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Lessons that Europe can learn from the US patent assertion entity phenomenon

Garry A. Gabison*†

School of Law, University of Virginia, Charlottesville, VA, USA

This paper investigates the patent assertion entities (PAEs) problem in Europe. First, it argues that PAEs should be not as active in Europe as it is in the USA simply because European inventors infringe less. They infringe less because there are fewer patents to infringe. PAEs, however, can still thrive in Europe. Using the example of the UK, this paper shows that PAEs visible activities are non-negligible even if they pale compare to the level of activities in the USA. Using the example of France, this paper shows that governments have not waited for PAEs to come their countries; some have taken steps to create their own governmentally sponsored PAE. Finally, this paper argues that the USA is trying to learn from the EU and bring fee-shifting to their system; fee shifting, in and of itself cannot solve the PAE problem. This paper also argues that the EU is taken on some of the problem as the USA and responding in similar ways with regard to injunctions; injunction remains an important part of the PAE arsenal; yet, the highest courts in both jurisdictions have made clear that infringing a patent does not automatically great a patent holder a right to exclude others. The paper concludes by discussing the Unitary Patent Court system and the impact it will have on PAE activities in Europe: some PAEs may benefit but most will still find Europe a hostile environment for their activities.

**Keywords:** patent assertion entities; Unified Patent; Unified Patent Court

1. Introduction

The White House has condemned the activities of patent monetizing entities as extorting money out of producing entities.¹ These entities ‘have had a negative impact on innovation and economic growth’.²

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*Email: garry.gabison@ec.europa.eu

†J.D. from the University of Virginia School of Law and Ph.D. in Economics from Yale University. Research Fellow at the European Commission Joint Research Centre Institute for Prospective Technological Studies.


²ibid 2. In ‘The Direct Costs from NPE Disputes’ (2014) 99 Cornell Law Review 387, James Bessen and Michael J. Meurer estimate that non-practicing entities cost accrued $29 billion of direct costs in 2011. This figure has been criticized for being overinflated. In ‘Analyzing the role of non-practicing entities in the patent system’ (2014) 99 Cornell Law Review 425, David L. Schwartz and Jay P. Kesan argue that this figure is biased upward because it includes litigations that may have been brought regardless and because monetary transfers between entities differ from costs to economists.

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Patent monetizing entities also known as patent assertion entities (PAEs), who purchase patents from other entities for the purpose of ‘acquiring and licensing patents’ or by litigating infringers. Thus, contrary to NPE like universities or research centers, they do not invest in research and development nor do they invent. Contrary to practicing entities, they do not purchase patents for the purpose of using them. They operate in a myriad of industries and they follow different business models. PAEs are rent-seeking entities without productive upside – in most cases.

Regardless of their business model, these entities present major downsides that have policy-makers wondering what can be done. In the USA, Congress passed the Leahy-Smith America Invents Act (AIA) in 2011 to address some issues presented by these entities. For instance, policy-makers put in place a new joinder rule. This joinder rule aims at discouraging PAEs suits because under this Act, a plaintiff can only join alleged patent infringers if the alleged infringing comes out of the same facts instead of the same patent and hence under this rule, PAE cannot take advantage of economies of scale by

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3Non-practicing entities encompass a multitude of entities, which live along a spectrum. At one end of the spectrum are inventors who do not exploit. Universities and research centers often perform research, file a patent based on their research, but do not develop products or services that utilize these patents (but may license them). At the other end, are PAEs. US Government Accountability Office, ‘Assessing Factors That Affect Patent Infringement Litigation Could Help Improve Patent Quality’ (22 August 2013) GAO-13-465 at 20 [GAO Study henceforth].

4In Pragmatus AV LLC v Facebook Inc 769 F Supp 2d 991, 995 (ED Va 2011), the district court states that the plaintiff is “non-practicing entity”, meaning that it does not research and develop new technology but rather acquires patents, licenses the technology, and sues alleged infringers. [Plaintiff]‘s main line of business is enforcing its intellectual property rights, and a large part of that task involves threatening to file lawsuits.’


6In ‘Missing the Forest for the Trolls’ (2013) 113 Columbia Law Review 2117, 2126, Mark A. Lemley & A. Douglas Melamed, identified three principal business models that PAEs use: (1) they sue and hope for a big jury award; or (2) they sue and negotiate quickly a low-value settlement (leveraging high litigation costs); or (3) they accumulate large quantities of patents and licensing this portfolio (under the threat of suing non-licensed alleged infringers).

7Some have argued that PAEs have some upside. See e.g. Catherine M. Cottle & Robert P. Greenspoon, ‘Don’t Assume a Can Opener: Confronting Patent Economic Theories with Licensing and Enforcement Reality’ (2011) 12 Columbia Science & Technology Law Review 194, 215(discussing how ‘NPEs also introduce liquidity into technology markets’ because ‘when acquiring rights to an individual’s or a company’s patent or portfolio, the NPE acts as a technology broker and facilitates a robust technology marketplace’).

8Congress, among others, ha[s] raised concerns that patent infringement litigation by NPEs is increasing … AIA mandates that GAO conduct a study on the consequences of patent litigation by NPEs.’ cf GAO Study (n 4) 3–4.

9In ‘The America Invests Act: Slaying Trolls, Limiting Joinder’ (2012) 25 Harvard Journal of Law & Technology 673, Tracie L. Bryant argues that the AIA limits the joinder rule in order to address non-practicing entity suits. cf Executive Office of the President (n 2) states that ‘the impact of aggressive litigation tactics by PAEs and others was not widely known during the seven years the AIA was under negotiation’ putting into doubt that the AIA’s primary goal was to address NPEs.

joining all alleged infringers. The AIA impacted litigation procedures in order to increase the litigation costs. Preventing joinder has led to more PAE suits and between 2010 and 2013, the number of non-NPE cases has remained relatively stable while the number of PAE cases has increased almost 400%.

Since policy-makers perceived that their previous efforts did not yield sufficient results, in 2015, US representatives put forward a bill to re-address the PAE problem. They identify startups and small and medium enterprises (SMEs) as being in need of more protection: the AIA impacts the litigation rules but it does not address the majority of PAE demands that never make it to litigation. Some European policy-makers have become more concerned with the PAE phenomenon and fear that it will be imported to Europe.

This paper first look at whether PAEs are active in Europe. This paper argues that PAEs are not as likely to be as active in the EU because EU has fewer patents to purchase, to enforce, and to infringe. It uses the case study of the UK and France to show the limitation and extent of the PAE activist in Europe. First, about 11% of patent suits in the UK are allegedly brought by PAEs. This number is much smaller than the US number; the reason behind the difference could be attributed to the procedural enforcement of patent claims. Second, the French government may not have been among the policy-makers concerned about the PAE phenomenon; in fact, they embraced it and created its own PAE. While this paper does not discuss Germany individually, PAE activities in Germany are discussed at length throughout the paper and shows that PAEs have enjoy success there.

13 The GAO study (n 4) states that multi-defendant suits are concentrated in the software industry. The GAO study also reports that ‘lawsuits involving software-related patents accounted for about 89 percent of the increase in defendants during this period’. ibid 14. NPEs are associated with multi-defendant suits, which would indicate that NPEs act frequently in the software industry.

14 The GAO study (n 4) reports that ‘the overall number of defendants in these cases increased from 2007 to 2011 by about 129 percent over the 5-year period’ but ‘operating companies brought most of these lawsuits’. ibid 14. ‘From 2000 to 2010, the number of patent infringement lawsuits fluctuated slightly, and from 2010 to 2011, the number increased about 31 percent’. ibid14. This large increase may be due to an end-game problem associated with the AIA: knowing that they will not be able to sue multiple defendants together, companies rushed to the courts before the rule became effective. Therefore, the AIA may have either incentivized operating companies to file suits before it became effective or operating companies may join multiple defendants more frequently than NPEs.

15 Fiona M. Scott Morton & Carl Shapiro, ‘Strategic Patent Acquisitions’ (2014) 79 Antitrust Law Journal 463, Figure 1.

16 cf Executive Office of the President (n 2).


18 Colleen Chien, Startups and Patent Trolls (2104) 17 Stanford Technology Law Review 461. Table 1 shows that, from a sample, companies fight out of court (24% of the time) about twice as many times as they fight in court (11%). They also settle 18% of the time.

19 The European Commission launched a study in 2014 to investigate the issue brought by PAE in the ICT industry. Marcel de Heide, Oana van der Togt, Noëlle Fischer, & Jos Winnink, ‘Study on the changing role of Intellectual Property in the semiconductor industry – including non-practicing entities’ (2014) European Commission. Other studies are underway but the results have yet to be made public.


Finally, this paper looks at the lessons learned from the US policy-makers’ effort to address their PAE problem. This paper argues that the differences in fee shifting and injunction contribute to the different PAE activities level between the EU and the USA. The procedures are importance in curbing PAE activities. Next, the section concludes by discussion the Unified Patent Court (UPC) system and comparing the UPC to the USA. Federal patent enforcement system. While the UPC and the US system have similarities, the main difference should assure that PAEs do not propagate in Europe to the same level as in the USA.

2. Are they in Europe?

Patent assertion entities are companies ‘whose business model primarily focuses on purchasing and asserting patents’. They have also been referred as patent monetization entities or patent troll. Their characteristics vary greatly from entity to entity but one constant remains: they create an added cost on innovative companies – sometimes referred as an innovation tax. This section investigates the case of the UK and France.

2.1. Europe is not a fertile ground for PAEs

There are only marginally fewer active companies in Europe than in the USA: in 2008, the USA had over 27 million active companies whereas the Europe Member State had around

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23Some NPEs simply buy patents from others for the purpose of asserting them for profit; these NPEs are known as patent monetization entities (PME). cf GAO study (n 4) 2. But ‘[t]he Federal Trade Commission uses the related term ‘PAEs’ to focus on entities whose business model solely focuses on asserting typically purchased patents. As such, the PME term also encompasses entities that might use third-party NPEs to assert patents for them.’ ibid footnote 6. For an in-depth definition of non-practicing entities and patent troll, see e.g. Lemley et al (n 8).

24See e.g. In re Qimonda AG 462 BR 165, 174 (Bankr ED Va 2011) (“non-practicing entity” or “NPE” (sometimes disparagingly referred to as a “patent troll”)). ‘Not all NPEs are referred to as “patent trolls”. For example, research universities may develop patented technology but not practice the patents.’ Cascades Computer Innovation LLC v RPX Corp Case No 12-CV-01143 YGR, note 3 (ND Cal 2013)

25Executive Office of the President (n 2) identified seven characteristics for these kind of patent assertion entities:

1. They do not ‘practice’ their patents; that is, they do not do research or develop any technology or products related to their patents; 2. They do not help with ‘technology transfer’ (the process of translating the patent language into a usable product or process); 3. They often wait until after industry participants have made irreversible investments before asserting their claims, 4. They acquire patents solely for the purpose of extracting payments from alleged infringers; 5. Their strategies for litigation take advantage of their non-practicing status, which makes them invulnerable to counter-claims of patent infringement. 6. They acquire patents whose claim boundaries are unclear, and then (with little specific evidence of infringement) ask many companies at once for moderate license fees, assuming that some will settle instead of risking a costly and uncertain trial. 7. They may hide their identity by creating numerous shell companies and requiring those who settle to sign non-disclosure agreements, making it difficult for defendants to form common defensive strategies (for example, by sharing legal fees rather than settling individually). (ibid 4)

24 million active companies. Therefore, PAEs should have as many opportunities to make demands from companies in Europe as companies in the United. This section investigates why PAEs could be more or less active in Europe than in the USA. This section argues that PAEs are not as prolific in Europe because European companies infringe less and PAEs can profit less in Europe.

PAEs may be less active in Europe because European innovators infringe less. First, companies in Europe infringe less because Europe has fewer patents on which to infringe.

Figure 1 shows the number of patents granted by the US Patent and Trademark Office (USPTO) and the European Patent Office (EPO) per year from 1999 to 2014. The USPTO grants 2 to 5 times as many patents as the EPO. Therefore, PAEs making legitimate claims have fewer opportunities to make these claims.

Second, since there are fewer patents in Europe, PAEs should have fewer opportunities to purchase patents to leverage against companies. Since PAEs, by definition, purchase their patents from somewhere else, the lower number of patented innovation gives fewer opportunities for innovators to sell to PAEs; hence, PAE activities are thwarted before they even start.

Europe has fewer patents for two reasons. First, fewer inventions are patents because covered subject matters differ between European Patents (EP) and US patents. More specifically, in the USA, software innovators can patent and copyright their software innovations. In Europe, software should ‘only’ be copyrightable under the European Patent...
Convention (EPC) because the EPC explicitly prohibits the patenting of ‘programs for computer’. Similarly, business methods remain patentable under certain circumstances in the USA but are not patentable in Europe. Second, fewer inventions are protected because it is arguably more difficult to obtain a patent in Europe than in the USA. This difference makes the patent system in Europe arguably stronger than in the USA.

Second, companies in Europe infringe less because European companies know how to avoid infringing. Patents in Europe have more accurately defined boarders; hence, companies can avoid infringing on other’s patents because they know where the innovation covered by these patents stops and when they start. This argument has been made in the context of software: US software patents have characteristics such as their broadness

(2)) while copyright protection are valid for up to ‘the life of the author and 70 years after the author’s death’ (17 USC § 302). This longer protection comes at a lower cost. American Intellectual Property Law Association, ‘Report of the Economic Survey 2013’ (2013) cites $350 copyright fees and $10,000 patent fees for electrical/computer in 2012. For more information on the fee schedules, see US Copyright Office <http://copyright.gov/docs/fees.html>; United State Patent and Trademark Office (USPTO) <http://www.uspto.gov/web/offices/ac/qs/ope/fee010114.htm> accessed 15 December 2014. Copyright protects against literal copying. ‘In the language often used by courts interpreting the Copyright Act, this issue boils down to the protectibility of literal copying of “non-literal” elements of a software program.’ cf Weiser (n 29) footnote 13. The distinction been the two is germane to this paper.

Countries that ratified the Convention on the Grant of European Patents of 5 October 1973 (The European Patent Convention) subscribed to Article 52(1): ‘European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application’ but excludes: ‘programs for computers’. ibid 52(2)(c). 38 countries have subscribed to this convention. (<http://www.epo.org/about-us/organisation/member-states.html>). The EPO reaffirmed in 2009 that it follows European patent law as laid down in the European Patent Convention (EPC) adopted by the 38 member states of the European Patent Organisation. Under the EPC, a computer program claimed ‘as such’ is not a patentable invention (Article 52(2)(c) and (3) EPC). Patents are not granted merely for program listings. Program listings as such are protected by copyright.


Mark A. Lemley and Bhaven Sampat, ‘Examiner characteristics and patent office outcomes’ (2012) 94 Review Economics & Statistics 817, 824 (using a sample of 2,761 patents that were both filed at the USPTO and the EPO in 2001, they found that 52.1% of the patents granted by the USPTO were also granted by the EPO but 88% of patents granted by the EPO were also granted by the USPTO).

Matthis de Saint-Georges & Bruno van Pottelsberghe de la Potterie, ‘A quality index for patent systems’ (2013) 42.3 Research Policy 704, 714 (empirically comparing patent systems across nine criterion and concluding that:

The EPO and the patent offices of the UK and several Nordic countries have the highest-quality metrics. At the other extreme are the U.S. and several Commonwealth countries, which have the lowest indicators of quality. The medium-high group includes many European countries (e.g., Austria, Poland, France), the major Asian economies (e.g., Japan, China, South Korea, Malaysia) and several other countries (e.g., Russia, Switzerland).
have been flagged as leading to more PAE activity. In fact, PAE operate heavily in the software industry in the USA, to the point that PAE activities have been blamed for the increase in software litigations. Thus, having more accurately defined patents in the EU can help taper PAE activity.

PAEs may be less active in Europe because Europe is a less profitable market. First, PAEs profits from suing in Europe because while the EP can be valid in multiple jurisdictions to enforce across Europe it requires suing in every jurisdiction individually. Therefore, the threat of suing is not as potent because a PAE who sues in one small European jurisdiction cannot recoup as much damages as suing for damages across the USA.

Second, European countries allow to shift attorney’s fees on the losing party. This fee shifting arguably makes the threat of litigation less potent because alleged infringers have more incentive to defend claims because they may not have to pay for the litigation costs.

Third, PAEs in the USA can target and have targeted technology producer but also technology users. This type of PAE activities has led some to argue in favor of an innocent user defense in the USA, however, these demands may fall on deaf ear in Europe where most countries already have prior user rights.

This section argues that for a number of reasons PAEs should be less active in Europe than the USA. The next section argues that these reasons have been exaggerated. It deconstructs every reason one after the other.

2.2. PAEs can still thrive in Europe

This section investigates each argument presented above and addresses them individually. First, innovators may patent as much in Europe as they do in the USA and in fact, Figure 1 can be misleading. In Europe, PAEs can choose between patenting at the European level and patenting at the Member State level. The patent costs drive the decision to patent in one country or multiple countries. For instance, a French patent costs about €6,500 over

36The GAO Study (n 4) states that software patent litigations have increased more rapidly than litigation not involving software between 2007 and 2011 and a large portion of this increase has been attributed to PAEs.
37Stefania Fusco, ‘Markets and Patents Enforcement: A Comparative Investigation of Non-Practicing Entities in the U.S. and Europe’ (2014) 20 Michigan Telecommunication Technology Law Review 439 (finding evidence of limited NPE activities in European countries and attributing the difference with the USA to (1) the availability of funding specifically for NPE activity, (2) culture, and (3) the size of the targeted market).
38ibid 454 (arguing that Europe has been as a less fertile ground for NPEs because NPEs struggle to find funding, they face different judicial systems, the market (and hence potential profits from acting) does not justify the cost of litigating, and the litigation culture differs).
39Ibid.
40Ibid.
43David J. Kappos & Teresa Stanek Rea, ‘Report on Prior User Rights’ (2012) USPTO Report to Congress (discussing the prior user rights in France, Denmark, Germany, the UK, as well as Japan and comparing these jurisdictions to the USA).
its lifetime, a German patent costs about €14,000, and a British patent costs about £5,000. In comparison, an EPO patent costs about €25,000; thus, individually applying to a patent in France, Germany and the UK may be cheaper than an EPO patent. Therefore, an innovator cannot justify the cost of an EPO patent unless he or she plans to operate or license his or her patents in multiple jurisdictions.

Figure 1 only accounts for EP patents granted by EPO and this number underestimates the number of patents active in Europe. A true measure of the patent numbers in Europe would require looking at single country patents and the patent families across all the EU Member States and the EPO; this number could then be compared to the US numbers. In other words, PAEs may well have more patents to choose from in Europe than in the USA and more patents to purchase.

Even assuming that EU has fewer but stronger patents than the USA, these patents contradictorily impact PAEs and their litigation incentive. On the one hand, since PAEs in Europe can rely on stronger patents, PAEs should succeed more often in their demands because patent validity should not be questioned as much at trial and the trial should focus on whether infringement occurred. On the other hand, because they might believe they would succeed more often, they may be incentivized to bring more nuisance claims and alleged infringer may not want to run the risk of challenging whether they infringed at trial. The overall behavioral effect is unclear.

Second, it is also misleading to assume that software patents do not exist in the EU. In spite of computer programs not being a valid subject matter, the EPO has granted patents ‘for a computer-implemented invention’ when ‘a technical problem has to be solved in a novel and non-obvious manner’. EPC signatory countries have put into law the EPC. This draws the distinction of ‘programs for computer’ and ‘computer-implemented invention’ around the effects of executing a program: Running the program must lead to a technical effect such as controlling an industrial process or machinery or reduce noise distortion. cf EPO Publication (n 31) 3. The EPO draws the distinction of ‘programs for computer’ and ‘computer-implemented invention’ around the effects of executing a program: Running the program must lead to a technical effect such as controlling an industrial process or machinery or reduce noise distortion. cf EPO Publication (n 31) 14. For a discussion of software patentability comparing USA and EU, see e.g. Michael Guntersdorfer, ‘Software Patent Law: United States and Europe Compared’ (2003) 2 Duke Law & Technology Review 1; Susan J. Marsnik and Robert E. Thomas, ‘Drawing a Line in the Patent Subject-Matter Sands: Does Europe Provide a Solution to the Software and Business Method Patent Problem?’ (2011) 34 Boston College International and Comparative Law Review 227 (2011).
and have implemented and interpreted the EPC in inconsistent ways; however, they all grant patents for software-related invention. Software patents in the EU as in the USA are defined upon functionality; hence, the difference may well rest on the patent drafting.

Third, even PAEs activities are less profitable in Europe than in the USA because they may well remain profitable. While it may not be profitable to pursue an alleged infringer in all 32 EPC jurisdictions, some jurisdictions in Europe, such as France, Germany, and the UK, are large enough to justify making demands and following through with the litigation threat because the potential benefits of making a demand outweigh the costs. For instance, Vringo, an alleged patent troll, has filed suits against ZTE, a cellular phone manufacturer, in the UK and Germany among others separately to enforce a standard essential patent (SEP) to a cellular phone standard. Vringo has already won the UK case and will soon be heard in front of the German court.

Interestingly, this example also shows that a PAE can elect to pursue infringement of only certain patents in each jurisdiction. In the case of Vringo, it challenged different European patents in each jurisdiction: it challenged 4 patents in Germany but only 2 in France. A PAE can forum shop: a PAE can select the jurisdiction where it may find it cheaper or easier to get a favorable judgment, adapt its strategy to this jurisdiction (e.g. requesting an

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52 cf Marsnik et al (n 51) 302–20 who discusses how the UK courts and the German courts have interpreted and implemented the EPC and the no-patent-for-software rule.

53 In ‘Sources and characteristics of software patents in the European Union: Some empirical considerations’ (101) 23 Information Economics and Policy 141, Francesco Rentocchini constructs a database of European software patent: Because software is not an official recognized patent category, the author uses a search algorithm to construct a database of software patent. He finds that over 30,000 software patent have been granted in Europe by the EPO – in spite of patent being officially un-patentable.

54 Vringo Inc v ZTE Corp No. 14-cv-4988 (LAK) (SDNY Jun 3 2015). While Vringo would classify as a larger NPE, the opinion explains that Vringo did not developed the patents but purchased them from Nokia. ibid ‘Although they never say so bluntly, ZTE contend that Vringo are “patent trolls”’ Vringo v ZTE, EWHC 3924 (Pat), HC-2012-000076 (England and Wales High Court (Patents Court) Decisions 28/11/2014)

55 Vringo v ZTE, EWHC 3924 (Pat), HC-2012-000076 (28/11/2014)(establishing that Vringo’s patent was valid as amended and was infringed by ZTE). Other cases have also been settled out of court Vringo v ZTE, HC12B04711 (2015).


‘We are pleased with the claims that were held valid by the German Patents Court and look forward to the hearing on infringement of these claims in the first quarter of next year,’ said David Cohen, Vringo’s Chief Legal and Intellectual Property Officer.


57 Vringo also filed cases against ZTE in the Netherlands (case C/09/470109/KG ZA 14-870, Oct. 24, 2014)(ordering a detention of products), France (Tribunal de Grande Instance de Paris, challenging infringement of patents EP 1,186,119 and EP 1,221,212), Spain (Commercial Court No. 11 of Madrid, challenging the infringement of patent ) among others. ibid.
injunction), and leverage the judgment in one jurisdiction to get an easier settlement in another. This jurisdictional issue will soon be rendered moot with the adoption of the UPC system; this issue is discussed in more details in Section 3.

Fourth, while attorney’s fees can discourage litigation, it may not discourage demands. PAEs often make demands without suing. PAEs that file nuisance suits do not rely on court to thrive; however, they may need to file a suit from time to time to give weight to their demand letter threats. However, ‘loser pays’ rule does not dis-incentivize all nuisance suits: defendant of nuisance may still find it more efficient to settle than to go to court for low value settlement none the least because they must go through the long litigation to recoup some of their litigation costs. PAEs are repeat players and some PAEs rely on business model that focuses on volume instead of large claim; thus some PAEs thrive on these low value settlements.

Furthermore, even if alleged infringers can recoup the litigation fees at the end of the trial, if they elect to fight a PAE demand in court, they will need to pay the cost upfront; some liquidity strapped alleged infringers may not be able to take up the fight. Considering that PAEs often target small companies, PAE should be as incentivized to make demands from companies in Europe than in the USA. This fee shifting issue is investigated in more details in Section 3.1.

3. UK and France: two contrasting approaches

PAEs may have to adapt their business model in Europe. For instance, they may decrease the size of their demand and instead rely on volume. But, they should operate in Europe. The next section looks at the case of the UK and France to illustrate how PAEs have operated in these countries.

3.1. The case of the UK

PAEs are active in the UK. One study found that ‘[non-practicing entities] account for eleven percent of patent suits litigated in the UK over the entire 2000–2010 period’. The authors of the study explain how they classified the various NPEs and focus their argument on PAEs, a NPE subset. The authors argue that the USA and UK are similar in many respects including patent law, but, in the UK, only 12.3% of patents suits are brought by PAEs whereas in the US this number is above 25%. They reasoned that the legal systems in these countries differ only on the availability of fee shifting: in the UK, the loser pays – on top of his or her own litigation costs – on average two third of the winner’s litigation

58 Colleen Chien, ‘Startups and Patent Trolls’ (2014) 17 Stanford Technology Law Review 461 (discussing the different responses that start-ups have followed after receiving a demand letter and show that a minority went to court to fight the case or settle).
60 ibid.
61 See the second business model employed by PAEs. cf Lemley et al. (n 8) 2126.
62 Chien (n 59) reports that from a survey of 307 venture capital or investors and startups, 35 had received demands and 75% of the companies reported revenue under $10 million.
63 cf Helmers et al (n 21).
64 ibid 543.
65 ibid 525.
costs whereas in the USA, each party pays its own litigation costs. However, this argument may overly simplistic because fee shifting is not the only significant difference.

Others have argued that, beside attorney’s fees, PAEs may not be as active in the UK because of other procedural differences. First, plaintiffs may request to have a jury trial for civil cases in the USA – including patent cases – whereas patent cases in the UK are trialed in front of a specialized panel. In the UK, this specialized panel leads to a lower appeal rate and lead to fewer appeals that overturn the lower court decision than US jury panels. Therefore, a jury panels indirectly increase litigation costs because defendant or plaintiff appeal more often. Regardless of whether jury panel lead to more false positive, since the parties must ex-ante account for a higher chance of appeal (filed by them or the opposition), jury trials indirectly increase the litigation costs; thus, they make the suit threat more potent and help PAE proliferate and prosper in the USA as compared to the UK.

Second, the standard of proofs between the UK and the USA differ as well. Specifically, when a defendant challenges a patent’s validity, the presumptions differ: in the USA, patents are assumed to be valid whereas, in the UK, patent-invalidity counterclaims are investigated more in depth. Since UK is not as friendly to patent litigation plaintiffs, the PAE suit threat has less weight in the UK.

Since PAEs cannot as potently yield the lawsuit threat in the UK as in the USA, PAEs are not as active in the UK as in the USA. Or so goes the argument.

First, if policy-makers worry about the impact of PAEs on the court system (e.g. clogging the dockets), then the lower rate of PAE suits in the UK as compared to the US supports that PAEs are not as a much of a problem; however, if policy-makers worry about the PAE impact on innovation and start-ups, then lawsuits are misleading about the PAE impact because lawsuits represent the visible part of PAE activities. The US example shows that PAE activities also involve demands, which are settled without court intervening, while

66 ibid 541–546.
69 ‘[T]he costs of taking a patent case through appeal ranged from $650,000 to $4,500,000.’ ibid 186.
70 This argument does not depend on whether jury trials are appealed more often because they lead to more erroneous mistakes that are overturned on appeal. Jury trials could also have more procedures such as jury instruction that are more open to appeal. As such, I would argue that it does not matter whether juries are more correct than judge panels but the simple prospect of having an appeal and the potential of having to retrial a case because of jury instruction may sufficiently deter defendants from fighting the case in court.
71 35 U.S. Code § 282. Microsoft Corp v i4i Ltd Partnership, 564 US __, 131 SCt 2238 (2011)(holding that clear and convincing evidence must be presented in order to overturn the presumption of validity).
72 Luke McDonagh, ‘Exploring perspectives of the Unified Patent Court and Unitary Patent within the business and legal communities’ A Report Commissioned by the UK Intellectual Property Office, 12 (2014) (stating that ‘data .. demonstrate that a high proportion – around two thirds – of UK PHC decisions result in revocation of the disputed patent, showing that the UK courts take the question of patent validity very seriously’ and that because ‘the UK deals with infringement and validity decisions together, … regardless of whether a case is filed as an infringement claim or as a revocation claim in the UK, the PHC conducts a stringent validity analysis.’)
lawsuits represent the minority of demand outcomes. The out-of-court settlements take the form of royalties or licensing agreements, often referred as stick licensing; however, these activities are unobservable in both the USA and the UK.

Second, even if defendants can recoup a large portion of their litigation costs, cash-strapped defendants, like start-ups, do not benefit from the UK fee shifting. These companies would need to litigation to a final judgment in order to recoup these fees: these companies could still find it cheaper (and faster) to agree to a licensing fee than go to court. In other words, the threat value that PAEs can extract may be lower in the UK as compared to the USA but they still have room to operate.

The UK may be in a better position than the USA with regard to PAEs but they may not have all the answers. The UK patent office has expressed concern that passing to the European Unitary Patent Court system could need to an increase in PAE presence. This issue is discussed in more details in Section 3.2.

PAEs are active in the UK. The market is not too small not to attract PAEs and their suits as the Vringo case as demonstrated. PAE activities are possibly only starting in the UK and that is why the rate of PAE litigation is so low. France present such an example where PAE activities are becoming fashionable – arguably too fashionable for the general welfare.

3.2. The case of France

France has been quite a fast study. The French government did not wait for PAEs to arrive to France to act: it brought PAEs to France itself. In 2010, the French government created its own PAE called France Brevets. France Brevet is entirely (directly and indirectly) governmentally funded. France Brevets describe itself as ‘one of the very first sovereign investment funds fully dedicated to patents with a worldwide perspective… to build strategic patent positions and monetize them through effective and focused licensing efforts’. In December 2013, France Brevets filed its first lawsuits against LG Electronics of Korea and HTC Corporation of Taiwan, cell phone manufacturers both in the USA and in Germany. In 2014, LG settled the case by agreeing to get a license.

73 cf Chien (n 19)
74 cf McDonagh (n 73) 12.
75 Constituée en mars 2010 sous la forme d’une société par actions simplifiée, France Brevets est dotée d’un capital de 100 M€ à terme, à parité entre la Caisse des dépôts agissant pour le compte de l’Etat dans le cadre du Programme d’Investissements d’Avenir et la Caisse des Dépôts intervenant pour son compte propre’ which translates to: Established in March 2010 as a joint stock company, France Brevets has a capital of €100 million which were invested in equal shares by la Caisse des dépôts on behalf of the State as part of the Program on Investments for the Future and la Caisse des dépôts acting for its own account. (author’s translation) <http://www.caissedesdepots.fr/activite/domaines-daction/investissements-davenir/france-brevets.html> accessed 22 July 2015.
77 Bourdu (n 22).
78 France Brevets sued through ‘NFCT, LLC (“NFCT”), a Delaware limited liability corporation with its principal place of business in Marshall, Texas. NFCT is a wholly-owned indirect subsidiary of France Brevets’’ NFC Technology LLC v France Brevets SAS, No. C 14-1225 SI (ND Cal 2014); NFC Technology LLC v HTC America et al, 2:13-CV-01058-JRG (ED Tex 2013).
from France Brevets. In 2015, France Brevets further filed a suit against Samsung as well.

France Brevets argues that it has a different business model and is the champion of small innovators and start-ups who seek to collect licensing fees. First, it does not purchase or hold patents; instead, innovators retain the patents and France Brevets seek and negotiate patent licenses with potential clients after aggregating them. If the negotiations fail and the potential client allegedly keeps infringing the patents without paying royalties, France Brevets brings a suit on behalf of the innovator. France Brevets assumes the litigation costs and if successful, France Brevets collects between 30% and 60% of the revenues (without cap). They argue that the HTC suits came after over a year of failed negotiations and as such differ from traditional patent trolls. France Brevets further argues that they follow a transparent policy and when they negotiate, the potential clients know what patents they seek to license and who holds it. As such they believe they are more akin to a patent pool. The variant on the traditional PAE models looks minimal and has led to comparison with PAEs.

France Brevets means to act as an intermediary but its actions were received with much criticism. France Brevets is not the first governmentally sponsored PAEs and its success

82 Convention du 2 septembre 2010 entre l’Etat, l’Agence nationale de la recherche et la Caisse des dépôts et consignations relative au programme d’investissements d’avenir (action ‘France Brevets ’), JORF n°0205 page 16153 (Sept., 4 2010) <http://www.legifrance.gouv.fr/eli/convention/2010/9/2/PRMX1022556X/jo/texte> accessed 22 July 2015. France Brevets, according to its expressed goals, aims at helping small and medium size companies to raise revenues from intellectual property and at providing them with the means to secure licenses. As such, France Brevets asserts that it champions the interests of the small and give the example of one company: ‘Laurent Tonnellier’s testimonial, CEO of mobiLead, a French start-up creating outstanding innovations in the Internet of Things field. Its founder, and inventor of the new generation of QR Code, is recognizing France Brevets for its professional technical expertise and long term vision.’ <http://www.francebrevets.com/en/content/our-values> accessed 22 July 2015.
83 “France Brevets” est une structure d’investissement qui a vocation à acquérir des droits sur les brevets issus de la recherche publique et privée, à les regrouper en grappes technologiques et à les licencier, à des conditions de marché,’ which translates to: ‘France Brevets is an investment fund that intends to acquire rights over patents developed through public and private research, to regroup them into a pool, and to license them. Convention du 2 septembre 2010 (n 83) (author’s translation) 84 Fabienne Schmitt, Brevets : Une PME française gagne contre HTC, Les Echos (Mar. 27, 2015) <http://www.lesechos.fr/27/03/2015/lesechos.fr/0204261458707_brevets—une-pme-francaise-gagne-contre-htc.htm> accessed 22 July 2015.
85 ibid.
86 ibid.
87 France Brevets acts in the most transparent manner and will disclose publicly every patent and licensing programs’ conditions within the limit of our confidentiality agreements.’ <http://www. francebrevets.com/en/content/our-values> accessed 22 July 2015.
88 cf Bourdu (n 22).
89 cf Lemley et al (n 8).
90 cf Bourdu (n 22).
seems to have spurred on other governmentally funded patent monetizing entities. Beyond the traditional PAE problems, France Brevets has raised concerns about who it pursues and whether it could target companies ‘to advantage domestic firms by harassing foreign competitors’.

However, cellular phone companies all operate worldwide and rely on global value chain and global markets to reach economics of scales. A strategy focusing on creating a tax on foreign goods seems shortsighted. In the case of France Brevets, it has, thus far, only filed suits against Asian phone manufacturers. This strategy may well help French phone manufacturer like Alcatel-Lucient in the USA and German markets – where the suits are filed – in the short term by taxing the activities of its competitors; but it also opens the door for retaliations from governmentally sponsored PAE, in the much larger Asian markets. It remains to be seen whether Alcatel-Lucient and other French telecom equipment manufacturers will feel the effect of France Brevets’ actions.

In other words, in the long term, this strategy could harm more than help local manufacturers: if France Brevets helps French small and medium size enterprises, as its mandate describes, in return, it potentially harms French multinational. The retaliation argument has been made before – for instance in the dumping context. All parties involved, whether PAEs or companies, are repeat players in these markets and the lessons learned from dumping enforcement should also apply to government-sponsored patent enforcing entities.

The other issue with governmentally sponsored PAEs is that they harm their home consumers. These PAEs impose a tax on certain products and this tax will inevitably be passed onto consumers. These extensions of governmental activities indirectly harm their citizen. Considering the balance of harm to citizen and revenues to innovators, creating these PAEs could be pareto-improving or pareto-harming decision.

If the mandate of France Brevets is to be taken at face value, it could, in the long run, serve as a patent elf. It could help inventors and encourage innovation because it would provide inventors with the opportunity to raise more funds from their patented innovation. No allegations have been made that France Brevets is enforcing ‘useless’ patents or filing frivolous suits; the criticisms have focused on the cost they impose on companies.

94 Williams (n 92).
95 See e.g. Bruce A. Blonigen & Chad P. Bown, ‘Antidumping and retaliation threats’ (2003) 60 Journal International Economics 249 (empirically finding anti-dumping allegation are less likely against country in which relation exposure is higher).
96 A pareto improvement occurs when overall societal welfare increases: The welfare increase for citizen innovators more than outweighs the welfare decrease from their citizen consumers.
97 Damien Geradin, Anne Layne-Farrar, and A. Jorge Padilla, ‘Elves or Trolls? The role of nonpracticing patent owners in the innovation economy’ (2011) 21 Industrial and Corporate Change 73 (arguing that non-practicing entities can have an upside).
98 Lemley et al (n 8) 2124–25.
Governmentally-sponsored PAEs can help small innovators find individuals who want to implement innovations\(^\text{99}\) and help start-ups raise more funds.\(^\text{100}\) Studies have found that innovators often struggle to sell\(^\text{103}\) or license their patents due to the licensing-related transaction costs\(^\text{102}\) and only a minority of companies licenses out their patents\(^\text{103}\) whereas companies often wish to license more.\(^\text{104}\)

Governmentally-sponsored PAEs could help provide the missing expertise in setting licensing fees and finding partners.\(^\text{105}\) Korea has such an intermediary that has proven useful for SMEs.\(^\text{106}\) These SMEs have used the services of the Korean Integrated Contract Manufacturing Service to enhance their collaborative efforts and help them ‘diffuse their innovative technologies’.\(^\text{107}\)

These PAEs with upside have been found wanted.\(^\text{108}\) Governmental patent monetizing entities can play this intermediary role\(^\text{109}\) without necessarily imposing the deadweight loss associated with PAE and the nuisance suit. It remains to be seen whether France Brevets will help technology transfer or only taxes it.

4. A tug of war between policy-makers and NPE

This section investigates how policy-makers have addressed or attempted to address the PAE situation. First, it looks at how the USA is putting in place measures that would make its patent enforcement system more akin to the European enforcement system. The USA hopes to reduce the negative impact of PAEs but it remains unclear whether these changes will solve the problem. Second, it looks at how the Unitary Patent Court system

\(^{99}\)See e.g. Cottle et al (n 9).

\(^{100}\)‘[P]atent enforcement has become financially undoable for small startup companies. NPEs provide an avenue to protect assets that would otherwise be lost due to financial constraints.’ Colleen Chien, ‘Patent assertion and startup innovation’ New America Foundation, Open Technology Institute White Paper, 18 (2013).


\(^{103}\)27% of Japanese companies declared to license patents to non-affiliated partners while the corresponding figure for European is 20%.' ibid 12.

\(^{104}\)45% of European companies and 80% of Japanese companies that already license want to license more. ibid Table 11 & 12.

\(^{105}\)ibid Table 13.


\(^{107}\)ibid 296–99 (2010)


\(^{109}\)cf Chien (n 102)
will soon harmonize the patent system across the European signatory countries and whether this unification will incentivize PAE activities in the same way PAEs operate across all 50 US states in Federal courts.

4.1. Lessons learned: are the USA and EU converging?

This section discusses some specific points where the USA and the EU have converged. First, it discusses proposed changes to the AIA and the fee shifting rule. Second, it discusses injunctions and an EU recent decisions that aligns the EU a little closer to the USA.

4.1.1. Fee shifting

The EU in general and the UK in particular has been argued as a less fertile ground for PAEs because litigation costs are lower for defendants. Since defendants have lower litigation costs, they have lower threat values when negotiating. With lower threat values, PAEs cannot extract as much rent from innovators. In other words, one way to make PAEs less prolific is by making them less profitable.

In the USA, policy-makers passed the AIA. This Act impacted the joinder rule in order to decrease the PAE economics of scale from suing multiple alleged infringers simultaneously. In other words, it aimed at making PAEs less profitable by increasing their litigation costs. Whether the Act proved successful in detracting PAEs remains unclear. Without a counterfactual analysis, it remains impossible to assess whether it deterred suits; yet, the level of PAE activities remains a concern for American policy-makers.

In 2015, policy-makers have already tabled amendments to the AIA to further detract PAE activities. These amendments, in general, aim at making patent infringement litigation less attractive. A bill was introduced in the US Congress in February 2015 to review patent infringement procedures. Among the changes proposed, the Innovation Act allows the prevailing parties to recoup some of the fees incurred in connection with patent infringement litigations. The fee-shifting, on its own, may or may not deter nuisance suits depending on whether the rule mandates a one-way or two-way fee shifting and other idiosyncrasies.

Another bill was introduced in the US Senate in April 2015 to the same effects. Among the changes proposed, both Acts affect the pleading requirements. In essence,
the US policy-makers are increasing the cost of patent enforcement and invariably they are making US patent enforcement procedures closer to their European counterparts.

University have already complained that these amendments are not narrowly tailored and would discourage patenting – and subsequently harm innovation.\(^ {117}\) The University fear that the mandatory fee-shifting would make defending patents too costly – hence too risky – and instead would deter patent holders who are cash strapped from defending their own patents.\(^ {118}\) According to the Universities, since deterring patent assertion, licensing, and indirectly innovation is not the goal of the AIA and its future amendments, focusing on frivolous suits would more narrowly address the problem.\(^ {119}\)

Setting criteria for frivolous suits, however, can be complicated. Frivolousness criteria often end up being over-inclusive. For instance, focusing on a plaintiff low \textit{ex-ante} chance of winning ends up being overly inclusive because some plaintiffs need discovery to access probative information; without this information, their case would not succeed and their meritorious claim would classify as frivolous. A frivolous criterion could instead focus on whether a suit has a negative expected return (i.e. where the expected litigation costs outweigh the expected damages). Focusing on the suit’s expected return could also be overly inclusive because parties can advance unobvious interest or strategy. For instance, a plaintiff enforcing a patent may rely on economies of scale; he could sue one defendant to show his patent validity and use this court-verified patent to leverage\(^ {120}\) and extract licensing fees against other alleged infringers.\(^ {121}\) While the first suit has a negative expected return taken alone, it has positive expected returns when taken with all the follow-on demands.

In the same way, those criteria are also under-inclusive. During a patent suit, a patent holder only needs to argue that the defendant has infringed; a patent holder can knowingly assert an invalid patent but because this patent is presumed to be valid by the court, he could put forward an arguably frivolous claim. The onus (and cost) is on the defendant to argue invalidity and the court has no duty to raise such claims. As such, focusing on the \textit{ex-ante} chance of winning would not be the same depending on the type of defendant faced and lead to inconsistent frivolous rulings.


\(^{118}\) ibid.

\(^{119}\) ibid.

\(^{120}\) Note that there is no preclusion. The new defendant may decide to take on the case and argue again the patent validity; however, the defendant may find it less likely and become less optimistic about his chance of winning if another court already asserted the patent validity. The second plaintiff may also challenge the infringement claims.

\(^{121}\) Note that because a patent holder requested few damages from a single infringer it does not mean the invention is not social optimal. A patented innovation may have little social value in the hand of one user but enormous social value in the hand of multiple users, for instance, because of network effects e.g. the telegraph, telephone, internet, etc.
Instead of focusing fee-shifting on frivolity, fee-shifting has been based on losing the case. It avoids further costly proceeding arguing over the suit’s frivolity. It inevitably over and under includes PAE suits. The over-all effects of fee shifting on PAEs and innovation *ex-ante* remain difficult to predict because of the countervailing indirect and direct effect.

Fee-shifting has been in the legal system in Europe for centuries and the legal system grew based upon its existence. Relying on fee shifting as the solution to the PAE problem seems overly audacious. The EU conversation above has shown that PAE remains active litigants in countries like the UK or Germany even with fee-shifting.

Patent assertion entities’ full activities remain unknown as litigation is simply the visible part of the iceberg; but, even this visible part can be as if not more dramatic where fee-shifting are possible because of other procedural advantages. For instance, Germany has a mandatory two-way fee shifting rule; yet, PAEs have been (overly and) openly active in Germany. For instance, Sisvel, a PAE, has been operating in Europe for years and while its business model is arguably evolving, it was for a long time considered an aggressive PAE: Sisvel memorably waited for 51 companies and their executives to come to a product exhibition in Germany to launch civil/criminal proceedings; these actions were compared to a ‘raid’ onto the exhibition. Enforcing these patents in Germany was a strategic decision: Sisvel’s alleged infringers had their

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122 A hearing on attorney’s fees remains necessary and parties may argue as hard about fees as they do about the case.

123 In ‘Special Incentives to Sue’ (2010) 95 Minnesota Law Review 782, Margaret H. Lemos discusses the incentives created by fee shifting and the fact that judges have adapted their approach to cases based upon all the rules affecting a case; hence arguing that fee shifting on its own may not bring the incentive to sue or defend a case.


127 Just a few days prior to the CeBIT 2008 fair in Hanover, Sisvel S.p.A. sent requests for license payments to more than 40 exhibitors. Requests were up to a three-digit-million USD range and could therefore not be incurred immediately. Since IPR infringement is a crime in Germany, Sisvel was able to sue nearly 40 electronics manufacturers and their chief executive officers (CEOs).’ Tim Pohlmann & Marieke Opitz, ‘Typology of the patent troll business’ (2013) 43 Research and Development Management 103, 111.

headquarters mostly in Asia but injunctive relief was more accessible in Germany and the executive could be arrested in Germany.129

In other words, other mechanisms have evolved along fee-shifting that affect how entities behave in each jurisdiction. Fee-shifting will not solve all problems and will possibly over and under deter patenting130 and innovation if not adapted to the situation. Implementing fee-shifting in the USA may require some tinkering such as hourly caps, total recoverable legal cost caps,131 mandatory/discretionary fee shifting,132 etc. Policy-makers will encounter more critics but the process may well require trials and errors.

4.1.2. Injunctions

Injunctions have gone through these judicial trials and errors before becoming what they are today. Injunction is a powerful tool for PAEs because a permanent injunction can preclude a technology implementer from importing, selling, etc. their product within a jurisdiction. When they negotiate licenses and make their demands, PAEs can threaten alleged infringers of rendering their whole business worthless.

Since injunction is such a powerful and final remedy, USA and EU courts have attempted to grant them only when necessary. In 2006, the US Supreme Court made clear in eBay v MercExchange133 that having a valid infringed patent does not automatically grant the holder an injunction.134 In other words, PAEs could not automatically use the injunctive relief threat against an alleged infringer because they were not guaranteed to be able to get one; hence, since injunction became non-automatic, PAEs could hold-up infringer to the same sums.

The Court describes a four part test for a patent holder to be granted an injunction.135

The Court discussed one criterion in particular: the plaintiff first must demonstrate that

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129 Accusing the violating companies at the time of the Hanover exhibition resulted in two important strategic advantages for Sisvel. First, it is very difficult to get an injunction in Asia, and court procedures are lengthy and complicated. The location advantage of Germany and the legal context are important foundations for the effective enforcement of property rights. Second, another advantage is the use of the press as a pressurizing medium. The CeBIT is the largest IT fair in the world, and the seizure of the stands imposed public pressure on the respective firms.’ cf Pohlmann (n 127) 112.

130 Jay P. Kesan, ‘Carrots and Sticks to Create a Better Patent System’ (2002) 17 Berkeley Technology Law Journal 763, 789–97(discussing the merits of multiple strategies to reform the patent system, including fee shifting, comparing the British rule to the American attorney fee rules and discussing the potential for one way fee shifting under different scenarios).

131 A cap on the recoverable fees still creates some disincentive for the most frivolous claims. It also encourages defend meritorious case but also does not encourage an arm’s race between parties because they remain liable for some legal costs;

132 The previous discussion assumed mandatory fee-shifting. Discretionary fee shifting could create problems: If plaintiffs and defendants do not know when courts will grant those fees – or if these parties cannot make an educated guess, parties cannot perform a cost-benefit analysis before enforcing a patent or defending against such enforcement – and by backward induction, parties would not perform innovation if they cannot be sure they benefit from it. This argument goes back full circle to determining whether a suit is frivolous.

133 547 US 388 (2006)

134 ibid 393–94.

135 A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction. (ibid 391)
he/she suffered an irreparable injury;\textsuperscript{136} the Court dismissed the argument that because a plaintiff was a non-practicing entity, it automatically did not suffer an irreparable injury.\textsuperscript{137} One of the underlying implication is that all patent holders must be treated the same;\textsuperscript{138} yet, in one of the concurrent opinions, Justice Kennedy expressed concerns over the leveraging power that injunction grants to PAEs but trusts that the other factors (and in particular whether granting an injunction is in the public’s interest) will affect how courts grant injunctive relief.\textsuperscript{139}

In Europe, the patent enforcement system remains a mosaic. Under the EPC, the EPO grants patents; but ‘[a]part from common rules relating to the grant of a European patent, a European patent remains governed by the national law of each of the Contracting States for which it has been granted.’\textsuperscript{140} As such, PAEs can forum shop for the jurisdiction, which grants preliminary injunction or other advantageous procedures.\textsuperscript{141}

In 2015, the Court of Justice of the European Union (EUCJ) ruled on injunction issues related to patent infringement suits of a SEP. In \textit{Huawei Technology Co Ltd v ZTE Corp, ZTE Deutschland GmbH},\textsuperscript{142} Huawei asserted in German courts that ZTE infringed upon one of its European Patents. Huawei requested an injunction but ZTE argues that this injunction ought not to be granted because this patent was a SEP, which should be granted to any user on Fair, Reasonable, and Non-Discriminatory terms and as such an injunction would constitute an abuse of dominant power and violates the European monopoly laws.\textsuperscript{143} The Court found that an injunctive relief could be granted without violating the monopoly laws for a SEP under certain circumstances. Using the facts of the case,\textsuperscript{144} the Court argue that both parties must make good faith effort to negotiate a license for the SEP in order to be granted an injunction or defeat an injunction. While all the circumstances that enable a patent holder to obtain an

\textsuperscript{136}ibid.
\textsuperscript{137}ibid 393.
\textsuperscript{138}In \textit{Vringo v ZTE} [2014] EWHC 3924 (Pat), HC-2012-000076 (Pat), the UK Patents Court made a similar statement: ‘ZTE contend that Vringo are “patent trolls”… Whether ZTE are right or wrong about this is irrelevant and [the Court] will ignore these allegations’.
\textsuperscript{139}\textit{eBay v MercExchange} 547 US at 396–97.
\textsuperscript{140}C-170/13 (5th Chamber, July 2015).
\textsuperscript{141}The above examples Sisvel, Vringo, and France Brevets have showed that Germany has found itself at the center of many PAE controversies because of its strong IP laws – including the combination of criminal/civil procedures for patent infringement, its injunctive laws, etc. See e.g. Katrin Cremers, Max Ernicke, Fabian Gaessler, Dietmar Harhoff, Christian Helmers, Luke McDonagh, Paula Schliessler, and Nicolas van Zeebroeck, ‘Patent Litigation in Europe’ (2013) ZEW Discussion Paper No. 13-07 (explaining why Germany hears more patent cases than its European colleagues) <http://ftp.zew.de/pub/zew-docs/dp/dp13072.pdf> accessed 30 July 2015.
\textsuperscript{142}C-170/13 (5th Chamber, July 2015).
\textsuperscript{143}Article 102 of Treaty on the Functioning of the European Union. ‘Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.’ The article gives four non-exhaustive examples, which include: ‘[s]uch abuse may, in particular, consist in: . . . (b) limiting production, markets or technical development to the prejudice of consumers’.
\textsuperscript{144}The Court found that injunctive relief could be granted to SEP holders if the SEP holder has already clearly notified the alleged infringer of the alleged violation and attempted to negotiate the fee, the infringer has expressed interest in negotiating, the SEP holder has made a written offer, but the alleged infringer kept infringing without continuing the negotiations or by employing delaying tactics, then the SEP holder could be granted an injunction. C-170/13.
injunctive relief have been left open, the Court, however, made clear that injunctive relief should not be granted for all SEP disputes.\textsuperscript{145}

The questions asked in \textit{Huawei v ZTE} differ greatly with the question asked in \textit{eBay v MercExchange}. However, in both cases, the respective Courts held that patent holders are not automatically entitled to an injunction and instead, the facts of the case determine whether an injunction ought to be granted.

In the EU, the EUCJ speak of abusive conduct,\textsuperscript{146} which would prejudice consumers whereas the US Supreme Court speaks of disserving the public interest. In many respect, the Courts in both jurisdictions attempt to balance the interest of the few against the interest of the whole. Suppressing injunctive relief in both jurisdictions has not been an option. Injunctions are alive and well. Courts have the duty to review each request because this remedy is powerful and PAEs have leveraged its threat.

The next section discusses Unitary Patent Court system, a system which will harmonize the patent enforcement system across European signatory countries, much like the USA and its Federal Court system in patent cases.

\section*{4.2. Unitary patent court}

A discussion has arisen about the effect that a UPC proposal could have on the proliferation of PAEs at the European\textsuperscript{147} and Member State level.\textsuperscript{148} The UPC attempts to harmonize the patent enforcement system in Europe. Currently, innovators can seek a patent separately in each national patent office or can apply to the EPO to obtain a patent valid in the pre-selected signatory states.\textsuperscript{149} Even if the patent is valid in multiple states, the applied enforcement system depends on the jurisdiction where the enforcement is sought.\textsuperscript{150} Thus in 2013, 25 countries signed an Agreement to create the UPC.\textsuperscript{151} The signatory countries include the UK, France, and Germany. The UPC will enforce a new patent, the Unitary Patent,\textsuperscript{152} and the current European Patents in a single court system that will have the

\textsuperscript{145}SEP are patents that are considered essential to a standard that has been set by standard setting organization (SSO) in order to enhance compatibility between devices and avoid having too many standards. However, some SSOs like the Institute of Electrical and Electronics Engineers, Incorporated are in the process of making policy change to their agreements and plan on making injunctive relief unavailable if the patent is a SEP. This policy change has been recognized by the Department of Justice and has not be found in potential violation of the antitrust laws. See Renata B. Hesse, ‘Business Review Letter’ (2 February 2015) US Department of Justice, Antitrust Division available at <http://www.justice.gov/file/338591/download> accessed 14 August 2015. The impact on patent enforcement and PAEs who hold SEP remains to be seen. Note that some PAE like Vringo (n 55) or Sisvel (n 127) hold SEPs.


\textsuperscript{147}cf de Heide et al (n 20) 25–26.

\textsuperscript{148}cf McDonagh (n 73).


\textsuperscript{150}cf n 140.

\textsuperscript{151}Agreement on a Unified Patent Court (2013/C 175/01).

\textsuperscript{152}Regulation (EU) No 1257/2012 of the European Parliament and of the Council of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection; Council regulation (EU) No 1260/2012 of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection with regard to the applicable translation arrangements.
authority to enforce patents and provide a pan-European injunction that would cover the 25 signatory countries.153

This system should make the PAEs more attractive in Europe because they would have not to deal with the issue of multiple jurisdictions:154 patent holders gain economies of scope because they will be able to recoup damages for injuries done anywhere in the signatory countries together.

The USA can provide Europe with some answers ahead of implementing a pan-European system. First, PAEs are unavoidable:155 they were active in Europe before the UPC and they will remain in Europe after its implementation. Their level of activity may rise; but, it remains unclear how much because the specific about the litigation costs under the UPC remain unclear.156

Second, PAEs have already been forum shopping in Europe and found Germany to be better suited for their activities because of its advantages procedures as illustrated by the Vringo, France Brevets, and Sisvel cases discussed above. Policy-makers hope that moving to the UPC will help harmonize in the manner of the US system and hence avoid such forum shopping; however, forum shopping may well be unavoidable. Even in the USA, PAEs have forum shopped: the Eastern District of Texas is district court venue where PAEs are most active.157 The UPC will likely follow the same fate – particularly until enough jurisprudence at higher level court harmonizes the lower level court decisions.158

Even with the UPC and even if EU governments start creating their own PAEs, PAEs will likely remain fewer than in the USA because patents remain fewer in Europe. Furthermore, any UPC patents are subject to revocation actions: the UPC courts will have the authority to invalidate patents.159 Thus, before, EPs were challengeable through the EPO for the first nine-month of the patent;160 Unitary Patents will remain challengeable for its duration through the UPC system.161 PAEs will need to make a cost-benefit analysis: facing invalidations action in order to access the 25-jurisdiction injunctions.

153 Agreement on a Unified Patent Court (2013/C 175/01) Art. 32.
154 cf de Heide et al (n 20) 25; McDonagh (n 73) 26–27.
155 cf McDonagh (n 73) 39.
156 Court filing costs are not the only unknown. Case duration remains also unknown and would impact the way PAEs and alleged infringers use the court system.
158 UPC courts will be divided in multiple layers: Court of First Instance, Court of Appeal, and a Registry. The Courts of First Instance will have local, regional, and one central division, the Central Division are in London, Paris, and Munich and each central division is attributed a subject matter: London has (a) Human necessities and (c) Chemistry, metallurgy; Munich has (f) Mechanical engineering, lighting, heating, weapons, blasting; and Paris has (b) Performing operations, transporting (d) Textiles, paper (e) Fixed Constructions (g) Physics (h) Electricity. Agreement on a Unified Patent Court (2013/C 175/01) Art. 7–8 & Annex II. Decision at the Court of First Instance can be appealed to the Court of Appeal. ibid 73.
159 Agreement on a Unified Patent Court (2013/C 175/01) Art. 32.
161 During the transition period where the Unitary Patent and EPO patents converge, patent holders of EPO approved patents will have to elect whether to put their patent into the UPC system during the transition period. Agreement on a Unified Patent Court (2013/C 175/01) Art. 83. Selecting to opt-out sends a signal that the patent is a weak patent because it protects them from invalidation actions.
Invalidation actions are court proceedings and will likely command the same cost as infringement actions. It remains to be seen how often these actions will be brought, but, it is conceivable that patent invalidation entities will spring up: entities where (small) companies can pool their resources to challenge PAEs patents in court.

More importantly, the EU has not affected its patenting policies; as such, even under the UPC, the EU remains an unfriendly territory for PAEs. First, the EU has fewer EPs than the USA; the number of patents transferred to the UPC system will remain even lower; and the number of UPC patents in the hand of PAEs will constitute an even smaller fraction.

Second, the EU has not changed its patenting subject matters. US patents in general and software US patents in particular have been criticized for attracting PAEs because they were numerous and over-broad. In the past, narrowing patent definition (with regard to newness or innovativeness) effectively tackled some PAE-like behavior. The EU has arguably had already a narrower definition than in the USA as discussed above.

Third, procedures under the UPC remain unattractive for PAEs. For instance, fee-shifting will still be present in the new system and PAEs will need to think twice before filing a suit. Furthermore, the filing costs will also likely remain prohibitive. Those two factors make PAE nuisance threat unconvincing.

Fourth, strong defensive arguments in court are still available in Europe. Alleged infringers can mount a defense against PAEs using prior user right defense, which are arguably negates PAEs’ leverage over the majority of alleged infringers; or a non-commercial user defense, which also stops PAEs going after users of technologies.

The UPC may boost PAE activities one specific type of PAE activities: PAEs that rely on valid infringed patents and request large damages. The example of discussed above provide some insight into this strategy. Under the UPC, PAEs will be able to exploit some economics of scope by recouping damages for the whole pan-European market. For instance, in the case of Vringo, it will not need to file in various jurisdictions; however, the PAEs lose the advantage of being able to select which patents to advance in each jurisdiction. Patent holders suing and winning in court are arguably not the most worrying type of PAE activities because those still need to convince a judge panel.

162 Holders of European patents can elect to move their patent into the UPC system but the EPO granted European patent will be phased out for the Unified Patent.
163 cf Gabison (n 35); Chien (n 43).
164 ibid 348(discussing the example of agrarian patents and how ‘[i]n 1902, a bill was passed that curtailed the eligibility of incremental functional designs for design patent protection, by reversing the legislative change in 1870 that spurred the crisis’).
165 cf de Heide et al (n 20) 26 argue that because litigation costs are paid by the losing party, trolls should remain reluctant to litigate weak patents; McDonagh (n 73) 26–27 makes the same argument.
166 cf Chien (n 43) 362–63 discusses how an independent innovator defense ‘would solve the problem of both holdups and trolls [and] would also greatly diminish patent quality problems by preventing obvious inventions from becoming the patentee’s exclusive domain because others are likely to come up with it on their own’.
167 Article 28 of the UPC Agreement.
168 cf Chien (n 43) 365–67 discusses the potential impact of an innocent user defense has had in the UK, France, and Germany, and could have in the USA by refocusing the attention of PAEs from users, who cannot defend themselves, to makers, who usually have more means to do so.
The most worrying are the rent-seeking unobservable PAEs activities: PAEs that make demands from SMEs and obtain a stick license; and PAEs that bring nuisance suits and settle quickly. First, while some SMEs in Europe operate in multiple jurisdictions, the majority likely do not; hence, under the UPC system, PAEs cannot leverage a higher threat against most SMEs because whether PAEs make demand for the whole of 25 UPC countries or just one jurisdiction, the value would remain the same. Second, the filing cost under the UPC will remain large enough that it will deter most nuisance suits. In general, while the new system may boost PAE activities, the UPC may not affect the kind branded as a tax on innovation.

5. Conclusion
Europe has a system that remains unfriendly to PAEs. Europe has in place procedures like fee-shifting or defenses like the non-commercial user defense available to alleged infringer that make PAEs less capable of leveraging their patents. Even in this unfriendly environment, PAEs still find ways to use and even exploit this system. For instance, PAEs have been forum-shopping between EU member states and PAEs have leveraged criminal charges against alleged infringers in Germany.

PAEs must have profited from their activities or they would not have multiplied the way they have. Governments like France have found this model so attractive that they have sponsored their own PAEs. While the jury is still out on whether these governmental sponsored entities are beneficial for innovation and knowledge transfer, these entities present new challenge – none the least, whether government will use the entities as a new form of protectionism.

All in all, the PAE level of activity in Europe remains low compared to the USA. The US present a valuable example of what could happen to Europe once the UPC comes into play and opens the door to a 25-state-wide damage recoupment and injunction threat. In the EU and the USA, injunctions have been granted on a discretionary basis – taking into consideration the interest of society/consumers. The UPC will bring about a number of changes but it is hard to imagine that the UPC will increase PAE activities in Europe to the US level. In the UPC, PAEs may face even more fight because all patents become subject to revocation actions, opening the door for a new anti-PAE business model. The most important lesson to draw from the US experience is that PAEs may never be fully deterred.171

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171 cf Chien (n 43) discusses the waves of PAE-like activities during the agrarian patent crisis and the railroad patent crisis. at 342–44. The USA experienced a similar phenomenon in the 1800s in the agrarian toll making and 1900s with the railroad boom; once again, in recent years, the USA has experienced a similar level of activity with the spread of information technologies.
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ORCID
Garry A. Gabison http://orcid.org/0000-0002-4603-8448