Using ezDL as a search interface for patent searching

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Existing OS solutions for patent search

- Patent search is a complex task
  - Traditional search already complex
  - Special considerations for patent searching (e.g. completeness, accountability)
  - Patent applicants sometimes try to hide their documents

- Existing open source systems are either
  - search engines with bare-bones interfaces or
  - non-specific GUI toolkits
Support needs

- Survey among patent professionals (Vanderbauwhede, 2010) showed need for support with
  - search result assessment
  - search result navigation
  - search management, organization and history
## Important Patent Search Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Lemur</th>
<th>Lucene</th>
<th>MG4J</th>
<th>Terrier</th>
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Based on Vanderbauwhede, 2010
The Great Divide

User Interface Toolkit

IR Toolkit

Application-specific code

Patent Search Application

Application-specific code

Using ezDL as a search interface for patent searching
Meet ezDL

- DAFFODIL has been continually developed and evaluated since 2000
- Unified access
  - to heterogeneous data sources
  - using a common interface,
  - a common query syntax and
  - a combined result view
- 10 years of experience and evaluation
- Reimplementation of DAFFODIL system started in 2009
- Not a search engine, but all search engines can be plugged in
What ezDL brings to the table

The tray can also be used to collect new terms and authors. Create new

- TP. LTD et. al. (2008). "Maintenance of a markup language document in a collaborative setting"
- C. INC et. al. (2008). "Tissue closure system"
- Jj. S et. al. (2008). "APPARATUS AND METHOD FOR LOW POWER AES CRYPTO"
- H. WEI et. al. (2008). "Key Generation For Advanced Encryption Standard (AES)"
- AG. GMBH et. al. (2008). "Security device for a transponder"
- Arduino
- Friedrich Ulrich

Clear all
What ezDL brings to the table

Matthias Jordan

Using ezDL as a search interface for patent searching
What ezDL brings to the table

Matthias Jordan  Using ezDL as a search interface for patent searching
What ezDL brings to the table

Using ezDL as a search interface for patent searching
EzDL for patent search

- Integrated features supporting patent search
- Showcase for ezDL’s extensibility
- Searches on MAREC collection using SOLR: 10 hours
- Displaying Patent documents: 12 hours
- Extracting, grouping: 1 hour
Presented features

- Rich query syntax
  - Boolean queries with fields operators
  - Phrases and proximity operators, year ranges
  - Wildcards and truncation operators
Presented features

- Query support
  - Full query history
  - Filtering
  - Re-running and combining

![Query History](image)
Presented features

- Result support
  - Highlighting
  - Grouping
  - Filtering
  - Sorting
  - Extracting

Using ezDL as a search interface for patent searching
The demo

Using ezDL as a search interface for patent searching
## Important Patent Search Features Revisited

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Based on Vanderbauwhede, 2010, with extension

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The Great Divide – United

User Interface Toolkit
IR Toolkit
Patent Search Application
Application-specific code

Using ezDL as a search interface for patent searching
Conclusion

- Patent search is demanding
- Graphical tools are more helpful than command line tools
- EzDL is not a patent search application
- Demo shows features to support patent search
- More features easily implemented by leveraging existing framework
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