Z39.50 Technical Issues

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Objectives

▼ Show how to use some buzzwords

▼ Give some feel for how Z39.50 works

▼ Describe “Z39.50 in real life” landscape
Z39.50 Is An Active Force

▼ There are many useful implementations

▼ There are significant production services

⇒ US: RLG, OCLC, LC
⇒ Europe: PICA

▼ There are “standard” interoperability tests

⇒ Servers: RLG, OCLC, LC, AT&T, SilverPlatter
⇒ Clients: BookWhere, ZNavigator, SLS, SIRSI
How to get a Z39.50 Client

▼Buy one
 ⇒ SIRSI Vizion, BookWhere, ZNavigator

▼Buy that bit of your OPAC
 ⇒ SIRSI, SLS, III, Ameritech, Aleph, ...

▼Start with something appropriate
 ⇒ WebZ etc., IR-TCL, DB-OSI, snacc
How to Get a Z39.50 Server

▼ Buy that bit of your OPAC/database server
    ⇒ SiteSearch, III, Ameritech, SilverPlatter, ...

▼ Use a middleware server
    ⇒ Blue Angels, Isite, <Index Data>

▼ Start with something appropriate
    ⇒ <Index Data>, DB-OSI, snacc, OCLC tools
What you’ll want to know

▼ Z39.50 has “Choices”, “Optionals” and “EXTERNALS”
  ➞ Make the standard flexible
  ➞ Make many implementations “right”
  ➞ Support infinity of data formats without change

▼ So implementations may “interoperate” without doing what you want.
Quick Z39.50 Tour

▼ Init
▼ Search
▼ Present
▼ Scan
▼ Sort
▼ Extended Services
▼ Etc.
Init

▼ Basic Login function
▼ Sets some session parameters
▼ User identification & authentication
  ⇒ Some early experiments still can be found
  ⇒ Two current methods - string, structure
▼ Other possibilities
  ⇒ OCLC database list
  ⇒ Character set negotiation
Search

▼ One main syntax - Type 1 ("RPN")
   ⇒ Type 1
   ⇒ Type 2

▼ “Attributes” are abstract vocabulary for access points

▼ Output is “Result Set”
Some clients are lazy

⇒ Named result sets are a client convenience
⇒ Explain

Some servers fail silently

⇒ Free services prefer results to none, or to errors

Some servers are lazy

⇒ Even trivial attributes sometimes fail
Search Troubles cont.

▼ Term normalisation
  ⇒ Author names
  ⇒ Subject headings

▼ Some important capabilities aren’t universally supported
  ⇒ Proximity
  ⇒ Non-ASCII search terms
  ⇒ Result set operand
Attributes can be a real problem

⇒ Do you want precision, or results?

⇒ Some clients specify more than needed
Present

▼Retrieve specified items from a result set
▼Client specifies
  ➞ What records
  ➞ What part of each record
  ➞ How it prefers records delivered
Present issues

▼ Information model

⇒ Non-traditional items - digital, web, ...
⇒ Non-catalogue records - A&I, full text, ...
⇒ Cataloguing - ISSN, ISBN, SICI

▼ Holdings model

⇒ Fields in Bib record or separate record?
⇒ If separate record, how is it found?
⇒ Detailed vs. Summary; multiple institutions
Present issues cont.

▼Circulation

▼Record syntaxes

⇒MARC, but WhatMARC?

⇒GRS, but what schema?

▼Retrieved fields

⇒Only “F” and “B” guaranteed, but not defined

▼Record sizes & segmentation
Scan

▼Vocabulary browse

⇒ “Index” specified by attribute combination

⇒ Response includes

• Term
• Count (by database)
• Attributes and value for best search
Scan issues

▼ Servers fail silently, because of indexing
▼ Clients ignore servers’ attribute suggestions
▼ No agreed thesaurus mechanism
Sort

▼ Allows client to ask server to reorder results
  ➞ Using search attributes
  ➞ Using retrieval fields
  ➞ Using server-defined sort keys
Sort issues

▼Not widely implemented
Extended Services

▼ Makes provision for non-IR features
    ➞ Item order
    ➞ Periodic query/SDI
    ➞ Saved result sets
    ➞ Update

▼ Rarely implemented
    ➞ Item Order supported by OCLC for ILL
    ➞ Update coming in Australia
Etc.

▼ Explain lets client learn about server
  ⇒ Client can enable/disable features, e.g.
  ⇒ Can’t address semantics
  ⇒ Language and terminology problems for users

▼ Dublin Core may with semantics
  ⇒ Directly useable by GRS records
Summary

▼ Z39.50 is in wide use
  ➞ Many suppliers
  ➞ Many sites, offering valuable information

▼ Semantic problems remain hard