Understanding KVK, the technical base of artlibraries.net

Uwe Dierolf
Library of the Karlsruhe Institute of Technology (KIT)
Opened in April 2006
24h library
never closed since 2006
+30,000 visitors per week
KIT Library – more pictures
KIT Library – first 24/7 library in europe

- Self service stations for all tasks using RFID technology
  - Book lending and book return
KIT Library – first 24/7 library in europe

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  - Book lending and book return
  - Lending of ILL books
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- Self service stations for all tasks using RFID technology
  - Book lending and book return
  - Lending of ILL books
  - Lending of keys (keylender)
KIT vs. University of Karlsruhe

- University of Karlsruhe
  - 18,000 students
  - 4,000 researchers and administrative staff
- Forschungszentrum Karlsruhe
  - 4,000 researchers
- KIT = University + Forschungszentrum
- Distance 10 km
KVK – the technical base of artlibraries.net

- Started in August 1996
- Even as old as the internet
- 1,500,000 search requests per month

Idea

- In 1996 only few library catalogs had a Z39.50 interface
- Problem: How to develop a simple user friendly search service?
- Solution: Pattern matching
  - Send search requests to a catalog using HTTP requests
    - KVK emulates the user with his browser
  - Take a look on (read / parse) the HTML of the result page
    - Get short title, URL to full title, number of hits, "more hits"-link
  - Create a unique formatted hit list
    with links leading to the destination catalog
Pros and cons of cross search vs. general index

- Cross search could be slow
  - Users have to wait for slow catalogs if they want to see all results
  - But the felt speed is fast cause results of fast catalogs are presented immediately

- Duplicate titles can't be eliminated
  - It's not a problem for the users
  - They are primarily interested in the result

- General index needs the metadata
  - Cross update problem

- KVK can integrate even any web based catalog
  - Cookie problem

- Cross search limits the number of catalogs in a virtual cat.
Cookie problem

- KVK acts like a "man in the middle"
  - KVK starts the search session
  - Some catalogs manage all their session information using cookies
  - To get the full title you need session ID stored in the cookie
  - KVK is not allowed to store cookies for other domains cause of security reasons

- Workaround
  - Relay-mode of the KVK
  - Even requests to get a full title are handled by the KVK server
    - KVK acts like a proxy server for full title requests
    - All links on the full title page which need the session are not working

- Conclusion: in most cases cookies are a "no go"
Workflow of a KVK request

User

KVK-Search
result only
get full title

KVK

native search
result + cookie

Catalog using cookies

invalid session or session timed out
Solutions to circumvent the cookie problem

- KVK uses internal search interface for search engines
  - In most cases the result is machine readable, e.g. XML

- Examples
  - Infoguide from OCLC
    - KVK sends search requests to the Infoguide Web service
  - DNB catalog
    - KVK sends SRU requests to the DNB server
  - Union catalogs KOBV and BVB
    - KVK uses the internal search interface to Lucene / Fast

- Why does this help?
  - KVK doesn't need the session ID and the cookie any more
  - KVK creates "deep links" as links to the full title
    - Use the ID of the title in the URL
Delivery service based on KVK

- Lit-Express
  - Simple form of ILL
  - KVK extracts the title data and fills an order form
New features in KVK search

- My catalogs
  - Saving and restoring selections of catalogs
  - Based on Javascript Library jQuery

- "Did you mean ..."
  - Using Google to prevent typing mistakes
  - ... under construction
Thanks for your attention

Are there any questions?
Literatur

- *jQuery in Action*, Bear Bibeault und Yehuda Katz, engl.
- *jQuery*, Ralph Steyer), dt.,
- *jQuery UI 1.6*, PACKT Publishing, engl. (neu 1.7)
Links

- [http://docs.jquery.com/Main_Page](http://docs.jquery.com/Main_Page)
- [http://westhoffswelt.de/blog.html](http://westhoffswelt.de/blog.html)
- [http://westhoffswelt.de/data/portfolio/webtechcon_2009_bubbles_and_trees_with_jquery.pdf](http://westhoffswelt.de/data/portfolio/webtechcon_2009_bubbles_and_trees_with_jquery.pdf)
Bilder