An International Perspective on Standards

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Trend: Use industry standards as a base

- http & ldap protocol
- URL (http GET)
- Web services (http POST)
- XML data format with customised schemas

- Protocols with their own TCP/IP port
- Stateful protocols
- EDIFACT & BER encoding, ISO 2709
Some Areas Getting Attention

- Discovery
- Delivery
- Centralised metadata indexes
- Metadata
- Reference
- Standards Interoperability
- Started in 2001; Version 1.1 coming 20th November 2003

- Simplified, modernized protocol, grown up Z39.50
  - Generic platform

- [http://lcweb.loc.gov/z3950/agency/zing/srw/specifications.html](http://lcweb.loc.gov/z3950/agency/zing/srw/specifications.html)
SRW WEB service
- HTTP POST, SOAP wrapper, XML encoding, WSDL
- Client / server (machine to machine)
- For long query strings, complex queries
- For protected servers

SRU
- HTTP GET (URL) with XSLT
- Simple thin client – (browser to machine)
- Low entry
Main Differences from Z39.50

- “Stateless” and “connection-less”, with continuity maintained by:
  - result set (server named)
  - Authentication token
- Only one database
- Only one record syntax & encoding – XML (not ASN.1)
- CQL (CCL inspired) not RPN
- Explain – XML document (eye & machine readable)
More Differences

- Search & present use same request mechanism

- Services:
  - Search
  - Sort (part of search request)
  - Scan (v. 1.1)
  - Explain
Keeps best bits of Z39.50

- Abstract indexes
  - DC mandatory
  - Bath profile mapped
- Precise searching
- Result set concept
- Improves Explain – machine configurable
- Extensibility – other info at message & record level (v. 1.1)
Common Advantages

- Multi-target searching
  - One user interface; one search
  - different platforms (UNIX, NT, IBM etc.)
  - different database systems (relational, network)
  - different database models
- Searching based on abstract concepts
  - “Title”, i.e. not database columns
- Can combine results from diverse dbases
  - Common record syntax (usually MARC)
- Reuse of results
- Facilitates follow on delivery – electronic & physical
Example Implementors

- Traditional Z39.50 users
- Metasearch engines
- Web databases (e.g. Amazon, Google)
- Content providers
- GridIR
- OASIS ebXML (Electronic Business XML Initiative)
http://greta.pica.nl:1080/sru/?
<explain id="OCLC PICA Test" authoritative="true">
  <serverInfo protocol="sru" version="1.0">
    <host>greta.pica.nl</host>
    <port>1080</port>
    <database>/sru/</database>
  </serverInfo>
  <databaseInfo>
    <title lang="en" primary="true">SRU Test Database</title>
    <description lang="en" primary="true">OCLC PICA SRU Test Database</description>
    <author>OCLC Pica</author>
    <contact>janifer.gatenby@oclpica.nl</contact>
    <extent>Test database, contents may vary</extent>
    <langUsage codes="du ge en fr">Records are in Dutch, German, English, French and other languages</langUsage>
    <restrictions>Database available for SRU testing only.</restrictions>
  </databaseInfo>
  <metaInfo>
    <dateModified>27-03-2003</dateModified>
  </metaInfo>
  <indexInfo>
    <indexSet name="pica"/>
    <index><title>Title (keywords)"/></index>
  </indexInfo>
</explain>
Simple Query

http://greta.pica.nl:1080/sru/?query=dc.creator+%3d%22frank%22+and+dc.date+%3d%221986%22&recSchema=dc
Discovery
Delivery
Centralised metadata indexes
Metadata
Reference
Standards Interoperability
openURL – NISO Z39.88 draft standard for trial use till 1.11.2003

- Linking standard
- Conveys bibliographic metadata + user data to resolving server
- Started 1998 at U. Ghent

Shell – syntax without contents

- Profiles for content
IPIG Request Submission

- Being mapped to OpenURL
- Will submit openURL profile if all elements cannot be mapped
OpenURL

User interface system

Link Resolver

Link Resolver

Link Resolver
Request Submission

- Portal
- openURL
- ILL system
  - ISO ILL 10161
- Z39.50, SRU, HTTP/XML etc.
- ILL system
- etc.
Inter-Library Loans

- ISO ILL version 3 in preparation
  - Not backwards compatible
  - Limited extra functionality
    - Undo
    - subject requests
    - redirect
Unmediated user requests

- Growing – NCC 40% loans, 20% copies
- Consortial borrowing profile of NCIP
- Important ingredients of unmediated
  - Reduction of refused requests
    - determination of rights = Directory
    - Actual availability = NCIP item lookup, Z39.50 or SRU holdings enquiry, hold

http://www.niso.org/standards/standard_detail.cfm?std_id=728
Nederlandse Catalogus
Centralus NCC ILLFigures

![Bar chart showing ILL, End user, and DD figures for 2000, 2001, and 2002.]
Discovery
Delivery
Centralised metadata indexes
Metadata
Reference
Standards Interoperability
Open Archives Initiative (OAI)

Version 2 June 2002

- www.openarchives.org/

Designed for harvesting documents – eprints

- Now being used for metadata
  - Trend towards Google model
  - Away from distributed metadata searching

- e.g. TEL (40+ European national libraries)

- www.europeanlibrary.org/
Discovery
Delivery
Centralised metadata indexes
Metadata
Reference
Standards Interoperability
Collection Level Description (CLD)

- Dynamic selection of databases (beyond passive grouping)

http://www.ukoln.ac.uk/metadata/cld/
Functional Requirements of Bibliographic Records (FRBR)

- Improved presentation & navigation
  - ALEG
  - RLG – Red Light Green
- IFLA Working group on serials requirements
- OCLC OR algorithm – free
  - [http://www.oclc.org/research/software/frbr/default.htm](http://www.oclc.org/research/software/frbr/default.htm)
- WorldCat in FRBR coming in 2004
Discovery
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NISO Committee AZ

Mission: Facilitate the interaction of networked reference services

- Reference query transfer protocol
- Query data schema

http://www.niso.org/committees/committee_az.html
http://www.oclc.org/questionpoint/
Discovery
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Standards Interoperability

- ISO TC46 SC4 WG7 Data elements
  - Consolidating 5 parts of ISO 8459
    - Mapping to protocol standards
    - Tool for the creation of standards
    - Database envisaged
  - Library Directory ISO 2146
    - Collection description
    - Service description
      - ILL & DD
      - Reference
    - Australian libraries gateway
Thank you!!