

ELONA MALAIŠKIENE – VILNIAUS UNIVERSITETO BIBLIOTEKA

INFORMATION RETRIEVAL SYSTEMS IN THE VILNIUS UNIVERSITY LIBRARY. PAST AND PRESENT

Libraries are one of the basic elements of the information system in every developed country. Their accumulated resources and facilities developed in recent years have been used in a big way to inspire the development of science, economy and culture in the country. Traditionally the library is perceived as a collection of assorted systematically processed books. The Vilnius University Library, founded in 1570 with the Jesuit College, is nine year older than the University itself. There are over 5.3 million volumes in the library collection: 180 thousand old and rare XV – XVIII century volumes, over 237 thousand manuscripts, more than 80 thousand graphic works, 681 information compact disks. Annually it acquires 100000 new copies. The Library serves 16000 readers. It has 14 branch libraries in various faculties and 8 reading halls in the central building. The principal function of the Library is to accumulate, process and enshrine books, manuscripts and periodicals as well as to present comprehensive information to the reader about intellectual wealth held in the Library. Therefore the work of the library can not be envisaged without a perfectly organized information search system. The report will deal with traditional and electronic catalogues of the Vilnius University Library.

I would like to make a brief survey of the Vilnius University Library catalogues development and organization history, basing on the Vilnius University scientists' and library personnel research works. The VU Library catalogues are important for regional studies, Lithuanian culture and science. They have been compiled and published since the middle of the 16th century and represented literature of universal content and diverse languages. From the readers' services point of view the library catalogues are significant for highlighting publications necessary for maintaining research and study processes, systematical information and disclosure of various aspects of new materials.

The period of creation and organization of the catalogues may be divided into the following stages:

- Formation of manuscript catalogues from 16 to 19 c.,
- Formation of card catalogues and printed card catalogues 19 – 20 c.,
- Organisation of the system of catalogues and card files from the middle of 20 c.,
- Creation of electronic catalogues and databases.

There are diverse forms of the VU Library catalogues: bound volumes of manuscripts, sets of office papers; cards collections. According the functions they are classified as following:

- Main catalogues that reflected the content of library collection and are designed for user services;
- Complementary catalogues that registered library duplicate exemplars, various cabinets books and inventory, training literature for faculties, collections of autonomous university departments;
- Officiary catalogues designed for financial documentation. This includes lists or catalogue of donated books, periodicals subscription registries, catalogues of library transferred books. Such catalogues were also necessary as legal documents.

Manuscript catalogues are the prehistory of cataloguing activities. Spontaneous library development on the basis of separate collections, scholastic book shelving system, absence of uniform inventory records, contradictory historical events in the university had a direct impact on catalogue creation activities. Three catalogues mentioned above have unquestionable historical connection with the Vilnius University and are remarkable for their composition methods. Stanislaw Koszutski, the librarian of king Sigismund Augustus, was the first who attempted to express the function of the catalogue in the preface of "Index Librorum Jurisprudentia in Bibliotheca D. Sigismundi II Augusti", 1553. He proved the importance of entering author last name. His catalogue model reflected collection structure, provided the opportunity for alphabetical search, information retrieval by the title keyword and subject. Furthermore, he indicated the number of publications by their formats. The second attempt is professor's Joachim Lelewel private library inventory or catalogue, compiled in 1853 ("Biblioteka Joachima Lelewela w Brukselli"). The third effort was professor V. Gursky library catalogue. Search and identification of manuscript catalogues is a complicated process. Inauspicious circumstances stipulated their dissipation to various countries and towns archives.

In the second part of 18th century and especially in the beginning of 19th century growing library collections and increasing number of readers raised the task to create accurate library collection catalogue system. Remarkable moment in the history of the Vilnius University Library is the appointment of professor Ernest Gotfrid Grodek to the position of library prefect in 1804. Grodek graduated from Göttingen university and had practical and theoretic knowledge of library science that he successfully used organizing the work of Vilnius University library. Cataloguing activities were started during the first year of professors work in the

library. Double catalogue was filled for all books: one consisted of 1/8 paper sheet size cards for each publication and the other - bound books consisted of four volumes in folio. Both catalogues are compiled in alphabetical order. The first card catalogue is grouped in systemic order and rewritten to folios. Furthermore, there was also the third one – depository catalogue which contained author last names, the first words of titles and numbers of shelves and volume position to improve the process of finding the book. Besides alphabetical and unfinished systemic catalogues, there were many additional catalogues.

The second was the period of card and printed catalogues that coincided with the Vilnius Public Library opening to the community (1865 – 1915, since 1919 – the Vilnius University Library). The new phenomena was the organization of collection according to formal system. The number of catalogues was increasing, their volume expanded. Catalogues differentiated by their purpose (readers, officary catalogues) and the method of compiling (alphabetic, systemic and others). Separate catalogues were compiled for books, periodicals, manuscripts and etc. Systemic catalogues adopted simplified scheme of French books bibliography, the instruction of books and manuscripts description that in essence matched Prussian cataloguing trend was published for card catalogues. Polish scientist and VU library director (1925-1939) Lysakowski is very well known among librarians for his contribution to cataloguing theory. He organized the first subject catalogue and wrote a monograph about it (*Katalog przedmiotowy*). He established the norms of cataloguing, he the first tried to multiply the catalogue cards by the way of photographing them. Lysakowski also planned to make the centralized catalogue of all libraries. He studied readers attitude to the catalogues.

Since 1940 when Lithuania was annexed by Soviet Union, the content of the Vilnius University Library was gradually changing. In 1949 – 1953 separate books and periodicals catalogues in Lithuanian were created. Alphabetical readers and officary (general/major) catalogues emerged, systemic catalogue and articles card files were started to develop. The Library adopted Soviet general prints description rules and classification schemes. Composition and publication of printed catalogues became the function of specialized departments.

In the 70's and 80's the librarians of Vilnius University library improved the system of card catalogues, recatalogued and reclassified publications of the 1st part of the 19th and 20th centuries and preparation of a number of instructions connected with book processing, cataloguing and classification were undertaken. The Vilnius University Library wasn't a typical Soviet academic library. Possessing unique collections it combined academic and research library functions (since 1958). That's why cataloguing and printed cards issues required original solutions. Centralized cataloguing method was implemented in the library and its branches. Having rationalized the book processing, the library concentrated on the creation of general alphabetic catalogue. It was duplicated – one for readers and the other – officary. This was the requirement of Soviet instructions for catalogue and card files development. Composition of periodicals catalogue was

also a difficult task. The same as alphabetical catalogue – two sets of cards – for the of non-soviet and soviet times periodicals - were developed. Furthermore, it was necessary to compare old periodicals catalogues to the collection, recatalogue volumes of 19th – the beginning of 20th century. The development of systemic catalogue was very difficult task. There was no classification scheme for the libraries of higher schools. It was necessary to adopt international universal decimal and Russian library bibliographical classifications. Cataloguers had to follow so-called party principle. Rubrics of the catalogue, relationships between categories, marker system – all of the elements were intended to maintain educative function. Ideological and subject selection of prints was performed. Therefore, the catalogue wasn't comprehensive. At first it didn't reflect 19th – the beginning of 20th century prints. Only in the beginning of 8th decade some gaps of the catalogue were filled.

The constituent of the Vilnius University library catalogue system are catalogues of specific departments and faculties. All departments had alphabetic and systemic catalogues, though cataloguing and classifying activities were centralized.

In the information society the concept of library, its activities, social functions and information retrieval methods change dramatically. The automation of the library may essentially modify the services rendered and their effectiveness. Automation of the Vilnius University library may be divided into two stages – the creation of its own system BIBLIO and the implementation of ALEPH, the integrated library system created by Israel company ExLibris. The creation of electronic catalogue was started in 1993, when the Library decided to accept the donation of computer equipment organized by the Lithuania-Norway cooperation. Due to the teamwork of the University Computing Centre and Library specialists the library software BIBLIO has been created and started to work. Vilnius University library was one of the first to start electronic catalog in Lithuania. First steps of creating the electronic catalog were made in Book Processing department. Under the guidance and supervision of computer specialists the department librarians underwent a difficult way to the finished bibliographic entry. Two stages might be observed in this way. First, preparation stage which started at the beginning of 1992 with the translation of UNIMARC. UNIMARC was recommended by IFLA and accepted as a standard in Lithuania. Work sheets for theoretical training of catalogers were prepared. Those work sheets containing standard catalog card dimensions, sequences of elements of bibliographic entry, punctuation marks, intervals between separate elements were submitted to the programmers of the Computer Centre. The programmers also prepared language conversion tables with alphabetical equivalents. In addition language and geographical codes have been translated. The codes of library departments and subdivisions were prepared as well. After practicing in the Computer Centre the new stage began – the entering of publications into computer memory. The date 1993 may be rightly considered the start of VUL electronic catalog.

Up to the end of 1993 all monographs written in the Lithuanian language and monographs in foreign languages published after 1980 were entered in the electronic catalog. The issues published prior to 1980 were entered only using coded information into identification databases and catalogued using typewriters. Printed card were prepared for the official catalog, public alphabetical and systematical catalogs and were sent to Library subdivisions and faculty libraries. Since 1994 all books regardless of the year of the year of publication or language were being entered into the electronic catalog. In spring 1994 first terminals were installed in the public catalog for the use of library readers. Upon entering 10000 bibliographic entries it was decided to stop printing cards for public catalogs and were supplied only to the official catalog and to subdivisions which were not furnished with computerised workplaces. In April 1995 the Periodical department started cataloguing periodical publications. Other departments of the Library are gradually joining the automation activities.

The founding of electronic catalog was very important for library itself and especially helpful for newcomers and first-year students. We were proud of the creating the first electronic catalog in Lithuania which was available via INTERNET since 1994.

Libraries attempt to automate their services, so several automated information systems emerged, different electronic cataloguing formats are used. Such situation causes duplication of works in big libraries, book ordering is coordinated poorly, there are no opportunities for cooperation implementing current cataloguing and retroconversion, users can't use union electronic catalogue. Realizing these issues, big libraries decided to cooperate and try to solve similar problems together. In 1993 Lithuanian research library consortium that would be responsible for coordinating library acquisition and the development of integral information system was established. In 1997 Lithuanian company Sigmanta won the Lithuanian library electronic catalogue software development competition. Later Sigmanta software for union catalogue extension to integral automated library system that would be used in most Lithuanian libraries was provided. Most libraries couldn't accept this idea.

Experience of other libraries showed that creating the automated library system by their own efforts is a long and costly process. Therefore the libraries of higher education institutions decided to unite their efforts and acquire an integrated automated information system to be used by 15 academic libraries. In 1997 on the initiative of the Association of Academic Libraries and the institutions of the Lithuanian Conference of Rectors the Kaunas University of Technology prepared and carried out the project "Network of Lithuanian Academic Libraries". The project is executed as a part of Lithuanian higher schools computerization programme that was certified by the government of Lithuania in 1997. The main goal of the project was to prepare and implement functional-organisational structure of the Network of Lithuanian Academic Libraries which would improve the work of academic libraries as well as the dissemination of information about

Lithuanian documents and transferring factographic material to foreign users. To reach this goal the ALEPH automated library system of the ExLibris company was acquired and in 1999 a new stage of library automation was started – the implementation of ALEPH.

The Vilnius University Library was the first of higher school libraries which started to work with the new system. The library is big, experienced in electronic cataloguing (8 years experience, the first book electronic description was made in 1993, January 15 using BIBLIO system) and managing the electronic catalogue of 300000 exemplars with 145000 bibliographic descriptions, so it prepared thoroughly to the implementation of the new system. Together with the VU Computation Center comprehensive system implementation plan was formed. On June 15 the system BIBLIO was stopped and all electronic data were transferred to ALEPH system. In the very beginning only Acquisition, Prints Processing and Periodicals departments worked in the new system environment. Later other departments joined and specific departments such as Manuscript, Bibliography, Litanistics departments. Users don't see this side of our work so can't appreciate the advantages of automation. The most important part of any system is user service. Computerized user service is a complex process that requires new hardware, higher personnel qualification and psychological readiness. Library staff was preparing to this work very thoroughly. The working group was established to foresee all possible service nuances, to combine system features with the library service traditions. On December 1, 2001 the director personally congratulated the first reader who ordered literature using computer. However, not everything depends on staff good will and efforts. The main condition to implement computer user services is books with a bar code. There are 5 million volumes in the library. As I mentioned, the electronic catalogue was started in 1993. At the moment there are 189 000 bibliographical records and over 450 000 records per exemplar in it. Only 200 223 volumes of all records are with bar code. 15-20 thousand bibliographic and 50 thousand records per exemplar are added to the catalogue each year. It is very important to provide bar codes to all volumes in the electronic catalogue and to enter the most read books to it. To implement it there are two working groups in the library. Due to the work of the library staff all volumes from the central library depositories that are in the electronic catalogue already have bar codes. Now faculty libraries also check their depositories and make necessary preparations for running computer services.

ALEPH is a complete, integrated system that manages all aspects of the library, for both staff and readers. Readers can access ALEPH through a powerful Web or Windows interface. ALEPH allows readers either to enter the system as a guest user or to log in to a customized profile. Readers may also customize their session, for example, by selecting default sort or display options. ALEPH provides search tools that are both powerful and easy to use. All access points are defined by the library. ALEPH supports a virtually unlimited number of browse and search indexes and has many features to help readers navigate the large result

sets that are generated in research libraries and consortia. Result sets are displayed in a default sort order defined by the library, but the system allows for other sort options, which the readers can activate as necessary. Readers can have records sorted by relevancy; can limit result sets by date range, language, and other filters; can use various operators to combine sets; and can select or deselect items in a set to form a subset when appropriate. To narrow down a search even more, readers can use ALEPH powerful scoping feature, which enables them to set the results of one search as the basis for future searches.

ALEPH provides a complete set of readers empowerment features. Readers may check fines, loans, and reserves. They may request materials through holds, Document Delivery, and Inter-Library Loan functions. Readers can view their current loans and renew materials subject to the library's circulation policies.

Electronic and Internet resources are accessible through ALEPH support of MARC-based linking fields. Libraries around the corner or around the world can be quickly and effectively searched by means of a Z39.50 broadcast search function. Access to CD-ROM and citation databases lets readers expand their search to all the electronic resources of the library. Real time linkage between citation systems and ALEPH bibliographic holdings makes readers aware of the library's resources.

Developing new technology in the library information retrieval becomes a complex process when the user search both in traditional and electronic search systems.

Library implements advanced information and communication technologies that provides quick information retrieval for our user.

New technology has considerably changed the image of the old University Library. Computerization, automation, digitization, Internet, and new technologies allowed reader service to create and disseminate electronic information.

The Vilnius University Library, the oldest library in Lithuania and one of the oldest libraries in Eastern Europe, is operating successfully in the age of new technologies, by applying diverse science and technology achievements in its direct activities creating and spreading electronic information to the library users.

REFERENCE:

Bulavas V., Gudauskas R., Varnienė R., *Lietuvos integrali bibliotekų informacijos sistema*, Vilnius 1994, p. 50.

ExLibris ALEPH500 – The IQ Solution (www.exlibris-usa.com/aleph/index.html).

Glosienė A., *Biblioteka informacijos politikos kontekste*, "Informacijos mokslai", 15 (2000) p. 11-27.

Janiūnienė E., *Informacijos paieškos vadyba bibliotekoje*, Vilnius 2001, p. 135.

Kastanauskaitė D., *Vilniaus universiteto bibliotekos katalogai archyvuose. Vilniaus universiteto bibliotekos metraštis*, Vilnius 1993, p. 63-69.

Kastanauskaitė D., *Vilniaus universiteto mokslinės bibliotekos rankraščiniai ir spausdinti katalogai*, Vilnius 1990, p. 42.

Kastanauskaitė D., Petrauskienė M. Z., *Vilniaus universiteto bibliotekos katalogų kūrėjai (1960-1990). Vilniaus universiteto bibliotekos metraštis*, Vilnius 1997, p. 95-102.

LABT plėtros koncepcija: Lietuvos virtuali biblioteka/Butkevičienė B., Dubininė G., Kučiukas V. ir kt. (www.ktu.lt/labt/lt/pletra2001/indexp.html).

Malaiškienė E., *Bibliotekos automatizavimo dešimtmetis, Vilniaus universiteto bibliotekos metraštis*, Vilnius 2000, p. 10-14.

Miežinienė A., Verhoeven J., *Informacijos paieška duomenų bazėse*, Vilnius 1998, p. 82.

Puzinaitė V., Vladimirovas L., *Senajo Vilniaus universiteto bibliotekos katalogai. Vilniaus universiteto bibliotekos metraštis*, Vilnius 1958, p. 19-31.

Vilniaus universiteto biblioteka 2000 metais, Vilnius 2001, p. 68.

Vilniaus universiteto biblioteka 2001 metais, Vilnius 2002, p. 47.