

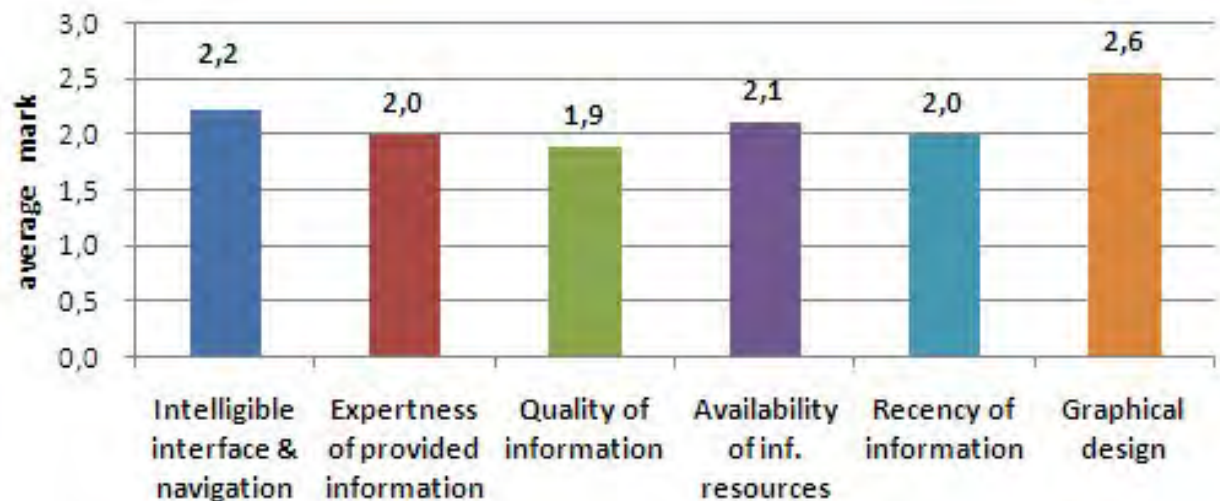
IMPROVEMENT OF SEARCH EXPERIENCE BASED ON MESH SEMANTICS : RECENT INNOVATIONS IN MEDVIK PORTAL

Introduction

- National Medical Library, Prague, Czech Republic
- we operate Medvik system – multi-LIS & web portal
 - 6 integrated medical libraries
 - several databases and datasets (800 000 biblio records & growing) :
 - library catalogues (200 000) & holdings
 - union catalogues holdings
 - medical libraries register
 - authority – personal, corporate, Medical Subject Headings
 - Bibliographia medica Cechoslovaca – articles (600 000+)
 - digital archive – publishers full texts (13 000+)

Medvik Portal

- current version since 2006, Java, JSP, Tomcat
- developed as OPAC for Medvik libraries
- strong MARC format dependency, searching based on biblio record fields
- users not very satisfied with design & navigation



Medvik Portal – new needs

- better integration of available data & services into single access point
 - ▣ articles records
 - ▣ archived full texts
 - ▣ rich content – covers, TOCs
 - ▣ linking services
 - ▣ MeSH – English & Czech translation
- modern interface, more user friendly
- focus on simple & intuitive search workflow

Approaches & Methods

- aggregated database – master index
- search in full records – abstracts included
- advanced relevancy ranking
- results clustering
- query builder
- better usage and presentation of MeSH data
 - ▣ users do not have to know MeSH
 - current approach: headings query > biblio > results
 - new approach: free text > headings selection > results
 - visual presentation > MeSH tag cloud

Tag clouds

- tag clouds – form of visual retrieval interface, common in Web 2.0 applications
- based on term frequency in a given collection of documents
- alphabetical sorting

ajax apple art article audio blog blogging blogs books business code comics community computer cool
css culture daily del.icio.us delicious design development diy firefox flash flickr free freeware fun
funny games geek google graphics gtd hacks hardware history howto html humor images internet
java javascript language lifehacks linux mac maps media movies mp3 music news opensource
osx photo photography photos php politics productivity programming python rails reference
research rss ruby science search security shopping social software tech technology tips tool tools
toread travel tutorial tutorials usability video web web2.0 webdesign webdev wiki windows writing xml

MeSH cloud

- used in LigerCat & AnneO'Tate tools – cloud sorted alphabetically
- tags - headings - from retrieved records are grouped semantically
 - ▣ mapped to the MeSH tree structure
 - ▣ grouped into 16 top-level categories
 - ▣ headings sorted by position in the tree structure – from general to specific

MeSH cloud example

B - Organisms

Animals Animals, Newborn Guinea Pigs Rabbits Dogs Cats Mice

Rats

Brain Abscess Disease Models, Animal Neurologic Manifestations Brain
Diseases Cerebrovascular Disorders Craniocerebral Trauma
Hydrocephalus Hypertension Neoplasm Metastasis Seizures Alzheimer Disease

C - Diseases

Anoxia Brain Damage, Chronic Brain Edema Brain Injuries **Brain**
Ischemia Brain Neoplasms Epilepsy Hypoxia, Brain Intracranial
Hemorrhages Stroke Brain Infarction Cerebral Palsy Glioma Hypoxia-Ischemia,
Brain Ischemic Attack, Transient

D - Chemicals and Drugs

Calcium Serotonin

E - Analytical, Diagnostic
and Therapeutic
Techniques and
Equipment

Animal Experimentation Brain Mapping Diagnosis, Differential Drug Therapy
Neurosurgical Procedures Prognosis Rehabilitation Stereotaxic Techniques
Diagnostic Imaging Disease Models, Animal Electric Stimulation Thrombolytic
Therapy Treatment Outcome Electroencephalography Magnetic
Resonance Imaging Radionuclide Imaging Tomography Tomography, Emission-
Computed Tomography, X-Ray Computed Risk Factors

F - Psychiatry and
Psychology

Mental Disorders Behavior, Animal Schizophrenia Alzheimer Disease

Medvik Portal – new concept

Intro Search Articles Authors Subjects Libraries Queries Clipboard

MyAccount [Filip Kříž] Logout Help LangSwitch

Search

Search in: Catalogs Bibliomedica-BMC articles all

E-resources Portal
Digital Archive Kramerius
Library services

Refine results

MeSH Headings

test
test

Check tags

test
test

Subheadings

test
test

Authors

test
test

Publication dates

test
test

Journals

test
test

Query #1 (number-of-hits) : brain ...

[filters](#) on/off

selected terms for new query selected terms for new query selected terms for new query selected terms for new query selected terms for new query selected terms for new query

Mark: all pageclipboard <<10 / 770 >>

Display: 10 Sort by: default

	Title	Author	Published	Services
1 <input type="checkbox"/>	Title title title title: subtitle subtitle subtitle subtitle Journal source abstract link link	Lastname, firstname, years affiliation Příjmení, jméno Příjmení, jméno Příjmení, jméno ...more	2009-2010	order copy clipboard details Kramerius
9999 <input type="checkbox"/>	Title title title title: subtitle subtitle subtitle subtitle part title part link link	Lastname, firstname, years	2009-2010	order loan clipboard details Kramerius

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Display: 10 Sort by: default

Refine results

B - Organisms

Animals [Animals](#), [Newborn](#) [Guinea Pigs](#) [Rabbits](#) [Dogs](#) [Cats](#) [Mice](#)

Rats

[Brain Abscess](#) [Disease Models](#) [Animal](#) [Neurologic Manifestations](#) [Brain](#)

Limit results

Databases

Medvik Catalogue
 BMC articles

Medvik owners

NLK
 NLK - OVI
 ÚHK
 IKEM
 SÚKL
 Krajská zdravotní

Other libraries

Collections

test
test

Coming soon

- new framework – Google Web Toolkit – smooth & responsive interface, better controls (sliders, local menus, graphs...), tasks independency, widgets
- users clipboard – grouping of records, tagging
- sharing of saved results and queries using: e-mail, persistent links, social networks, bookmarking services
- related documents display, authors cluster, RSS
- query transfer to PubMed & OpenURL linking
- focus groups testing & evaluation

Thank you for your attention

- Please feel free to contact us

kriz@nlk.cz

- Stay tuned

Medvik Portal: <http://www.medvik.cz>

NML website: <http://www.nlk.cz>



[Digital Preservation
Europe - Bitrot]