

Project "North +": documenting, preserving and providing public access to the cultural heritage in libraries, museums, archives and galleries in North and Central Bulgaria

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Abstract. This paper presents the project „North +“ for documenting, preserving and providing public access to the cultural heritage in libraries, museums, archives and galleries in North and Central Bulgaria.

Keywords: Cultural heritage, repositories, digitization, metadata

1 Introduction

The new information and multimedia technologies developed in recent years to levels that enable new ways of storage, maintenance, exhibition and dissemination of enormous amount of cultural and historical heritage materials. The project "North+" includes documenting and preserving the cultural heritage, creating a digital hub "Culture and History" and a network for the provision of intellectual access to it in cultural institutions and organizations: libraries, museums, galleries and archival collections of local partners in North and Central Bulgaria.

With this project for creation of the modern center for digitization related cultural institutions will combine efforts in the conservation and digitization of cultural and documentary heritage for whose protection they are responsible. And there will be a chance for unification of the digitization process and the creation of full-text databases.

As a result of the digital center there will be easy access to the cultural heritage of the cultural institutions of the central northern part of Bulgaria, despite the physical use of the cultural values, there is a chance for intellectual access to them without damaging or endangering to retain the original objects in the long term for future generations.

The territorial scope of the network covers the North Central Region and Central Region of the Republic of Bulgaria. So far are studied and included more than ten scientific and cultural centers: Regional Public library "P. R. Slaveykov" - V. Tarno-

vo (RPL), Institute of Mathematics and Informatics – Bulgarian Academy of Sciences (IMI-BAS), Department "Culture and Tourism" - Veliko Turnovo (DKT), Regional Historical museum (RHM) – Veliko Tarnovo, Art gallery “Boris Denev”, Regional library “Liuben Karavelov” – Russe, “Elenka and Cyril D. Avramovi” – Svishtov, NL “Sagalasie – 1869” – Pleven, NL “Zora” – Sliven, Foundation "National Academic Library and Information System", Regional library “Georg Baritiu” – Brasov, Rumania, Center for interethnic dialogue and tolerance "Amalipe" and others.

Central role in the cultural network as the underlying digital center and the coordinating node is assigned to RPL [6]. RPL act as a regional center of expertise for 153 libraries in the territory of Veliko Tarnovo district. It also collects, processes, stores, organizes and provides for use its library resources and methodologically assists libraries in the region, qualifies the library staff, summarizes the data on their activities and submits it to the Ministry of Culture and to the National library “St. St. Cyril and Methodius”. All this makes it a natural center of the extended network of cultural and scientific institutions “North +”.

In the project, IMI BAS continues the investigations and implementation of technical solutions for a wider spread and access to the Bulgarian cultural and scientific heritage [1][3][4][5][7].

2 Objectives, Necessity and Characteristics of „North +”

The project “North +” is aimed at digitization of objects of cultural heritage and creation of digital centers. The aim is to provide the necessary technological basis for digitization, preservation and provision in the European context of the cultural, literary, documentary, historical and architectural heritage, maintained in culture partner institutions and organizations from the North Central region and other demographic regions of Bulgaria. Through digital conversion for specialized collections of manuscripts, books, revival periodicals, old photographs, a local archive of immovable cultural heritage and museum exhibits paintings would be provided unhindered access in European dimensions of the Bulgarian cultural heritage.

The central library is planning to create a data network of virtual offices (branches) with digital literature of the partners like the Holy Mountain Athos digital filials (in Sofia University "St. Kliment Ohridski" [2] and Ohio University, USA). At the same time activities of the partner organizations in the implementation of conservation functions will increase, which in recent years have remained in the background, due to lack of funds for the purchase of modern equipment and a lack of capacity in the institutions participating in the project. The project intends to include volunteers from Bulgaria and other ethnicities, the process is bilateral. On one hand the capacity of the digital center will increase and will be secured with human resources, on the other hand the participants will acquire the necessary library and digital competence that is necessary for the implementation of project activities. Will be followed the general national responsibility - national memory to be preserved for future generations.

2.1 Justification of Creating a Modern Center for Digitization

A) In the study of BLIA in relation to the upcoming national strategy and conservation of literary heritage program in libraries and providing access to it, facts are provided and are indicated the problems that face libraries and other institutions, occupied with the difficult task - preservation and promotion of cultural heritage, priority in the cultural policy of European union. The main conclusions of this study are that the preservation of original literary heritage in Bulgaria is seriously threatened, due to lack of storage conditions and prevention, conservation and restoration do not meet modern standards, requirements and standards, the lack of a secure budget for these activities. Compared with other member states of the EU digitization in the country is in a very modest size - only 5.54% of the total literary heritage is digitized. A national register of digitized objects is missing.

B) According to the archeographical commission to National library “St. St. Cyril and Methodius”, cited in the study of BLIA about the project about the national strategy and program for the protection of literary heritage in nearly 100 libraries are stored 8000 editions of manuscripts from X to XIX century, 189000 volumes early printed books, rare and valuable books in various languages and more than 3 million of archival documents from the period of Middle age Ages of Ottoman rule and the Renaissance. Current state and the conservation of these collections is not everywhere according to the requirements and standards, and thus they are in danger of atmospheric influences. The paper that was used in the second half of the XIX and XX century was with high acid content, therefore, documents created during this period are perishable and threatened with destruction. For these reasons it is necessary to adopt measures, both nationally and locally for the restoration, preservation and digitization of existing rare and valuable collections in order to preserve the originals and provide greater access to our national cultural heritage.

Another valuable collection, subject to digital conversion is the specialized local record of immovable cultural property. It keeps securities scientific and technical documents showing the history of the study, the technical condition and activities in conservation and restoration of cultural real objects. Originals - drawings and plans are made of paper, most by heliograph image together with other text and photo documents are perishable and in danger of destruction.

C) By pursuing digitization of objects of cultural heritage, created by Digital Center shall be provided open access to digitized national cultural and scientific heritage. This sets the beginning of sustainable policies for their continued digital preservation and conservation. The modern center of digitalization will bring together similar institutions in the conservation and digitization of cultural heritage for whose protection they are responsible. The project enables unification of the digitization process and the creation of full text databases. As a result, the digital hub shall provide a broad and easy access to the cultural heritage of the cultural institutions of the central northern part of Bulgaria and retain the original objects in the long term for future generations.

D) By incorporating key cultural units, predominantly from the north central region of Bulgaria is achieved a major part in the digitization process of the cultural heritage of a large demographic area.

2.2 Target Groups and Impact on Target Groups

Target groups of "North +" are all layers of civil society: academics, students, representatives of ethnic communities, employees in institutions and organizations, residents of settlements.

2.3 Expected Results and Impact of the Implementation of the "North +"

- For libraries and library profession: facilitation of activities on storing and organizing access to information and better and effective protection of cultural and historical heritage in regional and national contributions; improving the quality and speed of service to readers benefiting from the special library collections;
- For museums and museum workers: creating a coherent structure of classification and indexing of documentary heritage and museum exhibits;
- For the municipal officials from the department "Culture and Tourism" and other organizations such as the Union of Architects in Bulgaria, designers and citizens owners of cultural values: promotion of cultural heritage, by digitization of objects of public importance and priority category of national and local importance, and further, objects of ensemble significance;
- Creating an Interactive cultural map of objects "cultural treasure";
- Benefits for the target groups of consumers: saving time; quick and easy access to the information they need with cognitive and scientific purposes; common access to full-text databases and cultural sites.

3 Studies and Activities, Related to "North +"

The project "North +" includes the following studies and schedule of activities.

1. Managing and monitoring of the project
2. Study of the existing technologies for digitization of the planned project sites
3. Exploration of the status and detailing of available specialized collections of project participants
4. Organization of hardware and software equipment
5. Investigation and selection of standards for the production of digital backup copies of real objects and their annotation with metadata
6. Development of digital centers (fixed and mobile)
7. Team training in digitization with a scanning hardware and software, photography, 3D scanning, work with software for optical character recognition, building arrays with metadata

8. Establishment of arrays with metadata
9. Digitizing of the collections of all partners
10. Digitization of terrain with mobility center
11. Processing and creation of digital archives and repositories
12. Organization and protection of digital archives
13. Creation of "theme paths" in the digital library
14. Dissemination and promotion of project results
15. Presentation of selected digital collections in the European Digital Library
16. Video documentation of selected items of movable and immovable cultural heritage. Capturing artistic and documentary
17. Development of interactive map "cultural treasure"

3.1 Research and Analysis of Existing Technologies and Standards

A research and analysis of the existing technologies is conducted and a proposal for an optimal set of hardware and software is prepared. The aim is to make a thorough study and analysis of the state of modern technology for the digitization of cultural heritage and analytical study of the development and application of modern technologies to build digital repositories and libraries with complex multimedia content, their functionalities and architectures.

The analytical studies cover the following key issues:

- general concepts of digital repositories and libraries with complex multimedia content;
- used formats, standards and principles for the construction of digital libraries and repositories with complex multimedia content;
- comp. architectures of digital libraries with complex multimedia content;
- initiatives for digitization of cultural heritage;
- features in the construction of digital libraries and repositories with complex multimedia content for display and preservation of cultural heritage, in particular the three-dimensional documentation of unique items, which is a relatively new field of activity.

We follow three main guidelines: online accessibility to materials, digitization of analogue collections and protection and preservation. Different hardware and software technologies and methods of digitization were analyzed depending on the type of media: text, photo, video, audio and 3D.

3.2 Study of Specialized Funds for Archives, Libraries, Galleries and Museums and Other Institutions

RPL as the underlying digital library and coordinating unit for structural design shall select a scheme of the entire documentary archive, including the documental literary heritage from the specialized collections of regional and community center libraries, movable and immovable cultural property of DKT, museums and galleries.

The survey about the condition of the specialized funds of archives, libraries, galleries and museums and other institutions on the territory of Central North Bulgaria and the regional center of Brasov and retrieving the information to be included in the common digital array is detailed. Foreseen to provide a treatment of selected documentary array of digitizing (dating, expert for originality, historiographical and bibliographical description). Experts are attracted for this key activity and they will advise participants when entering information about special collections and building metadata.

DKT examines the local scientific documentary archival collections of immovable cultural heritage, located in the municipality of Veliko Tarnovo proposing to digitize objects: files – technical documentation, maps, plans on a paper basis, normative documents and lists, research papers, studies and old photo-documentation of the real cultural values and documentation of military monuments.

Archival documents and information about 500 pcs immovable cultural property (ICP) will be digitized; will be produced advanced 3D scanning in reality of 30 sites of national and local importance. For a period of five years could be digitized a total of about 2000 sites ICP and 120 objects will be scanned in 3D format.

The library “Georg Baritui” – Brasov carries out research activities to fill the information related to the creation on the territory of the district of Brasov of early printed books from the period of XIX-XX century, related to Bulgaria, printed in the region, on Cyrillic or Latin. The newfound collection will be digitized on site at the Regional Library “Georg Baritui” – Brasov and metadata will be prepared, which will be merged in the common database.

3.3 Performance of Research and Analysis of Existing Standards and a Proposal for an Optimal Set of Metadata

Common formats and standards used for complex multimedia content. The available formats and standards for describing content, exchange of data, description of the resources and security and access rights in digital libraries are adapted to support the construction of interoperable digital libraries and repositories with complex multimedia content.

The user Interface is a standard web browser.

Exchange of data:

- Graphic formats: JPEG, TIFF, GIF, BMP, PNG, EPS, Group 4 Fax, CGM
- Format for structured documents: SGML, HTML, XML
- Formats for video, moving image, 3-D objects: MPEG, AVI
- QuickTime, Real Video, ViviActive, VRML
- Formats for volume: au, mp3, wav, Real Audio

Metadata and description of resource: Dublin Core, WHOIS++ Templates, US-MARC, RDF and others. Security, permissions, payments: the standards for e-commerce.

After completing the tasks is expected realization of multiple outcomes and benefits to society and to achieve greater public and institutional participation in the digiti-

zation and promotion of tangible and intangible Bulgarian cultural heritage in the European context of cultural and creative industries, cultural exchange, cultural diversity.

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