

Open Library Network: new developments in library automation

Anton Bossers

The growth of telecommunications networks throughout Europe is empowering individuals and libraries with previously undreamed access to information. Networks, both academic and commercial, already exist in Europe and are used as information carriers. Libraries can either be largely by-passed by these developments or their information management skills can be harnessed to the benefit of those developing systems. Some years ago, the 70's were called "the golden age of networking". Until now, I disagree with such kinds of self-sufficient statements, because in my opinion until now library automation and networking are just in their first, preparatory phase. During the next years, the radical, revolutionary change for libraries will be that technology will give the end-user of libraries from their office-desk the initiative in catalogue searching, in document requesting and in interlibrary loan. Libraries have to be prepared for that change.

The telecommunications networks which are established during the last years, and especially the academic research networks in the European countries, will create a great opportunity for libraries to face the year 2000. Much of the cultural, historical and even research information held in libraries does not have sufficient commercial value to be attractive to the marketplace. So for libraries as - in most cases - public, not-for-profit organizations there is an important task to do in the distribution of information. Libraries have to do so at a time of radical political, economic and social change in Europe, and, however the available information is not commercially attractive, libraries have to do so in a more and more competitive environment.

For the creation of an operational automated library network, one can recognize three different aspects. The libraries within a network need

- an organisational infrastructure
- a technical infrastructure
- a (library-) professional infrastructure (implementation)

I will explain my opinion with the Dutch Pica Library Automation Network as an example.

Pica is a co-operative not-for-profit organization for libraries and other information providing institutions, like documentation centres, in the Netherlands. Pica aims to promote co-operation between those participating institutions, using automated library network facilities, to optimize the management of those institutions and to improve the services of libraries to end-users. Pica is promoting efficiency to create optimal access to information and library resources. Pica is owned by and working for Dutch libraries.

Organizational infrastructure

Pica has originated from a research Project on Integrated Catalogue Automation during the period 1969-1975. The research was co-ordinated by representative staffmembers of the participating libraries (Royal Library and several university libraries under responsibility of the directors of those participating libraries as a Steering Committee). In 1976, the Steering Committee decided to stop the research and to start operationalization. A central bureau was established for co-ordination and development, while the group of representative staffmembers was changed into a user group. Each member of the Steering Committee was obliged to report to his own university board (for the Royal Library to the Minister of Education). After a period of strong growth in operations and participants in the early 80's, the organizational infrastructure became more and more insufficient. It was decided to change the structure into an independent not-for-profit foundation under Dutch law, the Centre for Library Automation Pica, in 1986. From then, the board consists of a chairman (appointed by agreement between the Minister of Education and the Minister of Culture), the director of the Royal Library, four university chief-librarians and three directors of public library organizations. Since then, the organizational infrastructure is felt to be effective, because of recognizing the idea of co-operation with respect for the necessary, certain independency of the central organization and the own responsibility of each participating library.

Technical infrastructure

In the period 1976-1990 Pica has realised an automated library network with all the different system- en networkfacilities. The systemfacilities became operational in the following steps:

1976-1979	Pica-1:	
		- shared cataloguing
		- output facilities
1980-1990	Pica-2:	
		- shared cataloguing (1980)
		- output facilities (1980)
		- interlibrary loan for periodicals (1982)
		- local library system (circulation, acquisitions) (1983)
		- central online retrieval system (1985)
		- local library system (online public access catalogue) (1985)
		- interlibrary loan for monographs (1988)

The network facilities moved from a central computersystem with terminal/printer-workstations connected via leased telephone-lines (a starshaped network) into a network with central and local applications, connected by different datacommunication-technology (leased and dial-up lines; use of packet switching networks like Datanet and SURFnet; interlinking via pre-OSI-technology) and using personal computers next to terminals as workstations.

Now that the technical infrastructure is realized since 1990, Pica has developed projects for changing the infrastructure into an Open Library Network.

- by redesigning the central facilities (Pica3-project; realization 1990);
- by redesigning the local library facilities (LBS3-project; realization 1990-1992);
- by converting the datacommunication network into SURFnet-technology, the Dutch academic research network (realization 1990-1992);
- by experimental interlinking with networks abroad, especially for interlibrary loan (together with LASER, England and SDB/SUNIST, France; 1990-1992): the ION-project

The different projects are financed by own investments and by special grants from the university libraries, from SURF, from the Ministers of Education, Culture and Economic Affairs, and from the EEC.

For the whole operation it is essential to plan a phased implementation, because of the fact that it is unacceptable for the participating libraries to be one day out of services.

Characteristics of the new developments are:

- integration of software;
- standardization of search facilities;
- the implementation of intelligent workstations (personal computers);
- standardization of datacommunication (OSI/VTP);
- improvement of online public access, based on additional user requirements and ergonomic studies;
- integration of CD-technology.

In the end of 1992, the network will have been changed into a network, in which the library staff and the professional end-user can use all the available systems with his own single personal computer without knowledge in which computersystem his transactions are done. The user needs a functional menu, which presents the different facilities he is allowed to use; a transparent network, an Open Library Network.

[figure 1]

The Open Library Network in the Netherlands, which implementation has started in 1992, will be implemented too in the Deutsche Bibliothek and the federal state Niedersachsen in Germany during 1993-1995, based on Pica central and local library systems and using the German academic research network, which is connected with the Dutch SURFnet.

A new major activity for the next year is Pica's project for rapid document delivery RAPDOC. The project was based on several analyses of Pica's automated ILL-system for periodicals, which is now handling more than 300,000 requests for journal articles per year. Those studies pointed out that 80% of the requests refer to some 6,000 periodical titles. One further conclusion was that libraries all too often do not deliver the requested articles speedy enough, according to modern standards.

18 major libraries in the Netherlands (mainly research libraries, some public libraries) and Pica are executing the RAPDOC-project. Together they aim at the delivery of requested articles from 6,000-7,000 scientific periodicals within 24 hours. The main clusters of activities in the context of this project will be:

- Organisational: further and deeper analysis of the availability of the 6,000-7,000 titles ("Core collection"), their spread over the Dutch libraries, and the requests being made to it. Periodical titles will be assigned to the participating libraries, which will give guarantees for certainty and speed of delivery.
- Adding table of contents data to the database of the then "distributed core collection" of periodical titles. In order to minimize activities for table-of-contents cataloguing, Pica has set out to investigate possibilities for buying, exchanging or otherwise obtaining these data from external sources. The participating libraries will have to catalogue the uncovered material.
- Extra telecommunication facilities through Pica- and SURFnet-networks. A number of alterations to the existing ILL software has to be brought about, thus implementing a technical infrastructure which will enable the transmission of documents in electronic form, both towards libraries and to end-users directly. In the context of RAPDOC the local and the national level can be distinguished. Documents (periodical articles) will be scanned, compressed and stored temporarily on workstations (pc's) in the supplying libraries (local level). The interconnection of the local library systems makes up the national level: overnight the documents will be transferred to workstations in the receiving libraries, over the X.25 SURFnet-network. All activities described, should - within the next 2-3 years - establish a system for fast mutual document delivery, intended to fulfill the demands of the various user groups of

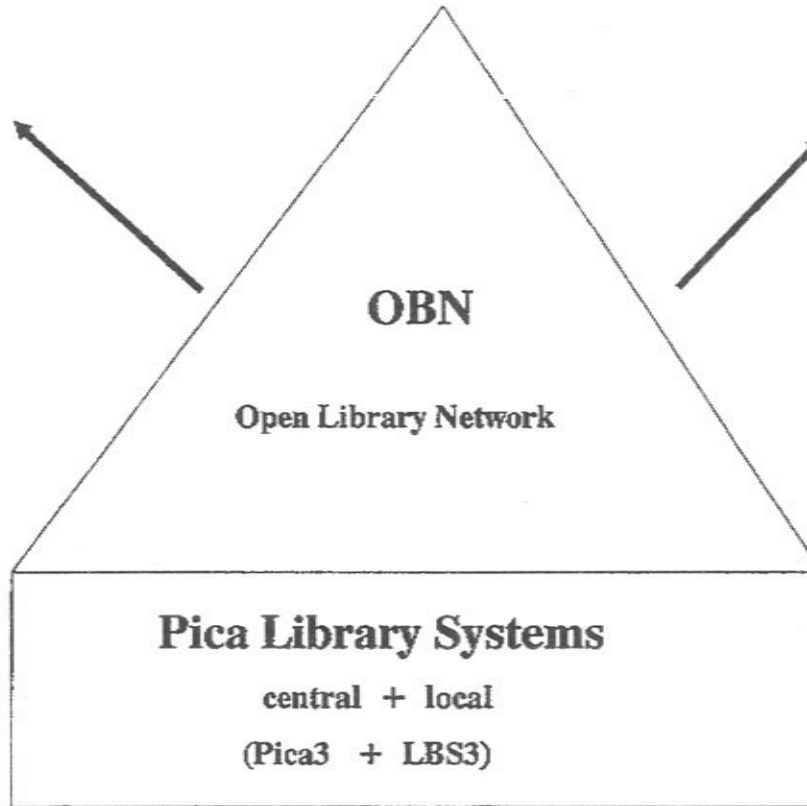
the participating libraries. In the case of a successful operation, we will study the possibilities of offering the document delivery services to user groups outside the circles of the current participants.

The RAPDOC-project is a new development in library automation to complete the automation of all library services: searching the catalogue and delivering the document in an open network-environment with high technology and a strong organizational library-structure.

Pica 1992

RAPDOC

electronic
document
delivery



Germany

- (federal) state Niedersachsen
- Deutsche Bibliothek

ION

International
Interlibrary
Loan