Z39.50 : THE BASICS

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Z39.50
INFORMATION RETRIEVAL STANDARD

- NUMBER OF AN AMERICAN COMMUNICATION STANDARD (NISO)

- DEVELOPED TO OVERCOME PROBLEMS OF MULTIPLE DATABASE SEARCHING
  » DIFFERENT SCREENS, COMMAND LANGUAGES, SEARCH PROCEDURES
Z39.50

- Z39.50 SIMPLIFIES SEARCHING
- ONLY NEED TO KNOW COMMANDS OF LOCAL SYSTEM
- PERMITS COMMUNICATION BETWEEN SYSTEMS USING DIFFERENT HARDWARE AND LIBRARY SOFTWARE
SEARCH AND RETRIEVE (SR) PROTOCOL STANDARD

INTERNATIONAL INFORMATION RETRIEVAL STANDARD (ISO)

COMPATIBLE SUBSET OF Z39.50

Z39.50 CLIENT and SERVER

- BASED ON CLIENT / SERVER MODEL
- TWO COMPUTERS IN A PEER-TO-PEER RELATIONSHIP
- EACH COMPUTER HAS SPECIFIC TASKS FOR THE FUNCTION BEING PERFORMED
- 2 PARTS TO Z39.50: ORIGIN/TARGET
Z39.50 MODEL

USER'S SYSTEM
  CLIENT
  ORIGIN

DATABASE SYSTEM
  SERVER
  TARGET

DRA, NOTIS, VTLS

GEAC, OCLC, LC

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ORIGIN SYSTEM (CLIENT)

- SOFTWARE ON LOCAL SYSTEM TRANSLATES SEARCH QUERY INTO FORMAT OF Z39.50 STANDARD
- CONNECTS TO AND SENDS QUERY TO SYSTEM HOUSING THE DATABASE
- PRESENTS RECORDS/RESULTS OF QUERY TO SEARCHER

SEARCHER OF ORIGIN SYSTEM NEVER INTERACTS DIRECTLY WITH TARGET SYSTEM
TARGET SYSTEM (SERVER)

- COMPUTER HOUSING THE DATABASE(S)
- TRANSLATES THE Z39.50 QUERY TO SEARCH LOGIC OF DATABASE SYSTEM
- OBTAINS INFO FROM DATABASE, RETURNS IT TO ORIGIN SYSTEM
- RETURNS RECORDS OR REPORTS A RESULT SET

CLIENT AND TARGET ROLES CAN BE CONTAINED IN SAME SYSTEM
Z39.50 FEATURES - 1992 (vers.2)

- SUPPORTS BASIC BIBLIOGRAPHIC SEARCHING
- STANDARDIZES THE QUERY FORMAT TO BUILD SIMPLE OR COMPLEX SEARCHES
- ATTRIBUTES: USE, RELATION, POSITION IN FIELD, STRUCTURE, TRUNCATION, COMPLETENESS
  » BOOLEAN, PROXIMITY
1. INIT (INITIALIZATION)
2. SEARCH
3. PRESENT
4. DELETE-RESULT-SET
5. ACCESS CONTROL
6. RESOURCE CONTROL
Z39.50 FEATURES - 1995 (v. 2&3)

- Searching of bibliographic and non-bibliographic formats, e.g. full text, video
- Sort, scan, segmentation, item order, update, etc.
- Explain service

Z39.50 still evolving!!
WEB Client (Browser)

HTTP

WEB/Z39.50 GATEWAY

HTTP

Conversion

Z39.50 Origin

Z39.50 Target

Z39.50 Server
WHAT Z39.50 IS NOT

λ NOT A COMMON COMMAND LANGUAGE
λ NOT A USER INTERFACE
λ NOT A SPECIFICATION FOR BUILDING THE DATABASE
λ NOT A SPECIFICATION FOR THE TELECOMMUNICATIONS NETWORK
BENEFITS

1. PERMITS INTERSYSTEM SEARCHING AND RECORD TRANSFER REGARDLESS OF SYSTEM SOFTWARE OR HARDWARE

2. PROVIDES SIMPLER ACCESS TO REMOTE DATABASES THROUGH SINGLE INTERFACE
BENEFITS

3. REDUCES TRAINING TIME, NEED FOR SYSTEM SPECIFIC TERMINALS OR COMPUTERS

4. CAN BE USED TO RETRIEVE BIBLIOGRAPHIC AND NON-BIBLIOGRAPHIC INFORMATION
IMPLEMENTATION ACTIVITIES

UNITED STATES

- Z39.50 IMPLEMENTORS GROUP (ZIG)
- APPROX. 80 IMPLEMENTATIONS
  » AMERITECH, DRA, VTLS, GAYLORD, GEAC, ENDEAVOR, SIRSI, OVID, INNOV. INTERFACES
  » OCLC, RLG
  » COLUMBIA, DARTMOUTH, UNIV. OF CAL., U. OF FLORIDA, LIBRARY OF CONGRESS
  » CHEMICAL ABSTRACTS, LEXIS/NEXIS
IMPLEMENTATION ACTIVITIES

EUROPE

- NETHERLANDS, U.K., GERMANY, ITALY
  » EUROPEAN COMMISSION SPONSORED PROJECTS (DALI, SOCKER, ONE, ARCA, etc.)

CANADA

- NATIONAL LIBRARY OF CANADA TOOLKIT SOFTWARE
- UNIVERSITY LIBRARIES

National Library of Canada/Bibliothèque nationale du Canada
CONCLUSION

- Z39.50 REVOLUTIONIZING DATABASE SEARCHING
- INVALUABLE TOOL FOR LIBRARIES AND OTHER INFORMATION SECTORS
- ISSUES TO BE RESOLVED:
  » PRECISION, MARC FORMAT EXCHG,
  » HOLDINGS, EXPLAIN, ETC.
Z39.50 RESOURCE PAGES ON THE WEB

- Z39.50 Maintenance Agency
  URL: http://lcweb.loc.gov/z3950/agency/
  - official Z39.50 documents, register of implementors, profiles, interpretations, articles, etc.

- Internet Searching With Z39.50
  URL: http://www.markkelly.com/z3950/
  - general info, links to software, int’l activity, related standards, implementations, etc.

- Z39.50 Resources - a Pointer Page
  URL: http://ds.internic.net/z3950/z3950.html
  - pointer page to numerous Z39.50 resources and information
Z39.50 RESOURCE PAGES ON THE WEB

- Z39.50 Client and Web Gateway Reviews
  URL: http://www.dstc.edu.au/RDU/reports/zreviews/
    » reviews 12 Z39.50 clients, 5 Web/Z39.50 gateways

- Catalogs with Web Interfaces: Z39.50 gateways
  URL: http://www.lib.ncsu.edu/staff/morgan/alcuin/wwwed-catalogs-Z39.50.html
    » annotated list of Webbed sites, software and services

- Z39.50 Library Sites
  URL: http://www.bookwhere.com/hosts.htm