

## Brief#2: Z39.50 Searching

What is Z39.50 Searching?

Answers the questions

- What is Z39.50?
- What are the benefits of Z39.50 searching?
- How do Z39.50 searches fit into ILL workflow?
- Who will have access to the Z39.50 Search Interface?
- How do I use VDX for Z39.50 searching?
- Where can I find the OCUL Virtual Union Catalogue?

Part of the VDX implementation includes the creation of an **OCUL Virtual Union Catalogue**.

The catalogues of all of the OCUL university libraries will be available for remote searching using a Web interface or through the VDX Web or Windows staff desktop. The OCUL Virtual Union Catalogue will allow real time searching of multiple online public access catalogues (OPACs).

### What is Z39.50?

Z39.50 is the common name for the International Standard, ISO 23950, Information Retrieval (Z39.50): Application Service Definition and Protocol Specification, and the similar ANSI/NISO Z39.50 standard. The Library of Congress is the Maintenance Agency and Registration Authority for the standards.

Z39.50 is an international standard for communication between computer systems, primarily library and information related systems. It was first developed in 1984, and the latest version, Version 3, was released in 1995. The standard is a client / server-based protocol for searching and retrieving information from remote databases.

### What does it do and how does it work?

The objective of Z39.50 is to support computer to computer communication in a standard form and to support the transfer of data between various systems independent of the structure, content or format of the data in a particular system. The Z39.50 protocol allows the transfer of messages between a Z39.50 Web gateway and the individual OPAC servers. In order to establish a connection, a Z39.50 session is initiated and messages are sent between the two systems to communicate the type of information that will be accessed and transferred. Depending on the individual OPAC's implementation of Z39.50, a number of access points may be supported for searching, including complex Boolean searches (AND, OR, NOT) and multiple field searching. Z39.50 can recognize, process, and display any record catalogued in US MARC.

Accessing a Z39.50 Web gateway makes it possible for users to search and retrieve results from the catalogues of libraries with Z39.50 compatible OPACs using a standardized

interface. Messages transferred between the user's computer and remote catalogues will identify records that meet specific search criteria, retrieve and display results.

Here is a possible scenario for an undergraduate using the OCUL VDX Web site

- First - Undergraduate Bob goes to the OCUL Virtual Union Catalogue Web page
- He selects the target libraries from the OCUL Web page that he wants to search
- He enters the search terms he's interested in
- The **Z-Portal** part of the VDX software sends the search terms and remote libraries' server details to the Z39.50 component built into the VDX system
- Z-Portal translates the search terms into **Z-speak** which both computers understand and contacts the database at the remote library
- The Z-server software on the remote library's system gets the message and starts a series of communications with the server that is getting messages from Undergraduate Bob's computer
- There is a lot of "back and forth" between the 2 systems - where they exchange data about the protocol they are using so that they establish a **Z-Association** between the two systems
- Once the servers know that they are using the same communication protocol, then Z-Portal translates the **Z-speak** into a search request that the remote/target library's database processes and gets a response about the number of hits found in the remote database
- The VDX system then displays the hits in a numbered list, sorted by search location

#### What are the benefits of Z39.50 searching?

Z39.50 makes communication between computers easier because it standardizes the basic search and retrieval functions. Using Z39.50, systems like VDX can send requests to several libraries simultaneously - this saves time and cuts down on the need to reenter the search several times. Searching for and downloading bibliographic records using Z39.50 software is simpler because the user doesn't have to learn several interfaces and all of the access points to the catalogues are conveniently gathered in one location. Further, the system returns integrated search results so this makes it easy to compare the results from several sources.

#### How do Z39.50 searches fit into ILL workflow?

The creation of an OCUL Virtual Union Catalogue means that interlibrary loan (ILL) processing is made easier for both patrons and staff. By providing multiple search targets, users can easily identify required items. By performing the search and initiating an ILL request in the VDX environment, the VDX system fills in the bibliographic information for the requested item. This means that users do not have to type in the basic bibliographic data. Staff will also be able to perform searches of remote OPACs from within the VDX Web or Windows desktop. Staff will be able to use direct links to Amicus, CISTI, the British Library, Library of Congress, and SOLS (Southern Ontario Library Service).

The Z39.50 database & catalogue search serves 3 purposes:

1. A discovery tool to allow users to easily search for materials beyond their local collection
2. Populating an ILL request form with bibliographic information  
(I imagine - correct bibliographic information - without the typos and partial entries!)  
This part of the Web site will be available for sites that have gone "live"
3. A verification tool for staff in one convenient single search interface

Who will have access to the Z39.50 Search Interface?

Anyone with Internet access will have access to the Union Catalogue search screen. However, only patrons with valid ID and logins will be able to place ILL requests.

Where can I find the OCUL Virtual Union Catalogue?

You can search the OCUL Virtual Union Catalogue at <http://142.150.190.51/>  
(This URL will change in the next few weeks, when it does the new URL will be posted on the VDX Project and OCUL ILL listservs).

To use the Union Catalogue, select the "bibsearch" button on the left side of your screen (you do not have to be logged in or have a password to do this).

When you get to the "Simple Search" screen click the boxes in front of the university catalogues that you would like to include in your search. You can search as many or as few as you want to.

Enter your search term in the "Search for" box at the bottom of your screen and click on the blue "submit" button.

It's important to remember that the "Simple Search" only looks in the title field. If you want to do more complex searches, search additional catalogues (Amicus, CISTI, British Library, Library of Congress, SOLS), or search on different fields you need to click on the "advanced" button at the top of the Web page.

When you look at your search results you may notice that there is no holdings information. Not to worry. There are 2 steps involved in setting up the Z39.50 target searching and we have not completed the 2<sup>nd</sup> step yet. The system still needs a bit of fine tuning but we know that people are curious about the system, so we are giving you an early sneak peek. Search attribute and holdings set up will be completed before the system goes live in the Fall.

### How do I use Z39.50 searching within the VDX database?

The procedures for performing remote searches through the VDX Web client or Windows desktop will be covered in upcoming training sessions (dates and locations for the first implementation group to be announced soon). However, using the Z39.50 search functionality within the VDX system is very much like using it on the Web site.

### Where can I find more information on Z39.50?

There are lots of Web sites with Z39.50 information. These are just a few.

1) The International Standard Z39.50 Maintenance Agency

<http://lcweb.loc.gov/z3950/agency/>

2) UKOLN

<http://www.ukoln.ac.uk/dlis/z3950/>

3) D-Lib Magazine, April 1997 by Clifford A. Lynch

<http://www.dlib.org/dlib/april97/04lynch.html>

4) The ANSI/NISO Z39.50 Protocol: Information Retrieval in the Information Infrastructure by William Moen

<http://www.cni.org/pub/NISO/docs/Z39.50-brochure/>

5) Z39.50: An Overview of Development and the Future by Susannah Iltis

<http://www.cbr.washington.edu/~camel/z/z.html>

6) Z39.50 in a Nutshell by Kunze and Rodgers

<http://www.informatik.tu-darmstadt.de/VS/Infos/Protocol/Z39.50/z39.50-nutshell.html>

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