3-13-2013

Patent Trolls by the Numbers

Colleen Chien
Santa Clara University School of Law, colleenchien@gmail.com

Patent Trolls by the Numbers

See PatentlyO version for live links
Assistant Professor Colleen Chien, Santa Clara University Law School
colleenchien@gmail.com, Twitter:@colleen_chien

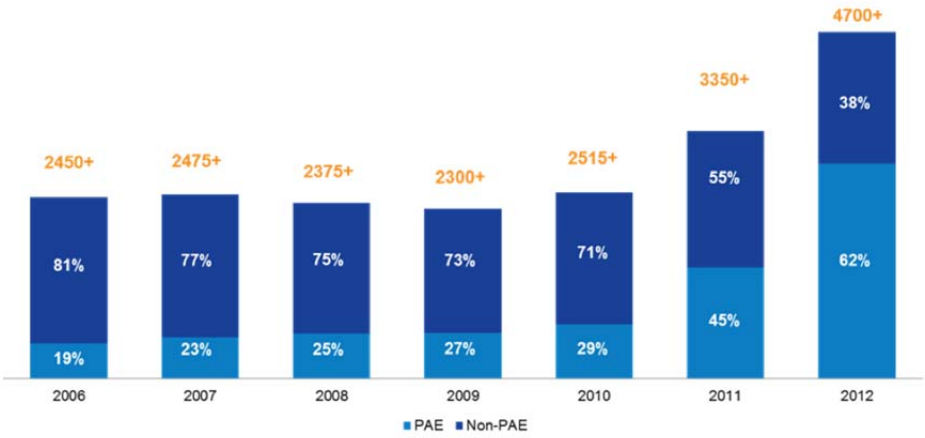
Following President's Obama remarks and reintroduction of the SHIELD Act, today the House Judiciary Committee Subcommittee on Courts, Intellectual Property and the Internet is holding hearings on litigation abuse by patent trolls (aka patent assertion entities or PAEs). Companies J.C. Penney, SAS, Cisco, Johnson & Johnson, & Adobe, are testifying. Part of the discussion may focus on patent troll metrics, on which I have previously reported. These statistics draw heavily upon proprietary research as well as my own analyses, so, in the interest of full disclosure, below are the numbers and what I know about them. Some say that the time has come to act, not to further study the PAE phenomenon but I believe in both – that to craft interventions that are both narrowly tailored and actually will work requires a deep understanding and careful analysis.

(It bears mentioning as well that much also can be learned from related experiences -- indeed, litigation abuse is nothing new and in fact the Judiciary committee that is hosting today's hearing held a hearing on litigation abuse in non-patent contexts yesterday. In the patent troll context, many interventions, like fee-shifting, improving patent quality control, special defenses, and maintenance fee tweaking have been suggested/tried before – in the recent past (early 2000s) as well as in the late 1800s, against both farming and railroad patent trolls and related contexts. FWIW, in my paper on the topic, I discuss other fixes like court leadership, industry organizations, collective action, and bolstering protection of users based on what has worked in these settings.)

1. PAEs brought 62% of 2012 patent litigations

According to RPX Corporation PAEs initiated 62% of all patent litigation, or 2,921 of 4,701 suits in 2012. RPX is a publicly-traded company that provides solutions to troll threats for its member companies and has great data, principally maintained by Seth Besse.

PAE Suits (2005-2012)



Credit: © RPX Corporation 2013

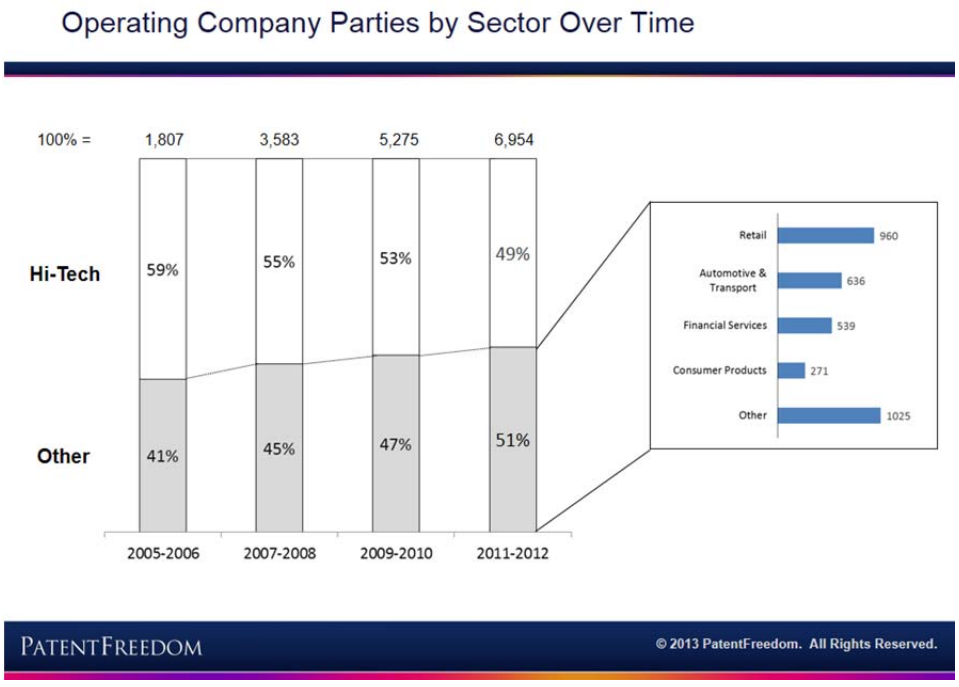
Data checks on RPX numbers:

a) Patent Freedom reports 2,923 NPE lawsuits in 2012, as compared to RPX's 2,921 PAE lawsuits, using a slightly different definition.
b) I compared about 1,000 of RPX's codings with my own, and reported the result in Appendix C of this paper: "The share of disagreements between the databases was 7%, with the net number of trolls varying by 4%."
c) Robin Feldman, Sara Jeruss, and Joshua Walker found that about 40% of 2011 suits were brought by patent monetizers in their study for the GAO. See comparison at page 17.

Comparison to 2011: The share of suits brought by PAEs in 2012 grew from 2011. However, the AIA's misjonder rules, which curbed the troll tactic of naming multiple unrelated defendants in a single suit which had artificially deflated troll suit numbers, are responsible. Thus, the increase in the number of troll suits, post-AIA, is most likely an artifact of the AIA.

2. In 2012, PAEs Sued More Non-Tech Companies than Tech Companies

Though the PAE share may surprise some, patented technologies like software are the building blocks of modern commerce. "Low-tech" industries like funeral homes, advertising agencies, and retailers like JC Penny which is testifying tomorrow are all taking steps to protect themselves from troll demands. Though historically a "tech" problem, in 2012 PAEs sued more non-tech companies than tech companies, according to the analysis below by Patent Freedom, which provides market intelligence on patent trolls. Retailers are hit the hardest by non-tech PAE suits, followed by automotive like Ford, which has also testified against trolls, financial services, and consumer products. So expect a broadening of the coalition to deal with trolls especially as many in these sectors are likely being sued over their use rather than making of technology.

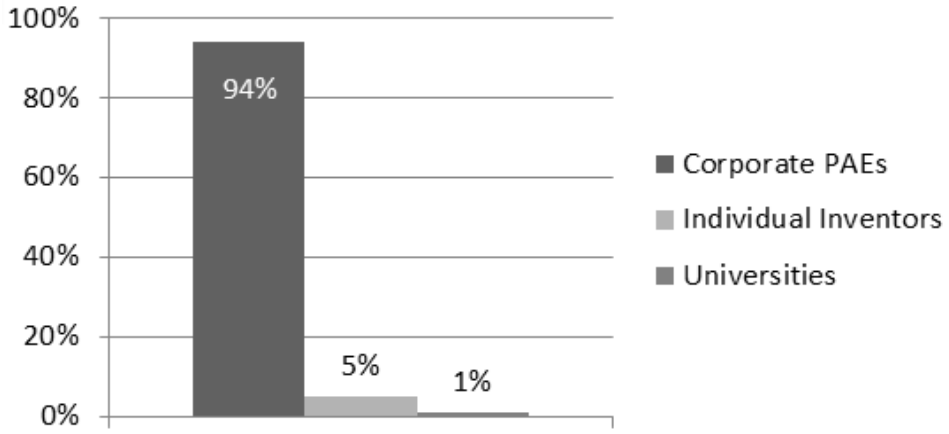


3. Individual Inventor v. Corporate PAE suits

Not all trolls are created alike. Individuals get injunctions, corporate trolls don't. (See my paper with Mark Lemley, at FIG 3.) The SHIELD act would force corporate losing trolls to pay, but not individuals. "Non-practicing entities" can also include universities and startups, which is why I created the term PAE to apply to businesses that assert patents as their primary business model – universities and startups don't, they are focused on commercializing or transferring technology. (As Justice Kennedy put it in his *eBay* concurrence, trolls are firms that "use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees.")

Based on data provided by RPX, 94% of 2012 suits brought by entities that don't practice were brought by corporate PAEs. Individual inventors were another 5% and the remaining 1% universities, based on data provided by RPX. However, PWC's excellent litigation report reports much higher "individual NPE" proportion – of 51% but for the 1995-2011 period and likely using a different methodology. Because the SHIELD act turns on the individual vs. corporate distinction, it would be important to reconcile these numbers.

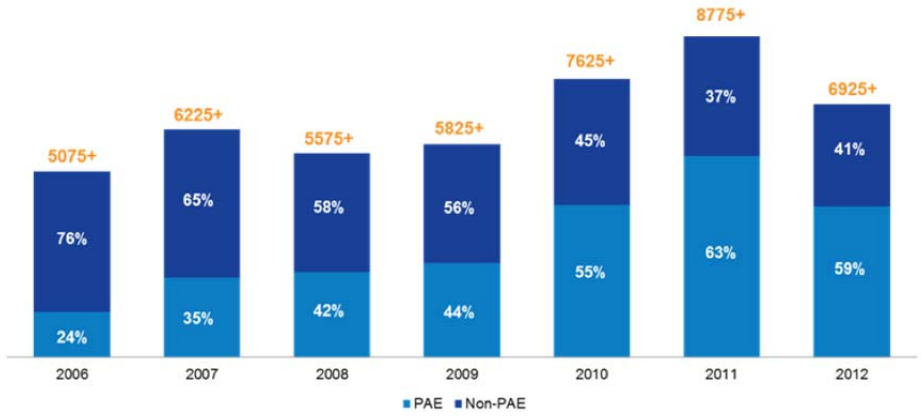
The Distribution of 2012 NPE Suits by NPE Type (based on RPX data)



4. PAE defendants comprised 59% of all patent lit defendants

According to RPX Corporation, defendants to PAE suits represented 59% of 2012 patent litigation defendants, or 4,125 out of 6,934. (Patent Freedom counted 3,859 NPE defendants to RPX's 4,125).

PAE Defendants (2005-2012)



Credit: © RPX Corporation 2013

Comparison to 2011: As the graph above shows, the absolute number of defendants named in PAE suits in 2011 shrank about 25% in 2012. However, that the relative share of troll defendants only declined by 4% (from 63% to 59%), supports that this trend reflects a general decline in new patent cases brought by practicing and non-practicing entities, rather than a fundamental shift away from the courts by PAEs.

The Success of the Misjoinder Rules

While the share of PAE defendants has not gone down significantly, I do believe, based on unreported analyses that I have performed, that trolls have changed their litigation tactics in at least one respect – they are less likely, because of the misjoinder rules, to name small defendants in lawsuits where they cannot be joined with other parties. In this way, the joinder rules can be said to be having their intended impact of making life harder for trolls. The small companies that actually are sued, however, are arguably worse off because they have fewer joint defense options. And even if they are not sued, many small defendants are receiving letters (see below).

5. 55% of Unique PAE defendants makes $10M or less

Based on my analysis of RPX's database, 55% of unique PAE defendants make $10M or less in revenue, and 66% make less than $100M a year. (previously I have erroneously reported the 55% number as associated with defendants making "less than $10M", it should be "$10M or less." Apologies for the error!). While small defendants have historically received less attention as troll targets, the patent woes of podcasters and small businesses that use scanners, not to mention bakeries (I love bread) have gotten recent attention.

Notes:

Because small companies are sued fewer times than large companies – e.g. Apple gets dozens of PAE demands whereas a small company may only get a handful – the number of total demands is more heavily skewed towards large companies than the unique defendant count. However, I believe 55% to be a conservative estimate because I calculated it based on actual revenue estimates in the RPX database provided by Dun & Bradstreet and commercial providers, and excluded from both the nominator and denominator companies for whom no revenue is reported. If, on the other hand, we assume that companies without coded revenue likely have limited revenue – an assumption other scholars have made– the share would grow. Longer discussion of methodological issues and approaches

to filling in missing data here. Also of note, because of the success of the joinder rules in discouraging suits against individual small cos., the 55% number has likely declined in recent months.

6. At the ITC in 2012, PAE complainants brought about 35% of patent complaints and about half of patent respondents.

337 Patent Investigations & Respondents	2011	2012
New Patent Investigations	69	40
PAE Share	23%	30%
New Patent Defendants	226	184
PAE Share	43%	48%

My research assistants worked with me to code the complainants in these cases, using data provided by the ITC. As with district court defendant counts, total ITC investigations and defendants (called "respondents") declined in 2012 from 2011, by about 40% and 20%, respectively. However, the PAE share of investigations and respondents actually increased from 2011 to 2012, from 43% to 48%.

Data checks:

a) Last summer, the ITC published a report called "Facts and Trends" that tracks NPEs. It reported a combined NPE share of 19% of investigations, and 41% of defendants in 2011, versus my PAE shares of 23% and 43%, respectively (see above). The ITC report also notes that ITC numbers tend to vary greatly from year to year, given their relatively small numbers of investigations, which I tend to agree with.

b) Covington & Burling's Robert Fram and Ashley Miller, in an excellent unpublished paper *The Rise of Non-Practicing Entity Litigation at the ITC: The State of the Law and Litigation Strategy* (Jan. 5, 2011), tracked the percentage of companies relying on their licensing activities to show a domestic industry from 13% in 2000-2006 to 35% in the first 8 months of 2010). Based on an extension of their database they shared with me, the rate in 2011 (through Oct. 1) was 41%.

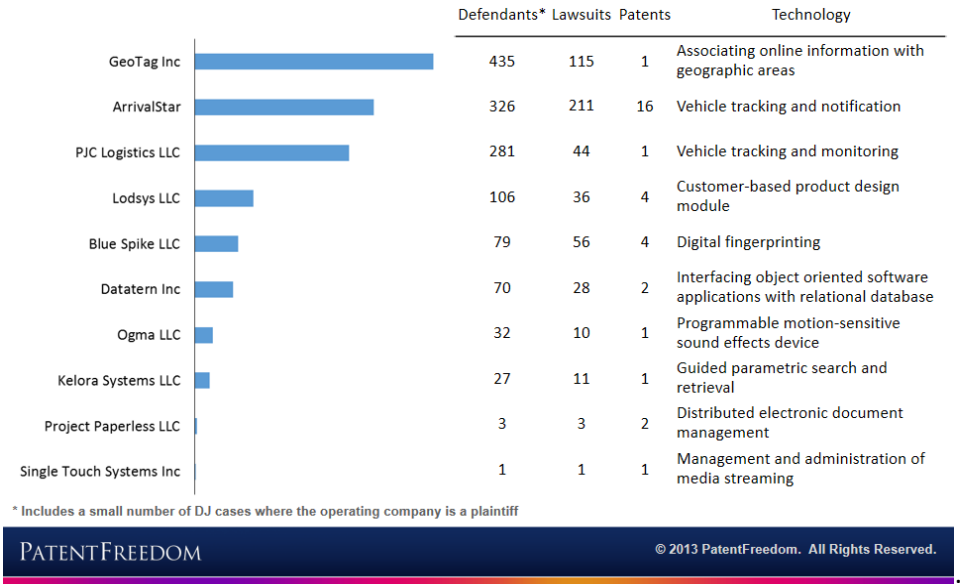
Legislative reform?: Members of the ITC bar and ex-ITC officials remain deeply skeptical of the efforts to reform the ITC legislatively that tech companies are pushing for. Last summer, I argued that the ITC's decision-making was evolving, and recommended revisiting its record in six months to a year. However, the fewer cases and exclusion orders that the ALJs have issued since then have meant a slower evolution of the ITC's law, despite more attention from government agencies and others.

While we wait, I still find it puzzling that entities like Acacia, Industrial Technology Research Institute of Taiwan, Beacon Navigation GmbH of Switzerland, and Intellectual Ventures would put up the considerable funds it takes to bring an ITC case when the ITC can't award the licensing revenues they seek, but only an exclusion order. The best I can tell is that this trend reflects a deeper dissatisfaction of patentholders with the consequences of *eBay*, rather than a desire to stop unfair importation, particularly since PAEs name domestic defendants more often than foreign ones (see Appendix A).

7. Some High Impact PAE Patents Fit the "Buy and Sue" Pattern

SHIELD has put more emphasis on the provenance of patents, with Joff Wild at IAM estimating that SHIELD might only cover one in four NPEs based on Patent Freedom Data. I really respect Joff's blog and magazine, and recommend it to anyone who is serious about understanding the monetizer perspective (though the magazine is expensive). However, I have a different view of the numbers, that because patent impact is heavily skewed, what matters are high impact patents– that is to say, if just Lodsys and Geotag were discouraged from bringing their suits, many people would have been happy. Through our analysis of "high impact" patents I asked Patent Freedom to put together for another analysis, we found that the nine out of ten were purchased before assertion, rather than owner-asserted. Obviously, a sample of 10 is an anecdote but it does provide another way, and another datapoint, to consider.

10 High-Impact PAE Patent Campaigns: 9 out of litigated patents were bought, not owner-asserted



Defendants*	Lawsuits	Patents	Technology
435	115	1	Associating online information with geographic areas
326	211	16	Vehicle tracking and notification
281	44	1	Vehicle tracking and monitoring
106	36	4	Customer-based product design module
79	56	4	Digital fingerprinting
70	28	2	Interfacing object oriented software applications with relational database
32	10	1	Programmable motion-sensitive sound effects device
27	11	1	Guided parametric search and retrieval
3	3	2	Distributed electronic document management
1	1	1	Management and administration of media streaming

Also, I understand that the Patent Freedom folks have a different view of their own data than IAM so if you are interested follow them on Twitter:@PatentFreedom.

8. PAEs Appear to be Less Successful than Practicing Entities in Litigation

PWC's excellent annual litigation report is chock full of statistics about patent litigation and in particular, with respect to NPEs, that: they look to juries more (but the differences are declining), a higher median damage award and a lower than practicing company success rate (34% practicing co v.23% NPE) that is declining (Chart 5B).

John Allison, Mark Lemley, and Josh Walker's paper documents that the "most litigated" (8x or more) NPE patents lose more than 90% of the time in court. Data provided by RPX found that such repeat litigants dominate PAE cases – 61% of defendants named in 2011-2012 were sued by a PAE who had brought the case 8+ times (see page 33).

9. Public PAEs

My research assistant and I have been working on profiling public company PAEs – those which derive a majority or significant revenue from asserting patents. Depending on how you slice it, we have found about 16 of them (ACTG, ASUR, DEMO: OTC, NSSI, OPTI, RMBS, VHC, WIN:TO, VRNG, PANL, DSS: NYSE

Amex , WDDD: OTC, BB,PCO, PRKR, UPIP); a number of the stocks are very volatile and live and die by litigation outcomes – invest with caution.

10. What We Need to Understand Better: Demands , Users, the Differential Impact of Interventions

Litigations are only a small part of the story as many companies, especially the small ones, are never sued. While good data on patent demand letters is lacking, here are a few data points:

- In my survey of startups, among companies that had received threats (N=79), in some cases many threats, less than a third had been sued. This survey is being redistributed to a larger and more representative sample which should yield better estimates when it is concluded.
- In its RICO complaint against Innovatio, Cisco reported that over 8,000 letters had been sent, even though there were only 26 named defendants, a ratio of 276:1.

We also need to understand how many of these suits are user based ones – in my survey (N=79), 40% of respondents said the demand was based on a technology they were using, not making. Such suits seem hard to justify as anything but nuisance-based.

11. What Really Counts

What really matters is not PAE litigation itself but the impact it has on businesses, innovation, and the economy, and in particular how these impacts are distributed and also the justice or injustice of the claims – that is why there is so much heat on the PAE issue –because people who are sued feel that had no ability to anticipate or avoid it. My research has documented the positive impacts of a liquid IP market, and that startups are selling to trolls and benefiting from that monetization. However, it also documents a significant emotional toll: people said demands have "invoked rage over the waste of time," made a target "very very angry," "ruined family friends" and caused "stress" and "ill-will generation [sic]": "it was agonizing to hand over all the money we had earned from a product we had invented and created ourselves to a firm that invents nothing and creates nothing. Our founder has since lost his house, car [sic] all his assets." As the numbers of impacted companies and industries continues to grow, don't be surprised if the ranks of those who support curbing most egregious litigation abuses – the practices of going after end-users, rather than manufacturers and extracting from small companies nuisance-based rather than value-based settlements – continues to swell as well.

= = = = =

Notes:

- With thanks to my research assistants Aashish Karkhanis, Nicole Shanahan, Teri Karobonik, John Neal, and Coryn Millslagle and to RPX Corp., Patent Freedom, Gazelle Technologies, Robert Fram and Ashley Miller.
- High impact patents discussed above include 7,222,078 (Lodsys), 7,346,472 (Bluespike), 5,937,402 (DataTern), 6,101,502 (Datatern), 5,930,474 (Geotag), 6,150,947 (Ogma), 5,223,844 (PJC Logistics), 6,185,590 (Project Paperless), 7,054,949 (Single Touch) 8,015,307 (Single Touch).