EUROPAGATE

European SR-Z39.50 Gateway

Background Study

Part II

Z39.50 and ISO SR Servers in Operation

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Preface

The EUROPAGATE Background Study is primarily aimed at providing the necessary background information for the the EUROPAGATE project participants. However, as it might be of interest to others studying or implementing the ISO SR or Z39.50 standards, it is made publicly available.

The study is divided into three parts:

I. Current Implementations of Z39.50 and ISO SR
II. Z39.50 and ISO SR Servers in Operation
III. Current Developments and Future Trends

This second part contains contributions from:

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Part III contains a glossary and a bibliography, common to all three parts.

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An electronic information service based on World Wide Web is also available at:

- **http://www.dtb.dk/egate/egate.html**

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1 Introduction

This report investigates the current status of implementations of Z39.50 and ISO SR. It mainly consists of tables that describe the existing servers. Section 2 is an index to existing Z39.50 servers followed by a descriptions of each of the databases available on the servers. Section 3 is a description of available SR targets and databases in table form. Finally, the report contains two case studies, one on the IRIS Z39.50 project and one on the Nordic SR Net project.

2 Available Z39.50 databases

A list of available servers in 1992 was located at the following address:

URL: ftp://ftp.iij.ad.jp/pub/internet/pub/Z39.50/Z39.50-1992-available-databases

Information on the availability of Z39.50 databases was requested via e-mail. This e -mail was sent to all the contacts listed at that address.

Information was sought on the availability of Z39.50 databases under the following headings:

- Name
- Contents
- Availability (access method)
- Size
- Costs
- Location
- Attributes supported
- Contact information
- Record Syntax
- Query Type

This e-mail was sent to the following contacts:

- Steve MacNeill, Acadia University
  e-mail: stephen.macneil@acadiau.ca
- Robert Waldstein, AT&T Library Network
  e-mail: wald@library.att.com
- Thorn Roby, CARL Systems
  e-mail: troby@CARL.ORG
- Xavier Trevisani, CLSI
  e-mail: Xavier@CLSIB21.CLSI.US.GEAC.COM
- Jim Fullton, CNIDR
  e-mail: fullton@concert.net
- Margery Tibbets, University of California Division of Library Automation
  e-mail: mztuc@uccmvsa.bitnet
- Sean Donelan, Data Research Associates
  e-mail: SEAN@SDG.DRA.COM
- Data Research Sales Department
  e-mail: Sales@DRANET.DRA.COM
- Mark Hinnebusch, Florida University
  e-mail: FCLMTH@NERVM.NERDC.UFL.EDU

- Steve Silberstein, Innovative
  e-mail: steve@vega.iii.com
- Larry Dixson, Library of Congress
  e-mail: ldix@seql.loc.gov
- Sara Randall, NOTIS
  e-mail: srandall@TWAIN.NOTIS.COM
- Ralph Levan, OCLC
  e-mail: rrl@OCLC.ORG
- Lee Newman, Penn State University
  e-mail: ewn@psulias.psu.edu
- Lennie Stovel, Research Libraries Group
  e-mail: bl.mds@rlg.stanford.edu
- lis-link-request@mailbase.ac.uk
- Z39PIG-request@aston.ac.uk

The IRIS servers were identified through research on the IRIS project Telematique Project No. 35.

The replies received were divided into either experimental or operational databases.
The response rate was approximately 75%.

Research identified that all the servers with the exception of the IRIS servers were American.

Databases were indexed under the server name/organization.

Practical testing was then performed on two databases:
- INFOCAL
- DREWDG

2.1 Index to the catalog of databases

The individual database descriptions of the catalog are arranged by server/organization as outlined below:

Acadia University
- AULS Acadia University Library Catalogue

AT&T Library Network
- BOOKS Book catalog
- CIC Customer Information Centre
- NETLIB Software index
- RUSSIAN Russian archives

CARL Systems

- ACC Arapahoe Community College
- AIC Aims Community College
- AUR Auraria Community College
- BEM Bemis Public Library
- CUB University of Colorado Boulder
- DPL Denver Public Library
- DNU Denver University
- EPL Estes Park Public Library
- FRC Front Range Community College
- LAW Denver University Law
- LCC Lamar Community College
- MCC Morgan Community College
- MIN Colorado School of Mines
- MPL Fort Morgan Public Library
- NJC Northeast Junior College
- NWC Northwest College
- OCC Otero Community College
- PPC Pikes Peak Community College
- PUE Pueblo Community College
- RDR Red Rocks Community College
- RGU Regis College
- SPL Sterling Public Library
- TCC Trindad Community College
- TKU Teikyo Loretto Heights
- UNC University of Northern Colorado
- WYO University of Wyoming

CLSI/GEAC

- CL-DEFAULT Demo book database

CNIDR - Clearinghouse for Networked Information Discovery and Retrieval

- BOOK MARC records
- ERIC-D ERIC digest
- SECURE-D

Data Research Associates

- DREWDB Sample database from Drew University
- IAC - BUSINESS
- IAC - EXPAND
- IAC - FULL-TEXT
- IAC - MAG
- UMI - ABI
- UBI - IMAGE
- UMI - NEWS
- UMI - PA

Dublin City University

- Dublin City University Online Catalogue

Florida Centre for Library Automation

- AM Florida A & M University
- CF University of Central Florida
- FA Florida Atlantic University
- FI Florida International University
- FS Florida State University
- NF University of North Florida
- RE ERIC (1988 to date)
- RR ERIC (1967-1987)
- SF University of South Florida
- UF University of Florida
- WF University of West Florida

Forbairt, Dublin

- Forbairt Online Catalogue

Innovative

- DEFAULT Sample library catalog

Library of Congress

- BOOKS Sample book records
- NAMES Sample name authority records

Limerick University

- University of Limerick Online Catalogue

NOTIS

- ERIC Sample CIJE
- IREG Interest Resource Guide
- UNIVERSE Sample library MARC records

OCLC

- ERIC (demo subset)
- OLUC (World Cat demo subset)
- Article First
- Biography Index
- Business Periodicals Index
- Consumers Index
- Contents First
- ERIC
- Fact Search
- General Science Index
- Geo Ref
- GPO Monthly Catalog
- Humanities Index

- PAIS Decade
- Readers Guide Abstract
- Social Sciences Index
- Wilson Business Abstracts
- World Cat

Penn State University

- CATALOG Library book catalog

Research Libraries Group

- ABI ABI/Inform
- AMC Archival and Manuscripts control
- AUT RLIN's Combined Authority File
- AVI Avery Index to Art and Architectural Periodicals
- BKS Book Database
- CATALOG RLIN's Bibliographic File
- DSA Dissertation abstracts
- EIP Engineering Index
- FLP Index to Foreign Legal Periodicals
- HAP Hispanic American Legal Periodicals
- HST History of Science and Technology
- MAP Maps Database
- MDF Computer Files Database
- NAF Name Authority File
- NPA Newspaper abstracts
- PAI Public affairs information service
- PRA Periodical Abstracts
- REC Sound Recordings
- SAF Subject Authority File
- SCO Scores Database
- SER Serial Database
- VIM Visual Materials
- WLI World Law Index

University of California, Berkeley

- INFOCAL

University of California, Melvyl

- CATALOG UC Book Catalog
- PE UC Periodicals Catalog
- TEN Last ten years of UC Book Catalog

University College Dublin

- TALIS Library Monographs, Serials and Report Catalog

2.2 Catalog of databases

DATABASE NAME:	AULS
DATABASE CONTENTS:	Acadia University Library Catalogue
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Acadia University
NETWORK ACCESS:	Internet Access Server - addr: auls.acadiau.ca Server - ip: 131.162.1.70
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME:	Acadia University's Server
b) ORGANISATION:	Acadia University
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Steve MacNeil, e-mail: Stephen-macneil@acadiau.ca

DATABASE NAME:	Books
DATABASE CONTENTS:	Sampling of AT&T book catalog, mainly IEEE. A subset of the book catalogue corresponding to the search ieee records vary in size from a few hundred characters to 29,604. Median around 5000.
DATABASE SIZE:	1800 records
DATABASE PROVIDER:	AT&T Library Network
NETWORK ACCESS:	Internet Access
COST:	Free
PROTOCOL:	Z39.50-1992 with qualifications
LOCATION:	
a) SERVER NAME	AT&T Library Network Server
b) ORGANISATION	AT&T Library Network
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	Bib1
CONTACT INFORMATION:	Robert Waldstein e-mail wald@library.att.comm

DATABASE NAME: CIC

DATABASE CONTENTS: AT&T Customer Information Centre (CIC) Database is a listing of over 400 ,000 AT& T product document offering from AT &Ts Customer Information Centre. Database offers a catalog of thousands of product bulletins, sales manuals, user guides,installation and service manuals, books brochures, domestic and international telephone directories, catalog.

DATABASE SIZE: 400,000 records

DATABASE PROVIDER: AT & T Library Network

NETWORK ACCESS: Internet Access.

COST: Free

PROTOCOL: Z39.50-1992 with qualifications

LOCATION:

a) SERVER NAME: AT& T Library Network Server
b) ORGANISATION: AT& T Library Network

QUERY TYPE: RPN

RECORD SYNTAX: US MARC

ATTRIBUTE SET: Bib 1

CONTACT INFORMATION: Robert (Bob) Waldstein
e-mail wald@library.att.comm

DATABASE NAME:	NETLIB
DATABASE CONTENTS:	Index of free mathematical and statistical software
DATABASE SIZE:	The index/DB has 2952 modules with fields: packages, modules, start description lines, words, characters, library description. (overall library module description)
DATABASE PROVIDER:	AT& T Library Network
NETWORK ACCESS:	Internet Access.
COST:	Free
PROTOCOL:	Z39.50- 1992 with qualifications
LOCATION:	
a) SERVER NAME	AT &T Library Network Server
b) ORGANISATION	AT &T Library Network
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	Bib 1
CONTACT INFORMATION:	Robert (Bob) Waldstein e-mail wald@library.att.comm

DATABASE NAME:	Russian
DATABASE CONTENTS:	Russian Archives based on library of Congress's exhibit files.
DATABASE **SIZE:**	Unknown
DATABASE PROVIDER:	AT& T Library Network
NETWORK ACCESS:	Internet Access.
COST:	Free
PROTOCOL:	Z39.50- 1992 with qualifications
LOCATION:	
a)SERVER NAME:	AT& T Library Network Server
b)ORGANISATION:	AT& T Library Network
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	Bib 1
CONTACT INFORMATION:	Robert (bob) Waldstein e-mail wald@library.att.comm

DATABASE NAMES: *

ACC Arapahoe Community College
AIC Aims Community College
AUR Auraria Community College
BEM Bemis Public Library
CUB University of Colerado Boulder
DPL Denver Public Library
DNU Denver University
EPL Estes Park Public Library
FRC Front Range Community College
LAWDenver University Law
LCC Lamar Community College
MCC Morgan Community College
MIN Colerado School of Mines
MPL Fort Morgan Public Library
NJC Northeast Junior College
NWC Northwest College
OCC Otero Community College
PPC Pikes Peak Community College
PUE Pueblo Community College
RDR Red Rocks Community College
RGU Regis College
SPL Sterling Public Library
TCC Trindad Community College
TKU Teikyo Loretto College
UNC University of Northern Colerado
WYO University of Wyoming

DATABASE CONTENTS: Library Catalogues

DATABASE SIZES: Unknown

NETWORK ACCESS: Internet Access.
Server address: Z39.50.carl.org
Server ip: 192.54.81.12
Access is not via telnet but requires the use of a Z39.50 client program.

COST: Free

PROTOCOL: Z39.50

LOCATION

a)SERVER NAME: CARL Systems
b)ORGANISATION: CARL

QUERY TYPE: Type 1

RECORD SYNTAX: US MARC

ATTRIBUTE SET: Bib 1

CONTACT INFORMATION: Thorn Roby
e-mail troby@CARL.ORG

* Due to the large volume of databases on the CARL server, and in order to avoid repetition of information, all the CARL library catalogues are covered in this entry.

DATABASE NAME:	Cl - default
DATABASE CONTENTS:	GEAC/CLSI demo book database
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	CLSI
NETWORK ACCESS:	Internet access Server addr: inet-gw.clsi.us.geac.com Server Ip: 198.3.222.10 Port: 210 No login or password is required
COST:	Free (demo/test)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME:	CLSI/GEAC Server
b) ORGANISATION:	CLSI
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Xavier Trevisani, Project Leader, GEAC/CLSI, Inc., 320 Nevada Street, Newtonville, MA 02 160 Phone: (617) 965 - 6310 E-mail: xavier@clsi.us.geac.com

DATABASE NAME:	Book
DATABASE CONTENTS:	MARC records in Postgres database
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	CNIDR
NETWORK ACCESS:	Internet Access Server addr: Kudzu.cnidr.org Server port: 5556
COST:	Free (demo with access security)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	CNIDR's AARK server
b) ORGANISATION	CNIDR
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Jim Fullton e-mail: fullton@concert.net

DATABASE NAME:	ERIC - D
DATABASE CONTENTS:	Contains records from ERIC digest
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	CNIDR
NETWORK ACCESS:	Internet Access Server addr: Kudzu.cnidr.org Server port: 5556
COST:	Free (demo with access security)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	CNIDR's AARK server
b) ORGANISATION	CNIDR
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Jim Fullton

DATABASE NAME:	DREWDB
DATABASE CONTENTS:	Sample database of 400,000 bibliographic records from Drew University
DATABASE SIZE:	400,000 bibliographic records
DATABASE PROVIDER:	Data Research Accociates (DRA)
NETWORK ACCESS:	Internet Access: Server addr: dranet.dra.com Server IP: 192.65.218.23 Server Port: 210 Login and Password Required
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME:	Data Research Associates server
b) ORGANISATION:	Data Research Associates, Inc.,
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Sean Donelan, Data Research Associates, Inc. St. Louis, Mo Phone: +1 314-432-1100 E-mail sean@sdg.dra.com

DATABASE NAME:	UMI - ABI
DATABASE CONTENTS:	UMI's ABI/ Inform provides complete bibliographic information indexing and 150 word abstracts for articles published in 800 business journals.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	UMI/Data Courier, Louisville, KY
NETWORK ACCESS:	Internet Access Server - addr: umi.dra.com Server - ip: 192.65.218.55 Port: 210
COST:	Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Data Research Associates Server
b) ORGANISATION	Data Research Sales Department
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	BIB-1
CONTACT INFORMATION:	Sales@DRANET.DRA.COM Data Research Associates Inc. St. Louis, MO Name: Data Research Sales Department (800) 325 - 0888 + 1 - 314-432-1100

DATABASE NAME:	UMI-News
DATABASE CONTENTS:	UMI's Newspaper abstracts records feature complete bibliographic information, indexing and 25 word abstract for articles published in 8 major national and regional newspapers
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	UMI/Data Courier, Louisville, KY
NETWORK ACCESS:	Internet Access Server - addr: umi.dra.com Server - ip: 192.65.218.55 Port: 210
COST:	Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Data Research Associates Server
b) ORGANISATION	Data Research Sales Department
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	BIB-1
CONTACT INFORMATION:	Sales@DRANET.DRA.COM Data Research Associates Inc. St. Louis, MO Name: Data Research Sales Department (800) 325 - 0888 + 1 - 314-432-1100

DATABASE NAME: UMI-PA

DATABASE CONTENTS: UMI's Periodical abstracts includes 950 periodicals with coverage of current topics such as politics sports, technology, health care, education and the environment.

DATABASE SIZE: Unknown

DATABASE PROVIDER: UMI/Data Courier, Louisville, KY

NETWORK ACCESS: Internet Access

Server - addr:	umi.dra.com
Server - ip:	192.65.218.55
Port:	210

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME Data Research Associates Server
b) ORGANISATION Data Research Sales Department

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: BIB-1

CONTACT INFORMATION: Sales@DRANET.DRA.COM
Data Research Associates Inc.
St. Louis, MO
Name: Data Research Sales Department
(800) 325 - 0888
+ 1 - 314-432-1100

DATABASE NAME:	UMI-IMAGE
DATABASE CONTENTS:	Image delivery of many articles is the UMI/Inform database
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	UMI/Data Courier, Louisville, KY
NETWORK ACCESS:	Internet Access Server - addr: umi.dra.com Server - ip: 192.65.218.55 Port: 210
COST:	Charge is on a per article basis and this service does require a subscription to UMI ABI/Inform or Periodical abstracts.
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Data Research Associates Server
b) ORGANISATION	Data Research Sales Department
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	BIB-1
CONTACT INFORMATION:	Sales@DRANET.DRA.COM Data Research Associates Inc. St. Louis, MO Name: Data Research Sales Department (800) 325 - 0888 + 1 - 314-432-1100

DATABASE NAME:	IAC - EXPAND
DATABASE CONTENTS:	IAC Expanded academic covers 960 scholarly titles in the arts, humanities and social sciences and general science.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Information Access Company, Foster City Ca
NETWORK ACCESS:	Internet Access Server - addr: iac.dra.com Port: 210
COST:	Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Data Research Associates Server
b) ORGANISATION	Data Research Sales Department
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	BIB-1
CONTACT INFORMATION:	Sales@DRANET.DRA.COM Data Research Associates Inc., St. Louis, MO Data Research Sales Department (800) 325 - 0888 + 1 - 314-432-1100

DATABASE NAME:	IAC-MAG
DATABASE CONTENTS:	IAC's Magazine Index Plus provides complete indexing and abstracting of over 400 of the most requested periodicals.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Information Access Company, Foster City, CA
NETWORK ACCESS:	Internet Access Server - addr: iac.dra.com Port: 210
COST:	Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Data Research Associates Server
b) ORGANISATION	Data Research Sales Department
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	BIB-1
CONTACT INFORMATION:	Sales@DRANET.DRA.COM Data Research Associates Inc., St. Louis, MO Data Research Sales Department (800) 325 - 0888 + 1 - 314-432-1100

DATABASE NAME:	IAC - BUSINESS
DATABASE CONTENTS:	IAC's Business Index provide a comprehensive source of indexing and abstracting of over 700 business management and trade journals
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Information Access Company, Foster City, CA
NETWORK ACCESS:	Internet Access Server - addr: iac.dra.com Port: 210
COST:	Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Data Research Associates Server
b) ORGANISATION	Data Research Sales Department
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	BIB-1
CONTACT INFORMATION:	Sales@DRANET.DRA.COM Data Research Associates Inc., St. Louis, MO Data Research Sales Department (800) 325 - 0888 + 1 - 314-432-1100

DATABASE NAME:	IAC - FULL - TEXT
DATABASE CONTENTS:	Full text delivery for articles more than 500 titles indexed by IAC.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Information Access Company, Foster City Ca
NETWORK ACCESS:	Internet Access Server - addr: iac.dra.com Port: 210
COST:	Requires subscription to IAC Magazine and/or Business Index.
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Data Research Associates Server
b) ORGANISATION	Data Research Sales Department
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	BIB-1
CONTACT INFORMATION:	Sales@DRANET.DRA.COM Data Research Associates Inc., St. Louis, MO Data Research Sales Department (800) 325 - 0888 +1-314-432-1100

DATABASE NAME:	Dublin City University Online Catalogue
DATABASE CONTENTS:	Libraries Monograph, Serials and Report Collections
DATABASE SIZE:	Approximately 80,000 records
DATABASE PROVIDER:	Dublin City University
NETWORK ACCESS:	Presently available through IRIS only looking into the possibility of making it available over the Internet.
COST:	Initial registration with IRIS user ID and ten hours connect time: £250 + VAT Additional blocks of connect time published in advance. 10 hours £200 + VAT 25 hours £400 + VAT 2000 hours £3,000 + VAT
PROTOCOL:	Z39.50 Version 2
LOCATION:	
a) SERVER NAME	DCU Z39.50 Server
b) ORGANISATION	Dublin City University
QUERY TYPE:	RPN
RECORD SYNTAX:	LC MARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Clara Cullen, Systems Librarian, Dublin City University, Glasnevin, Dublin 9. Tel: (01) 704 5212 Fax: (01) 374733 e-mail cullenc@dcu.ie

DATABASE NAME:	AM
DATABASE CONTENTS:	Florida A & M University
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	FI
DATABASE CONTENTS:	Florida International University
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	FA
DATABASE CONTENTS:	Florida Atlantic University
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	FS
DATABASE CONTENTS:	Florida State University
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	UF
DATABASE CONTENTS:	University of Florida
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	NF
DATABASE CONTENTS:	University of North Florida
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	SF
DATABASE CONTENTS:	University of South Florida
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	CF
DATABASE CONTENTS:	University of Central Florida
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	WF
DATABASE CONTENTS:	University of West Florida
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	RE
DATABASE CONTENTS:	ERIC (1988 to date)
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	RR
DATABASE CONTENTS:	ERIC (1967-1987)
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Florida Centre for Library Automation
NETWORK ACCESS:	On OSI stack only
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Florida Centre for Library Automation's Server
b) ORGANISATION	Florida Centre for Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Mark Hinnebusch University of North Florida e-mail:fclmth@nervm.nerdc.ufl.edu

DATABASE NAME:	Forbairt Online Catalogue
DATABASE CONTENTS:	Libraries Monographs, Serials and Report Collections
DATABASE SIZE:	8,500 - 9,000 records
DATABASE PROVIDER:	Forbairt Library
NETWORK ACCESS:	Presently available through IRIS only looking into the possibility of making it available over the Internet.
COST:	Initial registration with IRIS user ID and ten hours connect time: £250 + VAT Additional blocks of connect time published in advance. 10 hours £200 + VAT 25 hours £400 + VAT 2000 hours £3,000 + VAT
PROTOCOL:	Z39.50 Version 2
LOCATION:	
a) SERVER NAME	Forbairt Z39.50 server
b) ORGANISATION	Forbairt, Glasnevin, Dublin 9
QUERY TYPE:	RPN
RECORD SYNTAX:	Not full MARC records. Create their own using AACR2
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Pat Raftery, Librarian, Forbairt, Glasnevin, Dublin 9. Tel: (01) 8370171 Fax: (01) 8370178

DATABASE NAME:	DEFAULT
DATABASE CONTENTS:	Innovative's sample library catalog database
DATABASE SIZE:	Approximately 200,000 records
DATABASE PROVIDER:	Innovative (III)
NETWORK ACCESS:	Internet Access Server addr: demo.iii.com Port: 210
COST:	Free (demo/test)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Innovative's server
b) ORGANISATION	Innovative (III)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Steve Silberstein e-mail: steve@vega.iii.com

DATABASE NAME:	BOOKS
DATABASE CONTENTS:	Test file of books bibliographic records. Approximately 16,000 records currently in this file.
DATABASE SIZE:	Approximately 16,000 records currently in this file
DATABASE PROVIDER:	Library of Congress
NETWORK ACCESS:	Internet Access Server - addr: IBM2.LOC.Gov Server - IP: 140.147.254.1
COST:	Free
PROTOCOL:	Z39.50 Version 2
LOCATION:	
a) SERVER NAME	LC Z39.50 Test Server Information
b) ORGANISATION	Library of Congress
QUERY TYPE:	RPN Operators supported: AND, OR, AND-NOT
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	See note next page.
CONTACT INFORMATION:	Larry E Dixon Library of Congress e-mail: ldix@seql.loc.gov

Use	Value	Description	Databases Supporting	
	1	Personal name	BOOKS	NAMES
	2	Corporate name	BOOKS	NAMES
	4	Title	BOOKS	NAMES
	5	Title series	BOOKS	
	7	ISBN	BOOKS	NAMES
	8	ISSN	BOOKS	NAMES
	9	LCCN	BOOKS	NAMES
	21	Subject heading	BOOKS	NAMES

RELATION:	Value	Description	Database Supporting	
	3	Equal	BOOKS	NAMES

POSITION:	Value	Description	Databases Supporting	
	3	Any	BOOKS	NAMES

Position: For ISBN, ISSN, and LCCN searches, ALL attributes values are supported.

STRUCTURE:	Value	Description	Database Supporting	
	1	quoted phrase	BOOKS	NAMES
	2	word	BOOKS	NAMES
	6	word list	BOOKS	NAMES

LC supports word list (valued=6), but we support as proximately within the same field (Plus or minus infinity). (Implicit AND)
For ISBN, ISSN, and LCCN, searches, All attributes values are supported.

TRUNCATION:	Value	Description	Databases Supporting	
	100	Do not truncate	BOOKS	NAMES

For ISBN, ISSN, and LCCN searches, All attributes values are supported.

COMPLETENESS:	Value	Description	Databases Supporting	
	1	Incomplete subfield	Books	NAMES

For ISBN, ISSN, and LCCN searches, ALL completeness attribute values are supported.
Requirements and Defaults: The Use Attribute is REQUIRED.
For the other attribues, if an attribute type and value are not supplied by the client, the following defaults are applied at Library of Congress.

RELATION	--	Equal (value=3)
POSITION	--	Any (value=3)
STRUCTURE	--	Word (value=2)
TRUNCATION	__	Do not truncate (value=100}
COMPLETENNIS	--	Incomplete Subfield (value=1)

DATABASE NAME:	NAMES
DATABASE CONTENTS:	Test file of names authority records. Approximately 4,000 records currently in this file.
DATABASE SIZE:	Approximately 4,000 records currently in this file
DATABASE PROVIDER:	Library of Congress
NETWORK ACCESS:	Internet Access Server - addr: IBM2.LOC.Gov Server - IP: 140.147.254.1
COST:	Free
PROTOCOL:	Z39.50 Version 2
LOCATION:	
a) SERVER NAME	LC Z39.50 Test Server Information
b) ORGANISATION	Library of Congress
QUERY TYPE:	RPN Operators supported: AND, OR, AND-NOT
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1 (See note next page.)
CONTACT INFORMATION:	Larry E Dixon Library of Congress e-mail: ldix@seql.loc.gov

Note on attribute set :

Use	**Value**	**Description**	**Databases Supporting**	
	1	Personal name	BOOKS	NAMES
	2	Corporate name	BOOKS	NAMES
	4	Title	BOOKS	NAMES
	5	Title series	BOOKS	
	7	ISBN	BOOKS	NAMES
	8	ISSN	BOOKS	NAMES
	9	LCCN	BOOKS	NAMES
	21	Subject heading	BOOKS	NAMES

RELATION:	**Value**	**Description**	**Database Supporting**	
	3	Equal	BOOKS	NAMES

POSITION:	**Value**	**Description**	**Databases Supporting**	
	3	Any	BOOKS	NAMES

Position: For ISBN, ISSN, and LCCN searches, ALL attributes values are supported.

STRUCTURE:	**Value**	**Description**	**Database Supporting**	
	1	quoted phrase	BOOKS	NAMES
	2	word	BOOKS	NAMES
	6	word list	BOOKS	NAMES

LC supports word list (valued=6), but we support as proximately within the same field (Plus or minus infinity). (Implicit AND)
For ISBN, ISSN, and LCCN, searches, All attributes values are supported.

TRUNCATION:	**Value**	**Description**	**Databases Supporting**	
	100	Do not truncate	BOOKS	NAMES

For ISBN, ISSN, and LCCN searches, All attributes values are supported.

COMPLETENESS:	**Value**	**Description**	**Databases Supporting**	
	1	Incomplete subfield	Books	NAMES

For ISBN, ISSN, and LCCN searches, ALL completeness attribute values are supported. Requirements and Defaults: The Use Attribute is REQUIRED. For the other attribues, if an attribute type and value are not supplied by the client, the following defaults are applied at Library of Congress.

RELATION	--	Equal (value=3)
POSITION	--	Any (value=3)
STRUCTURE	--	Word (value=2)
TRUNCATION	--	Do not truncate (value=100)
COMPLETENNIS	--	Incomplet Subfield (value=1)

DATABASE NAME:	University of Limerick Online Catalogue
DATABASE CONTENTS:	Bibliographic Records of the Libraries. Monographs and Serial Collections.
DATABASE SIZE:	140,000 Monograph records 2,200 Serial records
DATABASE PROVIDER:	McDonnell Douglas Information Systems
NETWORK ACCESS:	Presently available through IRIS only looking into the possibility of making it available over the Internet.
COST:	Initial registration with IRIS user ID and ten hours connect time: £250 + VAT Additional blocks of connect time published in advance. 10 hours £200 + VAT 25 hours £400 + VAT 2000 hours £3,000 + VAT
PROTOCOL:	Z39.50 Version 2
LOCATION:	
a) SERVER NAME	Limerick Z39.50 server
b) ORGANISATION	University of Limerick
QUERY TYPE:	RPN
RECORD SYNTAX:	UK MARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Ms Lindsey Mitchell, Systems Librarian, University of Limerick, Plassey Technological Park, Limerick. Tel: (061) 333644 Fax: (061) 338034 e-mail Mitchellle@ul.ie

DATABASE NAME:	UNIVERSE
DATABASE CONTENTS:	Sample Library MARC record
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	NOTIS
NETWORK ACCESS:	Internet Access Server addr: frost.notis.com
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	NOTIS Z39.50 Server
b) ORGANISATION	NOTIS
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1 Only accepts Use Structure Truncation Attributes
CONTACT INFORMATION:	Sara Randall, NOTIS Systems, e-mail: sara@notis.com

DATABASE NAME:	IREG
DATABASE CONTENTS:	Interest Resource Guide
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	NOTIS
NETWORK ACCESS:	Internet Access Server addr: frost.notis.com
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	NOTIS Z39.50 Server
b) ORGANISATION	NOTIS
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1 Only accepts Use Structure Truncation Attributes
CONTACT INFORMATION:	Sara Randall, NOTIS Systems, e-mail: sara@notis.com

DATABASE NAME:	ERIC
DATABASE CONTENTS:	1988-1990 CIJE (journal articles in education)
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	NOTIS
NETWORK ACCESS:	Internet Access Server addr: frost.notis.com
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	NOTIS Z39.50 Server
b) ORGANISATION	NOTIS
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1 Only accepts Use Structure Truncation Attributes
CONTACT INFORMATION:	Sara Randall, NOTIS Systems, e-mail: sara@notis.com

DATABASE NAME:	OLUC
DATABASE CONTENTS:	Subset of the WorldCat Database
DATABASE SIZE:	10,000 records
DATABASE PROVIDER:	OCLC, Inc
NETWORK ACCESS:	Internet Access Server addr: rdsd-rs6ooo.dev.oclc.org Server port: 211
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	OCLC's server
b) ORGANISATION	OCLC, Inc.
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Ralph Levan Sr. Consulting Analyst OCLC Online Computer Library Mail Drop 432 6565 Frantz Rd Dublin OH 43017 Phone: (614) 764 - 6115 (800) 848 - 5878 X6115 Fax: (614) 764 - 6096 e-mail: rrl@oclc.org

DATABASE NAME:	ERIC
DATABASE CONTENTS:	1987 records from ERIC
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	OCLC, Inc
NETWORK ACCESS:	Internet Access Server addr: rdsd-rs6ooo.dev.oclc.org Server port: 211
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	OCLC's server
b) ORGANISATION	OCLC, Inc.
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Ralph Levan Sr. Consulting Analyst OCLC Online Computer Library Mail Drop 432 6565 Frantz Rd Dublin OH 43017 Phone: (614) 764 - 6115 (800) 848 - 5878 X6115 Fax: (614) 764 - 6096 e-mail: rrl@oclc.org

DATABASE NAME: Article First

DATABASE CONTENTS: Article First Database, from OCLC's First Search Service.

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

Ralph Levan
Sr. Consulting Analyst
OCLC Online Computer Library
Mail Drop 432
6565 Frantz Rd
Dublin OH 43017
Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Biography Index

DATABASE CONTENTS: Biography Index Database from OCLC's First Search Service.

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

Ralph Levan
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6565 Frantz Rd
Dublin OH 43017
Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Business Periodicals Index

DATABASE CONTENTS: Business Periodicals Index Database, from OCLC's First Search Service.

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS:

Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Consumers Index

DATABASE CONTENTS: Consumers Index Database from OCLC's First Search Service.

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Contents First

DATABASE CONTENTS: Contents First Database, from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: ERIC

DATABASE CONTENTS: ERIC Database, from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Fact Search

DATABASE CONTENTS: Fact Search Database from OCLC's Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: General Science Index

DATABASE CONTENTS: General Science Index Database from OCLC's First Search

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS:

Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Geo Ref

DATABASE CONTENTS: Geo Ref Database, from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: GPO Monthly Catalog

DATABASE CONTENTS: GPO Monthly Catalog Database from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Humanities Index

DATABASE CONTENTS: Humanities Index Database, from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS:

Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: PAIS Decade

DATABASE CONTENTS: PAIS Decade Database from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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Dublin OH 43017
Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Readers Guide Abstracts

DATABASE CONTENTS: Readers Guide Abstracts Database from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

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(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Social Sciences Index

DATABASE CONTENTS: Social Sciences Index Database from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

Ralph Levan
Sr. Consulting Analyst
OCLC Online Computer Library
Mail Drop 432
6565 Frantz Rd
Dublin OH 43017
Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: Wilson Business Abstracts

DATABASE CONTENTS: Wilson Business Abstracts Database, from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) SERVER NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

Ralph Levan
Sr. Consulting Analyst
OCLC Online Computer Library
Mail Drop 432
6565 Frantz Rd
Dublin OH 43017
Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME: World Cat

DATABASE CONTENTS: World Cat Database, from OCLC's First Search Service

DATABASE SIZE: Unknown

DATABASE PROVIDER: OCLC, Inc

NETWORK ACCESS: Internet Access
Server addr: Z39.50.oclc.org
Server port: 210
or Server -addr: castor.dev.oclc.org

COST: Product/Subscription required

PROTOCOL: Z39.50

LOCATION:

a) Server NAME OCLC's server
b) ORGANISATION OCLC, Inc.

QUERY TYPE: RPN

RECORD SYNTAX: USMARC

ATTRIBUTE SET: bib-1

CONTACT INFORMATION:

Ralph Levan
Sr. Consulting Analyst
OCLC Online Computer Library
Mail Drop 432
6565 Frantz Rd
Dublin OH 43017
Phone: (614) 764 - 6115
(800) 848 - 5878
X6115
Fax: (614) 764 - 6096
e-mail: rrl@oclc.org

DATABASE NAME:	CATALOG
DATABASE CONTENTS:	Penn State's Library Book Catalog
DATABASE SIZE:	
DATABASE PROVIDER:	Penn State University
NETWORK ACCESS:	Internet Access Server 1P: 128.118.88.200 Port Number: 210 No login name or password is required
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Penn State's Z39.50 server
b) ORGANISATION	Penn State University
QUERY TYPE:	RPN (See note next page.)
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1 (See note next page.)
CONTACT INFORMATION:	Lee Newman, Penn State University, Phone: (814) 865 - 1818 e-mail: ewn@psulias.psu.edu

Note on querytype :

Init, Search, and Present requests supported Trigger resource central requests supported but only to cancel a search. Will support more eventually. Operators AND, OR, AND - NOT, PROX supported Boolean operators on the default result set are supported**.** Element set names of F and B are supported F is the default. Result set naming is not supported yet.

Note on Attribute set :

All position attributes supported, but first in subfield is treated the same as first in field. Default is first in field.
Relational attributes supported (default is EQUAL):

EQUAL
GREATER OR EQUAL (only as an add-on DATE search used to restrict the entries in the default result set)
LESS THAN OR EQUAL (only as an add-on DATE search used to restrict the entries in the default result set)

Use attributes supported (use attribute is required):

Personal Name (1, 1004)
Title (4)
Title Series (5)
Uniform Title (6)
Subject Heading (21)
Local Subject Index (29)
Author (1003)
Subject Name Personal (1009)
Name Geographic (58)
Corporate Name, Conference Name, Author-Name Corporation, Author-Name Conference (2, 3, 1005, 1006)
Code -- Language (54, but only as an add-on search used to restrict the entries in the default result set)
ISBN and ISSN (7, 8)
LC Call Number (16)
LC Card Number (9)
Date of publication (31, but only as an add-on search used to restrict the entries in the default result set)
Date of Acquisition (32, but only as an add-on search used to restrict the entries in the default result set)
Number Government Publication and Number Publisher for Music (50, 51)
Local Number (12)
Author - Title (1000)
Any and Default (1016, 1017)

Structure Attributes Supported (default is Phrase):

Phrase (1)
Word (2)
Word List (6)

Year (4, but only for use attribute date of publication)
Normalized Date (5, but only for use attribute date of acquisition)

Truncation Attributes Supported (default is Do Not Truncate):

Right Truncation (1)
Do not Truncate (100)
Process # In The Search Term (101)

We ignore the completeness attributes.

DATABASE NAME:	BKS
DATABASE CONTENTS:	Research Libraries Group Book Databases
DATABASE SIZE:	49,070,000 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	AMC
DATABASE CONTENTS:	RLG's Archival and Manuscripts control Database
DATABASE SIZE:	Approximately 370,584 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	MAP
DATABASE CONTENTS:	RLG's MAPS Database
DATABASE SIZE:	Approximately 227,451 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	MDF
DATABASE CONTENTS:	RLG's Computer Files
DATABASE SIZE:	Approximately 32,391 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	REC
DATABASE CONTENTS:	RLG's Sound Recordings
DATABASE SIZE:	Approximately 1,301,763 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	SCO
DATABASE CONTENTS:	RLG's Scores Database
DATABASE SIZE:	Approximately 1,026,115 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	SER
DATABASE CONTENTS:	RLG's Serials Database
DATABASE SIZE:	Approximately 3,527,819 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	VIM
DATABASE CONTENTS:	RLG's Visual Materials Database
DATABASE SIZE:	Approximately 183,054
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	NAF
DATABASE CONTENTS:	RLG's Name Authority File
DATABASE SIZE:	Approximately 4,932,288 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	SAF
DATABASE CONTENTS:	RLG's Subject Authority File
DATABASE SIZE:	File with approximately 294,933 records
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	AUT
DATABASE CONTENTS:	RLIN's Combined Authority file combined subject and Name Authority
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	CATALOG
DATABASE CONTENTS:	RLIN's Bibliographic file is an online catalogue with more than 56 million items held by over 200 of the world's leading research institutions. It contains citations to resources such as books, serials, archives and manuscripts, maps, musical scores, sound recordings, films, photographs, realia and computer files.
DATABASE SIZE:	56 MILLION ITEMS
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet access Server - addr: rlg.stanford.edu
COST:	Free (as a courtesy to Z39.50 developers)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group (RLG)
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	ABI
DATABASE CONTENTS:	ABI/Inform database Contents: Contains records describing articles from business magazines management and professional publications, academic journals trade and speciality publications and international titles.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	AVI
DATABASE CONTENTS:	Avery Index to Art and Architectural Periodicals. Contains records describing articles in over 1,000 architectual periodicals in the fields of architecture and related disciplines.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	DSA
DATABASE CONTENTS:	Dissertation abstracts containing records describing dissertation and master's theses in all areas of academic research at over 550 universities including almost all North American graduate schools and many European universities.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	EIP
DATABASE CONTENTS:	Engineering index which contains records describing articles in over 4,000 national and international engineering journals and conference proceedings. Coverage includes materials from all major engineering societies commercial publishers, research and development organizations, university presses and government agencies.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	FLP
DATABASE CONTENTS:	Index to Foreign Legal Periodicals which contains records describing articles in over 450 legal journals. Also contains essay collections festschriften and congress reports as they are published. Coverage includes international law, comparative law and municipal law of countries other than the United States, British Isles and the British Commonwealth.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	HAP
DATABASE CONTENTS:	Hispanic American Legal Periodicals which contains citations to articles in more than 400 scholarly journals published in Latin America or treating Latin American and U.S. Hispanic topics. Coverage includes materials in English, French, German, Italien, Portugese and Spanish.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	HST
DATABASE CONTENTS:	History of science and technology database which contains records describing articles conference proceedings, books, book reviews and dissertations in the history of science and technology and allied historical fields. Citations reflect the contents of over 600 journals and partial contents of several hundred more. Coverage includes all languages in which these materials are published.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	NPA
DATABASE CONTENTS:	Newspaper abstracts which contains records describing articles from 25 major regional, national, financial and ethnic newspaper.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	PAI
DATABASE CONTENTS:	Public Affairs Information Services (PAIS/contains records describing articles in over 1,400 periodicals and thousands of government document statistical directories, reports, pamphlets, conference proceedings and books coverage including materials from the entire spectrum of public and social policy issues with an emphasis on factual and statistical information. Some records include an abstract of the article.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	PRA
DATABASE CONTENTS:	Periodical abstracts database which contains records describing articles from close to 1,000 general interest, academic and business journals and transcipts of over 30 news -oriented television programs.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	WLI
DATABASE CONTENTS:	World Law Index database Part 1 the Index to Hispanic legislation contains records describing the national laws, decree-laws and regulations taken from the official legal gazettes of 29 countries studied by the hispanic Law Division of the Library of Congress Law Library. These include the spanish speaking countries of Latin America, plus Haiti Brazil, the Philippines, Portugal, Spain and nations from the Portugese - African region.
DATABASE SIZE:	Unknown
DATABASE PROVIDER:	Research Libraries Group (RLG)
NETWORK ACCESS:	Internet Access Access - addr: rlg.stanford.edu
COST:	Free (test/demo of production DB) Product/Subscription required
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME	Research Libraries Group Server
b) ORGANISATION	Research Libraries Group
QUERY TYPE:	RPN
RECORD SYNTAX:	USMARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Lennie Stovel e-mail bl.mds@rlg.stanford.edu

DATABASE NAME:	INFOCAL
DATABASE DESCRIPTION:	John Kunze's demo server
NETWORK ACCESS:	Internet Access Server address: infocal.berkeley.edu
COST:	Free (demo/test)
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME:	UC Berkeley server
b) ORGANISATION	University of California
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	Bib 1
CONTACT INFORMATION:	John a. Kunze University of California e-mail jak@violet.berkeley.edu

DATABASE NAME:	CATALOG
DATABASE CONTENTS:	University of California Book Catalog
DATABASE SIZE:	Over 7 Million records
NETWORK ACCESS:	Internet Access Server addr: MELVYL.UCOP.EDU Server ip: 192.35.222.222
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME:	UC-DLA's MELVYL SERVER
b) ORGANISATION:	University of California. Division of Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	Bib 1
CONTACT INFORMATION:	Margery Tibbets University of California Division of Library Automation e-mail: mztuc@uccmvsa.bitnet

DATABASE NAME:	PE
DATABASE CONTENTS:	University of California periodicals database
DATABASE SIZE:	800,000 RECORDS.
NETWORK ACCESS:	Internet Access Server addr: MELVYL.UCOP.EDU Server ip: 192.35.222.222
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME:	UC-DLA's Melvyl Server
b) ORGANISATION:	University of California. Division of Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	Bib 1
CONTACT INFORMATION:	Margery Tibbets University of California Division of Library Automation e-mail mztuc@uccmvsa.bitnet

DATABASE NAME:	TEN
DATABASE CONTENTS:	The last ten years of the University of California's Book Catalog
DATABASE SIZE:	1.5 million records
NETWORK ACCESS:	Internet Access Server addr: MELVYL.UCOP.EDU Server ip: 192.35.222.222
COST:	Free
PROTOCOL:	Z39.50
LOCATION:	
a) SERVER NAME:	UC-DLA's Melvyl Server
b) ORGANISATION:	University of California. Division of Library Automation
QUERY TYPE:	RPN
RECORD SYNTAX:	US MARC
ATTRIBUTE SET:	Bib 1
CONTACT INFORMATION:	Margery Tibbets University of California Division of Library Automation e-mail: mztuc@uccmvsa.bitnet

DATABASE NAME:	TALIS
DATABASE CONTENTS:	Libraries Monographs, Serials and Report Collections
DATABASE SIZE:	288,000 records
DATABASE PROVIDER:	University College Dublin
NETWORK ACCESS:	Presently available through IRIS only. Looking into the possibility of making it available over the Internet.
COST:	Initial registration with IRIS user ID and ten hours connect time: £250 + VAT Additional blocks of connect time published in advance. 10 hours £200 + VAT 25 hours £400 + VAT 2000 hours £3,000 + VAT
PROTOCOL:	Z39.50 Version 2
LOCATION:	
a) SERVER NAME	UCD Z39.50 Server
b) ORGANISATION	University College Dublin
QUERY TYPE:	RPN
RECORD SYNTAX:	UK MARC
ATTRIBUTE SET:	bib-1
CONTACT INFORMATION:	Marie Burke, University College Dublin, Belfield, Dublin 4. Tel: (01) 7067647 Fax: (01) 2837667

2.3 Practical experiences

2.3.1 CAT from UC Berkeley

DATABASE NAME:	INFOCAL
DATABASE TITLE:	John Kunze's demo server (small database)
AVAILABILITY:	Internet Access Server addr: infocal.berkeley.edu
COST:	Free (demo/test)
PROTOCOL:	Z39.50
LOCATION:	Server: UC Berkeley server
ORGANISATION:	University of California
ATTRIBUTE SET:	Bib-1
DATABASE PROVIDER:	University of California, Berkeley

USER ACCESS: telnet infocal.berkerley.edu
The user is then connected to INFOCAL the Information System for the University of California Berkeley Campus

A Table of Contents list is displayed with the following options presented to the user:

1. Classes
2. Faculty and Staff phone book
3. Job Vacancy Listings
4. Campus News and Events
5. Information Systems and Technology Newsletter
6. Research and Instructional Resources
7. Bibliographic Catalogues (experimental)

The user can enter a selection number or a command for example help.

When the user chooses Option 7 "Bibliographic Catalogues the following options are available.

1. About Bibliographic Access through Infocal

2. UC Library Catalogue (MELVYL)

3. Pennsylvania State University Library Catalogue (LIAS)

1.1 About Bibliographic Access through Infocal.

Selected external bibliographic catalogues are available through Infocal for limited experimental access through a computer-to-computer communications protocol called Z39.50.

Infocal, like many other information services, is based on a client-server model. The client software runs on the local computer and communicates via a specified protocol with a server machine which holds the information. Infocal uses a number of protocols, including Z39.50, Gopher, and others. In the present multi-protocol environment, this increases interoperability with other systems, thus enhancing the value of the local service.

Although most non-commercial Z39.50 projects have not reached production level in their development, IST's Information Services unit has been asked by the UC Office of the President's Division of Library Automation and the Penn State University Library to allow Z39.50 access to their experimental Z39.50 servers through Infocal. The UC systemwide catalogue, MELVYL, runs on an IBM 3090 in Oakland, under the MVS operating system. The Penn State catalogue, LIAS, runs on a DEC VAX 10000 in University Park, Pennsylvania, under the VMS operating system. The Infocal Z39.50 client runs on a DEC 5900 in Berkeley under the ULTRIX operating system. There is no shared Z39.50 code on the three installations.

This service is truly experimental - the remote servers will not always be available, and Infocal was not designed as a specialised bibliographic client. Access will be limited for now to the main LIAS and MELVYL bibliographic catalogues, not the other databases and services accessible through those systems. This experimental version is no substitute for traditional access to online catalogues. What you will see is based on Version 2 of Z39.50, the latest approved version of the standard. Work is well underway on Version 3 which will provide more and enhanced servers. Over the next few years we will see more and more implementations of this standard, leading toward considerably more interoperation between diverse systems than currently.

1.1.1 An information service is provided for users on how to use the Infocal database. The following information is displayed to assist the user.

How to use Infocal:
When you see --> you may enter a command or a selection number, if any. Always end each command by pressing <RETURN> or <ENTER> on some keyboards. In most cases pressing <RETURN> by itself displays a previous menu. There are also a few commands you may want to use from to time.

Commands:

top	go to uppermost level and display the starting menu
restart	start a new session

end terminate session
help display information on a given topic (currently just "pager") program is called to let you read text one screenful at a time. The paper understands commands that you can read about by typing "help pager".

Comments and Questions:
For questions or comments about the information on this system, please contact the information providers directly. For questions about the Infocal software, contact Infocal support staff at 642-8507 or send electronic mail to consult@infocal.berkeley.edu.

2. UC Library Catalogue (MELVYL)
Query Type: The following searches are available in MELVYL:

1. Personal Author
2. Corporate Author
3. Exact Corporate Author
4. Exact Title
5. Title Words
6. Subject Headings
7. Exact Subject Headings
8. ISBN
9. ISSN
10. Other Search

A sample 'Personal Author' search was conducted using the author 'Austen'

Result

Request: find pa austen, j
456 records found

(CAT) Record #1

Author: Aiken, Joan, 1924
Title: Mansfield revised/Joan Aiken
Publisher: Garden City, N.Y: Doubleday, 1985, c 1984
Pages: 188 p.; 22 cm
Notes: Sequel to: Mansfield Park/Jane Austen
Other Authors: Austen, Jane, 1775 - 1817 Mansfield Park

The number of records which have been found is displayed. The first record is displayed in a full and complete MARC format. The user can then enter a record number or proceed to the next record. The user is not shown the full display of lists but has to search through the records one at a time.

3. Pennsylvania State University Library Catalogue (LIAS)

Query Type: The following searches are available in the LIAS database.

1. Personal Author
2. Author
3. Title Words
4. Exact Title
5. Uniform Title
6. Series Title
7. Subject Heading
8. Personal Name Subject
9. Geographic Name
10. ISBN
11. ISSN
12. Library of Congress Card Number

A sample 'Exact Tile' search was conducted under the title Pride and Prejudice'

Result:

Request: zfind xt {pride and prejudice}

(CATALOG) Record #1
Author: Austen, Jane, 1775-1817
Title: The collected works of Jane Austen: Sense and sensibility, Pride and prejudice, Mansfield park, Emma, Northanger abbey, Persuasion.
Publisher: London: Octopus Books, 1980
Pages: 1184 p.; 22 cm
Other Authors: Sense and sensibility.
Pride and prejudice.
Mansfield park.
Emma.
Northanger abbey.
Persuasion.

35 records found.

It is displayed in the same format as the MELVYL results.

COMMENTS

The main problems encountered by the user is that when searching for an item the records found are displayed on a singular basis and the user has to search through each record individually. The information screen on how to use Infocal is very helpful and Infocal is freely available over the Internet.

Contact Information: John A. Kunze
University of California
e-mail jak@violet.berkeley.edu.

2.3.2 DREWDB from Data Research Associates

DATABASE NAME:	DREWDB
DATABASE DESCRIPTION:	Sample Database of 400,000 bibliographic records from Drew University.
AVAILABILITY:	Internet Access server-addr: dranet.dra.com server ip: 192.65.218.23 server port: 210 login and Password required Testing logs from the server are retrievable by using FTP DRANET.DRA.COM, username IR Server, password GUEST.
COST:	Free (demo)
LOCATION	
(a) SERVER NAME	Data Research Associates server
(b) ORGANISATION	Data Research Associates (DRA)
DATABASE PROVIDER:	Data Research Associates
CONTENTS:	The Data Research Information Gateway allows the user to search in the Online catalogue and the Gateway catalogue.

USER ACCESS: telnet dranet.dra.com
For testing purposes a demo account was provided to access via the Internet. A username and a password were given for one week for testing by the Sales Administrator, Laurie Rock-Scull.
e-mail LAURIE@DRANET.DRA.COM

The Online Catalogue

Query Type:

The Online Catalogue allows the user to search under the following options:

1. Authors
2. Title
3. Subject

The following options are also presented to the user:

Help Screen
Next List of Commands
Database Gateway
News
Suggestion Box
Information Gateway
Keyword Searching

Keyword Searching

The user is able to search the database using Keywords as follows:

EXAMPLE

fi	Keyword	fi games
fi ti	Title	fi ti america
fi au	Author	fi au austen
fi su	Subject	fi su football

The user can then enter the following commands.

DISPLAY: To display a record
START: To start over
STOP: To finish
HELP: For more information

OTHER SEARCHES
The user can also research the database under the following options.

C	=	CALL NUMBER
I	=	ISBN
N	=	ISSN
L	=	LCCN
O	=	ORIGINAL #
R:	=	REFERENCE #

SAMPLE SEARCH
A sample Author search was conducted under the Author `Austen'.

Results:

LINE #	# of titles	
1	14	Austen Jane, 1775-1817
2.	1	Austen Jane, `1775-1813. The Watsons.

The User then types in the line number for title information. A new search can be entered at any time. The commands are:

K Keyword
B Back Up
?? Help
ST Start Over
LIM Limit
A Author
T Title
S Subject
C Call

TITLE SEARCH
The user enters the title he wishes to find. Leading articles (A, AN or THE) in a title should not be entered.

COMMENTS
The results of the searches are first displayed in a list and the user can then enter a number to view a full display of the record. The records is in full MARC format. The system is user-friendly and available on the Internet.

Contact Information: Sean Donelan
Data Research Associates Inc.,
St. Louis, MO
Tel: +1 314 432 1100
e-mail: sean@sdg.dra.com.

3 Available SR databases

This section describes experimental and operational SR databases. The table form has been chosen to provide overview of the problems that will occur in the implementation of the EUROPAGATE gateway and mailserver.

As the evolution of the SR protocol is rather new one cannot expect to find lots of SR databases. It is difficult to differentiate between operational and experimental databases when they are all non cost databases and more or less still involved in research projects. In this chapter, the databases from the ION project are considered operational and some of the servers from Nordic SR Net are considered experimental. Much work is going on with the purpose of creating experimental SR databases, e.g. in British Library and in Die Deutsche Bibliothek but they are at an early stage.

3.1 Experimental databases

Tables of servers from the Nordic SR Net project.

3.1.1 Bibsys, Norway

Location	Bibsys 7034 Trondheim Norway Phone +47 7359 2097 Fax +47 73596848
Contents	Union Catalogue of all university and academic libraries in Norway.
Cost	Free
Size	1,500,000 records
Protocol information	SR
Availability	TCP/IP
Technology	HP-UX Unix front server. IBM VM/ESA database backend.
Toolkit	ISODE
Query type	CCL
Attribute set	CCL operators and local attributes
Record syntax	NORMARC
Record composition	Full
Character set	ISO Latin-1
Contact info	Ole Husby Bibsys ole@bibsys.no

3.1.2 University Library of Oslo, Norway

At the university library there are two SR targets, the Trip system and the UBO:BOK system. Trip is a Swedish library system and it holds four sub databases where the largest is the ISDS base over serials with International Standard Serial Number. It has more than 600,000 records. UBO:BOK is a catalogue of Norwegian books.

Location	University Library of Oslo, Norway Postbox 1080 Blindern 0316 Oslo Norway Phone +47 2285 2546 Fax +47 2285 2401
Contents	Trip : Has two available databases : 1) SAMPER Union catalogue of periodicals 2) ISDS Serials with International Standard Serial Number UBO:BOK : Has two available databases : 1) BOK. National bibliography 2) SAMBOK. Union catalogue of monographs
Cost	Free
Size	Unknown
Protocol information	SR
Availability	TCP/IP
Technology	
Toolkit	ISODE
Query type	CCL
Attribute set	CCL operators and local attributes
Record syntax	NORMARC
Record composition	
Character set	ISO Latin-1
Contact info	Geir Pedersen geir.pedersen@usit.uio.no

3.1.3 Libris

Location	Kungl. Biblioteket LIBRIS-avd. Box 5039 10241 Stockholm Sweden
Contents	Union catalogue for all Swedish research and university libraries.
Cost	Not decided yet. Probably free.
Size	
Protocol information	SR
Availability	TCP/IP
Technology	SUN Sparc 10 server frontend. IBM ES9021-900 with Stairs as database backend.
Toolkit	ISODE
Query type	CCL
Attribute set	CCL operators and local attributes
Record syntax	UNIMARC
Record composition	
Character set	ISO Latin-1
Contact info	Goran Skogmar Libris skogmar@libris.kb.se

3.2 Operational databases

The objectives of the ION project is to create an integration of SR and ILL, especially in terms of international interlending. The ION project has three partners, Pica from the Netherlands, LASER of the United Kingdom and SDB/SUNIST of France. The French partner has no available OPAC and is only cooperating via the ILL. LASER and Pica have each SR servers that have been brought to an operational stage.

The record composition in the ION project is reduced to 12-15 fields, which has been chosen as necessary identification for ILL processing.

3.2.1 Pica

Location	Pica Schipholweg 99 Leiden Netherlands Phone +31 71 257257
Contents	Union catalogue for Dutch libraries
Cost	Not decided yet.
Size	
Protocol information	SR
Availability	X.25
Technology	Micro VAX server frontend running DEC Ultrix Tandem database backend.
Toolkit	ISODE
Query type	RPN
Attribute set	bib-1
Record syntax	UNIMARC
Record composition	Full and Brief. In both cases reduced.
Character set	ISO 10646
Contact info	Makx Dekkers Pica dekkers@pica.nl

3.2.2 LASER

Location	LASER Fourth Flour Gun Court 70, Wapping Lane London EC19RL Great Britain Phone +44 71 702 2020 Fax +44 71 702 2019
Contents	Union catalogue for a large number of libraries all over Great Britain
Cost	Not decided yet.
Size	3,000,000 entries
Protocol information	SR
Availability	X.25
Technology	AEG front server running Realix UNIX (AT&T 5.3). AEG risc based database backend.
Toolkit	ISODE
Query type	RPN
Attribute set	bib-1
Record syntax	UNIMARC
Record composition	Full and Brief. In both cases reduced.
Character set	ISO 10464
Contact info	Peter Smith LASER

3.3 Practical experiences

The practical evaluation of available SR databases was made very difficult for two reasons:

- There is, to our knowledge, only one freely available SR client.
- Most databases are either experimental and, reserved for the experimental use of restricted groups, or with restricted access.

The client we have used for practical tests is the one provided with Nordic SR-net software. It is a simple client with a text interface and limited functionality. This client is provided more as a client programming example, using the Nordic SR-net toolkit, and to allow minimal testing of newly set-up databases then as a production client.

For the purpose of practical testing we have contacted a number of database maintainers both of experimental database and of production ones. We got few answers specifying that their database(s) were not, or not yet, available.

Our practical test had therefore to be on the only SR database freely available to us, SAMPER on the GANDALF server. This of course limits the scope of this test, furthermore because this is the database provided for test of the test client we have.

Following is the log of a connection with the server gandalf:

```
sun> client
Nordic SR-NET - Simple SR Client v0.1d
Type HELP for information on commands.
SR> help
Commands are:
   STATUS
   OPEN database-server
   FIND [resultset ID =] CCL command
   SHOW record number [ number of records to show]
   NEXT number of records to show [ starting record number]
   RESULTSET result set name
   DATABASE database [, database]
   DELETERESULTSET [result set, result set, ]
   SET  SMALLSETUPPERBOUND  |  LARGESETLOWERBOUND  |  MEDIUMSETPRESENTNUMBER
<value>
   RECORDSYNTAX <record syntax>
   CLOSE
   QUIT
SR> open gandalf
[ using SR BASIC, gandalf, Universitetet i Oslo, NO ]
Connected to gandalf (SR implementation High Level API Server, version v0.1)
SR> status
Connected to gandalf.
SR> database samper
SR> status
Connected to gandalf, current database samper.
SR> find a=test
34 records found, 10 records returned
Database: SAMPER
*0012085   skp*
*008901126
*24500$aAGRICULTURAL MACHINERY ADMINISTRATION, REGINA,
   SASKATCHEWAN. TEST REPORT.
*85000$aNLH$n4-$y1961-
^
Database: SAMPER
*0014440   skp*
*008901126
*24500$aAMERICAN SOCIETY OF MECHANICAL ENGINEERS, NEW
   YORK. POWER TEST CODES.
*85000$aNTUB$y1923-46 U
*85000$aIENERGI
^

[...]

Current result set: a
SR> show 11 1
1 records returned
Database: SAMPER
*00152693  skp*
*008901126
*24500$aNATIONAL RESEARCH COUNCIL OF CANADA, OTTAWA.
   ASSOCIATE COMMITTEE ON PLANT BREEDING. REPORT
   ON CO-OPERATIVE 2-ROWED BARLEY TEST.
*85000$aNLH$y1957-58
^
SR> next 1
1 records returned
Database: SAMPER
*0014440   skp*
*008901126
*24500$aAMERICAN SOCIETY OF MECHANICAL ENGINEERS, NEW
   YORK. POWER TEST CODES.
*85000$aNTUB$y1923-46 U
*85000$aIENERGI
```

```
^
SR> status
Connected to gandalf, current database samper, current result set "a".
SR> find b=earth
108 records found, 0 records returned
Current result set: b
SR> status
Connected to gandalf, current database samper, current result set "b".
SR> resultset a
SR> deleteresultset b
Deleting named result sets...  Done
SR> record syntax
Previous RecordSyntax was RECORDSYNTAX NORMARC.
New RecordSyntax is syntax.
SR> RecordSyntax UNIMARC
Previous RecordSyntax was syntax.
New RecordSyntax is UNIMARC.
SR> status
Connected to gandalf, current database samper, current result set "a".
SR> show 1 1
1 records returned
Database: SAMPER
*0012085   skp*
*008901126
*24500$aAGRICULTURAL MACHINERY ADMINISTRATION, REGINA,
   SASKATCHEWAN. TEST REPORT.
*85000$aNLH$n4-$y1961-
^


SR> help
Commands are:
   STATUS
   OPEN database-server
   FIND [resultset ID =] CCL command
   SHOW record number [ number of records to show]
   NEXT number of records to show [ starting record number]
   RESULTSET result set name
   DATABASE database [, database]
   DELETERESULTSET [result set, result set, ]
   SET  SMALLSETUPPERBOUND  |  LARGESETLOWERBOUND  |  MEDIUMSETPRESENTNUMBER
<value>
   RECORDSYNTAX <record syntax>
   CLOSE
   QUIT
SR> set MEDIUMSETPRESENTNUMBER 1
   Small set upper bound: 10
   Large set lower bound: 100
   Medium set present number: 1
SR> find b=and
11266 records found, 0 records returned
Current result set: b
SR> find b=sun
Search failed - remote error: Result set exists and replace indicator off
SR> set replace on
   Small set upper bound: 10
   Large set lower bound: 100
   Medium set present number: 1
SR>  find b=sun
Search failed - remote error: Result set exists and replace indicator off
SR> delete b
Deleting named result sets...  Done
SR>  find b=sun
9 records found, 9 records returned
Database: SAMPER
*0015166   skp*
*008901126
*24500$aANNALS OF THE IQSY. CAMBRIDGE,MASS.
   SE
INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS,
   ROME. INTERNATIONAL YEARS OF THE QUIET SUN
   COMMITTEE. ANNALS OF THE IQSY. CAMBRIDGE,
   MASS.
^
```

```
[...]

Database: SAMPER
*00190813  skp*
*008901126
*02200$a0269-1159
*24500$aSUN AT WORK IN EUROPE. BIRMINGHAM.
*85000$aNTUB$n4-$y1987-
*85000$aNBI$y1988-
^


Current result set: b
SR> set SMALLSETUPPERBOUND 1
   Small set upper bound: 1
   Large set lower bound: 100
   Medium set present number: 1
SR> find c=sun
9 records found, 1 records returned
Database: SAMPER
*0015166   skp*
*008901126
*24500$aANNALS OF THE IQSY. CAMBRIDGE,MASS.
   SE
INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS,
   ROME. INTERNATIONAL YEARS OF THE QUIET SUN
   COMMITTEE. ANNALS OF THE IQSY. CAMBRIDGE,
   MASS.
^


Current result set: c
SR> next
1 records returned
Database: SAMPER
*0015166   skp*
*008901126
*24500$aANNALS OF THE IQSY. CAMBRIDGE,MASS.
   SE
INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS,
   ROME. INTERNATIONAL YEARS OF THE QUIET SUN
   COMMITTEE. ANNALS OF THE IQSY. CAMBRIDGE,
   MASS.
^


SR> status
Connected to gandalf, current database samper, current result set "c".
SR> RESULTSET
Current result set is c
SR> RESULTSET all
SR> RESULTSET
Current result set is all
SR> DELETERESULTSET all
Deleting named result sets...     Deletion of result set(s) failed:
resultSetDidNotExist
SR> close
SR> status
Not connected to any remote server - use OPEN to establish a connection
SR> quit
sun>
```

The conclusion of this practical test is difficult to draw as it is a one client on one database test. It is very difficult to know if a client does not support a particular function or if it is the server. The HELP command from the client show that it implements a restricted set of commands which all seem to be supported by the server. It is difficult to know if the server and that particular database supports further command or arguments. In the case of the replacement of an existing set in a new find it is clear that the server

supports the replace indicator but the client has no way of setting it. The limited information available on this test database does not really allow a more complete practical test. One thing we have noticed during practical test is that the database name is not really check in itself and selecting a wrong database will simply returns the following cryptic message: Search failed - remote error: Unsupported search. This looseness in command and parameter control is a general remark about this client/server implementation. It is nevertheless understandable as this is only a test client talking to an experimental database.

4 Case study of the IRIS project

In 1994, the IRIS service was launched in Ireland. IRIS implemented the ANSI Z39.50 protocol to link the distributed databases of six libraries in a single searching mechanism. IRIS is a database searching and document ordering service for libraries and business users in Ireland. The service is based on the libraries of Dublin City University, Forbairt, Trinity College Dublin, University College Dublin, University College Galway, and the University of Limerick.

4.1 Background

IRIS was begun in 1990 as a recommended approach to the future of library resource sharing and interlending in Ireland. In the absence of a union catalogue in Ireland, libraries depend heavily on the resources of the British Library to service their interlending requirements. In 1991 some 85% of Irish interlending traffic was with BLDSC. There was a desire, therefore, to seek a solution which would exploit more fully the resources of Irish libraries. The original concept envisaged the transparent linking of library catalogues using modern networking technology. However, the potential of the project for making the resources held in Irish libraries more easily accessible to business and industry in the country proved attractive to the European Commission. A proposal for funding to the Commission of the European Communities was approved under the Telematique programme in April 1992. The Telematique programme is funded under the European Regional Development Fund and is aimed at the development of advanced telecommunications services for SMEs. Telematique requires 50% co-funding from the participant libraries.

The IRIS project was initially based on a proprietary solution. However, by mid 1992, it had become apparent that the technical architecture would have to be a client-server based system. A feasibility study was conducted to investigate the business and technical options and the viability of these options in terms of the time and financial constraints. Based on the results of the feasibility study, the decision to proceed was made in November 1992.

4.2 Standards

The feasibility study identified that there were relevant similar but different ISO and ANSI standards which could form the basis for the proposed service. The Standards were ANSI Z39.50 and ISO 10162/10163 Search and Retrieve (SR). The main differences between Z39.50 and ISO SR for the purpose of IRIS were identified as:

(i) the ANSI standard functionality is generally a superset of the ISO standard and is more widely implemented;

(ii) the ANSI standard is typically built upon the TCP/IP communications (although the 1988 standard does not specify it) system whereas the ISO standard assumes the use of the ISO OSI communications;
(iii) Different transfer syntaxes.

In Europe the OSI communication standard had been the favoured solution but for this project there were a number of constraints which resulted in the choice of TCP/IP as the underlying communications stack.

- A TCP/IP infrastructure was already in place whereas the libraries system did not have the complete OSI stack at the moment. To install the OSI stack in the library system would be expensive in terms of software licences and extra hardware. In some cases (notably the PC based system in Forbairt) it might not be feasible to install OSI on the same platform.

- It would not be feasible to implement low costs clients with OSI (i.e. ones with low hardware and software costs).

- Library system vendor resistance to OSI. Z39.50 was more prevalent in the US and a number of the vendors were U.S. oriented.

- There was a time constraint to implement the service before December 1993.

The choice between using Z39.50 and ISO SR was not as different as compared to the difference between ISO OSI stack and TCP/IP stack. The functionality and implementation at the protocol layer was very similar and the functional differences would probably be eliminated in future versions of Z39.50. This meant that gateways between ISO SR and Z39.50 will not result in loss of functionality provided a core set of options were used. The project used such a set of options.

4.3 Implementation

The libraries operated a diverse range of systems software and hardware platforms: Dynix (using two different platforms) at three of the sites; Oracle on a Novell network; BLCMP on a Data General MV9500; URICA on a McDonnell Douglas Series 19. Except in the case of Forbairt, access to each of these databases was available over the Irish academic network HEAnet. A national policy to extend the academic network to become a national research network facilitated the inclusion of Forbairt on HEAnet.

4.3.1 The Service — facilities

IRIS provides the following facilities:

- access to the holdings of major Irish libraries in a single search
- access to a table of contents service, listing 14,000 journal titles with more than 4,000,000 articles
- ordering of items with a single keystroke
- items despatched in less than 24 hours, throughout the working week
- services at low cost

- completely distance independent.

IRIS also allows the user to consult information resources worldwide through IRIS/UnCover - a partnership arrangement which gives access to UnCover, a database in excess of 14,000 titles with more than 4,000,000 journal articles: the largest on-line database of its kind.

4.3.2 The Service — technical implementation

The basis of the technical implementation is:
- implementation is based on the ANSI Z39.50 -1992 (version 2);
- the communications network used is TCP/IP based;
- non academic users access the system over dialup lines or Eirpac (i.e. via standard PAD interface);
- attribute set Bib-1 only is supported;
- client is based on a Unix platform;
- E-mail is used for request transmission.

4.4 Using IRIS

To use IRIS, the user needs
- A PC, a modem and a telephone
- or access to a network, such as the Irish academic HEAnet
- plus, ideally, access to a fax machine.

The user must also have registered with IRIS and received a user ID.
When logged on to IRIS the menu offers the following options:
- The IRIS library catalogues
- IRIS/UnCover: journal article access and delivery
- Service News.

Items can be selected on-screen. Your order will be sent immediately to the relevant IRIS library or to the IRIS/UnCover service. The material requested is delivered by:

- IRIS: copies of journal articles by post or through fax, or loans of books or other materials by post, within 24 hours of an order (urgent materials can be despatched by courier on request)
- IRIS/UnCover: copies of journal articles through fax within 24 hours.

4.5 IRIS — the future

IRIS is a strategic development for Irish libraries both in terms of resource management and innovative technology implementation. The resources of the libraries of higher education institutions are being made available to each other, to libraries generally and especially to the business user. Among the advantages to the libraries is the potential for income generation, profile raising among the business and wider community and resource utilisation. Implementing a client-server architecture provides the basis for an expandable distributed national or international database and provides a gateway to other services. To the libraries, an important consideration is that an infrastructure will be in place to take advantage of developments in electronic document delivery.

5 Case study of the Nordic SR-net project

5.1 About Nordic SR Net

This section (5.1) is copied from section 4.4.2 in Part I of the Background Study.

The Nordic SR-net project was started in autumn 1991 by NORDINFO, an organisation including all five Nordic countries. The goal of the project is to implement the ISO SR standard protocol for communication between several information systems in the Nordic countries thus offering operational network services to the library community. The participating organisations are:

- University Library of Oslo, Norway (UBO)
- BIBSYS, Norway
- BRODD, The Norwegian School of Library and Information Science
- National Office for Research and Special Libraries, Norway (RBT)
- Danish Research Libraries, Computer Division, Denmark (FEK)
- The LIBRIS project group, Sweden
- Automation Unit of Finnish Research Libraries, Finland, (TKAY)
- University Library of Reykjavik, Iceland

The aims of the project are (from NORDINFO-Nytt 1992:2):

- To connect main library catalogues, in the Nordic countries, in a computer network for the purpose of simplifying the reference work and at the same time to be able to benefit from the other institutions classification and indexing work.

- To improve the knowledge of the use of library OSI protocols in the Nordic countries.

- To influence further development of the library OSI protocols based on our own experience with the use of such protocols.

- To simplify the search and retrieval of MARC records from bibliographic databases, with different command syntaxes, in Europe and North America.

- To make it possible to search different types of databases using IANI in general.

- To prepare a basis for the general use of SR in the academic networks and in the library community, by making available a general implementation of SR together with the experiences gained in the project.

One of the results of the Nordic SR-net project is the development of a ISODE based SR toolkit that includes a protocol machine with a high level API together with conversion utilities for converting query languages and MARC-formats. This has been used to implement both targets and a primitive line oriented standalone origin.

5.2 Server projects

So far three targets has used the toolkit and installed operable SR servers though none provide a regular service yet :

- TRIP/UBO:BOK, Oslo, Norway
- BIBSYS, Norway
- LIBRIS, Sweden

The two Norwegian sites have published six databases (BIBSYS, UBOBOK, SAMBOK, NOTA, SAMPER, and ISDS) that are available for testing within the Nordic SR-net project.

The LIBRIS target is operable in a development environment within Ericsson (a Swedish telecommunications company) who operates the LIBRIS computer. Due to security considerations the target is not reachable from outside Ericsson's internal network. They plan to soon install a UNIX computer outside the internal Ericsson network and then LIBRIS will be accessible for the rest of the Nordic SR-net group for testing purposes.

TKAY in Finland has a VTLS based library system and they are waiting for the VTLS target implementation. VTLS has released an origin already. The target is planned to betatest in March/April when TKAY will get a copy for testing. Both these are Z39.50 implementations that are layered directly above TCP/IP and will probably not be able communicate with the rest of the SR targets and origins in the project. Other problems are related to query and transfer syntax incompatibilities between the systems.

FEK in Denmark will start implementing their server once they have stabilised their new ALBA library system which was taken into use early 1994.

University of Reykjavik is working together with LIBERTAS on a target implementation.

5.3 Results from the project

When the project was finished 1994-02-24 close to 30 persons had spent 8700 man hours within the project. The results from the project (NORDINFO Nytt 1994:1) can be summarised in the following points:

- A protocol engine for SR (ISO 10163) was developed as a general package on a UNIX machine. This package can utilise three different underlying protocol stacks:

    1. OSI layers 4-7 (using ISODE) and TCP/IP for layers 1-3.
    2. OSI layers 4-7 (using ISODE) and X.25 for layers 1-3.

3. direct on top of TCP/IP

   The protocol engine is freely available by anonymous ftp at URL
   ftp://atlas.bibhs.no/Nordic-SR/SR-6.tar.Z

- An API to be used between a local library system and the protocol engine was defined.

  To further simplify the use of the protocol engine a high-level API was also defined. This also includes help routines like conversion from CCL to Reverse Polish Notation and conversions to and from UNIMARC records.

- A conformance test suite for the SR protocol was developed together with a procedure to perform the tests. The protocol engine was tested with this procedure.

- An implementation of the origin part of the protocol was done.

- A conversion table for converting between seven MARC-formats was developed together with tools to do the conversion.

- This is freely available by anonymous ftp at URL ftp://atlas.bibhs.no/MARC

Furthermore some target services was developed (see sec 5.2 above).

The experiences gained from the project include:

- Network services today are more than adequate to support a protocol like SR.

- It is important to provide services like scan, explain, etc.

- There are problems with using different character sets in origin and target, specially in relation to the search service.

- ISODE is good for making a fast first implementation but it is unclear if it is efficient enough to support large loads.

A complete report will be published by NORDINFO later.

5.4 Further developments

The Nordic SR-net project has two major problems that has to be solved in the future. One is of course the problem with inoperability between Z39.50 and SR. They have been discussing ways of implementing dual stacks to facilitate communication with both SR and Z39.50. The EUROPAGATE project will of course solve this problem for Nordic SR-net. The other problem is the inefficiency introduced by ISODE. They are looking into using Minimal OSI as a replacement for ISODE. This will result in far superior efficiency of their system.