Russian Federation

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A. Users and content

What are the main materials/categories of objects being digitised?

Museums
Descriptions and images of museum items are being digitised and added to specialized databases; electronic catalogs, virtual exhibitions and multimedia support of real exhibitions are being generated.

Libraries
Bibliographic records are being digitised and added to electronic catalogs, and this process goes along with retrospective conversion of card catalogs.
Full-text books including old-printed ones are being digitised, as well as journals, old newspapers, historical maps, printed music, musical compositions, posters, postcards, photos and gramophone records.
In November 2006, The Library of Congress (United States) and Russian National Library signed an agreement that initiates a new international project on development and creation of the Global Digital Library.[1]

Archives
Electronic document inventories are being generated; text documents and, to a lesser extent, audio and video records from retromedia are being digitised.

Sites and monuments protection (archaeology, architecture)
Descriptions of the monuments, documentation, images, plans and maps are being digitised. Creation of a union state register database of the historical and cultural monuments is planned within the Culture of Russia 2006—2010 National Program.

How is the digitised CH content being distributed?

The digitized CH resources are being distributed through the Internet portals and sites, regional public access networks and local networks of cultural and educational institutions; additionally, they are being distributed on CDs.

Examples:
The Museums of Russia[2] portal has been in operation for over 10 years; it has won over 40 Russian and foreign awards; it is visited monthly by 240 000 users. This portal is based on the Russia's Museum Register (3301 museums) and the Museum Sites Catalog (697 sites). The portal provides access to 30,235 images of museum items. On a regular basis, its news section is being updated; a show bill and professional information is being published; user forum, a quiz and puzzles section are being maintained along with other portal services.
The State Hermitage site[3] provides access to the digital collection with an extended-search option and the QBIC search option by color and composition using the IBM technology.
Two museums of Russia offer Internet access to the full illustrated catalogs of their collections: Rybinsk State Museum-Reserve[4] - as of January 2007, it contained 55,780 descriptions of museum items and 34,994 images; in one year the catalog of this museum has increased by almost 10%, and the number of images, by almost 30%; from 2006, access has been provided to the full illustrated catalog of Chuvash State Museum of Fine Arts[5] (as of January 2007, it contained 20,397 descriptions of museum items and 18,003 images). Both catalogs are being renewed on a regular basis by a variety of data including data on the temporary exhibited items.
A good example of a united museum catalog is the online catalog "Karelia Museum Collections"[6].
As for libraries, the main digitization tool is the LIBNET

program which is being funded within the Culture of Russia 2006—2010 Program. The LIBNET National Information and Library Centre[7] was established in March 2001 by two Russian national libraries, i.e., Russian State Library (Moscow) and Russian National Library (Saint-Petersburg), with the aim to realize cooperation projects of the Russian libraries in creation, exchange and use of electronic resources using the advanced technologies. As of January 1, 2007, the Union Catalog of Russian Libraries contained 1 954,846 records; it has added 764,209 new records in a one-year term. In December 2006, almost 24,000 bibliographic records were borrowed from the Union Catalog.

The Regional Library Consortia Association (ARBICON[8]) was established in May 2002 with the aim to coordinate the activity of libraries striving to improve their services by modernizing the library resource management when establishing library consortia. ARBICON offers Z39.50 access to electronic catalogs and electronic libraries of the participants to this project who joined the regional consortia. To date, ARBICON comprises 14 regional library consortia covering a vast territory of Russia, and almost 300 libraries. Each consortium comprises a different number of libraries and outlines the access policy to its resources. In 2006, ARBICON initiated a project entitled "Electronic Full-Text Unified Collection" (EPOS), a distributed information system that unites electronic collections of the project participants on the basis of agreed rules and allows them to effectively use their electronic resources through the global data transmission networks.

Archives. The database "A Guide to Russian Archives"[9] has been produced so as to enhance the access of researchers to the documents of the Archival Collection of the Russian Federation. This database contains 60 guide-type reference books – 20 on federal and 40 on regional archives which were published from 1987 through 2004 and, also, descriptions of over 100,000 archival collections which include sociopolitical, historical, military and economic documents, materials on literature and arts, scientific and technical information, etc. Electronic catalogs, including illustrated ones, are represented on the sites of several Russian archives, among which are Russian State Archive of Films and Photos,[10] Russian State Archive of Literature and Arts[11], St. Petersburg Central State Archive of Films and Photos.[12]

The project "Russia's Regions Culture" is a corporate site[13] being funded by the Federal Agency for Culture and Cinematography. This site represents the diverse multinational character of Russia's culture and provides access to an extensive base of official, special-purpose and corporate regional cultural sites.

The project "ComSat Culture" aims to unite individual branches, departments and institutions of culture in a common information network which is a framework of satellite aerials with coordination center at the Main Computer Center of the Federal Agency for Culture and Cinematography.[14] The original technological data security solutions that were used in the design of this project allowed for creating a well protected information and communication network. The project enables continuous delivery, batch delivery of files, including movies and video, and other services. The subscribers to the network are regional cultural administrative authorities and institutions of culture and education.

Are there any eLearning or creative industry uses for the digitised CH material?

Yes, there are some, but they are not systematic because of departmental barriers.

A major project is being underway in the National Personnel Training Foundation[15] which aims to establish a unified national collection of digitised educational resources[16] with Internet access to them.

This Foundation is working currently on cooperation models for dealing with museums and libraries.

In 2006 a project was launched to design a portal of educational resources for the purpose of training specialists for culture. Stage I of this project has been already completed with respect to the educational resources for the secondary, tertiary and complementary education of librarians.

Are there any special issues that deal with the general accessibility of the digitised cultural content?

On the one hand, general access to digital cultural resources depends on the programs of providing Internet connection for museums and libraries and on establishing public-access centres to information resources within federal and regional programs. On the other hand, the programs

of connecting users to the Internet are being realized. Thus, in 2008, all the 65,000 Russia's schools are planned to obtain Internet connection within the National Project "Education". Within another project, "KiberPocht@" (CyberM@il), we have started to implement the federal program which aims to provide universal information and communication collective Internet access services to remote settlements whose population is less than 500 people (these are territories with a very low population density, where development of communications is unprofitable, i.e., Siberia, Russia's Far East and Far North). Implementation of the first Russia's program known as "Establishing the Russia's Network of Public Legal Information Centres Based on Public Libraries", which aims to exercise the rights of the people to socially significant information, started on June 1998. The centres that have been opened within this Program provided free access to quality and updated legal information. In 2005, the team that was implementing this Program was awarded the State Prize of the Russian Federation. In total, there are over 2,000 such centres in Russia today, 60% of them being Internet-connected.

B. Technologies for digitisation

What common standards are most commonly used in digitisation?

Standards that are most common for printed texts are HTML, PDF, Dejavu.
For images, TIFF, JPEG, ISO/JPEG 10918 (SPIFF).
For audio information, WAV (for preservation purposes) and MP3 (for access).

What technologies and tools are most commonly used in digitisation?

Contactless scanners are rather commonly used for books and documents, but, generally, the decisions which technologies are to be used are taken by specialists in book preservation. Scanners, contactless scanners among them, and digital cameras are most commonly used for museum items.

How is interoperability ensured?

The interoperability of library catalogs is ensured by using the All-Russian standard RUSMARK, which is the Russian version of UNIMARK. LIBNET, the National Cooperative Cataloguing Center, uses the OPAC Global technology.
The memorandum of joined efforts taken to create a unified national authority subject heading file to be used in Russia's libraries may serve as another example of cooperation. This memorandum was signed by Russian National Library, Russian Book Chamber, Russian State Library and LIBNET.
A common standard for describing museum items and the respective metadata schemes has not been adopted in Russia. Interoperability is ensured by using common computer systems of museum collections management, such as KAMIS, which is a system being used by over 200 museums, and AIS-Museum, which also serves over 200 museums. To represent museum item descriptions over the Internet, the professional community has developed a concise-description standard.
On the transport level, data exchange is effected via TCP/IP and XML Schema protocols, as well as Z39.50.

Have any research needs emerged?

Research has been done at a low scale and is disintegrated, but we know that several dissertations have been defended on this subject, and several projects have been implemented due to the grants of scientific foundations.
Research and methodological studies with respect of e-libraries have been conducted by Russian State Library, Russian National Library and Russian Electronic Libraries Association.[17]

C. Sustainability of content

What funding models and funding sources are most commonly used in digitisation?

The main funding sources are the Government of Russia, the administrations of the subjects of the Russian Federation (regional governments), the grants of the governmental scientific foundations

and private foundations,[18] including foreign ones.[19] An example of supporting digitization of audio collections is the grant of the Association for Recorded Sound Collections (ARSC) (7,000 USD) which was received by H. W. Marston and Company for preservation, documentation and distribution of records from the collection of Julius Block. Stored on Edison cylinders in 1891–1910, these records were deemed lost during the World War II.[20]

Have you any examples of cost-reduction?

The basic models that reduce the digitization cost are flow production for large libraries and information centers, digitization from micromedia and outsourcing with the attraction of professional companies. The project "The Red Book of the Smolensk Region Culture", which is dedicated to digitisation of the cultural heritage of Smolensk region, may be a good example of a cost-reduction model. Students of secondary and tertiary schools are being attracted to implement this project, and mobile digitisation centres[21] are being established.

Have you any examples of national competence centres in digitisation of cultural content?

The leading cultural institutions of the federal level, such as Russian State Library, Russian National Library, State Hermitage, Moscow Kremlin Museums, State Tretyakov Gallery, State Russian Museum, State Historical Museum are the national competence centres in digitisation. Most of the central universal scientific libraries in the subjects of the Russian Federation are seriously involved in digitisation of rare books of their collections and materials of regional studies. Several museums of the regional level are also involved in digitization of their collections, such as museums in Yaroslavl region, Republic of Karelia, Republic of Tatarstan. Among large-scale digitization projects is the Fundamental E-library "Russian Literature and Folklore".[22] This full-text information system includes pieces of Russian literature, scientific bibliographies, research works and historical and biographical works. This project is implemented by INFORMREGISTR Scientific and Technical Centre, Institute of Russian Literature of the Russian Academy of Sciences (The Pushkin House)[23] and other partners.

Digitised within this project have been full collected works by many Russian writers and poets—Pushkin, Griboedov, Tolstoy, Chekhov, Tyutchev, Esenin; fairy-tales, Russian epic, literary encyclopedia, literary criticism, etc. Access to digital information resources is provided via Internet and offline publications.

D. Digital preservation

Are there national policies for digital preservation?

There is no national policy for digital preservation in the duly formalized and approved version.

Can you give examples of tools or technologies used for digital preservation of CH content?

Preservation of cultural heritage is conducted by individual institutions and networks. The main tools are various backup copying technologies and migration. In order to preserve publications on CDs, the Federal Digital Publications Depository was established on the basis of INFORMREGISTR Scientific and Technical Centre.[24] INFORMREGISTR is responsible for the state control and registration of Russia's information resources including online and offline databases, digital publications and e-libraries; it also provides access to the Internet catalog of registered digital resources.

E. Monitoring progress

Input/output indicators

Input	MEUR / Posts	Comment
Funding allocated to support digitisation - government		The funds allocated to support digitization at the federal and regional levels are not accounted for separately.
Funding allocated from within existing institutional budgets*		Not available
Size of work-force (full-time equivalent posts)		Not available

*Combined total, including personnel costs.

Output	Number of collections / items	Comment
Number of digitised collections		
- museums	Almost 600 collections 10 063 678	Expert appraisal Number of museum items as per the electronic catalog (data of the Main Information and Computer Centre of the Federal Agency for Culture and Cinematography as of 2005).
- libraries	6361	Number of computer-equipped libraries.
	44 242 000	Total volume of the electronic catalog of public libraries (data of the Main Information and Computer Centre of the Federal Agency for Culture and Cinematography as of 2005).
- archives	432 archives 267 291 inventories	Data of the Federal Archives Agency as of 2001.
Number of digitised collections recorded in a national inventory		
- museums	697	Number of museum sites on the Museums of Russia portal.
- libraries	50	Number of e-libraries registered by INFORMREGISTR.
	300	Number of libraries offering access to its catalogs via the ARBIKON project.
	1 954 846	Volume of the union catalog of Russia's libraries (LIBNET).
- archives	343 archives 219 332 inventories	Data of ROSARKHIV as of 2001.
Number of digitised items per collection type		Not available

Use indicators

Use	Amount	Comment
Use of web-sites distributing digitised heritage content		Data of the Museums of Russia portal.
- user sessions	308355	Average per month for the past 3 months.
- average duration of user sessions	Up to 2 min. 43% of users work for more than 2 min.	At the portal only, with no account of links to museum sites.
- average page impressions per user session	2 pages	--- « ----
Purchase or distribution of CDs / DVDs	40 000	Expert appraisal of the annual volume of sales of CDs with cultural information.
	13740	Number of copies of digital publications as acquired by federal libraries in 2005.
Audiences for streaming, video-casting or broadcasting		Not available

Assess any user-need surveys made on digital heritage content services

Surveys were conducted in 2004–2005 to assess
Internet users working with cultural information
resources.

Share of Internet users of cultural information resources and services, %

Resources and services	2004	2005	Addition
Electronic library catalogs	22,1	29,36	+ 7,26
Electronic museum collection and exhibition catalogs	10,6	16,48	+ 5,78
Full-text e-libraries	16,8	28,67	+ 11,87
Ready-made abstracts	31,8	36,7	+ 4,9
Info on working hours, repertoire, exhibitions, ticket price, etc.	50,9	44,18	- 5,72
Electronic document delivery	11,3	12,88	+ 1,58
Ticket order, reservation or purchase.	14,2	23,13	+ 8,93

Source: IRIO-ROMIR, 2004-2005 survey (sampling: 1816 people)

1 The leading participants to this project will be national libraries and archives of various countries. This project is supported by UNESCO and IFLA. The planning and development stage of the site prototype is funded by Google that made a target allocation of $ 3.000.000 US.
2 `<http://www.museum.ru>` (in Russian; some information is also in English).
3 `<http://www.hermitagemuseum.org>` (in Russian and English).
4 `<http://www.rybmuseum.ru/>` (in Russian).
5 `<http:// www.artmuseum.ru>` (in Russian).
6 `<http://www.museums.karelia.ru/kamis/web/>` (in Russian).
7 `<http://www.nilc.ru/>` (in Russian).
8 `<http://www.arbicon.ru>` (in Russian).
9 `<http://guides.rusarchives.ru/browse/browse.html?enc=rus>` (in Russian; the interface has also an English version).
10 `<http://rgakfd.ru/>` (in Russian).
11 `<http://altsoft.rosbi.net/rgali/start.do;jsessionid=A1E131850B64249F79FB89DD47C2D33B#>` (in Russian).
12 `<http://photoarchive.spb.ru:9090/www/start.do>` (in Russian; the interface has also an English version).
13 `<http://www.culturemap.ru>` (in Russian).
14 `<http://www.givc.ru>`.
15 `<http://portal.ntf.ru/portal/page/portal/NTF/about/index>` (in Russian).
16 `<http://school-collection.edu.ru/>` (in Russian).
17 `<http://elibra.ru/>` in Russian.
18 For instance, Potanin's Charity Foundation `<http://www.museum.ru/prof/news.asp?Id=29073>` (in Rusian) or Dmitry Zimin's Foundation "The Dynasty" `<http://www.museum.ru/prof/news.asp?Id=29769>`.
19 For example, "RUSSIAN LITERARY HERITAGE ON-LINE", a project funded by the Andrew Mellon Foundation and managed by the British Council, Moscow. The project, which started in April 2006 and will be completed in March 2007, is developing and implementing an on-line joint catalogue which will offer integrated access to the bibliographic catalogues of the Personal Library of Tolstoy held by the State Memorial and Natural Preserve Museum Estate of Leo Tolstoy 'Yasnaya Polyana' as well as the bibliographic and digital resources of the Moscow Russian State Library, related to the Russian author Leo Nikolaevich Tolstoy. `<http://conf.cpic.ru/upload/eva2006/reports/dokladEn_1041.doc>`
20 Block was a German businessman who lived in St. Petersburg and used a phonograph to record music and historical chronicles. He invited well-known musicians, poets and actors to have a look at the phonograph at his place and then talked them into making records. Among these well-known people were Anton Arensky, Eddy Brown, Nikolay Figner, Yasha Heifetz, Joseph Hoffman, Sergei Taneev, Petr Chaikovsky and Count Leo Tolstoy. These records are preserved in the phonogram archive of the Institute of Russian Literature of the Russian Academy of Sciences (The Pushkin House) in St. Petersburg.
21 `<http://nasledie.smolensk.ru/>` (in Russian).
22 `<http://www.feb-web.ru/>` (in Russian and English).
23 `<http://www.pushkinskijdom.ru/>` (in Russian and English).
24 `<http://www.inforeg.ru>` (in Russian).