

How to ensure shared access to different types of museum objects: experiences from Estonian Museums Information System

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Introduction

In 2009 Estonian museums adopted Museum Information System (MuIS / <http://www.muis.ee/portaal/>) whose purpose is to ensure common access and information sharing between different institutions.

Before turning to a web-based information system, Estonian museums used a system called KVIS (Information System for Museums and Antiquarian Institutions) that shared the same software but worked only locally at each individual site. KVIS was created in 1993 with a goal to create a database that would allow users to document and explore objects related to the various human disciplines (archeology, art, history, ethnography, numismatics, etc.) and belonging to different periods of history.

In 2003 KVIS was used in 35 museums. By 2009, when the transfer of data from KVIS to MuIS started, that number had risen to 45, including both central state museums and smaller local museums. Thus data from over 42 specific fields was transferred to MuIS, which means that the system contains items, photographs, digital prints as well as descriptions of museum objects related to art, archeology, archival sciences, ethnography, sports, maritime, military affairs, drama, music etc.

KVIS and MuIS are functionally very similar. Both systems allow users to document museum objects in electronic environment. Both allow users to document the descriptive data of museum objects and manage that data concerning the use of these objects. Therefore MuIS has all the same data fields that KVIS had, the difference is in how the system can be used. Data entered locally in one museum must also work in a web-based system and be understood by all museums unified under MuIS.

Our paper will focus primarily on problems describing museum objects in the common web-based system (MuIS). Discussion is based on actual work and real life experience from different Estonian museums.

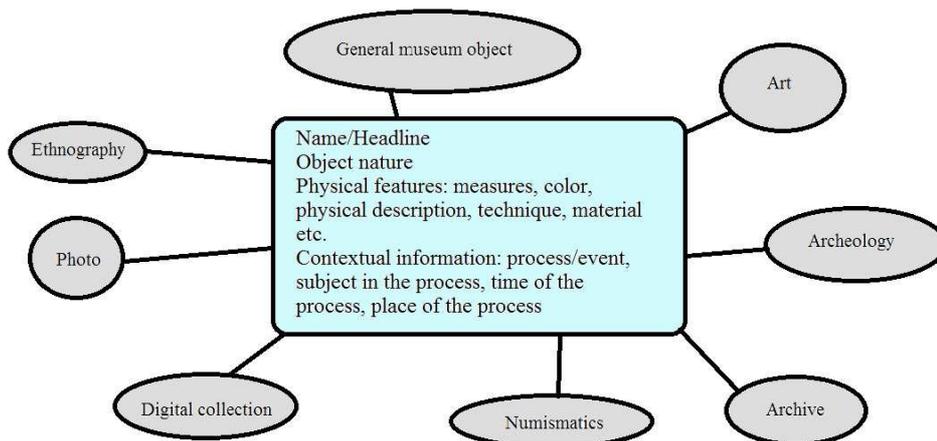
Descriptive data for different types of museum objects and its common ground

There is a long tradition of dividing museum objects into different collections based on their physical characteristics, particularly in connection with storing the objects. This has brought with it varying input forms for museum objects that are physically different making it difficult to standardize descriptive data for different types of objects.

Standardizing descriptive data for different types of museum objects has not been easy. It is not problematic theoretically, but museum workers are not readily willing to change their working habits, the terminology they use and the way they structure (or fail to structure) their data. We believe that systems architecture should take into consideration the opinions and expectations of museum workers

to ensure that the necessary data is entered. MuIS was originally designed to use eight different input forms (archive , art, photo, digital collection, ethnography, archeology, numismatics, and general museum object) to provide options for museums with varied collections. The system has been in use at museums for a year and out of these eight input forms three are still in active use: art, archeology and general museum object.

The following figure indicates common types of data for different input forms:



There are many common types of data that are used to describe museum objects, but some are often essentially the same. For example a date like 1968 can indicate a document, a uniform, a piece of furniture or a painting. Items can also be classified under a common topic (process), e.g. politics, revolt. And the data type “Place” (place of occurrence) can also be the same, for example Prague. Different types of museum objects can have common essential features. Such features are primarily found in contextual data types: data about making the objects, data about using the objects and data about the process depicted in a painting/photo.

What data connected to a museum object is sufficient for it to be fully catalogued?

To what extent can types of data be common to different types of objects and to what extent must they be specific to particular museum object. Our database has 3 levels to describe museum objects: 1) primary registration, 2) full cataloguing and 3) scientific description. Our actual experience has shown that it is at the second level where it is possible to standardize the types of data, how it is structured and partly standardize the content of the data – here we have in mind the classification of museum objects into type/nature and theme. Scientific description requires a more specific approach to a given field. At the same time the level of full cataloguing is very important for subsequent research. For a museum object to be fully catalogued it must be searchable by its physical appearance and also by its content.

With different types of museum objects one can standardize contextual data connected to that object: years, people, places, topic/event. Inevitably, museum objects differ from each other based on their physical characteristics. Although here too it is possible to approximate the structure of data entry with no change in the substantive value of the variable described. For example, while entering measurements one should refrain from formats. Instead one should write out the actual measurements. For example, paper size A4, should be written as: height cm, width cm. This can be troublesome for the person entering that data, but provides a clear understanding each time (even after 150 years) and in every culture.

Central dictionaries

Throughout the development of KVIS and MuIS dictionaries have always been problematic. In reality one has to admit that theoretical solutions do not always play out in practice.

The purpose of dictionaries used in the descriptive systems of museum objects is to generally systematize content information, which should help to ensure a correct entry of the museum object.

In most of these systems controlled terminology is used. The most known tool is the choice of terminology and classification lists comprising checked vocabulary in thesaurus structure. It makes the data entry easier and ensures accurate information retrieval. Controlled use of terminology in entering the data and in subsequent search requires the presence of additional data or metadata. We must not forget that this kind of thematic classification holds onto its time and space. For example women's sleeveless shirt that was underwear in the 19th century has become outdoor clothing in the 20th century. Several means of living have transformed into toys or sports equipment. Therefore the use of unified big thesauruses in describing the objects of museums of different areas is problematic, as by default it creates additional relations to the described object that altogether create information.

Estonian museum workers have also experienced limitedness of such thematic classification on the one hand and unnecessary generalisation on the other hand when using the KVIS information system, where the classification system of objects supports only the subject-based classification. The system connects the objects of the same type to a certain subject by default. For example, when classifying competitive skis as „ski”, KVIS classifies them automatically as the means of transportation. However, this information is misleading since the ski was meant to be used for competing already on the level of its making or idea and it has been used accordingly. The fact that skis have been the means of transportation in their historical origin is very indirect information considering the purpose of competitive skis.

Such subject-based classification is probably adequate in museums of one area, but not in the central information system including museums of various areas.

So based on practical experience MuIS uses simple types of dictionaries. Its connections are made by the museum worker. At the same time, since the types of data that are being described are common, the museum objects are universally searchable.

Next we will describe dictionaries in MuIS, which are important for the classification of an object by its nature, use and topic. In addition we will talk about museums own dictionaries and its relations to other MuIS' dictionaries.

Dictionary „Object's Nature” supports the grouping of museum objects by their name. These are unambiguously understandable terms about object's type, which are in alphabetical order. Dictionary has not been meant to describe object's content. For example, in the dictionary “Object's nature” a photo is marked „photo”. Also the content of a photo is entered in the subdivision “topic” of the dictionary „Activities and phenomena”.

Giving a unique name to the object in the information system is supported by the space for free text “Name”, which enables to name the described object in the way each museum considers to be important. At the same time the dictionary “Object's nature”, thanks to checked terminology, helps to group objects of similar type in various museums. It will also ensure simple and fast object search.

Dictionary „Object's use” is a hierarchical dictionary that enables to classify objects quickly by their use. For example: a ball which would be a ball also in the classification of nature, but in the use classification it may be a plaything, sports equipment or ritual object.

It is important that object's use is determined by each museum itself, i.e. interrelation between object's nature and use is created by museum worker him/herself, considering the needs of the museum. Museum workers' knowledgeable interference in the use classification prevents excessive information flow that may be caused by big central thesauruses where certain types of objects are by default related to certain use.

Dictionary "Activities and phenomena" is hierarchical dictionary. This central dictionary supports the division of various objects to certain subjects. To the classification of object's contextual information the subdivision "Topic" of the dictionary „Activities and phenomena" is more important. Its use results in the division of museum objects by subjects in subject file.

For example, the subjects for "the ball" could be playing sports (parent term) or volleyball (child term), or playing (parent term) or infant play (child term), or cult (parent term) or fertility rite (child term). To which subject the ball is classified will be determined by museum worker him/herself, proceeding from the object being described. This dictionary gives unitary subject catalogue for all museums and so makes it possible to find a special type of object in all museums according to a certain subject.

This dictionary is related to the input form „Event" where the context of museum object is described. It is obvious that museum object can not be described using the so-called subject indexing only. Museum object's context must be opened through information which can be created only by the data that has been knowingly linked. Interrelations between data must be created by museum worker him/herself, not by information system. When determining term to an object in the input form „Event" in the subdivision "Topic" of the dictionary „Activities and phenomena" it is important for the creation of object's overall context to fill also the fields: „Time" (i.e. dating); „Place" (i.e. Geographical location); „Participants/Subject" (i.e. person/institution)". Through this data group determining the cultural historical context of the object, a unique context related to the object is formed. Creation of interrelation between these three different data fields is important since the same object may have very different use areas in various time periods. Besides, coherent description of these main indicators makes the meaning of several different persons, dates and places related to the object understandable to the information searcher. Therefore the use of the subdivision "Topic" of the dictionary „Activities and phenomena" is obligatory by the object's full cataloguing.

Museums' own dictionaries: first, each museum has possibility to create entirely independent dictionaries according to their subject. Second, museum has possibility to add its own specific terms under any central dictionary, which will form the so-called "own dictionary". For example if, from the standpoint of the central database, it is important to know that an object is an archaeological find, then in archaeological collection more specific classification can be used. Classification or additional term brought out in this example should be related to the dictionary „Object's nature".

Museums' own dictionaries and terms are seen only in the museum where they have been entered. If necessary, "own terms" can be united to the central dictionary to make them usable for all. This can be done by the decision of a certain committee and considering the requirements of the completion process of the central dictionary.

Such general structure of MuIS dictionaries has been programmed because the existing central dictionaries are insufficient and do not satisfy description needs of various museums.

So far the experience has shown that merely theoretically arranged dictionaries are not always suitable for the user. Through museums' own dictionaries, formed in a real working process, also central dictionaries will be arranged in the future.

How does it work in real life?

Different opportunities for searching data depend greatly on how and what kind of data a museum worker enters into the system. Things that work theoretically might not always work in real life. The

use of the previous system KVIS showed that if you enter the data locally and search for it locally, there will not be any universally searchable content in the system, because using the same data input fields one can enter essentially very different information. People don't consider how to make objects from one museum searchable everywhere.

Take for example the field "name". The content of the field "name" not only differs when we talk about different types of museum objects, it may also differ even among the same type of museum objects. On the one hand, while describing a photo, some system users may use only the field "name" and enter the title, dimensions, technique etc. all into that one field. On the other hand, other users may just enter "Photo" into the field "name". In addition various objects can be named differently. For example, a "family sign" that is located on a "fishing float" (fishing net buoy) will be named in one museum "family sign" and in another museum "fishing float". If the nature of the object has not been added, then it is impossible to search for it everywhere in the system.

"Name" is a free text field and thus the user is left with the opportunity to write down the museum object quite accurately. At the same time it makes it possible to unify the content of the name field of different types of museum objects, so that the search would work universally. And as already noted the name of the museum object is also supported by classifying the nature of the object.

An important problem is also the difficulty in structuring the description of the museum object, to separate different types of data. That is primarily a problem with descriptions of old documents. Especially hard for the museum worker has been the transition from object-oriented description to an event-based description. People know how to structure the physical characteristics (physical characteristics were explained both on paper and in KVIS), but do not know how to structure different data connected to manufacturing or use of the museum object or what is depicted in a museum object.

Conclusion

The difficulties that arose with the transition from KVIS to MuIS gave us experience and knowledge that we are trying to implement with the new system. For example KVIS had various ways to enter the descriptive data with no restrictions limiting the person entering it. This led to great variety in the ways different data was entered. While the database of a museum has to be very flexible with maximum opportunities, there must also be limitations in how the system is used at first until central issues are resolved. It is not the software developer who gets to say what is the best solution, but the museum worker. The best solutions are born via actual experience and common use of data. For example, it is important for a museum worker to realize that when he/she enters the data correctly, it is possible to search it over the system. Each system needs time for corrections, because behind the system is a person who has to determine through everyday work whether or not something works correctly.

We know that not all descriptions of museum objects in MuIS are as we would like them to be, but a year's worth of experience has shown that the use of the system makes the big picture increasingly clear. That is why we hope that one year from now we will be able to provide even better results.