Is there a Ghost in the [Search] Machine?
Improving Search UX using Query Analysis and Machine Cues

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pinboard.in tag

pinboard.in/u:jasonclark/t:search-ux/
twitter as channel (#hashtag)

@jaclark #DLFforum
Overview

• What are the “ghosts” of the search act?
• Applying context and intention to Search UX
• Anticipatory Design in a search prototype
• Questions
“Such in outline is the official theory. I shall often speak of it, with deliberate abusiveness, as "the dogma of the Ghost in the Machine." I hope to prove that it is entirely false, and false not in detail but in principle. It is not merely an assemblage of particular mistakes. It is one big mistake and a mistake of a special kind. It is, namely, a category mistake.”

Search Act | Context + Intention
Search Act => Context + Intention
<table>
<thead>
<tr>
<th><strong>Article</strong></th>
<th><strong>Title</strong></th>
<th><strong>Author(s)</strong></th>
<th><strong>Publication</strong></th>
<th><strong>Availability</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The Laser Biophysics Center.</td>
<td></td>
<td></td>
<td>Check holdings at MSU Bozeman Documents</td>
</tr>
<tr>
<td>3</td>
<td>Laser</td>
<td></td>
<td></td>
<td>Select MSU Availability</td>
</tr>
</tbody>
</table>
Read a very interesting piece from Simone Kortekaas (Utrecht University Library) – a summary of the author’s presentation at the LIBER General Annual Conference 2012.

Like every other library, we at Utrecht University Library have always offered our users a catalogue. In 2002 we built our own discovery tool specifically designed for electronic journal articles. We called it Omega and it immediately became a huge success. Explaining this separate tool for e-journals to our users was not difficult. Looking for printed material? Search the WebOPAC. Looking for electronic journals or e-books? Search Omega. Looking for specific disciplines or materials? Search the dedicated electronic databases. This division also determined the layout of our homepage.

In the last few years, things have been changing rapidly. New commercial discovery tools such as Primo and Summon entered the library market and we lost our pioneering role. Meanwhile more and more users are finding their way to our licensed journals through larger and stronger search engines like Google Scholar which is freely available on the Internet and contains massive numbers of scientific material. But our users also switched to databases we subscribed to such as Web of Science and Scopus. Statistics showed that usage of our library catalogue and Omega was stabilising while the usage of our licensed journals was still growing. The time had come to rethink the future of our library
Figure: Google UI inviting natural language question - “Calories in cranberry sauce?”
What are the Ghosts in the Search Act?
search query = literal aspect + inferred aspect
“yellowstone national park” [search query]

“yellowstone national park” [literal aspect]

iPhone user, on MT highway [tacit, inferred aspect]
This is anticipatory design.
Cues from the “live” Query
cueWords = ["about", "above", ..., "can", ...]
query = 'Can I get research help?';
if (in_array(strtolower($query), $cueWords)) {
    echo "Here are some people to talk to: ";
}

OR

# python example
cueWords = ["about", "above", ..., "can", ...]
query = 'Can I get research help?'
query.lower()
if query in cueWords:
    print 'Here are some people to talk to:'
Cues from the Machine
HTTP Headers
+
Global Server Variables

en.wikipedia.org/wiki/List_of_HTTP_header_fields
Location from the Browser or Network Info
{
    "longitude": -110.9013,
    "latitude": 45.628,
    "asn": "AS13476",
    "offset": "+6",
    "ip": "153.90.170.5",
    "area_code": "0",
    "continent_code": "NA",
    "dma_code": "0",
    "city": "Bozeman",
    "timezone": "America/Denver",
    "region": "Montana",
    "country_code": "US",
    "isp": "Montana State University",
    "postal_code": "59717",
    "country": "United States",
    "country_code3": "USA",
    "region_code": "MT"
}
Cues from Analytics Logs
Applying Contextual and Intentional Cues
Use these cues to show different parts of search index and additional context
Ten Blue Links

Search...

Search

Facets

Not seeing what you need? Watch the space below for refinements.

With this prototype, I'm looking at ways that the search act can be treated as a conversation.

What is this?
Privacy?
Ten Blue Links

Sara Mannheimer - Data Management Librarian [Assistant Professor ...
www.lib.montana.edu/people/about/139

Publication and Data Services - MSU Library | Montana State ...
https://www.lib.montana.edu/services/publication-and-data/

Home - Data Management - Library Guides at Montana State ...
guides.lib.montana.edu/data

Sara Mannheimer - Library Guides at Montana State University
guides.lib.montana.edu/prf.php?account_id=33395

Faculty & Professional Vitae :: Montana State University Libraries

Facets

Not seeing what you need? Watch the space below for refinements.

- Categories
- People
- FAQ
- Offers

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What is this?
Privacy?
Ten Blue Links

Sort: Relevance or Date

"research help" (About 825 results)

Ask the Library - Ask the Library
ask.lib.montana.edu/

Research and Instruction Services - MSU Library | Montana State...
www.lib.montana.edu/services/research-and-instruction/

Services - MSU Library | Montana State University
https://www.lib.montana.edu/services/

Home - Psychology Research - Library Guides at Montana State...
guides.lib.montana.edu/psy

Publication and Data Services - MSU Library | Montana State...
https://www.lib.montana.edu/services/publication-and-data/

Facets

Not seeing what you need? Watch the space below for refinements.

► Categories
► "Hand-picked" Topics
► Topics by Location
► Popular
► People
► FAQ
► Offers

With this prototype, I’m looking at ways that the search act can be treated as a conversation.
Ten Blue Links

who is susan borda?

Sort: Relevance or Date

"who is susan borda?" (About 9 results)

Susan Borda - Digital Technologies Development Librarian ...
www.lib.montana.edu/people/about/141

People in the Library - Results :: Montana State University
(MSU ... 
www.lib.montana.edu/people/view.php?team=Library...and...

Faculty & Professional Vitae :: Montana State University
Libraries
www.lib.montana.edu/people/vitae.php

Liaisons by College/Department - MSU Library | Montana
State ...
www.lib.montana.edu/services/liaisons-by-department.html

Profiles - Library Guides at Montana State University
guides.lib.montana.edu/prf.php

Facets

Not seeing what you need? Watch the space below for refinements.

It looks like you are asking a question.

Do you want to talk to a librarian?

- Research Help
- FAQ
- Categories
- Offers

With this prototype, I'm looking at ways that the search act can be treated as a conversation.

What is this? 
Privacy?
Suggestions Based on Result Set Size

Ten Blue Links

"research help" (About 846 results)

- Ask the Library - Ask the Library
  ask.lib.montana.edu/

- Research and Instruction Services - MSU Library | Montana State
  www.lib.montana.edu/services/research-and-instruction/

- Services - MSU Library | Montana State University
  https://www.lib.montana.edu/services/

- Home - Psychology Research - Library Guides at Montana State
  guides.lib.montana.edu/psy

- Publication and Data Services - MSU Library | Montana State
  https://www.lib.montana.edu/services/publication-and-data/

Facets

Not seeing what you need? Watch the space below for refinements.

- Categories
- "Hand-picked" Topics

A few common topics based on our human-created sitemap and an analysis of our search logs:

- articles & research databases, borrow, research help, library hours, yellowstone, parking & directions, montana history, google scholar msu, montana code annotated, mla format 6th edition

- Topics by Location
- Popular
- People
- FAQ
- Offers

With this prototype, I'm looking at ways that the search act can be treated as a conversation.
Suggestions Based on Local Context

Ten Blue Links

"research help" (About 825 results)

Ask the Library - Ask the Library
ask.lib.montana.edu/

Research and Instruction Services - MSU Library | Montana State
www.lib.montana.edu/services/research-and-instruction/

Services - MSU Library | Montana State University
https://www.lib.montana.edu/services/

Home - Psychology Research - Library Guides at Montana State
guides.lib.montana.edu/psy

Publication and Data Services - MSU Library | Montana State
https://www.lib.montana.edu/services/publication-and-data/

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► Categories
► "Hand-picked" Topics
► Topics by Location
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► People
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An offer based on local weather.

It’s cloudy and cold, stop in for a cup of something warm.
Check out the "Brewed Awakening" hours and menu.

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Woman Stalked Across 8 Websites By Obsessed Shoe Advertisement

NEWS IN BRIEF
October 12, 2015

LAWRENCEVILLE, GA—Expressing her growing unease at repeatedly spotting the same picture and text lurking in the corners of her favorite webpages, local woman
Next Steps + Possibilities

- Library Discovery Search - “Bento Box”
- Speciality Search Applications
- Library Digital Collections
- User Testing with the Prototype
Quaero ergo sum

“I search, therefore I am”
There are Ghosts in the [Search] Machine.

What do we as a profession choose to do with them?
Questions?

twitter.com/jaclark
www.lib.montana.edu/~jason/talks.php
Acknowledgements

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