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INFORMATION RESOURCES ON CULTURAL HERITAGE: SOME PROBLEMS OF INTEGRATION*

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Introduction

Together with Internet technologies, the idea of integrating of the world information resources on cultural heritage came out and now is in the project stage. In the sphere of ideas, Russia is not apart from the whole world, so this idea is discussed widely in publications, on professional conferences and seminars, including EVA'98 Moscow, ADIT'98 Ivanovo, ADIT'99 Yaroslavl, and Crimea'99. All the papers of the "Strategic Issues" session of EVA'99 Moscow and a lot of papers of other sections are devoted to this topic. Last year when preparing EVA'98 Moscow we had an aim to bring together specialists of different branches of culture – libraries, museums, immovable heritage, modern artists – to discuss problems of information technologies in cultural area and integration. In our paper for EVA'98 Moscow [1] we introduced the idea to design a Federal Programme which could determine the system approach to the integration of information resources on cultural heritage and consolidate all interested parties (the Ministry of Culture, the Ministry of Education, the Ministry of Science and Technologies, the Ministry of Communication, the Ministry of Press and Information, public organisations, museums, libraries, archives, technological firms, multimedia industry, private persons).

This aim was grounded on understanding that the world cultural heritage is not only museum items but also includes outstanding buildings and sites, monuments, books and documents, theatre, music, folk art etc., all these cross-linked. An integrated system approach to cultural heritage is announced by MEDICI (Multimedia Education and Employment through Integrated Cultural Initiatives - www.medicif.org) [2], which connects access to the world cultural heritage with education and employment. Approximately the same ideas are introduced by the Ministry of Culture of Russia: *«Integration of maximum possible volume of data on Cultural Heritage items as well as on cultural activities and the agents of cultural*

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activities in information networks is the aim, which follows from the fundamental thesis of the Russian State Cultural Policy – creation of common cultural space» [3]. Open access to the world cultural heritage through computer networks will give users wide possibilities to gain knowledge no matter where and in what form (museum item, book, film, etc.) it is kept.

From this point of view, the cultural heritage barriers between cultural institutions are artificial. Museums keep rare books collections and documents, they could be kept in libraries or archives, and some libraries organise their own museums. Museum libraries keep treasures practically closed to the public but in the projects of museum computing systems you can hardly find museum libraries – they are Cinderellas; at the same time museum libraries are not included into library networks as libraries are subordinate to the other department. It is not important to a user who wants a certain document where this document is kept - in a library, in a museum or in an archive - he needs access to the document. This is what is needed from information networks: to give access to the needed documents regardless from the institution it is kept in.

In planning integration of information resources on cultural heritage with access through computer networks it is important from the very beginning to keep in mind two global aims:

1. integration on national level, and
2. integration on international level.

That is, to organise access to Russian Internet sector for foreigners not knowing Russian and to organise access to the world heritage to Russians not knowing foreign languages.

All the ideas mentioned above could be found speculations not connected with everyday needs. But the global aims of information resources integration will determine the future architecture of the system and the methodology of meta-data and linguistic solutions. The meta-data and linguistic solutions will have a dramatic influence on the success of the system, access and search features, and the overall value of the information to the users. In some sense meta-data and terminology are more important than technological decisions as they are valuable as they are, not dependent on technologies and could be used with any level of computerization.. For example, the Russian artists database is an element of Russian cultural heritage, at the same time it could be used on a search node in a universal information network, or in a local museum network, or in an art library local network, etc. A purely technological approach may kill any project from the very beginning.

The desired situation: if we are interested in Anton Chehov and search information in the integrated cultural heritage network, we should get data on Chehov's biography; museums of Anton Chehov; museum items from these museums; bibliography; libraries, Internet-sites, CD-ROMs on Chehov and his works; full texts of Chehov books and illustrations to the texts; theatre performances and actors; movies; monuments, etc. There would be full information on the subject regardless of countries and institutions where it is gathered and kept. To have this possibility in future we should plan meta-data and terminology solutions oriented to this aim.

Integration into World Open Information Space

In the EC 5th Framework Programme as well as in the finished 4th Framework Programme (projects Van Eyck, GABRIEL, ONE-II, PICA, RLIN, OCLC, Aquarelle, Marburg, CHIN, etc.) there are a number of projects of multi-lingual approach to universal information networks. In these projects multi-lingual thesauri and meta-data on different branches of science and culture were designed and filled. Multilingual thesauri were created by UNESCO, Getty foundation, and others.. Among these a special role is played by Infoterm (Vienna), the centre of terminology standards in the framework of Technical Committee 37 on Standards. Russia should obviously take part in this activity, and Russian terminology should become an obligatory part of multi-lingual thesauri. If we use world multi-lingual thesauri for information indexing and searching, it will help at least partially to overcome the language barrier.

If a foreign user writes a query using his mother language and a standard multi-lingual thesaurus, and if a search machine searches information which was indexed using the same thesaurus independently from the language of information resources, then the user will gain a list of all resources, adequate to he query, including Russian language resources. Not knowing Russian, the user won't be able to read Russian texts, but at least he/she can brows the images on the topic and order translation of some resources or annotations into his language as an extra network service. Without this, the Russian sector of the Internet and digitised Russian Cultural Heritage will stay unattainable for the World. (Note, that the same technology is needed inside Russia for resources in other languages of Russia: Tatar, Mari, or Chechen, for example).

Vice versa, a search machine of Russian information network should help Russian users not knowing foreign languages to find and understand world resources, using the same multi-lingual mechanism, and supply translation into Russian. Thus, for Russia the usage of world standards and world terminology is important for the

purpose to overcome the language barrier and to be really included into the world information process.

In library sphere in the framework of the LIBNET programme, there are some projects on international co-operation, and there are some important achievements, for example, OCLC (Online Computer Library Center) search with participation of 20 libraries of Russia [4]. There is a serious practical activity in meta-data and terminology, for example, harmonisation of bibliography rules in a joint project of Russian Library Association and OCLC [5]. From 1995, Russia has taken part in project «Author» in the European Programme CoBRA (Computerised Bibloigraphic Record Actions), whose aim it is to develop and support national files of individual and collective names in the networks [6]. Subject headings on medicine and health of the Russian State Central Medical Library are harmonised with MeSH of the National Medical Library of USA, and support search of medical books in Russian in Medline data-base [7]. From the first steps of museum information integration, it is impportant to use the experience and practical results achieved by librarians keeping in mind the future integration of museum and library information resources.

Integration of information resources on national level

For the first time the idea of Russian cultural heritage net was discussed at the 3d annual conference of Russian Museum Association on Documentation and Technologies (ADIT) in May 1999 in Yaroslavl, and it was called a «national idea» [8]. Though the idea was born inside Russian museum community, it should be dwelt from the very beginning as integration of information resources of cultural area in the whole. First of all, there must be co-operation of specialists from museums, libraries, archives, etc., for designing meta-data and terminology standards on a national level and harmonising them with international standards.

Integration of information resources of libraries in Russia

The main feature of library resources integration is a set of programmes and projects on network technologies. This is, first of all, a Federal Programme LIBNET [9], and some other projects [10], for example, «Russian Libraries in INTERNET» (financed by the Open Society Institute, George Soros' fund) and by federal programmes of information infrastructure of Russia development), or the «Centre of Corporate Cataloguing» which is financed by the Ministry of Culture and the Ministry of Science and Technologies of Russia. Development and financing of these programmes is a result of activities of libraries, state institutions and independent science and charity funds [10]. It is important that these programmes integrate libraries no matter to what state body they are subordinate

and that intensive co-operation of Russian libraries and information centres with foreign institutions is supported.

- Programmes of integration of library information resources include:
- Development of communicative data formats, authority files, subject headings etc.
- Corporate cataloguing
- Distant access to library catalogues through global information networks
- Electronic delivery of documents
- Retro-conversion

Integration of information resources of museums of Russia

The process of integration of information resources of Russian museums is just beginning. It is a pity there is neither a federal programme of support of this activity nor a wide participation of museums of Russia in international projects. At the same time, some regional integration projects (for example, Yaroslavl [11], Nizhny Novgorod [12], Ivanovo [13]) and the programme "Russian Cultural Heritage Net" (based on "Museums of Russia" server www.museum.ru) have been started. [14]. International projects of museums: the State Hermitage – IBM, the State Historical Museum – Museums on Line [15].

Except for corporate cataloguing, impossible in museums as each museum item is unique, all the other elements of library resources integration programmes are valid for museums and should be included into museum resources integration programmes. Above that, special attention should be paid to imaging and the technological and legal protection of images and museum item descriptions in global networks.

Distinguishing features of museum information on the Internet is that Russian museums as a rule do not show catalogues of their collections (the State Hermitage is the only successful exception), though exhibition catalogues could be found in Russian Internet sector. It is caused first of all by the lack of a federal programme, government decisions on legal issues, all-Russian standards of meta-data, terminology and imaging. As the major part of Russian museum funding belongs to the State, governmental decisions are needed.

Second, more than a half of the state museums haven't got computers and do not use automated systems for collection management; only some museums using collection management systems have input their collections in full; imaging is even a greater problem. Aside from financial reasons, it is connected with indifference of the state institutions to the problems of digitisation of museum collections. Whether or not to use an automated system, to solve the problem of full electronic

cataloguing, or to open a digitised collection on the Internet, is an individual decision of each museum.

To speed up the process of museums catalogues digitising and to make it more effective, it is useful to make experiments on retro-conversion of museum catalogues (the same as it is done in libraries) and in case of positive results to use this technology in museums across the country.

To make the State Catalogue of Russian Federation Museum Fund [3] and to organise distant access to it through information networks needs serious legal decisions. Legal problems of electronic imaging could partially be solved if the Russian State Service for registration of protected images and museum items descriptions is installed. This service could perform the same registration functions as Museums on Line [15] does, and it could be based on the same or different principles of image indexing and protection, but it should be a Russian State Registration Service.

Corporate creation of museum meta-data, terminology and authority files

In the early 1980s, at the beginning of informatization of museums, the Ministry of Culture of the Soviet Union organised special work-groups. These work-groups focused on museum terminology. To gather special groups of terms was the responsibility of large museums (for example, Russian art was the responsibility of the State Tretyakov Gallery, jewellery and decorative art fell to the Kremlin museums, etc.). This process, though, didn't bring desirable results; museum thesauri were not made. When installing automated systems of collection management, each museum acted independently and designed its own thesauri. Only when one of standard museum systems was installed in a museum, it used and developed the terminology of all other museums using the same system. At that stage there were two ways to gather and organise museum terminology: 1) terminology was organised in advance, before the system was installed and descriptions of museum items indexed; 2) terminology was gathered in the process of indexing so that terminology files were formed together with information input by each operator independently. The first approach helped to form terminology files of a museum; while the second approach which was more convenient for information inputting, it created problems of synonyms and problems of data-bases merging. Thus, in IAMIS museum information system, a special mechanism of combining terminology was designed.

In any case, now, after 10 years of using of museum information and collection management systems, museums and designers of standard museum systems gained large experience in dealing with terminology and a large set of terminology and authority files of authors, personalities, historical events etc. designed by a single

museum or by association of museums using the same museum automated system. This could serve a good base for all-Russia standards of meta-data, terminology, and authority files. Resources of that sort existing in electronic form are of special value. Meta-data, terminology, authority files for integration of information resources on cultural heritage should be designed on corporate grounds. The Standards Committee [16], thus, could be defined as a body organising activities, dealing with communicative formats, meta-data and terminology harmonisation on national and international level and conversion of existing authority files into standard formats.

Potential of cultural resources integration

Museums and immovable cultural heritage

For the last 20 years, informatization of muse
ums and state bodies of registration and preservation of immovable cultural heritage went in parallel, first, as a lot of museums are situated in historical buildings, second, on official reasons. Starting from the Ministry of Culture of the Soviet Union, the same state institutions worked over these problems. The same situation was (and is until now) in Russia: the Main Computing Centre of the Ministry of Culture of Russia (GIVC) designs and installs standard museum information system and keeps the Federal database of immovable cultural heritage, which includes descriptions of 95% of historical buildings and monuments, belonging to the state [17].

Museums and libraries

At the first stage of integration it is important to install automated information systems in museum libraries and include museum library catalogues into library information networks. Then it is important to include books indexes (from museum library catalogue) into museum item records and thus link the museum information system with museum library information system. Vice versa: museum items inventory numbers should be included into book records in a museum library database. If all the above is done it is possible to give access to museum information system through library information networks: ”user-library net-museum library catalogue – book record-museum item record” or ”user – museum net – museum catalogue – museum item record – book record.”

Another possibility is connected with museum collections of rare books. The books of these collections should be indexed as library items as well as museum items; the records should be included into library information networks.

Museums and Archives

In this area, integration potential is connected with museum document collections, which are indexed both as museum items and as archive materials. The archival material is treated this way according to the rules of the State Archive Department (some standard museum systems, for example, IAMIS of AltSoft, St. Petersburg

and the «Museum» of the Main Computing Centre of the Ministry of Culture of Russia support archiving features).

Conclusions

It is evident that the Federal Framework Programme of Russian Information Resources on Cultural Heritage Integration is need. Federal Programme of Museum Resources Integration, also not yet existing, should be a part of this Federal Framework Programme. Federal status of the programme is determined by the fact that major part of Russian Cultural Heritage, and of museum funds as a part of Cultural heritage, belongs to the State.

The Programme of Museum Resources Integration should also have a federal status, consolidating different Federal Ministries and Committees, oriented to integration of all resources on cultural heritage and to integration with the World Open Information Space. It should include:

- Organisational issues;
- Financial issues;
- Legal issues, including IPR;
- Communicative formats, meta-data, terminology standards;
- Museum informatizaion, including means of image acquisition and protection;
- Technological, technical and methodological problems of networked access to museum information resources, electronic delivery of documents and images;
- The State Catalogue of Museum Fund of Russia;
- Education and training;
- Museum information resources integration with resources of other branches of cultural area;
- New technologies for popularisation of Cultural heritage including multimedia on-line and off-line;
- International Co-operation.

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