There are many ways to view patent assertion entities

- It’s a Fan!
- It’s a Wall!
- It’s a Rope!
- It’s a Spear!
- It’s a Snake!
- It’s a Tree!
What is a patent assertion entity?

Justice Kennedy: “firms [that] use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees.”
What is a patent assertion entity?

FTC/Chien: an “entity that uses patents primarily to obtain license fees rather than to support the development or transfer of technology.”
What is a patent assertion entity?

A company that asserts patents on existing products as a business model
Asserting patents on existing products as a business model distinguishes PAEs from other types of NPEs.

Non-Practicing Entity Types

Universities

PAEs

Inventor Monetizers

Special Purpose Patent Monetizers

(Non-Practicing Corporate Monetizers)

Non-Practicing Defensive Aggregators

Startups
Why is the PAE business model interesting?
Traditional patent litigation economics are stacked against enforcement
Traditional patent litigation economics are stacked against enforcement

*It's Expensive to Bring a Patent Lawsuit*
Traditional patent litigation economics are stacked against enforcement.

It’s Risky to Bring a Patent Lawsuit

\[
\text{COST} \geq \text{REVENUE} = \text{LOSS}
\]
These high costs and risks lead to the nonenforcement of patents.

~250K estimated patents

Only a tiny fraction is enforced.
PAEs fundamentally change the economics of patent enforcement
PAEs don’t make anything and can’t be countersued, disrupted, or impugned.
PAEs don’t make anything and can’t be countersued, disrupted, or impugned.
PAEs use contingent fee lawyers

Cost of Assertion

Direct Costs
PAEs use contingent fee lawyers

Cost of Assertion

Direct Costs
- Lawyers (75%)
- Costs (25%)
PAEs use contingent fee lawyers and assert the same patents in the same venues to capture economies of scale
PAEs make it economical to bring suit, and economical for the defendant to settle, regardless of the merits.
PAEs make it economical to bring suit, and economical for the defendant to settle, regardless of the merits.

![Diagram showing cost of defense, cost of assertion, and judgment/settlement with a question mark representing the 'Nuisance Lottery Fee Model'.
Don’t Call them Trolls
What is patent assertion?

A pathbreaking, disruptive technology for monetizing patents that eliminates traditional obstacles to enforcement [and give the little guy a chance!]
What is patent assertion?

A pathbreaking, legal disruptive technology for monetizing patents that eliminates traditional obstacles to enforcement
This year, PAEs have brought the majority (61%) of patent lawsuits – 2,530 through December 1.

Source: RPX Research and PACER. Includes suits filed through 12/1/2012.
What is patent assertion?

A pathbreaking, disruptive legal technology for monetizing patents that eliminates traditional obstacles to suit

That represents the majority of new patent cases
What is the Ratio of Demands to Suits?

100:1 – estimate of high end sell-side patent broker

307:1 – Cisco et al v. Innovatio, Case No. 1:11-cv-09308, Lex Machina (8,000+ letters, 26 cases)
We don’t know exactly what’s happening but it’s likely that….

**What is the Ratio of Demands to Suits?**

100:1 – estimate of high end sell-side patent broker

307:1 – Cisco et al v. Innovatio, Case No. 1:11-cv-09308, Lex Machina (8,000+ letters, 26 cases)

Most patent fights are not conducted in public
Public cases and private demands are often resolved under NDA
What is patent assertion?

A pathbreaking, disruptive legal technology for monetizing patents that eliminates traditional obstacles to suit.

That represents the majority of new patent cases about which we don’t really understand the consequences, good or bad.
Now that we know what we are talking about...

No. It’s an elephant
Now that we know what we are talking about…
This view
This view is empirical and descriptive, but motivated by policy concerns.

**Datasources**

- Literature, Survey and Interview Subjects
- **Lex Machina**
- **CrunchBase**
  - Open database of 100K+ startups and tech companies
- **RPX**
  - RATIONAL PATENT®
RPX Data is on average within 1% vs. Lex Machina/Feldman 2012 coding for the GAO

On Average, RPX = +1%

See also RPX v. Chien 2009 (943 codings compared), reported in Chien 2012, Startups and Patent Trolls (finding RPX = +4% PAEs)

2. Case Study: Harms/Benefits to Startups

3. Policy Issues

4. Monitoring/Research Agenda
PAEs capture economies of scale, over multiple defendants and campaigns

**Sample PAE Business Plan**

<table>
<thead>
<tr>
<th>Revenue</th>
<th>Settlements</th>
<th>Settlements</th>
<th>Settlements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Cost of Acquisition</td>
<td>Financing/ Legal Costs</td>
<td>Marginal Cost of Assertion</td>
</tr>
</tbody>
</table>

The business model is risky – you may never get your investment back.
PAEs capture economies of scale, over multiple defendants and campaigns.

Cost of Assertion

Direct Costs
The majority (76%) of PAE defendants are sued by a PAE that has named 15+ defendants over 2 or more suits.

**Distribution of “Serial PAEs” by Defendants Named**

(Jan 1, 2011 – Dec 1, 2012)

- **Serial PAEs**: 73%
- **Non Repeat PAEs**: 19%
- **Serial Inventors**: 3%
- **Non Repeat Inventors**: 5%

Serial PAEs have named more than 15 defendants in more than 1 suit, Aggressive Repeating Inventors have named more than 15 defendants in more than 1 suit.
Although suits against large tech companies get the most attention, defendants revenue/industry profiles vary widely.

Source: RPX Research and PACER. Includes suits filed through 12/1/2012.
There are several drivers of settlement
“[When] the Sword of Damocles of a jury verdict or [an] ITC injunction hanging over their heads.”


See Shapiro and Lemley 2007

**Settlement driven by how much it would cost to switch out the technology (injunction) or what a court might award in damages**
When it’s cheaper to fold than fight

Settlement driven by the cost of defense

Chien 2012, Reforming Software Patents
2. Case Study: Harms/Benefits to Startups
Why Startups Matter: from 2003-2007 they created more new jobs than other firms in the private sector.
Startups create new jobs, but they also change course/fail at a high rate, shedding assets like patents

“Four out of every 10 hires at young firms are for newly created jobs, much higher than in older firms, where the ratio fluctuates between 0.25 and 0.33”

Source: Authors’ calculations based on seasonally adjusted QWI tabulations for twenty-eight states.

Haltiwanger et. al, Job Creation, Worker Churning, and Wages at Young Businesses (November 2012)
How are PAEs benefiting small companies?
How are startups benefiting from patent (NPE/PAE) buy and litigate the patents of small companies ($200M) more than the patents of others.

Figure 2. Small companies and individual inventors remain the primary source of NPE/PAE patents.

Note: NPE litigations for relevant market sectors including: consumer electronics and PCs, e-commerce and software, financial services, media content and distribution, mobile communications and devices networking and semiconductors. NPE, NCE, INV and university suits included

Source: RPX Corporation (c) 2011. Data based on NPE transactions from Jan 2010 to March 2011.
Some startups are interested in monetizing their patents (although unclear if PAE v. ex ante transfer)

4% of 223 nonrandom survey respondents reported that they had monetized their patents, with another 20% saying that they had considered it.

Chien 2012, Startups & Patent Trolls
How are PAEs harming small companies?
The majority of PAE defendants (at least 55%) have less than $10M in revenue.

At least 55% of unique defendants have less than $10M in revenue and 66% have less than $100M.

Source: RPX Research and PACER. Includes suits filed through 12/1/2012.
Why are small companies being sued?
The more funding a startup gets, the more likely it is to be sued.

$N = \sim 200$ per category. Based on author analysis of $\sim1600$ companies in Crunchbase and Lex Machina litigation records.
Some startups are harmed by PAE demands. More than a nuisance.

Chien 2012, Startups & Patent Trolls
We don’t really know the net benefits or costs
This Presentation
3. Policy Issues
Before PAEs: widespread nonenforcement of patents

~250K estimated patents

Only a tiny fraction is enforced
After PAEs: it can be economical to bring, and to settle suits, regardless of the merits.

Cost of Defense

Cost of Assertion

Judgment/ Settlement
What are the pros and cons of rapidly increasing enforcement?
Before PAEs: widespread nonenforcement of patents

~250K estimated patents

Only a tiny fraction is enforced
But widespread infringement has pro-competitive benefits

**Patent is enforced**

I get to have the feature

**Patent is practiced, not enforced**

We all get to have the feature, in all different forms and prices.

**Hooray for Competition!**
When companies can’t win in the courtroom, they must compete in the marketplace

Sources of Competitive Advantage

**Courtroom**
- Freedom to litigate
- Great patents
- Great lawyers

**Marketplace**
- Freedom to innovate
- Great products
- Great marketing
But PAEs give the little guy a chance and create a demand for their patents – this should increase innovation.
PAEs are increasing the velocity of transfers between buyers and sellers of patent rights.
Repeat litigants dominate these transfers. 61% of defendants were sued by a PAE who had sued 8+ times.

Repeat Litigant PAEs have named more than 15 defendants in more than 7 suit, Aggressive Repeating Inventors have named more than 15 defendants in more than 7 suit.
Allison et al 2011 found that the most asserted software patents (8+ cases) – lose in court roughly 90% of the time

PAE Plaintiff Type by Number of Defendants Named: Jan 1, 2011 – Dec 1, 2012

Are these transfers legitimate?

Repeat Litigant (8+ lawsuits) PAEs 60%
Non Repeat Inventors 23%
Repeat Litigant (8+ lawsuits) Inventors 1%
Non Repeat PAEs 16%

Repeat Litigant PAEs have named more than 15 defendants in more than 7 suit, Aggressive Repeating Inventors have named more than 15 defendants in more than 7 suit
How efficient are the transfers between buyers and sellers of technology? (survey data)
Based on 900 litigations, in the majority of them, the legal costs exceed the settlement.

RPX Survey of 78 companies with 900 resolved NPE litigations. Legal cost includes outside counsel (lead, local, and re-exam), experts, discovery, prior art searching, jury consultants, graphics, and other related costs. Excludes in-house legal costs. Settlement and judgment costs may include the estimated present value of running royalties. NPEs include PAEs (Patent assertion entities believed to earn revenue predominantly through licensing of patents), universities and research institutions, individual inventors, and select operating companies asserting patents well outside their area of product or services. The very vast majority of the data underlying this analysis reflects litigation with PAEs.
What reforms are possible?
Non-ITC Judicial remedies reforms have reduced the injunction rate and made proving damages more expensive.

Uniloc, LaserDynamics, Lucent Posner

Ebay and its Progeny Causal Nexus

Cost of Assertion

Judgment/Settlement
Other reforms are aimed at reducing the cost of defense and increasing the cost of assertion.

Post Grant Review

e-Discovery Reform

Misjoinder Rules

Cost of Defense

Cost of Assertion
One-way fee shifting could dramatically change courtroom economics and contingent representation

Fee-Shifting

But the past has shown it to be less useful against:
- Repeat players (but most PAEs are)
- Judgment proof parties (but many PAEs are)
- Cases that don’t go to judgment (only 5% of cases do)
What is the Ratio of Demands to Suits?

100:1 – estimate of high end sell-side patent broker

307:1 – Cisco et al v. Innovatio, Case No. 1:11-cv-09308, Lex Machina (8,000+ letters, 26 cases)
What about market-based ways of reducing the cost of defense?
What about market-based ways of reducing the cost of defense?

- Group Defense
- Non-Settlement Policy
- Insurance
- Defense Contingency
- Self-Help
What about market-based ways of reducing the cost of defense?

- Group Defense
- Non-Settlement Policy
- Insurance
- Defense Contingency
- Self-Help
These approaches have been used before
In the late 1880s, railroads, under patent attack in a manner similar to tech companies today formed Associations that mounted...

**Railroads, Inventors, and the Diffusion of Innovation**

common defenses in patent suits and monitor all issues relating to patents in the industry. About a dozen major eastern roads agreed to form an identical organization—the ERA—the same year. Lines would pay annual fees, assessed in proportion to earnings, and in return receive full legal services, including consultation on the legal status of all inventions. Members agreed to provide any information regarding disputed technologies and to inform the associations of inventions developed in their own shops. Any member who reached a settlement with an individual currently bringing suit against another member would sacrifice its rights to defense by the association.

See also Chien, *Reforming Software Patents* 2012
Facing such united opposition, inventors seldom pressed forward with litigation. Indeed, aside from the brake cases, virtually no patent disputes went to trial. “During the last three years,” reported the secretary of the ERA in 1887, “only four suits for infringement of patents have been brought against our members,” and all but one was “unimportant, commenced by the patentees themselves, and of a local nature.”

By then, the associations had long since come to function more as advisers than litigators. With access to so much information, their lawyers could readily advise railroads on how to innovate without encountering patents or how to avoid paying large fees for technologies covered by patents. The files of the B&O and the CB&Q contain numerous examples of their work in this regard.

Steve Usselman, Patents Purloined 1991
See also Chien, Reforming Software Patents 2012
Perhaps the best testimony to the effectiveness of the pools came from the reactions of inventors. Never an easy group to organize, inventors banded together to fight the patent associations. A group known as the Inventors Protective Agency formed in the early 1880s to counter the legislative efforts of the railroads. Later, the group challenged the legality of the railroad associations, without success. Courts upheld the rights of railroads to combine in their defenses in patent cases, and Congress twice rejected petitions that would have declared the ERA and WRA in violation of the antitrust laws.
So, where does that leave us?
4. Monitoring/Research Agenda

“To understand God's thoughts we must study statistics”

-Florence Nightingale
More research is needed to understand the positive and negative impacts.

- What have small companies done with the money? (What cut did they get?)
- What is the nature of the negative impacts?
- What has been the impact on innovation?
Qualitative, quantitative, and historical approaches could all be useful.

“Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted.”

Comprehensive Case Studies
Monitor movements in the market
See if legal/market reforms work
Thank you! References and Contact Information

Startups and Patent Trolls (2012) (draft)

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"The value of an idea lies in the using of it."
Thomas Alva Edison