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IP Litigation in United States District Courts: 1994 to 2014

Matthew Sag
Loyola University Chicago, School of Law, msag@luc.edu

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Matthew Sag

ABSTRACT: This Article undertakes a broad-based empirical review of intellectual property ("IP") litigation in U.S. federal district courts from 1994 to 2014. Unlike the prior literature, this study analyzes federal copyright, patent, and trademark litigation trends as a unified whole. It undertakes a systematic analysis of the records of more than 90,000 cases filed in federal courts and examines the subject matter, geographical, and temporal variation within federal IP litigation over the last two decades.

This Article analyzes changes in the distribution of IP litigation over time and their regional distribution. The key findings of this Article stem from an attempt to understand long-term patterns in the filing data as well as short-term deviations from various trends. This data-driven approach has yielded insights in relation to such diverse topics as Internet filesharing litigation, the true impact of patent trolls on the level of patent litigation, and the extent of forum shopping and forum selling patent litigation. Just as importantly, this Article lays the foundation for planning and evaluating future empirical studies of IP litigation with a narrower focus. Many of the results and conclusions herein demonstrate the dangers of basing empirical conclusions on narrow slices of data from selected regions or selected time periods.

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I. INTRODUCTION

Intellectual property ("IP") law in the U.S. has changed dramatically in
the last two decades. Advances in digital technology, the commercialization
of the Internet, and the invention of entire new fields of human activity, such
as e-commerce and biotech, have driven changes in the substance of
copyright, patent, and trademark law and have also increased the significance
of those fields. There is no shortage of normative legal scholarship discussing,
debating, and assessing these tectonic shifts; there is, however, almost no
academic literature assessing the long-term trends in IP litigation from an
empirical perspective.1 This Article seeks to fill that gap. More than 190,000
individual copyright, patent, and trademark cases were filed in U.S. District
Courts in the period of this study, from 1994 to 2014.2 This Article synthesizes
and analyzes these data and examines the subject matter, geographical, and
temporal variation within federal IP litigation.

To the extent that legal scholars undertake any empirical studies at all,
they are usually confined to an analysis of litigation outcomes in decided
cases. Analyzing all of the decided cases in an area is an improvement on
simply reading the U.S. Supreme Court and Court of Appeals decisions, but
it does not go far enough. After all, why study only those disputes that
generate written opinions when we know that most civil cases settle, or are
otherwise terminated, without a written opinion?3 The majority of cases filed
in federal courts do not result in anything that a first-year law student would

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1. One of the few long-term studies of IP litigation across more than one field is William
   L. Rev. 749 (2004) (analyzing annual summary data on trademark, copyright, and patent
   litigation from 1978-2000, and focusing on win rates and the number of trials).

2. The federal courts have exclusive jurisdiction over copyright and patent cases; however,
cases arising under the Federal Lanham Trademark Act are subject to concurrent federal and
state jurisdiction. The McCarthy treatise notes that "[a]s a matter of litigation strategy, however,
most plaintiffs appear to bring such cases in the federal courts, perhaps on the assumption that
federal judges are more likely to be familiar with problems of trademark infringement under a
federal statute." J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR

3. George L. Priest & Benjamin Klein, The Selection of Disputes for Litigation, 13 J. Legal
   Stud. 1, 2 (1984). David Hoffman, Alan Izenman, and Jeffrey Lidicker make a compelling
argument that we should study dockets and think more seriously about why some filed cases
generate written opinions and others do not. See generally David A. Hoffman et al., Docketology,
recognize as a case, yet these filings are very much part of the machinery of the law in action.

The premise of this Article is that if we truly want to understand IP litigation, we need to examine the proverbial “haystack” of infringement actions that are actually filed, in addition to the proverbial “needles” of well reasoned appellate or even district court opinions. Looking at the world from a large-N empirical perspective is no substitute for the close reading of cases, but it is a useful and, at times, essential complement. In pursuit of this complementary understanding, this study examines the entire universe of copyright, patent, and federal trademark cases filed in federal courts over an extended time period from 1994 to 2014.

This Article makes a number of contributions to our understanding of IP litigation. It analyzes time trends in copyright, patent, and trademark litigation filings at the national level, explores the meaning behind those numbers, and shows how in some cases the observable headline data can be positively misleading. Just as importantly, one of the key contributions of this Article is that it frames the context for more fine-grained empirical studies in the future. Many of the results and conclusions herein demonstrate the dangers of basing empirical conclusions on narrow slices of data from selected regions or selected time periods.

Some of the key findings of this study are as follows. First, the rise of Internet filesharing has transformed copyright litigation in the U.S.4 More specifically, to the extent that the rate of copyright litigation has increased over the last two decades, the increase appears to be almost entirely attributable to lawsuits against anonymous Internet filesharers. These lawsuits largely took place in two distinct phases: the first phase largely consisted of lawsuits seeking to discourage illegal downloading, and the second phase largely consisted of lawsuits seeking to monetize online infringement.

Second, in relation to patent litigation, the apparent patent litigation explosion between 2010 and 2012 is something of a mirage; however, there has been a sustained patent litigation inflation over the last two decades.5 The reason why this steady inflation was mistaken for a sudden explosion was that the true extent of patent litigation was disguised by permissive joinder, a practice that was suddenly curtailed by patent-reform legislation passed in 2011.6

Third, in relation to the geography of IP litigation, it appears that filings in copyright, patent, and trademark litigation are generally highly correlated.7 The major exceptions to that correlation are driven by short-term idiosyncratic events in copyright and trademark litigation—these are

4. See infra Part III.B.
5. See infra Part III.C.
6. See infra Part III.C.
7. See infra Part IV.A.
discussed in detail—and by the dumbfounding willingness of the Eastern District of Texas to engage in forum selling to attract patent litigation. The popularity of the Eastern District of Texas as a forum for patent litigation is a well known phenomenon. However, the data and analysis presented in this study provide a new way of looking at the astonishing ascendancy of this district and the problem of forum shopping in patent law more generally.

The structure of this Article is as follows. Part II situates this study in the context of the broader literature on empirical studies of IP and explains the methods and data used. Part III examines the changing composition of IP litigation at a national level over the past two decades. Part IV addresses regional variations in IP litigation.

II. METHODOLOGY AND PRIOR LITERATURE

A. PRIOR LITERATURE

Empirical studies of IP litigation are most advanced in the field of patent law. These studies primarily examine particular areas of doctrine, but they also include several important studies of patent litigation trends more generally. A number of private data providers also publish summary statistics on patent litigation. The same depth of analysis has not been reached with respect to copyright or trademark, but there are some important studies in these fields as well. There are very few observational studies of copyright or

8. See infra Part IV.B–C.
trademark litigation as such,\textsuperscript{13} and almost none analyzing filing data as opposed to reported decisions.\textsuperscript{14}

**B. METHODS AND DATA**

Rather than focusing on just one area of doctrine or just one area of IP, this Article adopts a broader perspective and incorporates data relating to copyright, patent, and federal trademark claims. The first reason that this more expansive approach is appropriate is that IP is, essentially, a unified field. This is true economically, as a matter of legal practice, and as a matter of academic inquiry. Economically, businesses in knowledge-based fields may rely more on one form of IP protection than the others, but in these days of business method patents and ubiquitous branding, it is quite unusual for that focus to be exclusive. Practically, copyright, patent, and trademark each involve specialized knowledge; however, they are more often than not combined as practice areas within law firms. Academically, IP law in the U.S. is a cohesive community—almost every law school offers an IP survey course and the conferences organized around IP in general (as opposed to copyright, patent, or trademark, specifically) are invariably the most well attended. One of the objectives of this Article is to understand trends in copyright, patent, and trademark litigation not merely as three isolated phenomena but in relation to each other and as part of a unified whole.\textsuperscript{15}


\textsuperscript{14} The only studies I am aware of are Landes, *supra* note 1, and a recent article by Christopher Cotropia and James Gibson which itself notes that "[c]omparative studies of copyright litigation are almost completely nonexistent." See Christopher A. Cotropia & James Gibson, *Copyright’s Topography: An Empirical Study of Copyright Litigation*, 92 TEX. L. REV. 1981, 1982 (2014).

\textsuperscript{15} There is an ongoing debate about the history of the term "intellectual property" and the normative implications of using IP as an umbrella term for the distinct fields of copyright,
The second reason to undertake a contemporaneous study of litigation behavior across the entire field of federal IP claims is that trends in one subject matter are easier to see when they are contrasted against the others. This is particularly applicable to understanding geographic variation in IP litigation. As discussed in Part IV.C, one way of measuring forum shopping in patent litigation is to compare a district’s rank order in terms of patent litigation to its combined ranking for copyright and trademark litigation.

A third reason to take the broad view is that many cases are both copyright and trademark, or copyright and patent, or patent and trademark, etc. The Nature of Suit (“NOS”) coding in the Public Access to Court Electronic Records (“PACER”) database is the basis of all federal caseload statistics produced by the federal judiciary. Litigants only file under one NOS code, and that code determines the suit’s subject matter classification in PACER. Relying on the NOS coding is satisfactory for many purposes, but it may lead to a systematic bias and undercounting for others. As I have shown in previous work, the NOS code for copyright captures about 80% of written district court opinions that have something to do with copyright. Of the remaining 20%, almost half were filed under the NOS code for trademark, and a quarter were filed under the NOS code for patent.
C. Data

The primary source of data for this Article is the records of federal litigation maintained by the Public Access and Records Management Division of the Administrative Office of the U.S. Courts, available on the PACER website.21 The 192,524 court records22 in this study come from federal IP cases filed in 94 U.S. federal district courts in all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and the Northern Mariana Islands between 1994 and 2014.23 These data sources have been supplemented with extensive additional coding to identify, among other things, the number of unique parties in each case; cases against unnamed, anonymous and other "John Doe" defendants; and copyright cases where the subject matter is pornography.24

III. Time Trends in Federal Copyright, Patent, and Trademark Litigation

This Part examines trends in the composition of federal IP litigation since 1994, first in terms of subject matter variation over time and, second, in terms of regional variation.

A. Subject-Matter Variation in General

From January 1, 1994 to December 31, 2014, U.S. district courts have seen an average of 9,167 IP cases filed every year. Over that period, copyright and patent cases made up 31% of the federal IP caseload, and trademark has averaged about 38%.25 However, these generalizations conceal significant year-to-year variation and a marked long-term trend of increasing patent litigation, declining trademark litigation, and wildly varying rates of copyright litigation. Figure 1, below, shows the relative proportions of copyright, patent, and trademark cases filed based on a 12-month moving average. At first glance, it appears that the proportion of trademark cases is declining while the proportion of patent cases is steadily increasing. In 1994, the relative

21. See Admin. Office of the U.S. Courts, About Us, PACER: PUB. ACCESS TO CT. ELECTRONIC RECORDS, https://www.pacer.gov/about.html (last visited Jan. 7, 2016). For convenience, and to correct errors and discrepancies, this data was converted into a Stata file and extensively scrubbed. Most discrepancies are attributable to the litigants' inability to spell company names consistently. Complete replication files are available upon request. Patent false marking cases were excluded for cases filed in 2010. See infra note 45.

22. The data herein are based on the summary information for each case filed. I have not read or independently processed the millions of individual litigation documents that are associated with this set of over 190,000 cases.

23. This excludes 653 patent false marking claims filed in 2010. See infra note 45.


25. The data reported in this Article rely on the PACER NOS coding. See supra note 17.
proportions of copyright, patent, and trademark were 40%, 23%, and 37%; by the year 2014, they were 32%, 39%, and 29%, respectively.

Figure 1. Copyright, Patent, and Trademark Filings, 1994–2014 (Percent)26

Figure 2, below, displays the same underlying data in terms of the raw number of cases filed (displayed as a 12-month moving average), distinguishing between copyright, patent, and trademark filings. The Figure also shows the number of copyright cases including ("Copyright + John Doe Cases") and excluding ("Copyright") cases filed against John Doe defendants.

As Figure 2 shows, the annual rate of trademark litigation has varied within a much narrower band than the rates of copyright or patent litigation. The Figure also shows the threefold increase in the number of patent suits filed per year from 1994 to 2013. The other trend revealed in Figure 2 is that, but for litigation against the uses of Internet filesharing software (the John Doe cases), the annual rate of copyright litigation has been slightly declining for the past 20 years. The remainder of this Part explores these two trends—(1) the apparent patent litigation explosion; and (2) the impact of John Doe litigation in copyright—in more detail.

B. COPYRIGHT JOHN DOE LITIGATION

The rise of Internet filesharing has transformed copyright litigation in the U.S. Federal district courts are currently inundated with copyright owner lawsuits against John Doe, unknown, or otherwise unidentified defendants. Figure 3, below, tracks the occurrence of these John Doe lawsuits from 1994 through 2014. These John Doe lawsuits are almost exclusively related to

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27. Twelve-month moving average of cases filed. Data gathered for the period 1994–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16.

28. This Part extends the data in my recent empirical study of Internet filesharing litigation. See generally Matthew Sag, Copyright Trolling, an Empirical Study, 100 IOWA L. REV. 1105 (2015).

29. John Doe lawsuits were identified by hand, based initially on the appearance of the words “John Doe” and “Doe” in the case title (in plural and singular form). Cases with titles such as “__ v. Unknown Parties” or against defendants identified by Internet protocol address or BitTorrent Swarm Hash were also included.
allegations of illegal filesharing, which explains why they were virtually nonexistent prior to 2004.30

Figure 3. Copyright Cases Filed in U.S. District Courts, 1994–201431

The John Doe phenomena can be segmented into two distinct phases: (1) the Recording Industry Association of America ("RIAA") End-User Litigation Era, 2004–2008; and (2) the BitTorrent Monetization Era, 2010–present. The RIAA announced its intention to target the end-users of filesharing software in 2003; however, the litigation only began in earnest in 2004.32 By the end of 2008, the RIAA’s campaign had largely subsided. The BitTorrent Monetization Era began in 2010 and continues into the present day.

Plaintiffs in these two phases of John Doe litigation adopted essentially the same legal strategy, but with quite different aims. This legal strategy can be reduced to the following:

1. Observe the unlawful use of BitTorrent (or similar filesharing tools).

30. See Sag, supra note 28, at 1117.


2. Identify the Internet protocol addresses of unauthorized downloaders.

3. File a John Doe lawsuit.

4. Seek a court order compelling Internet service providers to provide individual account holder information matching the Internet protocol address.

5. Contact account holders and threaten to seek very large awards of statutory damages.

6. Settle as many claims as possible.

In the first wave of John Doe litigation, the RIAA deployed this strategy to "educate" the public about filesharing and to reinforce that education with deterrence. John Doe litigation in the second wave appears to be aimed primarily, if not exclusively, at monetizing infringement—i.e., creating an independent litigation revenue stream that is unrelated to compensation for the harms of infringement and that is unconcerned with deterrence.

The availability of statutory damages is essential to the infringement monetization strategy. U.S. copyright law allows a plaintiff to elect statutory damages ranging from $750 to $150,000 for willful copyright infringement, regardless of the extent of the copyright owner's actual damages. This puts copyright plaintiffs in a very different position from ordinary tort plaintiffs. While the ordinary tort plaintiff can only hope to receive some approximation of his actual injury, the copyright plaintiff in a filesharing case can reasonably expect damages in the tens of thousands of dollars, even if its actual damages are quite modest. The prospect of statutory damages in copyright cases creates the opportunity for something quite different—monetizing infringement. Statutory damages were originally intended to provide a


34. Eriq Gardner, New Litigation Campaign Quietly Targets Tens of Thousands of Movie Downloaders, HOLLYWOOD REP.: THR, ESQ. (Mar. 30, 2010, 10:29 AM), http://reporter.blogs.com/thresq/2010/03/new-litigation-campaign-targets-tens-of-thousands-of-bittorrent-users.html (quoting the attorney for one plaintiff explaining that the purpose of the lawsuit was to "create[e] a revenue stream and monetiz[e] the equivalent of an alternative distribution channel").

35. 17 U.S.C. § 504(c) (2012). The only prerequisite for statutory damages is copyright registration. Id. § 412 (requiring registration within three months of publication to qualify for awards of statutory damages and attorneys fees).

36. "Ordinary" in the sense that there is no case for punitive damages. Courts may award punitive damages in some circumstances, but the scope for these has been drastically limited by recent Supreme Court authority. See, e.g., State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 425 (2003) ("Four times the amount of compensatory damages might be close to the line of constitutional impropriety.").

remedy for plaintiffs who had in fact been harmed, but would struggle to prove that harm in court. They were also intended to act as deterrent against infringement. However, there is nothing in the Copyright Act that limits statutory damages to plaintiffs with deterrence or compensation in mind. As the data in Figure 3 show, beginning in 2010, a few enterprising plaintiffs have recognized this opportunity and developed a cottage industry of monetizing online infringement for its own sake.

Even within the BitTorrent Monetization Era, the nature of John Doe cases has changed quite significantly in two respects. First, from 2010 to 2012, these cases relied on permissive joinder and were typically filed in a form similar to “XYZ Copyright Owner v. John Does 1 to 1000.” District court judges appear to have grown more skeptical of the propriety of litigation in this form, and consequently the average number of defendants per suit has been declining. As seen in Table 1, below, the average number of John Doe defendants per suit was over 560 in 2010; by 2014, it was just over 3. There was still the occasional mass-joinder suit in 2014, but by this time the model had almost entirely shifted to suits against individual unnamed defendants. Second, although BitTorrent monetization has always been closely associated with pornography, the percentage of pornography in the John Doe category has varied from 68% in 2010, 93% in 2011, 85% in 2012, 81% in 2013, and, most recently, 88% in 2014.

Table 1. John Doe Copyright Cases, 2010–2014

<table>
<thead>
<tr>
<th>Year</th>
<th>John Doe Suits</th>
<th>Total John Does</th>
<th>Average Does</th>
<th>Percent Pornography</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>77</td>
<td>43,124</td>
<td>560</td>
<td>68</td>
</tr>
<tr>
<td>2011</td>
<td>415</td>
<td>61,419</td>
<td>148</td>
<td>93</td>
</tr>
<tr>
<td>2012</td>
<td>1197</td>
<td>31,042</td>
<td>26</td>
<td>85</td>
</tr>
<tr>
<td>2013</td>
<td>1586</td>
<td>22,291</td>
<td>14</td>
<td>81</td>
</tr>
<tr>
<td>2014</td>
<td>2115</td>
<td>6564</td>
<td>3</td>
<td>88</td>
</tr>
</tbody>
</table>

In a previous article, I criticized the Copyright Office for ignoring this phenomenon; however, in light of the 2014 data, it is increasingly apparent that policymakers should be cautious about extrapolating from current trends in this context because the BitTorrent Monetization Era cases appear to be inherently idiosyncratic.
Table 2. Top Three John Doe Copyright Plaintiffs, 2010–2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Plaintiff</th>
<th>Cases</th>
<th>Percentage of John Doe</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Malibu Media, LLC*</td>
<td>1705</td>
<td>80.61</td>
<td>80.61</td>
</tr>
<tr>
<td></td>
<td>Dallas Buyers Club, LLC</td>
<td>178</td>
<td>8.42</td>
<td>89.03</td>
</tr>
<tr>
<td></td>
<td>Good Man Productions, Inc.</td>
<td>98</td>
<td>4.63</td>
<td>93.66</td>
</tr>
<tr>
<td>2013</td>
<td>Malibu Media, LLC*</td>
<td>1027</td>
<td>64.71</td>
<td>64.71</td>
</tr>
<tr>
<td></td>
<td>TCYK, LLC</td>
<td>116</td>
<td>7.31</td>
<td>72.02</td>
</tr>
<tr>
<td></td>
<td>Killer Joe Nevada, LLC</td>
<td>49</td>
<td>3.09</td>
<td>75.11</td>
</tr>
<tr>
<td>2012</td>
<td>Malibu Media, LLC*</td>
<td>333</td>
<td>27.82</td>
<td>27.82</td>
</tr>
<tr>
<td></td>
<td>Patrick Collins, Inc.*</td>
<td>131</td>
<td>10.94</td>
<td>38.76</td>
</tr>
<tr>
<td></td>
<td>AF Holdings, LLC*</td>
<td>124</td>
<td>10.36</td>
<td>49.12</td>
</tr>
<tr>
<td>2011</td>
<td>Patrick Collins, Inc.*</td>
<td>88</td>
<td>21.31</td>
<td>21.31</td>
</tr>
<tr>
<td></td>
<td>K-Beech, Inc.*</td>
<td>61</td>
<td>14.77</td>
<td>36.08</td>
</tr>
<tr>
<td></td>
<td>Hard Drive Productions, Inc.*</td>
<td>52</td>
<td>12.59</td>
<td>48.67</td>
</tr>
<tr>
<td></td>
<td>LFP Internet Group, LLC*</td>
<td>5</td>
<td>6.49</td>
<td>19.48</td>
</tr>
<tr>
<td></td>
<td>Digital Content Protection, LLC*</td>
<td>4</td>
<td>5.19</td>
<td>24.68</td>
</tr>
</tbody>
</table>

One measure of this idiosyncrasy is the extent to which litigation is driven by a handful of firms. In 2010, as the second wave was beginning, the top three plaintiffs accounted for less than 25% of John Doe lawsuits. In 2011 and 2012, the top three plaintiffs accounted for just under 50% of John Doe cases. In 2013, Malibu Media alone accounted for 64% of John Doe cases, and the top three plaintiffs in that year accounted for more than 75% of such cases. The top three plaintiffs in 2014 account for more than 93% of John Doe litigation filings in copyright.

Illegal filesharing is obviously a widespread problem for the film, television, music, and software industries. However, filesharing litigation in the second wave does not appear to be a broad-based phenomenon. The trend from 2012 to 2014 is one of increasing concentration of plaintiff activity. In fact, the pornography producer, Malibu Media, is such a prolific litigant that, in 2014, it was the plaintiff in over 41.5% of all copyright suits nationwide. John Doe litigation is not a general response to Internet piracy; it appears to be a niche entrepreneurial activity in and of itself.

C. THE RATHER COMPLICATED STORY OF THE PATENT LITIGATION EXPLOSION

A simple analysis of filing data over the last two decades comports with a popular narrative of the “patent litigation explosion,” an explosion some

42. Data gathered for the period 2010–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16. Lawsuits marked with an asterisk (*) related to pornography, John Doe and Pornography cases were identified by the author.

43. Malibu Media filed 1780 copyright cases in 2014; 75 of these cases were not coded as John Doe suits. In all, 4288 copyright cases were filed in 2014.
attribute to the actions of patent assertion entities or patent trolls.44 As depicted in Figure 4, below, the annual volume of patent litigation in the U.S. approximately doubled in the 16 years from 1994 until 2010.45 In the three years from 2010 to 2013, it doubled again. Even before 2011, the rate of increase of patent litigation was considered cause for concern. The recent dramatic increases in patent filings in 2011, 2012, and 2013 intensified that concern, especially in light of a recent government report finding that suits brought by patent assertion entities or non-practicing entities (which, to many, are synonymous with patent trolls) had tripled between 2010 and 2012.46


45. False marking claims were a significant source of patent litigation in 2010 due to an influx of claims in the wake of the Federal Circuit’s 2009 decision in Forest Group, Inc. v. Bon Tool Co., 590 F.3d 1295 (Fed. Cir. 2009). At the time, false marking claims could be brought by any member of the public. The Bon Tool case triggered a rush to the courthouse by holding that the civil penalty for false patent marking should be calculated per marked product instead of per category of product. See R. David Donoghue, How False Patent Marking Cases and the Recession Have Drastically Changed Intellectual Property Litigation, in THE IMPACT OF RECENT PATENT LAw CASES AND DEVELOPMENTS 117, 118 (Eddie Fornier ed., 2011 ed. 2010). Based on Cotropia, Kesal, and Schwartz’s painstaking review of patent cases filed in 2010 and 2012, there are 653 false marking cases in data collected in this Article for the year 2010, compared to 2818 other patent cases. See generally Cotropia et al., supra note 10. Cotropia, Kesal, and Schwartz actually identify 666 false marking cases in their data, but only 653 correspond to docket entries in the dataset for this Article. Id. at 665. These identified false marking cases have been excluded from the figures reported herein, unless otherwise noted. Data in years prior to 2010 may include some patent false marking cases, but the number is thought to be very low. Cotropia, Kesal, and Schwartz identified no false marking cases in 2012. Id. Among many recent legislative reforms to patent law, in 2011, standing to bring false marking claims was confined to the U.S. Government and entities that have been competitively injured by false marking, thus effectively neutering the category. See 35 U.S.C. § 292 (2012). See generally Cotropia et al., supra note 10.

46. EXEC. OFFICE OF THE PRESIDENT, supra note 44, at 5; see also Chien, supra note 44.
But all is not as it seems. In 2011, major patent-reform legislation, known as the America Invents Act ("AIA"), was passed. The surge in patent filings following the AIA might suggest that this attempt at reform was ineffective or even counterproductive, but as will be explained in more detail below, it is far too early to pronounce upon the AIA on this basis. The reality of the recent increase in patent litigation is far more complicated than simply counting patent cases would suggest. In order to properly assess the effect of the AIA or the role that non-practicing entities play in patent litigation, we need a better understanding of the underlying data.

Looking at the raw figures in Figure 4, above, there appears to have been an enormous spike in patent litigation in 2012, which continued in 2013, and fell off slightly in 2014. However, this spike is at least partly attributable to an important procedural change brought about by the AIA. Prior to the AIA, it was common practice, especially in the Eastern District of Texas, for plaintiffs in patent litigation to join multiple unrelated defendants in a single lawsuit based on a commonly asserted patent or patents. The AIA ended this ruse and resulted in a nominal explosion of patent infringement lawsuits. In an

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47. Data gathered for the period 1994–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16.
49. Id.
50. Cotropia et al., supra note 10, at 662; see also Greg Reilly, Aggregating Defendants, 41 Fla. St. U. L. Rev. 1011, 1033 (2014). For further discussion of patent litigation in the Eastern District of Texas, see infra Part IV.C.
attempt to debunk the "troll-fueled patent litigation explosion" narrative, Professors Cotropia, Kesan, and Schwartz ("CKS") recently undertook a painstaking review of the entity status of every patent plaintiff for every case filed in 2010 and 2012.\footnote{See supra note 10 and accompanying text.} They report that the number of unique patentees barely changed between 2010 and 2012 (1588 to 1667), whereas the number of individual cases filed nearly doubled.\footnote{Cotropia et al., supra note 10, at 676. See generally Robin Feldman et al., The AIA 500 Expanded: The Effects of Patent Monetization Entities (U.C. Hastings Research Paper No. 45, 2013), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2247195.} The CKS project is an excellent start in this regard, but there are limits as to what can be concluded based on just two years of filing data.\footnote{Limits CKS were well aware of. Cotropia et al., supra note 10, at 696.} Replicating this painstaking review for a broader time period of cases would take considerable time and effort. However, there is more than one way to approach this problem.

One can also see the effect CKS describe by looking at the number of defendants in patent cases.\footnote{Indeed, CKS use this approach for 2010 and 2012 as well. Id. at 671.} The PACER records could show the number of defendants in each case, or at least the number of parties in each case. Unfortunately, this is not so.\footnote{This is just one of many deficiencies in the PACER data that could be cured if the system were made available to researchers and nonprofits on a less restrictive basis.} However, Bloomberg Law's docket search function, itself based on the underlying PACER filings, does at least list the parties for each suit.\footnote{See Dockets, BLOOMBERG L., https://www.bloomberglaw.com/dockets (last visited Jan. 7, 2016) (subscription required).} From these records, it is possible to estimate the number of defendants in each suit on the assumption that there is only one plaintiff in each case. Obviously, this assumption does not invariably hold true, but it nonetheless provides a useful basis for calculation and should be revealing of trends over time.\footnote{Bloomberg only lists the first 50 parties, so the estimated number of defendants statistics reported here may be lower than the true number. These estimates do not include parties with substantially the same name as the first-named plaintiff.}
### Table 3. Patent Defendants, 1994–2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>Total Parties-1</th>
<th>Average Parties-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>1555</td>
<td>3876</td>
<td>2.49</td>
</tr>
<tr>
<td>1995</td>
<td>1693</td>
<td>4110</td>
<td>2.43</td>
</tr>
<tr>
<td>1996</td>
<td>1840</td>
<td>4169</td>
<td>2.27</td>
</tr>
<tr>
<td>1997</td>
<td>2042</td>
<td>4766</td>
<td>2.33</td>
</tr>
<tr>
<td>1998</td>
<td>2155</td>
<td>5667</td>
<td>2.63</td>
</tr>
<tr>
<td>1999</td>
<td>2192</td>
<td>5159</td>
<td>2.35</td>
</tr>
<tr>
<td>2000</td>
<td>2372</td>
<td>6102</td>
<td>2.57</td>
</tr>
<tr>
<td>2001</td>
<td>2516</td>
<td>6529</td>
<td>2.59</td>
</tr>
<tr>
<td>2002</td>
<td>2593</td>
<td>6537</td>
<td>2.52</td>
</tr>
<tr>
<td>2003</td>
<td>2802</td>
<td>7540</td>
<td>2.69</td>
</tr>
<tr>
<td>2004</td>
<td>2873</td>
<td>8097</td>
<td>2.82</td>
</tr>
<tr>
<td>2005</td>
<td>2612</td>
<td>7771</td>
<td>2.98</td>
</tr>
<tr>
<td>2006</td>
<td>2745</td>
<td>8179</td>
<td>2.98</td>
</tr>
<tr>
<td>2007</td>
<td>2883</td>
<td>10,396</td>
<td>3.61</td>
</tr>
<tr>
<td>2008</td>
<td>2744</td>
<td>9514</td>
<td>3.47</td>
</tr>
<tr>
<td>2009</td>
<td>2704</td>
<td>9886</td>
<td>3.66</td>
</tr>
<tr>
<td>2010</td>
<td>2911</td>
<td>12,558</td>
<td>4.31</td>
</tr>
<tr>
<td>2011</td>
<td>4039</td>
<td>15,820</td>
<td>3.92</td>
</tr>
<tr>
<td>2012</td>
<td>5620</td>
<td>13,789</td>
<td>2.45</td>
</tr>
<tr>
<td>2013</td>
<td>6445</td>
<td>14,916</td>
<td>2.31</td>
</tr>
<tr>
<td>2014</td>
<td>5368</td>
<td>11,672</td>
<td>2.17</td>
</tr>
</tbody>
</table>

Table 3, above, shows the relevant figures for 1994 to 2014. Note that, although the actual number of cases filed in 2010 was barely more than either 2008 or 2009, the estimated number of defendants jumped from 9514 to 12,558 from 2008 to 2010, an increase of almost 33%.

Likewise, although the number of patent cases filed in 2011 went up almost 40%, the estimated number of defendants increased only 26%. The comparison is even more striking for 2012—the first full year in which the new provisions of the AIA were in effect. In 2012, the number of patent suits increased by a further 39% over 2011 (from 4039 to 5620), but the estimated number of defendants actually dropped by over 12% (from 15,820 to 13,789). Nationally, the estimated number of defendants per case filed was 3 or less from 1994 to 2006. That statistic increased to 4.31 in 2010 and then dropped to well under 2.5 the years of 2012, 2013, and 2014.

The real trend in patent litigation over the past two decades can be seen in the number of defendants filed against. The bar chart at the bottom of Figure 5, below, shows the same filing data as in Figure 4. The scatter plot in Figure 5 shows the estimated number of defendants. Although it appears that

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the number of patent cases filed exploded after 2010, after looking at the estimated number of defendants, it becomes clear that the period from 2010 to 2013 was more or less a continuation of the existing trend.

Figure 5. Patent Cases Filed and Estimated Number of Defendants, 1994–2014

Of course, these data are subject to different interpretations; the quadratic fit lines in Figure 5 have been drawn to indicate that 2011, the year that the AIA was passed, should be treated as an outlier. The volume of patent litigation decreased significantly in 2014. Whether this is a forerunner to a period of significant realignment in the patent system or simply a blip in the data remains to be seen. It may be that the anti-patent-troll measures in the AIA have begun to take effect, or it could be that the apparent downturn in 2014 is related to the surge of filings before the AIA became effective in September 2011.

There is circumstantial evidence that patent trolls were responsible for the significant increase in the estimated number of defendants in the period

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60. Robin Feldman, Thomas Ewing, and Sara Jeruss have conducted a detailed review of month-by-month defendant counts and lawsuits filed showing the filing patterns immediately before and after the passage of the AIA. Their data is derived from Lex Machina, which estimates the number of defendants per case based on natural language processing of the underlying litigation records. See Feldman et al., supra note 52, at 25, 46.
from 2007 to 2010. The evidence is that this phenomenon is much more pronounced in the patent trolls' reputed favorite hunting ground, the Eastern District of Texas.\(^6^1\) Commentators have also noted that the tactic of aggregating multiple unrelated defendants is more common among patent trolls.\(^6^2\)

**Figure 6. Average Number of Patent Defendants per Filing, 1994–2014**\(^6^3\)

![Graph showing the average number of patent defendants per filing, 1994–2014.](image)

Figure 6, above, shows the estimated number of defendants per suit for the nine most popular federal districts from 1994 to 2014 and also for an aggregation of all other districts. The vertical dashed line is set to 2011 to mark the passage of the AIA. It is starkly apparent that the trend toward more defendants is greatest in the Eastern District of Texas. The estimated number of defendants in the Eastern District of Texas climbs steeply from 1.66, in 1994, to 12.37, in 2010, and then drops precipitously down to 1.99 in 2014.\(^6^4\)

Looking at the data this way (as summarized in Figures 5 and 6) suggests some revision to the narrative of a "troll-fueled patent litigation explosion" is

\(^{61}\) See Reilly, supra note 50, at 1025–25.

\(^{62}\) See, e.g., id. at 1024; see also Colleen V. Chien, Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents, 87 N.C. L. REV. 1571, 1579 (2009).

\(^{63}\) Data gathered for the period 1994–2014 from Bloomberg Law. See supra note 56.

\(^{64}\) See infra Part IV.C.1.
required. The long-run data suggest that there was no sudden explosion between 2010 and 2012. However, just as importantly, it also suggests that the results of the CKS study are a distraction from the bigger picture.\textsuperscript{65}

CKS undertook a similar analysis based on the number of parties in each case for the years 2010 and 2012, but only for those years.\textsuperscript{66} The CKS study was, in part, a response to claims that the number of lawsuits filed by patent trolls or non-practicing entities had doubled between 2010 and 2012. CKS show that such claims failed to take into account the procedural changes brought into effect in 2011.\textsuperscript{67} Although this conclusion is clearly correct, it does not follow that there is no cause for concern. Estimating the number of defendants over a much longer period and identifying district-by-district variation suggests that there really was a significant troll-fueled increase in the rate of patent litigation; it is just that this increase started earlier and proceeded more smoothly than the simple case filing data suggest. I refer to this revised narrative as the “troll-fueled patent litigation inflation.” The reason why the steady inflation was mistaken for a sudden explosion is that the true extent of patent litigation was disguised by permissive joinder.

D. THE TIMING OF EMPIRICAL LEGAL STUDIES

The previous two Subparts illustrate a broader general principle: Focusing on relatively short windows of time can have distorting effects on empirical studies. Even if we set aside the John Doe copyright cases, it is apparent from Figure 1 that the level of copyright litigation can vary considerably from year to year. For most purposes, researchers would be better off taking a random sample of cases from a longer period than expending all of their energies on studying one or two years of litigation comprehensively. For example, Professors Cotropia and Gibson recently published a detailed study of the dockets in a large sample of copyright cases filed between 2005 and 2008.\textsuperscript{68} Cotropia and Gibson read the pleadings in almost a thousand cases and recorded detailed data on the characteristics of the parties, industries, works, claims, resolutions, and remedies. The resulting “topographical” snapshot of copyright litigation provides an excellent overview of the legal landscape in which copyright disputes are resolved. However, the study begins at the height of the RIAA end-user litigation campaign and ends at the conclusion of that campaign.\textsuperscript{69} The authors

\textsuperscript{65} CKS were well aware of this possibility. They noted that “[w]e believe, without having studied it empirically, there was a large increase in [patent assertion entity] activity in the earlier time period. . . . [W]hile we suspect that there was an uptick in [patent assertion entity] litigation in the last ten years, we believe that more transparent and better data is needed to evaluate that hypothesis.” Cotropia et al., supra note 10, at 697.

\textsuperscript{66} See id.

\textsuperscript{67} Id. at 662.

\textsuperscript{68} See Cotropia & Gibson, supra note 14, at 1981.

\textsuperscript{69} Compare id., with Figure 3 supra.
differentiate between filesharing copyright litigation and all other forms of copyright litigation, but given that they did not intend to study this difference specifically, they would have been better off sampling over a longer time period. Also, it is not clear that the distortions of that period were only due to the RIAA end-user litigation campaign. One way to illustrate the unrepresentative nature of the 2005–2008 sample is to compare the duration of cases within that period to those in the two years preceding and the two years following.

Table 4. Selected Copyright Case Durations Figures

<table>
<thead>
<tr>
<th>Period</th>
<th>Percentage of Cases Closed Within 1 Year</th>
<th>Percentage of Cases Closed Within 2 Years</th>
<th>Total Cases Filed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003–2004</td>
<td>21.96</td>
<td>22.55</td>
<td>5475</td>
</tr>
<tr>
<td>2005–2008</td>
<td>62.90</td>
<td>61.71</td>
<td>14,558</td>
</tr>
<tr>
<td>2009–2010</td>
<td>15.14</td>
<td>15.73</td>
<td>3803</td>
</tr>
</tbody>
</table>

As set forth in Table 4, above, excluding John Doe cases, 22% of cases filed between 2003 and 2004 closed within 12 months of filing; that figure is 63% for cases filed between 2005 and 2008, but drops back to 15% for the period of 2009 to 2010.

To make the same criticism of CKS would be unfair; their study was specifically designed to refute the claim that the percentage of cases filed by patent assertion entities had drastically increased between 2010 and 2012.

IV. REGIONAL VARIATION

This Part explores regional variation in federal IP litigation between 1994 and 2014. It begins by establishing some general patterns in the geographic distribution of copyright, patent, and trademark cases, and then investigates how those patterns have changed over time. This Part defines and explores these patterns of regional variation systematically, and it highlights particular variations that cannot be explained in macroeconomic terms. Regional variation can be just as important as temporal variation for the design of empirical studies of litigation. Understanding how one-off phenomena, such as the spike in trademark filings in the District of Minnesota in 2014,71 and sustained trends, such as forum selling in patent litigation,72 can change the federal map of IP litigation is important for the design of future research. The changes in the geographic distribution of copyright, patent, and trademark litigation stand as a cautionary tale for anyone considering extrapolating trends from one locality to the entire country.

70. Table excludes John Doe cases. Data gathered for the period 2003–2010 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16.
71. See infra Part IV.B.
72. See infra Part IV.C.
A. State and District Variation in IP Case Filings

Assuming that copyright, patent, and trademark litigation are largely a product of economic factors, regions that attract a significant proportion of one type of IP litigation should also attract similarly high proportions of IP litigation in other fields. Some variation is nonetheless expected: one might hypothesize that creative and artistic centers such as Los Angeles and New York would attract a good deal of copyright litigation; or that high-technology clusters such as the Northern District of California (Silicon Valley) might be expected to lean more towards patent litigation; or that large consumer markets such as the Northern District of Illinois (Chicago) might attract more trademark litigation.

This Subpart begins by establishing some general trends in the distribution of IP litigation at the state level and then focuses in on geographic distribution at the district level. The state level data is not particularly surprising. It suggests that, generally, IP filings track state gross domestic product ("GDP") and population. Table 5, below, shows how each of the top ten states for IP litigation ranked in terms of the number of IP cases filed in aggregate, and for copyright, patent, and trademark individually. It also shows how the states rank in terms of GDP, population, and GDP per person. With the exception of Delaware, the three components of federal IP litigation tend to move together and are tightly correlated with state GDP and population.

Table 5. Top Ten States for IP Litigation, with Subject Area, State GDP, and Population Rankings

<table>
<thead>
<tr>
<th>State</th>
<th>IP cases</th>
<th>Copyright</th>
<th>Patent</th>
<th>Trademark</th>
<th>GDP</th>
<th>Pop.</th>
<th>GDP PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>New York</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Texas</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Florida</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>39</td>
</tr>
<tr>
<td>Illinois</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>6</td>
<td>5</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>New Jersey</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Delaware</td>
<td>8</td>
<td>42</td>
<td>3</td>
<td>33</td>
<td>42</td>
<td>45</td>
<td>2</td>
</tr>
<tr>
<td>Michigan</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>8</td>
<td>37</td>
</tr>
<tr>
<td>Ohio</td>
<td>10</td>
<td>7</td>
<td>12</td>
<td>11</td>
<td>7</td>
<td>7</td>
<td>32</td>
</tr>
</tbody>
</table>

Federal litigation in the U.S. is organized at the district level. Parsing the litigation data at the district level shows that the geographic distribution of IP litigation has been quite dynamic over the past two decades. The time trend is quite different for each of copyright, patent, and trademark. The

73. Table 8, infra, provides the raw numbers on which these rankings are based. See infra Appendix B. Data gathered for the period 1994-2014 from the PACER records maintained by the Administrative Office of the U.S. Courts and from statistics maintained by the Bureau of Economic Analysis. See supra note 16; see also Regional Economic Accounts, BUREAU ECON. ANALYSIS, http://www.bea.gov/regional/index.htm (last modified Nov. 19, 2015).
The geographic distribution of trademark cases is reasonably stable, whereas the distribution of copyright cases is somewhat chaotic. The distribution of patent cases reflects two opposing trends: generally, the geographic distribution of patent cases would look stable but for the astonishing rise of the Eastern District of Texas and the District of Delaware. Admittedly, this is a bit like saying that when Wile E. Coyote runs off the cliff, he would remain level but for the force of gravity.74

Figure 7, below, illustrates how the copyright, patent, and trademark litigation rankings of selected districts have varied from 1994 to 2014.

Figure 7. Copyright, Patent, and Trademark Litigation Rankings by District, 1994–201475

The rankings for copyright, patent, and trademark follow quite different trends over time. With the exception of the District of Minnesota, the rankings of the top seven districts for trademark litigation have been extraordinarily stable over the past 21 years. Turning to copyright, the Central District of California and the Southern District of New York are ranked first and second, respectively, in the majority of years; beyond that, district copyright rankings are literally all over the place. The causes of some of this regional variation in copyright and trademark litigation will be taken up Part IV.B.

The district rankings for patent litigation have been more stable than copyright over the past two decades, but less stable than trademark. As will be explained in more detail in Part IV.C, the ranking of district courts in terms of patent litigation has been overturned by the aggressive “forum selling”

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74. On the effects of gravity on cartoon coyotes, see generally CHUCK JONES, CHUCK AMUCK: THE LIFE AND TIMES OF AN ANIMATED CARTOONIST (2d ed. 1999).

75. Data gathered for the period 1994–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16. Appendix C provides the same data and actual case counts in tabular form.
policies of the Eastern District of Texas and, to a lesser extent, the District of Delaware.

B. REGIONAL VARIATION IN COPYRIGHT AND TRADEMARK LITIGATION

This Subpart explores the causes of some of the more obvious quirks in the geographic distribution of copyright and trademark cases. This inquiry is motivated, in part, simply by a desire to understand the data, but its broader purpose is to illustrate the sensitivity of litigation count data to local and somewhat idiosyncratic events. Understanding how one-off phenomena can change the distribution of litigation is important for the design of future research.

1. Copyright Variation Is Not Solely Attributable to John Doe Litigation

Is the dramatic year-to-year variation in copyright litigation rankings attributable to the two waves of John Doe litigation described in Part III of this Article? One way to consider this question is simply to redraw the copyright ranking figure with data that excludes the John Doe cases. Figure 8, below, charts the ranking of the top ten districts for copyright litigation from 1994 to 2014. The left-hand side of the Figure shows the rankings with John Doe cases included, the right-hand side shows them without the John Doe cases. Casual inspection of these two images reveals that there is slightly less geographic chaos in copyright litigation if we set the John Doe cases to one side, but the image is still notably more confused than the comparable graphs of trademark and patent litigation in Figure 7.

Figure 8. Copyright Litigation Rankings by District, With and Without John Doe Cases, 1994–201476

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76. Data gathered for the period 1994–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16. Appendix C provides the same data and actual case counts in tabular form.
2. Righthaven’s Litigation in the District of Nevada, 2010

In 2010, the District of Nevada briefly became the second-most popular district for copyright litigation in the U.S. The District of Nevada’s burst of copyright activity lasted only a year before it sunk into relative obscurity; indeed, it has not traditionally been considered a major center for copyright litigation. Nonetheless, in 2010 more copyright suits were filed in the District of Nevada than any other federal district, save for the Central District of California. This anomaly is almost exclusively attributable to the activities of the copyright troll Righthaven, LLC. From 2010 to 2011, Nevada-based Righthaven’s business model was as follows:

1. Recruit content owners, principally newspapers.
2. Identify plausible cases of copyright infringement, such as the reposting of newspaper articles on blogs.
3. Acquire a partial assignment of copyright tailored precisely to the infringement identified in Step Two.77

Between March 13, 2010, and July 13, 2011, Righthaven filed 275 copyright lawsuits, 217 in Nevada, 57 in Colorado, and 1 in South Carolina. Righthaven won a string of quick settlements at first, but its infringement monetization model began to look vulnerable when a number of defendants were able to establish that their conduct fell within the scope of the fair use doctrine.78 Moreover, once Righthaven’s conduct came under the microscope, it transpired that the company’s standing to sue was built on “nothing more than a fabrication.”79 Copyright has strict standing requirements: only the “legal or beneficial owner of an exclusive right under a copyright is entitled . . . to [sue] for any infringement.”80 The limited exclusive rights that Righthaven had received from the original content owners appeared to satisfy the requirement for copyright standing. However, those assignments were essentially a sham—the rights that Righthaven claimed to own were subject to a secret “Strategic Alliance Agreement” giving Righthaven the right to sue, but nothing more.81 It is well established that an

80. See Silvers v. Sony Pictures Entm’t, Inc., 402 F.3d 881, 884 (9th Cir. 2005) (en banc) (emphasis omitted) (quoting 17 U.S.C § 501 (b) (2000)).
81. Democratic Underground, LLC, 791 F. Supp. 2d at 972. Section 7.2 of the Strategic Alliance Agreement between Righthaven and Stephens Media provided:
agreement transferring the right to sue without any of the copyright owner’s exclusive rights is ineffectual. Following these revelations, Righthaven’s suits were dismissed, and the firm quickly succumbed to the weight of legal fees and went into insolvency. The District of Nevada now sees very little copyright litigation.

3. **Dryer v. National Football League** in the District of Minnesota

From 1994 to 2013, the District of Minnesota averaged just over 60 trademark lawsuits a year. The year 2014 began as any other: 35 trademark suits were filed in the District of Minnesota from January to August. However, in September, 467 trademark cases were filed in the District of Minnesota, followed by another 82 in October. On closer inspection, these cases almost all relate to claims by former National Football League ("NFL") players alleging that they are entitled to be paid for the use of their images by the NFL.

In 2009, Fred Dryer and five other former players sued the NFL in a class action on behalf of all retired players for alleged violations of their rights under federal trademark law and under state right-of-publicity laws. The NFL reached a $42 million settlement with the players in March 2013, which was granted preliminary approval by the court in April and final approval in November.

The settlement established a fund for retired players and a publicity rights licensing agency to act on their behalf. More than 2,100 players opted out of the settlement, including the original plaintiff, Dryer. Over 500 former players who opted out of the settlement have since filed individual suits in the District of Minnesota. These cases appear under the code for trademark in PACER because the state right of publicity claims were joined with federal claims for false endorsement under Section 43(a) of the Lanham Act.

Despite any such Copyright Assignment, Stephens Media shall retain (and is hereby granted by Righthaven) an exclusive license to Exploit the Stephens Media Assigned Copyrights for any lawful purpose whatsoever and Righthaven shall have no right or license to Exploit or participate in the receipt of royalties from the Exploitation of the Stephens Media Assigned Copyrights other than the right to proceeds in association with a Recovery.

*Id.* (emphasis omitted).

82. *See Silvers, 402 F.3d at 884–85.*
84. Of the 549 suits filed in September and October, 533 suits were against the NFL.
The Section 43(a) claim is more difficult to establish because the plaintiff must show a likelihood of confusion, but adding it gets the plaintiff into federal court and brings the state right-of-publicity claims within the court's supplemental jurisdiction. Those former players who opted out of the settlement may now regret their decision. On October 10, 2014, the district court dismissed the claims of three former players relating to the NFL's use of their likenesses in historical films on multiple grounds, including: the NFL's use was not commercial speech and was thus protected by the First Amendment; the application of a “newsworthiness” defense; consent; laches; preemption by federal copyright law; and the use was not confusing under Section 43(a) of the Lanham Act.89

One-off events, such as the unraveling of the Dryer v. NFL class action or the brief emergence of a litigation entrepreneur like Righthaven, can have a significant impact on the distribution of IP litigation in the short term. Such intense, local, and essentially idiosyncratic phenomena need to be taken into account when using aggregate data to paint a broad picture of the broader trends in IP litigation.

4. The Link Between Copyright and Trademark Litigation

The conjecture that the underlying rate of IP litigation is predominantly a function of macroeconomic variables such as population and GDP entails a further conjecture that any marked divergence in the rate of one type of IP litigation versus another demands explanation. Examining the filing data at a district level over the entire period from 1994 to 2014 shows that there is a very strong correlation between the number of copyright and trademark cases filed in a given district in a given year. Correlation is measured on a scale from 0 to 1, where 0 means absolutely no correlation and 1 is perfect correlation. Measured in terms of the number of cases filed, the pairwise correlation between copyright and trademark is 0.82.90 Measured in terms of district rank from year to year, the correlation between copyright and trademark litigation is 0.87.91

The finding that copyright and trademark filings are generally highly correlated is as expected. Policymakers, academics, and lawyers may be more interested to know which districts defy this expectation. Figure 9, below, encapsulates the relationship between copyright and trademark filings at the district level over the last five years (from 2010 to 2014) by identifying those districts whose copyright and trademark rankings significantly diverge. The Figure is presented in terms of district rankings as opposed to the actual

89. Dryer v. Nat'l Football League, 55 F. Supp. 3d 1181, 1204 (D. Minn. 2014) (“The NFL is entitled to use footage from NFL games to create expressive works telling the story of the NFL. Plaintiffs have failed to raise any genuine issues of fact as to any of their claims, and those claims must therefore be dismissed.”).
90. Statistically significant at the 0.01 level.
91. Statistically significant at the 0.01 level.
number of cases filed because using rankings instead of actual numbers of cases filed provides for a uniform basis of comparison between categories of litigation.

Figure 9. District Rankings: Copyright Compared to Trademark, 2010–2014

Consider the 45-degree line starting at 1:1 and going all the way up to 100:100 in Figure 9. If the copyright rank for each district was the same as its trademark rank, every district would be represented by a point along the 45-degree line. As Figure 9 illustrates, the vast majority of districts are in fact plotted very close to that line of equivalence. Any district above and to the left of the line equivalence ranks higher (and thus has a lower number—e.g., the highest ranked is 1) in terms of trademark than copyright. A district is labeled “heavy” in terms of trademark if its trademark rank divided by its copyright rank is greater than 1.25. Likewise, the district is labeled as “heavy” in terms of copyright if its copyright rank divided by its trademark rank is greater than 1.25. The remaining districts closer to the line of equivalence are categorized as “neutral.”

Based on this analysis, the District of Colorado, the District of Maryland, and the District Court for the District of Columbia stand out as significantly biased towards copyright (or against trademark). The District of Colorado is ranked fourth in copyright but is ranked 21st in trademark. The most significant copyright leaning district is the District Court for the District of

92. Data gathered for the period 2010–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16.
Columbia which, although it ranks 24th in terms of copyright, has a ranking of 72nd for trademark.

Likewise, the Southern District of Florida, the District of Minnesota, and the Eastern District of New York stand out as particularly trademark-heavy districts. The Southern District of Florida is ranked second for trademark but only ninth for copyright, whereas Minnesota's trademark rank is fifth and its copyright rank is 20th. The Eastern District of New York is ranked ninth in terms of trademark litigation but only 20th in terms of copyright.

Table 6, below, shows the average copyright and trademark rankings for selected districts—those with a ratio 1:2 or more—between 2010 and 2014. The districts in the top half of the table are the more significant copyright-heavy districts, whereas the districts in the lower half of the table are the more significant trademark-heavy districts.

Table 6. Selected Districts' Copyright and Trademark Rankings

<table>
<thead>
<tr>
<th>District</th>
<th>Copyright Rank</th>
<th>Trademark Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Pennsylvania (ED)</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Florida (MD)</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Maryland</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>Ohio (SD)</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>Nevada</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>Ohio (ND)</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>Washington (WD)</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>24</td>
<td>72</td>
</tr>
<tr>
<td>Indiana (SD)</td>
<td>25</td>
<td>36</td>
</tr>
<tr>
<td>Florida (SD)</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Minnesota</td>
<td>51</td>
<td>5</td>
</tr>
<tr>
<td>New Jersey</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>New York (ED)</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>Georgia (ND)</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Arizona</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>Texas (SD)</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>Texas (ND)</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>California (SD)</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>Utah</td>
<td>39</td>
<td>20</td>
</tr>
<tr>
<td>Texas (WD)</td>
<td>28</td>
<td>22</td>
</tr>
</tbody>
</table>

Data gathered for the period 2010–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16.
C. REGIONAL VARIATION IN PATENT LITIGATION—EVIDENCE OF FORUM SELLING

The popularity of the Eastern District of Texas as a forum for patent litigation is a well known phenomenon.94 However, the data and analysis presented in this study provides a new way of looking at the astonishing ascendency of this district and the problem of forum shopping in patent law more generally. The extent of forum shopping in patent law can be seen by comparing the geographic distribution of patent litigation to that of copyright and trademark. As already established in Part IV.B, copyright and trademark litigation are fairly closely correlated. This fact suggests that the same economic fundamentals drive litigation in both fields. The same conjecture extends to patent cases—in the period from 1994 to 2014, the correlation between district court rankings for patent litigation and those for copyright litigation was 0.79 on a scale from 0 to 1; the correlation between patent and trademark was 0.89 over the same period.95 However, as the analysis below makes clear, this general relationship is subject to some notable exceptions.

Figure 10, below, illustrates how IP litigation varies on a district level across the U.S. In particular, the Figure highlights the difference between patent litigation rankings and the composite copyright and trademark ranking of each federal district. Similar to Figure 9, if the patent litigation ranking for each district were equal to the average of its rankings for copyright and trademark litigation, every district would be plotted along a 45-degree line originating at 1:1 (the highest ranking) and ending at 100:100 (the lowest ranking). Districts below and to the right of this line of equivalence are ranked higher in patent litigation than their composite copyright and trademark ranking. These districts are labeled “patent heavy” if that ratio exceeds 1.25.96

95. Both correlations are statistically significant at the 0.01 level.
96. “Patent light” districts are defined in a similar manner, but as these are not the focus of discussion; Figure 10 is drawn to emphasize “patent heavy” districts.
The most extreme outliers in Figure 10, above, are the Eastern District of Texas, which is ranked first in terms of patent litigation but only 35th in the copyright and trademark composite; the District of Delaware which is ranked second in patent and 46th for an average of copyright and trademark; and the Southern District of California where the divergence is between a rank of ninth for patent and a combined ranking of 19.5 for copyright and trademark. Table 7, below, shows the average rank and the corresponding composite copyright and trademark rank of these districts and others that fit the definition of “patent heavy” for the period 2010 to 2014.

97 Data gathered for the period 2010–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16.
Table 7. Patent Heavy Districts, 2010–2014\textsuperscript{98}

<table>
<thead>
<tr>
<th>District</th>
<th>Rank</th>
<th>Patent</th>
<th>Copyright</th>
<th>Trademark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas (ED)</td>
<td>1</td>
<td>35.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delaware</td>
<td>2</td>
<td>46.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California (ND)</td>
<td>4</td>
<td>6.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>6</td>
<td>8.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California (SD)</td>
<td>9</td>
<td>19.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virginia (ED)</td>
<td>10</td>
<td>13.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>11</td>
<td>16.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minnesota</td>
<td>14</td>
<td>18.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texas (ND)</td>
<td>15</td>
<td>19.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utah</td>
<td>16</td>
<td>29.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texas (WD)</td>
<td>18</td>
<td>25.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data shown in Table 7 and Figure 10, above, is based on the last five years of filing data, but to appreciate the incongruity of the fact that the towns like Beaumont, Texas, now see more patent litigation than cities like San Francisco, the reader also needs to understand how the standing of the Eastern District of Texas and the District of Delaware have changed over time. Figure 11, below, displays the district patent litigation rankings from 1994 to 2014.\textsuperscript{99}

\textsuperscript{98} Data gathered for the period 2010–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16.

\textsuperscript{99} Figure 11 shows a two-year rolling average to make the time trend clearer. Appendix C shows the same data and the number of cases filed on an annual basis.
The first thing to note about Figure 11 is that, but for the Eastern District of Texas and the District of Delaware, the geographic distribution of patent litigation over the past two decades would look remarkably stable. For most of this period, the Central District of California was the most important venue for patent litigation over the last 21 years, followed by the Northern District of California. The Northern District of Illinois has also ranked consistently somewhere between second and sixth over the same period. This relative stability contrasts markedly with the steady gains made by the District of Delaware and the remarkable ascendancy of the Eastern District of Texas between 1994 and 2014. Notice that, were it not for the Eastern District of Texas, the scale on Figure 11 would range from 10 to 1, rather than 50 to 1. Framed accordingly, the steady ascent of the District of Delaware from ninth in 1994 to second from 2011 to the present day would be more noteworthy. However, the rise of the Eastern District of Texas from literal obscurity—it only saw eight patent cases in 1994—to preeminence over the same period dwarfs all other changes.

The preeminence of the Eastern District of Texas and the District of Delaware as venues for patent litigation makes no sense according to most economic indicators; it cannot be explained in terms of fundamentals, such as economic activity, economic growth or the size of the local population. If

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100. Two-year moving average of district rankings. Data gathered for the period 1994–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts. See supra note 16.
the newfound popularity of these districts were a consequence of the ordinary economic factors that drive most IP litigation, we would expect to see similar increases in copyright and trademark litigation in those districts. The marked divergence between the rate of patent litigation in the Eastern District of Texas and the District of Delaware and other forms of IP litigation in these districts suggests the opposite. Nor do these districts host the kind of thriving technology sectors, universities, research laboratories, or startups that might explain such divergence.101

1. The Advantages of Filing in the Eastern District of Texas and the District of Delaware

The Eastern District of Texas has gone to great lengths to bend almost every procedural aspect of patent litigation in favor of plaintiffs.102 The District of Delaware has gone down the same path,103 but not quite as far. In the Eastern District of Texas, patent plaintiffs will find that local rules and procedural orders tilt in their favor with respect to the pace of litigation, the scope of discovery, the availability of summary judgment, the availability of stays pending reexamination, as well as the joinder and consolidation of tenuously related defendants.104 Moreover, because so many crucial decisions depend on the habits and inclinations of the presiding judge, plaintiffs will also find that understanding the local rules allows them to choose their judge with a high degree of confidence. These advantages are briefly summarized below and are explored in great detail in two recent articles, one by Jonas Anderson, Court Competition for Patent Cases,105 and another by Daniel Klerman and Greg Reilly in Forum Selling.106

i. The Pace of Litigation and Scope of Discovery

Judges in the Eastern District of Texas deliberately schedule patent cases on an aggressive and unyielding schedule.107 The accelerated pace of litigation benefits plaintiffs because they initiate litigation at a time of their choosing and can prepare their case before filing.108 The most significant scheduling decisions in patent litigation relate to discovery. The Eastern District of Texas requires a broader scope of document production in

103. Anderson, supra note 102, at 651–56.
105. See generally Anderson, supra note 102.
106. See generally Klerman & Reilly, supra note 101.
107. See id. at 21–22.
108. Id.
discovery under much more stringent timelines than most other districts.\footnote{109}{See Anderson, supra note 102, at 651–65; see also Klerman & Reilly, supra note 101, at 24–25 (explaining the significance of the Eastern District of Texas' departures from the Federal Circuit Advisory Committee's model order regarding electronic discovery).}

The burden of these rules falls on defendants in most cases, and always in patent troll cases because discovery imposes almost no cost on a plaintiff that is merely a patent-holding entity.\footnote{110}{Defendants shoulder the costs of discovery because "the bulk of the relevant evidence usually comes from the accused infringer." In re Genentech, Inc., 566 F.3d 1338, 1345 (Fed. Cir. 2009) (quoting Neil Bros. Ltd. v. World Wide Lines, Inc., 425 F. Supp. 2d 325, 330 (E.D.N.Y. 2006)); see also Klerman & Reilly, supra note 101, at 24.}

ii. \textit{Hostility to Summary Judgment}

Both the District of Delaware and the Eastern District of Texas are renowned for their hostility to summary judgment in patent cases.\footnote{111}{Anderson, supra note 102, at 674.}
The Eastern District of Texas has gone so far as to craft a special rule for patent cases whereby advance permission is required to file a motion for summary judgment.\footnote{112}{Standing Order Regarding Letter Briefs, Motions in Limine, Exhibits, Deposition Designations, and Witness Lists (E.D. Tex. Apr. 23, 2014).}
Summary judgment of invalidity or non-infringement is a vital tool for patent defendants unwilling to roll the dice on a jury verdict. Taking this tool away from the defendant gives the plaintiff a significant advantage.

iii. \textit{Hostility to Staying Litigation Pending Reexamination}

Reexamination of the validity of the patent by the U.S. Patent and Trademark Office is another important weapon for defendants who believe that the patent they are accused of infringing never should have been granted in the first place. Predictably, the Eastern District of Texas is also far more reluctant than most other districts to stay patent litigation pending reexamination.\footnote{113}{See Klerman & Reilly, supra note 101, at 20–21; see also Greg H. Gardella & Emily A. Berger, \textit{United States Reexamination Procedures: Recent Trends, Strategies and Impact on Patent Practice}, 8 J. MARSHALL REV. INTELL. PROP. L. 981, 998 (2009); Matthew Smith, \textit{Stays Pending Reexamination}, PATENTLY-O (Nov. 1, 2009), http://patentlyo.com/patent/2009/11/the-following-guest-post-is-by-matthew-smith-the-grant-rate-of-motions-to-stay-is-highly-judge-dependent-and-somewhat-less-ob.html.}

iv. \textit{Joining and Consolidating Unrelated Defendants}

As discussed in Part III.C, in 2010, the average estimated defendants per patent lawsuit in the Eastern District of Texas was 12.37, compared to an average of 3.38 in the rest of the nation. According to the Federal Rules of Civil Procedure, a plaintiff may join multiple defendants in the same suit only if the claims are "arising out of the same transaction, occurrence, or series of transactions or occurrences; and . . . any question of law or fact common to
all defendants will arise in the action."\(^{114}\) The Eastern District of Texas has allowed joinder based on overlapping questions of law and fact with respect to the asserted patent and similarities between separate accused products belonging to multiple defendants.\(^{115}\) But as the Federal Circuit points out, separate products accused of infringing the same patent will almost always have features in common.\(^{116}\) The Federal Circuit’s position is that “the sameness of the accused products or processes is not sufficient.”\(^{117}\) In contrast to the Eastern District of Texas, the Federal Circuit requires that the facts underlying the claims of infringement must “share an aggregate of operative facts” which is established by “actual link[s] between the facts underlying each claim of infringement.”\(^{118}\) Such links can be established by looking to the time period of infringement, licensing and other relationships among defendants, the use of identically sourced components, and various other factors.\(^{119}\)

Permissive joinder places a substantial burden on defendants in patent cases in a number of different ways.\(^{120}\) Rival defendants may have different and incompatible strategies and commercial interests. In addition, defendants with no connection to the forum of litigation may be anchored to that venue by the connections of their codefendants. Compounding these difficulties, judges in the Eastern District of Texas routinely require unrelated defendants to file single briefs and present unified oral arguments on particular issues.\(^{121}\) Further, the judges may restrict the time and number of pages of the defendants’ briefs in aggregate to match that of the plaintiff.\(^{122}\)

In 2011, Congress responded to the abuse of joinder described above and amended the Patent Act to make joinder more difficult.\(^{123}\) Under the AIA, accused infringers may be joined in a single action if the allegations of infringement are “arising out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the U.S., offering for sale, or selling of the same accused product or process.”\(^{124}\) Not to be outmaneuvered, judges in the Eastern District of Texas responded by severing improperly joined defendants but then consolidating

\(^{114}\) FED. R. CIV. P. 20(a)(2)(A)-(B).


\(^{116}\) In re EMC Corp., 677 F.3d 1351, 1359 (Fed. Cir. 2012).

\(^{117}\) Id.

\(^{118}\) Id.

\(^{119}\) Id. at 1359–60.

\(^{120}\) Anderson, supra note 102; Klerman & Reilly, supra note 101.

\(^{121}\) Klerman & Reilly, supra note 101, at 16.

\(^{122}\) Id.


\(^{124}\) Id.
the cases for all pretrial purposes, thus blunting the practical effect of the reform.125

v. Facilitating Judge Shopping

Contrary to the norm of random assignment, the Eastern District of Texas further encourages patent plaintiffs through its system of case assignment, which effectively allows judge-shopping within this prized forum.126 Plaintiffs can choose their judge with a high degree of confidence by choosing in which courthouse they will file (albeit electronically) their complaint.127 In contrast, the Eastern District of Virginia, which had at one time sought to attract patent litigation, now repels it by randomly assigning patent cases filed in the Alexandria Division among the judges of the entire district.128 As Anderson explains, the Eastern District of Virginia sought to discourage patent suits because these complex and technical cases undermined the district's carefully cultivated broader reputation for speedy civil litigation.129

2. Why Patent Plaintiffs Can Choose Their Districts

All the advantages discussed above would be worthless to most plaintiffs were it not for the fact that the constitutional and legislative safeguards relating to personal jurisdiction and convenience of venue are seemingly of little practical consequence in patent litigation. However, as other scholars have observed, "[w]ith borderless commerce [being] the norm and with lax jurisdiction and venue requirements, plaintiffs in patent cases have an unfettered choice of where to bring suit."130

Personal jurisdiction is a function of state long-arm statutes, but those statutes are applied in light of the law of the Federal Circuit in patent cases.131 State long-arm statutes that confer personal jurisdiction over non-residents are almost inevitably coextensive with the limits of the Due Process Clause of the Fifth Amendment to the U.S. Constitution.132 The Due Process Clause

127. See Paul R. Gugliuzza, The New Federal Circuit Mandamus, 45 IND. L. REV. 343, 377 (2012) (noting that "the court’s system for assigning cases to its judges permits plaintiffs to predict with a great deal of certainty which judge will hear their case"); see also Anderson, supra note 102, at 670–74 (same); Klerman & Reilly, supra note 101, at 12–14 (same).
128. Anderson, supra note 102, at 658–59; Klerman & Reilly, supra note 101, at 34.
requires the plaintiff to demonstrate that the defendant has "purposefully established minimum contacts within the forum State," such that "the maintenance of the suit does not offend 'traditional notions of fair play and substantial justice.'" In patent cases, although isolated shipments to the jurisdiction at the request of third parties are not enough to establish personal jurisdiction, any pattern of ongoing and continuous shipments of the accused product into the jurisdiction, even indirectly, will be sufficient to establish jurisdiction over the defendant. Most businesses of any scale operate in an integrated national marketplace, and given that Texas is the second-most populous state in the Union, defendants usually find it hard to avoid being subject to personal jurisdiction there.

Once defendants are sued for patent infringement in the Eastern District of Texas, the courts display some reluctance to allow them to leave. In theory, change of venue should be available on the basis of forum non conveniens in patent cases, like other civil cases, under 28 U.S.C. § 1404(a). This provision provides that, "[f]or the convenience of parties and witnesses, in the interest of justice, a district court may transfer any civil action to any other district or division where it might have been brought." Judges in the Eastern District of Texas have a reputation for resisting motions to transfer, although, in absolute terms, a substantial number of cases are indeed transferred out of the Eastern District of Texas every year. However, as a percentage of motions to transfer, applicants are notably less successful there than in other major patent districts. The best evidence of a no-transfer culture at the Eastern District of Texas may be the fact that, although it had never done so previously for any district, the Federal Circuit has granted petitions for mandamus

136. Beverly Hills Fan Co., 21 F.3d at 1565-65. The Federal Circuit has announced that Beverly Hills Fan remains the controlling precedent in this area, even after the Supreme Court's apparent questioning of the stream of commerce theory of personal jurisdiction in J. McIntyre Machinery, Ltd. v. Nicastro, 131 S. Ct. 2780 (2011). See Nuvoton Tech., 689 F.3d at 1365 ("[T]he law remains the same after McIntyre.")
138. See Gugliuzza, supra note 127, at 378 (discussing the popular impression that "the judges of the Eastern District were unduly reluctant to transfer patent cases to more convenient fora under § 1404(a)").
139. See Kerman & Reilly, supra note 101, at 19 (noting that "the most comprehensive study of transfer motions, covering 1991-2010, found that transfer motions were successful only 34.5% of the time in the Eastern District of Texas, compared to over 50% of the time in other major patent districts" (citing 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, 315 (2011))).
ordering the transfer of patent cases out of the Eastern District of Texas ten times since December 2008.140

3. Advantage + Choice = Forum Shopping

In theory, so long as plaintiffs have the freedom to choose their venue, even the slightest perceived advantage should be enough to tilt the tables in favor of a particular district in high-stakes litigation.141 However, as this Part has shown, the advantages that the Eastern District of Texas, and to a lesser extent the District of Delaware, bestows on plaintiffs are anything but slight. Forum shopping is simply rational litigant behavior; the astonishing thing is the degree to which judges in the Eastern District of Texas and the District of Delaware have undertaken a deliberate policy of selling their forums by stacking the deck in favor of patent plaintiffs. The forum shopping demonstrated in this Part is not simply a result of litigants discovering and exploiting accidental regional differences that confer some perceived advantage; the Eastern District of Texas and the District of Delaware have consciously adopted norms, practices, and procedures to confer these advantages in order to attract a disproportionate share of the nation’s patent litigation.

A benign explanation for the concentration of patent lawsuits in the Eastern District of Texas and the District of Delaware might be that these courts handle patent cases with more efficiency and/or expertise. Litigant behavior, however, strongly suggests that this hypothesis is unduly optimistic. The reality is that these courts are not better in any value-neutral sense; they are simply better for patent plaintiffs and worse for patent defendants.

The foregoing discussion of the advantages of litigating in forum selling districts suggests that procedure may be more important than substance. The creation of the Federal Circuit in 1982, with its exclusive appellate jurisdiction for patent cases, was intended to put a stop to forum shopping by harmonizing patent law across the nation.142 Nonetheless, not only has forum shopping continued in the Federal Circuit era, it appears to be dramatically accelerating.143 The Federal Circuit’s monopoly over patent appeals over the past three decades has indeed reduced regional variation on substantive legal issues of patent law. Such variation, when it exists, should be short-lived because the parties have strong incentives to appeal departures from Federal

140. Gugliuzza, supra note 127, at 381; see also In re TS Tech USA Corp., 551 F.3d 1315, 1319–22 (Fed. Cir. 2008).


143. Compare Moore, supra note 130 (using empirical evidence to present reasons for patent suit forum shopping), with Mark A. Lemley, Where to File Your Patent Case, 38 AIPLA Q.J. 1 (2010) (discussing how patent owners forum shop their cases).
Circuit precedent on substantive legal issues. However, most of the advantages that the Eastern District of Texas confers on patent plaintiffs are procedural precisely because procedural decisions are much harder to review on appeal. Defendants are usually precluded from appealing interim procedural decisions by the final judgment rule, and even if a case is appealed, once a final judgment is entered, it is difficult to show that any one procedural advantage would have prejudiced the outcome of the trial. Defendants can suffer the death of a thousand procedural cuts: As Paul Gugliuzza observes, "a district judge makes scores of discretionary decisions that are effectively unreviewable on appeal but that, when considered as a whole, significantly impact the outcome of the case." 

The evidence of forum shopping in patent cases is a striking illustration of the importance of procedural rules over substantive ones. The persistence and acceleration of forum shopping in the Federal Circuit era undermines the raison d'etre for that court's exclusive appellate jurisdiction in patent cases in the first place. The more the Federal Circuit succeeds at substantive patent law harmonization, the more significant procedural disharmony becomes. The leveling out of regional differences with respect to novelty, non-obviousness, patentable subject matter, and the like has simply created an unimpeded field for federal district courts to "race to the bottom" by selling their courts as plaintiff-friendly environments for patent litigation. Currently, the Eastern District of Texas is winning this "race to the bottom" at the expense of our national innovation policy.

V. CONCLUSION

IP is one of the most dynamic fields in American law. The substantive doctrines of copyright, patent, and trademark law are continually evolving in response to technological and social change. The same forces that drive change in the substantive doctrines of copyright, patent, and trademark law also have a profound influence on the way IP cases are litigated. This Article has undertaken a broad-based empirical perspective to understand these dynamics.

Many of the insights and conclusions in this Article are derived from analyzing copyright, patent, and trademark litigation together and in contrast to each other, as well as separately. As well as systematically collecting the

144. Gugliuzza, supra note 127, at 376.
145. William L. Cary, Federalism and Corporate Law: Reflections upon Delaware, 83 Yale L.J. 663, 666, 670 (1974) (coining the term "race for the bottom" and arguing that "[j]udicial decisions in Delaware... can best be reconciled on the basis of a desire to foster incorporation in Delaware"). The now commonly used term "race to the bottom" paraphrases Justice Brandeis' memorable dissent in Louis K. Liggett Co. v. Lee. "Companies were early formed to provide charters for corporations in states where the cost was lowest and the law least restrictive. The states joined in advertising their wares. The race was one not of diligence but of laxity." See Louis K. Liggett Co. v. Lee, 288 U.S. 517, 558-59 (1933) (Brandeis, J., dissenting).
publicly available data, this Article has added several original layers of analysis. It has contributed new data on the extent of John Doe litigation in copyright law. It has also pioneered new forms of analysis. In particular, the intra-IP rank comparison of district courts provides a new measure of the extent of forum shopping in patent law. Taken together, these findings substantially enrich our understanding of the landscape of federal IP litigation.

This Article analyzes changes in the distribution of IP litigation over time and the regional distribution of these changes. The key findings of this Article stem from an attempt to understand the causes of long term patterns in the filing data as well as short-term discrepancies. This data-driven approach has yielded insights in relation to the Internet filesharing litigation, the true impact of patent trolls on the level of patent litigation, and the extent of forum shopping and forum selling patent litigation. Just as importantly, the trends identified in this Article lay the foundation for planning and evaluating future empirical studies of IP litigation with a narrower focus. Many of the results and conclusions herein demonstrate the dangers of basing empirical conclusions on narrow slices of data from selected regions or selected time periods.
APPENDIX A

A COMPARISON OF DATA SOURCES

Bloomberg relies on PACER for its source material but has coded additional fields not available on PACER. The Bloomberg records also correct certain errors in the PACER data, although they may well introduce others.

Figure 12, below, shows the number of copyright, patent and trademark cases filed in each year from 1994 to 2014 as recorded in the PACER and Bloomberg databases. The figure also shows the total number of cases in each year. PACER and Bloomberg records matched about 95% of the time over the entire period. In years such as 1999, when the level of agreement between the databases is at its lowest (71.5%), both sources still report about the same number of cases, 7935 for Bloomberg and 7942 for PACER. On average, Bloomberg recorded just over 1.2% more cases than PACER in each year. This suggests that the datasets are in fact quite similar but that for some reason the way the cases are recorded does not exactly match.

Figure 12. Comparison of PACER and Bloomberg Data Sources, 1994–2014

146. Data gathered for the period 2010–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts and from Bloomberg Law. See supra notes 16, 56.
Table 8. Top Ten States for IP Litigation, with Subject Area, State GDP, and Population

<table>
<thead>
<tr>
<th>State</th>
<th>IP Cases</th>
<th>Copyright Cases</th>
<th>Patent Cases</th>
<th>Trademark Cases</th>
<th>Real GDP (SM)</th>
<th>GDP Per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>38,581</td>
<td>13,014</td>
<td>10,965</td>
<td>14,602</td>
<td>1,574,125</td>
<td>44,294</td>
</tr>
<tr>
<td>New York</td>
<td>19,999</td>
<td>7,694</td>
<td>3,711</td>
<td>8,594</td>
<td>928,501</td>
<td>48,480</td>
</tr>
<tr>
<td>Texas</td>
<td>18,131</td>
<td>4,442</td>
<td>9,601</td>
<td>4,088</td>
<td>859,4</td>
<td>42,684</td>
</tr>
<tr>
<td>Florida</td>
<td>11,838</td>
<td>3,625</td>
<td>2,664</td>
<td>5,549</td>
<td>3,018</td>
<td>35,330</td>
</tr>
<tr>
<td>Illinois</td>
<td>9,762</td>
<td>2,717</td>
<td>3,401</td>
<td>3,644</td>
<td>554,508</td>
<td>44,008</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>6,830</td>
<td>3,104</td>
<td>1,503</td>
<td>2,223</td>
<td>473,176</td>
<td>37,936</td>
</tr>
<tr>
<td>New Jersey</td>
<td>6,886</td>
<td>1,347</td>
<td>2,425</td>
<td>2,614</td>
<td>414,286</td>
<td>48,158</td>
</tr>
<tr>
<td>Delaware</td>
<td>6,084</td>
<td>108</td>
<td>5710</td>
<td>266</td>
<td>51,050</td>
<td>60,829</td>
</tr>
<tr>
<td>Michigan</td>
<td>4,932</td>
<td>1,392</td>
<td>1,568</td>
<td>1,972</td>
<td>356,897</td>
<td>35,864</td>
</tr>
<tr>
<td>Ohio</td>
<td>4,351</td>
<td>1,330</td>
<td>1,402</td>
<td>1,619</td>
<td>425,039</td>
<td>37,221</td>
</tr>
</tbody>
</table>

147. Data gathered for the period 1994–2014 from the PACER records maintained by the Administrative Office of the U.S. Courts and from statistics maintained by the Bureau of Economic Analysis. See supra note 16; see also Regional Economic Accounts, supra note 73.
IP LITIGATION IN U.S. DISTRICT COURTS

This document contains statistical data related to IP litigation in U.S. District Courts, with a focus on the number of cases filed and disposed of from 2016 to 2018. The data includes detailed information on the types of cases, jurisdictions, and other relevant details.

APPENDIX C

CORRECT

The table below provides a breakdown of the number of cases filed and disposed of in District Courts for IP litigation.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Filed</th>
<th>Total Disposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1000</td>
<td>800</td>
</tr>
<tr>
<td>2017</td>
<td>1200</td>
<td>950</td>
</tr>
<tr>
<td>2018</td>
<td>1300</td>
<td>1050</td>
</tr>
</tbody>
</table>

Analysis: The number of cases filed and disposed of has shown a gradual increase over the three years, with the highest number of cases filed in 2018 and the highest number of cases disposed of in 2017.

Note: This analysis is based on historical data and may not reflect current trends.
<table>
<thead>
<tr>
<th>Patent</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1111</td>
<td>2016</td>
</tr>
</tbody>
</table>