# THE CREATION AND DEVELOPMENT OF INTEGRATED INFORMATION SYSTEM FOR AUTOMATED STOCKTAKING, DIGITIZATION, PRESERVATION, SEARCH AND ACCESS OF MUSEUM VALUABLES IN LITHUANIA

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In March 27, 2001 by order of the Minister of Culture of the Republic of Lithuania there was set up a working party to prepare the conception and model for computerizing the collections Lithuanian museums possess; therefore, it may be considered the beginning of digitization of Lithuanian cultural heritage. The working party consisted of the competent specialists highly experienced in museum work, who together developed a digitization conception.

In 2002, Lithuanian Art Museum (hereafter LAM) joined the EUREKA project MUSEUM ONLINE CATALOGUE (MOC) initiated in the Baltic States by National Museum Board of Latvia. Apart from mentioned institutions the were partners from Estonian Ministry of Culture together with IT companies from three Baltic States: joint-stock company "ALNA" (Lithuania), GenNet Laboratories Ltd. (Estonia), and IT Consulting Ltd. (Latvia).

Carrying out the project together with JSC "ALNA", somewhat financially supported by Lithuanian Ministry of Culture, in 2004-2008 LAM set up and introduced Collection Information System (RIS) and Integral Collection Information System (IRIS). With the introduction of RIS and IRIS it became possible for LAM to computerize stocktaking of collections, to store, manage and control data on museum collections, and to provide information to museum employees, internet users as well as to the national portal of Lithuanian cultural heritage ePaveldas [www.epaveldas.lt](http://www.epaveldas.lt) which was initiated in 2005. There was also proposed the public access to LAM's electronic catalogue on the internet [http://www.rinkinys.ldm.lt/iris](http://www.rinkinys.ldm.lt/iris).

There is already some basic data on more than 156 thousands of exhibits in the LAM RIS database. In 2008, RIS was installed and adapted in Vilna Gaon State Jewish Museum as well as in M. K. Čiurlionis National Art Museum. Several other Lithuanian museums have their own collection information systems but these are not suitable for digitization of exhibits.

Another important aspect that motivated to further develop the digitization processes in Lithuanian museums were the resolutions "On the Affirmation of Strategy Concerning the Development of Information Society" and "On the Affirmation of Conception Concerning the

Digitization of Lithuanian National Heritage" that  the Government of the Republic of Lithuania passed respectively on June 8 and August 25 of 2005. The conception that still remains the underlying strategy of cultural heritage digitization in Lithuania maintains that there should be introduced favourable circumstances to initiate and develop the strategy, programs and projects of cultural heritage digitization, to coordinate and monitor their implementation, and to secure continuous progress of the digitization of cultural heritage objects in libraries, museums, archives and other institutions devoted to the preservation of cultural valuables.

Ministry of Culture and Ministry of Education and Science of the Republic of Lithuania together with Information Society Development Committee (hereafter ISDC) and Lithuanian Archives Department (both under the Government of Republic of Lithuania) were entrusted to coordinate and to constantly monitor the digitization of cultural heritage.

The conceptual strategy maintains that the aim of cultural heritage digitization is to digitize unique and valuable cultural heritage objects as well as information about them seeking to "create an integrated information system of Lithuanian cultural heritage based on homogeneous standards and information usage agreements that would ensure long-term preservation of and access to digitized information; providing digital copy and information, allow the long-term preservation and usage of cultural heritage; promote and disseminate Lithuanian cultural heritage in the wide context of diverse world culture, and contribute to the creation of integral information field of European cultural heritage.

The conception indicates that upon deciding which objects are to be digitized the following criteria should be applied: uniqueness, content and value, physical condition and age.

The urgency to further develop the digitization process in Lithuanian museums is clearly stated in the resolution "On the Confirmation of Museum Modernization Program in 2007-2015" passed on March 14, 2007 by the Government of the Republic of Lithuania. In this document it is emphasised that there is still no such integrated museum information system which is why sharing information, searching collections and exchanging them is virtually impossible. As fundamental to the strategy, the resolution designates its crucial objective "with the help of modern means and technologies, to actualize the collections of country's museums and to provide a possibility to familiarize society with the digitized cultural heritage and information about it."

Another impulse that prompted museums to join the process of digitization of cultural

heritage was the resolution "On the Confirmation of the Strategy Concerning the Digitization of Lithuanian National Heritage, the Preservation of Digital Content and Access to It" which was passed on May 20, 2009 by the Government of the Republic of Lithuania, and which ratified the strategic plan for the years 2009-2013. In the document it is claimed that one of the strategic aims of the Government is "to promote the digitization of cultural objects preserved in various memory institutions, to ensure that Lithuanian cultural heritage would be preserved, integrated into a virtual space of cultural heritage and broadcast into the world." Furthermore, there is a need to develop an integral information system for digitization of cultural heritage, that would warrant the preservation of cultural objects, allow to access them as well as integrate them into the common digital space of European cultural heritage. The aim, therefore, is to capacitate a right set of legal, organizational and otherwise important circumstances to develop and make it functional an integrated infrastructure of digitization system of Lithuanian cultural heritage. There will be created and elaborated an integrated system for searching, preserving and accessing digitized cultural heritage as well as efforts put to improve the competence of the specialists working with digitization in various memory institutions. Besides there will be made an endeavour to standardize the processes of cultural heritage digitization, preservation and access, to create and spread the digitized content of Lithuanian cultural heritage, and last but not least, to encourage initiatives promoting the digitized cultural heritage.

Together with the resolution there was ratified a plan for 2009-2013; it is pointed out there that Lithuanian Art Museum together with Martynas Mažvydas National Library of Lithuania and Lithuanian Archives Department under the Government of Republic of Lithuania are to carry out the functions of digitization centres in memory institutions, to coordinate the digitization of Lithuanian cultural heritage, to encourage communication between various memory institutions and further to be responsible for spreading news and information on this subject locally and internationally. The funding for implementation of this project will be obtained from the Republic of Lithuania and EU Structural funds.

The plan indicates that developing the integrated system for searching, preserving and accessing the digitized cultural heritage in 2009-2011, the Lithuanian Integral Museum Information System (hereafter LIMIS) 2009-2011 should be established and installed in Lithuanian museums.

Following the resolution, on June 30, 2009 Lithuanian Art Museum founded a new department - Lithuanian Museums' Centre for Information, Digitization and LIMIS (hereafter LM ISC LIMIS) the mission of which is to not only organise and coordinate the digitization of

museums' valuables and to present cultural heritage on the international portals but also to develop a Lithuanian Integral Museum Information System administered according to homogeneous standards and encompassing a number of collection databases of Lithuanian museums.

In 2009, executing the order "On the Assignation to Pursue the Project 'Installation of Lithuanian Integral Museum Information System LIMIS in Lithuanian Museums' Given to Lithuanian Art Museum" issued by the Minister of Culture of the Republic of Lithuania, LM ISC LIMIS conceived and proposed to Central Project Management Agency a project on the installation of LIMIS in country's museums that is planned to be carried out in March 2010 - August 2012. During this period LIMIS should be developed and installed in 19 Lithuanian museums (4 national and 15 state museums). For the second stage of the project LIMIS will be introduced in other Lithuanian museums (regional, departmental, etc.).

The project was agreed upon and launched in March 18, 2010 after the contract between LAM, Information Society Development Committee and Central Project Management Agency concerning project funding and administration had been signed. LIMIS regulations based on valid laws of the Republic of Lithuania are already issued, LIMIS specification confirmed. Public buyings are still being administered; classifiers, thesauruses, keyword dictionary and the dictionary of persons are under construction.

In February 2010, LAM together with M. K. Čiurlionis National Art Museum (Kaunas), Lithuanian Sea Museum (Klaipėda) and Šiauliai Aušros Museum (Šiauliai) signed an agreement on founding regional digitization centres in those three museums. In March 2010 the centres were established, their function is defined in the set of regulations made by LAM and the above mentioned museums. Each centre has one employee from LM ISC LIMIS.

LIMIS is being created not only for computer-assisted stocktaking of museum collections and exhibits, their storage, management and control following unanimous standards in accordance with the list of the standards recommended by the Minister of Culture as well as the well-established order of the preservation and stocktaking museum collections. The underlying is to integrate the databases of Lithuanian museums into one integral information system, to ensure the development and maintenance of LIMIS electronic catalogue, to supply with a means for digitization of museums' exhibits and the development of full-text databases and also to provide system users with a search tool as well as information on the exhibits of Lithuanian museums. The system will enable museums to not only send data about their exhibits to the integral museum

information system but also to make their own electronic catalogues, provide free access via internet and to do virtual exhibitions from the data aggregated in museums' electronic catalogues. In addition, they will also be able to take part in other digitization projects and to independently provide their project partners with data on their digitized exhibits.

All the necessary classifiers, thesauruses, keyword dictionary and the dictionary of persons have already been started to compile. The work is done by five specialists from the Methodical department of LM ISC LIMIS who work under the project "The installation of Lithuanian Integral Museum Information System (LIMIS) in Lithuanian museums" and collaborate with various Lithuanian museums and working parties. Evaluating a wealth of experience that memory institutions from Lithuania and other countries have, lists of classifiers and thesauruses are made considering the particularity of cultural objects accumulated in country's museums. The already compiled lists of classifiers as well as thesauruses are then sent to the museums and special working parties comprising of the specialists of art, culture history, natural and technical science, and restoration, where they are analysed, complemented and corrected if needed. After the analysis of comments and suggestions, LM ISC LIMIS specialists correct thesauruses and lists of classifiers, then send it once again for museums' staff to review and only after the final check they are presented to the experts and scientists to evaluate. The lists of classifiers will be in Lithuanian and English and in some cases, when specific collections require – in Latin and Russian as well.

At the present moment there is no such system that would integrate all country's museums and would be able to automatically stock take and digitize museums' exhibits whereas the need to digitize exhibits and to provide society with information about them is huge. Regarding that, in 2010 LM ISC LIMIS presented virtual exhibition information system http://www.muziejai.lt/emuziejai that offers every museum a possibility to already start learning how to digitize the exhibits and to supply internet users with the information about them. The result of the collaboration with ATHENA is that the system is designed in such a way that information on museums valuables could be harvested into EUROPEANA through ATHENA mechanism. In the beginning of 2010, with the help of information system more than 500 exhibits were digitized and then their data provided to the administrators of ATHENA project.

In the coming years it will be possible to harvest data on museum valuables directly into EUROPEANA through the national portal of Lithuanian cultural heritage ePaveldas www.epaveldas.lt. From 2010 onwards Martynas Mažvydas National Library of Lithuania is running a project "Creation of Virtual Electronic System of Cultural Heritage" that is sponsored

from EU Structural funds. The project has several partners among the most important memory institutions in Lithuania including three museums: LAM, Lithuanian Theatre, Music and Cinema Museum, and  Šiauliai Aušros Museum. Participating in the project opens up a possibility to contribute to the creation and development of the integral system for the search, preservation and access of cultural heritage.