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Implementation of electronic library functions in modest environment

1. Introduction

In June 1996 the project of the electronic library was adopted for the use of the National Medical Library (NML), Prague. In view of our limited financial resources it was necessary to define it in such way so that at least some of its functions could be gradually put into practice. Since that time we have succeeded in testing and applying at least the most principal functions within the modest and financially limited environment of our library. The objective of this paper is to summarize the starting point and the results achieved up to now.

2. The concept of electronic library and description of environment

Electronic library is fully automated library which stores and offers not only products but also electronic documents, provides access to external information resources in computer networks, offers its own electronic publications, and cooperates with other libraries on the Internet.

Financing and planning

Financing and planning play a key role in setting up and carrying out all "developmental" projects. In this respect, a special program established by the Ministry of Health of the Czech Republic which aims at the implementation of modern information technology in medical libraries is of utmost importance. Allocation of financial means for such projects as for example LAN linked with the Internet is, however, in most libraries uncertain.

Connection to wide area networks

Connection to WAN and its quality constitute an important factor of electronic library design. Until now NML has been linked to WAN at 19,2 Kb/s transfer rate. The link at 48 Kb/s is being tested.

In view of our limited budget we evidently have to put up with 64 Kb/s transfer rate as the final solution. Connection via optical cables would be

highly preferred but the costs would immensely exceed our financial means. In contrast, TEN 34 project is under way in the CR which provides 34 Mbit/s transfer rate for all academic libraries. In this way Czech universities and research institutes of the Czech Academy of Sciences will be able to use network multimedia applications, take part in distance learning etc.

User space

No adequate space (separate study room) exists in the library building to accommodate the need of users for electronic resources.

Users in medicine and health care system

As compared with industry and business related sphere, the number of Czech health establishments linked with the Internet is relatively low so that no extensive approach to electronic library can be expected at present.

3. Implementation of electronic library functions

Integrated library system

Since May 1997 automated cataloguing of monographs in the ALEPH system and hypertext (WWW) access to online catalogue have been operational. Standard browsers and various telnet programs provide access to catalogue. Some 21,000 records of monographs since 1991 are included in the catalogue (www.nlk.anet.cz/ALEPH). The Czech-English version of MeSH thesaurus is a special base.

Retrospective and shared cataloguing in cooperation with the National Library of the CR and other participants represents the next stage. Until now we have provided the input of more than 3,000 records into the union catalogue of foreign monographs managed by the National Library. This cooperative system is being tested as well as the practice of taking over records of Czech monographs for our usage.

The file of library users has been recently established and work on implementation of ALEPH lending module will start in the nearest future. In our premises situated outside the central building work with our catalogue of monographs is, however, still possible only on individual computers in the CDS/ISIS system.

Acquisition and usage of electronic documents

Extra means were allocated by the Ministry of Health to NML last year for the purchase of primary documents. Some of these have been used for buying transaction numbers enabling experimental employment of electronic document delivery service JASON (University Library Bielefeld - www.uni-bielefeld.de). In February we started the delivery of full-text copies of articles retrieved from this JASON base for our clients at a symbolical price (the real charge 6 or 12 DM for one article copy is covered by NML). Articles are delivered via electronic mail. The service is strictly limited to journals not held in any of Czech libraries.

Following the agreement with the British Institute of Radiology we are planning to provide readers access to the electronic version of British Journal of Radiology (www.bir.org.uk/bjronline). No extra costs will be incurred as we subscribe to the printed journal.

Some of the financial means mentioned above have been used for the purchase of multimedia on CD-ROM, both Czech and foreign products, e.g. Clinical Endocrinology, Rheumatology, The Art of Laparoscopic Suturing, Interactive Skeleton, Pathology etc. The work with these CD-ROMs is being tested on two multimedia standalone computers. Unfortunately no title out of this CD-ROM set is licensed for use in LAN.

NML's electronic publications

Our attempts concern full-text documents in both online and CD-ROM sphere. Since the beginnings of the fifties the library has been the editor of series of abstract journals (15 sections). The contents and selected references from Abstracts of Anesthesiology issues are available on our WWW server (www.nlk.anet.cz). Another periodical Lékařská knihovna, NML's bulletin for medical librarians, is available in the full-text electronic version. Browsing both journals and searching them by string-oriented retrieval program is fairly simple.

The edition of a new CD-ROM publication is under way: the Museum of Public Health and Medicine Electronic Guide with many illustrations will be released this year. The data will be stored in the hypertext system.

Employment of databases in local area network

The advantages of LAN are indisputable. At the present time the bases in NML are being used on standalone computers with only one exception: CD-ROM BiblioMedica. Produced in DOS and Windows versions since 1995 by NML in cooperation with Albertina icome, Prague, it comprises the following NML's databases: records of the national medical bibliography (since 1978), records of daily press articles (since 1991), union catalogue of medical periodicals (since 1976), directory of libraries contributing to the union catalogue. Mounted on Infoserver Librarian machine (Digital Co.), the disc can be accessed from several workstations.

In October SilverPlatter ERL (Electronic Reference Library) is to become operational in LAN under Windows NT 4.0. Access to Medline Express (1966+) can be then provided for four simultaneous users.

Electronic mail

As well as in other libraries E-mail is the most popular service of the Internet in NML. Not only is it used virtually in all departments but also our clients employ it effectively for ordering xerocopies and for requesting loan period extension.

WWW service

WWW server is used not only for providing basic information about NML's activities but also for information services still not available in ALEPH system or for services of a specific character. It plays a main role in our attempts in the field of electronic publishing, it is employed in article copy delivery service, recently for access to library catalogue etc. By taking advantage of the exciting possibilities offered by WWW the approach to heterogeneous information becomes to some extent unified which makes the user's work easier.

The server is an important tool for providing direct access not only to national resources but to a variety of outstanding databases worldwide.

With the aim to alleviate the problem of low transfer rate a specialized proxy server Squid is being tested.

4. Conclusions

Environment for implementing the functions of electronic library in NML is rather modest because of our limited financial resources.

The concept of electronic library is, nevertheless, of primary value and its principal functions may be implemented in NML even in the present-day modest environment.