DIGITIZATION AND ONLINE COMMUNICATION OF LIBRARY DOCUMENTS. EUROPEAN AND NATIONAL PERSPECTIVES

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Abstract: The digitization of information resources that provide online access, preserving them for future generations is something that requires efforts both at national level for the member states as well as at European level.

National Library of Romania is an important institution constantly focused on the long term preservation process and the permanent access to cultural heritage. The purpose of this paper is to establish two areas of action: first of all, to strengthen efforts to expand and improve access to knowledge and to join partnerships with libraries in the national libraries system, in order to support sharing documents, human and material resources, and secondly, to define a public policy regarding the digitization of cultural resources and creating a digital library of Romania.

Keywords: National Library of Romania, digitization, digital library, public policies.

The „Digital Libraries" Initiative[1] is part of the European strategy aiming to define and develop a "digital economy", a strategy defined for year 2013[2]. The strategy is presented as a package of active policies that would stimulate the development of an information society and of the media industry in Europe and would allow the use of digital technologies in economy and society. Three priority policies are defined:

- Creating a single European information space (by the convergence of digital technologies).
- Innovating and investing in Research and Development (supporting trans/European projects which would allow the integration, at

[1] Europe's Information Society / Digital Libraries Initiative http://ec.europa.eu/information_society/activities/digital_libraries/index_en.htm

[2] i2010 Digital Libraries. European Commission. Information Society and Media. http://ec.europa.eu/i2010

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the level of small and medium size institutions, of the results of research obtained at European level).

- Promoting the Inclusive European Information Society (eliminating the existing gap between Member States and the disparities in electronic services for citizens - the eGovernment principles).

The „Digital Libraries" Initiative is part of the package of measures for the implementation of the first policy, the creation of a single European information space and is directed towards supporting digital library services, developing diversified digital contents, adequate digital services, creating a European network of digital centers (with digital information) and, last but not least, regulating the issues related to intellectual property rights in the digital libraries context.

In the context of globalized information, libraries should define in a unitary way their role in society, that of capitalizing and preserving national intellectual heritage by organizing, processing, providing access and making available the national patrimony of resources within all media. The principles that should be promoted are: the principle of freedom of information and universal access to information; preservation of the national intellectual heritage; observing intellectual property rights; sharing information and documentation resources; promoting the role of libraries and librarians in society; promoting specific legislation; promoting professional cooperation at national and international levels; promoting a multicultural and multilingual information context, new models of information and documentation based on the up-to-date technologies.

The initiative aims at making Europe's cultural and scientific heritage accessible and usable online. It involves an extremely diverse cultural and scientific patrimony, both as documentary typology and information support: traditional documents on printed support (books, brochures, periodicals, printed musical scores, photos etc.), audio-visual documents (music, films), electronic documents (traditional documents transposed in electronic format, multimedia documents, electronic-born documents, data bases, other digital information contents).

In order to create a European digital library the European Commission has identified three **directions for action**:

- online accessibility (implying all the information and communication infrastructure and the specific information applications);

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- digitization of collections (transposing existing collections on traditional or analogical support into digital format and integrating them with electronic-born documents in a unitary ensemble);
- safeguarding and preserving the concerned electronic documents and collections with a view to enabling access to information for future generations.

The challenges that arise are **financial**, related to the high costs of digitization and the subsequent preservation and conservation; **technical** due to the diversity and dynamics of the technologies involved**; organizational** related to the need for a good coordination at national and European level; **legal**, related to the observance of copyrights and rights of dissemination.

In our work we do not tackle the issue of technical solutions for the implementation of the project but we should mention the principle that underpins the implementation and operation of such an information structure: a single access point to the European digital content. In other words, even if the digital content would be located in different collections, in various data bases, a single point of access will allow to search in different libraries.

The "Digital Libraries" Initiative includes two parts or two directions of actions: **cultural and scientific.**

An actual project, part of the initiative and which aims to valorize the European cultural heritage is "The European Digital Library" which aims to ensure multilingual access through the Internet to cultural collections of Member States. The Internet portal "European Library" (http://www.theeuropeanlibrary.org/portal/index.html) provides access to a very large array of digital resources: books, series of publications, children's literature, cartographic collections, musical collections, photos, posters, various images, manuscripts, doctors theses and dissertations etc.

Digitizing information resources, ensuring online access to them, their preservation and conservation for future generations are actions that need sustained efforts both at national level in the Member States and at European level.

At European level, the Commission defined a number of policies and directions of action in order to improve the framework conditions for the digitization of information and documentation resources, enabling their

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preservation in digital format[3], and providing co-funding for a number of projects and actions.

At the level of Member States, actions of digitization already exist but the efforts are unequal, sometimes disparate and the rhythm is behind expectations. The reasons are mainly financial, organizational, decisional. It is recommended that Member States activate their cultural institutions (libraries, museums, archives) and, by coordinating national libraries, participate in the implementation of the European Digital Library.

Scientific and educational information represent the second component of the Digital Library Initiative. This type of information resource has an extremely dynamic character, due to the large number of existing publications, the huge volume of already existing digital content. The European Commission adopted on 14 February 2007 the Directive on access to scientific information in the digital era[4], stipulating a number of measures through which the Commission aims to improve access to scientific information and its preservation.

A number of projects financed by European funds had as their objective the digitization of the European cultural heritage, with a view to providing new opportunities for science and education, creating the premise for social and economic development, improving access to information for European citizens. They are cross-border projects between partners from different Member States of the European Union; this is a pre-condition for interaction among partners, by promoting cultural and linguistic diversity, as well as online access to European cultural digital content etc.

We would like to mention some of these projects: MINERVA and MinervaPlus (Ministerial Network for Valorising Activities in Digitization – FP5/6)[5], which created a network of national structures in the Member States (even of ministries) responsible for the definition and harmonization of digitization policies. A forum of discussion was created, best practices were identified, digital contents were inventoried, typologies of information needs were identified etc.

Projects such as MEMORIES (design of an Audio Semantic Indexation System Allowing Information Retrieval for the Access to

[3] Commission Recommendation on the digitisation and online accessibility of cultural material and digital preservation
http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=2782
[4]http://eur-lex.europa.eu/LexUriServ/site/en/com/2007/com2007_0056en01.pdf
[5] www.minervaeurope.org

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Archive Content)[6], EASAIER (Enabling Access to Sound Archives through Integration, Enrichment and Retrieval - FP6)[7] or CONTRAPUNCTUS (Preservation and Unification of New and Existing Braille Music Digital Sources for a New Access Methodology -FP6)[8] contributed to the transposition in electronic format of audio resources, facilitating access to digital music. Real audio archives were created, indexed through specific methods and are now available online. CONTRAPUNCTUS created an online library of such information resources also accessible in Braille.

A number of projects emphasized "online access for all", these being actually projects in which the emphasis is not on the digitization of collections but mainly on the opportunities of their online valorization and exploitation. These projects developed new products and services specific to digital context. BRICKS (Building Resources for Integrated Cultural Knowledge Services - FP6)[9] is a project that integrates museums, libraries and other organizations (about 50) with a view to developing new value added services. All the above institutional structures are gathered around an open platform of a multilingual digital library that shares resources and provides value added products and services.

From a strictly biblioteconomic point of view, we would like to mention the projects:

- **The European Library – TEL**[10]**,** a project initiated with European funds having as objective to provide free access to information and documentation resources existing in 47 national libraries in Europe in 20 languages. The digital resources may be full text or bibliographical (bibliographical registration of non-electronic documents). Why the National Libraries? The National Library of a country is the one assuming the role of capitalizing, organizing, processing, preserving and valorizing the national cultural patrimony by its specific mission (legal depository, national bibliographic control, national center for conservation and preservation, methodological center).

[6] www.cordis.europa.eu/ist/digicult/memories.htm
[7] www.easaier.org
[8] www.punctus.org
[9] www.brickscommunity.org
[10] The European Library – TEL http://www.theeuropeanlibrary.org/portal/index.html

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The 47 European national Libraries participating in "The European Library - TEL" are members of the CENL **Conference of European National Librarians**[11]**.**

New projects that would further develop TEL benefited of co-funding:

- The **TEL- ME- MOR** (2005-2007) supported 10 national libraries in Europe from the new Member States to become full-members of TEL.
- **TEL+** (2007-2008) is financed by the European Commission and has two main objectives:

- to digitize 20 million pages of content in several languages;
- to support Romania and Bulgaria to become full-members of the **European Library**

The National Library of Romania is member of TEL+ since October 2007.

- **European Digital Library – EDL**[12](2006- 2008) is financed by the European Commission within the framework of the eContent+ Program. EDL is an extension of the European Library, founded by CENL and its goal is to provide access to the electronic collections of libraries through a single access point. Initially there were in the project nine national libraries of the European Union (Belgium, Greece, Island, Ireland, Lichtenstein, Sweden, Norwegia, Spain, Luxemburg) intending to have over 50 million digital registrations accessible from a single access point (bibliographical catalogues and digital collections). The TEL and EDL projects will mutually support each other and will develop the multilingual aspects of interfaces, due to the involvement of CENL in i2010 Digital Libraries. The European Library – TEL is crucial for the organizational foundation of the European Digital Library. EDL is supportive of the collaboration between the European Library and other non-library cultural initiatives with a view to protecting and valorizing the national and European cultural patrimony.

As of year 2008, the **European Digital Library – EDL** entered a new stage of its evolution. It became **EUROPEAN**[13] and aims to become involved in the development of digital content in all member countries of CENL. The European Commission wishes that the initiative developed at library level be extended to museums, archives and to any other structures having a role in the conservation and valorisation of the European cultural

[11] The Conference of European National Librarians (CENL). http://www.cenl.org/
[12] European Digital Library Project. http://www.edlproject.eu/
[13] European Digital Library – EDL www.Europeana.eu

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patrimony. For this purpose two recommendations were issued: *Council Conclusions on Digitisation and Online Accessibility of Cultural Material, and Digital Preservation (2006/C 297/01)*; *Commission recommendation on the digitisation and online accessibility of cultural material and digital preservation (2006/585/EC).*

At national level, the Ministry of Culture and Cults initiated a Public Policy for the implementation of the Digital Library of Romania in compliance with the two recommendations of the European Commission. The National Library of Romania is involved in the definition and substantiation of this public policy. The underlying principle is that the Digital Library of Romania is a unitary structure representing the national cultural patrimony in digital format, observing the accessibility to digital resources from a single access point and at the same time following a thematic and institutional organization. Accordingly, the following thematic benchmarks were defined:

- Written documentary patrimony (libraries)
- Mobile patrimony (museums, collections)
- Audio-visual patrimony (audio-visual archives)
- Immobile patrimony (monuments, archeology)
- Archive patrimony

For the "libraries" module the National Library of Romania prepared a feasibility study for the entire system of public libraries of Romania, in order to identify the minimum conditions for promoting and implementing such a public policy in the domain of libraries. The study was based on a questionnaire distributed to county libraries (that assume also a methodological mission in their area), to the Library of the Romanian Academy, the Central University Library of Bucharest (later the questionnaire was also sent to other university libraries in order to extend the results of the research). The questionnaire focused on issues related to information and documentation resources existing in libraries, their involvement in activities and projects of digitization, human and technological resources possessed, possible difficulties, their vision on the process of digitization of the existing collections.

We present below some of the main aspects as issued from the feasibility study prepared by the National Library of Romania[14]:

[14] Studiu de fezabilitate privind digitizarea, prezervarea digitală şi accesibilitatea on-line a resurselor bibliotecilor.[document inedit] Studiu realitat de Biblioteca Naţională a României. Bucureşti, 2007.

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The national legislative framework

Law nr. 8/1996, on copyright and connected rights

Law nr. 135/2007, on archiving documents in electronic format

Law nr. 182/2000, on the preservation of the mobile national cultural patrimony

Law nr. 186/2003, republished, on supporting and promoting written culture

Law nr. 334/2002, republished, Law of libraries

Objectives

- transposing in electronic format the written cultural patrimony
- promoting the written cultural patrimony at European level
- preserving the value of bibliophile books and manuscripts
- preserving documents in an advanced state of deterioration
- improving access to documents, locally and at distance, impacting on the increase of users, in number and categories
- opportunities for simultaneous consultation of the same document by several users
- providing a modern way of document consultation in accordance with new technologies, unrelated to the location and the daily program of libraries
- improving the quality of the document consultation process
- increasing the number of electronic resources developed directly in electronic format without a traditional equivalent

Information and documentation resources in libraries of Romania (conclusions based on the questionnaire)

- The funds of libraries are structured in accordance with the typology of documents: books, periodicals, manuscripts, cartographic documents, AV documents, graphic documents. The size of the collections depends on the type of library, and at local level on the allocated budget.
- Libraries carried out a number of digitization projects, on an individual basis and of smaller sizes. In most cases, digitized documents are available for consultation locally or on the websites of the libraries.
- All libraries have catalogues in traditional format (alphabetic, systematic etc.) and also electronic catalogues.
- There are very few electronic resources acquisitioned by libraries (Romanian legislative data base, Oxford Journals data base, EBSCO etc.).

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- The information infrastructure varies depending on the budget of each library and on the institutional management. Most county libraries use Tinlib as an integrated library software.

- There are a reduced number of IT specialists in libraries, a situation that would impact on the development of the digitization process.

- Libraries offer for selection collections of periodicals from the local media, the collection of the "Official Journal" and old Romanian books.

- In order to ensure compatibility between the digitization processes developed at local level, public libraries consider using an integrated library software for the entire national level.

- There are disparities between libraries in terms of information and organization, financial, material and human resources.

- It is necessary to create a specific structure (Direction Libraries) within the Ministry of Culture and Cults to ensure a better coordination of the activities in the domain at national level.

Aspects of the digitization process

The National Digital Library may be implemented along the principle of shared resources similar to the National Shared catalogue.

a) Identifying the already existing projects

b) Identifying digitization priorities of libraries and of documents proposed to be digitized

c) Selecting the documents/collections to be digitized

The criteria taken into account will be:

- the documentary value;
- preservation of the original documents;
- the representative character for a certain domain, a certain period of time or a certain geographic area both at national and international level;
- a relatively large group of potential users that would justify the selection;
- juridical aspects of two kinds: copyright and diffusion right;
- financial criterion;
- the technology required.

Collaboration between libraries manages to avoid duplication of actions impacting on costs and the length of time for project implementation, ensuring for it a unitary character at national level

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d) Methodology of work

Approaches should be different, depending on: the physical characteristics of the document, ways of storage; special collections; physical state of the document.

The National Center of Pathology and Restoration of Publications within the National Library of Romania by its nationally defined mission, as by Law of Libraries (Law no 334/2002 republished), may issue a framework regulation on the way to approach the digitization process from the point of view of documents preservation. The prescriptions of the regulation will determine the technical specifications of the digitization equipment and technologies.

e) Identifying the equipment and software

f) Communicating the digitized documents

- documentation aspects for processing and representation in the data base
- interface
- access rights

g) Costs

The budget of the digitization project at national level depends on the selected digitization solution.

The costs refer to:

- purchasing equipment;
- purchasing software;
- training of the library personnel;
- costs related to the spaces necessary for the digitization process;
- data base management costs;
- costs for obtaining copyrights and diffusion rights

The digitization solution

The selected digitization solution should take into account the aspects listed above.

There are three alternatives:

A. Digitization within the library – a solution applicable for the following situations:

- documents in special collections (rare book, ancient book, manuscript, incunable etc.), fragile or very valuable documents; special attention should be given to preserve and conserve these documents;
- small collections;
- creation of new digital documents;

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- documents transferred from the National Digital Library with minor adaptations;

B. Digitization by external services

It is recommended in cases of digitizing huge volumes of documents/pages which do not require special protection except the usual one.

Resorting to external services is recommendable in case a special technique of digitization is required, with special equipment.

C. A mixed solution

Most European libraries developing similar programs adopted a mixed solution of digitization.

Project management

The national project of digitization at the level of the national system of libraries is a complex one that should rely on the collaboration of all institutions in the system.

To attain a unitary outcome, the followings should be corroborated:

a) information and organization resources;
b) material resources;
c) financial resources;
d) human resources.

The proposal was approved by the Government of Romania and became Public Policy, necessitating the issuance of a Government Ordinance allowing the financing of the project. The text is available on the website of the Ministry of Culture and Cults[15]. The national dimension and the multiple implications of the project are already obvious and we shall see the way it evolves.

[15] http://www.cultura.ro/Documents.aspx?ID=293

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