How Data Liberation Will Nix the Proverbial Patent Troll

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Roadmap

1. Intro theory: “Coase 2.0”

2. History and evolution of patent monetization models

3. Patent law is unable to deal with downstream pathologies such as holdup and the inability of stakeholders to value patents

4. What the Big Data Revolution in Patent Law will look like, and what we need to do to get there.

5. What to expect for the future.
Theory: Introducing “Coase 2.0” to the Debate

(1937) Ronald Coase: transaction costs are a central determinant of how economic activity is organized.

(1970’s) Gilson, et. al.: Imperfect markets give rise to intermediaries to lift the wedge between parties. (Lawyers as transaction cost engineers)

“When markets fall short of perfection, incentives exist for private innovation”

(2015) Shanahan, Goodenough, McGinnis, etc.: Technology supplements lawyers as transaction cost engineers. (“Coase 2.0”)

1. Will it become a controlling determinant in the transaction cost of lawyers?

2. What are the controlling variables in determining the cost economizing effects of technology on transactions? (both in the patent space and beyond)
Evolution of transaction cost economizing over time

- 1850's: Patent Consortiums
- 1960's: Lemelson Model
- 1980's - 1990's: Acquisitions, Auctions and Brokerages
- Late 1990's: Publicly Traded NPEs
- 2000's: The Hybrid Model
And each model can be a chameleon…

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ACACIA</td>
<td>Large PAE</td>
</tr>
<tr>
<td>ASURE SOFTWARE</td>
<td>Hybrid PAE and Operating Company</td>
</tr>
<tr>
<td>BURST.COM (now DEMOCRASOFT)</td>
<td>PAE turned Operating Company</td>
</tr>
<tr>
<td>INTERDIGITAL</td>
<td>PAE and Patent Licensing Entity</td>
</tr>
<tr>
<td>NETWORK-1 SECURITY SOLUTIONS, INC.</td>
<td>PAE</td>
</tr>
<tr>
<td>OPTI, INC.</td>
<td>Operating Company Turned PAE</td>
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<tr>
<td>RAMBUS</td>
<td>PAE and Patent Licensing Company</td>
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<td>TESSERA TECHNOLOGIES</td>
<td>Operating Company Turned PAE</td>
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<tr>
<td>VIRNETX, INC.</td>
<td>PAE</td>
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<tr>
<td>Wi-LAN</td>
<td>Operating Company Turned PAE and Patent Licensing Entity</td>
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<tr>
<td>VRINGO</td>
<td>Operating Company Merged With PAE, Turned PAE</td>
</tr>
<tr>
<td>RPX CORPORATION</td>
<td>Non-Asserting Patent Licensing Entity</td>
</tr>
<tr>
<td>UNIVERSAL DISPLAY</td>
<td>PAE With Operating Unit</td>
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<tr>
<td>TIVO</td>
<td>Hybrid Operating Company Turned PAE</td>
</tr>
<tr>
<td>DOCUMENT SECURITY SYSTEMS</td>
<td>Operating Company Turned PAE Through Merger</td>
</tr>
<tr>
<td>WORLDS, INC.</td>
<td>PAE With Nominal Value Side-Operations</td>
</tr>
<tr>
<td>FORTRESS INVESTMENT GROUP</td>
<td>Investment Fund with PAE Subsidiaries</td>
</tr>
</tbody>
</table>
Technology enabled intermediaries, or Technology AS the intermediary

2010+ Technology Enabled

1850's
- Patent Consortiums

1960's
- Lemelson Model

1980's - 1990's
- Acquisitions, Auctions and Brokerages
- Publicly Traded NPEs

Late 1990's
- The Hybrid Model

2000's

2020+ Prediction
- Technology Intermediaries
- Semantic AI
- Probability Models
- Automated Transactions
- Network Patent Ledgers
- CryptoLedgers
What is it going to take?
It appears government and private practice suffer from systemic issues with patent IT infrastructure.
#pats is a list of the 10K most recently changed pending PAIR applications

```python
output = []
for pat, data in pull_pats(pats):
    ADS_count = data.count('<IMAGE_CODE>ADS</IMAGE_CODE>')
    if ADS_count > 1:
        dates = []
        for i in pull(data, 'IMAGE'):
            if not '<IMAGE_CODE>ADS</IMAGE_CODE>' in i: continue
            date = try_pull(i, 'IMAGE_MAIL_DATE')
            dates.append(date)
        dates.sort()
        dates = [yyyymmdd_2_mmddyyyy(x) for x in dates]
        output.append((pat, str(ADS_count), ';'.join(dates)))
```

~44K Errors
Patent Maintenance Fees

Please enter both a patent number and its corresponding application number to do the following:

- Click on 'Retrieve Fees to Pay' to pay a maintenance fee.
- Click on 'Get Bibliographic Data' to obtain patent bibliographic data.
- Click on View Payment Windows' to determine when maintenance fees are due.
- Select the applicable year (4, 8 or 12) from the drop-down list box next to 'Payment Window' and click 'View Statement' to print a statement showing receipt of a maintenance fee payment.

We are unable to display the requested information. Please note that all requests must be made using this form consistent with the Terms of Use displayed below.

**Patent Number** (exclude special characters; e.g. commas): 8615723

**Application Number** (must be 8 numeric digits - see NOTE below): 13597134

Retriece Fees to Pay
Get Bibliographic Data
View Payment Windows
View Statement for Payment Window: 04
The USPTO Has Implemented a Verification System in Public PAIR

The United States Patent and Trademark Office (USPTO) has implemented a two-word verification code to improve data access for Public PAIR users. Public PAIR users are now required to manually enter a two-word verification code into the reCAPTCHA validation screen before accessing Public PAIR data. The USPTO takes seriously its responsibility to promote the progress of science by providing free access to patent data via Private and Public PAIR. The USPTO implemented a CAPTCHA security response.

CAPTCHA (Completely Automated Turing Test to Tell Computers and Humans Apart) is an industry-accepted security feature to ensure that humans, and not bots, are accessing computer programs. The version of CAPTCHA that the USPTO implemented is named reCAPTCHA (for additional details http://recaptcha.net/), a project of the School of Computer Science at Carnegie Mellon University. The reCAPTCHA deployment was an immediate response to a system outage problem caused by bots. The USPTO continues to explore long-term solutions to address the need for open access to the data by the Intellectual Property community.
The USPTO will continue to develop an acquisition strategy under the previously posted RFP (DOC52PAPT1000025) using competition to the maximum extent possible for establishing the long-term no cost solution to public data dissemination and transparency of governmental data.

**Intellectual Property: Is there a public API to the USPTO database?**

Is there a public API to access the United States Patent and Trademark Office (USPTO) database? The USPTO has a web interface but as far as I can tell, they do not offer an API for accessing the same data. What options are available for searching the USPTO database via an API for active or pending trademarks?
Why Would This Stuff Matter to These Guys?

Patent reform advocates are launching a ‘super-coalition’ to whack patent trolls


By Schmidt, Jacobs & Glover on April 30, 2014

#Alicestorm: Patent Invalidations and USPTO Practice After Alice

1/14/2015 by Robert Sachs | Fenwick & West LLP

Patent Reform Can’t Wait

PTAB does not necessarily restrict the negative impact of NPEs: in fact NPE claims are equally as invalidated as operating company claims.

-Love and Ambwani, 2014 Research Paper

- PTAB institutes IPR petitions for at least one challenged claim 84% of the time.
- Among the instituted IPRs, all challenged claims are instituted 74% of the time.
- Among IPRs that reach a final decision on the merits, all instituted claims are invalidated or disclaimed more than 77% of the time.
So WHAT?

Transactions are all about information, the rest is distributive.

Policy Suggestions towards **Certainty, Cost, Resolution and Quality**

1. Transaction costs are high because information gathering between “patent wanters” and “patent (rights) holders” is messy. Focus on this.

2. Focus on **ex ante informational distribution** versus ex post “penalties”. OR, devise penalties around incentivizing ex ante disclosure. *(Review current laws that have to do with information sharing: i.e. IDS filings, Willful Infringement, Assignment filing, Real Party at Interest - do these work? If not, then why?)*

3. Define a technical standard for what the “Congressional Mandate for Dissemination of Public Records” means. *(Is this an XML api? Is this bulk downloads? **New terms of service and tools** that encourage innovation in transactions and information sharing.)*
Research Opportunity: “Coasean Mapping” Applied Coase 2.0

Transaction cost economizing

R&D
Prosecution
Monetization
Assertion
Settlement/Damages

“hypothetical negotiation between parties”
Thank you

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