

DIGITAL LIBRARY
FEDERATION

From Theory to Practice



Bielefeld Academic Search Engine

Friedrich Summann
Bielefeld UL

Bielefeld University Library

DLF Spring Forum 2004



Presentation Overview

Part 1:

General introduction to the BASE Digital Collections

- objectives, content, potential

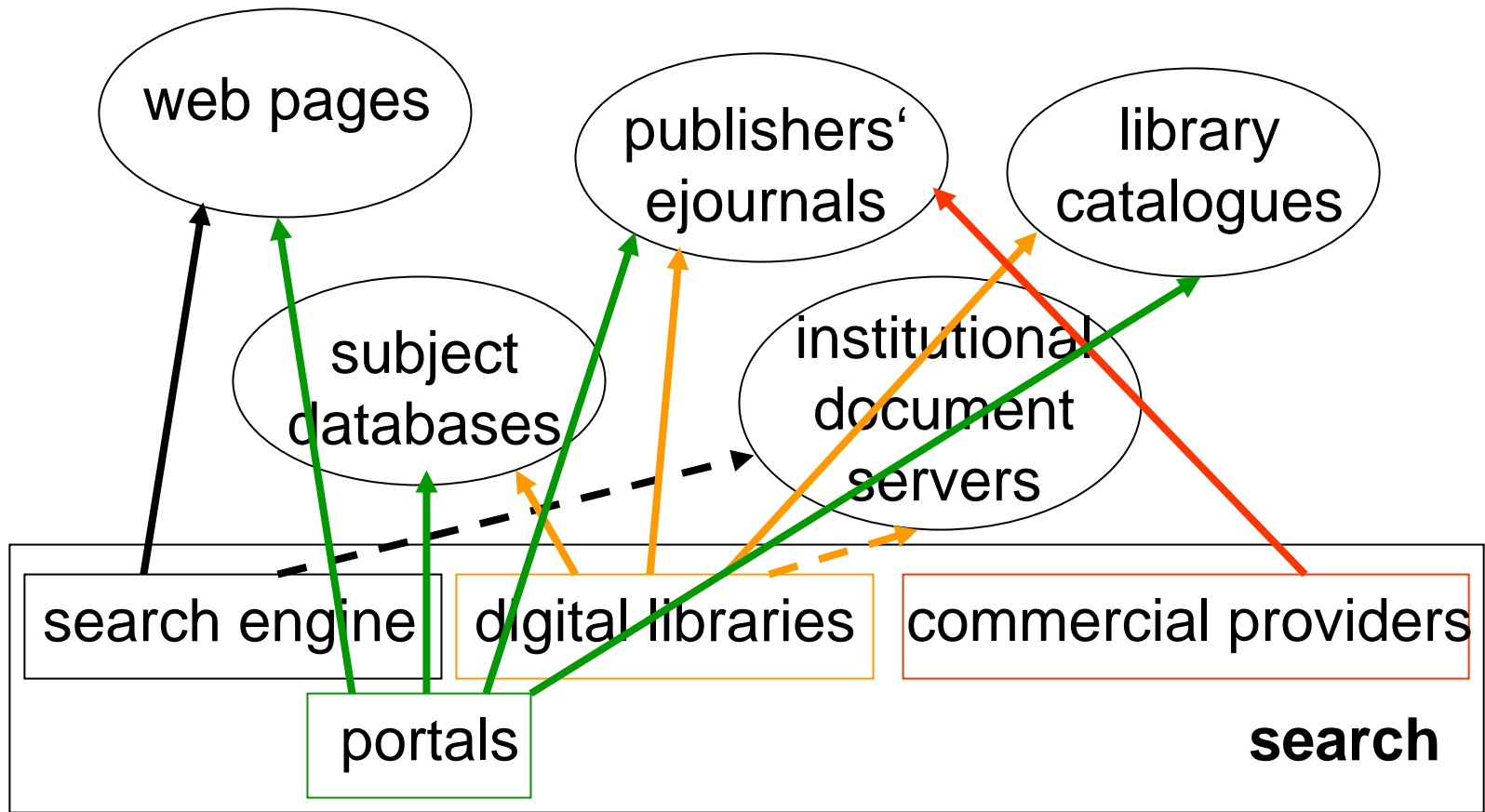
Part 2:

Technical report about the BASE Digital Collections

- backend: harvesting and preprocessing, processing and indexing
- frontend: search interface, search and result presentation



Academic Online Information: the Reality





Starting Point:

Digital Library North-Rhine Westphalia
(1998-2001)

Problems:

- Users want search engine look and feel
- Search functionality too slow
- No integration of fulltext resources
- No integration of web pages

Academic Online Information: the Vision

web pages

publishers'
ejournals

library
catalogues

subject
databases

institutional
document
servers

search engine for academic online information



Evaluation of Search Technology

(02/2002 – 08/2002)

- Convera
- Google
- mnoGo
- FAST
- Lucene (2003)



From Theory to Practice (1)

- Proof of concept with FAST Data Search (Math Demonstrator)

Math-Demonstrator

Mathematic Basic Search - Search for [Deutsche Version](#) | [Advanced Search](#) | [Help](#)

free content sources licenced and free content sources

© 2003 by Bielefeld University Library

- Extension: Bielefeld Academic Search Engine: search service for digital collections

BASE Digital Collections

Basic Search: [Deutsche Version](#) | [Advanced Search](#) | [Help](#)

free content sources licenced and free content sources

BASE - Bielefeld Academic Search Engine
© 2004 by Bielefeld University Library



From Theory to Practice (2)

The concept of BASE:

- collecting and making accessible in a single index a **representative** and **heterogeneous** set of academic online content
 - different document types
 - different data formats
 - fulltext and/or metadata
 - content from the “visible” and “invisible” web



From Theory to Practice (3)

Objectives of the BASE Search Engine:

- Real-life testing and implementation of FAST Data Search
- working with interoperability standards (OAI, XML)
- developing prototypes of intelligent and flexible user interfaces



From Theory to Practice (4)

Some general information:

- work on BASE in progress at Bielefeld UL since summer 2003
- team of 2 software developers
- software: FAST Data Search 3.2
- pilot project for national proposal “Using Search Engine Technology in Digital Libraries and Scientific Information Portals” by Bielefeld UL and North Rhine-Westphalian Service Centre for Academic Libraries (part of VDS in vascoda)





The Content (1)

- about 600,000 documents indexed up to now in 15 collections:

a) Metadata

- Project Euclid (6,516 articles):
 - harvested using OAI-protocol
- Bielefeld UL: Journals of the German Enlightenment (57,690 articles)
 - database output

The Content (2)

b) Fulltext without metadata / web content

- Documenta Mathematica (e-journal)
- preprint servers at Bielefeld University
(together 18,301 documents)
- TIL/UL Hannover: project reports of BMBF (64 documents)





The Content (3)

c) Fulltext with metadata

- Springer journals (224,387 articles):
 - metadata indexed, fulltext in preparation
- Bochum UL: electronic dissertations of Ruhr-University Bochum (1908 documents):
 - harvested using OAI-protocol
- Bielefeld UL: Online publications (369 documents)
 - harvested using OAI-protocol, metadata indexed, fulltext in preparation
- Oxford Internet Library of Early Journals (104,516 pages)
 - SGML export

The Content (4)

c) Fulltext with metadata (cont.)

- University of Michigan Historical Math Collection (772 documents)
- Cornell University Library Historical Math Monographs (630 documents)
 - metadata harvested using OAI-protocol, metadata and fulltext indexed separately
- SUB Göttingen/GDZ: Mathematica (427 documents)
 - harvested using OAI-protocol, up to now only metadata indexed



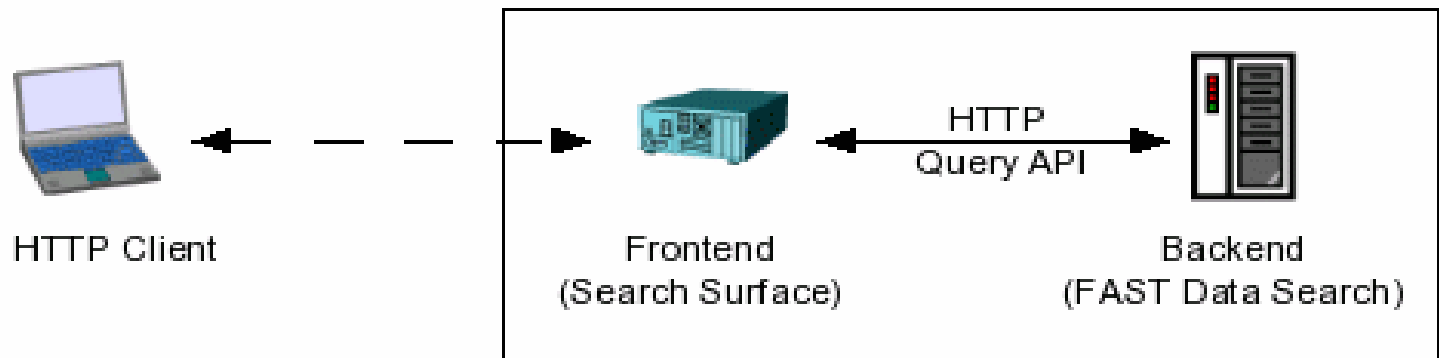


The Potential

- making accessible different kinds of content sources in one index: web content **and** databases/catalogues
- indexing metadata **and** fulltext with or without metadata
- enhancing fulltext data by metadata extraction
- flexible and customizable frontend
- transferring performance and scalability of search engine technology to digital library world

System Components

- separate frontend and backend server
- currently one frontend server
- can be easily enhanced with more servers
- currently one backend server (single node)
- can be enhanced to multi node system





Dispatching

Frontend:

- search interface (basic, advanced) (PHP)
- result processing and result presentation

Backend:

- harvesting (Perl OAI harvester)
- preprocessing and conversion from BRS, OAI-DC and other DB formats with Perl
- filetraverser, crawler
- document processing and indexing of data
- query and result processing



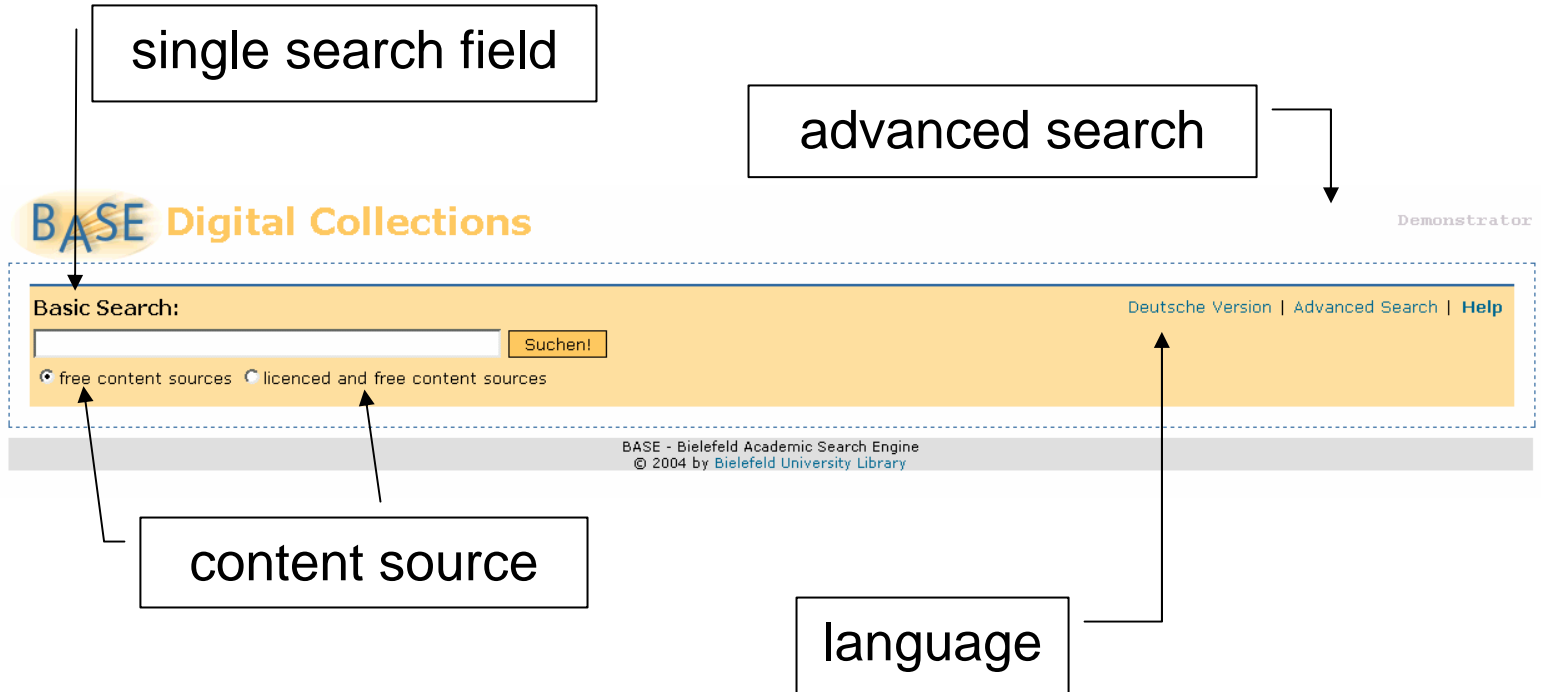
The Frontend

- Siemens Primergy, 2 x 800MHz CPU
1.28 GB RAM
- RAID1, Adaptec SCSI, 36GB
- SuSE Linux 9.0, Kernel 2.4.21-smp
- Apache web server with PHP 4

Bielefeld University Library web server

Search Interface (1)

Basic Search



Search Interface (2)

Advanced Search

BASE Digital Collections

Demonstrator

Advanced Search:

Complete Document

Author Index

Title

Keyword Index

Hits per Page

search field selection

free content sources licensed and

year limit

Restrict your search

Published (format YYYY)

source selection

- Content Sources
- Bielefeld University: Online Publications
 - Cornell UL: Project Euclid
 - Cornell UL: Historical Math Monographs
 - SUB Goettingen/GDZ:Mathematica
 - Bielefeld UL: Journals of the German Enlightenment
 - Bielefeld University: Math. Preprints, e-journal Documenta Mathematica
 - Springer-Verlag Heidelberg (licensed)
 - TIB/UB Hannover: Research Reports, BMBF
 - Bochum University: Electronic Dissertations
 - Univ. of Michigan: Historical Math Collection
 - Oxford University: Internet Library of Early Journals

Search History

- [linear algebra src:allfree](#)
- [linear algebra src:allfree sj:numerische mathematik](#)
- [linear algebra src:allfree au:fraloh. abraham1](#)

Search history



Result Presentation (1)

BASE Digital Collections

creator: [abel]

free content sources licenced and free content sources

[free content sources](#) | [licenced and free content sources](#) | [Help](#)

169 documents found in 0.3060 seconds

1. Documenta Math 23 The Abel-Jacobi Map ...

Author: A. Iliev and D. Markushevich

Title: The Abel-Jacobi Map for a Cubic Threefold and Periods of Fano Threefolds of Degree 14

Abstract: The Abel-Jacobi maps of the families of elliptic quintics lying on a smooth cubic threefold are studied. It is proved that a 5-dimensional projective space for quintics, and a smooth 3-dimensional variety birational to the cubic itself for quartics...

Subject: 1991 Digital Collections Subject Classification: 14J30,14J60,14J45

<http://www.mathematik.uni-bielefeld.de/DMV-J/vol-05/03.pdf> (243.9k) [PDF]

Content provided by [Bielefeld University: Math. Preprints, e-journal Documenta Mathematica](#)

[Find Similar](#) | [Refine Similar](#) | [Exclude Similar](#)

drill down

2. Oeuvres complètes de Niels Henrik Abel

Author: Abel, Niels Henrik

Title: Oeuvres complètes de Niels Henrik Abel

Publisher: publiée aux frais de l'Etat Norvégien par L. Sylow et S. Lie

Year: 1973

Pages: VIII, 621, 338 S.

Remarks: Nachdr. d. 2-baendigen Ausg. Christiania 1881 in 1 Bd

Further Authors: SYLOW, LUDVIG [Hrsg.]

<http://www.ub.uni-bielefeld.de/netacgi/nph-brs?Sect5=COOP&d=COOP8/opac1.htm?xf=S&r=0&l=20&s18=HT005205602> (1.6k) [HTML]

Content provided by [Bielefeld UL library catalogue](#)

[Find Similar](#) | [Refine Similar](#) | [Exclude Similar](#)

result change

search history

3. Abel's equation and regular growth: variations on a theme by Abel

Author: George Szekeres

Title: Abel's equation and regular growth: variations on a theme by Abel

Source: Experiment. Math. 7 (1998), no. 2, 85-100

metadata display

Refine your search

by content source	All
by author	All
by subject	All
by document size	All
by file type	All
by year of publication	All
by document type	All
by language	All

Search History

- linear algebra src:allfree
- linear algebra src:allfree sj:numerische mathematik
- linear algebra src:allfree au:[ralph, abraham]
- linear algebra src:allfree yr:1970-1980
- linear algebra src:allfree yr:1970-1980 lg:eng
- linear algebra src:allfree yr:1970-1980 lg:eng au:[barker, g. p.]
- linear algebra src:allfree lg:de
- linear algebra src:allfree lg:de type:pdf
- linear algebra src:allfree lg:de src:fulltext
- linear algebra src:umh umc



Result Presentation (2)

8. **Nonlinear Abel integral equations**

Gorenflo, Rudolf ; Nonlinear **Abel** integral equations ; applications, analysis, numerical methods ; Preprint / Universitaet (Berlin, West) / Fachbereich Mathematik ; 248 ; Berlin ; 1987

<http://www.ub.uni-bielefeld.de/netacgi/nph-brs?Sect5=COOP&d=COOP&p=1&u=/netahtml/opac1.html&f=S&r=0&l=20&s18=HT005546358> (1.7k) [HTML]

Content provided by [Bielefeld UL library catalogue](#)

[Find Similar](#) | [Refine Similar](#) | [Exclude Similar](#)

9. **Die Periodizitätsmoduln der Abel'schen Integrale erster Gattung als Functionen eines Parameters aufgefasst für den Fall ...**

Broecker,Hermann ; Die Periodizitätsmoduln der **Abel'schen** Integrale erster Gattung als Functionen eines Parameters aufgefasst für den Fall ... ; 1893

<http://gdz-srv2.sub.uni-goettingen.de:8091/cgm/servlet/dienstreq?verb=Display&Service=Repository&version=1&identifier=PPN314377646> (1.4k) [HTML]

Content provided by [SUB Goettingen/GDZ:Mathematica](#)

[Find Similar](#) | [Refine Similar](#) | [Exclude Similar](#)

10. **Abel integral equations**

Gorenflo, Rudolf ; Vessella, Sergio ; **Abel** integral equations ; applications-motivated solution concepts ; Preprint / Universitaet (Berlin, West) / Fachbereich Mathematik ; 209.245 ; Berlin

<http://www.ub.uni-bielefeld.de/netacgi/nph-brs?Sect5=COOP&d=COOP&p=1&u=/netahtml/opac1.html&f=S&r=0&l=20&s18=HT005417129> (1.6k) [HTML]

Content provided by [Bielefeld UL library catalogue](#)

[Find Similar](#) | [Refine Similar](#) | [Exclude Similar](#)

fulltext

Results: [1-10](#) | [11-20](#) | [21-30](#) | [31-40](#) | [41-50](#) | [51-60](#) | [61-70](#) | [»](#) [New Search»](#)





The Backend

Live-System:

- Intel PC Dual Pentium, 2 x 2.8 GHz CPU, 2GB RAM
- RAID5 + Hotspare 290 GB
- Suse Linux 9.0
- System report: 344.8GB total, 24.8GB used, 320GB free
 - 15 Collections, > 600000 documents
 - FAST Search 3.2 (PHP 4, Python 2.2)

Test-System

(provided by FAST Search & Transfer):

- Dell PowerEdge, 1 x PIII 730 MHz CPU, 1.2 GB RAM
- RAID5, Adaptec SCSI, 66GB
- RedHat Linux 7.3, Kernel 2.4.22-pre5

Our current routines:

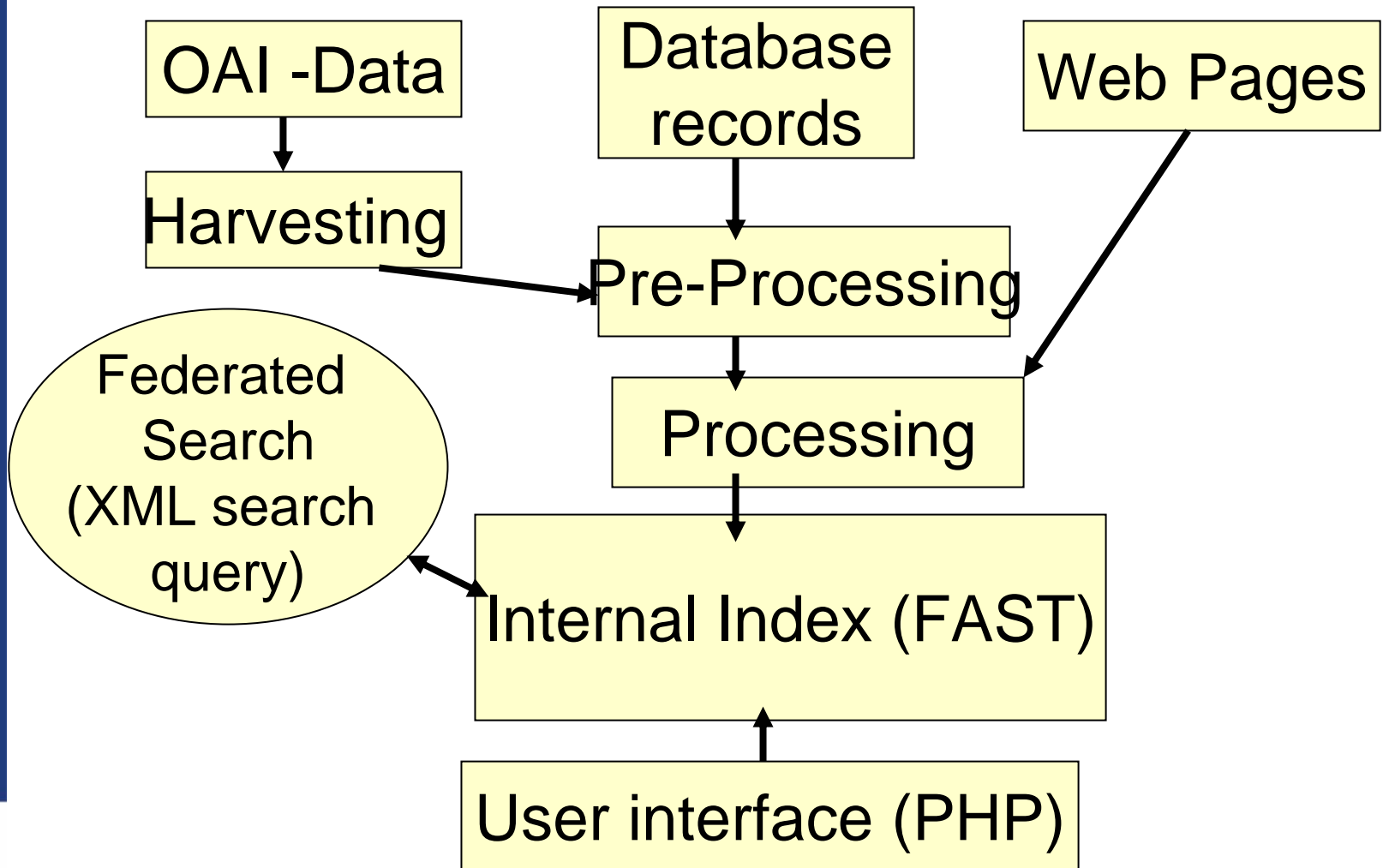
Integrating resources in a „Metasearch environment“

- Analyzing database interface (HTTP, Z39.50)
- Implementing search database calls
- Scanning results and preparing internal display format



BASE data workflow

Samples



BASE data workflow tools

	FAST	Additional developments
Data Loading	Crawler, File Traverser, DB Connector	OAI Harvester DB export
Pre-processing		Perl, XSLT crosswalks
Processing	Standard stages	Python stages
Indexing	Indexer	
Access, Navigation	Search API	PHP scripts



Bielefeld Development Environment

- OAI Harvester tool (harvesting metadata) (open source)
- Perl, XSLT (Preprocessing)
- Python (Processing)
- PHP (frontend programming)
- Apache
- Linux





Harvesting

harvested OAI-DC data

assumed:

`<date>1991</date>`

reality:

`<date>-set=math&until=2003-11-03&metadataPrefix=oai_dc-
</date>`

`<date>1903;1903-09-02</date>`

`<date>[c1911] </date>`

`<date>1906-1928 [v.1, '28] </date>`

`<date>[192-?] </date>`

`<date>C. Gerolds sohn,</date>`

`<date>28 cm.</date>`

Preprocessing (1)

in:

<date>[c1915]</date>

out:

<element name="dcdate"><value>[c1915]</value></element>

<element name="dctyear"><value>1915</value></element>

in:

<language>ENG</language>

out:

<element name="dclanguage"><value>eng</value></element>

<element name="language"><value>en</value></element>



Preprocessing (2)

in (binary data from CDROM database):

... Japanese. Esperanto summary ...

out:

```
<element name="dclanguage"><value>Japanese. Esperanto  
summary</value></element>
```

```
<element name="language"><value>jp</value></element>
```

```
<element name="secondarylanguage"><value>eo</value>  
</element>
```



Preprocessing (3)

Summary

- language code (text and ISO 639-2 to ISO 639-1)
 - ISO 639-1 (de,fr)
 - ISO 639-2/B (ger,fre), ISO 639-2/T (deu,fra)
- date filtering
- XML encoding and conversion
- generating unique document id (doi, document number, ...)
- general filtering and error correction
- building of body content (author, title, description, ...)
- fulltext link extraction





Processing (1)

Filetraverser sources

- loading of preprocessed content with filetraverser
- processing with self created pipelines
 - language detection from title and description
 - setting of mime type
 - generate teaser based on description, meta data or body
 - tokenize selected fields
 - lemmatize (run, runs, running, ran) and synonyms (security, safety) → dictionary based
 - vectorizer (for analyzing similarities between docs)



Processing (2)

Crawler sources

- crawling of selected web sites according to rules
- crawling of fulltext link lists
- system processing with stages (partly self developed)
 - deleting format (mime type)
 - format detection
 - uncompressing (zip, gzip, tar, ...) and setting of new format
 - set content type (metadata, fulltext, mixed, unknown)
 - Postscript conversion (Ghostscript)
 - PDF conversion (XPDF)
 - SearchMLConverter (FAST)
 - language and encoding detection (FAST)



Indexing

Current indexstructure

- enhanced by 15 DC fields
- additional 5 index fields
 - dcisbn (ISBN, ISSN)
 - dcdoi (DOI or similar identifier)
 - dcyear (filtered year as integer)
 - dcstype (metadata, fulltext, ...)
 - rights (name of source)

Further Development (1)

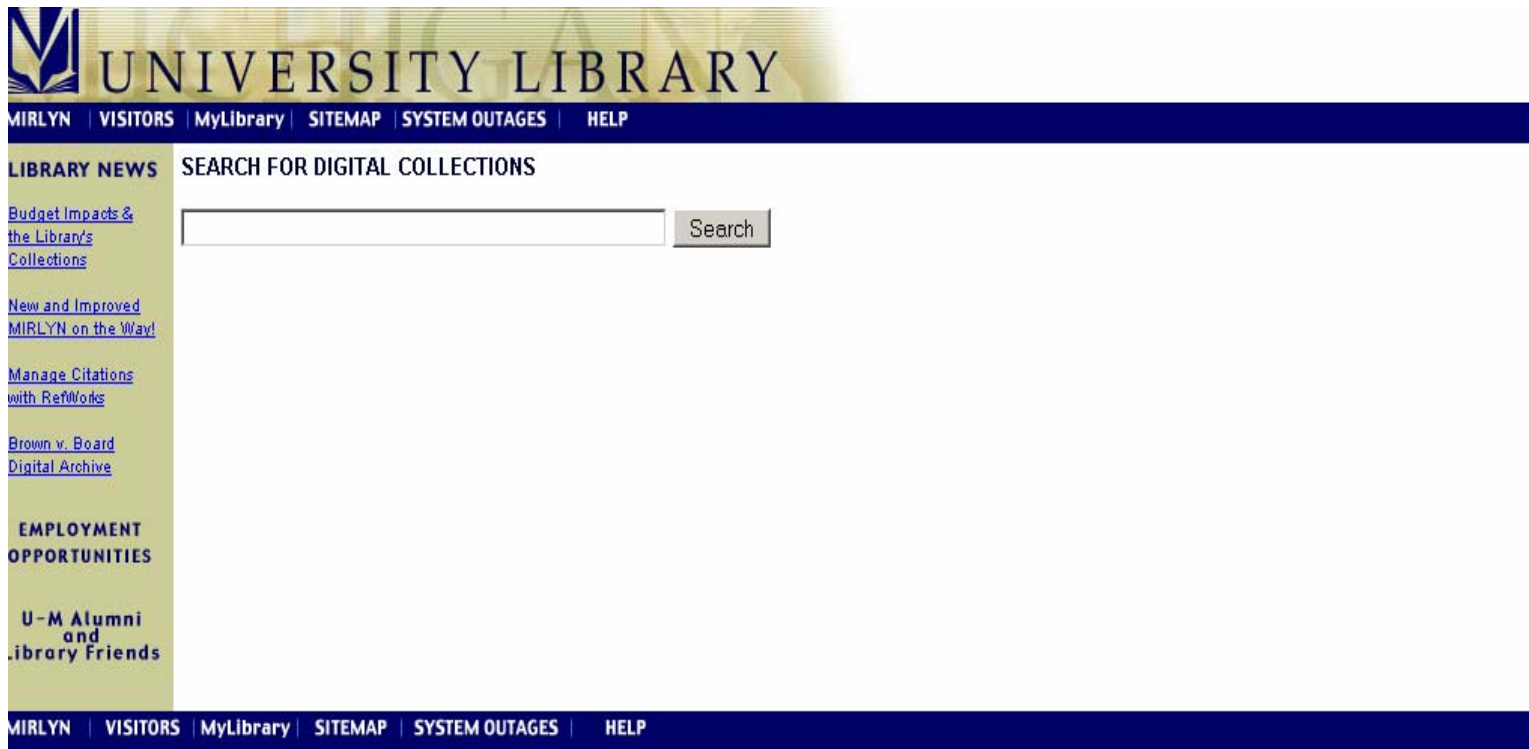
Frontend

- Templating (customised views)
- search interface (search API)
- combining metadata record and corresponding fulltext in result display
- truncation





Customised views



The screenshot shows the University of Michigan University Library website. At the top left is the University of Michigan logo, a stylized 'M' with a book. To its right, the text 'UNIVERSITY LIBRARY' is displayed in a serif font. Below this is a dark blue navigation bar with white text links: 'MIRLYN', 'VISITORS', 'MyLibrary', 'SITMAP', 'SYSTEM OUTAGES', and 'HELP'. The main content area is divided into two columns. The left column, titled 'LIBRARY NEWS', contains several blue hyperlinks: 'Budget Impacts & the Library's Collections', 'New and Improved MIRLYN on the Way!', 'Manage Citations with RefWorks', and 'Brown v. Board Digital Archive'. Below these links are sections for 'EMPLOYMENT OPPORTUNITIES' and 'U-M Alumni and Library Friends'. The right column is titled 'SEARCH FOR DIGITAL COLLECTIONS' and features a search input field with a 'Search' button to its right. At the bottom of the page, there is another dark blue navigation bar identical to the one at the top, and a footer containing the University of Michigan logo, the text 'University of Michigan UNIVERSITY LIBRARY', a link 'Questions or comments? Ask Us!', and the date 'Last Update: 12:04 PM EDT on Tuesday, April 13, 2004'.



Author Index Browsing

The screenshot displays the BASE Digital Collections interface. The main window is titled "BASE: Browsing by Author - Microsoft Internet ...". The "Advanced Search" section includes a "Complete Document" field, an "Author" dropdown menu with "abel" entered, and a "Search!" button. The "Restrict your search" section has a "Published" dropdown set to "in year" and a "Content Sources" list with several checked items. A "Search History" section at the bottom shows previous searches. A "Browsing by Author" window is open, showing a list of authors starting with "ABEL...", including "ABEL (all) 1267", "ABELANET-ALBIN 1", "ABELARD 27", "ABELARDO-PIETRO 27", "ABELARD-JACQUES 2", "ABELARD-PETER 27", "ABELARD-PIERRE 27", "ABELAR-TAISHA 1", "ABELBECK-GERT 1", "ABELBECK-GERT-HRSG 2", "ABELBECK-GERT-RED 1", "ABELDHAUSER-WERNER 1", "ABELDT-GÜNTER 2", "ABEIN-MANFRED", and "ABEIN-MANFRED-HRSG 4". The browser's address bar shows the file path: "file:///K:/AG%20Fast/Screenshots/New%20Orleans/digicoll_browse-author_abel.gif". The taskbar at the bottom shows the Start button and several open applications, including "Von Novell geliefert...", "Pegasus Mail", "interna.doc - Micros...", "New Orleans", "Microsoft PowerPoin...", and "digicoll_browse-a...".



Subject Index Browsing



The screenshot displays the BASE Mathematics website interface. At the top, a navigation bar includes links for 'Startseite', 'Lesezeichen', 'Instant Message', 'T-Online', 'Internet', 'Neuigkeiten', 'Interessantes', 'Mitglieder', and 'Marktplatz'. The main content area is titled 'BASE Mathematics' and features an 'Advanced Search' section with fields for 'Complete Document', 'Author', 'Title', and 'Keyword'. Below these are options for 'Hits per Page' (set to 10 Results) and radio buttons for 'free content sources' and 'licenced and free c'. A 'Restrict your search' section includes a 'Published' dropdown (set to 'in year') and a list of content sources with checkboxes, such as 'Bielefeld University: Online Publication' and 'Cornell UL: Project Euclid'. A 'Search!' button is located at the bottom of the search section. A 'Search History' section is partially visible below. A modal window titled 'BASE: Browsing by Subject - Microsoft Internet...' is open, showing a list of subject keywords for 'MSC' (Mathematics Subject Classification). The list includes categories like '00-XX: General', '00-01: Instructional exposition (textbooks, tutorial papers, etc.)', and '00A05: General mathematics'. The window also has a search bar and a 'Suchen' button. The website footer includes 'tsche Version | Simple Search | Help' and 'Demonstrator'.

Further Development (2)

Backend

- automation of harvesting and content preprocessing
- Federated search, linking with external indexes
- search result improvement (ranking, boosting, linguistics)
- performance optimisation
- support of standard protocols (Z39.50, OAI, SOAP) as a target system





Further Visions

- Anchor analysis
- Link topology analysis
- Citations analysis
- Automatic linguistic analysis of anchor texts
- Push services
- Personalized ranking
- Cross-language information retrieval



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Thank you!



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BASE Digital Collections - Mozilla

http://math.ub.uni-bielefeld.de/htmlvorlagen/diglib_erweitert_english.html

Suchen Drucken

Startseite Lesezeichen Instant Message T-Online Internet Neuigkeiten Interessantes Mitglieder Marktplatz

BASE Digital Collections

Demonstrator

Advanced Search: [Deutsche Version](#) | [Simple Search](#) | [Help](#)

Complete Document

Author [Index](#)

Title

Keyword [Index](#)

Hits per Page

free content sources licenced and free content sources

Restrict your search

Published (format YYYY)

Content Sources

<input checked="" type="checkbox"/> Bielefeld University: Online Publications	<input type="checkbox"/> Springer-Verlag Heidelberg (licenced)
<input checked="" type="checkbox"/> Cornell UL: Project Euclid	<input checked="" type="checkbox"/> TIB/UB Hannover: Research Reports, BMBF
<input checked="" type="checkbox"/> Cornell UL: Historical Math Monographs	<input checked="" type="checkbox"/> Bielefeld University: Electronic Dissertations
<input checked="" type="checkbox"/> SUB Goettingen/GDZ:Mathematica	<input checked="" type="checkbox"/> Univ. of Michigan: Historical Math Collection
<input checked="" type="checkbox"/> Bielefeld UL: Journals of the German Enlightenment	<input checked="" type="checkbox"/> Oxford University: Internet Library of Early Journals
<input checked="" type="checkbox"/> Bielefeld University: Math. Preprints, e-journal Documenta Mathematica	

Search History

- linear algebra src:allfree
- linear algebra src:allfree sj:numerische mathematik
- linear algebra src:allfree au:[ralph, abraham]
- linear algebra src:allfree yr:1970-1980
- linear algebra src:allfree yr:1970-1980 lg:eng
- linear algebra src:allfree yr:1970-1980 lg:eng au:[barker, g. p.]
- linear algebra src:allfree lg:de

Start | Von Novell gelieferte Anw... | Pegasus Mail | Microsoft Word Viewer 97... | Microsoft PowerPoint - [dl... | BASE Digital Collection... | DE

BASE Digital Collections - Mozilla

Datei Bearbeiten Ansicht Gehe Lesezeichen Tools Fenster Hilfe

Zurück Vor Neu laden Stopp http://math.ub.uni-bielefeld.de/htmlvorlagen/diglib_suchergebnis_english.html Suchen Drucken

Startseite Lesezeichen Instant Message T-Online Internet Neuigkeiten Interessantes Mitglieder Marktplatz

Find Similar | Refine Similar | Exclude Similar

2. **Oeuvres complètes de Niels Henrik Abel**
Author: Abel, Niels Henrik
Title: Oeuvres complètes de Niels Henrik Abel
Publisher: publiée aux frais de l'Etat Norvégien par L. Sylow et S. Lie
Year: 1973
Pages: VIII, 621, 338 S.
Remarks: Nachdr. d. 2-baendigen Ausg. Christiania 1881 in 1 Bd
Further Authors: SYLOW, LUDVIG [Hrsg.]
<http://www.ub.uni-bielefeld.de/netacgi/nph-brs?Sect5=COOP&d=COOP&p=1&u=/netahtml/opac1.html&f=S&r=0&l=20&s18=HT005205602> (1.6k) [HTML]
 Content provided by [Bielefeld UL library catalogue](#)
[Find Similar](#) | [Refine Similar](#) | [Exclude Similar](#)

3. **Abel's equation and regular growth: variations on a theme by Abel**
Author: George Szekeres
Title: Abel's equation and regular growth: variations on a theme by Abel
Source: Experiment. Math. 7 (1998), no. 2, 85-100
Abstract: Following a 70-year old suggestion of Paul Lévy, a condition is formulated for the regularity of growth of real functions. The condition, which is quite explicit, makes use of the iterates of the function and solutions of Abel's functional equation, and is well adapted to a computer testing. Numerous computer experiments reveal interesting properties of the proposed regularity criterion.
Primary Subjects: 26A12
Secondary Subjects: 39B22
<http://ProjectEuclid.org/getRecord?id=euclid.em/1048515657> (2.7k) [HTML]
 Content provided by [Cornell UL: Project Euclid](#)
[Find Similar](#) | [Refine Similar](#) | [Exclude Similar](#)

4. **Niels Henrik Abel**
 Holst, Elling B. ; **Abel**, N. H. ; **Abel**, Niels H. ; **Abel**, Niels Henrik ; Holst, Elling Bolt [Hrsg.] ; Niels Henrik **Abel** ; memorial publié à l'occasion du centenaire de sa naissance ; Kristiania ; Dybwad ; Teubner ... ; 1902
<http://www.ub.uni-bielefeld.de/netacgi/nph-brs?Sect5=COOP&d=COOP&p=1&u=/netahtml/opac1.html&f=S&r=0&l=20&s18=HT005266268> (1.7k) [HTML]
 Content provided by [Bielefeld UL library catalogue](#)
[Find Similar](#) | [Refine Similar](#) | [Exclude Similar](#)

by year of publication

by document type

by language

Search History

- linear algebra src:allfree
- linear algebra src:allfree sj:numerische mathematik
- linear algebra src:allfree au:[ralph, abraham]
- linear algebra src:allfree yr:1970-1980
- linear algebra src:allfree yr:1970-1980 lg:eng
- linear algebra src:allfree yr:1970-1980 lg:eng au:[barker, g. p.]
- linear algebra src:allfree lg:de
- linear algebra src:allfree lg:de type:pdf
- linear algebra src:allfree lg:de src:fulltext
- linear algebra src:umh umc
- linear algebra src:[umh umc] sj:[26e05 (msc2000)]
- linear algebra src:all th:workshop...
- linear algebra src:all th:workshop... not:terminkalender...
- time au:[hawking] src:allfree (0)
- time au:[hawking] src:all

Start | von Novell gelieferte Anw... | Pegasus Mail | Microsoft Word Viewer 97... | Microsoft PowerPoint - [dl... | BASE Digital Collection... | DE



The screenshot shows a Mozilla browser window titled "BASE Digital Collections - Mozilla". The address bar contains the URL http://math.ub.uni-bielefeld.de/htmlvorlagen/diglib_standard_english.html. The browser's menu bar includes "Datei", "Bearbeiten", "Ansicht", "Gehe", "Lesezeichen", "Tools", "Fenster", and "Hilfe". The toolbar features navigation buttons (Zurück, Vor, Neu laden, Stopp), a search button labeled "Suchen", and a print button labeled "Drucken". A navigation bar below the toolbar contains links for "Startseite", "Lesezeichen", "Instant Message", "T-Online", "Internet", "Neuigkeiten", "Interessantes", "Mitglieder", and "Marktplatz".

The main content area displays the "BASE Digital Collections" title in large blue font, with "Demonstrator" in smaller grey text to the right. Below the title is a yellow search box with the text "Basic Search:". To the right of the search box are links for "Deutsche Version", "Advanced Search", and "Help". The search box contains a text input field and a "Search!" button. Below the search box are two radio buttons: "free content sources" (selected) and "licenced and free content sources".

At the bottom of the main content area, a grey bar contains the text: "BASE - Bielefeld Academic Search Engine © 2004 by Bielefeld University Library".

The Windows taskbar at the bottom shows the "Start" button and several open applications: "Von Novell gelieferte Anw...", "Pegasus Mail", "Microsoft Word Viewer 97...", "Microsoft PowerPoint - [d...", and "BASE Digital Collection...". The system tray on the right includes a volume icon and a network icon.

digicoll_searchresult.gif (GIF-Gafik, 991x566 Pixel) - Mozilla

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Author: A. Iliev and D. Markushevich
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Abstract: The Abel-Jacobi maps of the families of elliptic quintics and rational quartics lying on a smooth cubic threefold are studied. It is proved that their generic fiber is the 5-dimensional projective space for quintics, and a smooth 3-dimensional variety birational to the cubic itself for quartics...
Subject: 1991 Digital Collections Subject Classification: 14J30,14J60,14J45
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- ### Oeuvres complètes de Niels Henrik Abel

Author: Abel, Niels Henrik
Title: Oeuvres complètes de Niels Henrik Abel
Publisher: publiée aux frais de l'Etat Norvégien par L. Sylow et S. Lie
Year: 1973
Pages: VIII, 621, 338 S.
Remarks: Nachdr. d. 2-baendigen Ausg. Christiania 1881 in 1 Bd
Further Authors: SYLOW, LUDVIG [Hrsg.]
<http://www.ub.uni-bielefeld.de/netacgi/nph-brs?Sect5=COOP&d=COOP&p=1&u=/netahtml/opac1.html&f=S&r=0&l=20&s18=HT005205602> (1.6k) [HTML]
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- ### Abel's equation and regular growth: variations on a theme by Abel

Author: George Szekeres
Title: Abel's equation and regular growth: variations on a theme by Abel
Source: Experiment. Math. 7 (1998), no. 2, 85-100

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8. **Nonlinear Abel integral equations**
Gorenflo, Rudolf ; Nonlinear **Abel** integral equations ; applications, analysis, numerical methods ; Preprint / Universitaet (Berlin, West) / Fachbereich Mathematik ; 248 ; Berlin ; 1987
<http://www.ub.uni-bielefeld.de/netacgi/nph-brs?Sect5=COOP&d=COOP&p=1&u=/netahtml/opac1.html&f=S&r=0&l=20&s18=HT005546358> (1.7k) [HTML]
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9. **Die Periodizitätsmoduln der Abel'schen Integrale erster Gattung als Functionen eines Parameters aufgefasst für den Fall ...**
Broecker,Hermann ; Die Periodizitätsmoduln der **Abel**'schen Integrale erster Gattung als Functionen eines Parameters aufgefasst für den Fall ... ; 1893
<http://gdz-srv2.sub.uni-goettingen.de:8091/cgm/servlet/dienstreq?verb=Display&Service=Repository&version=1&identifier=PPN314377646> (1.4k) [HTML]
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10. **Abel integral equations**
Gorenflo, Rudolf ; Vessella, Sergio ; **Abel** integral equations ; applications-motivated solution concepts ; Preprint / Universitaet (Berlin, West) / Fachbereich Mathematik ; 209.245 ; Berlin
<http://www.ub.uni-bielefeld.de/netacgi/nph-brs?Sect5=COOP&d=COOP&p=1&u=/netahtml/opac1.html&f=S&r=0&l=20&s18=HT005417129> (1.6k) [HTML]
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System Monitor

1 Node Controller is registered with the Config Server.

Host	AS	CS	CD	Cr	DP	FS	LM	LS	NC	PP	QR	RS	SP	WS	DS
ubfast.ub.uni-bielefeld.de	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Node: ubfast.ub.uni-bielefeld.de

Control Panel

Node Commands Shutdown Node

Document Processor Add Doc. Processor Remove Doc. Processor

Crawler Remove Crawler

General system information

DataSearch location /usr/fastsearch/fast/datasearch

Disk status: 17% used
210.5 GB free - 44.5 GB used - 255.0 GB total

Installed module list

Module name	Process name	PID	Status	
Archive Server	archiveserver	5355	Running	<input type="button" value=" "/> <input type="button" value="C"/>
Config Server	configserver	5354	Running	<input type="button" value=" "/> <input type="button" value="C"/>
Content Distributor	contentdistributor	5360	Running	<input type="button" value=" "/> <input type="button" value="C"/>
Crawler	crawler	5757	Running	<input type="button" value=" "/> <input type="button" value="C"/>
Document Processor	procserver_1	5414	Running	<input type="button" value=" "/> <input type="button" value="C"/>
File Server	fileserver	5411	Running	<input type="button" value=" "/> <input type="button" value="C"/>
License Manager	lmgrd	5352	Running	<input type="button" value=" "/> <input type="button" value="C"/>
Log Server	logserver	5351	Running	<input type="button" value=" "/> <input type="button" value="C"/>
Node Controller	nctrl	5421	Running	<input type="button" value=" "/> <input type="button" value="C"/>
Post Process	postprocess	5726	Running	<input type="button" value=" "/> <input type="button" value="C"/>

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Custom Stages

Stage Name	Description	Type
DCstypeToFulltext	Sets attribute dcstype either to value FixedType or automatically.	general
DCstypeToScanText	Sets attribute dcstype either to value FixedType or automatically.	general
OxfordMerger	Merges string attributes in input-list using separator string (or space if left empty). The result is stored in the Output at...	general
ShoppingExampleXSLT	Perform XSLT processing on document. Parameter "sspath" is path to the stylesheet. Parameter "syntax" sho...	general
SpringerDOItoLink	Process an attribute with an external program, subject to a timeout	general
TitleDescriptionToHTML	Merges dctitle and dcdescription to html	general

Default Stages

Stage Name	Description	Type
AttributeMapper	Applies predefined mappings on configurable attributes	general
AttributeMapperRe	Applies predefined mappings on configurable attributes	general
AttributeMerger	Merges string attributes in input-list using separator string (or space if left empty). The result is stored in the Output at...	general
ExternalDataFilterTimeout	Process an attribute with an external program, subject to a timeout	general
Lemmaizer	Lemmaize selected attributes	general

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