

A-6. METHODOLOGICAL AND TECHNICAL SOLUTIONS FOR THE CREATION OF SEAMLESS CONTENT OF THE LITHUANIAN DIGITAL CULTURAL HERITAGE: GAINS AND CHALLENGES

Regina Varnienė-Janssen

Martynas Mažvydas National Library of Lithuania, Gedimino pr. 51, Vilnius, Lithuania
email: r.varniene@lnb.lt

Abstract. The report describes the experience of the Martynas Mažvydas National Library of Lithuania and nine other memory institutions from the creation of seamless content of the digital cultural heritage, and outlines application of the formal reference ontology CIDOC CRM and its extension CRM_{dig} for different data formats, in particular to support the implementation of automatic data transformation algorithms from local to national data structures (i.e. the Virtual Electronic Heritage System, VEPS) without the loss of meaning. It also discusses semantic querying of digital objects, their provenance and metadata by applying the Integrated Thesaurus of Personal Names, Geographical Names and Historical Chronology of Lithuania within the Virtual Electronic Heritage System.

General. In order to satisfy the user needs and those arising from a new paradigm of the Lithuanian cultural policy, namely the creation of digital content of the cultural heritage, the CIDOC CRM ontology has been applied for the first time in Lithuania. It allows linking metadata schemas used by diverse memory institutions, thus creating user-convenient virtual environment. As a formal reference ontology, CIDOC CRM particularly focuses on cultural heritage information and documentation.

The CIDOC CRM model and its extension CRM_{dig} within the Virtual Electronic Heritage System (VEPS, *Virtuali elektroninio paveldo sistema*) serves as a generic background ontology for application modelling and interoperability tool, and also for implementation of automatic data transformation algorithms from local to national data structures (i.e. VEPS) without the loss of

meaning and supporting semantic queries against integrated resources. Though the CIDOC CRM model has been designed for universal application, the specific feature of its use in Lithuania proves the fact that, in addition to the software based on CIDOC CRM and its extension CRM_{dig}, the Integrated Thesaurus of Personal Names, Geographical Names and Historical Chronology of Lithuania (BAVIC, *Bendras Lietuvos asmenvardžių, vietovardžių ir istorinės chronologijos tezaurus*) has been created for the use of all memory institutions for semantic search.

The new programming period of 2014–2020 sets as one of its priorities digitisation of the cultural heritage. This is also provided in the European Commission's communications and strategic documents of Lithuania: the Europe2020 strategy and Lithuania's National Progress Programme 2014–2020.

In line with these documents, a project idea concerning expansion of VEPS has been proposed, which has the following main goals:

- a) creation and implementation of user-oriented digital heritage services;
- b) digitisation of cultural heritage objects and long-term preservation of digital data;
- c) advancement of digitisation competencies and promoting e-service skills.

The key impacts of this project idea are:

- i) further strengthening of interinstitutional partnership;
- ii) increasing interoperability between systems;
- iii) improving open access to digital data;
- iv) improving interdisciplinary Lituanica research.