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### Foreigners in U.S. Patent Litigation: An Empirical Study of Patent Cases Filed in Nine U.S. Federal District Courts in 2004, 2009, and 2012

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# Foreigners in US Patent Litigation: An Empirical Study of Patent Cases Filed in Nine US Federal District Courts in 2004, 2009, and 2012

Marketa Trimble\*

## ABSTRACT

*One of the greatest challenges facing patent holders is the enforcement of their rights against foreign (non-US) infringers. Jurisdictional rules can prevent patent holders from filing patent infringement suits where they have the greatest likelihood of success in enforcement, such as where the infringer is located, has its seat, or holds its assets. Instead, patent holders must file lawsuits in the country where the infringed patent was issued. But filing a patent lawsuit in a US court against a non-US infringer may be subject to various difficulties associated with the fact that US substantive patent law (particularly as regards its territorial scope) and conflict of laws rules are not always compatible and interoperable with the conflict of laws rules of other countries. Such insufficient compatibility and interoperability can lead to US judgments not being enforceable outside the United States.*

*In the Hague Conference's Judgments Project, which the Conference relaunched in 2012, the United States has an opportunity to negotiate internationally-uniform conflict of laws rules to improve cross-border litigation, including cross-border patent litigation. This Article provides data on cross-border patent litigation that can be used to show the extent of the cross-border patent litigation problem and assist in assessing the appropriate degree of US involvement in the Judgments Project.*

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*The Article updates the author's earlier research on cross-border aspects of patent litigation, contributes to the rapidly growing body of empirical literature on patent litigation (including the literature on the "patent troll" phenomenon), and enriches the literature on foreign litigants in patent disputes and on transnational litigation in general (both of which suffer from a dearth of statistical data).*

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## I. INTRODUCTION

An increasing internationalization of activities involving intellectual property (IP) rights seems unequivocal; prominent court cases such as *Microsoft Corp. v. AT&T Corp.*,<sup>1</sup> *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*,<sup>2</sup> and *Apple, Inc. v. Samsung Elec. Co.*<sup>3</sup> highlight the international aspects of IP, and the products and services that surround us in our daily lives are tangible evidence of the internationalization of IP. With respect to IP litigation, however, apart from anecdotal evidence, very little data exist to explain the magnitude of cross-border IP litigation and confirm the internationalization trend in patent litigation.<sup>4</sup> In 2011 and 2012 the author contributed to the literature on cross-border IP litigation by compiling data on the participation of foreign (non-US) parties in patent cases filed in US federal district courts in 2004 and

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1. 550 U.S. 437 (2007).

2. 617 F.3d 1296 (Fed. Cir. 2010), *cert. dismissed*, 134 S. Ct. 2333 (2014). There are other recent decisions that concern the territorial scope of IP laws. *See, e.g.*, *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 1174 (2006).

3. 735 F.3d 1352 (Fed. Cir. 2013).

4. *See* Paul M. Janicke & LiLan Ren, *Who Wins Patent Infringement Cases?*, 34 AIPLA Q.J. 1, 9 (2006); Kimberly A. Moore, *Xenophobia in American Courts*, 97 NW. U. L. REV. 1497, 1499 (2003). Professor Chien's 2008 article provided data concerning International Trade Commission (ITC) proceedings. *See* Colleen V. Chien, *Patently Protectionists? An Empirical Analysis of Patent Cases at the International Trade Commission*, 50 WM. & MARY L. REV. 63, 63 (2008).

2009.<sup>5</sup> This Article updates the earlier studies, provides new original data for cases filed in selected US federal district courts in 2012, and shows the most recent developments in the internationalization of patent litigation in the United States.

Empirical evidence about cross-border aspects of patent litigation is important for several reasons. First—and most importantly—empirical evidence helps determine to what extent the United States should be concerned about and improve the options available to parties who pursue foreign infringers of US patent rights in US courts.<sup>6</sup> Of course, government actions to secure procedural rights and effective remedies in IP (or any other) cases should not depend solely on quantitative evidence showing how frequently the rights are violated and how often the remedies cannot be attained, or how significant the impact of the rights violations and remedy unattainability is on a country's economy. Government intervention does not become more needed only because—and only when—a certain number of cases or a certain economic impact calls for action. However, statistics assist the government in prioritizing its agenda both domestically and internationally. Although at the international level the government's sense of priorities is not dispositive (because it is subject to other countries' sense of urgency in particular matters), the government needs to have a clear sense of which national priorities it should pursue in the international arena.

The presence of foreign defendants<sup>7</sup> in patent litigation in the United States can result in difficulties for US patent holders if the patent holders need to enforce their rights against the foreign defendants.<sup>8</sup> Typically, plaintiffs looking to resolve infringements of their rights prefer a forum where the plaintiffs can secure remedies, such as the place where the infringer or the infringers' assets are

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5. See MARKETA TRIMBLE, *GLOBAL PATENTS: LIMITS OF TRANSNATIONAL ENFORCEMENT* (Oxford Univ. Press, 2012) [hereinafter TRIMBLE, *GLOBAL PATENTS*]; Marketa Trimble, *When Foreigners Infringe Patents: An Empirical Look at the Involvement of Foreign Defendants in Patent Litigation in the U.S.*, 27 SANTA CLARA COMPUTER & HIGH TECH. L.J. 499 (2011) [hereinafter Trimble, *When Foreigners Infringe Patents*].

6. The data on patent litigation do not and cannot provide a full picture of patent enforcement problems because patent holders use additional avenues to enforce their rights. In the United States, for example, ITC proceedings serve to enforce patent rights as well. 19 U.S.C. § 1337 (2012). Some enforcement actions do not involve the filing of a lawsuit or an ITC complaint. See also *infra* Part V.

7. The research defined a “foreign” party as a party that, at the time a patent case was filed, had its domicile outside the United States—meaning that the party either resided outside the United States or was incorporated and had its principal place of business outside the United States.

8. For a review of the difficulties, see Trimble, *When Foreigners Infringe Patents*, *supra* note 5, at 503–09.

located.<sup>9</sup> In patent litigation, plaintiffs' choice of forum is limited because courts usually refrain from deciding cases that involve foreign patents. Courts in the United States, as well as in foreign countries, refuse to adjudicate the validity of foreign patents;<sup>10</sup> it appears that US courts will adjudicate infringements of foreign patents only if the parties do not raise the issue of invalidity of the foreign patent.<sup>11</sup> Since patent invalidity is typically raised as a counterclaim or defense in patent infringement cases,<sup>12</sup> plaintiffs in such cases have little choice but to file their cases in the country where the patent was issued, even if that country is not the most convenient forum for enforcing a judgment or securing remedies against the infringer.<sup>13</sup>

Obtaining a judgment against a party with no presence in the United States implies a need to have the judgment recognized and enforced in the country where the party has a presence and remedies can be secured. This need exists for both monetary relief and injunctions; if a party does not pay damages or voluntarily comply with an injunction, enforcement in both cases requires access to the party or its assets. Whether the recognition and the enforcement of a US judgment succeed outside the United States depends on the degree of compatibility and interoperability of US substantive law (as regards

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9. Sometimes the most efficient manner in which to proceed is to target parties that are secondarily liable. In these cases, it will be the forum where these parties or their assets are present that might offer the best chance for enforcement. The availability of remedies is not always the dispositive factor in selecting a forum; other factors, such as advantageous substantive and procedural laws, can also influence the selection of the forum.

10. See, e.g., *Voda v. Cordis Corp.*, 476 F.3d 887, 890 (Fed. Cir. 2007). Courts cite the act of state doctrine and concern for foreign country sovereignty as the main reasons for which they refuse to decide the validity of foreign patents. See *id.* at 905.

11. See, e.g., *Fairchild Semiconductor Corp. v. Third Dimension (3D) Semiconductor, Inc.*, 589 F. Supp. 2d 84, 91 (D. Me. 2008). In some countries, courts will not adjudicate infringements of foreign patents; however, in other countries, courts will adjudicate infringements of foreign patents, but only if the parties refrain from raising the issue of invalidity of the foreign patent. See *id.* at 99.

12. See 25 U.S.C. § 282(b)(2)–(3) (2012).

13. If a patent holder holds a parallel patent (a patent on the same invention) in another country where it is easier for the patent holder to secure remedies, the patent holder can file a patent infringement suit in the other country. However, such a suit will concern only the infringement of the foreign parallel patent and not the infringement and the remedy for the infringement of the US patent. Successfully defeating patent infringement in one country can, however, have effects that are sufficient to stop the infringer from infringing in other countries, including the United States. The remedies that are enforced in one country may cause enough harm to the infringer to cause him to stop his activities in other places or everywhere; the infringer may also decide not to risk further litigation in other countries, such as the United States, and to stop the infringing activity. Although parallel patents are independent of each other and a decision on patent validity and infringement rendered in one country is not dispositive of issues of validity and infringement under the law of another country, parties and courts may take the outcome of the first litigation as indicative of the likely outcome of future litigation on infringements of parallel patents if the infringements result from the same or similar activities elsewhere.

its territorial scope) and conflict of laws rules<sup>14</sup> with the conflict of laws rules of the country where the judgment should be recognized and enforced.

Experts specializing in conflict of laws and IP agree that the degree of compatibility and interoperability of countries' conflict of laws rules is insufficient for effective cross-border enforcement. This low degree of compatibility and interoperability persists, notwithstanding the existing and substantial internationalization of activities that involve IP. The experts have proposed that the situation of litigants in cross-border IP cases be improved through special IP-specific conflict of laws rules<sup>15</sup> that would—in an ideal scenario—be applied uniformly in multiple countries or globally.

The recognition that cross-border IP litigation would benefit from IP-specific conflict of laws rules is not novel. Scholars pointed out the specificity of the application of conflict of laws rules in IP cases as early as the late 1800s<sup>16</sup> and have discussed special conflict of laws rules in IP cases for decades.<sup>17</sup> Some countries have recently legislated IP-specific conflict of laws rules.<sup>18</sup> At the regional level, the countries of the European Union (EU) have agreed on uniform rules for jurisdiction, choice of law, and the recognition and enforcement of foreign judgments; these EU rules include some IP-specific provisions

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14. Conflict of laws rules are rules on jurisdiction, rules on the choice of applicable law, and rules on the recognition and enforcement of foreign judgments.

15. This Article does not discuss whether an improvement in a litigant's situation could or should be achieved through adoption of internationally-uniform general conflict of laws rules, or whether IP-specific conflict of laws rules are necessary, desirable, or preferable. On the desirability of IP-specific conflict of laws rules, see, for example, Marketa Trimble, *Advancing National Intellectual Property Policies in a Transnational Context*, 74 MD. L. REV. (forthcoming 2015) (manuscript at 12) [hereinafter Trimble, *Advancing National Intellectual Property Policies*].

16. *E.g.*, 2 CARL LUDWIG VON BAR, *THEORIE UND PRAXIS DES INTERNATIONALEN PRIVATRECHTS* 231–91 (Hahn'sche Buchhandlung, Hannover 1889); EUGEN ULMER, *DIE IMMATERIALGÜTERRECHTE IM INTERNATIONALEN PRIVATRECHT*, in 38 *SCHRIFTENREIHE ZUM GEWERBLICHEN RECHTSSCHUTZ* (Carl Heymanns Verlag 1975).

17. *See, e.g.*, *Itar-Tass Russian News Agency v. Russian Kurier, Inc.*, 153 F.3d 82, 84 (2d Cir. 1998); *Voda v. Cordis Corp.*, 476 F.3d 887, 890 (Fed. Cir. 2007); *see also* STIG STRÖMHOLM, *COPYRIGHT AND THE CONFLICT OF LAWS* 3–4 (Carl Heymanns Verlag 2010) (explaining that although they are rare, studies on conflict of laws and IP do exist, and suggesting some reasons for the rarity); *cf.* JEAN-PAUL TRIAILLE ET AL., *EUROPEAN COMM'N, STUDY ON THE APPLICATION OF DIRECTIVE 2001/29/EC ON COPYRIGHT AND RELATED RIGHTS IN THE INFORMATION SOCIETY (THE "INFOSOC DIRECTIVE")* 64 (2013) ("Private international law issues have long been neglected in the field of copyright.").

18. Some countries introduced IP-specific conflict of laws provisions in their national legislation. *See, e.g.*, MINJI SOSHŌHŌ [MINSOHŌ] [C. CIV. PRO.] 2011, art. 3–5 (Japan); Bundesgesetz über das Internationale Privatrecht [PIL], Dec. 18, 1987, art. 109(1) (Switz.); *see also* Trimble, *Advancing National Intellectual Property Policies*, *supra* note 15, manuscript at 44.

as well.<sup>19</sup> At the international level, however, countries have not yet agreed on a large-scale harmonization of most conflict of laws rules, including IP-specific rules. Countries have concluded international treaties on IP that aim to improve the enforceability of IP rights within each country,<sup>20</sup> including enforceability through civil litigation,<sup>21</sup> but the treaties abstain from improving enforcement through cross-border civil litigation.<sup>22</sup> The initiative to produce a large-scale general treaty on jurisdiction and recognition and enforcement of foreign judgments, launched in 1992 by the Hague Conference on Private International Law (the so-called “Judgments Project”),<sup>23</sup> ultimately failed. IP-specific conflict of laws rules proved to be among the most contentious issues in the discussions of the Judgments Project.

In 2012, the Hague Conference reopened the Judgments Project<sup>24</sup> with the renewed hope that the Project could produce a large-scale conflict of laws treaty. Since the first failed treaty, several expert groups have drafted proposals for conflict of laws rules in IP cases;<sup>25</sup> one of the groups is the committee of the American Law

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19. See Convention of 27 September 1968 on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters, art. 16.4, Sept. 27, 1968, 1978 O.J. (L 304) 36, currently replaced by Regulation (EU) No. 1215/2012 of the European Parliament and of the Council of 12 December 2012 on Jurisdiction and the Recognition and Enforcement of Judgments in Civil and Commercial Matters (recast), art. 24.4, 2012 O.J. (L351) 1 (EC); Regulation No. 864/2007 of the European Parliament and of the Council of 11 July 2007 on the Law Applicable to Non-Contractual Obligations, art. 8, 2007 O.J. (L 199) 40 (EC).

20. See Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1896, (as revised at Paris July 4, 1971 and amended Sept. 28, 1979) [hereinafter Berne Convention]; Paris Convention for the Protection of Industrial Property, Mar. 20, 1883 [hereinafter Paris Convention]; Agreement on Trade-Related Aspects of Intellectual Property Rights, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Apr. 15, 1994, 1869 U.N.T.S. 299 [hereinafter TRIPS Agreement].

21. See Berne Convention, *supra* note 20, at art. 15–16; Paris Convention, *supra* note 20, at art. 10; TRIPS Agreement, *supra* note 20, at art. 41–50.

22. International treaties exist that include provisions for customs measures as a means of enhancing the enforceability of rights in cross-border scenarios. See, e.g., Paris Convention, *supra* note 20, at art. 9–10; TRIPS Agreement, *supra* note 20, at art. 51–60. The TRIPS Agreement also provides for “criminal procedures.” TRIPS Agreement, *supra* note 20, at art. 61.

23. See *The Judgments Project*, HAGUE CONFERENCE ON PRIVATE INT’L LAW, [http://www.hcch.net/index\\_en.php?act=text.display&tid=149](http://www.hcch.net/index_en.php?act=text.display&tid=149) (last visited Dec. 9, 2013).

24. See *id.*

25. See, e.g., AM. LAW INST., INTELLECTUAL PROPERTY: PRINCIPLES GOVERNING JURISDICTION, CHOICE OF LAW, AND JUDGMENTS IN TRANSNATIONAL DISPUTES (2008) [hereinafter AM. LAW INST., PRINCIPLES]; EUROPEAN MAX PLANCK GRP. ON CONFLICT OF LAWS IN INTELLECTUAL PROP. (CLIP), CONFLICT OF LAWS IN INTELLECTUAL PROPERTY: THE CLIP PRINCIPLES AND COMMENTARY (2013); TRANSPARENCY OF JAPANESE LAW PROJECT, TRANSPARENCY PROPOSAL ON JURISDICTION, CHOICE OF LAW, RECOGNITION AND ENFORCEMENT OF FOREIGN JUDGMENTS IN INTELLECTUAL PROPERTY (2009), available at [http://www.tomeika.jur.kyushu-u.ac.jp/ip/pdf/Transparency%20RULES%20%202009%](http://www.tomeika.jur.kyushu-u.ac.jp/ip/pdf/Transparency%20RULES%20%202009%20)

Institute, which published its conflict of laws principles for IP cases in 2008.<sup>26</sup> In the revived Judgments Project, the Hague Conference can benefit from the expertise accumulated in the proposals, and build on the discussions among the experts. Naturally, the question remains whether the proposals will help overcome certain strong beliefs held by stakeholders about IP-specific conflict of laws rules, and whether these beliefs could still prevent any international agreement on the subject. How much emphasis the Judgments Projects deserves in the spectrum of international negotiations in which the United States engages will depend on the perceived importance of improving the enforceability of rights in cross-border situations and therefore the desirability of internationally uniform conflict of laws rules. Empirical evidence in this Article should assist the government in assessing the importance of the Judgments Project in the IP area and the desired intensity of US involvement in the Judgments Project from the perspective of IP.

Even if a large-scale international conflict of laws treaty does not materialize from the Judgments Project, empirical evidence about particular countries that frequently appear as the domiciles of defendants<sup>27</sup> in US patent cases will suggest the countries with which the United States should seek bilateral or multilateral agreements to enhance the enforcement of IP rights through civil litigation. Data about the countries of domicile of defendants in patent litigation also inform law firms about countries in which they may locate new clients and seek cooperation with foreign law firms. Finally, the data will also assist future empirical projects on various aspects of patent litigation.

Before presenting the statistics that compare data on the involvement of foreign parties, and particularly foreign defendants, in patent cases filed in selected US federal district courts in 2004, 2009, and 2012, this Article explores in Part II the developments in the US patent landscape since 2009. The US patent landscape has undergone significant changes since 2009. Important amendments to patent legislation and significant alterations in the patent litigation landscape occurred between 2009 and 2012, and some of the amendments and alterations have already had profound effects on the statistics of patent cases filed in 2012. These changes have been reflected in recent statistical studies, and Part III reviews the studies

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20Nov1.pdf; KOREAN PRIVATE INT'L LAW ASS'N, PRINCIPLES ON INTERNATIONAL INTELLECTUAL PROPERTY LITIGATION (2010) (on file with author).

26. AM. LAW INST., PRINCIPLES, *supra* note 25.

27. See *supra* note 7 for the definition of a “foreign party” and “domicile” as used in this Article.



that have been published since this author's article in 2010 that reported on foreign parties in US patent litigation.<sup>28</sup>

The review in Part III shows that numerous new studies on patent law and litigation have appeared since 2010 and have contributed invaluable data on patent litigation. However, the studies have not concentrated on data that illuminate cross-border aspects of patent litigation. This Article fills the gap in the existing patent litigation literature by providing new data on cross-border patent litigation. Part IV reports the data from extensive empirical research covering data for 2004, 2009, and 2012 for nine selected US federal district courts ("district courts") which were the nine busiest district courts for patent litigation in 2012 based on the numbers of patent cases filed in all US federal district courts that year.<sup>29</sup> Patent cases filed in the nine district courts in the three specified years are thus a non-random sample comprising 6,420 patent cases, and the statistics drawn from the sample demonstrate the developments in US patent litigation.<sup>30</sup>

The major finding of the empirical research is that the number of patent cases that involve foreign parties is rising—both the number of cases with foreign plaintiffs and the number of cases with foreign defendants. The rising number of patent cases with foreign defendants suggests the increasing potential for cross-border enforcement problems and the need to consider an active US involvement in international negotiations that can improve the enforcement of judgments through cross-border civil litigation, such as the negotiations within the Hague Conference's Judgments Project.

## II. THE US PATENT LANDSCAPE IN 2009–2012

The US patent landscape changed significantly between 2009 (the latest year reported in this author's earlier studies)<sup>31</sup> and 2012, the latest year covered by the empirical research in this Article. Before analyzing the statistical data on the involvement of foreign parties in patent cases filed in 2004, 2009, and 2012, it is useful to examine the changes that occurred between 2009 and 2012 since those changes may have influenced some of the data reviewed in Part IV of this Article.

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28. Trimble, *When Foreigners Infringe Patents*, *supra* note 5.

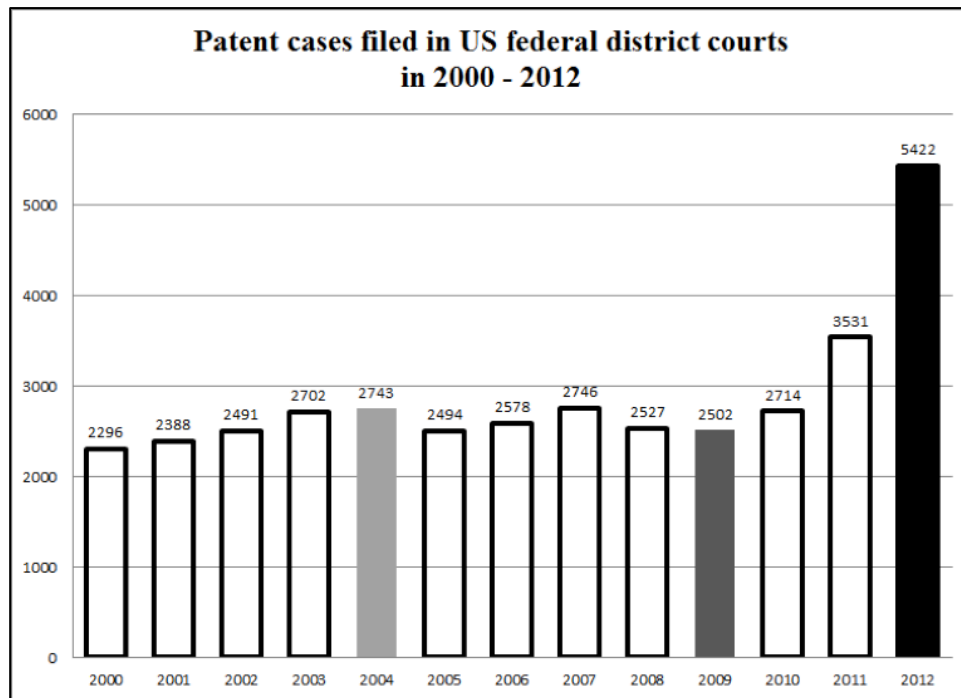
29. On the criteria used to select the nine district courts, see *infra* Part IV.

30. On the size of the sample with respect to the populations of all patent cases filed in all US federal district courts, see *infra* Part IV.

31. See sources cited *supra* note 5.

Since 2009, the number of patent cases filed in US federal district courts has been on the rise, and as Figure 1 shows, the rise from 2011 to 2012 was at a far greater rate than in the prior decade.<sup>32</sup> In 2012, the number of patent cases filed was almost double the number of patent cases filed in 2004, and more than double the number of cases filed in 2009, when plaintiffs filed about 10 percent fewer cases than in 2004.<sup>33</sup>

**Figure 1**



Scholars and commentators attribute the steep rise in the number of patent cases filed in 2011 and 2012 to the burgeoning business model of entities using patents (often of questionable validity)<sup>34</sup> and abusive litigation practices to extract revenue from alleged infringers.<sup>35</sup> These entities, so-called “patent trolls,”<sup>36</sup>

32. For the sources of the data used for the statistics in this Article, see *infra* Part IV.

33. Trimble, *When Foreigners Infringe Patents*, *supra* note 5, at 502.

34. Cf. Shawn P. Miller, *What's the Connection Between Repeat Litigation and Patent Quality? A (Partial) Defense of the Most Litigated Patents*, 16 STAN. TECH. L. REV. 313, 316 (2013).

35. See *infra* notes 61–65 and accompanying text for a discussion of the America Invents Act's amendment of the joinder rule.

sometimes described as “non-practicing entities” (NPEs),<sup>37</sup> and lately termed “patent assertion entities” (PAEs),<sup>38</sup> do not employ a novel business model. Entities that neither invent nor manufacture, but rather purchase existing patents to extract revenue<sup>39</sup> have existed for decades, and for at least as long as the patent system has existed without the requirement that the patent holder truly practice the invention in the country where the patent was issued.<sup>40</sup>

What is new about today’s NPE/PAE phenomenon is that, due to its magnitude, it is now the defining feature of the patent litigation landscape in the United States. According to a study by RPX Corporation, a company that promotes itself as “the leading provider of patent risk solutions”<sup>41</sup> and collects and analyzes patent litigation data, PAEs filed 45 percent of all patent suits in 2011 and 62 percent of all patent suits in 2012.<sup>42</sup> According to a different study by Cotropia, Kesan, and Schwartz, NPEs filed 50 percent of suits in 2012.<sup>43</sup> Of course, these statistics, as do any statistics on NPEs/PAEs,

36. E.g., Brenda Sandburg, *Trolling for Dollars: Patent Enforcers are Scaring Corporate America, and They’re Getting Rich—Very Rich—Doing It*, THE RECORDER, July 30, 2001, at 2. On characteristics of “patent trolls,” see Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 459 (2012).

37. See, e.g., Michael Abramowicz & John F. Duffy, *The Inducement Standard of Patentability*, 120 YALE L. J. 1590, 1600–01 (2011). On the types of non-practicing entities, see Risch, *supra* note 36, at 458. Another term—“non-manufacturing entities” (NMEs)—has been used in the context of ITC proceedings. Robert Greene Sterne et al., *Patent Enforcement Under Section 337 Before the United States International Trade Commission: Evolution of the Forum to Address A Non-Manufacturing Marketplace*, 12 SEDONA CONF. J. 211, 217, 297 (2011).

38. Colleen V. Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 300 (2010). It is generally understood that the term “non-practicing entities” (NPEs) is larger than the term “patent assertion entities” (PAEs). Colleen V. Chien & Mark A. Lemley, *Patent Holdup, the ITC, and the Public Interest*, 98 CORNELL L. REV. 1, 10 n.49 (2012). Allison, Lemley, and Walker identify eleven classes of NPEs and note that in their empirical study, “virtually all of the NPEs . . . [fell] into Classes 1 (companies in the business of acquiring and asserting patents from others) and 5 (inventor-owned companies).” John R. Allison, Mark A. Lemley & Joshua Walker, *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 683–84 (2011).

39. Compare with a definition of PAEs in Chien & Lemley, *supra* note 38, at 2 (“PAEs assert patents as a business model, traditionally using the threat of an injunction to reach a favorable settlement with the defendant.”).

40. On the requirement that a patent holder practice his or her invention in the country where the patent was issued (the “working requirement”) see, for example, Justin Hughes, *Traditional Knowledge, Cultural Expression, and the Siren’s Call of Property*, 49 SAN DIEGO L. REV. 1215, 1251 (2012).

41. Company, RPX, <http://www.rpxcorp.com/about-rpx> (last visited Dec. 9, 2013).

42. *Tracking PAE Activity: A Post-Script to the DOJ Review*, RPX, <http://www.rpxcorp.com/2013/01/23/tracking-pae-activity-a-post-script-to-the-doj-review/> (last visited Dec. 9, 2013). For a comparison with other studies (that found lower percentages) see Christopher A. Cotropia et al., *Unpacking Patent Assertion Entities (PAEs)*, 99 MINN. L. REV. (forthcoming 2014) (manuscript at 31), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2346381](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2346381).

43. Cotropia et al., *supra* note 42, manuscript at 32.

do not accurately reflect the negative effects that “patent trolls” might generate because the definition of PAE in the statistics focuses only on the number of lawsuits, and thus does not include a test for whether a PAE uses abusive litigation practices.<sup>44</sup> Not every plaintiff who asserts a patent (e.g., by filing a patent infringement suit) is a “bad” PAE, and not every patent holder who does not practice his patented invention but enforces his patent rights is a “bad” NPE.<sup>45</sup> Perhaps the abusive nature of litigation practices should be part of the definitions of NPEs/PAEs in the context of the “patent troll” debate; however, the problem with such a definition is that experts differ in their opinions as to when litigation practices become abusive.<sup>46</sup> Identifying an NPE/PAE as a “good actor” or a “bad actor” is a very fact-specific exercise; the search for a term that would describe only a “bad actor” (that eventually led to the use of the current terms “NPE” and “PAE”) evidences the difficulties associated with defining a “patent troll,” a “bad” NPE, and a “bad” PAE.<sup>47</sup>

One defining feature of the entities that critics perceive to be “bad” NPEs/PAEs is that the entities typically sue a large number of defendants. This modus operandi has caused the recent surge in the number of patent lawsuits.<sup>48</sup> Certainly not all plaintiffs who file multiple lawsuits are “bad” NPEs/PAEs, and not all “bad” NPEs/PAEs necessarily file multiple lawsuits, but the share of recent patent cases filed by repeat plaintiffs is indicative of the potential magnitude of the “bad” NPE/PAE problem.

To assess the impact of NPE/PAE-filed suits on the statistics presented in this Article, this author identified the courts that had a substantial increase in the number of patent cases filed from 2009 to 2012 and focused on these courts as the courts in which repeat plaintiffs most likely filed their suits.<sup>49</sup> Figure 2 illustrates the

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44. *Id.* manuscript at 7 (“Broad definitions of trolls or NPEs surely cause higher numbers.”).

45. On arguments used by critics and advocates of NPEs (and also PAEs), see Risch, *supra* note 36, at 459–61.

46. *Cf.* Emily H. Chen, *Making Abusers Pay: Deterring Patent Litigation by Shifting Attorneys’ Fees*, 28 BERKELEY TECH. L.J. 351, 354–58 (2013) (describing the features of “abusive litigation”).

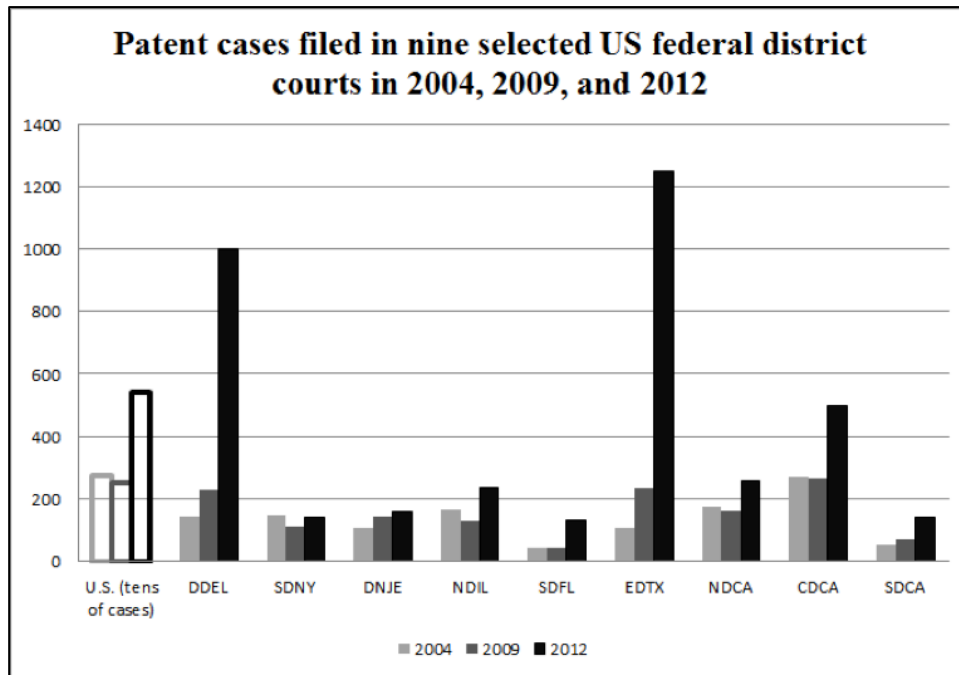
47. The fact-specificity of the problem is one of the reasons for Judge Michel’s criticism of pending patent reform bills. Olivia T. Luk, *Judge Michel: Patent Reform Bills Would Weaken Patent System*, IP WATCHDOG (Oct. 16, 2013, 2:27 PM), <http://www.ipwatchdog.com/2013/10/16/judge-michel-patent-reform-bills-would-weaken-patent-system/id=45709/>; *see also* Michael Risch, *Framing the Patent Troll Debate*, 24 EXPERT OPINION ON THERAPEUTIC PATS. 127, 127 (2014).

48. *See infra* notes 61–65 and accompanying text for a discussion of the America Invents Act’s amendment of the joinder rule.

49. Other recent research projects have also focused on “repeat plaintiffs,” although they used different criteria than the current project to identify such plaintiffs. *See* Allison, Lemley & Walker, *supra* note 38; Miller, *supra* note 34.

development in the number of patent cases filed in 2004, 2009, and 2012 in the nine district courts selected, and also the US-wide development in the total number of patent cases filed in all federal district courts in the United States in the same years (the first set of three columns, in tens of cases).

**Figure 2**<sup>50</sup>



A cursory review of Figure 2 reveals the two district courts with the greatest increases in the number of patent cases filed in 2012 compared to 2004 and 2009—the US District Court for the District of Delaware (DDEL) and the US District Court for the Eastern District of Texas (EDTX). A detailed look at the plaintiffs who filed cases in these two district courts in 2012 confirms a substantial incidence of repeat plaintiffs in these courts. For purposes of this analysis, this author defines a “repeat plaintiff” as a plaintiff who filed ten or more patent lawsuits in a single court in 2012. The selection of a minimum

50. After the first set of columns for the United States (tens of cases) in Figure 2, the following sets of columns are for the following nine US federal district courts (left to right): the District of Delaware, the Southern District of New York, the District of New Jersey, the Northern District of Illinois, the Southern District of Florida, the Eastern District of Texas, the Northern District of California, the Central District of California, and the Southern District of California.

of ten lawsuits per court is arbitrary, with the acknowledgement that there is no magic number at which a plaintiff becomes a “bad actor”—a “bad” NPE/PAE.<sup>51</sup> Some “bad” NPEs/PAEs might have filed fewer than ten lawsuits per court, while some parties that do not fit any usual definition of an NPE/PAE might have filed ten or more lawsuits per court. Nevertheless, the definition helps identify repeat plaintiffs, and the data concerning the plaintiffs suggest the possible magnitude of the “bad” NPE/PAE problem.

Results of the analysis using the above definition of “repeat plaintiff” are similar to the PAE results in other studies.<sup>52</sup> When the results of the present analysis concerning “repeat plaintiffs” are used as an indication of the magnitude of the NPE/PAE phenomenon,<sup>53</sup> the results confirm that more than half of patent cases filed in 2012 might have been filed by NPEs/PAEs. In DDEL, 27 plaintiffs filed ten or more patent lawsuits in the district court in 2012, with one of them filing 58 lawsuits. The lawsuits filed in DDEL by the 27 plaintiffs accounted for 50 percent of all patent cases filed in DDEL in 2012.<sup>54</sup> In EDTX, 34 plaintiffs filed ten or more patent lawsuits in the district court in 2012, with one of them filing 98 lawsuits. The lawsuits filed in EDTX by the 34 plaintiffs constituted 69 percent of all patent cases filed in EDTX in 2012.<sup>55</sup> It is also worth noting that the number of patent cases filed in 2012 by the 27 plaintiffs in DDEL, when combined with the number of cases filed by the 34 plaintiffs in EDTX,

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51. Cf. Allison, Lemley & Walker, *supra* note 38, at 680 (defining “the most-litigated patents” as those “that have been the subject of eight or more lawsuits since the year 2000”).

52. Compare with other studies; in 2012, PAEs filed 62 percent of suits according to the RPX Corporation’s study, and NPEs filed 50 percent of suits according to the Cotropia et al. study. See *supra* notes 42–43 and accompanying text.

53. Taking the EDTX data as an indicator of the NPE/PAE phenomenon might be warranted to a certain degree. Out of the 34 “repeat plaintiffs” who filed ten or more lawsuits in EDTX in 2012, 30 appear to be entities that do not manufacture products but engage in large-scale enforcement of patents that they (often) acquired from someone else. See *infra* Part IV.

54. A PricewaterhouseCoopers (PwC) study listed DDEL as the second most favorable district court for patent holders based on “shorter time-to-trial, higher success rates, and greater median damages awards” over the period 1995–2013. PRICEWATERHOUSECOOPERS, 2014 PATENT LITIGATION STUDY 17, (2014), [http://www.pwc.com/en\\_US/us/forensic-services/publications/assets/2014-patent-litigation-study.pdf](http://www.pwc.com/en_US/us/forensic-services/publications/assets/2014-patent-litigation-study.pdf).

55. On the reasons for the popularity among plaintiffs of EDTX, see Andrei Iancu & Jay Chung, *Real Reasons the Eastern District of Texas Draws Patent Cases—Beyond Lore and Anecdote*, 14 SMU SCI. & TECH. L. REV. 299 (2011); Paul M. Janicke, *The Judicial Panel on Multidistrict Litigation: Now A Strengthened Traffic Cop for Patent Venue*, 32 REV. LITIG. 497, 501–02 (2013); Teresa Li, *Shopping for Reversals: How Accuracy Differs Across Patent Litigation Forums*, 12 CHI.-KENT J. INTELL. PROP. 31, 36–38 (2013); Saurabh Vishnubhakat, *Reconceiving the Patent Rocket Docket: An Empirical Study of Infringement Litigation 1985–2010*, 11 J. MARSHALL REV. INTELL. PROP. L. 58, 64–67 (2011). According to the PwC study, EDTX was the third most favorable district court for patent holders over the period of 1995–2013. PRICEWATERHOUSECOOPERS, *supra* note 54. In the same study, EDTX was identified as the district court with the most decisions with NPEs as patent holders in 1995–2013. *Id.* at 18.

represented 25 percent of all patent cases filed in all US federal district courts in 2012, and equaled 47 percent of the difference between the numbers of patent cases filed in all US federal district courts in 2009 and 2012.

Given the extent of the NPE/PAE problem that the data on “repeat plaintiffs” suggest, it is not surprising that the phenomenon has garnered significant attention. It is emblematic for the rise in the awareness of the NPE/PAE problem that the issue graduated from professional law journals<sup>56</sup> to academic law reviews,<sup>57</sup> and eventually to the front pages of daily newspapers.<sup>58</sup> By mid-2013 numerous stakeholders, Congress, and the White House had contributed their voices and actions to the fight against the undesirable NPE/PAE phenomenon.<sup>59</sup>

The negative effects of “bad” NPE/PAE activities on the US court system and the economy are undeniable. However, it is important to note that the increase in the number of patent cases filed in 2012 compared to prior years may not precisely reflect the magnitude of the rise in NPE/PAE activity. In addition to a heightened activity by NPEs/PAEs,<sup>60</sup> a new practice that serial plaintiffs have adopted since the general effective date of the America Invents Act (AIA)—the 2011 major amendment to the US Patent

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56. See, e.g., Sandburg, *supra* note 36.

57. See, e.g., Mark D. Janis, *Reforming Patent Validity Litigation: “The Dubious Preponderance”*, 19 BERKELEY TECH. L.J. 923 (2004); Michael J. Meurer, *Controlling Opportunistic and Anti-Competitive Intellectual Property Litigation*, 44 B.C. L. REV. 509 (2003).

58. See, e.g., Stephen Dinan & Seth McLaughlin, *Retailers Seek Federal Help in War Against Patent Trolls*, WASH. TIMES, Dec. 2, 2013, <http://www.washingtontimes.com/news/2013/dec/1/retailers-plead-for-federal-help-in-war-against-pa/?page=all>.

59. See, e.g., Innovation Act of 2013, H.R. 3309, 113th Cong. (2013); Transparency and Improvements Act of 2013, S. 1720, 113th Cong. (2013); BRIAN T. YEH, CONG. RESEARCH SERV., R42668, AN OVERVIEW OF THE “PATENT TROLLS” DEBATE (2012), *available at* <http://fas.org/sgp/crs/misc/R42668.pdf>; EXEC. OFFICE OF THE PRESIDENT, PATENT ASSERTION AND U.S. INNOVATION (2013), *available at* [http://www.whitehouse.gov/sites/default/files/docs/patent\\_report.pdf](http://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf); Letter from Alliance of Auto. Mfrs. et al., Bus. Orgs., to Hon. John Boehner, Speaker of the House of Representatives (July 17, 2013), *available at* <http://cdn.arstechnica.net/wp-content/uploads/2013/07/BigTent-Patent-Letter.pdf>.

60. In this context, the statement refers to NPE/PAE activity in the aggregate, not the activity of specific NPEs and PAEs. It is difficult to judge the intensity of the activity of specific NPEs/PAEs because it is not unusual for NPEs/PAEs to create subsidiaries to pursue specific patents with the result that new NPEs/PAEs continue to appear in the patent litigation landscape. For example, out of the 27 “repeat plaintiffs” who filed ten or more patent cases in DDEL in 2012, 11 filed patent lawsuits in both 2011 and 2012. Out of those 11, two also filed patent lawsuits in 2010, and only one (a practicing entity among the 27 “repeat plaintiffs”) was a plaintiff in patent lawsuits filed in 2010, 2011, and also prior to 2010. See *supra* text accompanying notes 52–55. Out of the 27 “repeat plaintiffs,” 16 were complete “newcomers” to the patent litigation landscape in 2012, meaning that they filed their first patent lawsuits that year.

Act—may have contributed to the increase in the number of patent cases filed.<sup>61</sup>

One purpose of the AIA is to limit the joinder of parties in patent infringement suits; therefore, one of the AIA amendments concerns the rules for joinder. The amendment states explicitly that defendants may not be “joined in one action as defendants . . . based solely on allegations that they each have infringed the patent or patents in suit.”<sup>62</sup> Because of the AIA amendment, many defendants who could have been joined in one lawsuit before the AIA’s general effective date<sup>63</sup> could no longer be sued in one lawsuit after the effective date—September 16, 2012. The proscription against joining defendants based solely on allegations of infringements of the same patent or patents means that serial plaintiffs must now file more lawsuits than they did previously, even if they attack the same number of defendants.<sup>64</sup> Naturally, plaintiffs rushed to file patent cases under the old law before September 16, 2012, causing at least a part of the surge in the number of patent cases filed before September 16, 2012.

In addition to the joinder amendment, the AIA introduced other amendments, and some of those amendments can have a pronounced effect on foreign parties involved in the patent landscape in the United States.<sup>65</sup> As part of the US transition from the first-to-invent to the first-to-file system, the novelty rules were changed so that an invention is not novel if it is “known and used” anywhere in the world (not only in the United States), even if it is not included in a patent or a printed publication.<sup>66</sup> The AIA also changed

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61. Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011); see Cotropia et al., *supra* note 42, manuscript at 7 (“We find . . . that most of the differences between the years [of 2010 and 2012] is likely explained by and attributable to a change in the joinder rules adopted in 2011 as part of the America Invents Act.”); see also Cotropia et al., *supra* note 42, manuscript at 28 (“Based on our data, there is no major difference between both the number of unique patentees and the number of alleged infringers from 2010 to 2012.”).

62. 35 U.S.C. § 299(b) (2012).

63. For interpretations of the joinder rules before the AIA, see Tracie L. Bryant, *The America Invents Act: Slaying Trolls, Limiting Joinder*, 25 HARV. J.L. & Tech. 673, 682–85 (2012); and Trimble, *When Foreigners Infringe Patents*, *supra* note 5, at 501, 536–39, which interprets data on patent cases filed in EDTX against US and foreign defendants. “[T]he research suggests that the dramatic increase in patent litigation against foreign defendants in the Eastern District of Texas might have been caused artificially by the particular position of the District on the question of venue transfer during most of 2009.” Trimble, *When Foreigners Infringe Patents*, *supra* note 5, at 548.

64. Cf. *supra* note 60 (suggesting that “old” NPEs/PAEs that existed before 2012 may be replaced by new entities in 2012).

65. For an overview of the amendments introduced by the AIA see Paul M. Janicke, *Overview of the New Patent Law of the United States*, 21 TEX. INTELL. PROP. L.J. 63 (2013).

66. See 35 U.S.C. § 102(a)(1) (2012); see also Janicke, *supra* note 65, at 82; cf. Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011)



the rules for the grace period;<sup>67</sup> the AIA eliminated a previous provision that discriminated against inventions made abroad by denying the inventions their priority based on certain events in particular countries.<sup>68</sup> Finally, the AIA sets a new default court, the US District Court for the Eastern District of Virginia, for nonresident patent holders who “cannot be found at the address given in the last designation [of a person designated in the United States for service of process], or if no person has been designated . . . .”<sup>69</sup>

In addition to the changes made by the AIA, the Supreme Court and the US Court of Appeals for the Federal Circuit recently handed down decisions that effectuated or may effectuate additional significant changes in the law. *Bilski v. Kappos*,<sup>70</sup> *Global-Tech Appliances, Inc. v. SEB S.A.*,<sup>71</sup> *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*,<sup>72</sup> *Bowman v. Monsanto Co.*,<sup>73</sup> *Association for Molecular Pathology v. Myriad Genetics, Inc.*,<sup>74</sup> and *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*<sup>75</sup> were among the seminal cases that courts were deciding or decided in 2009–2012. These cases changed the substantive law of patentability and patent infringement in ways that affect everyone involved in the US patent landscape, including foreign parties.

Another change in the US patent landscape that will eventually have an impact on patent litigation is the growing number of foreign parties who own US patents. Commentators have largely overlooked the fact that in every year since 2008 the US Patent and Trademark Office (USPTO) has issued more patents on applications filed for inventions invented by non-US inventors than on applications filed for inventions by US inventors.<sup>76</sup> Because the statistics are based on the first inventor listed on a patent application,<sup>77</sup> they do not

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67. See 35 U.S.C. § 102(b).

68. See 35 U.S.C. § 104 (pre-AIA).

69. 35 U.S.C. § 293 (2012). Pre-AIA, the United States District Court for the District of Columbia was the default court for nonresident patent holders. 35 U.S.C. § 293 (pre-AIA).

70. 561 U.S. 593 (2010).

71. 131 S. Ct. 2060 (2011).

72. 132 S. Ct. 1289 (2012).

73. 133 S. Ct. 1761 (2013).

74. 133 S. Ct. 2107 (2013).

75. 617 F.3d 1296 (Fed. Cir. 2010).

76. U.S. PATENT & TRADEMARK OFFICE, U.S. PATENT STATISTICS CHART CALENDAR YEARS 1963–2012 (2014), *available at* [http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us\\_stat.htm](http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm).

77. U.S. PATENT & TRADEMARK OFFICE, CALENDAR YEAR PATENT STATISTICS (JANUARY 1 TO DECEMBER 31) GENERAL PATENT STATISTIC REPORTS AVAILABLE FOR VIEWING (2014), *available at* <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/reports.htm> (“[P]atent origin is determined by the residence of the first-named inventor . . .”).

show what percentage of newly granted patents are actually assigned to non-US persons or entities. However, the statistics could suggest that, in the future, the number of non-US persons and entities appearing as patent infringement plaintiffs or declaratory judgment defendants is likely to increase.

### III. STATISTICAL STUDIES ABOUT THE US PATENT LANDSCAPE SINCE 2010

The recent developments in the US patent landscape have been accompanied by an intense interest in empirical data, which has coincided with the increased emphasis in legal academia on empirical legal scholarship.<sup>78</sup> The patent law field has benefited in recent years from an explosion in the publication of statistical studies concerning patent litigation; academics and non-academics alike have produced numerous statistics and empirical studies on various aspects of patent law, and patent litigation in particular has received much attention.<sup>79</sup> However, the wealth of available statistical data provides almost no assistance in understanding cross-border litigation issues. In 2010, the author reviewed the available empirical literature<sup>80</sup> and discovered that despite the increased academic interest in various issues in patent litigation, very little data existed on cross-border aspects of patent litigation. Although more statistics were produced on patent litigation after 2010, the data on cross-border aspects of patent litigation remain scarce. This Part briefly summarizes the studies that were available as of 2010 and reviews the relevant studies published since 2010.

Prior to 2010, only two studies had provided data on the participation of foreign parties in US patent litigation,<sup>81</sup> and one additional study had reported data on foreign parties in proceedings before the International Trade Commission (ITC).<sup>82</sup> All three studies arose from an interest in a possible xenophobic bias in proceedings before US federal district courts and the ITC. The ITC study, though interesting and valuable, has not been relevant in the context of the author's studies, which focus on litigation in district courts;<sup>83</sup> the other

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78. See Thomas J. Milles & Cass R. Sunstein, *The New Legal Realism*, 75 U. CHI. L. REV. 831, 833 (2008).

79. For academic research, see *infra* Part III. For non-academic research, see, for example, 2014 PATENT LITIGATION STUDY, *supra* note 54.

80. Trimble, *When Foreigners Infringe Patents*, *supra* note 5.

81. Moore, *supra* note 4; Janicke & Ren, *supra* note 4.

82. Chien, *supra* note 4. ITC proceedings are the proceedings under 19 U.S.C. § 1337.

83. Professor Chien studied ITC investigations that were initiated between January 1, 1995, and June 30, 2007. Chien, *supra* note 4, at 69.

two studies reported data that shed some light on the presence of foreign parties in US patent litigation.

The first of the two studies on patent litigation was a 2003 article by Judge Kimberly A. Moore,<sup>84</sup> which reported findings that were based on a large database of 4,247 patent cases that were terminated in US district courts in 1999–2000. Judge Moore found no evidence of any xenophobic bias against foreign parties in adjudications by judges, but she observed some indication of bias in jury trials.<sup>85</sup> To study the bias issue, Judge Moore identified the domiciles of parties to the litigation and found that 9.7 percent of cases involved foreign plaintiffs and US defendants, and 13 percent of cases involved US plaintiffs and foreign defendants.<sup>86</sup>

The second study examining possible xenophobic bias in patent litigation was authored by Paul M. Janicke and LiLan Ren, and was published in 2006.<sup>87</sup> Janicke and Ren's study was much more limited in scope than Judge Moore's study because Janicke and Ren focused on 262 patent cases that the US Court of Appeals for the Federal Circuit resolved by dispositive decisions in 2002–2004.<sup>88</sup> Janicke and Ren found no statistically significant evidence of bias against foreign parties in the cases, in which 26 percent involved foreign defendants accused of patent infringement.<sup>89</sup> Only 6 percent of the 262 cases could have caused any cross-border enforcement problems because only 6 percent of the cases resulted in judgments of patent infringement against foreign persons or foreign entities.<sup>90</sup> Janicke and Ren's study also reported the countries of domicile of the foreign defendants; Japan, Canada, Sweden, and Great Britain emerged as the most represented countries of defendants.

Since 2010, numerous empirical studies have enriched the patent literature in the United States and provided original statistics to explain a variety of problems in the US patent landscape. Many studies concentrated on the NPE/PAE phenomenon,<sup>91</sup> which, as noted earlier, although not new to patent litigation, has become characteristic of US patent litigation in recent years.<sup>92</sup> Other studies

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84. Moore, *supra* note 4.

85. *Id.* at 1504.

86. *Id.* at 1527–28.

87. Janicke & Ren, *supra* note 4.

88. *See id.* at 3–4.

89. *Id.* at 22.

90. *Id.*

91. *See supra* notes 36–48 and accompanying text.

92. Brian J. Love, *An Empirical Study of Patent Litigation Timing: Could A Patent Term Reduction Decimate Trolls Without Harming Innovators?*, 161 U. PA. L. REV. 1309, 1312 (2013) (studying “all patent enforcement for a random sample of recently expired patents”);

discussed various factors that have affected forum shopping—factors that may explain why plaintiffs in patent litigation have preferred certain district courts to others. Issues that authors examined included the following: the effects of local rules on “rates and timing of case resolution in patent litigation”;<sup>93</sup> district courts’ claim construction decisions;<sup>94</sup> the use of declaratory judgments in forum shopping;<sup>95</sup> unpredictability in patent infringement awards granted in various district courts;<sup>96</sup> availability of enhanced damages in cases of willful patent infringement;<sup>97</sup> patent litigation reversal rates;<sup>98</sup> and settlements among repeat patent litigants.<sup>99</sup> Some studies focused on the particular district courts that have become most popular with plaintiffs;<sup>100</sup> other studies researched the ITC as an alternative or a complement to civil litigation.<sup>101</sup> In one of the ITC studies Colleen Chien added to her earlier research of ITC proceedings<sup>102</sup> and, together with Mark Lemley, analyzed the PAE problem in the context of ITC proceedings.<sup>103</sup>

Other studies examined other aspects of the patent landscape using statistical data. Some studies supplied data to clarify the substantive law of patentability and invalidations of patents; three studies analyzed recent jurisprudence of the US Court of Appeals for the Federal Circuit, particularly as regards the standard of obviousness;<sup>104</sup> and other studies focused on anticipation,

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Risch, *supra* note 36, at 469 (a study based on “the ten most litigious NPEs based on recent filings”); Allison, Lemley & Walker, *supra* note 38; Cotropia et al., *supra* note 42; Miller, *supra* note 34.

93. Pauline M. Pelletier, *The Impact of Local Patent Rules on Rate and Timing of Case Resolution Relative to Claim Construction: An Empirical Study of the Past Decade*, 8 J. BUS. & TECH. L. 451, 455 (2013).

94. James R. Barney & Charles T. Collins-Chase, *An Empirical Analysis of District Court Claim Construction Decisions, January to December 2009*, 2011 STAN. TECH. L. REV. 1 (2011).

95. Chester S. Chuang, *Offensive Venue: The Curious Use of Declaratory Judgment to Forum Shop in Patent Litigation*, 80 GEO. WASH. L. REV. 1065 (2012).

96. Michael J. Mazzeo et al., *Explaining the “Unpredictable”: An Empirical Analysis of US Patent Infringement Awards*, 35 INT’L REV. L. & ECON. 58 (2013).

97. Christopher B. Seaman, *Willful Patent Infringement and Enhanced Damages After In Re Seagate: An Empirical Study*, 97 IOWA L. REV. 417 (2012).

98. Lii, *supra* note 55, at 47.

99. Allison, Lemley & Walker, *supra* note 38.

100. Iancu & Chung, *supra* note 55; Vishnubhakat, *supra* note 55.

101. Christopher A. Cotropia, *Strength of the International Trade Commission As A Patent Venue*, 20 TEX. INTELL. PROP. L.J. 1 (2011); Chien & Lemley, *supra* note 38.

102. Chien, *supra* note 4.

103. Chien & Lemley, *supra* note 38.

104. Jennifer Nock & Sreekar Gadde, *Raising the Bar for Nonobviousness: An Empirical Study of Federal Circuit Case Law Following KSR*, 20 FED. CIR. B.J. 369 (2011); Lisa Larrimore Ouellette, *What Are the Sources of Patent Inflation? An Analysis of Federal Circuit Patentability*

obviousness,<sup>105</sup> and inter partes patent reexamination.<sup>106</sup> Still other studies analyzed the costs of patent litigation,<sup>107</sup> the efficiency and accuracy of patent adjudication (as an argument in favor of specialized patent trial courts),<sup>108</sup> and the role of universities in patent litigation.<sup>109</sup> In addition to statistical studies per se, recent patent literature increasingly either refers to statistics developed by others or reports simple statistics that the authors created from readily available sources.<sup>110</sup>

Unfortunately, the existing studies contain very little information about the cross-border aspects of patent litigation, such as data on foreign parties that are involved in patent litigation in the United States. Michael Mazzeo coded cases for the domicile of parties<sup>111</sup> in his research on the unpredictability of patent damages; however, Mazzeo found that the foreign domicile of the parties was not a factor that significantly influenced damage awards and, therefore, he did not report data on foreign parties in his 2013 article.<sup>112</sup> Shawn Miller coded cases for the domicile of parties in his research concerning patent quality.<sup>113</sup> He found that “foreign-owned patents were not significantly more or less likely to be invalidated than [those of] domestic patent owners” but that “foreign alleged infringers [were] significantly less successful in proving invalidity than domestic alleged infringers.”<sup>114</sup> However, neither of Miller’s two articles reporting his research results provided descriptive statistics on foreign litigants. Colleen Chien and Mark Lemley included descriptive statistics on foreign parties in their ITC study; they reported that out of “332 unique respondents named in PAE suits” before the ITC, 123

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*Rulings*, 121 YALE L.J. ONLINE 347 (2011); Jason Rantanen, *The Federal Circuit’s New Obviousness Jurisprudence: An Empirical Study*, 16 STAN. TECH. L. REV. 709 (2013).

105. Shawn P. Miller, *Where’s the Innovation: An Analysis of the Quantity and Qualities of Anticipated and Obvious Patents*, 18 VA. J.L. & TECH. 1 (2013).

106. Eric J. Rogers, *Ten Years of Inter Partes Patent Reexamination Appeals: An Empirical View*, 29 SANTA CLARA COMPUTER & HIGH TECH. L.J. 305 (2013).

107. James Bessen & Michael J. Meurer, *The Private Costs of Patent Litigation*, 9 J.L. ECON. & POL’Y 59 (2012).

108. Jay P. Kesan & Gwendolyn G. Ball, *Judicial Experience and the Efficiency and Accuracy of Patent Adjudication: An Empirical Analysis of the Case for A Specialized Patent Trial Court*, 24 HARV. J.L. & TECH. 393 (2011).

109. Jacob H. Rooksby, *University Initiation of Patent Infringement Litigation*, 10 J. MARSHALL REV. INTELL. PROP. L. 623 (2011).

110. See, e.g., Janicke, *supra* note 55; Wesley D. Markham, *Is Best Mode the Worst? Dueling Arguments, Empirical Analysis, and Recommendations for Reform*, 51 IDEA 129 (2011); Sterne et al., *supra* note 37.

111. Mazzeo et al., *supra* note 96, at 65, app. 1.

112. *Id.* at 68.

113. Miller, *supra* note 34, at 336.

114. Miller, *supra* note 105, at 32.

were foreign defendants.<sup>115</sup> Notwithstanding these and other substantial contributions to the statistical evidence about the patent landscape, and particularly the patent litigation landscape, the evidence contributed only minimally to an understanding of cross-border aspects of US patent litigation. No study concentrated on cross-border aspects, and very few studies included components that related to such aspects.

Not only do statistical studies on patent litigation lack data on cross-border aspects of patent litigation, but other relevant literature also provides no sufficient statistical information on such aspects. Patent literature that focuses on the participation of foreign parties in US patent litigation does not report statistics at all, or reports it in a very limited manner.<sup>116</sup> Similarly, general, not patent- or IP-specific, literature on transnational litigation and conflict of laws provides no statistical information; these areas have traditionally lacked sufficient empirical information,<sup>117</sup> and quantitative studies on transnational litigation and conflict of laws are rare. Since 2010 several empirical studies have emerged in the conflict of laws literature that address forum non conveniens issues;<sup>118</sup> however, none of the studies captured data on the magnitude of civil litigation involving foreign parties that is relevant to the present research. The statistics presented in Part IV contribute to the literature on these subjects as well.

#### IV. FOREIGN LITIGANTS IN US PATENT CASES FILED IN 2004, 2009, AND 2012

To analyze the involvement of foreign parties—and particularly foreign defendants—in US patent litigation, the empirical research reported in this Article used data on patent cases and documents in

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115. Chien & Lemley, *supra* note 38, at 45.

116. See James Pooley & Vicki Huang, *Multi-National Patent Litigation: Management of Discovery and Settlement Issues and the Role of the Judiciary*, 22 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 45, 46 (2011); Marta R. Vanegas, Note, *You Infringed My Patent, Now Wait Until I Sue You: The Federal Circuit's Decision in Avocent Huntsville Corporation v. Aten International Company*, 92 J. PAT. & TRADEMARK OFF. SOC'Y 371, 371 (2010).

117. Hillel Y. Levin, Book Note, *What Do We Really Know About the American Choice-of-Law Revolution?*, 60 STAN. L. REV. 247 (2007) (reviewing SYMEON C. SYMEONIDES, *THE AMERICAN CHOICE-OF-LAW REVOLUTION: PAST, PRESENT, AND FUTURE* (2006)).

118. Donald Earl Childress III, *Forum Conveniens: The Search for A Convenient Forum in Transnational Cases*, 53 VA. J. INT'L L. 157, 169 (2012); Donald Earl Childress III, *When Erie Goes International*, 105 NW. U. L. REV. 1531, 1535 (2011); Cassandra Burke Robertson, *Transnational Litigation and Institutional Choice*, 51 B.C. L. REV. 1081, 1081 (2010); Christopher A. Whytock, *The Evolving Forum Shopping System*, 96 CORNELL L. REV. 481, 481 (2011).

the Lex Machina database<sup>119</sup> available at the time of the research. The Lex Machina database covers the entire population of patent cases filed in US federal district courts since January 1, 2000. While the database provides a wealth of information about patent cases, including complete case documents in many cases, it does not include coding for the domiciles of parties. Thus, supplementing the domicile information is a major contribution of this research project.

The research in this Article focuses on nine US federal district courts, selected based on the high number of patent cases filed in those district courts in 2012: the US district courts for the District of Delaware (DDEL), the Southern District of New York (SDNY), the District of New Jersey (DNJE), the Northern District of Illinois (NDIL), the Southern District of Florida (SDFL), the Eastern District of Texas (EDTX), the Northern District of California (NDCA), the Central District of California (CDCA), and the Southern District of California (SDCA). Most of these district courts were also among the busiest district courts for patent litigation in the other two years this research covers; six of the nine courts had the most patent cases filed per court in 2004,<sup>120</sup> and eight of the nine courts had the most patent cases filed per court in 2009.<sup>121</sup> The cases filed in the nine district courts represented an increasing share of patent cases filed in all US federal district courts: 44 percent in 2004, 56 percent in 2009, and 70 percent in 2012.

As shown by the statistics in Figure 2 above, all nine district courts experienced an increase in the number of patent cases filed in the districts from 2009 to 2012; in some of the districts this increase can be described as dramatic. For instance, in EDTX the number grew from 235 in 2009 to 1,247 in 2012, an increase of 431 percent that greatly exceeded the national growth, as the number of patent cases filed in the entire United States grew by only 117 percent from 2009 to 2012. Other districts that exceeded the national increase from 2009 to 2012 were DDEL, where the increase was 338 percent, and SDFL, where the increase was 209 percent. The other six districts also saw growth but the growth was below the national growth—the

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119. LEX MACHINA, <https://www.lexmachina.com/> (last visited Dec. 10, 2013). On the selection of Lex Machina as the data source, see Trimble, *When Foreigners Infringe Patents*, *supra* note 5, at 515. The research populations were defined by the Lex Machina database as available in fall 2013. Because of continuous improvements in the database (removal of erroneously included non-patent cases, addition of missing patent cases), the database may reflect slightly different numbers when consulted at different times.

120. The busiest US federal district courts for patent litigation in 2004 were CDCA, NDCA, NDIL, SDNY, DDEL, and DNJE. *See* LEX MACHINA, *supra* note 119.

121. The busiest US federal district courts for patent litigation in 2009 were CDCA, EDTX, DDEL, NDCA, DNJE, NDIL, SDNY, and SDCA. *See* LEX MACHINA, *supra* note 119.

increases were by 100 percent in SDCA, 87 percent in CDCA, 78 percent in NDIL, 58 percent in NDCA, 27 percent in SDNY, and 11 percent in DNJE. As noted in Part II, the growth in 2012 in EDTX and DDEL is ascribable largely to repeat plaintiffs, which was also the case in SDFL, where a single set of plaintiffs filed 74 suits that accounted for 56 percent of all patent cases filed in SDFL in 2012.<sup>122</sup>

The research focused on foreign parties in the patent cases filed in the nine districts in 2004, 2009, and 2012. The research defined a foreign party as a party that, at the time of the filing of a patent case, had its domicile outside the United States, indicating that the party either resided outside the United States or was incorporated and had its principal place of business outside the United States. Each case was coded for the countries of defendants' domiciles but a country was registered only once per case, even if multiple defendants being sued in that case had that same country of domicile.<sup>123</sup>

In the first stage, the research concentrated on cases in which at least one party was a foreign person or foreign entity. Figure 3 shows that, in the nine district courts studied, the number of patent cases involving at least one foreign party was higher in 2012 than it was in either 2004 or 2009.

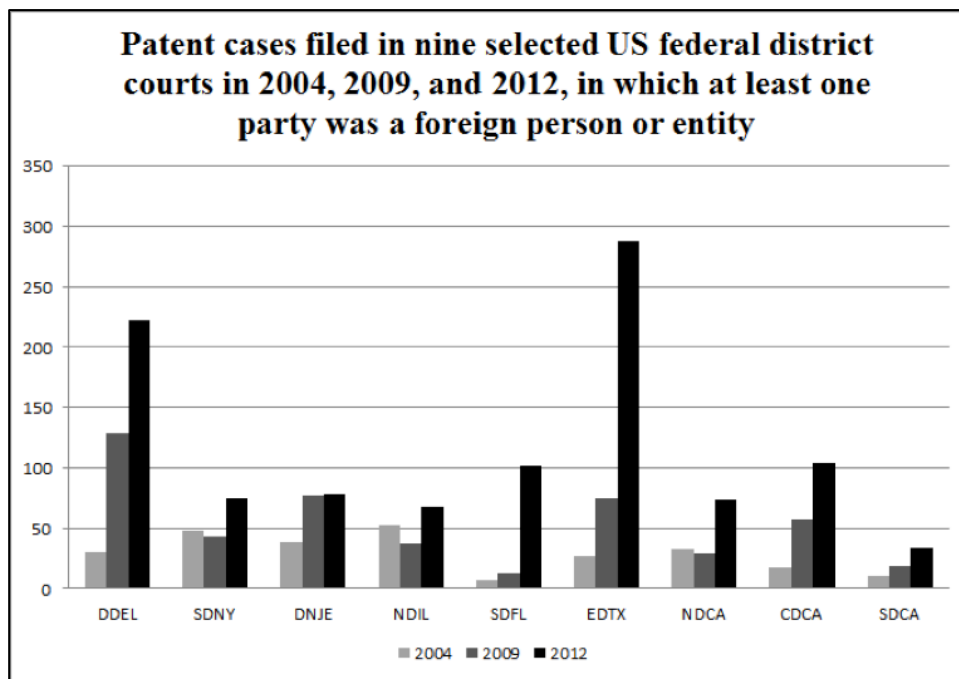
What might not be immediately apparent from Figure 3 is that, although EDTX had the most cases filed involving at least one foreign party in 2012 (287 cases filed), the increase in the number of such cases filed was the greatest in SDFL. There, the numbers jumped from 13 in 2009, to 102 in 2012, an increase of 685 percent—an increase in this category that far surpasses the percentage increases in numbers of cases filed in the other eight district courts.

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122. ArrivalStar S.A. and Melvino Technologies Ltd. *See* Cotropia et al., *supra* note 42, manuscript at 29–30 (showing ArrivalStar S.A. among the “Top Ten Most Litigious Patent Holders” in 2010 and 2012).

123. In a small percentage of cases the parties' domiciles could not be identified. For instance, in the 2012 population, 1.3 percent of cases contained defendants whose domiciles were unknown or whose domiciles could not be determined. The coding was based on the information in the latest version of the complaint.



**Figure 3**

The substantial 2012 growth in SDFL and EDTX in patent cases filed having at least one party who was a foreign person or entity can be explained in large part by interpreting the statistics presented in the next figure. Figure 4 provides statistics of patent cases filed in the nine district courts in 2004, 2009, and 2012 in which at least one plaintiff was a foreign person or foreign entity, meaning a foreign person or foreign entity was the only plaintiff suing in these cases, or was one of the plaintiffs suing together with other foreign or US plaintiffs.<sup>124</sup>

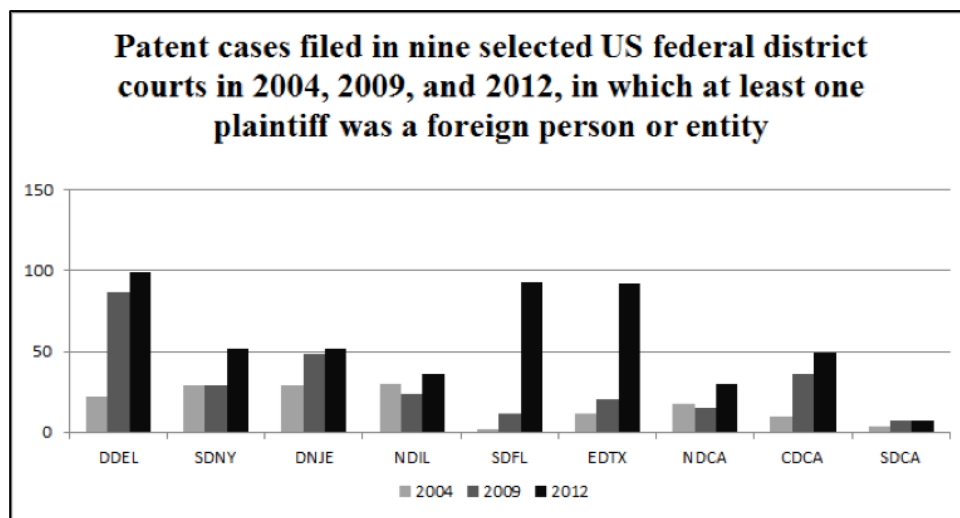
Figure 4 shows that in 2012 SDFL and EDTX saw rapid growth in the number of cases filed by foreign plaintiffs or foreign plaintiffs together with US plaintiffs. In SDFL this growth was due to the 74 lawsuits filed in 2012 by the single set of plaintiffs mentioned above that accounted for 80 percent of all cases filed in SDFL in which at least one plaintiff was foreign<sup>125</sup> (the plaintiffs' domiciles were

124. The focus of Figure 4 is on the domiciles of plaintiffs. The numbers in Figure 4 include cases in which the plaintiff or one of the plaintiffs was foreign, regardless of the domiciles of defendants; some of the cases included foreign defendants, some of them did not.

125. See *supra* note 122 and accompanying text.

Luxembourg and the British Virgin Islands).<sup>126</sup> Similarly, in EDTX a large percentage of 2012 cases with foreign plaintiffs was attributable to a single set of plaintiffs; in this case the plaintiffs filed 51 cases in EDTX that accounted for 55 percent of cases filed in EDTX in 2012 in which at least one plaintiff was foreign (the plaintiffs' domiciles were Luxembourg and the United States).<sup>127</sup> SDFL and EDTX also led among the nine district courts in the percentage growth in cases filed by at least one foreign plaintiff from 2009 to 2012; the increase was by 675 percent in SDFL and by 360 percent in EDTX.

**Figure 4**



To determine the potential for cross-border enforcement problems, the research next considered patent cases filed in the nine district courts in 2004, 2009, and 2012 in which foreign persons or foreign entities were among the defendants sued. Figure 5 reports the results in this category, providing statistics on patent cases filed in the nine district courts in 2004, 2009, and 2012 in which at least one defendant was a foreign person or foreign entity. This means that a foreign person or foreign entity was the only defendant sued in these

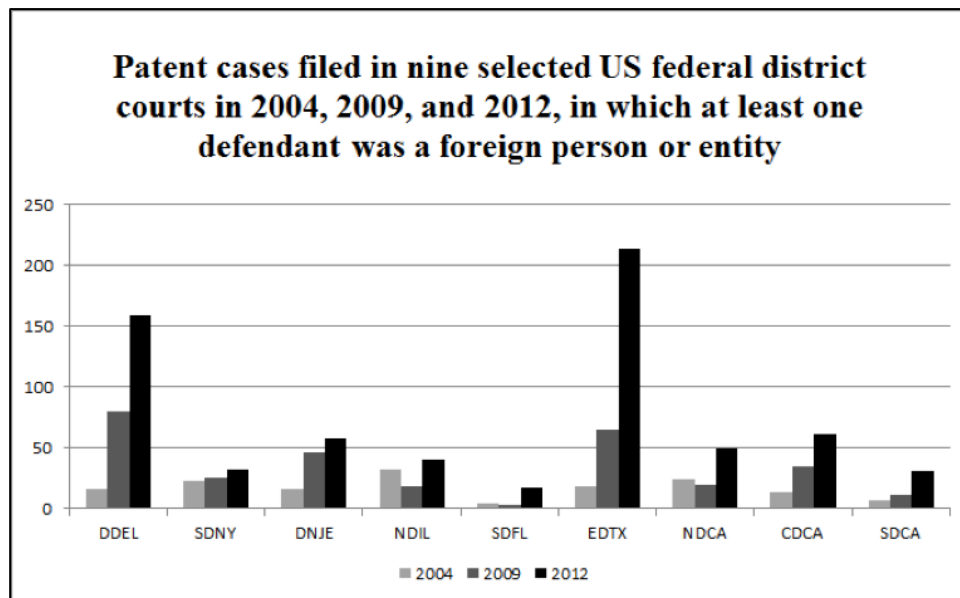
126. According to Lex Machina, as of December 10, 2013, the two plaintiffs were involved as plaintiffs in 375 and 377 patent cases, respectively, filed in various US federal district courts in various years. See LEX MACHINA, *supra* note 119.

127. Uniloc USA, Inc. and Uniloc Luxembourg S.A. According to Lex Machina as of December 10, 2013, the two plaintiffs were involved as plaintiffs in 96 and 86 patent cases, respectively, filed in various US federal district courts in various years. See LEX MACHINA, *supra* note 119; see also Cotropia et al., *supra* note 42, manuscript at 29 (showing Uniloc USA, Inc. among the “Top Ten Most Litigious Patent Holders” in 2010).

cases, or was one of the co-defendants sued together with other foreign or US co-defendants.

As Figure 5 illustrates, all nine district courts experienced growth in the number of cases involving at least one foreign defendant from 2004 and 2009 to 2012. The two district courts with the greatest increases in number of such cases per court were EDTX and DDEL, where the number jumped from 65 in 2009 to 213 in 2012, and from 80 in 2009 to 159 in 2012, respectively. As for the percentage increase from 2009 to 2012, SDFL saw the greatest growth from 2009 to 2012 (by 467 percent), and the second largest growth was registered in EDTX (by 228 percent). However, the increase in SDFL was based on a small number of cases (only 17 such cases were filed in 2012).

**Figure 5**

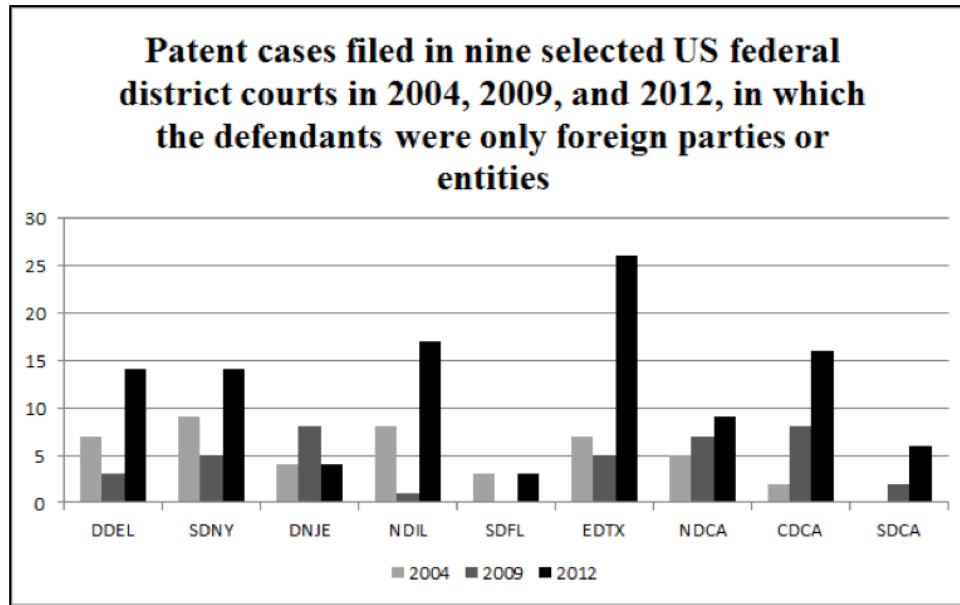


Next, the research focused on patent cases filed in the nine district courts that involved only foreign defendants. Figure 6 shows the statistics of patent cases filed in the nine district courts in 2004, 2009, and 2012 in which the defendant was, or all co-defendants were, foreign persons or foreign entities.

As Figure 6 shows, seven of the nine district courts saw an increase in 2012 in the number of cases involving only foreign defendants compared to both 2004 and 2009. DNJE saw a decrease in the number of such cases from 2009 to 2012, and the number in 2004 and 2012 was the same. In SDFL, the number of cases was the same in 2004 and 2012, with none of these cases filed in SDFL in 2009. In

general, the absolute number of cases in this category remains low; EDTX, NDIL, and CDCA had the highest numbers of such cases in 2012 (26, 17, and 16 cases, respectively).

**Figure 6**



Figures 5 and 6 evidence the increasing number of cases filed against foreign defendants in the nine district courts in 2012, both in cases in which at least one defendant was a foreign person or foreign entity, and in cases in which all defendants—or the only defendant sued—were foreign persons or foreign entities.

To assess whether there was a general increase in the internationalization of patent litigation in the United States from 2004 to 2009 and 2012, the research compared the percentages of cases involving foreign parties to all patent cases filed. Figure 7 shows the first of three comparisons (Figure 8 and Figure 9 show the other two) and focuses on the percentages of cases filed in the nine district courts in which at least one party (either a plaintiff or defendant) was a foreign person or foreign entity. The figure shows the percentages of such cases with respect to all patent cases filed in the nine district courts.

Figure 7 confirms the observations that the author made in earlier studies about this category of cases filed US-wide in 2004 and 2009.<sup>128</sup> As was the case in the entire population of patent cases filed

128. Trimble, *When Foreigners Infringe Patents*, *supra* note 5, at 524.

in all district courts in 2004 and 2009,<sup>129</sup> the share of patent cases involving at least one foreign party grew also in the nine district courts selected for the present research—from 22 percent in 2004 to 34 percent in 2009. However, in 2012 the percentage of such cases in the nine districts dropped to 27 percent of all patent cases filed in the nine district courts (although the percentage in 2012 was higher than the percentage in 2004).

**Figure 7**

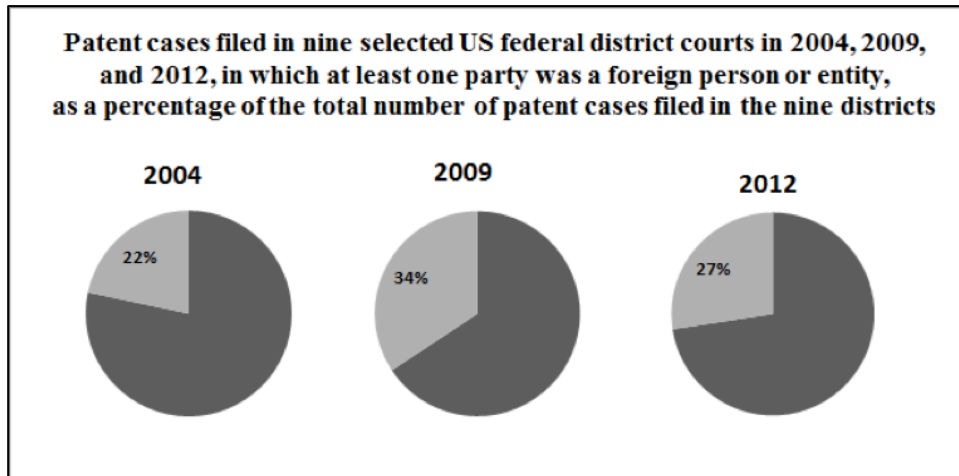


Figure 8 shows a development similar to that of Figure 7; the percentage of cases in the nine districts in which at least one plaintiff was a foreign person or foreign entity in the population of all patent cases filed in the nine district courts also fell from 2009 to 2012 (from 20 percent in 2009 to 13 percent in 2012), but the percentage in 2012 was the same as in 2004.

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129. *Id.*

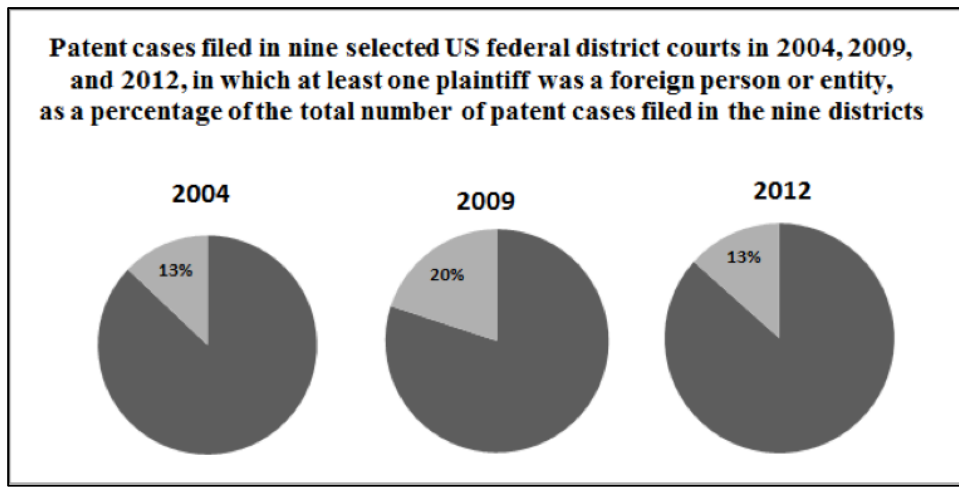
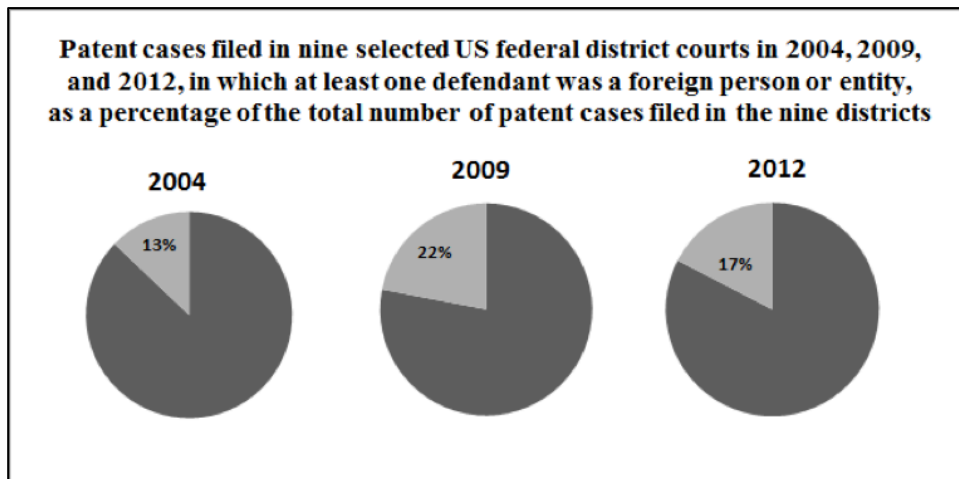
**Figure 8**

Figure 9 shows the percentage of patent cases in which at least one defendant was a foreign person or foreign entity in the total number of cases filed in the nine districts in 2004, 2009, and 2012. The percentage of these cases in the population of all patent cases filed in the nine districts also fell from 2009 to 2012 (from 22 percent in 2009 to 17 percent in 2012), but the percentage was higher in 2012 than in 2004.

**Figure 9**

Figures 7, 8, and 9 demonstrate that despite the increasing numbers of patent cases with at least one foreign party, cases with at

least one foreign plaintiff, and cases with at least one foreign defendant, the numbers show no increasing internationalization of patent litigation in the United States if internationalization is assessed by the percentage of the number of such cases in the total number of all patent cases filed in the nine selected districts in 2004, 2009, and 2012. The percentages suggest that the degree of internationalization has remained more or less stable in the three years.

Because of the high percentage of cases with repeat plaintiffs in 2012 (demonstrated in Part II), the question arises whether repeat plaintiff cases could have distorted the number of patent cases with foreign plaintiffs and foreign defendants. To answer this question, the 2012 data had to be cleaned of “repeat plaintiffs”;<sup>130</sup> to clean the data the research defined “repeat plaintiffs” this time as plaintiffs who filed ten or more patent lawsuits in the nine district courts taken as a whole.<sup>131</sup> There were 81 such “repeat plaintiffs” (or sets of plaintiffs) for the nine district courts taken as a whole in 2012, and together these repeat plaintiffs filed 51 percent of the total number of all patent lawsuits filed in the nine district courts that year.

When all cases filed by repeat plaintiffs in the nine district courts were removed from the population, the percentage of cases with at least one foreign party—in the dataset of cases without repeat plaintiff cases—was 30 percent, the percentage of cases with at least one foreign plaintiff was 16 percent, and the percentage of cases with at least one foreign defendant was 19 percent. The fact that these percentages are higher than the percentages of such cases in the population that include repeat plaintiff cases (with repeat plaintiffs included, the percentages were 27 percent, 13 percent, and 17 percent, respectively) shows that repeat plaintiffs did not file disproportionately more cases involving foreign parties than did other plaintiffs. In 2012 repeat plaintiffs filed, proportionately, slightly *fewer* cases involving foreign parties than did other plaintiffs; of the cases filed by repeat plaintiffs, 25 percent involved at least one foreign party, 11 percent involved at least one foreign plaintiff, and 16 percent involved at least one foreign defendant. Additionally, in the 2012 dataset that excludes repeat plaintiffs, the percentages of the three categories of cases are lower than they were in 2009—again showing no increasing internationalization in US patent litigation when removing from the population repeat plaintiffs, who filed

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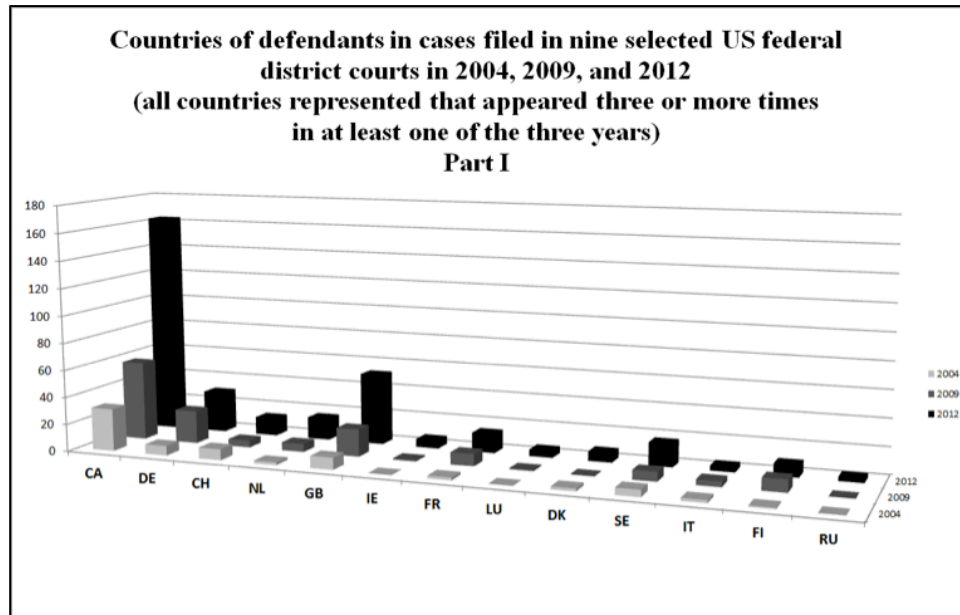
130. On the approximation of “repeat plaintiffs” and NPEs/PAEs, see *supra* note 53 and accompanying text.

131. Cf. definition of “repeat plaintiffs” *supra* Part II.

proportionately fewer cases involving foreign defendants than did other plaintiffs.<sup>132</sup>

Figure 10 lists, for the patent cases that were filed in the nine district courts in 2004, 2009, and 2012 and that had at least one defendant who was a foreign person or foreign entity, the countries that were represented as the countries of defendants' domiciles. The columns show the number of cases in which a country appeared at least once in the relevant years. To maintain a clear visualization, Figure 10 includes only those countries that were represented in three or more cases in at least one of the three years; with this restriction, Figure 10 shows data for twenty-seven countries.<sup>133</sup>

**Figure 10<sup>134</sup> (Part I)**

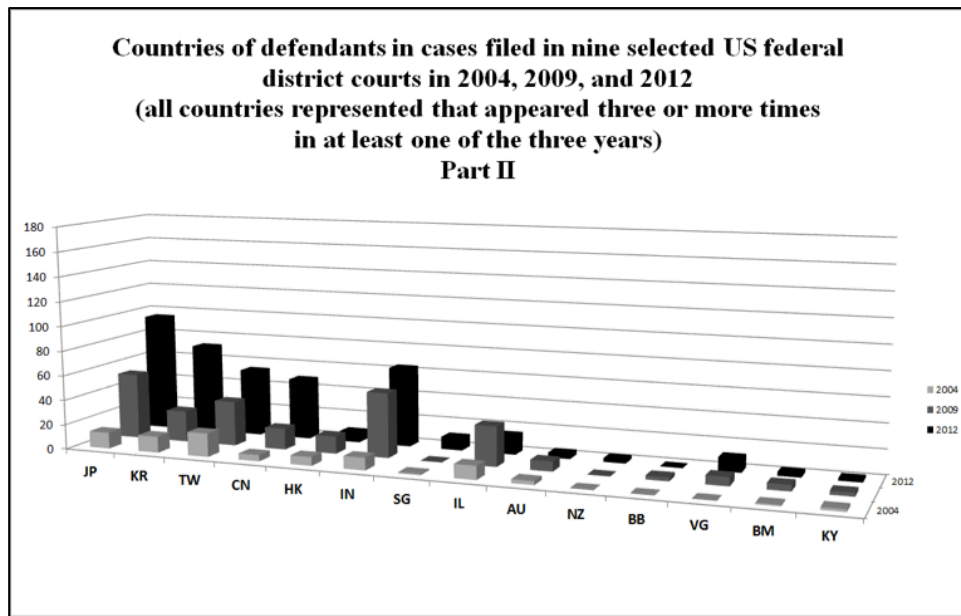


132. One possible explanation for the increase in the percentages for the three categories of cases from 2004 to 2009 and the decrease in the percentages from 2009 to 2012 could be that in 2009, when forum shopping in patent cases seemed to be on the rise, plaintiffs might have joined foreign defendants in order to secure favorable venue. See Trimble, *When Foreigners Infringe Patents*, *supra* note 5, at 535–39. With the change of the joinder rules in the AIA there is less incentive to join foreign parties solely for the purpose of securing favorable venue.

133. Data for twenty-five other countries were not included in Figure 10 because the countries were represented in fewer than three cases in all of the three years.

134. The countries in Figure 10 are (left to right) as follows: Canada (CA), Germany (DE), Switzerland (CH), the Netherlands (NL), Great Britain (GB), Ireland (IE), France (FR), Luxembourg (LU), Denmark (DK), Sweden (SE), Italy (IT), Finland (FI), Russia (RU), Japan (JP), Korea (KR), Taiwan (TW), China (CN), Hong Kong (HK), India (IN), Singapore (SG), Israel (IL), Australia (AU), New Zealand (NZ), Barbados (BB), British Virgin Islands (VG), Bermuda (BM), and Cayman Islands (KY). The codes correspond to ISO 3166-1-alpha-2 code.



**Figure 10 (Part II)**

The statistics in Figure 10 are consistent with the countries' numbers of cases for all US federal district courts that the author reported in earlier studies for 2004 and 2009.<sup>135</sup> Countries most often represented among the cases filed in the nine districts in 2012 were Canada (163 cases), Japan (95 cases), Korea (72 cases), India (64 cases), Taiwan (54 cases), Great Britain (52 cases), and China (49 cases). Among the cases filed in the nine district courts that involved defendants from these particular countries, cases involving defendants from China, Korea, Canada, and Great Britain grew the most from 2009 to 2012—by 188, 188, 181, and 160 percent respectively. The increase from 2009 to 2012 was smaller for the other countries—cases involving defendants from Japan grew by 79 percent, from Taiwan by 50 percent, and from India by 23 percent. Among other frequently represented countries of defendants' domiciles, two countries had fewer US patent cases in 2012 than in 2009; plaintiffs filed fewer cases in 2012 than in 2009 against defendants from Israel (32 cases in 2009 but only 15 in 2012) and from Hong Kong (14 cases in 2009 but only 8 in 2012).

Finally, for the purposes of estimating enforcement problems, it is important to note that most of the cases involving foreign defendants were infringement actions. An infringement action is the type of action that could generate enforcement problems when

135. Trimble, *When Foreigners Infringe Patents*, *supra* note 5, at 541.

remedies are granted against foreign defendants (infringers). For example, of the cases filed in 2012 in the nine district courts in which at least one defendant was foreign, only 2 percent were declaratory judgment actions for non-infringement or invalidity;<sup>136</sup> these actions would not require enforcement actions outside the United States against the foreign defendants. A declaratory judgment of invalidity of a patent requires an administrative action by the USPTO, and a declaratory judgment of non-infringement may require recognition by a foreign court for purposes of *res judicata* or collateral estoppel;<sup>137</sup> however, no enforcement actions against the defendants will be necessary. Additionally, 5 percent of the cases filed against at least one foreign defendant were based on New Drug Application (NDA) and Abbreviated New Drug Application (ANDA) applications.<sup>138</sup> These actions also typically require no enforcement outside the United States because the primary relief requested in these cases is an order that the effective date of the Food and Drug Administration (FDA) approval not precede the expiration date of the US patent.<sup>139</sup> Judgments concerning inventorship issues also do not necessitate enforcement outside the United States; in 2012 only two cases out of the entire population of patent cases filed in the nine districts concerned the inventorship of US patents.<sup>140</sup> On the other hand, a few cases in which at least one foreign plaintiff was involved could also have resulted in enforcement problems. These cases accounted for 2 percent of the cases filed by at least one foreign plaintiff and were actions for a declaration of invalidity and non-infringement. These declaratory judgment actions can result in a counterclaim of infringement against the foreign plaintiff, and, if they do, they can also generate cross-border enforcement difficulties if a judgment of infringement issues against the foreign plaintiff.

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136. New Drug Application (NDA) and Abbreviated New Drug Application (ANDA) suits that included a request for a declaration of infringement were not coded as declaratory judgment actions for the purposes of this study.

137. Since courts typically refuse to adjudicate the validity of foreign patents, it is very unlikely that a party would have to seek recognition by a foreign court of a declaratory judgment of invalidity.

138. 35 U.S.C. § 271(e) (2012); *see also* FOOD & DRUG ADMIN., DEP'T OF HEALTH AND HUMAN SERVS., OMB FORM NO. 0910-0338, APPLICATION TO MARKET A NEW OR ABBREVIATED NEW DRUG OR BIOLOGIC FOR HUMAN USE (2013), *available at* <http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM082348.pdf>.

139. Although a patent holder may seek additional relief—for example, an injunction prohibiting the approval applicant from selling the pharmaceutical in the United States—enforcement of the additional relief should not present difficulties because the applicant has been interested in receiving the FDA approval and thus very likely wishes to continue to engage in legal business in the United States.

140. One of the two inventorship cases was filed by a foreign plaintiff against foreign defendants; the other case was filed between US parties.

## V. CONCLUSION

The number of US patent cases involving foreign parties continues to rise, based on data for 2004, 2009, and 2012 from the nine US federal district courts that were the busiest patent venues in 2012 by number of patent cases filed in all US federal courts. In each of the nine district courts the number of patent cases grew from 2009 to 2012, and in six of the nine district courts (including the three busiest courts of the nine) there was also growth in the number of patent cases from 2004 to 2009. An increase is apparent in 2012 in comparison to 2004 and 2009 in the number of cases involving at least one foreign defendant (in each of the nine district courts) and also in the number of cases in which all defendants were foreign (in seven of the nine district courts).

The research shows the growth in the number of cases involving foreign parties, and particularly foreign defendants, and the data are indicative of a potential trend.<sup>141</sup> In the cases with at least one foreign party and the cases with at least one foreign defendant, the data suggest the possibility of an upward trend in the absolute numbers of such cases filed. While the absolute numbers of cases involving foreign defendants grew from 2004 to 2009 and from 2009 to 2012, the percentages of these cases in the total population of cases grew from 2004 to 2009 but decreased from 2009 to 2012. However, the percentages of such cases were slightly higher in 2012 than they were in 2004.

The increase in the absolute number of cases involving foreign parties, and particularly of cases in which at least one defendant was a foreign person or foreign entity, suggests that more cases may arise that will require the enforcement of a US judgment outside the United States, and also that other problems associated with cross-border litigation may arise. The percentage of such cases in the total population of patent cases supports a conclusion that the United States should be concerned about cross-border enforcement problems in patent litigation and should intensify its involvement in international negotiations of instruments that could enhance cross-border enforcement through civil litigation. The Hague Conference's Judgments Project is a setting in which such an instrument could be produced; the World Intellectual Property Organization (WIPO), which began a preliminary review of cross-border litigation problems in 2013, might be another

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141. The statistics in this research can *indicate* a potential trend but cannot *prove* a trend because three data points are insufficient to prove a trend.

international organization that could facilitate discussions of improvements in cross-border litigation of IP cases.

Negotiations of international instruments on cross-border IP litigation will be difficult. Disagreements on rules of jurisdiction in IP matters were among the reasons why the predecessor of the Judgments Project failed. Although recently drafted sets of principles for conflict of laws in IP contain much valuable information on conflict of laws rules in IP cases, the drafts might be far from being a blueprint for a globally acceptable agreement on rules for jurisdiction, choice of law, and the recognition and enforcement of foreign judgments in IP. International IP negotiations at WIPO have recently experienced difficulties, and because of these difficulties and public opposition to any kind of instrument—international or national—that would enhance enforcement of IP (particularly enforcement on the internet), it is unlikely that an international instrument concerning IP enforcement through civil litigation will be adopted in the near future.

If countries cannot negotiate a large-scale international instrument on cross-border IP litigation, the United States could consider—as it has done with other issues in IP—concluding bilateral or multilateral treaties to enhance cross-border IP enforcement through civil litigation. This Article lists the countries that were most often represented in US patent cases filed in 2012, and these countries should be the focus of negotiations on cross-border IP enforcement. Of course, if negotiations of such bilateral and multilateral instruments on IP litigation were to take place, they should address the general criticisms that these types of negotiations have generated in the IP community in recent years.

Finally, it is important to note that the statistics on patent litigation reported in this Article do not—and cannot—provide a full picture of the difficulties of enforcing patent rights against foreign parties. Statistics on filed patent cases can only indicate the magnitude of potential enforcement problems. Statistics on patent litigation necessarily underreport the magnitude of enforcement efforts because patent holders take a variety of steps to enforce their rights and not all, or even most, of the steps begin or end with the filing of a lawsuit in court. In fact, patent holders confronted with foreign infringers will often choose steps specifically to avoid civil litigation because of the cross-border difficulties that may arise. At the same time, statistics on patent cases that are filed overrepresent the magnitude of the actual difficulties of enforcing US judgments abroad; some cases are dismissed or settled, and in some cases the parties comply with judgments voluntarily, which means that these cases need no US judgment to be recognized and enforced abroad. Despite these limitations, the data on patent litigation are extremely

helpful indicators of the potential magnitude of cross-border enforcement difficulties in patent cases.