

Experience on Electronic Editorial Activities at the Institute for Information Recording of the National Academy of Sciences of Ukraine

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Abstract

We describe the Institute for Information Recording of the National Academy of Sciences of Ukraine's experience on the establishment and distribution of scientific/technical information, educational programs, reference information, rare musical compositions reproduced from phonograph cylinders, and databases.

Two methods of distribution of electronic editions were analysed: manufacturing of CDs, and application of telecommunication channels. It is expedient to distribute on CDs any information intended for use for a long period of time. On-line use of television computer broadcasts has been used for the Everything for Everybody Electron Computer Newspaper. The newspaper was established and registered in Ukraine in 1991 as a new mass medium. The electronic computer newspaper is broadcast five times a week on the first channel of the National TV of Ukraine, and it distributes up to 60 Mbytes of computer information per session under more than 80 headings. The use of a television channel for computer data transfer has some advantages compared to other transfer systems:

- high data transfer rate (up to 1.2 Mbit/s);
- large data transfer quantities (up to 60 Mbytes per session);
- simultaneous data transfer to all the users;
- unlimited quantity of subscribers.

Here we also give a brief description of the work on establishment and CD mastering and distribution of data on ethnographic expeditions, including unique phonorecords deciphered from Edison phonograph cylinders.

Introduction

Within the whole history of its existence humankind has accumulated vast volumes of knowledge which are stored on Shumer clay plates, on papyrus, on parchment and on paper at the museums, libraries and archives. Now, paper still remains the most popular data carrier and this predetermined the establishment of paper textual databases in the form of document archives, scientific monographs and treatises, vocabularies, encyclopedias, and library catalogs. These were the most familiar for the customers.

One of the most serious disadvantages of work with paper databases is very long time needed for information transfer from the database to the user. During the last few years rapid development of computer science and information technologies has allowed us to establish

the computer databases and knowledge bases, computer data systems and data transfer networks, and to reduce steeply, by hundreds or thousands of times, the information delivery times for users.

Dealing with the establishment of computer data systems, their developers used available experience of library data storage, which resulted in the establishment of information/computer complexes having large databanks and, in the users' work with them, an arrangement similar to their work with libraries, i.e. through the users addressing databases on their individual requests. A user request service is rather expensive and for various reasons is not able to satisfy comprehensively the user's data needs.

The experience of development in society shows that there are other more effective ways of conveying information compared to "libraries", namely the establishment of the press, i.e. an information source and distribution system, in the form of newspapers with multimillion circulations and other mass publications.

Everything for Everybody

At the Institute for Information Recording of the National Academy of Sciences of Ukraine, a new computer data mass distribution system has been established and introduced: the Everything for Everybody electronic computer newspaper, registered in 1991 at the State Committee of Ukraine on Television and Radio Broadcasting as a new mass medium..

At the electronic newspaper editorial board the information is prepared in the electronic form, encoded into a television signal and distributed through a television broadcasting channel the whole territory of Ukraine.

Beginning from 1992, the electronic newspaper is broadcast five times a week on the first channel of the National TV of Ukraine (UT-1), and distributes up to 60 Mbytes of computer information during one session at the 1.2 Mbit/s. rate.

The television channel for computer data transfer in the form of the Everything for Everybody electronic computer newspaper has tangible advantages compared to other data transfer systems, namely:

- high data transfer rate (up to 1.2 Mbit/s);
- simultaneous data transfer to all the users;
- large data transfer amounts (up to 60 Mbytes per session);
- unlimited number of subscribers, each of them receiving only the information addressed to them.

Modern personal computers equipped with a special television adapter (instead of television receiver), which, through a standard television antenna, automatically receives television digital information, undertake decoding into digital computer information, primary information selection by the subscriber's private code, and data recording on the personal computer, and are widely used as subscriber receivers.

In the process of input data flow processing two information selection phases are accomplished at the subscriber's machine. The first one is carried out by the computer and

teleadapter software and hardware in real-time mode synchronously with the receipt of information by television channel. This is a "rough" selection intended mainly to save computer disc storage. The second phase is "delicate" selection which is carried out directly by the user by an effective information/search system.

Individual databases of received information are established on users' computers, and the effective addressing of them is organized by applying as a tool a modern information/search system that is simple in operation.

Information intended for distribution is transferred by subscribers using common means of communication, directly by IBM telecommunication interaction through modems by the public telephone systems or by high-speed data transfer lines. This results in more active work of the institutions engaged in database generation, by way of establishment of branched networks of subject editorial boards, who gather and prepare separate subject trends of information on enterprises, institutions, organizations' activities for distribution. Such an approach at best accomplishes the major principles of the Helsinki Declaration and provides maximum information availability and openness, and equal rights in data distribution.

Today, the Everything for Everybody electronic computer newspaper comprises more than 80 information sections with subsections among which are the following:

- legislative acts of the Supreme Soviet of Ukraine, decrees of the Presidium of Ukraine, resolutions of the Cabinet of Ministers of Ukraine, regulatory enactments of ministries and departments (19 sections);
- social/political and economic materials of information agencies and mass media (16 sections);
- banking and financial information, stock market prices (7 sections);
- on-line commercial information of computer networks of Ukraine, CIS countries, newspapers, advertisers (11 sections).
- Current Contents, abstracts and scientific/technical information databases of the Institute of Scientific Information of the USA, VINITI (Russia) and Djerelo (3 sections);
- Sections on medicine, pharmacology, book-keeping, computer techniques and software (8 sections);
- business offers of foreign partners (2 sections), etc.

Users of the Everything for Everybody electronic computer newspaper are ministries, state and private institutions, enterprises and commercial organizations, scientific, educational and cultural departments, universities, libraries, students, post-graduates and individual specialists within the whole territory of Ukraine.

Every user of the Everything for Everybody electronic computer newspaper has the possibility of compiling and getting on to a CD his or her own (local) database corresponding to his or her needs. The user has the possibility also to purchase on the CD information which was distributed in any sections during all the time of newspaper's existence.

CDs of ethnographic expedition records

Our Institute pays great attention to the establishment, maintenance and distribution of electronic databases in the cultural field. An example of this is joint work of the Institute with the V.I. Vernadsky National Library of Ukraine (Kyiv), the V. Stefanik Lviv Scientific Library (Lviv), The M.T.Rylsky Institute of Art Science, Folkloristics and Ethnography (Kyiv), The People Science Institute (Lviv), and the Lviv Conservatoire (Lviv). At these scientific departments' stores, the materials of ethnographic expeditions are gathered, including unique collections of Edison phonograph cylinders, on which ethnographers recorded invaluable specimens of Ukrainian, Jewish and Rumanian folklore at the beginning of the twentieth century. Musical, epic traditions of Ukrainian people's descriptions of their mode of life reached us in their initial form and, naturally, they are today of great cultural/historical interest for scientists, folklore experts and connoisseurs worldwide.

Up to the most recent past, this ethnographic expeditions materials was not used widely, since equipment for deciphering their most valuable part - phonograph records - was absent from Ukraine.

IIRP of NAS of Ukraine has very rapidly developed a principally new method and manufactured the equipment for non-destructive sound reproduction from Edison phonograph cylinders. An optomechanical method of sound track relief digital reproduction with its further computer conversion into sound was accomplished on precision equipment for the first time in the world. Sound reproduction quality in this case exceeds the world level.

The results obtained are very important for storing the cultural property of the past and for distribution of information about it. Today, we can reproduce phonograph archives information, restore it and represent it in digital form, transfer it on to modern carriers, such as optical discs, which provide long-term storage of the records in computer form.

The first CD from the planned series of discs with folklore records is already copied and has been distributed among scientists, connoisseurs and folklore experts in Ukraine and in other countries. We have begun to prepare for the production of a CD which will represent the non-sound information, note materials, scientific comments, photos, drawings, etc. These CDs will be also distributed to the libraries, universities, cultural and scientific centers, among wide strata of society. This provides the conditions for scientific research of rare phonomaterials, being first sound setting of Ukrainian folklore, and of Ukrainian national minorities' cultural heritage. Wide prospects are opened up for acquainting the Ukrainian and world scientific community, a wide circle of folklore experts and connoisseurs with invaluable treasures of the Ukrainian peoples' national culture.