

**Martin Lhoták,**

**LINCA: The Union Catalog of the Czech Academy of Sciences**

from / *aus*:

Union Catalogs at the Crossroad

Edited by

Andrew Lass and Richard E. Quandt

pp. / S. 173-185

Erstellt am 31. März 2005

## Impressum

Bibliographic information published by Die Deutsche Bibliothek

Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at <http://dnb.ddb.de>.

*Bibliografische Information Der Deutschen Bibliothek*

*Die Deutsche Bibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.ddb.de> abrufbar.*

This publication is also openly accessible at the publisher's website. Die Deutsche Bibliothek has archived the electronic publication, which is now permanently available on the archive server of Die Deutsche Bibliothek.

*Diese Publikation ist auf der Verlagswebsite ebenfalls open access verfügbar. Die Deutsche Bibliothek hat die Netzpublikation archiviert. Diese ist dauerhaft auf dem Archivserver Der Deutschen Bibliothek verfügbar.*

Available open access / open access verfügbar:

Hamburg University Press / Hamburg University Press

<http://hup.rrz.uni-hamburg.de>

Die Deutsche Bibliothek archive server / Archivserver Der Deutschen Bibliothek

<http://deposit.ddb.de/>

ISBN 3-937816-08-9 (print)

© 2004 Hamburg University Press, Hamburg

Rechtsträger: Universität Hamburg, Deutschland

## Table of Contents

Union Catalogs in a Changing Library World: An Introduction .....	xi
<i>Andrew Lass and Richard E. Quandt</i>	

### Part 1 Western Models and Overview

Chapter 1.....	31
EUCAT: A Pan-European Index of Union Catalogs <i>Janifer Gatenby and Rein van Charldorp</i>	
Chapter 2 .....	51
The Virtual Union Catalog <i>Karen Coyle</i>	
Chapter 3 .....	67
The Cathedral and the Bazaar, Revisited: Union Catalogs and Federated WWW Information Services <i>Stefan Gradmann</i>	
Chapter 4 .....	89
Linking in Union Catalogs <i>Ole Husby</i>	
Chapter 5.....	101
Linda: The Union Catalog for Finnish Academic and Research Libraries <i>Annu Jauhiainen</i>	

Chapter 6 .....	123
Beyond Technology: Power and Culture in the Establishment of National Union Catalogs <i>Nadia Caidi</i>	

## Part 2 Czech and Slovak Union Catalogs

Chapter 7 .....	141
The CASLIN Union Catalog <i>Gabriela Krčmařová and Ilona Trtíková</i>	

<b>Chapter 8 .....</b>	<b>173</b>
<b>LINCA: The Union Catalog of the Czech Academy of Sciences <i>Martin Lhoták</i></b>	

Chapter 9 .....	187
CASLIN Uniform Information Gateway <i>Bohdana Stoklasová and Pavel Krbec</i>	

Chapter 10 .....	205
The Slovak Union Catalog for Serials <i>Lýdia Sedláčková and Alojz Androvič</i>	

## Part 3 Polish Union Catalogs

Chapter 11 .....	227
Are Our Union Catalogs Satisfying Users' Needs? <i>Błażej Feret</i>	

Chapter 12 ..... 245

Union Catalogs for Poets

*Henryk Hollender*

Chapter 13..... 265

Aiming at the Union Catalog of Polish Libraries

*Anna Paluszkiewicz and Andrzej Padziński*

Chapter 14 ..... 281

Implementing KaRo: The Distributed Catalog of Polish Libraries

*Tomasz Wolniewicz*

#### Part 4 Hungarian Union Catalogs

Chapter 15 ..... 297

The Hungarian Shared Cataloging Project: MOKKA

*Géza Bakonyi*

Chapter 16 ..... 305

Subject Cataloging in a Cooperative Cataloging Environment

*Klára Koltay*

Chapter 17 ..... 327

Principles of a National Union Catalog: Shared Cataloging in  
a Small Country

*Erik I. Vajda*

#### Part 5 Baltic Union Catalogs

Chapter 18 ..... 341

Using a Shared Cataloging System: The Estonian Approach

*Janne Andresoo and Riin Olonen*

## Part 6 South African Union Catalogs

Chapter 19 .....	361
A National Union Catalog for Shared Cataloging and Resource Sharing by Southern African Libraries <i>Pierre Malan</i>	
Chapter 20 .....	381
Regional vs. National Union Database Development: The GAELIC Perspective <i>D. L. Man and Lettie Erasmus</i>	
Chapter 21 .....	407
Why the “Big Bang” Did Not Happen: The CALICO Experience <i>Amanda Noble and Norma Read</i>	
Contributors .....	435
Conference Participants .....	441

## **Chapter 8**

# **LINCA: The Union Catalog of the Czech Academy of Sciences**

Martin Lhoták

The Academy of Sciences of the Czech Republic (ASCR) is the largest non-university scientific institution in the Czech Republic. It comprises the Main Library and the libraries of 60 basic research institutes.<sup>1</sup> Almost every Institute of the ASCR has its own topically focused library; some Institutes even have more than one library. These libraries are an indispensable resource of information for scientists. The ASCR also maintains a central library totaling 1,000,000 books and periodicals.

In 1992, the main library and a large number of institute libraries accepted a UNESCO grant offered to libraries in the Czech Republic to install the library system Micro-CDS/ISIS, which was a good solution at that time. Micro-CDS/ISIS had low hardware requirements and the system enabled broad customization. It was possible to run the system on local PCs or in the local network.

Large investments of grant moneys permitted the completion of a high-speed connection to the Internet for almost all Academy institutes in 1996. It opened new opportunities and new services for librarians, information workers and library users.

In 1996, the Library obtained support from The Andrew W. Mellon Foundation for the LINCA project, the Library Information Network of the Czech Academy (of Sciences). This was a turning-point because it provided a great opportunity for building the Union Catalog (UC) of the ASCR—a

---

<sup>1</sup> See Table 1 in the Appendix.

catalog that anyone could search in each of the Academy's 65 libraries from a single location. The LINCA project has as its goal the construction of a library information network based on new hardware and software, and the creation of the UC. There were not many different library software systems being used in the Czech Republic at that time. ALEPH or TINLIB were the most frequently installed ones in large Czech libraries.

BIBIS was the newest library system on the Czech market. Although we initially thought about the ALEPH system, there was a problem with ALEPH's local branch, and this fact assigned a lower evaluation to that system in the selection process. All three systems had similar levels of quality and user interface. The final choice was BIBIS. The system had a good functionality, was capable of broad customization and also had good references from abroad (e.g. Philips). BIBIS also had a local distributor, INCAD Ltd., in Prague. These were the main reasons for ASCR's choice. Connection to the server was to be via telnet for BIBIS. In 1996, this was a reasonable solution, considering that some Institutes had a slow Internet connection and low-performance end-user stations. Now, however, it appears to be a serious limitation. The library could choose either a central or a partly distributed system. The distributed system was chosen, based on 14 servers from Sun Microsystems. The project implementation group figured that this choice would offer more room for customizing the final setup.

An additional reason for the choice was that connections between some of the Institutes were still not fast enough. This solution did not seem to be ideal in some respects. The main problem was to find qualified administrators for some of the servers. The new system was at first planned only for Academy institutes that were interested and wanted to participate in the project. But the Academic Council of ASCR decided to fund the new information system to include all ASCR institutes. It was a good idea, but individual ASCR institutes now have a relatively high level of administrative independence, and it was very difficult to initiate and maintain cooperation and communication when some of them indicated no interest in participating. But gradually, more institutes began to work with the system. Its success was (and still is) very dependent on the individual librarians' efforts and abilities at each library. Considerable problems emerged when the Micro-CDS/ISIS system was in operation and when it was necessary to convert



data. The data structure was often not standard, because customized Micro-CDS/ISIS installations varied among individual Institute libraries, and there was also a lot of duplication in authorities and thesauri. It was also hard to find enough Micro-CDS/ISIS specialists who could ensure high-quality data export from the system.

Considering the capabilities that BIBIS had to offer, it was decided in 1997 to create a 'physical' union catalog. The advanced search system Excalibur Retrieval Ware (renamed Convera Retrieval Ware in 2001) was chosen for the UC OPAC tool. BIBIS' vendor in Prague also distributes and services this system, which facilitates making a direct data export from BIBIS to the Union Catalog. The data from the Micro-CDS/ISIS system can also be converted to the UC and it is possible to continually update them, but some data corrections need to be made. We started with 10 cooperating institutes in 1997. In 2002, the UC contained 250,000 entries from 40 institute library databases. In addition, card catalogs were scanned, and the scanned catalog contains more than 1,000,000 cards. The UC makes it possible to order publications through ILL from the main library. In the future we hope to have all 65 libraries in the UC and offer more services. But BIBIS in its Version 97 is quite limited in what it can offer. For example, it is not possible to provide certain information or services to users, such as whether a certain book is physically in a library or to reserve a book. These features are not typically available through the UC, but would, of course, be appreciated by our readers. In institutions having a central administration such as the ASCR, it might be possible to accomplish this. It could be done through strong cooperation and by centralizing management in one place—say, the main library. In time we would like to integrate all ASCR Institute libraries, but it depends on their general willingness to cooperate. Another problem in some institute libraries was the lack of professional librarians with sufficient technical background. It was noted at the beginning of the LINCA project that finding and recruiting enough trained, experienced, quality people is much harder than finding funding for the project. This has been fully confirmed over time.

A technical solution other than BIBIS must be found in the near future, because we are unable to offer advanced services (online reservations, Z 39.50, etc.) that are in fact the standard in the latest systems. The way to go

is to build a central system. This would ensure a more efficient operation for the entire system, for the Union Catalog and also for each institute library database.

## 1 A Closer Look

BIBIS has been adopted by approximately 20 libraries in the five years since its first installation. Forty of the 65 libraries are contributing to the UC of ASCR at the present time. While our ambition for expanded use of BIBIS at institute libraries was originally much higher, it is important to recognize the number of institutes that are now part of the system. Furthermore, one third of the institute libraries are using a system that obliges the user-librarian to observe all necessary cataloging rules, which is another significant achievement. A majority of our BIBIS users have not had any system before and have cataloged only to paper cards.

Of the several problems that remain, data conversion, the implementation of a distributed system, and human resource management are key. All of these are aggravated by financial problems.

## 2 Data Conversion

The Main Library and most institute libraries had cataloged in Micro-CDS/ISIS before the advent of BIBIS. A merit of Micro-CDS/ISIS is its flexibility. However, the problem was the transition to a new system, because no single procedure of conversion was appropriate for all libraries. Furthermore, libraries often did not have their own supervisors. There was only one person in the entire ASCR able to administer ISIS installations and who was qualified to provide system services. It was not possible to convert to BIBIS in all institutes, because many had no staff member to provide technical supervision. As a result, most of the libraries just gave up.

### 3 Distributed System

An improvement in the Academy's computer network occurred during 1995–1997. This improvement made possible a solution in which several servers would be connected to neighboring libraries. However, the bandwidth of the network at that time did not permit the use of a single central server. Administrators of servers were assigned during the planning and organizational stage; one for technical aspects and one for dealing with librarians. The startup and service of individual installation depended on the quality, interest and willingness of each administrator. The LINCA staff present at the beginnings had high resolve and determination. However, nobody imagined that some might not share that enthusiasm and that administrators of these servers might not be adequately remunerated. Although the problem of remuneration was solved in some cases, everything tended to come to a halt at institutes where staff did not have a strong interest in the new system. Even in libraries with good server administration, there tended to be problems because of data conversion difficulties.

### 4 Human Resources

Plans for the deployment of human resources were often inadequate to insure the proper implementation of the project. Complications would arise during data conversion or with server administration when staff was not competent to handle the job. The librarians in certain libraries often failed to get high-quality administrators for their servers, which prevented them from starting the cataloging module. But as time went on, some of the Institutes began to work with BIBIS anyway. Unfortunately, some of them became discouraged and quit.

A final problem arose as a result of inadequate BIBIS training. Since there were not many qualified librarians at the ASCR, most were unable to catalog in conformity with the standards (AACR2, UNIMARC) that were mandatory for BIBIS. Since no training courses had been organized for this purpose, librarians had to do much more work than normal. They were able to participate in training courses organized from time to time at the

National Library, but the initiative for this had to come from the individual librarians.

## 5 Motivation

People with varying levels of motivation were joining the project. The implementation team was highly organized and exhibited a strong sense of responsibility. But some libraries joined the project without a strong interest in it. As is often the case, the novelty of the system induced anxiety in some librarians for whom the system represented a set of brand new library standards. The motivation of server administrators varied from case to case. Cooperation was not as timely or as close as might be desired, because in some cases administrators were not librarians, but outside employees. Aversion to changing traditional methods of work and to learning new skills caused significant disruptions in the Cataloging Department of ASCR's Main Library when Micro-CDS/ISIS was installed. The same disruptions took place again during the transition from ISIS to BIBIS.

## 6 Finances

ASCR succeeded in obtaining significant financial resources from various sources (the Mellon Foundation and the Grant Agency of the ASCR) for acquiring hardware and software. But additional funds that could have been used for solving the conversion problems at the various institute libraries and for improving server administration did not become available.

In spite of these problems, the Union Catalog was created. Catalogs of individual institute libraries have been imported into a central database. It is now possible to search almost two-thirds of ASCR Institute libraries. The time it takes for new records to appear depends on how quickly the institutes submit the data. Some libraries update their records every 2–3 weeks, others only annually. The Union Catalog currently permits simple and advanced searches. It does not provide other functionalities, such as downloading of records, document delivery service or book reservation. The results of searches are displayed in the ISBD format.

## 7 Need for Changes

During the five years that BIBIS has been in use, it has not upgraded. As a result, it is becoming outdated and is increasingly incapable of performing the services that library users expect today. A case in point is the Uniform Information Gateway project (UIG). This project enables uniform access to electronic information resources, including the catalogs of the large Czech libraries. UIG administrators require participating libraries to run their own Z39.50 server. If a library has not installed this server, UIG administrators cannot integrate the library's catalog into the gateway. Although BIBIS promised that Z39.50 would be installed in an upgrade, Z39.50 is still not operational. With the current version of BIBIS, it is impossible to ensure readers' access to the status of their account or to provide them with information about the accessibility of publications turned up in a search. Shared cataloging is possible in BIBIS, but it is limited to cooperation among the users of each individual server. By now, a new modern library system should handle all these features. Since BIBIS does not, ASCR has to select a new system. The installation of very fast Internet connections to all institutes makes it possible, for the first time, to contemplate a fully centralized system.

Such a solution has several advantages. Since the system would need only one or perhaps two servers, hardware costs would decrease. The number of hard-to-find administrators and personnel costs would also decrease, while average competence would increase. A centralized module would also permit full use of records introduced by other libraries in the system. By utilizing holdings information, many duplicate records could be eliminated and storage requirements on the server would also decrease.

Much benefit is likely to be derived from selecting a system that is already in use at the major research libraries of the Czech Republic. The level of satisfaction with the newest version of ALEPH is high, and barring financial problems, that is the direction in which the ASCR libraries need to move. Introduction of this system at the Main Library and some institute libraries could take place in 2003, and the Union Catalog and the remaining institute libraries could come online in the new system in 2004.

## Appendix

**Table 1. Institute Libraries**<sup>2</sup>

Server	Abbreviation	Name of Institute	Size of Library
<b>KNAV</b>			
	LINCA	Union Catalog of the Institute Libraries of the ASCR	3,500,000
	KNAV	Main Library of the ASCR	945,412
	NHU	Economics Institute	62,500
	USMH	Institute of Rock Structure and Mechanics	27,700
	UDU	Institute of Art History	66,300
	UE	Institute of Electrical Engineering	4,100
	UH	Institute of Hydrodynamics	15,500
	UJC	The Czech Language Institute	57,400
	USP	Institute of State and Law	39,300
	UCL	Institute of Czech Literature	116,500
	A	Archives of the ASCR	69,000
	SLU	Institute of Slavonic Studies	69,990
	USD	Institute for Contemporary History	16,900
	UOCHB	Institute of Organic Chemistry and Biochemistry	82,000

---

<sup>2</sup> Ivana Kadlecova, "Report from projects," Library of ASCR, Prague, 1998.

<b>Server</b>	<b>Abbreviation</b>	<b>Name of Institute</b>	<b>Size of Library</b>
<b>KNAV</b>	UMG	Institute of Molecular Genetics	see UOCHB
	UHV	Institute of Musicology	22,400
		Size of Database	1,595,002
<b>SLOVANKA</b>			
	FZU-S	Institute of Physics	27,870
	UFP	Institute of Plasma Physics	10,900
	FZU-C	Institute of Physics	65,630
		Size of Database	104,400
<b>ZITNA</b>			
	MU	Mathematical Institute	66,840
		Size of Database	66,840
<b>JILSKA</b>			
	CTS	Center for Theoretical Study	20,000
	FLU	Institute of Philosophy	80,780
	MSU	Masaryk Institute	1,820
	PSU-P	Institute of Psychology	7,280
	SOU	Institute of Sociology	sect. lib.
		Size of Database	109,880
<b>MAZANKA</b>			
	UTIA	Institute of Information Theory and Automation	30,030

<b>Server</b>	<b>Abbreviation</b>	<b>Name of Institute</b>	<b>Size of Library</b>
<b>MAZANKA</b>	OU	Oriental Institute	195,630
	UIVT	Institute of Computer Science	8,270
	UMCH	Institute of Macromolecular Chemistry	28,300
	UFCH	Institute of Physical Chemistry	20,020
	URE	Institute of Radio Engineering and Electronics	14,880
		Size of Database	297,130
<b>KRC</b>			
	FGU	Institute of Physiology	360,000
	UEM	Institute of Experimental Medicine	9,920
	UMG-K	Institute of Molecular Genetics	see FGU
	FKU	Institute of Pharmacology	1,000
	MBU	Institute of Microbiology	FGU
	BU	Institute of Botany	82,400
		Size of Database	453,320
<b>PROSEK</b>			
	UTAM	Institute of Theoretical and Applied Mechanics	9,870
	HIU	Institute of History	221,830
	UZFG	Institute of Animal Physiology and Genetics	6,630



Server	Abbreviation	Name of Institute	Size of Library
<b>PROSEK</b>	UZFG	Size of Database	238,330
<b>MACHA</b>			
	UEF	Institute of Ethnology	27,800
	UKS	Institute for Classical Studies	37,500
		Size of Database	65,300
<b>KLAROV</b>			
	ARU	Institute of Archaeology	64,400
		Size of Database	64,400
<b>SUCHDOL</b>			
	UCHP	Institute of Chemical Process Fundamentals	19,160
	UEB	Institute of Experimental Botany	19,460
	GLU	Institute of Geology	5,690
		Size of Database	44,310
<b>SPORILOV</b>			
	GFU	Institute of Geophysics	27,700
	UFA	Institute of Atmospheric Physics	7,200
		Size of Database	34,900
<b>PELLEOVKA</b>			
	UACH	Institute of Inorganic Chemistry	8,700
	UACH	Size of Database	8,700

<b>Server</b>	<b>Abbreviation</b>	<b>Name of Institute</b>	<b>Size of Library</b>
<b>TROJA</b>			
	A	Archive	98,230
		Size of Database	98,230
<b>REZ</b>			
	UJF	Nuclear Physics Institute	98,230
		Size of Database	98,230
<b>ONDREJOV</b>			
	ASU	Astronomical Institute	88,440
		Size of Database	88,440
<b>CESKE BUDEJOVICE</b>			
	ENTU	Institute of Entomology	
	HBU	Institute of Hydrobiology	
	PAU	Institute of Parasitology	
	STHSBP	Technical and Administrative Service of the ASCR Biological Center	40,250
	UMBR	Institute of Plant Molecular Biology	
	UPB	Institute of Soil Biology	
		Size of Database	40,250
<b>TREBON</b>			
	MBU	Institute of Microbiology	20,000

<b>Server</b>	<b>Abbreviation</b>	<b>Name of Institute</b>	<b>Size of Library</b>
<b>TREBON</b>	HBU	Institute of Hydrobiology	5,160
		Size of Database	25,160
<b>BRNO</b>			
	UIACH	Institute of Analytical Chemistry	6,000
	ARU-B	Institute of Archaeology	39,000
	BFU	Institute of Biophysics	7,850
	UPT	Institute of Scientific Instruments	19,950
	UEK	Institute of Landscape Ecology	32,660
	PSU-B	Institute of Psychology	4,330
	UEF	Institute of Ethnology	13,000
	UJC-B	The Czech Language Institute	18,800
	UCL-B	Institute of Czech Literature	15,000
	UFM	Institute of Physics of Materials	13,400
		Size of Database	163,990
<b>PARDUBICE</b>			
	SLCHPL	Joint Laboratory of the Solid State Chemistry	2,000
		Size of Database	2,000
<b>OSTRAVA</b>			
	UGN	Institute of Geonics	8,740
		Size of Database	8,740

