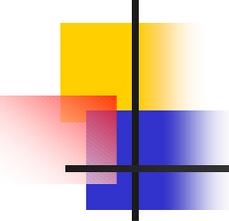


ZNG Architectural Overview

Search & Retrieval Web Service

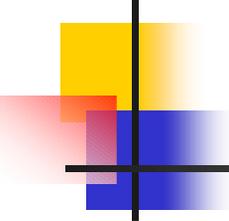
a.k.a. SRW

ZIG October 2001, Poul Henrik Jørgensen



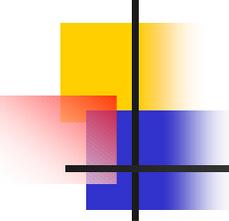
ZML a.k.a. eZ3950

- Z39.50 Services with alternative encoding (XER/XML) and transport (SOAP/HTTP)
- XER encoding of Z39.50 ASN.1 PDU structures
- SOAP Remote Procedure Calls (RPC) used to exchange Z39.50 Request/Response pairs
- HTTP as Transport mechanism for SOAP RPC
 - <http://lcweb.loc.gov/z3950/agency/zip/meetings/dc2000/zxml-report.html>
 - <http://lcweb.loc.gov/z3950/agency/zip/meetings/dc2000/presentations/zsoap.ppt>



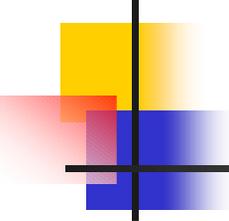
SRW a.k.a. ZNG

- New Search & Retrieve Web Service
- WSDL Specification of Service Interfaces
- Messages (i.e. parameters as XML structures)
- Port Types (i.e. procedure calls & parameters)
- SOAP RPC Binding - for special Clients
- URL Binding - for Web Browsers
 - <http://lcweb.loc.gov/z3950/agency/zng/zng.ppt>
 - <http://www.lib.ox.ac.uk/jafer/zng/zng-p1.wsdl.html>



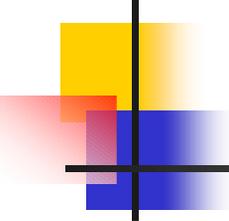
ZNG over SOAP

- SOAP Request message
 - Query string - with optional reference to existing response set
 - Number of records requested etc.
 - Response XML Schema to be used
 - Record XML Schema to be used
- SOAP Reply message
 - Result set Id
 - Number of hits in Result Set etc.
 - Array of Records



ZNG over URL

- Used with Web Browser without need for special Clients
- Request parameters encoded in URL syntax with Server location
- Response returned as XML structure with optional Stylesheet reference
- Can be used via Browser page with simple embedded script.



Summary

- S&R Web Service defined by WSDL
- Remote Procedure Calls based on HTTP, (SOAP) and XML parameters
- SOAP encoding for special Clients
- URL encoding for standard Browsers
- Persistent result sets - replaces session state
- String query language (CCL) - replaces RPN
- Search indexes - replaces attribute vectors
- XML Record formats (e.g. DC/RDF, ONIX, OAI/MARC-XML)