CMDRSB

CLARIN **Metadata** Repository/**Service**/Browser

http://clarin.aac.ac.at/MDService2/

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Basics - Interaction

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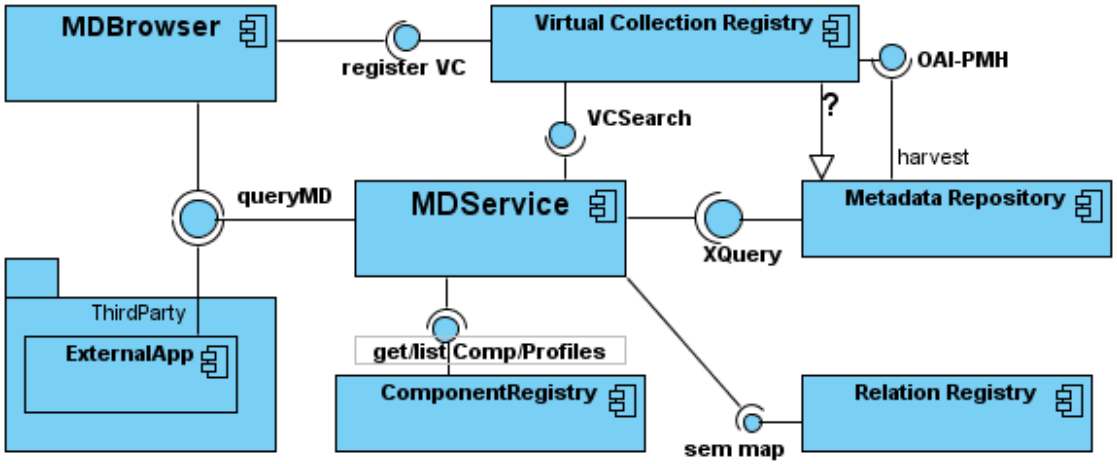
- **MDService** accepts queries about metadata from MetadataBrowser (and external Applications)
- and passes them to the Metadata Repository(ies)
- and/or to the Virtual Collection Registry,
- optionally applying Semantic Mapping based on the information from Component Registry, Data Category Registries and Relation Registry
- receiving results and passing them (optionally formatted) back to the requesting node.



Functionality - Service

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→ REST-interface (MDService2 WADL, HTML version)

- collections

  list the „natural" hierarchical collections-structure of the repository

- model

  return xml-elems used in the repository (with usage statistics)

- terms

  return terms/indices/xml-elems used in the repository enriched with
  a) the usage statistics (count occurrences and distinct values)
  b) the corresponding CMD-components and data categories

- values

  list distinct values for given index (similar to facet functionality)

- recordset

  retrieve a list of MDrecords based on a query [CQL]

- record

  retrieve individual MDrecord based on the identifier

Functionality - Browser

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http://clarin.aac.ac.at/MDService2/docs/htmlpage/info

- Dynamic Repositories
- Collections browsing
- Terms/Values browsing
- Query Input
  - Simple full-text query
  - Complex queries (CQL-searchclauses, boolean op)
  - Index auto-completion
- Queryset/Resultset

  work with multiple results in parallel
  - Paging
  - Variable views (select columns, auto-columns)
- Workspace (storing queries, bookmarks)
- „Linkable" Queries
- (Semantic Mapping)

Collections and Terms

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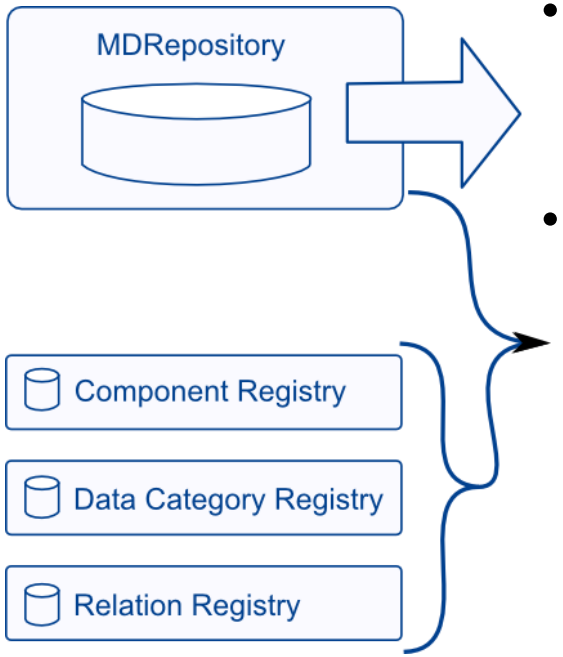

- collections

  the „natural" hierarchical collections structure of the repository (OLAC, IMDI, ... and subcollections)

- terms

  + information on the XML-structure of the records in the Repository = the profile usage statistics (occurrences and distinct values)

  + thanks to: CMD Profiles -> Schemas -> MD-Instances it is possible to track back from the instances to the profiles and from there to link to the data categories

MDRecord

```
<CMD><Header><MdProfile>{profileID}</MdProfile>
     <Components><{profileName}>
                 <{component}>
                  <{element}>
```

CMD-Profile-Specification

```
<CMD_ComponentSpec>
 <Header><ID>{profileID}</ID>...</Header>
 <CMD_Component name="{profileName}">
  <CMD_Component name="{component}">
   <CMD_Element name="{element}"
            ConceptLink="{datcat-uri}">
```

Data Category Registry

```
<dcif:dataCategorySelection>
  <dcif:dataCategory
     pid="{datcat-uri}" >
    {detail-information}
```

Query Language

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- simple full text queries: http://clarin.aac.ac.at/MDService2/docs/htmlpage/queries
  - simple term system
  - any of multiple terms (OR) child | acquisition
  - all of multiple terms (AND - default) child acquisition
  - Phrase a sequence of terms "longitudinal study"
- Bookmarks search/remember individual records (by handle/identifier)
  - clarin-at:aac-test-corpus:C4:158
- Complex search queries [SRU/CQL]
  - basic search clause (`index relation term`) : author any Adler
  - boolean title contains a and imprint.date between 1910 and 1920
- Combine simple query and search clauses
  - university and (title any system)
- Restriction by Collections: aac-test-corpus
- Search in a profile: LrtInventoryResource
- Search via DatCats ("Semantic Search"): isocat:creationDate contains 191

Semantic Mapping

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- Basic Idea

  query:

```
Actor.Name any Peter
```

  + relations:
  (#DatCat)

```
#sameAs (#Actor, #Person)
#sameAs (#Name, #FullName)
```

  = expanded query:

```
Actor.Name any Peter
OR Actor.FullName any Peter
OR Person.Name any Peter
OR Person.FullName any Peter
```

- Levels
  1. just mapping based on the ConceptLink resolvable via ComponentRegistry
  2. use equivalence relation between DatCats from Relation Registry
  3. use equivalence relation also between Component DatCats (yet to come)
  4. use also other relations in Relation Registry (`subClassOf`, synonymy?, …)

Public Space/Personal Workspace

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- Shall allow for customization
  - save Perspectives/Views
- Currently supporting
  - Storing Queries
  - Bookmarks
- But User-management (join the federation) not solved yet

  Thus there is only one common shared space

- Public Space meant for News, as Dashboard, options…

  obviously function not clear yet

Standards Conformance

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- Built on CMD
- Reading Data Category Registries
  - isoCAT, dublincore, … (open for further DCRs)
- „Inspired by" the standard-protocol SRU/CQL
  - Started opportunistically, but working towards conformance
  - Supported:
    - The query language CQL (parsing)
    - The format of the result <searchRetrieveResponse>
  - Main differences:
    - The current interface has to be mapped onto the protocol
    - mapping of collections - not solved (explain?)
    - Result-format: scan, explain
    - Diagnostics

SRU/CQL	*MDService*	*MDRepo*
(explain, Zeerex)?	collections	getCollections
explain	model, terms	queryModel
scan	values	scanIndex
searchRetrieve (CQL)	recordset, record	searchRetrieve (but XPath!)

Planned/Phantasized Functionality

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- Interaction with Virtual Collection Registry
  - Stored query → Intensional VC
  - Result of a (stored) query (Recordset) → Extensional VC
  - Collection of Bookmark → Extensional VC
- produce a SRU/CQL-protocol conformant REST-interface
- Custom Termsets
- Custom Views
- Queries Sorting
- Result Export (especially also only selected fields (not full records))
- translate UI, BUT mainly also the search-indices

  based on DCR language-sections
- Commenting – collaborative curation

  Allow to „annotate" / comment / make notes on the MDRecords

  just get email. via POSTing trac.tickets?

Situation and Outlook

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- The MDRepository currently contains around 109.000 records, mainly from the datasets: OLAC and IMDI (data statistics)
- Currently there are three instances of the MDRepository running providing similar but not identical datasets:
  - University of Gothenburg (main)
  - ICLTT, Vienna
  - MPI Psycholing, Nijmegen

  (they can be accessed by the same MDService, by switching the target repository in the UI)
- A first version of the MDService and Browser is online:
  clarin.aac.ac.at/MDService2 (this address may change)
  - Although the repository and interface already provide a lot of information and functionality, it is demo-quality and cannot yet be seen as reliable service.
  - Lot of work is still needed both on the data quality and user interface:
    - rework of the UI - based on feedback at CMDI-Workshop, Nijmegen20110117
    - continuous integration of new datasets (provided for harvest by the centres)
- Nevertheless we invite you to try it out and look forward to any critical remarks

MDBrowser

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Overview of functionality (not completely uptodate but largely correct)