Museum 2015: Progress in development of collection management

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Introduction

Finland is the land of thousand museums with hundreds of different collection management systems (number includes all electric systems used for cataloging museum collections, like Excel-tables and MS Access-databases). Numerous different systems cause unwanted extra work for museums that aim to publish their collections in shared common public interfaces. Thus, the Finnish National Board of Antiquities together with the Finnish National Gallery and the Finnish Museums Association started a project called Museum 2015 that focuses to solve these problems by creating a unified CMS during years 2012-2015 with funding from the Finnish Ministry of Education and Culture. Museum 2015 will unify most of the processes involved in museum's collection management by developing enterprise architecture for managing collections and their administration. In addition, it will result a framework for acquisition and implementation of a unified collection management system. Museum 2015 will also support museums in digitizing their materials for the National Digital Library (NDL) public interface, developing museum sectors own public interface in consert with NDL's national public interface and assist museums in

organization and decision-making in questions related to collection management and their public availability.

This paper focuses on the progress in the Museum 2015 and challenges leading the collaborational project. It describes project organization and some of the challenges faced in developing the management of Finnish museum's collections as well as availability of collections in public interface of National Digital Library of Finland (NDL).

Inconsistencies in cataloging

Museum 2015 exists largely because of the experience gained from the NDL project and the long history of too many different CMSs in Finland. The NDL is a public interface which gives access to the digital information and services of libraries, archives, and museums (http://www.kdk.fi/en; Rouvari & Vakkari 2011, 71). NDL's piloting phase revealed numerous inconsistencies in the museum cataloging and pointed out severe difficulties in producing and delivering data to the NDL with current systems – it is far from seamless operation. Different CMSs cause most of the inconsistencies in metadata. This is partly - but not sufficiently - solved by a recently introduced harvesting tool, the Lightweight Information Describing Objects (LIDO) that is the first attempt of Finnish museums to share a common and standardized harvesting schema for transferring data to public interfaces (Vakkari – Autere 2011).

LIDO dos not solve all problems. According to IT Center for Science Ltd's research "The current state of collections management in Finnish museums and how it could be developed" (IT Center for Science Ltd 2011) Museum 2015 trusts also that one unified

CMS will short most of the problems. But because unified CMS developed in Museum 2012 would not be in production until end of year 2015, project will meanwhile give support to all Finnish museums in the use LIDO. Finnish museums still need lots of co-operation if they want to succeed with public interfaces, both with NDL and Europeana which is Europe's Digital Library.

Aims of Museum 2015

Museum 2015 aims to enhance cooperation and joint decision making by encouraging museums for networking, interactive learning, and sharing of information. The main outputs of Museum 2015 are made in working groups which consist of museum professionals and other specialists stakeholders such as municipality's ICT specialists.

Working groups meet for decision making approximately monthly. Their decisions and produced papers are commented by specific comment groups free to everyone at museum sector to join. Currently, there are around 100 active comment group members.

In total, there are five thematic working groups under Museum 2015 umbrella: These are for developing enterprise architecture for museum sector, for developing the cataloging, for developing functional and technical specifications, for unified Collection Management System (CMS) and one for developing the interface of museum sector under NDL's national interface.

The working group for cataloging

The working group for cataloging will draw up a process description for cataloging as well as create platform-independent and standardized cataloging instructions for the entire museum sector. It aims to find a common consensus of classifications systems for museums to describe the objects that are chosen to catalogues. Also, some decisions and recommendations of the use of ontologies and controlled vocabularies will be written. The primary aim is to harmonize museum cataloging and make museum data in public interfaces such as NDL and Europeana more consistent. Thanks to the keen cooperation of the recent years, the exchange of knowledge and good practices between museums is also now self-evident. For example, TAKO is coordinating collaboration in matters related to acquisitions, documentation, and collections (http://www.nba.fi/en/nationalmuseum/tako). A certain part of the Finnish museum professionals are also well informed about ongoing discussions within expert meetings and professional. associations (like CIDOC).

The working group of the enterprise architecture

The Finnish government has increasingly endeavored to make better use of ICT investment. Reducing costs, removing overlaps, increasing interoperability, and promoting shared services are some of the practical ways to achieve this goal. EA is the tool adopted to identify problems and chart for better solutions. The legal background of this work is based on the Act of Information Management in Finland. As part of the governmental management, Finnish libraries, museums and archives have been working together for an integrated EA, especially related to the NDL.

The Museum 2015 working group EA is a pioneer in Finland. The Finnish museum sector is one of the leading instances producing EA in year 2012. Work in EA is very motivated among museums and in working group.

The purpose of the EA work is to create an overview of the museum sector's collection management as a whole and develop practices and synergy as well as advance the diverse utilisation of information and communication technologies in collection management work. The collection management reference architecture is subdivided into four sub-architectures: these are the business, data, application and technology. The collection management EA reference is also connected to several stakeholder architectures. These include the NDL's enterprise architecture and public administration level enterprise architectures (the municipal sector, the Finnish government).

Museums EA produced in Museum 2015 also gives to Finnish museums basic tools to face the changes in ICT sector in all kinds of museums. Museum sectors EA builds base to new unified CMS. Unified CMS have to follow guidelines proposed by museums EA designed by EA working group. Working group uses in its work tool called Kartturi, Kartturi method is recommended by Finnish public management (Public Administrations Recommendations 179, 2011).

Heterogeneity of museum's metadata and need for new CMS

The heterogeneity of metadata in all the different CMSs still contains a severe problem. Metadata is naturally the more various the more there are different CMSs. As said, there are 300 different electric CMS solutions in Finland's museums (Ekosaari 2009). Many

different competing systems are not cost-effective for government to fund. It is also know that the ones most used have already reached the end of their life spans. Finnish museum professionals are very conscious of ICT-development and make considerable efforts to improve their CMSs. Some of the systems are meeting the local needs of the current users but unfortunately none of them is suitable for all museums. According to IT Center for Science Ltd, new unified CMS for Finnish museums is most rational and best cost-effective solution (IT Center for Science Ltd 2011).

The Museum 2015 project has already a quite good view of what future users of CMS need because it has analyzed by couple of questions to museum professionals what is the most important in new CMS. According to them, most important is the ease of use. Secondly, arose flexibility of interface. To conclude, CMS should support modern workflows and have advanced search features. The Unified CMS's structure could be modular so that museums can tailor the system to meet their needs.

Working group of functional and technical requirements specifications for unified CMS

Museum 2015 working group of functional and technical requirements specifications has a basic aim of a single unified CMS for the whole museum sector. Such a joint system is already in use among university- and scientific libraries, which gives a model for governing a shared system. Starting point for CMS's specification is that unified CMS has not been possible before in Finland. Now, compromises have to be found.

In the specification of unified management system, Museum 2015 project will benchmark current researches (e. g. Kanter 2008) of CMSs and unified systems used in museums worldwide such as CollectionSpace, Omka, eMu, Collective Acces, and TMS. Lots of

experience of requirements specifications is also represented in the working group. Working group members are represent 6 different CMS and in potential comment group will have experience of other CMSs. Basic framework for requirements specification is developed in the Museums 2015 cataloging and EA working groups.

To have CMS suitable for most of museums the working group of functional and technical requirements specifications has to very clearly decide to start from 5 basic functional requirement facets CMS needs to have: 1) collection management 2) data management, 3) user interface 4) searching and 5) reports. Working group will also develop technical requirements for CMS and the requirements for the continuation of CMS according to international standards and good practices.

The specifications crafted in the project should meet the current state of progress made in information science as well as complying collection management standards which will ensure flexibility in the future. However, one of the most essential challenges is to find a balance between providing the comprehensibility required for meeting the variety of different institutions while maximizing the ease of use and efficient tool for day-to-day use by museum professionals. The system should also provide the necessary APIs for exporting the metadata to the NDL public interface with modern search features expected from current search engines such as full text searches, advanced Finnish stemming, and facets.

The potential working group for the public interface

A public interface for the unified CMS acquired in Museum 2015 project will be created in concert with the NDL. Museum sectors own interface under NDL's national interface

(including data from archives, museums and libraries) is to be a show case for Finnish museum's collections.

Museum 2015 will work with a potential working group consisting of museum professionals, information science specialists, and the public. This will aim to create the most insightful and innovative window to information of the cultural history. All museums participating in NDL, regardless of the collection management system used, will benefit from the innovations of Museum 2015. The most important underlying aim of creating a unified public interface is same as in whole Museum 2015: to keep perspective of museums professionals as important as the perspective of museum information end-users.

Future of unified CMS

After working group of functional and technical requirements specifications has completed its work with specification requirements in the end of year 2012, the purchase of CMS follows. The new CMS will be piloted in year 2014 and an administration model of CMS will be decided. CMS will be also tested and piloted with the help of extensive feedback from museums. By the end of year 2015, CMS will be in production.

Museum 2015 project strongly hopes that development of CMS continues after 2015 when unified CMS will be in common use. It would be useful to establish a consortium of museums using CMS and an advisory council that will continue to provide feedback and input for future versions of the system. Consortium of museums could co-operate around development of CMS and share the costs.

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