

Strategy on long-term preservation of Lithuanian cultural heritage, current and future projects

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1. Introduction

With the new strategic frameworks *Communication on 30.09.2005: i2010: Digital Libraries*¹, *Communication on 14.02.2007: on Scientific information in the digital age: access, dissemination and preservation*² and *Directive on 29.03.2007: on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities ("Audiovisual media services without frontiers")*³ the European Commission launched a new integrated approach of long-term preservation and access of digital cultural heritage and scientific knowledge. The *Communications* outline the vision of digitization, online accessibility and digital preservation of cultural heritage and scientific knowledge, highlighting the initiative and role of digital libraries. Those initiatives aim at making European Information resources easier to be accessed and more user-friendly in an online environment. They build on Europe's rich heritage combining multicultural and multilingual environment with technological advances and new business models [1].

To realize the potential of digital technologies for widespread and easy access to information, three main directions will be followed⁴:

- Online accessibility, a precondition for the general public, researchers and companies to get maximum benefit from information;
- Digitisation of analogue collections in order to promote their usage among the information society;
- Preservation and storage aiming to ensure access to digital material for future generations and to prevent precious content from loss.

More explicit mechanisms of cooperation between intellectual property and depositing institutions are needed to ensure accessibility to cultural heritage by

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions : i2010: Digital Libraries [SEC(2005) 1194] ; [SEC(2005)1195] / Commission of the European Communities. Brussels, 30.9.2005. COM(2005) 465 final.

² *Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee on Scientific Information in the Digital Age* : access, dissemination and preservation : [SEC(2007) 181] / Commission of the European Communities. Brussels, 14.2.2007. COM(2007) 56 final.

³ *Directive of the European Parliament and of the Council Amending Council Directive 89/552/EEC* : on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities ("Audiovisual media services without frontiers") : amended proposal : (presented by the Commission / Commission of the European Communities. Brussels, 29.03.2007. COM(2007) 170 final. 2005/0260 (COD).

⁴ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions* : i2010: Digital Libraries [SEC(2005) 1194] ; [SEC(2005)1195] / Commission of the European Communities. Brussels, 30.9.2005. COM(2005) 465 final. p. 3.

memory institutions. Therefore access to resources not protected by copyright law is given much attention in legal documents of the European Council. Another aspect emphasized in the Communication is urgent necessity of digitisation in the European countries conditioned by their relatively backward situation in comparison with Asia and the USA. The main reason for this is absence of strategy on cultural heritage digitisation.

Proactive policies are needed to respond to the fundamental changes in technology. Digital convergence requires policy convergence and willingness to adapt regulatory framework, consequently, they are consistent with the emerging digital economy. *Communication on Digital Libraries* states⁵: "Within the individual Member States there is, in general, no clear policy on digital preservation. Where national preservation plans do exist they tend to concentrate on safeguarding analogue material which is at risk, rather than venturing into the area of digital material. Most progress is made in the area of legal deposit, with member states introducing obligatory deposit for digital material to ensure that the material is collected and stored by the relevant institutions. However, at present the schemes vary widely from country to country."

Concerning the integration of Lithuania into the single eEuropean cultural area as a public space it has to be admitted that although the most important legislative documents define long-term preservation, actualisation and access of the Lithuanian cultural heritage and use of information technologies, there is no effective functional strategy on long-term preservation of digital cultural heritage yet. That was the main reason why different activities of cultural heritage digitisation had not been co-ordinated throughout the country. They had been largely accidental and dependent on various subjective reasons and opportunities.

The Conceptual Framework of Cultural Heritage Digitisation, approved by the Government in 2005, indicated a course to be followed by memory institutions in resource integration process aiming to ensure long-term preservation of digital heritage and improve access to it. Accumulation and storage of electronic resources in order to preserve them as a testament to present-day reality for future generations, require revision of the related legal documents.

In our report we shall review the current national legislation on the movable cultural heritage of Lithuania in the context of the new European Union cultural policy. In parallel, we shall survey the most significant projects for archiving long-term preservation and access of digital cultural heritage and scientific knowledge.

2. The Legislation on long-term preservation of cultural movable traditional and digital heritage of Lithuania

In Lithuania protection of the cultural heritage is secured by the Constitution of the Republic of Lithuania and the following related legislative acts which sustain the uniform structure of the national legal cultural heritage protection system presented in Chart 1.

⁵ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions* : i2010: Digital Libraries [SEC(2005) 1194] ; [SEC(2005)1195] / Commission of the European Communities. Brussels, 30.9.2005. COM(2005) 465 final. p. 7.

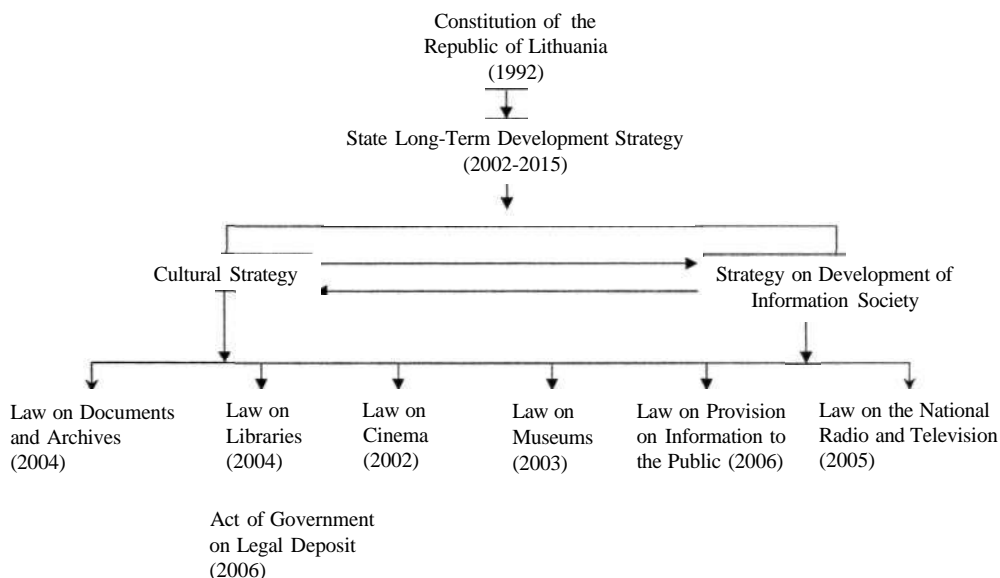


Chart 1. Legislation on long-term preservation of national cultural heritage

The State Long-Time Development Strategy [2], indicating the guidelines for economic, social, environmental and other policies until 2015 (November 12th 2002, No.IX-1187), defines preservation and actualization of the national cultural identity as the main long-term objective of national cultural policy. It combines inherited and common European cultural values, their secure prolongation, open access and competitiveness in the context of modern Lithuania, the European Union, and the rest of the world. However, the Strategy does not emphasize archiving of digital cultural heritage and scientific knowledge, its long-term preservation and access to it.

The Provisions on Lithuanian Cultural Policy [3] (adopted by the Government of the Republic of Lithuania on May 14th 2001, No.542) identify the following objectives of the Lithuanian Cultural policy: preservation and sustainment of the national cultural identity; stimulation of cultural activities and diversity of the arts; development of the information society; promotion of cultural openness; integration of the public into cultural processes. It also indicates the need for further acquisition and assimilation of modern technologies by the libraries in order to guarantee collection and preservation of national cultural and scientific objects.

The implementation of cultural development in Lithuania depends on the following legal documents:

- The Law on Documents and Archives [4] (2004, No.IX-2084), which regulates management and use of activity documents of state and municipal institutions, enterprises, state authorized persons, non-governmental organisations and private legal persons. However, the Law contains no provision for electronic documents.
- The Law on Libraries [5] (2004, No.I-920), which obligates the National Library to collect and preserve documents of cultural heritage published in Lithuania

and other documents of national content. However, the Law does not specify collection and preservation of the published digital heritage;

- The Law on Cinema [6] (2002, No.IX- 752), which obligates Lithuanian Central State Archives, an institution authorized by the Government, to take concern in preservation of national cinematic heritage. The State Archives collect original film material for preservation and renovation making it available for research, creative and other purposes. According to the above-mentioned Law, cinematic heritage shall be organized, preserved, catalogued, restored, and made available for research, educational and cultural purposes. The Law does not mention digital cinematic heritage.
- The Law on Museums [7] (2003, No.IX-1593), the primary legal act regulating the functions and activities of museums, specifies the collections and defines the system of Lithuanian museums, the order of establishment and liquidation proceedings as well as accounting practices, the order of subsidizing and management. The Law does not specify digital content and access to it.
- The Law on Provision Information to the Public [8] (2006, No.X-752), which defines the order of collecting, preparing and disseminating public information and the rights, duties and liabilities of public information producers, disseminators, participants therein, journalists and institutions governing their activities. Article 36 of the Law obligates the Government to determine the mandatory number of all publications (including electronic publications) which must be handed over to libraries free of charge. However, the legal aspect of copy delivery, as it is defined by the Law, does not satisfy regulations on long-term preservation of national cultural heritage because it does not define the content and directions of the legal deposit policy in Lithuania and does not outline the mechanism of legal deposit copy delivery and its full-scale acquisition.
- The Law on National Radio and Television [9] (2005, No.X-469), which defines the order of establishment and management of national radio and television institutions, their functions and activities. However, the issues of mandatory cultural heritage preservation and archiving of radio and television programmes are not dealt with. A new amendment to the Law on Radio and Television was registered in the Seimas of the Republic of Lithuania in March of 2007, which has not been published yet.

For obvious reasons we shall expand on the legislation on published documents.

The Bibliography Section and the National Libraries Section of CDNL, CENL and IFLA, taking into consideration the emergence of electronic resources and their exclusive status, encourage national libraries worldwide to update legislation on legal deposit which regulates collection of documents for archival storage. A number of European countries have made efforts towards the improvement of legal deposit legislation.

The National Library of Lithuania, executing its function of cultural heritage depositing, follows *The Guidelines for Legislation for National Libraries of UNESCO/IFLA*. The above-mentioned function is regulated by The Resolution (2006. No. 136-5170) on the substitution of the Resolution No. 1389 (November 22nd, 1996, Resolution No. 1389 "Regarding the Order of Distribution of Legal Deposit Copies of Publications and Other Documents to Libraries" [10]. It warrants delivery of legal deposit copies to libraries. One legal deposit copy is preserved in the

National Archive of Published Documents of the National Library of Lithuania which:

- stores and preserves documents published in Lithuania and other documents with national content;
- performs harvesting of web documents and their storage in the Archive of Electronic Resources.

The revised Act of the Government of 2006 which substituted the Act of the Government of Lithuania of 1996 [11], cannot be treated as an act of law sufficiently appropriate for the regulation of archiving electronic resources because it:

- does not identify and take into consideration new media types (including web documents); their harvesting is not sufficiently explicated and legalized;
- does not outline the policy of the legal deposit copy as the principal source for the National Archive of Published Documents and National Bibliography;
- does not specify the relationship and responsibility between the publisher and the library;
- does not define the order of delivery of the legal deposit copy;
- does not regulate the legal aspects of delivery (terms and expenses), archiving and access.

In the context of the current policy of the European Union, reflected in its most important communications and directives, it may be concluded that national legislation on long-term preservation of digital cultural heritage is not sufficient and requires further updating.

2.1. Project of the Legal Deposit Law

Therefore the initiative of the National Library of Lithuania of 2004-2005 on the project of a separate Legal Deposit Law, covering movable cultural heritage, was not accidental. The initiative was oriented towards long-term preservation, management and access of the current cultural heritage. It failed to get the approval by the Ministry of Culture and was withdrawn because Article 36 of the Law on Provision Information to the Public and the Amendment to the Act of the Government (2006) were anticipated to resolve the problems. However, as it was mentioned above, Article 36 of the Law does not provide sufficient legal basis for dealing with issues of publication delivery and their long-term preservation. Additional difficulties emerged in mandatory archiving, long-term preservation and access to electronic resources after the concept of "electronic resource" was abandoned without further explication by the legal act of 2006 on legal deposit.

The National Library of Lithuania as a significant institution responsible for cultural heritage preservation, has established a Working Group for preparation of the project of a new Legal Deposit Law which, unlike the Act of the Government, would have a different methodological meaning. The new Legal Deposit Law shall:

- define the objective and purpose of the legal deposit;
- outline the framework of legal deposit regulation by a state-authorized institution, which shall provide and realize national strategy and policy on legal deposit;

- define and ensure cooperation among providers of public information and libraries;
- expand the concept of legal deposit, incorporating modern information media types;
- legalize harvesting of web documents;
- define and identify mechanisms and methods of electronic resource delivery;
- indicate state institutions and the staff responsible for accumulation and preservation of cultural heritage, their legal liability and penalties for possible violations.

2.2 The legislation of cultural heritage digitisation

The Lithuanian State Long-Term Development Strategy (2002) [2], indicating the guidelines for economic, social, environmental and other policies until 2015, approved by the Seimas of the Republic of Lithuania, and the *Provisions of the Lithuanian Cultural Policy* define preservation and actualisation of the Lithuanian cultural identity as the main long-term objective of national cultural policy. It combines inherited and common European cultural values, their secure prolongation, open access and competitiveness in the context of modern Lithuania, the European Union and the rest of the world.

During the period of 2003-2004 the National Library of Lithuania carried out some planning activities on digitisation of cultural heritage, integration of memory institutions and strove to draw the attention of state institutions to the demand for the integration into the medium of European electronic content.

The National Library of Lithuania has considered the above-mentioned motives and prepared the Draft of the Concept of Digitisation of Cultural Heritage in 2004 in accordance with the Lund Principles [12] and the Lund Action Plan [13] aiming to secure:

- creation of common digital information environment of the Lithuanian cultural heritage with the assistance of memory institutions and other bodies responsible for cultural heritage;
- digitisation and distribution of the Lithuanian cultural heritage on the basis of the Integrated Virtual Library Information System;
- formation of an efficient infrastructure for digitisation of the Lithuanian cultural heritage in order to help memory institutions - libraries, museums, archives and others bodies responsible for the preservation of cultural heritage - to fulfil their obligations.

The concept is based on strategic documents of EU concerning digitisation of cultural heritage and in compliance with the e-Europe Action Plan approved by the EU Board. The promotion of the development of European content within global networks and enabling access to it by using digital technologies and creation of common European informational space would allow to implement the idea of unified Europe and develop business and public service infrastructure.

The main problems of digitisation in Lithuania are similar to those indicated on the European scale, namely, fragmentary and incoherent attitude towards digitization, obsolescence of technologies and shortage of repositories as well as simple and common forms of access to cultural heritage. Therefore, it is essential to ensure

adoption of common approach towards the informational space of digitised Lithuanian cultural heritage by institutions responsible for cultural heritage preservation, as well as cooperation among them; to increase their responsibility for creating single informational space of Lithuanian cultural heritage.

The Conceptual Framework of Digitization of Lithuanian Cultural Heritage determines the aim, principles and objectives concerning digitization of Lithuanian cultural heritage, objects of Lithuanian cultural heritage to be digitised and general criteria for selection. This Conceptual Framework establishes conditions for consecutive and purposeful work of state and municipality institutions and organisations on preservation of national cultural heritage, improvement of access to it and promoting the use of modern information technologies. This Conceptual Framework also allows to initiate and prepare the strategy, programmes and projects of cultural heritage digitization, as well as coordination and control of their implementation; it also ensures the coordination of activities concerning cultural heritage digitisation, performed by libraries, museums, archives and other institutions responsible for preservation of cultural values.

The National Library of Lithuania is the initiator of preparation Lithuanian cultural heritage strategy. The Lithuanian Archives Department, the Lithuanian Museum of the Arts, the Library of the Lithuanian Academy of Sciences, the National Museum of Lithuania and the Library of Vilnius University have declared their readiness to collaborate in preparation of the Strategy and take part in future projects on creation of the digital content of the cultural heritage.

3. Programmes and current projects of long-term preservation of cultural heritage

3.1. Harvesting and archiving of web resources

The responsibility for archiving and long-term preservation of national web space resources and their registration in the national bibliography is assumed by the National Library of Lithuania.

Following the recommendations of the IFLA and UNESCO to treat web resources as an important part of national heritage, the project of *Electronic Resources Subsystem - Archive of Electronic Resources - of Lithuanian Integrated Library System (LIBIS)* was developed in 2002.

The purpose of archiving web resources is to accumulate all web resources of the national web space and selection of web resources from other domains with national content.

The Archive of Electronic Resources is located in the LIBIS Centre of the National Library with a separate server for this purpose. For realisation of archival preservation and access functions of electronic resources Linux Operational System *RedHat* and database management system MySQL are used.

Harvester software (Version 1.0.1, last edited 31.08.2001, developed by NEDLI, was selected for accumulation of web resources. Practical realisation of harvesting, which has been lasting for 5 years, shows that this technology was efficient from the very start for:

- arrangement of files and their transmission to the Archive of Electronic Resources;
- duplicity control;
- transmission of new and validated URL's to the communications filter table.

When attempting to use automatic web harvesting method alone, there arise a

number of problems. Existing web harvesters are not designed for flexibility and it is difficult to arrange scheduling of harvesting times because they do not distinguish between different categories of web sites.

Another aspect of harvesting is to ensure collection of web resources in their entirety, with all linked parts intact and functioning, when accessed from the archive. This is particularly difficult with dynamic web pages containing JavaScript mini programs and other embedded software. Our experience with NEDLIB harvester shows that a large number of dynamic web pages are not handled properly and this occasionally results in gathering only a small part, if not just the starting page of the selected web site. Ideally a harvester should have a Java VM to be able to parse HTML page content properly but this is hardly achievable in the nearest future. Another similar problem concerns dynamically created web pages and URLs with parameters. A harvester is actually interacting with a web server when attempting to collect this type of documents. In pathological cases it could be getting new URLs perpetually from the same server. Therefore it can be dangerous to configure a harvester for gathering parameterised URLs despite the fact that a considerable part of the web space is occupied by dynamically generated content. An updated version of harvesting software will be implemented in the nearest future.

3.2. Co-operation of memory institutions on the grounds of Virtual Integrated System

At the beginning of 2005 13,3 million Litas (about 4 million Euros) from EU Structural Funds were received for the project "The Creation of Integrated Virtual Library Information System" according to the 3rd priority's 3rd measure, of "The Development of Information Services and Infrastructure" of the Single Programming Document approved by the Government of the Republic of Lithuania in 2004 (2004, No. 123-4486).

The project "The Creation of the Integrated Virtual Library Information System" aims at forming a solid network of libraries, museums and archives by digitising cultural heritage and making it available to all users in Lithuania and worldwide through the public and free-access interfaces.

The basis for the creation of the Integrated Virtual Library Information System (IVLIS) is the Lithuanian Integrated Library Information System (LIBIS) which consists of the Local Automated Information Systems (LAN) of 75 Lithuanian research and public libraries and local subsystems.

The main beneficiary of the project, Martynas Mazvydas National Library of Lithuania, represents the only beneficiary of this project. The project partners are the Lithuanian Art Museum and the Lithuanian Archives Department. Project duration is 30 months.

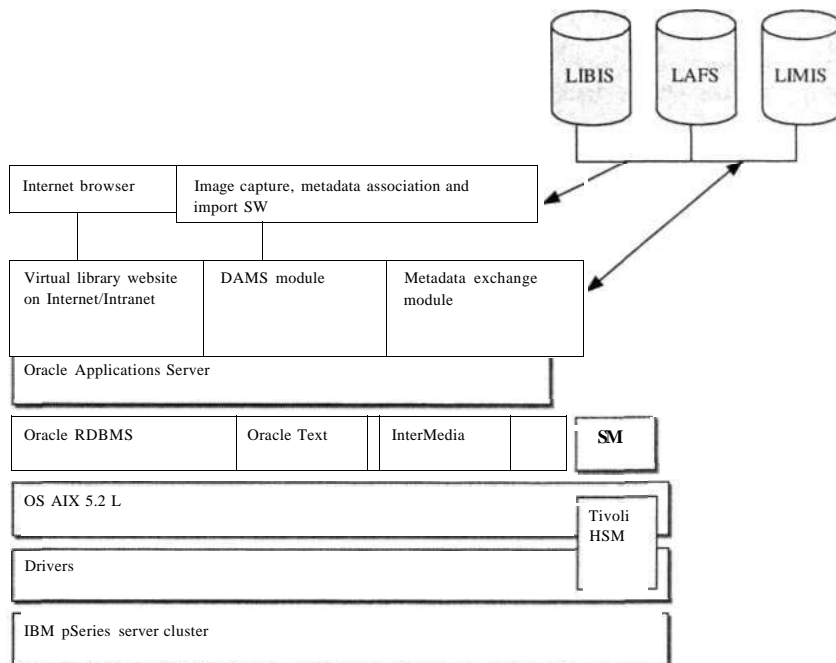


Chart 2. Software products for the creation of the Virtual Integrated System

The concept of the Virtual System used in the project is to indicate a digital information depository traditional functions of storage, preservation of information and providing access to it. It also functions as a shared system distributing all available information as well as positively promoting and maintaining creation of such information.

The common Digital Assets Management System has been created for the management of unstructured information and content, capture and incorporation of existing content from a variety of sources and from project partners - the Lithuanian Archives and Lithuanian Integrated Museum Information System (LIMIS) (end-user URL is <http://www.epaveldas.lt>)

Web browser-based interface has been developed for image and information retrieval, location, display and access.

Well-known interfaces, such as SRU (Search and Retrieve by URL) and CQL (Common Query Language), will also be implemented in order to exchange data with LAFD, LIMIS and other systems.

The goals and objectives of the Integrated Virtual Library Information System

The mission of the Integrated Virtual Library Information System has been formulated as follows: to promote co-operation between memory institutions and other bodies responsible for the cultural heritage during the processes of digitisation of cultural heritage objects and their integration into the European electronic information space.

The objects selected for digitisation include a number of books dated 1547-1863, documents of the Press Ban period (1864-1904), books in Latin published in Lithuania in 16th-17th centuries, books in Polish published in Lithuania in 17th-18th centuries, Lithuanian exile press published until 1940, legal acts and other formal

documents of the Republic of Lithuania from the inter-war period (1918-1940). The total number of pages that the National Library of Lithuania intends to digitise is 3 327 654.

Depending on the value and social significance, church registers of birth, marriage and death of the Roman Catholic Church dated 1599-1930: 36 document collections compiled of 1382 files stored in the State Historical Archives of Lithuania, were selected for digitisation.

The total number of pages intended to be digitised by the archives is 180 000.

Depending on social significance and physical condition, graphic works, watercolours and folk graphics, photo negatives and positives, slides and exhibits of historical and artistic photography will be digitised. A large number of maps, paintings, drawings, objects of bionistics and sfragistics, textile items and pictorial works will be digitised as well. The total number of pages and objects to be digitised by museums is 98 000.

The overall number of pages and objects to be digitised during the project implementation period (30 months) is 3 605 654.

The project of the National Library of Lithuania - "The Creation of the Integrated Virtual Library Information System" - has brought the attention of state institutions to the problems of long-term preservation of national cultural heritage, the necessity to form the national viewpoint on cultural heritage management and the benefits of integrating memory institutions into the space of European eInformation area. It has encouraged the Ministry of Culture and other institutions to initiate legal validation of the Concept of Digitisation of Cultural Heritage and invent a strategy for its implementation. The project serves as an important foundation for further cultural heritage strategies and cooperation among memory institutions in securing long-term preservation of cultural heritage by digitisation and integration of the digitised cultural heritage into eEuropean information space.

1. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions* : i2010: Digital Libraries [SEC (2005) 1194] ; [SEC(2005)1195] / Commission of the European Communities. Brussels, 30.9 2005. COM(2005) 465 final.
2. Valstybės ilgalaikės raidos strategija: patvirtinta Lietuvos Respublikos Seimo 2002 m. lapkričio 11 d. nutarimu Nr. IX-1187. *Valstybės žinios*, 2002, Nr. 113-5029
3. Dėl Lietuvos kultūros politikos nuostatų: patvirtinta Lietuvos Respublikos Vyriausybės 2001 m. gegužės 14 d. nutarimu Nr. 542. *Valstybės žinios*, 2001, Nr. 42-1454
4. Archyvų įstatymo pakeitimo įstatymas: patvirtinta Lietuvos Respublikos Seimo 2004 m. kovo 30 d. Nr. IX-2084. *Valstybės žinios*, 2004, Nr. 57-1982
5. Bibliotekų įstatymas: patvirtinta Lietuvos Respublikos Seimo 2004 m. birželio 15d. Nr. 1-920. [interaktyvus] [žiureta 2007 m. balandžio 4 d.]. Prieiga per internetą: <http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=238727&p_query=&p_tr2=>>
6. Kino įstatymas: patvirtinta Lietuvos Respublikos Seimo 2003 m. spalio 11 d. Nr. IX-752 [interaktyvus] [žiureta 2007 m. balandžio 4 d.]. Prieiga per internetą:

<http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=221593&p_query=&p_tr2=>

7. Muziejų įstatymo pakeitimo įstatymas: patvirtinta Lietuvos Respublikos Seimo 2003 m. gegužės 29 d. Nr. IX-1593. *Valstybės žinios*, 2003, Nr. 59-2638

8. Visuomenės informavimo įstatymo pakeitimo įstatymas: patvirtinta Lietuvos Respublikos Seimo 2006 m. liepos 11 d. Nr. X-752. *Valstybės žinios*, 2006, Nr. 82-3254

9. Lietuvos nacionalinio radijo ir televizijos įstatymo pakeitimo įstatymas: patvirtinta Lietuvos Respublikos Seimo 2005 m. gruodžio 22 d. Nr. X-469. *Valstybės žinios*, 2005, Nr. 153-5639

10. Del Lietuvos Respublikos Vyriausybės 1996 m. lapkričio 22 d. nutarimo Nr. 1389 „Del spaudinių ir kitų dokumentų privalomųjų egzempliorių siuntimo bibliotekoms tvarkos“ pakeitimo: patvirtinta Lietuvos Respublikos Vyriausybės 2006 m. gruodžio 11 d. Nr. 1240. *Valstybės žinios*, 2006, Nr. 136-5171.

11. Del spaudinių ir kitų dokumentų privalomųjų egzempliorių siuntimo bibliotekoms tvarkos : patvirtinta Lietuvos Respublikos Vyriausybės 1996 m. lapkričio 22 d. nutarimu Nr. 1389. *Valstybės žinios*, 1996, Nr. 115-2679

12. *The Lund Principles* [interaktyvus] [žiūrėta 2005 m. birželio 21 d.]. Prieiga per internetą:

<<http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/05/98&type=HTML&aged=0&language=EN&guiLanguage=en>>

13. *Action Plan on coordination of digitization programmes and Policies: implementation framework for digitization coordination actions in Europe* [interaktyvus] [žiūrėta 2005 m. birželio 21 d.]. Prieiga per internetą:

<http://www.cordis.lu/ist/directorate_e/digicult/lund_ap_browse.htm>