

THE UNIFIED PATENT COURT
AND NON-PRACTICING ENTITIES IN EUROPE

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ABSTRACT

Under the European Patent Convention, applicants can seek patent protection in several jurisdictions in one single application before the European Patent Office. However, the post-grant life of the patent implies the application of as many patent laws as the jurisdictions which the applicant designates. Thus, the right holder has a bundle of national patents, which implies the risk of parallel patent litigation and its often prohibitive costs.

The Unitary Patent Package proposes to create a European Patent with Unitary Effect as a single object of property, recognized throughout the European Union, to which one law only is applicable. It also aims to create a centralized Court for the enforcement of European and European Patents with Unitary Effect.

Our main research question will be that of understanding the possible relationship between the Unified Patent Court and Non-Practicing Entities activity in Europe.

In order to gain a proper understanding of the problem, we will firstly consider the current issues with the transnational enforcement of patent rights, namely, income distribution inequalities. Secondly, we will address the Unitary Patent Package legality under European Union and international law. Thirdly, we will revisit the purpose of patent law and understand its evolution towards patent monetization. Fourthly, we must understand the current patent market characteristics and define a Non-Practicing Entity. Afterwards, we will seek to understand these entities under recent empirical research. Finally, we will place the proposed European Patent with Unitary Effect on the current framework of patent protection in Europe, and finally analyze the provisions which may be favorable to Non-Practicing Entity's activities.

Key words: enhanced cooperation; Brexit; patent monetization; Non-Practicing Entities; Unified Patent Court.

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TABLE OF ABBREVIATIONS

CEO	Chief Executive Officer
DRAM	Dynamic Random Access Memory
ECJ	European Court of Justice
EPO	European Patent Office
EPUE	European Patent with Unitary Effect
EU	European Union
EUIPO	European Union Intellectual Property Office
EU MS	European Union Member States
EUTM	European Union Trade Mark
IP	Intellectual Property
M&A	Mergers and Acquisitions
MS	Member States
NPE	Non-practicing Entity
RCD	Registered Community Design
R&D	Research and Development
SME	Small and Medium Sized Enterprise
TRIPS	Trade Related Aspects of Intellectual Property Rights
UPC	Unified Patent Court
UPCA	Unified Patent Court Agreement
UPP	Unified Patent Package
USPTO	United States Patent and Trademark Office
WIPO	World Intellectual Property Office
WTO	World Trade Organization

1. From rags to riches: the trans-border enforcement of IP rights

At an international counter-infringement seminar, as the speaker ends his presentation on counterfeiting of trade mark protected goods, the habitual question time follows. A senior Peruvian judge intervenes:

“In Peru, I often have to deal with IP rights infringement. The infringing activities are mostly carried out by SMEs, crucial to the country’s economic development. As such, our Government gives us the «tip» to be «soft» on these infringers. How would you strike a balance?”

We witnessed the episode above at the EUIPO, in October 2017. The question clearly showed that the enforcement of IP rights must be understood in the political and socio-economic context it is inserted. One thing is having the possibility for the trans-border enforcement of IP rights. Another is having the conditions to decide in favor of the enforcement of that right. From the judge’s intervention, it was as if there was a clash between right holders in developed economies and businesses in less developed economies, which not only were skeptical about the enforcement of foreign rights but to some extent depended on their infringement, as to keep a fighting chance on the global economy.

Technological development allows for the protection of ideas and processes which wouldn’t be protectable years ago. Globalized markets project this IP rights protection worldwide. This new reality places the old dichotomy of exclusion and access under a different light.

IP covers an asset which in nature is not susceptible of appropriation by an individual. “Information” or “knowledge” are economically public goods – their consumption by one person does not reduce their value nor does it impede another person from accessing it. Since the market undersupplies public goods, without government intervention or without a special arrangement, there would be no production of these goods. Creating an idea or a product takes a significant amount of resources, but to copy it or to reproduce it (through reverse engineering, for example) is inexpensive. Thus, IP consists on the introduction of an inefficiency on the market, as to allow the inventor to recover the investment. If IP

was sold in a completely competitive market, the innovator would have no incentive to market his innovation, since there would be no means to recover the investment.

This classic view of IP rights is often questioned. For once, many of Humanity's breakthroughs were created by people driven by recognition rather than by profit. Moreover, monopolies may constitute an incentive for right holders to entrench their positions, rather than incentives to further innovation¹.

The current transnational enforcement of IP rights is characterized by tensions between the interests of right holders and concerns over access to IP protected goods, such as books and medicines. If the transnational framework for patent rights is not harmonized and there are loopholes on the applicable regulatory regimes, there remain incentives to free ride on the R&D efforts of others². At the same time, it has already been demonstrated that strong IP protection may have perverse effects on income distribution. When WTO members rose their standards of protection of IP rights in order to meet the standards imposed by the TRIPS Agreement, countries with R&D intensive industries benefited, but often at the expense of imbalances in income distribution on countries which import IP protected products³. Research also puts in evidence that strong IP rights tend to reduce income inequality amongst developed economies⁴. Considering that amongst the EU not all countries have the same industrial development, will the EPUE impact income distribution in Europe?

A proposal for a Community patent dates back to 1959, but the project failed in 1965. All subsequent proposals were frustrated. In 2010, proposals for a new patent court were once more presented, to address the shortcomings of transnational patent enforcement in the EU.

The UPP is composed of:

- 1) EU Council Decision 167/2011 (on enhanced cooperation);
- 2) Regulation 1257/2012 (on the introduction of the EU patent);

¹ DASGUPTA and STIGLITZ, "Uncertainty, industrial structure, and the speed of R&D", 1980, pp. 1-28.

² DINWOODIE and DREYFUSS, "Brexit and IP: The Great Unraveling?", 2017, pp. 8-12.

³ BAKER, JAYADEV and STIGLITZ, "Innovation, Intellectual Property and Development: a better set of approaches for the 21st century", 2017, pp. 26-40.

⁴ SAINI and MEHRA, "Impact of Strengthening Intellectual Property Rights Regime on Income Inequality: An econometric analysis", 2014, pp. 1-19.

- 3) Regulation 1260/2012 (translations);
- 4) Regulation 542/2014 (amending the Regulation on jurisdiction);
- 5) Decision of the EU Commission 1753/2015 (on the Italian adhesion to enhanced cooperation);
- 6) The UPCA;
- 7) The first protocol UPCA (on preparatory works related to its application);
- 8) The second Protocol UPCA (on privileges and immunity);
- 9) Some further agreements between the EPO and the EU institutions, which complement the former elements.

The project is yet again at a standstill and there are doubts if it will materialize. So, why is it worthy of academic attention? And why should it be related to NPEs, which have been so far unheard of in Europe?

For once, the legislative process in the creation of the UPCA involved resort to the enhanced cooperation mechanism, an option which was questionable and which may constitute a precedent for a too liberal resort to enhanced cooperation. This fragility is only reinforced by the results of the Brexit referendum.

Moreover, as there have been several previous attempts at a Community patent, a similar initiative may be repeated in the future if the UPP fails.

Finally, even though a lot has been written on the potential relation between NPEs and the UPC, we would say that the debate is often dissociated from empirical research.

Recent empirical research⁵ shows that NPEs have complex business models, more sophisticated than the usual narrative on NPE activity would suggest. Many NPEs behave abusively, but research points out their possible positive influence on startups and companies in R&D intensive markets.

⁵ LARSON, *The Exploitation and Enforcement of Patents by Non-practicing Entities – Practices, Developments, and Future Challenges*, 2017.

2. From a Union patent to an international law agreement. Two major flaws of the UPCA as an instrument of enhancement of the internal market

i) The resort to the enhanced cooperation mechanism

Regulation 1257/2012 was passed with resort to the enhanced cooperation mechanism, an option which is questionable, considering the goal of creating a unitary right in the whole Union.

Enhanced cooperation comes to address the tension between unity and the creation of Union policies in vital integration areas. Since the different levels of socio-economic development and diverging backgrounds within an enlarged Union could cause impossibility of agreement between 28 MS, Article 20 TEU, read together with Articles 326 and 327 TFEU allow a group of MS to establish a Union's policy without the consensus of other MS.

As to strike a balance between effective decision making and the unanimity which originally characterized the Community, there are several requirements for enhanced cooperation to take place.

MS can only resort to enhanced cooperation with respect to the non-exclusive competences of the Union. This option must favor the objectives of the Union, preserve its interests and reinforce the integration process. Acts adopted with resort to the enhanced cooperation mechanism are binding only on the participating MS and shall not be considered part of the *acquis communautaire*. Enhanced cooperation must comply with the Treaties and with Union law. It must not impair the Union's social, economic and territorial cohesion. It must not represent a discrimination in trade between MS and must not constitute on a distortion of competition between them. Most importantly, enhanced cooperation is a mechanism of last resort. It has an exceptional nature, since it is to be used only when the Council has concluded that there are no other means available to achieve the objectives pursued within a reasonable period of time⁶.

⁶ LAMPING, "Enhanced Cooperation: A Proper Approach to Market Integration in the field of Unitary Patent Protection?", 2011.

The proposed UPP met a standstill regarding the language issue. The Commission's proposal was that the patent would have to be applied in one of the EPO's procedural languages – English, French or German. The EPUE would become effective directly upon grant and publication of the grant with a translation of the claims in the other two procedural languages.

The obvious importance of the language regime applicable to the EPUE is that a patent's specification must perform the information function of the patent system, which derives from a patent establishing a directly enforceable rule of prohibition for all third parties.

Spain and Italy were particularly discontent with the proposed regime. The Council remained adamant with the three language system, alleging that the translation costs would be prohibitive and that the existence of many binding specifications would cause legal uncertainty.

On the 30th June 2010, the Commission submitted its proposal for a Regulation for the translation arrangements of the EPUE. On the 7th December 2010, 9 MS presented their official requests for enhanced cooperation. On the same day, the Prime Ministers of Italy and Spain presented a letter to the President of the Commission, to the European Council and to the Belgium Prime Minister, on which they expressed their will to further negotiate the language regime and their intention to take part in the UPCA. The Prime Ministers also pointed out the short duration of the negotiations⁷.

Italy and Spain brought cases C – 274/11 and C – 295/11, seeking the annulment of Council Decision 2011/167 TFEU, authorizing enhanced cooperation in the areas of creation of unitary patent protection.

Both countries argued that the creation of an IP right is an exclusive competence of the Union, under Article 118 TFEU. As such, it could not have been the object of an enhanced cooperation and if it was the object of a vote, it would have had to be voted by a majority vote. The Court found this to be a shared competence and thus enhanced cooperation was admissible, essentially confirming what the Commission had previously advanced in its proposal.

Regardless of being a shared competence or not, the Court should have had considered that the competence granted by Article 118 (2) TFEU is a competence with the objective

⁷ ULLRICH, "Harmonizing Patent Law: The Untamable Union Patent", 2012, pp. 9-34.

of enhancing the internal market, to be achieved by a unified system of IP protection, rather than through an harmonized one.

When assessing whether these requirements were met, it must be kept in mind that the main objective of the UPCA was that of tackling fragmentation of patent enforcement under the current EPC regime. Considering this main goal, it seems altogether inadequate to implement reform through a mechanism that will purposefully leave out MS.

Furthermore, it is hard to concede that this option was the last resort available to secure the Union's interest. Instead, it seems that it was a getaway out of negotiating the language issue in the Council.

Italy and Spain making a case for a more comprehensive language regime only shows interest on the UPCA, not the contrary. Suddenly, an urgency settled to continue with the EPUE as it was, forgetting that the Union was about to create an essentially truncated right, when compared to other IP rights in the European law framework, such as the EUTM or the ECDR.

All in all, resorting to enhanced cooperation fails to address the issue of territorial fragmentation, which under the UPCA regime is aggravated by leaving out the MS not participating in enhanced cooperation and by demanding that only 13 MS ratify the agreement to deem it applicable.

The solution achieved seems to impair the internal market cohesion and to distort competition. Will innovation in the non-participating MS be in jeopardy? Applicants for a EPUE may disregard the application before the national offices of the non-participating states in their overall patenting strategy. As the latter MS will have no say on the UPCA regime (for example, they will have no means of influencing the incentives set by the participating MS) the fear is that it will promote a divide between a “northern” innovation driven cycle and “two southern” territories outside of this cycle⁸.

⁸ ULLRICH, “Harmonizing Patent Law: The Untamable Union Patent”, 2012, p. 24. It should be noted that Italy finally deposited the instrument for ratification of the UPC with the EU Council on 10th February 2017.

ii) The UK's participation on the UPCA after Brexit

Despite of doubts regarding the UK's legitimacy to remain in the UPP, the UK already has ratified the UPCA and intends to take full participation on it.

The call to gain back sovereignty from what was perceived as the burdensome power of Brussels is at odds with the regulatory necessities of a global economy, on which firms decouple their activities in several jurisdictions. The loopholes created by a vacuum of a state's jurisdiction – or simply the ineffective enforcement of its laws – invite for free riding on third parties' R&D efforts. As such, a state which harbors a solid creative sector needs to protect itself with a web of regional, bilateral and multilateral agreements for IP protection. Given that the European institutions have been the privileged stage for advancing these initiatives, the question remains whether the UK stands to lose more sovereignty than before Brexit. For example, in a sensitive matter as the recognition of foreign sentences, the UK will have to renegotiate another arrangement which matches the regime under the Brussels Regulation (Regulation 44/2001 of 22 December 2000 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters).

In any case, the UK's participation on the UPP, as it is currently framed, strikes us as incoherent⁹. There are several reasons why the UK's participation is questionable.

What we now call the EPUE corresponds to a project which dates back to the beginning of the Community. The existence of a community patent was perceived as a necessary element for the creation of the internal market. For several reasons, the EPC was negotiated and concluded first. This agreement is an international agreement, foreign to the EU, establishing the EPO as an international center for the grant of European Patents. The Convention was signed by all 9 EEC MS and by 7 non EEC MS. Following the EPC, there were several attempts at creating a Community patent, but all failed. The proposals for a patent under the auspices of the Community were unsuccessful, not due to disagreement on the substantive patent law provisions, but mostly due to not providing an adequate solution for the language regimes and a Community patent judiciary.

⁹ Arguing in favor of the UK's ratification of the UPCA, see OHLY and STREINZ, "Can the UK stay in the UPC system after Brexit?", 2017.

The patent protection system under the EPC forced applicants and right holders to abide to different national patent laws and to enforce their rights in different jurisdictions. This represented an impediment to the enhancement of the internal market, a potential distortion to competition and an excessive financial burden for patent right holders. Still, the patent protection system provided under the EPC was functional and established itself as a successful mean of patent protection across Europe. As this system was successful, the urgency for the creation of a single patent right in the Union was not as strongly felt.

It is fair to speak of two rival patent protection systems in Europe: one based on the EPC; the other, a system which has never existed but was many times envisioned, of protection built within the framework of EU's institutions, EU law and according to the EU's legislative process. To finally admit to the UPCA a state which will be alien to the Union's decision making process seems to be contrary to this background¹⁰.

Some have argued that since the UPCA is an international law agreement, the UK can take full participation on it. Regardless of whether the UPCA is or is not an instrument of EU law, it cannot evade scrutiny under the general principles of law and international law.

Under the general principles of treaty interpretation laid out in the Vienna Convention on the Law of the Treaties, the UK's ratification of the UPCA is fragile.

UBERTAZZI¹¹ presents the following reasons against the UK's participation in the UPCA.

Firstly, Article 62 (1) (a) of the Vienna Convention allows a State to claim a fundamental change of circumstances to cease the validity of a treaty, or to withdraw from a treaty, if the circumstances which changed constituted an essential basis for the contract, from the point of view of the other parties to the treaty. Furthermore, Article 62 (1) (b) allows for a claim of a fundamental change of circumstances, if the change has the effect of radically modifying the nature of the obligations assumed by the parties. Tending to the project's evolution, it is evident that the co-signing EU MS considered the UK's EU membership as a fundamental condition for taking part in the Agreement themselves.

¹⁰ JAEGER, "Reset and Go: The Unitary Patent System Post Brexit", 2017, pp. 3-16.

¹¹ UBERTAZZI, "Brexit and the EU Patent", 2017. See also UBERTAZZI, Brexit and the EU Patent – Part II: What Shall We Do?", 2017.

Secondly, Brexit radically modified the perception on the obligations to be assumed by the UK. For example, the Preamble to the Agreement lays out a MS's liability in case of infringement of EU law by the UPC, including for the failure of the Court to request preliminary rulings. The rationale of this liability appears to be that of ensuring the supremacy of EU law and its application in the Court's decisions. More specifically, the provision considers the principle of judicial review by the ECJ serious to the point of holding the MS responsible for a failure of the UPC to request preliminary rulings. This liability reinforces the Court's insertion in the institutional framework of the Union and recognizes that the ECJ must play a fundamental role in the development of substantive patent law in Europe. It seems questionable whether the UK can as a non EU MS police the respect for the jurisdiction it evaded.

The ratification of the UPCA by a non EU MS would also be at odds with the legal grounds of the EPUE. These legal grounds are Regulation 1260/2010 (the decision authorizing enhanced cooperation) and Regulation 1257/2012 (introducing the EPUE). Both are EU law instruments, which have the purpose of enhancing the EU's internal market. These were passed to resort to enhanced cooperation, which makes them applicable only to the MS which have taken part in enhanced cooperation; moreover, the legal ground for the creation of the EPUE was Article 118 TFEU, allowing the EU to create supra-national rights.

Article 32 of the Vienna Convention on the Law of the Treaties clearly indicates that all elements of the UPP must be interpreted in connection with each other in order to interpret the UPCA. Article 31 (2) (a) establishes that a when interpreting a Treaty it is necessary to take into account "any agreement relating to the Treaty which was made by all the parties in connection with the conclusion of the Treaty". Article 31 (2) (b) refers "any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty".

The same solution results from the general principles of law recognized by civilized nations, applicable under Article 38 of the Statute of the International Court of Justice. Among these general principles is the principle of good faith. Broad as the principle may be, it seems fair to say that two rules of thumb can be derived from it and become generally applicable. The first is that a party's good faith must be assessed before, during and after the celebration of a contract. The second is that a party to a contract has a general obligation to safeguard the legitimate interests of the co-signing parties. The UK cannot

agree to obligations derived from the UPCA which imply EU membership, knowing that it will not abide to those obligations.

The wording of the UPCA frames participation on it as a prerogative of EU MS. The Preamble of the UPCA expressly refers to the “cooperation amongst the Member States of the European Union in the field of patents”, which contributes to the “establishment of an internal market within the European Union”. As such, it clearly puts in evidence that the UPC cannot be considered as an international court, since it frames it as a court common to the contracting states and part of their judicial system, expressly mentioning the CJEU competence to ensure the uniformity of EU law. As it happens with any national court, the UPC is obliged to apply EU law and to cooperate with the CJEU. As a consequence, it has the obligation, also expressly established in the Preamble and reinforced in Articles 21 and 22, of relying on the CJEU case law and request preliminary rulings in accordance with Article 267 TFEU.

Finally, Article 2 (b) in the general and institutional provisions expressly restricts membership to the UPC to EU MS, when establishing that “Member State” means “Member State of the European Union”.

For all the reasons above, the Brexit vote is now the most significant threat to the materialization of the UPCA.

3. From Stradivarius to Rockstar¹². A briefing on the evolution of patent protection

Before considering the characteristics of the current patent market, it is important to understand how this market came to be. This historical hindsight is important for several reasons. Firstly, we must know where today’s paradigm stands. Patent policies can be cyclical, in the sense that a pro-patent period can be followed by a time when patents are

¹² Rockstar is a patent holding company owned by Apple, Microsoft, Blackberry, Sony and Erickson, set up to buy patents from the Nortel bankruptcy estate. This entity then gained leverage when licensing the patents to third parties.

mistrusted. At a time when Europe intends to launch the UPC, it should conduct an exercise of analyzing comparative patent policy. This may be a mean to understand what patent policies are adequate, but can also prove helpful at preventing the inefficiencies and shortcomings which exist under the current American patent system.

The idea of patent law is ancient. There are registries of the Greeks granting exclusive rights for inventions dating from 500 BC. In 1474, Venetia already had a law establishing the grant of patent rights for inventors¹³.

The fact that it is still unknown why a Stradivarius sounds as it does reminds us that the alternative to a patent was secrecy. Stradivari was commissioned by King James II and King Charles III of Spain to produce violins, violas and violoncellos. Patronage such as this had of course the shortcoming of the wealthy determining the ways of innovation. The patent deal emerged to prevent the oblivion of valuable techniques and processes and to promote knowledge sharing amongst inventors. The inventor would enjoy a monopoly over his invention for a specific period of time, during which he could exclusively reap the benefits of his efforts and have the right to prevent others from accessing them. Once that time lapsed, he would have to allow others to use his inventive process as well. It is clear that the obligation of disclosure outweighed the compensation to be given to who had taken the first inventive step. While if the monopoly wasn't granted, inventors would have little financial incentive to innovate, the goal of the exclusive right was that of enhancing innovation, information and progress. Under this goal the scope and duration of these rights cannot exceed what is necessary to secure an optimal rate of innovations¹⁴.

Since Renaissance times, the perception on patent rights has changed radically. Patentability criteria were loosened, patent enforcement facilitated and the patent holder's position reinforced.

Today's patent landscape is characterized by patent monetization, which broadly refers to activities aimed at generating revenue from patent assets, other than developing their inherent technology. Patent monetization may for example consist on selling and buying

¹³ McCLURE, "From a Patent Market for Lemons to a Marketplace for Patents: Benchmarking IP in Its Evolution to Asset Class Status", 2015, p. 767.

¹⁴ For revisiting the rationale of IP protection, see BOYLE, *The Public Domain: Enclosing the Commons of the Mind*, 2008, pp. 17-41.

patents, licensing and cross licensing agreements, brokerage services, prior art searches, infringement analysis, products teardown and reverse engineering.

The main cause for patents being perceived as tradeable assets was the shift to a “knowledge based economy”. During the last decades of the last century, western economies became growingly R&D based. This was especially true for the American technological sector from the 90s onwards. Companies and researchers started operating in an environment where their competitive edge relied on their capacity to create and protect information goods.

From 1975 onwards, the share value of intangible assets grew disproportionately comparing to other corporate assets. The escalating technical complexity of these products was making it impossible for a company to develop them on its own¹⁵. As such the patent market became characterized by the interdependence of technology developers.

The number of patent filings increased, and with it patent enforcement became more common. From the 1990s onwards, the amount of patent litigation went through the roof. Not only has litigation increased, the value of damages awarded grew substantially: PricewaterhouseCoopers reports that the median jury award amounted to nearly 37.5 times the median benchmark between 2010 and 2013¹⁶.

Finally, it should also be noted that patents gained importance as strategic elements of the US economic policy throughout the last decades¹⁷.

For the last few years, patent law has been in the limelight and not receiving the best publicity. Academics, the US Congress and even US President Obama have spoken

¹⁵ MCCLURE, “From a Patent Market for Lemons to a Marketplace for Patents: Benchmarking IP in Its Evolution to Asset Class Status”, 2015, p. 761. MCCLURE refers to WIPO’s publication *Information and Communication Technology (ICT Strategy 5)*, 2013, reporting there were around 800 000 patent applicants globally in the early 1980’s and 1.8 million in 2009. The greatest increase in patent filings occurred in the 1990’s, with growing technical complexity.

¹⁶ PRICEWATERHOUSECOOPERS, *2014 Patent Litigation Study: As case volume leaps, damages continue general decline*, 2014.

¹⁷ For an historical background on the NPE phenomenon, see LARSON, *The Exploitation and Enforcement of Patents by Non-practicing Entities, Practices, Developments, and Future Challenges*, 2017, pp. 26-53.

negatively of the current patent system. It is often said the American patent system is at a crisis and patents were already considered to be a “rotten way” for rewarding ideas¹⁸.

The position of patent holders was mostly reinforced from the 1980s onwards. This period was preceded by times when patents were disregarded, especially due to anti-trust concerns. This persisted throughout the 60s and 70s, until the unimportance given to patent law alarmed the Carter Administration, after an appointed Advisory Committee concluded that the US patent system lacked incentives.

The strengthening of the patent’s holder position in the 80s had political, judicial and technical motives. The latter are easy to understand, as the protection of R&D efforts became quintessential for a company’s competitiveness. The judicial input for reinforcing patent rights consisted on more judgements favorable to plaintiffs, leading to an increase in patent value. There was an extension of patent protection to sectors which traditionally were off limits, such as life forms, genes, business methods and software. At the same time, rulings loosened the patentability standards for novelty and non-obviousness. A Court of Appeals for Federal Circuit was established in 1982, which became a single specialized Court, receiving all appeals from patent case decisions of Federal District Courts. Reportedly, this led to plaintiffs having higher success rates in patent infringement lawsuits.

The political impulse over patent law was essentially motivated by the fear of losing American hegemony in the technological sector, *vis a vis* its nascent Asian competitors. This concern made the Reagan Administration more open to discussion with economists and researchers around redesigning IP rights, leading the Administration to establish the President’s Commission on Industrial Competitiveness. The Commission produced a report titled *Global Competition: The New Reality. The Young Report*, as it became known, pointed out that patent reform was necessary and that the US should demand their trading partners to provide better standards of patent protection as well¹⁹.

The 1980s definitely were a game changing decade in US patent law. The scope of patent protection was broadened to cover business methods and software. In 1980, the US

¹⁸ As reported by The Economist on 8th August 2015. Available at: <https://www.economist.com/leaders/2015/08/08/time-to-fix-patents?fsrc=scn/tw/te/pe/st/timetofixpatents>.

¹⁹ PRESIDENT’S COMMISSION ON INDUSTRIAL COMPETITIVENESS, *Global Competition: The New Reality*, 1985.

Supreme Court ruled in favor of the patentability of living things in *Diamond vs Chakrabaty*.

The case is considered to be a landmark in patent law. The Supreme Court considered that a genetically modified bacteria was a patentable invention, as it considered that this live, man-made microorganism was non-naturally occurring.

The patentability of living organisms is still highly controversial. An example of this is the patent over the onmouse, a mouse genetically modified to be prone to cancer. While the USPTO granted a patent over it in 1988, the EPO only reluctantly granted a patent over the same invention in 2004²⁰. Commentators argue that this case was a turning point in patent law and some believe it allowed the biotechnology industry to flourish in the US.

The current market characterized by patent monetization seems to have been created by a combination of this “pro- patent” political environment and the technological progress fueled mostly by R&D efforts.

i) Market characteristics

While playing tennis, people must be sure not to wear any kneepads, or will do so at their own risk. They may be accused of infringing US patent 59933366, which protects “a method of executing a tennis stroke (...) covering a knee of a tennis player during tennis play”²¹.

Jeff Bezos received broad media attention for Amazon’s injunction against Barnes and Noble at the peak of holiday season based on the infringement of the “one click patent”. Amazon successfully patented a system which allowed for one single click on the chosen shopping item, instead of the traditional tiresome two click system. Online retailers

²⁰ MADIGAN and MOSSOF, “Turning Gold to Lead: How Patent Eligibility Doctrine Is Undermining U.S. Leadership in Innovation”, 2017, pp. 4-6.

²¹ The patent was granted on the 30th November 1999 and its claims can be consulted at <http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetacgi%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=5993336.PN.&OS=PN/5993336&RS=PN/5993336> (accessed on 8th July 2018).

rushed to their lawyers to find out whether Amazon could act against them too. Commentators reacted badly to Amazon's one click patent.

Bezos reacted with an open letter²², calling for shorter periods of patent protection for business and software patents – the proposed duration was that of 3 to 5 years.

The application for patents in business models was encouraged by Court rulings and there was a corresponding race to the patent office to register these business processes. These patents were mistrusted, since many of them would have failed rigorous scrutiny under the criteria for non-obviousness and novelty. The increasing number of applications for these business models patents was emboldened by the growing importance of e-commerce. Simultaneously, blocking patents multiplied in number, as increased the risk of firms being held up or simply unintentionally infringing on other's patent rights.

As the number of patents granted increased dramatically, the quality of the patents granted decreased – dramatically as well. The USPTO has issued patents for creating profiles for users, patents for “real time shopping” and for all imaginable variations of online business.

The phenomenon of patent monetization has led to a secondary patent market with characteristics of its own. Most importantly, this is a market where patents have become the object of autonomous business deals. The strategic management of patents has turned into an autonomous business activity, in which patents are valued based on their enforcement potential. A patent is a financial opportunity and its underlying technology is just one among other factors to place a value on it.

Patent law is especial for many reasons. One of them is its “probabilistic nature”.

Relating for example patent law and real estate law: if two people own one house each, both located on the same street and sharing identical characteristics, the value of the two buildings will be expected to be similar. There are concrete provisions regulating the landowner's rights and obligations and it is possible to determine accurately the value that the real estate market places on each of the assets. If these landlords were to be expropriated, they would be entitled to compensation by the Government. Patent law does not enjoy the same predictability. A patent owner can see its patent invalidated without

²² Available at <http://www.techlawjournal.com/intelpro/20000309bez.htm> (accessed on 4th July 2018).

compensation. Whereas a patent can weight more in a company's accounts than a building, it is a riskier and more volatile asset.

Economists say that a patent represents a right to try to exclude. The attempt at excluding third parties represents a probability that the patent will be found valid or not. The right to exclude and collect monopoly rents is thus not an absolute right, since it consists on the right to seek compensation in case of infringement. Once the patent is granted, it is presumed to be valid, but this presumption is rebuttable. The patent's true value is tested before a Court and again, what matters is its enforceability. Now, patent enforceability depends on a myriad of factors, intrinsic and external to the patent right, namely, the patent's owner, the patent's validity, its coverage, the patent offices in charge of interpreting its claims and last but not least, the Court before which the case is brought. Patent ownership is thus marred with uncertainty. To refer to this, it is commonly said that patents have a "probabilistic nature"²³.

Most patents issued are never litigated and from those which are, half of them is found to be invalid. A value of a patent can be determined by the number of claims it has, its prior art references and the time invested in its prosecution. Applicants are able to some extent to determine how valuable their patent can be, but at the same time, it is uncertain what aspects of the technology will the market value or not.

The recent patent deal of Nortel Networks clearly puts this in evidence. Nortel's other assets were sold for 3 billion US \$, while the company's patent portfolio was acquired at 4.5 billion US \$. A consortium of companies presented the winning bid, allegedly coordinated by the same competitive interest: keeping the patent portfolio out of Google's hands²⁴.

The Nortel case puts in evidence that patents are perceived in the market as very valuable corporate assets, autonomous from their owner. The acquiring party is aware that it is possible to monetize the patents, even if the business they are associated to goes bust. As we've seen, a patent's value is calculated mostly considering its enforcement potential. For the bidders, the patents had defensive value as a basis for infringement

²³ For an explanation of how a patent is not a well defined right, see LEMLEY and SHAPIRO, "Probabilistic Patents", 2005.

²⁴ McCLURE, "From a Patent Market for Lemons to a Marketplace for Patents: Benchmarking IP in Its Evolution to Asset Class Status", 2015, pp. 782-787.

counter-claims. Presumably, these patents were also expected to prove their offensive value – as motives for infringement accusations – later on.

Nortel's patent portfolio was subject to strong speculation because of its unclear scope and validity. The Nortel deal puts in evidence that patent markets operate without reliable quality and value benchmarks for patent valuation²⁵. Considering the importance that patents have gained as an asset class, it would make sense to establish best practices guides and mechanisms for greater transparency.

For 200 years, patent deals have been made in secrecy. On these transactions, it is the exclusive nature of the right that matters, over the collaborative aspect of the transaction²⁶. Given the secrecy of patent litigation and patent deals, it is harder to assess a patent's true value. In the US, most litigation brought by NPEs reportedly implies a non-disclosure agreement, which leaves all the market players, NPEs and practicing entities alike, in doubt regarding the value of settlement agreements. As it will get clearer later on, a non-disclosure agreement can play well into the hands of a "patent troll".

To sum up, the current patent landscape favors strong patent rights. Propensity to patent is high, patent litigation has increased and so has the number of patents granted which hardly meet adequately the patentability criteria of non-obviousness and novelty.

Sir Isaac Newton claimed that every scientist stands on the shoulders of giants, meaning that no scientific field is developed from scratch, but rather builds on what others have created before. An innovator in any field of human knowledge stands before a high pyramid of building blocks and seeks to place his own on the top. Getting there requires stepping on the building blocks of those who came before. If it were necessary to ask for permission or pay a tax at each stepping, the climber would be discouraged at best and more likely to abandon the project before it started.

A patent system which excessively favors patent rights protection resembles the pyramid full of permissions and taxes²⁷. It may choke down innovation and create an

²⁵ Referring to the general lack of information on patent markets, see Letter from John R. Allison *et al.*, Intellectual Property Law Professors, to the Members of the United States Congress, 25th November 2013.

²⁶ McCLURE, "From a Patent Market for Lemons to a Marketplace for Patents: Benchmarking IP in Its Evolution to Asset Class Status", 2015, pp. 776-778.

²⁷ The pyramid metaphor is suggested by SHAPIRO, "Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting", 2001, p 1.

anti-commons tragedy, as HELLER and EISENBERG put it²⁸. The tragedy of the commons is well known and refers to a situation where a resource is overused because there are no property rights over it and thus can be used openly. The anti-commons refers to a situation where there are multiple proprietors to whom to require permission to have access to the resource. One of the questions which ought to orient patent policy making is whether the current system of patent protection resembles an anti-commons tragedy, thus preventing the inefficiencies caused by undue enforcement of patent protection.

ii) Advancing a definition for NPE

We use the term “NPE” to refer to “individuals or entities that initiate business models entirely around purchasing, acquiring or filing for their own patent rights, and enforcing these patents to generate revenues”²⁹. This definition is advanced by LARSON in light of her recent empirical research on NPEs, to which we will refer to later on.

There is no consensus in academia regarding the definition of NPE. This is due mostly to the private nature of their activities – despite the headlines for skyrocketing licensing fees – and also due to the heterogeneous nature of the patent market itself. Given this diversity, we find terms that can refer to more or less similar activities taking place in the secondary patent market: “patent trolls”, “patent assertion entities” or “patent holding firms”. As these terms are often used interchangeably, there really is no agreement on the substance of what they refer to.

The expression “patent troll” seems to be unquestionably the most fashionable. “Trolls” are figures that in mythology used to hide underneath bridges to extort money from passing by travelers, so the term “patent troll” is the most pejorative. The “tale” that in the NPE debate is associated with “patent trolls” goes more or less like this: a patent troll is a parasite. It is an individual or an entity which collects patent portfolios just for the sake of later on accusing someone else of infringing on their patent. “Trolls” usually come

²⁸ HELLER and EISENBERG, “Can Patents Deter Innovation? The Anticommons in Biomedical Research”, 1998, pp. 1-4.

²⁹ LARSON, *The Exploitation and Enforcement of Patents by Non-practicing Entities, Practices, Developments, and Future Challenges*, 2017, p. 23.

to their targets and inform them that they are infringing on their property, so the alleged infringer has essentially two options: either to pay royalties for patent licensing or to face an accusation of patent infringement before a Court. The latter option is generally always bad. Patent litigation can be prohibitively expensive and the defense can be substantially difficult. In the US jurisdiction, the defendant may bear the burden of proof that he is not infringing on the patent. US patent law also creates a rebuttable presumption that a patent is valid until a court of law determines in contrary. Finally, the “prey” of the “patent troll” is often depicted as the most vulnerable of targets, generally startups with very little resources. Instead of facing lengthy and expensive litigation, the “target” will be forced to pay the demanded royalty which is unreasonably inflated.

To some extent, all of the above elements of the “patent troll tale” are true. However, they also consist on a narrative which is far too simplistic and biased against the patent proprietor. In reality, the activities of “patent trolls” are much more complex. It will become clear that under recent empirical research this focus on the enforcement aspect alone is not sufficiently comprehensive, as NPEs have multi-faceted complex business models which involve combinations of patent licensing, patent acquisition, patent management and *ad hoc* patent deals.

“Trolls” have the worst reputation in IP circles. It was the fear of “trolls” that urged academia on both sides of the Atlantic to voice that the UPC would consist on inviting “trolls” into Europe.

The concern over this sort of abusive patent enforcement is motivated by its detrimental effect on competition and innovation. There are several estimates on the loss of revenue that NPE litigation has caused to the American economy. For example, it is estimated that NPE lawsuits represented half a trillion dollars of lost wealth to defendants from 1990 through 2010³⁰.

“Patent trolls” are said to explore on the existing gap between patent law and competition law³¹. While patent law grants a temporary monopoly, competition law’s main concerns

³⁰ BESSEN, FORD and MEURER, “The Private and Social Costs of Patents”, 2011-2012, pp. 16-17.

³¹ For a first approach to NPE litigation and an adequate understanding of what is involves, see CHIEN, “From Arms Race to Marketplace. The Complex Patent Ecosystem and Its Implications for the Patent System”, 2010. From the same author, see also “Of Trolls, Davids, Goliaths and Kings: Narratives and Evidence in the Litigation of High Tech Patents”, 2009.

are over the operation of a free competitive market, encouraging multiple product and services providers to operate on the market. The goal of competition law is to prevent monopolies which place an unreasonable burden on consumers. Although the two branches of law may seem to be at odds, in reality they share a rationale which serves the enhancement of innovation and consumer welfare. Abusive patent litigation is said to choke down innovation and worsen consumer welfare, mostly by artificially inflating the prices for patented products.

This sort of abusive patent litigation referred to as “patent trolling” assumes specific characteristics of its own. It is a product of the features and faults of the secondary patent market. The patent landscape in which they operate is characterized by increasingly complex patents covering several pieces of multi-component products. NPEs knowingly use this technical complexity to their advantage. They explore and thrive on the faults of the US – globalized – patent system, filled with low quality patents, characterized by insufficient patent notice, the absence of benchmarks for patent valuation and damages awarding.

An example of a weak patent is US patent 5993366 on a method for hitting a tennis ball. This patent hardly meets the patentability criteria. Generally, NPEs serve themselves of the weakest patents available – patents with vague claims, likely to be invalidated, protecting only a small fraction of the technology or protecting a technology with reduced commercial value – patents which subject matter of protection is unclear and raises doubt amongst competitors regarding what is patented and what isn't. NPEs and practicing entities alike employ the strategy of acquiring low quality patents to enforce overbroad and possibly invalid patents.

A “quality patent” has a clear scope of protection and has precise claims. It seems to be widely recognized that the significant increase in patent applications was accompanied with a considerable decrease in patent quality, which multiplies the number of potentially questionable patent claims³².

NPE patent claims have been so far mostly over the technological sector, a branch of industry where given the multiple component products, it becomes unclear who owns

³² FEDERAL TRADE COMMISSION REPORT, *The Evolving IP Marketplace, Aligning Patent Notice and Remedies with Competition*, 2011.

patent rights to a specific technology, considering the several patent rights over it. This is often described as “patent thicket” Where it is unclear who holds patent rights and there are multiple patents covering a product, NPEs gain significant leverage over the companies they litigate against. Under these conditions, abusive patent litigators can successfully “hold up” their targets.

“Patent thicket” and “patent hold-up” have been major issues in the current patent market landscape, especially in the sectors of biotechnology and semi-conductors. “Patent thicket” refers to a bunch of patent rights which overlap, forcing developers wishing to commercialize new technologies to seek to obtain licenses from multiple patent holders. “Patent hold-up” is an expression commonly used to describe a situation where a producing entity has incorporated a technology in one of its products and sees the patent over that technology challenged by a third party. Because of this challenge, the sales of that product are stopped.³³ The success of the “hold-up” depends on the importance that the patented technology has to the alleged infringer and with the timing of the lawsuit. Once an aspect of a patented right becomes so important to the alleged infringer that it simply cannot carry on its productive activity without the infringing technology, the “troll” will accuse the producing entity of patent infringement. Considering the crucial importance the infringing technology has gained, stopping infringement is not an option. As such, most of the times the target is simply forced to pay the demanded royalties for licensing. In any case, the productive activities of the alleged infringer may be stopped for a longer or shorter period of time. In the IT sector, where the lifespan of products is notoriously short, patent hold up brings significant leverage for NPEs to extract royalties. The timing of the hold-up is also relevant: statistically, patent hold ups occur at the end of the lifespan of the product, when the “troll” is sure that the infringing technology is already incorporated in the company’s products. If the claimant is granted an injunction barring the alleged infringer from selling its products, it gets more leverage still. Even if it is found that the NPE claim was unfounded, the clock was ticking all along between the time the injunction was granted and the final decision of non-infringement. The producing entity didn’t sell any of its products in the meantime and the loss of revenue may be irreparable. In this aspect, NPE litigation becomes a very one sided game. The NPE has nothing to lose and has no concerns over reputation. In fact, if it gets a reputation

³³ ADDY and DOUGLAS, “Mind the Gap: Economic Costs and Innovation Perils in the Space Between Patent and Competition Law”, 2012, pp. 17-20.

as a fierce litigator, the better. Even if the NPE is ordered to pay compensation to the defendant for abusive litigation, an NPE can easily evade this liability through, for example, a special purpose vehicle, which will be made to go bust once the order to pay is received.

In order to understand if this sort of patent litigation will be possible under the UPCA, it is necessary to analyze the Court's power to grant injunctions and the provisions regulating the burden of proof. Most importantly, it would be necessary to scrutinize the applicable substantive patent law, which, as we will see later on, under the UPCA can be as many as the number of countries participating on the Agreement.

In this environment, practicing entities understandably wish to protect themselves against abusive patent litigation. As it becomes clear from patent hold up situations, practicing entities have a major fragility *vis a vis* NPEs: they're vulnerable to seeing their production stopped by an injunction or by a decision on infringement. As NPEs have no producing activities, they never face this risk. To describe the one-sided nature of this litigation, it is said there is "asymmetry of litigation risk" in NPE litigation.

An effective strategy for a practicing entity would be to eliminate its vulnerability to accusations of patent infringement; thus, practicing entities seek to mimic NPE's immunity to patent infringement accusations³⁴. In order to achieve this, practicing entities turned some of their efforts into activities in the secondary patent market, such as patent licensing and cross licensing. Adding to this, practicing entities started to set up their own NPEs, entities which would fight their patent wars while they remained immune to counter accusations of infringement. An example of this was the deal between Microsoft, Nokia and Mosaid, an NPE created to collect and license patents and to conduct patent

³⁴ An example of this is the IPCom case, an NPE created by Bosch to enforce its patent portfolio. It consisted on a special purpose entity, which could make Bosch not only immune to counter claims of infringement, but also able to evade financial responsibility if the defendants won the case. See FUSCO, "Markets and Patent Enforcement: A Comparative Investigation of Non-Practicing Entities in the United States and Europe", 2014, pp. 455–456, referring to Press Release available at http://www.ipcom-munich.com/pdf/110616_IPCom_Patent100a_UK.pdf (accessed on 22nd July 2018).

litigation. This removed the risk of counterclaims of infringement against Microsoft and Nokia³⁵.

4. From the “troll tale” to the “real deal”. How do NPEs operate in practice after all?

Admitting that NPE litigation and patent enforcement activities can contribute to revenue loss and represent a barrier to innovation, any prophylactic measures to adopt must be inspired in real business activities of NPEs.

Abusive patent enforcement from NPEs is difficult to regulate. From a European perspective, NPEs have operated so far mostly in the US. Despite of this, empirical research suggests that these are very adaptable enterprises, which easily divide the several stages of their business activities in several jurisdictions. As such, their actions are transnational. Adding to this, NPE activity is mostly kept private. When it receives public attention, it is by the hands of the media, which bears little credibility as a source for the real functioning of NPEs.

While patents have always been fundamental for enterprises to function, it was only in the last few decades that they have become objects of autonomous businesses. In the past, only lawyers, engineers and researchers dealt with patents, but currently more businesspeople and investors are getting into developing, managing, exploring and enforcing them. The shift to a knowledge economy placed an unprecedented emphasis on the protection of R&D efforts, leading to the emergence of a market where patents are tradeable assets. This market is not exclusively operated by patent investors or speculators; many producing entities use it for example to acquire third party IP. Thus, the secondary patent market also serves purposes for producing entities who wish to strategically acquire third party patent rights.

³⁵ ADDY and DOUGLAS, “Mind the Gap: Economic Costs and Innovation Perils in the Space Between Patent and Competition Law”, 2012, pp. 14-16.

LARSON has conducted a series of interviews to NPEs³⁶. Her research sought to understand the exact functioning of NPEs, seeking to answer questions about their financing, their patent acquisition processes and funding of patent purchases and litigation.

These entities are mostly funded through their patent enforcement, patent licensing programs, royalty licensing fees, court awarded damages and sums paid in result of settlement agreements. LARSON argues that all NPEs exist because of two factors. The first is the monopoly granted by the patent, consisting on the exclusive right of preventing others from using, selling or making the potential invention without the consent of the patent owner. The second is the absence of any requirement to work the patent in a specific time frame once it is granted.

We report the statements of five interviewees, some of which share common traits. Still, LARSON's research puts in evidence that NPEs are widely heterogeneous, as it happens with the patent market itself.

It goes without saying that practices such as patent cross licensing or patent pooling (methods generally used by practicing firms to solve litigation disputes) are of no interest to NPEs, considering that they don't conduct manufacturing or production.

LARSON's findings have led her to the conclusion that despite of the obvious setbacks that NPEs represent, they can as well bring benefits for the operation of the patent market.

Empirical data is fundamental for preventing misguided views on NPE activity by policy makers, patent judges and patent rights holders.

For starters, one NPE may develop its activities in several jurisdictions and outsource parts of its business, such as prior art search. Moreover, these entities often represent an additional mean of patent enforcement and represent fewer burdens for their associates, litigating on their behalf, finding them prospective licensees, conducting negotiations on licensing fees for them and also settling disputes on their name. Furthermore, these entities may be effective intermediaries, when it comes to aggregate patents, cutting through the required licensing transactions.

³⁶ All the empirical data we now refer to can be found in LARSON, *The Exploitation and Enforcement of Patents by Non-practicing Entities – Practices, Developments, and Future Challenge*, 2017, pp. 83-105.

LARSON's research also confirms that NPEs are often used for purposes which would be considered abusive and distortive of competition. Moreover, they may use financial schemes to avoid payment of liabilities resulting from litigation. From all the NPEs interviewed, none produced or sold products or had manufacturing or production facilities.

The first NPE interviewed operated from Finland and conducted patent deals both in Europe and in the US. Its CEO classified the company as an intermediary entity during M&A deals between investors, strategic buyers and IP right holders. The firm also buys patent licensing projects and patent litigations for a pre-negotiated amount or for a percentage of the damages. It operates in high-tech and currently seeks to acquire patents on the sectors of data and internet security.

Although they don't claim to have a fixed *modus operandi*, generally they seek the market for patent infringers and offer them licenses. The NPE was also paid by producing firms to assert patents against their competitors, whether the litigation was justified or simply intended to tie competitors. They are selective about the patent portfolios they build, seeking legal and technical advice before pursuing any attempt at patent licensing. The CEO claimed to prefer jurisdictions where patent injunctions are more easily obtained and admitted to use financial schemes (such as a special purpose vehicle holding the patent) to evade payment of court fees.

The second NPE interviewed identified itself as a "large public patent licensing corporation", operating from the US, in the high tech sector, namely on flash memory and chip stacking. The entity expected to expand into the medical patent sector.

Their core business is partnering with patent owners, identifying the potential license takers and then negotiating the respective licenses. Half of the revenues generated from licenses were took as payment. Approximately half of their patent portfolio was brought to them by their partners and they acquired the remaining half.

They claimed to provide a service for companies without resources to compete with larger firms settled in the market, offering licensing programs and litigation services if necessary. Reportedly, their collaborators had failed at previous attempts at patent licensing and enforcement.

The third NPE practiced defensive patent aggregation, removing patents from the market in order to prevent competitors from using them. These patents were then combined into a holding fund, to which all members who were granted a license had access. To identify patents which could be a potential threat, this NPE studied ongoing patent deals and patent portfolios being built.

These risk assessment services are at odds with the usual narrative of the “patent troll”, characterized by the acquisition of a patent followed by the threat to enforce it against an alleged infringer.

The fourth NPE interviewed provided patent licensing services in the areas of biomarkers, medical diagnosis and research tools. Clients were given access to a web based store in which there were hundreds of patents which the clients could license. The NPE was then paid a percentage of royalties for every patent transaction their clients made.

They offered several licensing structures, for licensors wishing to license their patents into the model and for patent license takers requiring a license out of the model, both on an exclusive and non-exclusive basis.

The fifth NPE interviewed consists on a patent licensing business, but it has worked on the development of semiconductor and communication technologies in the past. They obtained the patents that launched their licensing activities from their past producing activities.

The firm designed a DRAM technology which became so important it turned into a DRAM standard in the technology market. Realizing the potential of their asset, they started licensing campaigns. They have shifted their efforts to patent licensing almost exclusively, working with companies operating with memory devices globally.

Their line of expertise has now become the reverse engineering of semiconductor chips of other companies. Following this, they produce reports on how to improve this technology. Producing companies (such as Texas Instruments, for example) comes to buy their reports, not only because they wish to improve their own semiconductor chips, but also to understand whether their competitors were infringing on their patents.

The empirical research conducted puts in evidence that NPE activity involving patent search, patent management and patent enforcement can be more complex and sophisticated.

Perhaps the most interesting side to this research are the services provided to operating entities with fewer resources, allocating the most adequate patents to purchase or license, conducting patent search, assessing patent risks and litigating on behalf of their clients.

5. From a bundle of rights to a EPUE. The current legal framework and the proposed reform

The reasons why NPE activity has been so far unheard of in Europe are not clear.

Empirical studies³⁷ have found that there is NPE activity in Europe, but in a much smaller scale when comparing to the US. The reasons pointed out for this are often the procedural rules related to legal costs payment in most European jurisdictions, the level of damages awarded and the absence of certain types of injunctions in Europe. In the majority of European jurisdictions, there operates a system on which the losing party bears the judicial costs of the other party, which is pointed out as a factor preventing unfunded litigation. The amount of damages awarded in Europe can be considered modest when compared to the US. Moreover, as it will get clearer, the current European system of patent protection is fragmented and certain types of injunctions in patent infringement cases are not available. Finally, it is also pointed out that most European jurisdictions are civil law systems, which tend to favor a natural rights conception of patent laws; thus, patents are not easily dissociated from the original inventor. By contrast, the US favors a utilitarian conception of patent rights, privileging their transmission to third parties³⁸.

FUSCO advances other more convincing reasons for a diminished NPE presence in Europe. The principal reason for this is that Europe has lesser industries preferred by NPEs when compared to the US. NPEs target high revenue making companies, operating in industries such as electronics, machinery, software, computer equipment and

³⁷ FUSCO, “Markets and Patent Enforcement: A Comparative Investigation of Non-Practicing Entities in the United States and Europe”, 2014.

³⁸ *Ibidem*.

communications. The size of the targeted markets is thus not comparable. Furthermore, NPEs in Europe are not as well funded as in the US.

The proposed EPUE will correspond to a unitary right valid in the territory of the EU MS participating in the UPCA. Currently, a “European patent” exists, but this right does not correspond to a unitary right (comparable to the right granted by a EUTM, for example). Right now, the “European patent”, granted by the EPO, resulting from one single application, examination and registration procedure, is a collection of national patents, which comprises only the countries which the right holder designates. With the possibility of registering and later on enforcing a EPUE, a NPE will not have to litigate or threaten to litigate in multiple jurisdictions, but only before a single centralized judicial body.

If there is the possibility for an applicant to register a EPUE in the same way as it is today possible to apply for a EUTM, expectedly, applications for EPUE will increase significantly (as applications before national offices will likely decrease). This was exactly what happened when the EUTM system was launched. Despite the principle of coexistence of European and national trademark systems, the predominance of the European system is perfectly clear.

Furthermore, and recalling what has happened after the launch of the EUTM system, we find that the following may happen:

- a) Applicants may be tempted by the idea of having a patent valid throughout the whole EU territory, even if their use of the patent is confined to a single MS or even locally. This situation would be comparable to the cases in which a trademark would fail a genuine use test, since the trademark would be considered not to have been put to genuine use in the territory of the Union.
- b) It may also happen that applicants fear that their patents are invalidated before the UPC and thus lose their patent right practically in the entire European market. Applicants may strategically choose to opt out of the UPC jurisdiction during the seven year transitional period and stick to the current European system of patent protection, requesting a patent application before the EPO, indicating the designated territories and never requesting the unitary effect for their patent.
- c) Since applicants will not have to proof any intention to use the patent, it is likely that they try to patent a technology without the intention of developing

it. Again, it may be helpful to compare a future EPUE with the reality of the present EUTM. Considering the number of trademarks applied for and the number of trademarks which are renewed, it has already been concluded that almost half of the trademarks have not been put to genuine use within the Union³⁹.

- d) A European Patent which consists on a unitary right in one single application and examination for the whole territory of the Union is appealing to applicants from non EU countries. This of course will be a multiplying factor of the number of patents granted.
- e) As it currently happens with the EUIPO, the EPO will likely be pressed to be user-friendly, result driven and time saving at the time of granting EPUE, which means less examination time for increasingly complex technologies.
- f) The budgetary structure which the EPO adopts will be a crucial element in determining the number of registered patents and subsequent patented rights. The budget of the majority of patent offices in the world is dependent on the number of patents granted, which of course constitutes a strong incentive for registering patents, rather than rejecting them.

These hypothesis indicate that there may be great interest in the EPUE, multiplying the number of these rights within the Union, all enforceable before a centralized judicial instance.

Whether these concerns will materialize or not will depend on an array of factors, such as the procedural rules of the UPC, the fee system operated for the registration of a EPUE, the budgetary structure of the registry, the admitted damage claims for infringement, the leeway which is granted for applicants to build patent thickets, the sophistication of the judiciary, the structure of invalidation and infringement claims and also the extent to which prohibitive injunctions are allowed. This last question mostly depends on the practices adopted by the UPC judges when granting EPUE injunctions.

The UPC will be part of the judicial order of the participating MS of the EU. The Court will be bound by the principle of primacy of EU law and it will be bound to apply all the body of Union law.

³⁹ SMYTH, “Overfeeding the golden goose”, 2011.

If this is the case, the UPC being part of the judicial order of the participating EU MS, then, national courts will have to cooperate with the UPC. At the same time, if the UPC will be bound to apply EU law, it will have to cooperate with the ECJ, as national courts do. This cooperation would mean that:

- In case the Court of First Instance of the UPC considers that the interpretation of primary EU law is necessary to reach a decision, it will have to ask the ECJ to give a ruling, which will be binding on the UPC.
- In case the Court First Instance of the UPC considers that a decision on the validity or invalidity of an act of an institution of EU law is necessary to reach a decision, it will have to ask the ECJ to give a ruling on this. This ruling will be binding.
- If these issues are raised before the Court of Appeal of the UPC (that is, the interpretation of the EC treaties and the validity or invalidity of an act of an EU institution), the referral to the ECJ will be mandatory.

As such, we may have in Europe an entirely new body of judicial made patent law, in conformity with the ECJ's well known judicial activism.

The current patent landscape in Europe is fragmented and complex. It is composed of the EPC, the Biotechnology Directive and national patent laws.

The purpose of the EPC was to establish a single procedure for patent granting in Europe and establish common standards to which the patents granted must obey. It is an international agreement, despite of its name, it shouldn't be confused as being part of EU law.

Regarding this patent protection system, the pre-grant stage and the post-grant stage must be fundamentally distinguished. The right which is granted to a patent applicant under the EPC comprehends a bundle of national patents. Upon request, the applicant may designate the territories on which patent protection is sought. Then, the substantive national patent law of the designated countries will apply on each corresponding country. A principle of territoriality applies and the right holder does not enjoy the same degree of protection in each MS. If the applicant designates Germany, Italy and France as the territories on which patent protection must apply, then, the German, Italian and French patent laws will be applicable to the European patent on their respective territories.

Consequently, the EPC system lacks autonomy; the substantive patent law protection it seeks to guarantee relies squarely on the substantive patent laws of the contracting states to the EPC. Under Article 64 (3) of the EPC, a European patent grants the proprietor the same rights which would be granted by a national patent in that State. Thus, infringements to the European patent are currently dealt by the national law of the designated territory.

Considering the number of potentially applicable laws, patent protection under the EPC has several inherent difficulties: the costs of enforcement (consisting on court fees, lawyers and translations) can be prohibitive. Moreover, considering that judgements on patent infringement and validity often require highly technical assessments, given that judges have different traditions, which they bring to each case before them, then, there is the risk of different judgements on the same patent. Patents with exactly the same subject matter of protection may be found to be valid and enforceable in one state and invalid and unenforceable on another.

In order to address these complications, the EU presented in 2010 the project for a EPUE and a UPC. The creation of a unified patent right, common to all the MS of the EU, has been a project of the Union since the Community's early days. All the previous attempts failed, for several different reasons.

The 1257/2012 Regulation essentially offers an applicant the possibility of requesting a unitary effect to their European patent, within 30 days of publication in the European Patent Bulletin, as to obtain EPUE protection in the EU MS participating in enhanced cooperation. The unitary effect of the patent is retroactive to the moment when the patent was granted.

The unitary effect of the patent consists on uniform protection on the entire Union, with equal effect in all participating MS. Consequently, the limitation, revocation or transfer of EPUE has effects in all the participating MS.

The proposed EPUE does not substitute the existing European patent nor national patents. As such, there will be three levels of patent protection in Europe: one being the EPUE, the other corresponding to the European patent under the EPC and the latter consisting on the substantive patent law provisions of the MS.

Supposedly, the objective of the new patent would be to enhance the internal market within the Union, by reinforcing cooperation between MS in the field of patents,

curtailing the differences regarding patent enforcement. Curtailing these barriers would meet two objectives of IP Law: the enhancement of innovation and the elimination of unjustified restraints on competition.

Knowing whether the possibility for centralized patent enforcement will favor abusive patent litigation in Europe implies the scrutiny of the concrete UPCA provisions, which we will now proceed to do.

6. From the Agreement onwards. An analysis of the concrete UPCA provisions from an NPEs perspective

In theory, the UPC system would be appealing to NPE activity: it allows for centralized enforcement of a right which grants uniform protection in a vast territory, which comprehends the most relevant European markets. Moreover, the unitary effect of the patent can be obtained without any complex validation process or added translation costs.

At the same time, we've already understood that the analysis conducted by an NPE prior to patent enforcement or negotiation is more sophisticated and complex than what is often depicted. The behavior of a NPE is largely dependent on the business model that structures it. As it would happen with any other organization, its actions are a consequence of their business goal and the purposes that defines them. Does the NPE prefer litigation or does it favor settlement? Will it take on aggressive enforcement campaigns? Does it practice defensive patent aggregation? If so, how, and relating to which technology sectors?

Comprehended on this "pre-enforcement" assessment, there is one evaluation the NPE will necessarily have to make: the thorough analysis of the existing rules of the UPCA.

At this point in our work, we would like to refer to and comment on the provisions which seem to be most important from the point of view of a claimant with the characteristics of an NPE⁴⁰.

There are some factors discouraging to NPE activity, as for example the uncertainty regarding the industry's acceptance of the new EPUE. Applicants may refuse the unitary effect of the patent altogether or choose to opt out of the UPC's jurisdiction within the transitional period. Besides, the unitary effect of the patent is as much appealing as it is risky: in one single judicial decision, the patent can be revoked with effects in all participating MS. Moreover, it is still unknown how liberal the Court will be when awarding damages. Comparing to the American system, the awards granted by the Court may be less significant. Furthermore, the UPC will work based on a loser pays system, meaning the unsuccessful party will bear the costs of the other.

There are other provisions, however, which are encouraging to NPEs. Article 32 of the UPCA, which establishes the competence of the Court is one of them. The UPC shall have exclusive competence for the actions specified on Article 32 (1) (a) to 32 (1) (i).

Article 32 (2) refers to national courts the competence on actions relating to patents and supplementary protection certificates which do not come under the exclusive competence of the Court. This provision reminds us that there will be four levels of patent protection in Europe once the UPCA comes into full force: *i*) The national patent protection systems; *ii*) the EPUE; *iii*) the European patent granted by the EPO, under the jurisdiction of the UPC; and *iv*) the European patent granted by the EPO, out of the jurisdiction of the UPC. The latter category will exist because of the seven-year transitional period established on Article 83 (1) of the UPCA. Article 83 (1) provides that "During a transitional period of seven years after the date of entry into force of this Agreement, an action for infringement or for revocation of a European patent or an action for infringement or for declaration of invalidity of a supplementary protection certificate issued for a product protected by a European patent may still be brought before national courts or other competent national authorities".

⁴⁰ In conducting this analysis, we followed LARSON's assessment of the UPCA provisions favorable to NPE litigation. See LARSON, *The Exploitation and Enforcement of Patents by Non-practicing Entities – Practices, Developments, and Future Challenge*, 2017, pp. 117-125.

The provision consists on an “opt-out” option: an NPE can place their traditional European patents (but not their EPUE) outside the jurisdiction of the UPC, seven years from the entering into force of the UPCA.

From the point of view of an NPE, this may be a window of opportunity, allowing for more flexibility in patent enforcement strategies. During a timeframe of seven years, NPEs can decide which enforcement system is more adequate for their patent enforcement campaigns (whether the unitary or the national).

Again, right holders are expected to behave strategically, which means exploring all the options a regulatory regime offers and use them to best meet their interests. From a law making perspective, however, the solutions achieved under the UPCA should be judged under the ultimate goal of internal market enhancement, through the creation of a uniform right, susceptible of uniform enforcement. This transitional period is perhaps another symptom of a regime which grants too much leeway for right holders to frame their right as they see fit, resulting on a multifaceted right, inserted into a multilayered enforcement mechanism.

Another provision which may be helpful for NPE activity is Article 33 (1) (b), regarding the possibility of joining multiple defendants in the same infringement action: an action can be brought against multiple defendants where the defendants have a commercial relationship and where the action relates to the same alleged infringement. The possibility of joining multiple parties into one infringement action seems to be at the discretion of the Court to grant, since the text of the provision reads “an action *may* be brought”. However, if the Court does grant this option, the NPE’s patent enforcement strategy presumably becomes less costly.

Article 33 (3) (b) can contribute to NPE activity as well. The provision refers to a counterclaim for revocation of a patent on an action for infringement. Article 33 (3) (b) allows the Court to refer the counterclaim for revocation to the central division and suspend or proceed with the action for infringement. This possibility consists on a form of bifurcated procedure, under which the decision on the infringement of a patent and the decision on the validity of the patent run separately from each other. In case of litigation by an NPE, a bifurcated procedure may allow having a finding of infringement prior to the decision of validity of the patent. After a positive finding of infringement, an NPE has

renewed leverage against the alleged infringer. During this period, the defendant can be “tied” in litigation and the NPE would have a more solid stance to extract royalties.

Another tactic which NPEs can make use of on enforcement campaigns is the strategic licensing of patents. Article 47 establishes the conditions under which actions may be brought when licensees are involved:

- Article 47 (2) establishes that the holder of an exclusive license in respect of a patent shall be entitled to bring actions before the Court under the same circumstances as the patent proprietor, provided that the patent proprietor is given prior notice.
- In case the licensing agreement permits it and the patent proprietor is given prior notice, the holder of a non-exclusive license can bring action before the Court (Article 47 (3)).
- If an action is brought by the license holder, the patent holder has the right to join the action before a Court (Article 47 (4)).

However, the *validity* of the patent cannot be challenged in an action for infringement brought by the holder of the license, where the patent proprietor does not take part in the proceedings (Article 47(5)). If a party in an action for infringement wants to contest the validity of a patent, they shall have to bring action against the patent proprietor. The provision may constitute an indirect incentive for NPEs to license their patents to third parties, as to make the challenge to their patent’s validity more difficult. So, if this action is brought by the licensee and the defendant wants to challenge the validity of the patent, the defendant has to bring an action against the patent proprietor, which obviously raises defense costs.

From Article 56 onwards, the UPCA grants upon the Court a series of powers which may be relevant in NPE litigation. The Court has the power to take a series of preventive measures against infringement without the hearing of the alleged infringer. These can include issuing freezing orders, ordering a party not to remove from the court’s jurisdiction any assets located on its jurisdiction, seizure of the infringing goods and their detailed description, all prior to the commencement of proceedings on the merits of the case.

On the whole of the provisional powers of the Court, Articles 61 and 62 stand out, since they correspond to EPUE injunctions, capable of banning unlicensed products containing

the patented technology from the EU countries where the UPCA applies. Article 63 allows the Court to grant a permanent injunction, which means that after a positive finding of infringement, the Court can grant an injunction against the infringer, aimed at prohibiting the continuation of infringement (the injunction can also be granted against an intermediary). In abstract, there is the possibility that the Court grants an injunction as a consequence of infringement of a patent which later on will be found invalid in a revocation procedure. The applicant may request the Court to take appropriate measures against the products found to be infringing a patent, namely, the recall of products from the channels of commerce, depriving the product of its infringing property (which obviously implies an alteration to the product). All these measures can come after the finding of infringement and before the decision on the validity of the patent. The time lapse between the two findings may give an NPE much wanted leverage against the alleged infringer; the NPE may force licensing at higher royalties, for example.

Essentially, the UPC represents an outsourcing of the judicial function on patents played by national courts. Ideally, it would have also represented the creation of a single patent right in the Union. The fragmentation of the current patent landscape in Europe and the absence of a single substantive patent right are often pointed out as impediments to NPE activity in Europe.

Under the current system the NPE runs less risks, since it can select the jurisdiction on which it wishes to obtain protection. The varied patent landscape in Europe allows NPEs to forum shop the procedural rules which they find that may be more favorable to them. It is also the case that the European system can be less expensive than obtaining individual national protection if the NPE requires protection in at least 3 or 4 jurisdictions. Even a patent whose validity is questionable can be considered valid in one country, even if invalidated in all the others.

7. From here to eternity? The UPCA at a standstill

Despite the claims against the legality of UK's ratification of the UPCA, the British Government has ratified the Agreement on the 26th April 2018. While France has ratified

the Agreement four years ago, Germany's ratification is now in jeopardy. A claim was filed before the Federal Constitutional Court of Germany, challenging the legality of the ratification under German Constitutional Law. The claim has made the list of cases that the Court wishes to hear on the current year of 2018, which suggests that the Court found the claims valid to some extent. If it is found that ratification breaches EU law, the project as it is meets its end. The Hungarian Constitutional Court has found that the UPCA breaches Hungarian Constitution, pointing out the absence of adequate mechanisms for ratification of the Agreement. Hungary is not of the EU MS obliged to ratify the UPCA, but this Constitutional challenge contributes to the discredit of the UPCA project.

The purpose of the EPUE was essentially to promote the enhancement of the internal market. A centralized patent judiciary and a unanimous patent right in the Union would prevent the fragmentation caused by multiple different substantive patent law regimes and their associated procedural rules. From the point of view of the right holder, such a regime would be less onerous, given that by request the patent holder would be able to subject the right to only one substantive regime, potentially curtailing the costs associated with patent enforcement in different jurisdictions.

As we've pointed out above, resorting to the enhanced cooperation mechanism to create a right which would be unitary was a fundamentally flawed decision. In terms of the territorial validity of the EPUE, the UPCA totally lacks ambition, considering that the provisions will only be applicable to the territories of the MS taking part in enhanced cooperation. Furthermore, in order to the Regulation to be applicable, only 13 ratifications are required, adding to the obligatory ratifications from France, England and Germany – the EU countries with a larger number of patent applications currently.

The most significant shortcoming of the UPCA is that it practically creates no provisions on patents as an object of property. There are no rules regarding, for example, the transfer of rights, the rules applicable in insolvency proceedings where patents are involved, or contractual licensing provisions, or the date of third party effect of patent transactions.

Given that the goal was creating a uniform right for the entire Union, comparable to the rights granted under the EUTMR and the RCD, the UPC project has failed. It does not create a patent regime to which all EPUE will abide to. Rather, it creates a patent that will potentially obey to any law of the EU MS participating in enhanced cooperation and which has ratified the UPCA.

One of the underlying purposes of the Project was to create a court whose competence would be as broad as possible. The long term goal would be to progressively concentrate the competence to hear transnational patent cases in Europe before one single court, which would become an entity whose jurisprudence would be an essential element of patent law in Europe. However, the framework created under the UPP is at odds with this goal. Regarding the competence to hear cases on EPUE, the UPC will be competent to hear infringement and validity cases. At the same time, the ECJ will have the competence to hear preliminary references. National courts remain of course competent to hear cases on national patents; in addition, if their state is not taking part in enhanced cooperation or is not ratifying the UPCA, they will also be competent to hear European patents. And the Boards of Appeal of the EPO will be competent to hear administrative proceedings. Under this fragmented landscape it may be unrealistic to think that “patent trolls” will come to abuse unitary patent protection. At the same time, a right holder may legitimately protect certain aspects of a specific technology with a EPUE and other aspects of that technology with a national patent. This behavior is legitimate and lawful from the part of the patent applicant; the fact that the right holder explores the loopholes as thoroughly as possible in a specific regime may not constitute an abusive behavior *per se*. From the part of the law maker, however, it is arguable whether the creation of these loopholes is desirable, considering the ultimate aim of harmonization and internal market enhancement.

Multiple judicial entities are allowed to intervene in this law making process. Having several jurisdictions ruling on transnational patents in Europe means having several different entities influencing the evolution of patent law, in potentially different ways. Indirectly, this framework promotes the existence of the problem which it sought to address: different, when not conflicting, judgements on similar substantive matters.

The UPP also creates a material discrimination which should not go unnoticed – it seems clear that Germany becomes the biggest winner in the framework created by the UPCA – and the largest German law firms in particular.

Article 7 of the 1257/2012 Regulation establishes that the EPUE as an object of property will be treated in its entirety in all participating MS as a national patent of the participating MS in which the patent has unitary effect, and in which, according to the EPC registry, the applicant has his residence or principle place of business on the date of filing of the application of the European patent. In the cases that the applicant has no residence, principal place of business or place of business in a participating MS, the law applicable

to the patent in its entirety and in all participating MS will be German law. Considering that currently the largest number of European patent applications are from applicants outside the Union, it is crystal clear that German law will be the law applicable to the majority of EPUE. Large German law firms thus have a considerable interest on the implementation of the proposed UPC, considering applicants from outside the EU will come to them and seek legal counsel on the law they're better versed in.

It is arguable whether this discrimination against the substantive patent laws of all the other participating MS is justified or not. The system created by Article 7 of the 1257/2012 Regulation locks applicants from outside the Union into German law, without other apparent reason than the EPO being based on this country. Are the German patent law provisions necessarily better than those of France or the UK? Do they serve better the interests of a South Korean or an American patent applicant? The rationale for establishing German law as the subsidiarily applicable law is therefore unclear. The provision seems to be altogether discriminatory *vis a vis* the other EU MS.

Despite of these flaws, Europe may benefit if the UPC materializes. The fear of "patent trolls" should be demystified. Considering that NPE activity depends on a myriad of factors, varying according to their business model and strategy, it is not simply the possibility of transnational patent enforcement that will encourage NPE activity. The answers for abusive patent assertion are not found on the simple restriction of the transnational enforcement of patents. Rather, adequate prophylactic measures may consist on the strict respect for the patentability criteria of novelty and non-obviousness and on the EPO resisting the pressure to grant a greater amount of patents.

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