LIBNET – project of the major Russian libraries network

Yakov L. Shraiberg
Russian National Public Library for Science and Technology

Mikhail V. Goncharov
Russian National Public Library for Science and Technology
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Yakov L. Shraiberg, First Deputy Director
Mikhail V. Goncharov, Section Head
Russian National Public Library for Science and Technology

The development of automated technologies in Russian libraries is inseparably connected with telecommunication information exchange and online access. Nowadays, from the viewpoint of telecommunication interaction, there is a lack of library networks, excluding the network of the Russian Union Catalog with its centre in the Russian National Public Library for Science and Technology (NPLSaT). And, even then, very few participants in the Union Catalog use E-mail or online access to receive or transmit information, others continue sending it by mail or by teleaxes and telefaxes. And though a whole range of libraries maintain online access to their collections, this technology, as a rule, does not correspond to modern requirements and is not popular.

Therefore, the question of the Russian Federal Library Information Network (LIBNET) has arisen. The project is financed by a Federal budget and is part of the Russian Libraries Informatization Program.

Stage 1 of the LIBNET project plans to provide users with online access to electronic catalogs and databases of six largest Moscow libraries, including the joint product — the Russian Union Catalog of sci-tech literature maintained by NPLSaT.

The LIBNET project embraces the following libraries:
- The Russian National Public Library for Science and Technology (NPLSaT),
- Scientific Library of Moscow University,
- State Central Scientific Medical Library (SCSML),
- Russian Academy of Sciences Natural Sciences Library,
- Central Scientific Library of Agriculture,
- State Public Historic Library (SPHL).

At the beginning of 1993 the electronic catalog of NPLSaT consisted of one million records; NPLSaT maintains a double system (mainframe and NOVELL PC network (LAN)) telecommunication access to the electronic catalog via switched channels; in addition NPLSaT offers access to information products via X.25 (Russian network “Rospak”). The task of remote ordering of publications has been implemented.

The electronic catalog of the Scientific Library of Moscow University contains 50,000 records in a NOVELL PC network (LAN), accessible via switched channels.

The electronic catalog of the State Central Scientific Medical Library contains about 300,000 records in a NOVELL PC network (LAN), accessible via switched and data transfer network channels.

The electronic catalog of the Russian Academy of Sciences Natural Sciences Library contains 20,000 records; the library has at its disposal the mainframe IBM/360-compatible computer; teleaccess is not well-developed.

The electronic catalog of the Central Scientific Library of Agriculture contains 100,000 records in a NOVELL PC network (LAN);

The electronic catalog of the State Public Historic Library contains 10,000 records. The library has started to implement the French LIBER system; teleaccess is not available.

Due to extremely obsolete technologies and poor communication channels, the maximum exchange rate does not exceed 2400 baud; that obviously cannot handle bibliographic information exchange in technological volume without leading to users’ re-
fusal to work online with information resources. For example, owing to the above rea- 
son NPLSaT lost part of its online users and has introduced a new telecommunication 
technology (Figures 1,2).
LIBNET will allow effective interconnection of all the above-mentioned libraries on the basis of modern soft and hardware facilities, will allot to a wide range of libraries, organisations and individual users of Russia, real-time access and a means ordering publications from collections of these and other libraries further linked up to the network, thus organising an effective Russian ILL system.

Also, the technology of the network arrangement will afford access to foreign networks, databanks and electronic catalogs of the largest world libraries via modern communication protocols and will improve effectiveness and quality of international library communications.

Libraries taking part in the project will offer teleaccess to electronic catalogs of their collections, specialized, problem-oriented, reference and other databases, maintained and developed in each library on the grounds of the common network technology, UNIMARC interlibrary exchange format, NOVELL environment (the Network is planned to be a union global network with a similar interlibrary and inhouse information transmission rate and other characteristics) and the family of modern communication protocols. They will considerably improve and update the respective library technologies.

Within the LIBNET framework participating libraries will maintain an integrated database for coordinated foreign acquisition (NPLSaT will be charged with database support). Libraries will implement the principle of unified catalog description for foreign publications acquired by Russian libraries on the basis of common online and E-mail access to foreign bibliographic databases, as well as information conversion from bibliographic databases to CD-ROM according to the UNIMARC format.

LIBNET will allow the libraries to considerably improve the quality of services offered to scientists, specialists, students and all information users of the Moscow region and Russia in general, to improve library technologies and ensure the fulfilment of the first stage of the project, which concerns the creation of the library computer network for the whole country.

Thus, the first stage will result in the base configuration of the library computer network for the six largest Moscow libraries which will allow them to collect, prepare and exchange information (including exchange with foreign databanks) and to carry out teleaccess using modern telecommunication facilities on the basis of public data transfer network via X.25.

The decisions below were taken, following design experiments and with account to the present situation on the Russian telecommunication services market, general tendencies of online systems development, economic, technological indices and budget allocations:

1. To apply municipal digital channels of Moscow’s public telephone network with the exchange rate of 64 kbytes per sec — 2 Mbytes per sec, which, at the same time, will provide gateways for practically all packet-switched networks, functioning in Russia, and be on outlet to foreign data transfer networks (in particular DTEX-P).

2. To install unified soft—and hardware facilities, on the basis of IBM PC superservers with the characteristics depending on the volume of the existing electronic catalogs (for example, in addition to three servers at the disposal of NPLSaT, two more servers are planned for installation with common disk fields of no less than 12 Hbytes, and online memory of no less than 64 Mbytes each) and OS NETWARE of NOVELL company.

4. To make available transparent access to other libraries to any user linked up to the resources of one of the libraries, on the basis of routing data transfer networks.

5. To provide users wishing to be in remote connection with the switched channels, with a possibility of getting linked up either directly to the soft—and hardware facilities (for example — NETWARE ACCESS SERVER in NPLSaT) of a specific library or to the telephone network node, followed by mailing the requests to the required LIBNET network node. Diagram of LIBNET (first stage) is shown on Fig. 3.

The first stage of the project is planned to be finished by November 1993.

Resources of large Russian libraries, and information centres with developed systems of electronic catalogs and databases, are planned to be connected with LIBNET at the following stages of the network development. It should be pointed out that Russian provincial libraries show much interest in the idea of LIBNET and are ready to implement it, as they see the advantage to them of the distributed bibliographic processing and access to large databanks and union catalogs. At the same time Russian provincial libraries may have at their disposal unique information and literature on local lore, history and economy, ecology of specific regions and other data, sometimes unavailable in the collection of the large libraries.

The introduction of the first, and the following stages, of the project on the Federal Library Information Network will enable Russia to establish a modern network infrastructure for the information business and will allow Russian holders of information resources to take part in international cooperation in this field, which will meet interests of both Russian and foreign users of information.