Software Partnership Meeting

On Prior Art Resources

Thursday, December 5, 2013
1:00PM – 4:30PM
Madison North Auditorium
Alexandria, VA
Software Partnership Meeting

On Prior Art Resources

Margaret A. (Peggy) Focarino
Commissioner for Patents
Prior Art Resources

Seema S. Rao
Technology Center Group Director, TC 2100
Seema.Rao@uspto.gov
(571) 272-5253
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td>10 minutes</td>
<td>Introduction &amp; Background</td>
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<tr>
<td>70 minutes</td>
<td>USPTO Presentations</td>
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<tr>
<td></td>
<td>• Brian Sircus</td>
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<td>• Scott Beliveau</td>
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<td>• Pamela Reynolds</td>
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<td>• Boris Pesin</td>
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<td></td>
<td>• Q &amp; A</td>
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<tr>
<td>15 minutes</td>
<td>Break</td>
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<tr>
<td>70 minutes</td>
<td>Stakeholder Presentations</td>
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<tr>
<td></td>
<td>• Brad Pederson (Patterson Thuente IP)</td>
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<td></td>
<td>• John Toebes (Cisco Systems)</td>
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<td></td>
<td>• Dominic DeMarco (DeMarco IP, LLC and PIUG)</td>
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<td></td>
<td>• Michael Messinger (Sterne, Kessler, Goldstein, and Fox)</td>
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<td></td>
<td>• Q &amp; A</td>
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<td>30 minutes</td>
<td>Open Discussion</td>
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<td>5 minutes</td>
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• **Topic:** topics for the future software partnership meetings

• **Comment:** prior-art-based searching during examination of software and computer implemented inventions
• Enable examiners to search academic papers, books, brochures, and other publications provided by outside companies

• Private sector provision of/access to prior art resources

• Maximize benefit of 3rd-party submissions
Agency Approach

- Educate stakeholders on USPTO search resources and techniques
- Listen to external stakeholders’ views
- Work with stakeholders to improve searching
Public Resources


Seven Step Strategy is a basic search tutorial which can be divided into three sections:
  - Formulating a search strategy including
    - Classification search
    - Keywords
  - Tools and databases
  - Evaluation process
USPTO Presentations

- Search Strategies and Tools
- Collaboration Resources
- Scientific and Technical Information Center (STIC)
- Search Demonstration
Entry Level Program

- New examiners without IP experience
- Initial 4-month training in PTA
  - In-depth training on U.S. statutes, rules, procedures, and practices
  - Automation tools (OACS, eDAN, EAST, WEST, etc.)
  - Claim interpretation through lectures, exercises, and mentoring
  - Lab exercises
  - Hands-on walkthrough of patent examining process with discipline-specific training application
- Just-in-time training throughout the first year

IP Experienced Program

- New examiners with experience in IP
- Initial 25-day training in PTA
  - Brief overview of U.S. statutes, rules, procedures, and practices
  - Automation tools (OACS, eDAN, EAST, WEST, etc.)
  - Claim interpretation through lectures, exercises, and mentoring
- Just-in-time training throughout the first year
PTA
• Locate the most pertinent art ASAP
• “It is rare that a text search alone will constitute a thorough search of patent documents.” (MPEP 904.02)
• Prioritize areas most likely to produce relevant art
• Record search in OACS “Search Notes” form
Seven-Step Search Strategy

Identify Classes
• Brainstorm keywords related to purpose, use, and composition
• Look up the keywords in the Index to the U.S. Patent Classification and CPC to find classes/subclasses
• Verify the relevance of the classes/subclasses by using the Classification Schedule in the Manual of Classification
• Read the Classification Definitions to verify the scope of the subclasses and note “see also” references

Access Full Text
• Search the Patent and PGPub databases by Current U.S. or CPC Classification

Review
• Review claims, specification, and drawings of references for relevance
• Check references’ “U.S. Cl.” and “Field of Search” areas for additional class/subclasses
Tools

- EAST
  - Examiner's Automated Search Tool
- WEST
  - Web Examiner Search Tool
Patent-Related Databases

- US Patents Full-Text
- US Pre-Grant Publication Full-Text
- EPO Abstracts
- JPO Abstracts
- Derwent World Patents Index
- IBM Technical Disclosure Bulletin
- US Patents OCR Backfile
Search Capabilities

• Patent/PGPub numbers
• Classification
  – U.S. Patent Classification (USPC)
  – Cooperative Patent Classification (CPC)
  – International Patent Classification (IPC)
• Text searching
  – Boolean and proximity operators
  – Applying truncation to search terms
• Inventor or assignee
• Forward and backward citations
• Date ranges
P-substituted aminoalkylphosphinic acids of the formula...
EAST Interface

S13: (22) S12 and importance
S14: (1) "6738678".PN.
S15: (2) "2004111412"
S16: (1) "2004/111412"
S17: (60) (zhang zeng ma chen).in.
S18: (1) pagerank adjacency domain collections
S19: (834) hierarchical document clustering scc
S20: (202) S19 and domains! hosts!
S21: (1) S20 and (adjacency ADJ matrix)
S22: (163) pagerank
S23: (13) S22 and domains! hosts!
S24: (5) S19 and (adjacency ADJ matrix)
S25: (1) "10/881812"
S26: (1) (pagerank different).ab.
S27: (0) (pagerank other).ab.
S28: (8) ((less ADJ importan$3) WITH set) (rank
S29: (19) (low WITH priority WITH set) (rank OR
S30: (21) (low WITH priority WITH set) (rank OR

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<td>20060105</td>
<td>15</td>
<td>Method and system for calculating document</td>
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(22) Once the objects have been marked as used or unused, the pages of memory are sorted according to the number of dead objects per page as shown in step 414. In one embodiment, the first entry in the list contains the page with the least number of dead objects and the last entry contains the page with the greatest number of dead objects. In step 416, starting with the largest block size, live objects are moved from the pages having the most dead objects to pages having the least dead objects. After the largest block class sized objects have been moved, the process is repeated for each lower block size. The smaller classes of blocks are used to fill in the holes left by the allocation of the larger earlier blocks. Thus, proceeding in this manner reduces the internal fragmentation of the heap. The objects are preferably moved by setting an evacuation pointer to the emptiest page and an allocation pointer to the fullest page in step 410. The process continues in step 420 until the evacuation pointer and the allocation pointer point to the same page or, alternatively, until the threshold number of pages has been emptied. The process then waits until the threshold is again violated at which time the garbage collection cycle begins again.

(23) Preferred embodiments of the present invention are particularly well suited for use with applications that require real-time scheduling. The combined real-time behavior of the user program and the garbage collector is defined using the instantaneous allocation rate at

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**ABSTRACT**

A method for performing garbage collection in a real-time application uses a memory for determining an amount of memory required for garbage collection and waits until the determined amount of memory is available. After determining the amount of memory required for garbage collection based on the number of pages of a predetermined size, a garbage collector is used for completing the required garbage collection. A hybrid collector is used for recovering the data objects and distinguishing the memory space.
EAST Classification Window
## EAST Search History

### Prior Art Search History

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<tr>
<th>Ref #</th>
<th>Type</th>
<th>Hits</th>
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- **Row Separation for Printout:**
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  - Shading
  - Lines

- **Show searches of these types:**
  - Prior Art Search
  - Interference Search
  - Both Types

- **Include active and saved searches from the following folders in Search History:**
  - Active
  - Saved
  - Favorites
  - Failed
  - Trash

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  - All...

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  - Clear All
  - Save Selection...
  - Close

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<td>US-6,675,159</td>
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| Non-Patent Document     | |
|-------------------------| |
Additional Features

• Tagging
• Backward/forward citations
• KWIC (KeyWords In Context)
• Derwent patent family view
Thank you
Collaboration Resources

Scott Beliveau
Supervisory Patent Examiner, TC2400
Introduction
America Invents Act (AIA) allows the innovation community to contribute to the quality of examination by submitting published materials within a certain timeframe with a concise description of each document’s relevance.

More information can be found at:
http://www.uspto.gov/aia_implementation/patents.jsp#heading-7
http://www.uspto.gov/news/pr/2012/12-60.jsp
International Worksharing

• International agreements allow the USPTO to access work performed by other IP offices to reduce duplication of efforts

• Programs include:
  – Patent Prosecution Highway (PPH)
  – JP-First
  – First-look Application Sharing (FLASH)
  – UKIPO Worksharing Initiative
  – USPTO-KIPO Bilateral pilot
International Worksharing

Examiners are

• Made aware that international work results are available
• Given direct access to results
• Provided with resources to understand the results

More information can be found at:
http://www.uspto.gov/ip/global/patents/ir_pat_worksharing.jsp
Publicly-Supported Training

- Patent Examiner Technical Training Program (PETTP)
- Site Experience Education Program (SEE)
- Annual Technology Center Tech Fairs

More information can be found at:
http://www.uspto.gov/patents/pettp.jsp
Quality Enhancement Meetings

• Peer-centered meetings for examiners of all experience levels to meet, discuss patent applications, and share knowledge
• Examiners provide search and examination guidance to their peers
TC 2400: Network, Multiplexing and Cable

Key features of NORTH

1. NORTH is a web-based tool designed to help patent examiners increase their knowledge in a variety of technical subjects.
2. Examiners new to an area may use NORTH to increase their depth of knowledge in a particular subject.
3. Both new and experienced examiners may use NORTH for "just in time" training when working with unfamiliar topics.
4. NORTH also provides links to web pages and databases for use as general resources.
5. Unlike search engines or patent search tools, NORTH is organized by human editors and has been designed to be as intuitive as possible.
6. The information in NORTH is organized so it is easy to learn, and should necessarily correspond to the current classification system.

About NORTH

NORTH User’s Manual

North Team
For Questions, Comments or Suggestions, Please Contact: TC2400NORTH
For SharePoint Support, Please Contact: OPMPN/Sharepoint Support
370 Multiplexing

Multiplexing

Fault Recovery
Configuration Management
Packet Switching
Wireless (2G, 3G, 4G)
Multiplexing/Demultiplexing Techniques
Channel Assignment

Testing
Special Services

Signaling
Synchronization
Congestion Control

Overview

Class 370 is the generic class for multiplexing or demultiplexing systems, methods, or apparatus.

Supervisory Patent Examiners

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| 2593     | Yang, Hsiung-P.
| 2597     | Tang, S.
| 2607     | Sheik, Ayaz |
| 2677     | Shabbir, Muhammad |
| 2693     | Peine, Derrick W. |
| 2697     | Cheng, Andrew W. |
Examiner's Electronic Digest Database (E2D2)

- Contains over 13,000 records across all TCs
- Database design intended to make it easy for examiners to use
  - Art- and class-specific keywords
  - Examiner annotations
  - U.S. class/subclass information
- Resources available include
  - Book excerpts
  - Catalogs
  - Handbooks
  - Manuals
  - Journal articles
  - Technical reports
  - Translated foreign patents
  - Newspaper articles
Thank you
Scientific and Technical Information Center (STIC)

Pamela Reynolds
Technical Information Specialist,
TC2100 & TC2400
• Electronic Information Centers (EICs) are located within each TC
• Each EIC houses an art-specific print collection
• Main STIC houses a collection of scientific and technical literature
• Over 80 million foreign patents
USPTO Collections

• 500+ databases
• 59,000+ electronic journals
• 175,000+ ebooks
• Extensive historical and current print collection of books, journals, industry standards, and foreign patents
IP-Authenticated Access for Examiners

- IEEE Xplore
- ACM Digital Library
- Inspec
- Ei Compendex
- Dissertation Abstracts
- Research Disclosure
- IP.com
- Safari Books
- Science Citation Index
- MathSciNet
- ProQuest
- EBSCO
- ScienceDirect
Commercial Databases

- ProQuest Dialog
- STN
- Questel
- Lexis/Nexis
- Westlaw
Prior Art Search Services

- Professional search staff located in each TC search commercial databases to complement examiners’ searching
- Training provided to examiners
  - PTA
  - 15-Minute Demos
  - Lunch & Learn Sessions
  - One-on-one sessions with Search Strategy Experts (SSEs)
Translation Services

- In-house translators – 25 languages
- Machine translations
- External translation services for additional languages
### STIC Service Report

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STIC-Examiner Interactions

- In-person
- Telephone
- E-mail
- Instant message
- Chat room
Thank you
Example Claim

A method executed in a mobile device for providing a user interface for an Internet service, comprising:

• displaying a web site on the mobile device;
• storing web site visit history on the mobile device;
• detecting an input to the mobile device; and
• based on the input, displaying a web site on the mobile device according to the visit history.
Q&A
Thank You

<table>
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<tr>
<th>Jim Dwyer</th>
<th>Janet Gongola</th>
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<tbody>
<tr>
<td>Chirag Shah</td>
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<td>Vei-Chung Liang</td>
<td>Pamela Reynolds</td>
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Break
Stakeholder Presentations
Brad Pedersen

Patent Practice Chair
Patterson Thuente IP
Telephone: 612-349-5774
pedersen@ptslaw.com
Automated Snapshot Capture
Pilot Project Proposal for Improving Captured NPL Prior Art for Software Applications

USPTO Software Partnership Meeting

Brad D. Pedersen
December 5, 2013
The First NPL Problem
Undated Web Postings Cannot be Relied Upon

MPEP 2128

Date of Availability

Prior art disclosures on the Internet or on an on-line database are considered to be publicly available as of the date the item was publicly posted. * > Absent evidence of the date that the disclosure was publicly posted, if < the publication > itself < does not include a publication date (or retrieval date), it cannot be relied upon as prior art under 35 U.S.C. 102(a) or (b)*>. However <, it may be relied upon to provide evidence regarding the state of the art. Examiners may ask the Scientific and Technical Information Center to find the earliest date of publication > or posting <.
The Second NPL Problem
The Illusive and Ever-Changing World-Wide Web

• **Internet Archive**
  – Does not crawl websites that “opt out” with “robots.txt”

• **Knowledge Bases**
  – *Wikipedia*: freely changeable
  – *Knowledge Graph* and *Freebase*: social/historical focus

• **Semantic Web**
  – Great idea that remains mostly unrealized

• **Deep Web**
  – Harvesting below the surface web is a hard problem
  – 2-3 orders of magnitude more information than surface web
  – *BrightPlanet.com*
The Underlying NPL Problem
The Exponential Increase of Information

• The Amount of Stored Information has Exploded
  – “Every two days now we create as much information as we did from the dawn of civilization up until 2003”, according to Eric Schmidt in August 2010.
  – That was something like five exabytes of data in 2010.
  – By 2016, Internet traffic will be more than a zetabyte ($10^{20}$)
  – Exponential Increase is the Rule, Not the Exception
The Snapshot Proposal
Creating Time-Anchored Searchable Silos of NPL

• **Automated Ingesting of Patent Application**
  – Pilot limited to Specific Art Groups for Software cases.
  – “Opt In” by completing Electronic Form
  – Search targets generated by claim key-wording, glossification, NLP analysis of specification and optional image analysis of figures
  – Possible tuple creation for semantic search using OWL, rdf, XML and future cognitive computing analysis (Watson)

• **Search/Crawl as of Filing Date of Application**
  – Search targets used to capture specific NPL sources as of filing date
    • Wikipedia/Freebase/Knowledge Graph/Wolfram Alpha
    • IEEE/ACM/EFF blogs, RFCs
    • Inventor/Assignee web materials
  – Limited set of results from ranked search/harvest of entire web
The Snapshot Proposal
Creating Time-Anchored Searchable Silos of NPL

- **“Opt In” Electronic Form Includes:**
  - Suggested search classes/sub-classes for application
  - Expressly defined terms
  - Structure/steps for each means-plus-function claim element
  - Initial List of IDS references
  - Optional claim set with corresponding reference numerals

- **Searchable Silo of Results stored in Private PAIR**
  - Copyrighted material not accessible other than to applicant

- **Incentives for Participating**
  - Examiners given extra time in prosecution to analyze captured silos
  - Applicants could be given advancement in queue of pending cases
  - Applicants get bibliography of NPL that reduces add’l IDS filings
The Snapshot Proposal
Expanded Claim Key-Wording

• **Use Expanded Claim Sets for Key Word Frequency**
  - Utilize the inherent nature of independent and dependent claims to improve key word frequency scores.

1. A hat for an animal, comprising:
   a shell;
   a harness arrangement attached directly to the hat, including a first strap and a second strap, wherein the first strap and the second strap each have two loose ends which are movably secured to the shell of the hat; and
   the first strap and the second strap cross each other at a point below the muzzle of the animal when the hat is secured.

2. The hat of claim 1 wherein at least one of the first strap and the second strap is of a resilient material.

Vs.

1. A hat for an animal, comprising:
   a shell;
   a harness arrangement attached directly to the hat, including a first strap and a second strap, wherein the first strap and the second strap each have two loose ends which are movably secured to the shell of the hat; and
   the first strap and the second strap cross each other at a point below the muzzle of the animal when the hat is secured.

2. A hat for an animal, comprising:
   a shell;
   a harness arrangement attached directly to the hat, including a first strap and a second strap, wherein the first strap and the second strap each have two loose ends which are movably secured to the shell of the hat; and
   the first strap and the second strap cross each other at a point below the muzzle of the animal when the hat is secured;
   wherein at least one of the first strap and the second strap is of a resilient material.
Thank You!

About Brad Pedersen

Brad Pedersen is a patent attorney with more than 25 years of experience in patent law, engineering, business and entrepreneurship. He is a partner and the chair of the Patent Practice group at Patterson Thuente Pedersen, P.A., an intellectual property law firm in Minneapolis, Minnesota.

Brad is also a successful inventor and entrepreneur, with more than a dozen issued US patents and a recently launched RC gaming drone company – QFO Labs, Inc.

Brad is one of the more knowledgeable IP attorneys in the U.S. when it comes to the patent reform and the AIA. Since it was first introduced in 2005, he has actively followed the developments and debate surrounding patent reform at the agency, legislative and judicial levels. He educates clients and colleagues by writing and presenting on the imminent changes and strategies for dealing with the reforms. Brad can be reached at pedersen@ptslaw.com or (612) 349.5774

About Patterson Thuente IP

Patterson Thuente Pedersen, P.A. helps creative and inventive clients worldwide protect, and profit from, their ideas. Practicing in the areas of patents, trademark, copyright, trade secrets, IP litigation, international IP protection, licensing and post-grant proceedings, the firm’s attorneys excel at finding strategic solutions to complex intellectual property matters.

Visit us online at www.ptslaw.com.
John Toebes
Senior Director, Cisco Systems
Patent effectiveness tools and Process
Telephone: 919-476-2041
toebes@cisco.com
Identifying Related Patents Through Tags and Categories

John Toebes
Senior Director, Intellectual Property

November 5, 2013
Background

• Identifying good prior art requires great searching
• Tough to scale without experts
• Similar to recommendation systems such as collaborative filtering
• Companies such as Amazon figured out how to scale this problem
• Cisco has > 10,000 Issued US patents with an internal tool called CPOL which provides search capabilities
• Cisco applied tags and categories to successfully improve the ability to locate assets
Addressing the Issue

Created Category Taxonomy to cover all assets

Tested the taxonomy with different people

Not dissimilar from CPC, but with important restrictions

1. Only three level, ~200 categories

2. Each category must expect to represent no less than 1% and no more than 5% of all assets

3. Each patent asset can have no more than 3 categories.

Scarcity and bucket size ensure that assets will at least be in the bucket everyone looks in
User Tags

• While categories ensure that you will have the asset in the collection, tags allow for refinement.

• Tags are user defined but have types: Products, Standards and Generic

• Tags also include a description and identify the creator

• Anyone can create a tag and apply any tag to any patent asset

• Tag management tools allow for combining, marking equivalence and even retiring tags.
Tag Validation

- There is no central authority for tagging
- With any set of patent assets, a tag cloud quickly tells you what it is about
- With only 10% of our assets tagged, we could readily distinguish our portfolios
- At 90% coverage it becomes easy to see outliers
- Clusters of related patents become easy to recognize
Refining Search

• When looking for a particular asset, it is easy to start with a category even though it brings a large set.

• Turning on the Tag Cloud gives instant visibility into what else could be looked for

• Searching for a combination of tags allows prioritizing the best match

Search Categories ➔ Tag Cloud ➔ Tag Combinations
Surprising Results

• It is less important who tagged something or what they tagged it with than the fact that the same person tagged multiple items.

• Given any set of found patents, you can find other similar ones by using the tags on the initial set. The weight of the frequency of the tags allows for prioritization of the matched set.

• Inventors and even business organizations or assignees can be treated as virtual tags to improve the match.
Thank you.
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On behalf of PIUG

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Who is PIUG?

We are a non-profit organization for (passionate) individuals having a professional, scientific or technical interest in patent information.

Over 700 active members from around the world.

We are searchers, analysts, agents, and attorneys who work in-house, in academia, at law firms, and as independent consultants.
Shared Difficulties

Prior Art Searching is never perfect!

- We all balance precision versus recall (aka “Finding versus Searching”)

- We all have limited resources (time)

- Applicants do not make our lives easy (no attorney bashing allowed!)
Gap Analysis

USPTO Examiners have incredible technical resources available to them. *(There is no secret database with all the good stuff out there!)*

How do we utilize these resources a bit more efficiently?

How do we make the most of the time we do have to search?
Gap Analysis

1) Searching in Circles – the infinitely iterative loop
2) Patents versus Non-Patents
3) Drafting Queries - narrow to broad
4) Tagging References - broad to narrow
5) Classification searching
6) Text searching
7) Citation searching
8) Secure funding for PE2E
9) Random Tips!
Searching in Circles**

Iterate Text searching (patents)

Iterate

Iterate Classification with Text

Iterate Citations

Iterate

Iterate Classification

Iterate Text searching (NPL)
Patents versus Non-Patents

Approach these differently
- Patents are easy to search
- Non-Patents are hard to search

Learn terminology from one dataset to use in the other
- Terms, Inventors, Assignees

The examiner is the subject matter expert. Only they know what is relevant versus noise.
Draft Queries - narrow to broad

Start with a “finding” query and then expand incrementally.

Let the art teach you the proper terms and classification areas as you progress.

Follow leads. Be willing to change strategies.
Tag References - broad to narrow

Put a few broad references in your back pocket. These are your fall back references and will hopefully not be needed.

Move forward to improve upon them. Tag only references which make your rejection “better”.

Save your careful review of the tagged art for the end of the search process.
Classification searching

For the software arts, this is somewhat of a “broken tool”, but even a broken tool can be useful. (1/1.ccls.)

Use classification as a synonym. For example: (701/400-541.ccls. or gps) and… (GUI or 715/700-866.ccls.) and…

Learn the CPC system. It is the future.
Use the IPC system to help find CN, KR, and JP art.
**Check the 0’s: G06F1/03.ipcr. Or G06F001/03.ipc.
Text searching – Part 1

Proximity operators – The over reliance upon the “and” command loses the context of text based searching.

For example:

A and B = 3000 hits  … too many to review
Examiners choose  A and B and C and D = 300 hits
Consider instead  A same B = 400 hits
Consider instead  A with B = 200 hits
Do not fixate on the specific terms in the claims. The subject matter expert (Examiner) knows what is analogous! These terms are often applicant specific.
Citation searching

The enemy of my enemy is my friend.

Allow the work of others to serve you! Beware the Rule 1.56 data dumps though.

Citation searching creates a set of potentially relevant art for you independent of Classification and Text. This can be priceless.

**Beware the automatic database switching in EAST though!
Secure funding for PE2E

No database in the world is perfect. Each has significant pros and cons.

That said, EAST was developed in the 90’s and while powerful, is showing its age in many ways. We need a new system very badly to handle all of the raw patent data (80 million records and counting) and new search techniques being developed.
Random Tips – Part 1

Translations of most non-English art for free at the EPO! Visit them at http://worldwide.espacenet.com

Review non-US backcites at the same place as a bonus.

Google Scholar will link through most of the USPTO subscriptions. This includes big ones like IEEE and ScienceDirect. Others like ACM and Springer require direct entry of queries.
Random Tips – Part 2

To search art with only Abstracts available, limit your queries to (terms).ti,ab.

Another very valuable section is the “brief summary of the invention”. This is searchable using (term).bsum.

The Derwent database is not noise! It is a human generated Abstract for the subject reference. (No attorney joke intended.)
Random Tips – Part 3

There are actual magazines about prior art searching!

Check out World Patent Information (WPI) accessible through the USPTO ScienceDirect subscription. Many of the articles are written by the EPO training academy instructors and others by PIUG members.

Look up the two good articles by Evert Nijhof!
Thank You!

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Incentivizing Applicant-Provided Search Results

Michael V. Messinger
Partner, Electrical and Clean Tech Practice Group

December 5, 2013
Search or No Search?

- Recent Software Patent Trends Favor Search
- “File Without Search” Approach is Becoming Harder to Justify
  - Search Costs Down
  - Risks of Willful Infringement and Inequitable Conduct From Proper Search Down
  - Increased Scrutiny by PTO and Courts of Software Patents Under §§ 101, 112, 102 and 103
- Advantages to Knowing Best Prior Art
Significant Incentives For High-Quality Searching Are Already Present

- **Software Patent Marketplace Benefits**
  - Patent grant over quality prior art increases software-related patent valuation
  - IDS filings can increase patent valuation
  - Presence of respected non-patent literature can increase value

- **Drafting Benefits**
  - Understanding closest prior art permits tailored claim drafting, range of scope, and more effective claim terminology
  - Allows better interviewing of inventors
  - Leads to more detail in specification
  - Better pre-filing filtering

- **Examination Benefits**
  - Faster end-to-end prosecution, less RCEs
  - Helps ensure adequate disclosure under § 112
  - Helps ensure adequate disclosure to overcome § 101
  - Helps avoid prior art surprises and eligibility rejections
## Advantages of Searching in Software Arts

<table>
<thead>
<tr>
<th>Drafting</th>
<th>Examination</th>
<th>Valuation</th>
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<tbody>
<tr>
<td>• Problem/Solution focus</td>
<td>• Shortens prosecution</td>
<td>• IDS increases valuation</td>
</tr>
<tr>
<td>• Identifies inventive concepts and meaningful limitations</td>
<td>• Increases opportunities for Success in overcoming 101, 112, 102 and 103 rejections</td>
<td>• Grant over representative prior art increases valuation</td>
</tr>
<tr>
<td>• Provides opportunity for inventors to amplify description of inventive concepts</td>
<td>• Alerts Examiner of allowable subject matter</td>
<td>• Tailored claims scope increases valuation</td>
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<tr>
<td>• Claims overcome prior art</td>
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<td>• Better spending decisions</td>
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<tr>
<td>• Accurate terminology</td>
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<tr>
<td>• Adequate written description</td>
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Possible New Incentives for High-Quality Searching by Applicants

• Add a yes/no check box on Application Data Sheet:
  – If no IDS accompanies this filing, indicate whether a search has been performed.

• Increase Proper Application of Rule 105 (MPEP §§ 704.10-11)
  – Allows Examiners to request information from Applicant
  – Factors include:
    • Whether IDS is present
    • Whether background description is adequate
  – Limits to what can be requested: “Similar to 37 CFR 1.56, applicant is required by 37 CFR 1.105 to submit information already known, but there is no requirement to search for information that is unknown.” MPEP § 714.12
Possible New Incentives for High-Quality Searching

- Add an indication on face of patent indicating items of information provided by Applicant
- Add an indication on face of published patent applications indicating items of information provided by Applicant
- Add a yes/no check box in Office Action cover sheet of whether Examiner found information in Applicant’s IDS or Background helpful.
  - Publish results by assignee, inventor, and legal representative name.
- Provide rewards to Applicant for including a high-quality search for software-related art
  - Non-Patent Literature
  - Descriptions of relevance
  - Strong background section
- Potential rewards
  - Reduce or waive search fees
  - Advance examination
Possible New Incentives for High-Quality Searching

- New Technical Tools to facilitate IDS Submission
- Accept video information in IDSs
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Discussion
Next Steps

- Evaluate the information collected

- Generate recommendations for examiners and stakeholders
  - Training
  - Tools

- Continue the dialogue through
  - Microsite
  - Future partnership events
One initiative of the Software Partnership is the investigation and sharing of search strategies, and the improvement of tools and resources to evolve better techniques to identify prior art. Involvement of the scientific community in sharing best practices should help the USPTO identify the most relevant search resources and determine the best prior art for examination.
Thank You!

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