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Rethinking Patent Disclosure

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Rethinking Patent Disclosure

Professor Colleen Chien
colleenchien@gmail.com
Abstract

One of the main reasons for having a patent system is that patents disclose useful information that others can learn from. However, patents don't seem to be performing this function well. The average patent is written in legalese, uses vague language, and lacks details. What it covers often cannot be discerned from reading it. Many have responded with calls to improve the patent document - through better writing, more precise language, and more examples. The problem with these suggestions is that they are expensive to implement, disadvantage small inventors and startups, and arguably "overcorrect" the problem for the 80-90% of patents that are commercially unimportant. In this paper I argue that we need to rethink the concept of patent disclosure. Rather than focusing only on the content of the patent, we need to keep in mind the context of the patent - for example, how many times its been cited, whether the patent is in force, whether it has international counterparts, if it's been transfered, who owns it, whether it has been subject to reexamination or marking, and how many continuations have been filed on it. This contextual information represents not only the final “product” of the patent as issued, but the “process” by which it is made and used. This information is not readily available at present, but making it so could do much to reinvigorate the disclosure function of the patent system - using already available information. Making this information easier to access could also yield an important the additional benefit - solving the long-felt problem of how to identify valuable patents. Taking cues from what happens to patents - are they heavily cited, have more claims, larger families, longer prosecution times, post-grant reissuance or reexamination - the public will have a better idea of which patents are de facto gold-plated due to the differential treatment they receive.
distance.sub.t = SIGMA. [(w.sub.i * 0.25 / (sigma..sub.i^2 + 0.25)) * (m-u..sub.i-t.sub.i)^2]
distance.sub.t=\text{SIGMA.}[\left( w\text{.sub.i} \ast 0.2 \right. \\
\left. \frac{5}{\left( \text{sigma..sub.i} \right)^2 + 0.25} \right) \ast \left( \text{m} - w\text{.sub.i} \ast t \text{sub.i} \right)^2 ]

Abstract
A method of determining at least one match item corresponding to a source item. A database of multiple items such as songs is created. A Distance between the source song vector and each of database song vector is calculated, each distance being a function of the differences between the n musical characteristics of the source song vector and one of source database song vector. The calculation of the distances may include the application of a weighted factor to the musical characteristics of resulting vector.
distance.sub.t = \text{SIGMA.} \left[ \left( w.sub.i \ast 0.25 / ( \sigma.sub.i^2 + 0.25) \right) \ast ( m - u.sub.i - t.sub.i )^2 \right]

Inventors:
Glaser; William T. (San Francisco, CA),
Westergren; Timothy B. (Menlo Park, CA),
Stearns; Jeffrey P. (Berkeley, CA), Kraft;
Jonathan M. (Los Angeles, CA)
distance\_sub\_t = \text{SIGMA}.[(w\_sub\_i \times 0.2^5 / (\sigma_{i}^2 + 0.25)) \times (m - u_{i} - t_{i}^2)]

Inventors:
Glaser; William T. (San Francisco, CA),
Westergren; Timothy B. (Menlo Park, CA),
Stearns; Jeffrey P. (Berkeley, CA), Kraft;
Jonathan M. (Los Angeles, CA)
Distance sub t = \( \Sigma \left( w_{sub.i} \cdot 0.25 / (\sigma_{sub.i}^2 + 0.25) \right) \cdot (m_{u..sub.i-t.sub.i})^2 \)

**Assignee:** Pandora Media, Inc. (Oakland, CA)
distance.sub.t = \text{SIGMA}[(w.sub.i \times 0.25/((\text{sigma..sub.i}^2+0.25)) \times (m-u..sub.i-t.sub.i)^2]
distance_{t} = \text{SIGMA}[\left(\sum_{i} w_i \cdot 0.25/(\sigma_i^2 + 0.25)\right) \cdot (m - u_i - t_i)^2]
\[ \text{distance}_{sub \ t} = \text{SIGMA} \left[ \left( w_{sub \ i} \times 0.25 \right) / \left( \sigma_{sub \ i}^2 + 0.25 \right) \right] \times \left( m_{- u \ sub \ i} - t_{sub \ i} \right)^2 \]

**Innovator concerns:**
1. What can I learn from this patent?
2. Does this patent pose a risk to my business?
1. What can I learn from this patent about how to do music matching?

**Conveyance record:**
PTO conveyance file shows patent has been securitized and licensed in 2011.

(information not readily available on the PTO website)
1. What can I learn from this patent about how to do music matching?

Marking information:
Current Pandora website lists this patent.

(information not readily available on the PTO website)
2. Does this patent pose a risk to my business?

**Maintenance Fee Status:** Expired

*(information not readily available on the PTO website)*
2. Does this patent pose a risk to my business?

**Maintenance Fee record 2:** In force

**Conveyance record 2:** Patent sold to Acacia

*(information not readily available on the PTO website)*
"[the disclosure required by the Patent Act is] the quid pro quo of the right to exclude."

“[T]he ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure.”

Patents do appear to disclose useful information…

**Technical information (Oulette, Fromer)**
Survey evidence shows yes, to some
Non-self-disclosing inventions: may be single source
For self-disclosing inventions, patent information is easier/cheaper to access than alternative means

**Meta-Information (Long)**
Signal of Innovative output
Company’s Innovation Footprint(Intentions (Lemelson)
Yet Criticisms Abound…

Why Patent Disclosure is Failing
Nonstandard, vague language (FTC)
Fuzzy boundaries (Meurer)
Patentese (Seymore)

→ Uncertainty about what and whether patents pose a risk
→ Lack of teaching
Conventional Solutions

**Add content** (112 possession and enablement)
- Add source code (Walsh)
- Working examples (Seymore, Cotropia)

**Restructure the patent doc**
- Legal and technical layer (Fromer)
- Conform to technical database specifications (Dreyfuss & Berman)

**Change the way patents are drafted**
Why They Won’t Work

Problems with Proposals to Change the Way Patents are Drafted

- Expensive/significant change to practice
- Shifts costs to patentees
- Disproportionately disadvantage small/start-up firms
- Is it really worth it for the 80-90% of patents that don’t matter?
Rethinking Patent Disclosure
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure = Content</td>
<td>Disclosure = Content + Context</td>
</tr>
</tbody>
</table>
Rethinking Patent Disclosure – What’s the Problem? (2)

Traditional Theory

“Context” Theory

Lack of Content

Lack of Content
Rethinking Patent Disclosure – What’s the Solution? (3)

Traditional Theory

“Context” Theory

Improve Content

Improve Context
Rethinking Patent Disclosure – What’s the Solution? (3)

Traditional Theory

Improve Content

“Context” Theory

Improve Context
What is Context?

“The interrelated condition in which something exists or occurs” (Merriam-Webster’s Dictionary)
Context is any information that can be used to characterize the situation of an entity (Abowd)
What is Context?

Meaning that goes beyond the scope of semantics (Duranti)
Context in Linguistics

Mode of communication
- Face-to-face vs. email vs. text etc.

Participation status (Goffman)
- Author
- Principal
- Animator

Interaction (Goffman)
- Focused vs. Unfocused

Framing/Anchoring

The Medium is the Message
Context Aware Computing (Chen & Kotz)

Computing context
- network connectivity
- communication cost, communication bandwidth

User context
- user profile, location, social situation

Physical context
- lighting, noise, traffic condition, temperature

Time context
- Time of a day, week, month and season of the year
Context Aware Computing (Chen & Kotz)

A user enters a store →

Turns on his PDA ➔

PDA displays the info of a store item

= i

As the user wonders around in the store ➔

PDA analyzes user’s personal profile ➔

PDA recommends store items to the user ➔
Awareness of Context in Search (Brin, Page Google)

Pagerank context
  - number, recency, strength
  - link farms, paid links discounted
Content context
  - Position, font, capitalization, anchor/non-anchor text
Google Panda
  - Machine-learning based quality criteria, including design, trustworthiness, speed
Rethinking Patent Disclosure – in Context

What forms of disclosure matter?

Who is the audience for receiving the disclosure?

What are the doctrinal levers?

The Pay-off: Context-Based Solutions to the Disclosure Problem
<table>
<thead>
<tr>
<th>Traditional Theory</th>
<th>“Context” Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>The content of the specification and the claims</td>
<td>Content+</td>
</tr>
<tr>
<td></td>
<td>Intrinsic characteristics</td>
</tr>
<tr>
<td></td>
<td>Acquired characteristics</td>
</tr>
</tbody>
</table>
Intrinsic traits

Relative intensity of prosecution
Cites, number of claims, foreign filing, parent and children applications
Acquired traits

**Issuance**
- Transfer

**Ownership**
- Maintain

**Investment**
- Size Change

**Financing**
- Securitize

**Citation**
- Forward Citation

**Enforcement**
- Litigate

**Intrinsic Traits**

**Acquired Traits**

1 %
Rethinking Patent Disclosure – what forms of disclosure do we mean?

Traditional Theory

“Context” Theory

Specification

Specification +

The finished product of the patent as issued

The process of making the patent and what happens afterwards
Litigated vs. Unlitigated patents look different based on these traits.
## Rethinking Patent Disclosure – who is the Audience?

<table>
<thead>
<tr>
<th>Traditional Theory</th>
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</thead>
<tbody>
<tr>
<td>The public</td>
<td>Follow on innovators</td>
</tr>
<tr>
<td></td>
<td>Risk avoiders</td>
</tr>
<tr>
<td></td>
<td>Technology buyers</td>
</tr>
</tbody>
</table>
Rethinking Patent Disclosure – what are the Doctrinal Levers?

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Substantive</td>
<td>Substantive and Procedural</td>
</tr>
<tr>
<td>Section 112</td>
<td>Section 112, Marking Requirement, The Dissemination clause</td>
</tr>
</tbody>
</table>
Marking Requirement

35 U.S.C. 287 Limitation on damages and other remedies; marking and notice.
(a) Patentees, and persons making, offering for sale, or selling within the United States any patented article for or under them, or importing any patented article into the United States, may give notice to the public that the same is patented [by marking]. In the event of failure so to mark, no damages shall be recovered by the patentee in any action for infringement [prior to notice being provided]
(a) IN GENERAL.- The United States Patent and Trademark Office, subject to the policy direction of the Secretary of Commerce-
(2) shall be responsible for disseminating to the public information with respect to patents and trademarks.
Context-Driven Disclosure Solution - Principles

All patents are not created equal – uniformly requiring greater disclosure for all of them may not be warranted

Focus on commercially important patents

Leverage existing information rather than just asking patentees for new information
Context-Driven Disclosure Solution - Principles

Follow-on Innovators
- How does that product work?
- What solutions are out there?
- Which inventions have been commercialized?

Risk Avoiders
- Which patents implicate what I’m doing?
- Which patents pose the greatest risk?
- Where is the ”white space,” here/abroad?
Technology Buyers
- Which patents address the problem?
- Which inventions have been commercialized?
- What patents are for sale/license?
Context-Driven Disclosure Solution – What’s Needed, in Sum

The Ability to Search among patents and readily find:

- In-force patents (maintenance fee and invalidation)
- The owner of a patent
- Intrinsic and acquired traits
- Relevant patents

A solution to the sorting problem, that leverages existing and encourages further disclosure of context information
How to Do This – Leveraging Existing Data

Consolidate multiple patent information databases

Make patents searchable by:
- whether in-force (here and abroad), various owners of record, types of conveyances, family information (foreign/continuations), etc., litigated or not, who’s litigating patents in this area

Classify patents according to industry definitions
How to Do This – Creation of New Data

Marking Registry
    Virtual Marking provisions of the AIA
    Reinvigorate the marking requirement

Administrative changes/carrots to encourage disclosure of context data

Licensing Registry
    PCT applicants can request that the Int’l Bureau make information available on its PATENTSCOPE website
Virtual Marking change to 35 USC 287:

Patent owners will also be able to use a virtual marking to associate their product or service with an Internet address that associates the patented article with the number of the patent.
35 U.S.C. 287 Limitation on damages and other remedies; marking and notice.
(a) Patentees, and persons making, offering for sale, or selling within the United States any patented article for or under them, or importing any patented article into the United States, may give notice to the public that the same is patented [by marking]. In the event of failure so to mark, no damages shall be recovered by the patentee in any action for infringement [prior to notice being provided]
Carrots/Administrative Tweaks for Context Disclosure/Dissemination?

<table>
<thead>
<tr>
<th>RECORDATION FORM COVER SHEET</th>
</tr>
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<tbody>
<tr>
<td>PATENTS ONLY</td>
</tr>
</tbody>
</table>

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

2. Name and address of receiving party(ies)
   - Name: ________________________________
   - Internal Address: ____________________

   Additional name(s) of conveying party(ies) attached? [ ] Yes [ ] No

3. Nature of conveyance/Execution Date(s):
   - Execution Date(s): ____________________
   - Assignment [ ] Merger [ ]
   - Security Agreement [ ] Change of Name [ ]
   - Joint Research Agreement [ ]
   - Government Interest Assignment [ ]
   - Executive Order 9424, Confirmatory License [ ]
   - Other: ________________________________

   Additional name(s) & address(es) attached? [ ] Yes [ ] No

   - City: ________________________________
   - State: ________________________________
   - Country: __________________ Zip: __________

U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

Form PTO-1595 (Rev. 03-11)
OMB No. 0651-0027 (exp. 03/31/2012)
As of Jan 2012, PCT applicants can request that the Int’l Bureau make licensing information available on its PATENTSCOPE website.
Issues with/Potential Reactions to Solutions...

Complimentary to but does not require implementation of traditional solutions

Strategic Disclosure/Non-Disclosure

Chilled Disclosure – Trade Secrecy