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DOCUMENTATION OF MUSEUM OBJECTS IN ESTONIAN MUSEUMS: DEVELOPMENT AND APPLICATION OF MUSEUM INFORMATION SYSTEM

Master's thesis on information management (2009)

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CONTENTS

INTRODUCTION

Museums form a part of the information system of the society and regardless of whether they like it or not, they are definitely "major players" in the information society. The future lies in information and museums are full of it. Museums engage in collecting and creating organized and systematic information about the material world. Collections are the heart of museums. Objects have been collected both for their beauty and value and naturally also because of their meaning, as they are related to events in the past and in the present, technological development and natural environment. The object meanings are kept on file cards, in catalogues and in people's memories. The object meanings and ideas are presented to the audience via exhibitions, presentations, articles and events. Susanne Keene[1] has written that museum staff are like goalkeepers of object meanings. Preserving information and making it usable is the essential value of the museum around which the whole museum is organized.

Development of information technology has above all changed the collecting, preserving, processing and presenting object-related information. The informational scope of collections is much easier to organize with the help of information technology. The topic of this master's thesis, "Documentation of museum objects in Estonian museums" proceeds from the author's everyday work at the Estonian Sports Museum. In 1994-1997 I worked on creating and implementing a local database in the museum. By 1997 all museum objects had been entered into the database and the preparation of accession documents was based on information systems. In 2001, the museum joined the KVIS (Cultural Heritage Database). Since then I have been participating in developing the KVIS as a representative of the Sports Museum. Since 2003, I have advised and trained museums staff regarding problems related to information systems. Since 2005 I have participated in the working group developing the MuIS (Museums' Information System), and consulting the creators of the MuIS regarding the

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[1] *Keene, S.* 1998. Digital Collections: Museums and the Information Age. Oxford, p. 2.

functionality of museum work. As a part of this task I have had to train several working groups of museum staff who have directed the development of the functionalities of the MuIS with their proposals.

Practical working experience at the museum and working with museum information systems has made me realize that the actual foundation for the information system is created by object-related information. Therefore this master's thesis is first and foremost dedicated to problems that are related to documenting primary data in the museums' information systems.

The master's thesis is based on the actual need to discuss the principles of documenting museum objects in Estonian museums and make them correspond to modern technical possibilities and requirements. For museums this means first and foremost transferring from the documentation system based on paper documentation that has been used so far to the documentation system based on information systems. The aim is to create a common information bank of Estonian museums which is based on common data entry of museum objects from different fields of life, both regarding the structuring and types of data.

The central question of the master's thesis is how to document the information related to museum objects, how to manage it in the future and how to ensure its unambiguous comprehensibility and handling also in the future. In order to answer this question, different documentation models and description models of museum objects in Estonian museums are analysed on the basis of theoretical framework and the author's practical experience. The aim of the master's thesis is to provide a general overview and bring forth existing problems that are related to documenting museum objects in information systems. In order to achieve this aim, the following tasks have to be completed:

- Giving an overview of the history of documentation of museum objects in Estonian museums, as documenting museum objects is a continuous process. Each new created system has to be based on the previous one;

- Discussing the use of the electronic information system Cultural Heritage Database (KVIS) for documenting museum objects in order to find out problems that emerge when transferring from one documentation system to another;

- Analysing requirements that should be taken into consideration in documentation in order to achieve information that is as "true" as possible, or in other words, unambiguously understandable;

- Analysing possibilities to describe museum objects in the central information system MuIS that is being created, so that the entered data would ensure common central information queries;

- Discussing the support of the information system to ensure correct entry of data;

- Analysing the existing legislation about documentation of museum objects and present contradictions that occur between legal requirements and the possibilities of information systems.

The practical aim of the master's thesis is to found a basis for a documentation system of museum objects that is functioning in electronic environment. This means finding out the problematic areas of the existing systems and finding solutions for them. The theoretical proceeding point of the master's thesis is the fact that museum objects are in their essence collections of information and therefore their documentation has to be based on the concepts of information science.

Until now, no summarizing overview of the history of documenting museum objects in Estonian museums has been written, nor is the author aware of any Estonian museums having prepared an analysis of developments in documentation. Overviews of documentation can mainly be found from study materials of the University of Tartu. The museology-related study materials prepared by A. Luts in the years 1979-1981 provide an excellent overview of the Soviet documentation requirements. The materials

in the State Archives shed light on requirements for documentation of museum objects both in the period of the first Republic of Estonia and the Soviet era. The archives materials present requirements for documentation of museum objects; however, the actual implementation of these requirements in museums can only be concluded on the basis of descriptions of different museum objects and the documents in the museums' own archives. The minutes of meetings that can be found in the museum archives give actual information about the work that was done with the collections, the problems that emerged and the solutions that were found. As the aim of this thesis is not just to analyse the legislation regarding the documentation of museum objects, but also discuss how museum objects are actually documented in museums, the material for comparison is mainly the original description of museum objects from different museums (accession book/fund diary, inventory book/main catalogue, accession card). The thesis includes data from almost all Estonian museums, e.g. Estonian History Museum, Estonian National Museum, Estonian Sports Museum, Estonian Agricultural Museum and many others. The material for comparison that was central to the thesis was collected with the help of numerous museum staff who participated in the training courses organized by the author.

The most important theoretical framework of information for the thesis has been the research of subjective mechanisms of information, first and foremost the article "The concept of information" published by Rafael Capurro and Briger Hjorland in 2003. In Estonia, Kurmo Konsa has discussed the problems of information content of museum objects and his work has been relevant in the discussions of Chapter three.

The creation of information systems for museums has also brought about the redefinition of terminology that has been unambiguously understood by the museum staff until now because documentation of museum objects in electronic information system needs explaining certain definitions on various levels. This is necessary in order to ensure mutual understanding between the programmers of information systems and museum specialists and to achieve information system functionalities that satisfy the needs of museums. The most important terms in this thesis are *museum objects* and

documentation of museum objects. The author finds it important to define these two terms already in the introduction so that the later discussions would be unambiguously understandable.

In the framework of this thesis, museums deal with objects that have different statuses on the basis of which, they are divided into different groups and documented separately.

The term "documentation of museum objects" includes all documentation related to the administration of a museum object, starting from accession documents when an object is first received in a museum, but also documents which accompany objects' movement both inside and outside the museum, and additional documentation that is prepared in relation to such movements. The central and also the most important stage in the documentation of museum objects is the description of museum objects. Therefore, the problems related to describing museum objects are discussed throughout the thesis. In describing museum objects, the thesis mostly uses the more general term "documentation" as the focus of the thesis is mainly on the two first levels of description, the purpose of which is to document museum objects by their physical and content features. However, the term "description" is more appropriate for further description of museum objects, as this generally also means interpretation of documented data.

The following is a brief overview of the content of the master's thesis. The thesis consists of three chapters. Chapter one discusses the documentation systems of museum objects and structuring data in Estonia throughout history on the basis of materials from archives and documents that shed light on the documentation of museum objects at museums. This is a generalizing overview about changes related to documentation of museum objects that involves both legislation and documents that include descriptions of museum objects (main catalogue, inventory book, accession cards, card index or supporting catalogue).

Chapter two gives an overview of the KVIS, the first common information system of Estonian museums. The documentation of museum objects is studied in detail, and also

its contradiction with the valid accession procedure of museum objects Different descriptions of museum objects in the KVIS are also analysed, as a result of which it can be said that information system is a mere tool that facilitates the documentation of museum objects. As the thesis attempts at finding a documentation method that would actually function in contemporary Estonia, it is important to find out which methods have been used up to now, which problems have emerged and how these could be solved. Mainly based on practical experience, this chapter analyses the problems that have emerged when using the KVIS, with the aim of avoiding the same mistakes in implementation and use of the new information system in museums.

Chapter three presents a summary of the museums' needs regarding the functionalities of the new Museums' Information System (MuIS), and proceeding from this, also theoretical requirements for documentation of information. A closer look is given at the problem of trueness and adequacy of describing museum objects in information systems. Another important topic that is discussed at length is related to the vocabulary used to classify museum objects, or in other words, ensuring unified classification of museum objects from different fields of life, so that the content of museum objects could be unambiguously searched.

The annexes present specific examples of documentation of museum objects in Estonian museums. These are mainly examples of documentation of museum objects on the level of full cataloguing. The purpose of the annexes is not the analysis of actual activities of different museums but comparison of different documentation forms. Based on specific examples, general problems that are related to presenting the data in information systems are pointed out.

This thesis does not constitute a final solution to the problems discussed, nor is it a vision of an ideal information system. Instead, its mission is to point out the problems that are related to documentation of museum objects and to encourage discussion on the topic in the Estonian museum landscape.

1. HISTORY OF DOCUMENTATION OF MUSEUM OBJECTS IN ESTONAIN MUSEMS

The following chapter gives an overview of a museum as an institution and documentation as one of the main fields of activity of museums. The aim of this is to position the documentation of museum objects in relation to other fields of activity of museums. In historical retrospect an overview of the changes that are related to the documentation of museum objects is given, following the development of the legislation regarding the accession and preservation of museum objects and presenting specific examples from Estonian museums. The central part of documentation is made up by the description of museum objects and therefore this chapter also mainly focuses on that.

1.1 Museum as an institution and the role of documentation in museums

This chapter does not cover all institutions that can be named museums but only the institutions that match the term "museum" according to legislation. According to the

definition of the International Council of Museums (ICOM), a museum is a non-profit making permanent institution in the service of society and of its development, open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, the tangible and intangible evidence of people and their environment.[2]

The basis for preservation of collections is their documentation. Nowadays, this is supported by digital environment due to which, on the one hand, the physical use of collections is decreasing but on the other hand, collections are becoming available for a large number of users. Documentation of museum objects in digital environment provides an opportunity to make information available on several different levels and ways. Thorough documentation of museum objects also helps to simplify all processes that happen to them. Documentation of objects creates a foundation for understanding of the objects that have been collected in museum.

Documentation of object already starts during the collection process when object-related data, such as physical features and context of the object and information about its preparation and use, is noted down. At the same time, an object only becomes the property of the museum after preparing the accession document. This is a document that lays the foundation for museum collections. The most important part of documenting a museum object is describing the object[3], the purpose of which is to administrate collections both physically and intellectually. It firstly involves the registration of the object at the museum: pre-registration, reception, verification and description. Secondly it includes the documentation of object-related activities at the museum.

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[2]   *International Council of Museums* 2006. ICM Code of Ethics for Museums. Paris: ICOM; http://icom.museum/ethics.html#1def
[3]   Describing or description includes operations or their results that include collecting, analysing, organizing and recording information about objects in order to ensure their identification and control. (*Informatsioon ja dokumentatsioon* 2004. Eesti standard. I osa EVS–ISO 15489–1:2004.)

1.2 Overview of documentation history in Estonian museums

The following is an overview of the main ways of documenting museum objects in Estonian museums. The focus is placed on fixating the data related to museum objects and the documentation that organises their administration.

1.2.1 First instances of documentation (19th century─ the beginning of 20th century)

The documentation of museum objects in Estonian museums can be traced back to the beginning of the 19th century. The documentation back then was in the form of lists of collections, in other words catalogues that were created with private initiative.[4] However, conscious and considered documentation of museum collections as a whole can be discussed only from the beginning of the 20th century when in relation with the foundation of the Estonian National Museum in 1909, systematic expeditions for collecting antiquities and documentation of the collection started. [5]

One of the earliest examples of documenting the collected objects originates from *Mon Faible,* the collection of Johann Burchard, a chemist from Tallinn. At present, the collection belongs to the Estonian History Museum. Burchard started collecting antiquities at the beginning of the 19th century. In 1822 he decided that it was important to prepare an overview of the collected material. This list can also considered as a catalogue. He divided the collected objects into groups and created subdivisions, in other words systematising the collected items.

For one object[6], the catalogue includes a number, a name with description, notes and the name of the person donating the object. The numeration of items is separate for each subdivision. The name of the item together with the description provides an overview of

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[4] The collections of the Estonian Provincial Museum, museums of University of Tartu and other similar collections created on private initiative are meant here
[5] E.g. "Vana Kannel – Paar palveid Eesti rahva ärksamatele poegadele ja tütardele" by Jakob Hurt from 1886 explains the genres and collection techniques of folklore. There were numerous followers of Hurt's initiative, including Oskar Kallas who was one of the founders of the Estonian National Museum.
[6] Archives of the ENM, fund 135, inventory 11, unit 30.

the physical appearance of the object, its material and measurements. The origin of the item (year and location) is marked under the name and description of the item or in the notes column. The notes column includes additional information about the object. For instance, noteworthy instances related to the given object are presented. In case of most objects, also the place they were found or acquired, the year and the name of the person donating the object are presented. The way the donator's name is presented can differ: surname only, surname with first name or surname with initials. Due to the writing style back then, also the status of the person might be detectable.

When comparing the lists or catalogues prepared in 1822 and in 1875, it is evident that the way that the collections were systematised and the data was structured is different. In the later catalogues, the content and marking of the object subdivision has changed. Collections or subdivisions of items of one type are marked with letters. There is no subdivision according to the material of objects. There are no clear rules regarding whether the type of an object is determined according to the nature or the functionality of the object. It can be seen from the entries that the collected object itself is considered to be the most important thing, not the contextual information related to it.

The amount of data types in the catalogue (list) that was used in the period 1894-1911 is similar to the previous; however, the content of the data type has been specified[7]. The data of the person who donated the object is more specific, including their date of birth, previous names etc. Categorization into collections is also more thorough, meaning that the type of collection has been specified. The collected objects were divided either under documents, archive objects, numismatics or various.

It can be seen from the catalogue "Katalog des Museums der E.L.G. 1911-1934"[8] dating from 1911-1934 (see Annex 1) that the numbering has become more specific. There is a

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[7] Archives of the ENM, fund 135, inventory 11, unit 91. Gifts and increase from the years 1864-1894-1911.

[8] Archives of the ENM, fund 135, inventory 11, unit 88. Akzessionskatalog des Museums der E.L.G. 1911–1934. E.L.G stands for Estländischen Literärischen Gesellschaft or Estonian Literary Association. (Fund 135 is the fund of Estonian Literary Association; the items of the fund belonged to the association before the foundation of the Provincial Museum (1894).

separate column for the number which also includes information about the collection. Regarding the reception of the object, the name of the person donating the object and the time of receiving the object are at least partly marked. In comparison with the entries from 1894-1911, there is less data regarding the person donating the object. The object name and description are written in the same column. Often it only includes the name of the item. When the object received composed of different parts such as a photo album with forty photos then space was left for further description. When comparing the old catalogues, it can be seen that there are no common requirements regarding the information that should be marked down for each object.

1.2.2 Beginning of systematic documentation (1911–1939)

A significant change in documentation of old collected items was brought about by the foundation of the Estonian National Museum (ENM). In relation to this, also instructions for collection of items were prepared. Documentation of collected items already began during the collection process. (See Annex 2) The collection of items was regulated by a brochure named "Guide for collectors"[9] issued in 1911. The guide attempts at explaining the aims of collecting old items and providing exact instructions what to note down when collecting items.[10] It also informs the collectors about how the items collected by the ENM were systematised, in other words, on which bases the separate groups of items or collections were formed. The systematisation of collections is explained as follows: "The items at the museum are organized according to two

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[9]   *Eesti Rahvamuuseumi väljaanne nr 1*. 1911. Tartu. – This is a book for everyone who is interested in the museum and wants to send items there.
[10]   „In collecting items, the general principle to proceed from is that … items by its shape, decoration and other should reflect the current or previous cultural situation and shed light on the conditions that might be characteristic to a certain place or an item." (*Eesti Rahvamuuseumi väljaanne nr 1*. 1911. Tartu, p. 5.)

principles: there are groups of similar items, such as spoons, or groups of items with a similar purpose, such as fishing equipment."[11]

In 1920, the documentation requirements of collectable objects were specified by the "Rescue team of archaeological items" which was formed under the department of the Ministry of Education that was dealing with preservation (archaeological department).[12] Based on the Swedish example, new collection sheets were prepared (see drawing 1).[13]

Museum catalogue number...
Time and date of the interview
1.   Name of the seller / deliverer
First name, surname
Profession
2.   Place of residence (parish, station, farm); postal address
3.   Name of object, purpose of use
4.   Characteristic features of the object
-material
-dimensions (length, height, width)
-is it gilded, painted
-is it polished? Does it have incisions, paintings, engravings, vignettes or any other decorations? Which?
-are there any titles, dates, names, stamps?
5.   Which was the previous status of the object?
6.   How long has the object been in the person's possession?
7.   Who were its previous owners?
-   Was it inherited from a relative and if yes from which relative?

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[11]   The items collected by the ENM were divided into three different groups:
        1) Everyday items: clothes, accessories, household items, consumer items, measurement items, tools, means of transport, means of water transport, hunting and fishing tools, arms, medical and witchcraft items, toys.
        2) Cultural-historic items: items that help to paint a picture of the cultural development of our country – building styles, furniture styles, art items.
        3) Archaeological items: items of stone and bronze found inside the ground. (*Eesti Rahvamuuseumi väljaanne nr 1*. 1911. Tartu, p. 6-12.)

[12]   Minutes number 1 of a meeting of the Estonian Rescue team of archaeological items (10 April 1920). Extract from the minutes:
        5) to note the following in the collection order of the collectable items:
        A)... a list in two copies ... on the list, the collector writes the description of the items: colour, size, weight etc. The members of the commission: chairman of the museum chosen by the ENM M.J. Eisen; the keeper of the museum's collections and procurator E. Eisenschmidt and the member of the management board G. Wilbrg. (ERA. Fund 1108, inventory 5, archival item 75, p 23.)

[13]   ERA. Fund 1108, inventory 5, archival item 75, p 33 (Swedish model), p 34 (translation into Estonian).

Drawing 1. Collection sheet

The collection sheet was almost identical to what had been used beforehand. As can be seen from the questionnaire, it includes very thorough information about the collectable objects. The required amount of data about the person delivering the object is more specific from what it had been and the time and the collector were also specified. Limiting the collected material by time and the collector are relevant in further interpretation of the information.

By 1936, Estonian museums had reached a level where it was deemed necessary to develop a common Museum Act instead of separate regulations that had been valid up to then. The official discussion of the Museum Act started already in 1936 when its draft act was circulating in the Ministry of Education.[14] The Museum Act was passed in November 1939.[15] Pursuant to the act, the museums were subordinated to the Minister of Education. Documentation and preservation of museum items was discussed in chapter four. According to the act, the important document for preserving the information about museum objects was the main catalogue or the list that had to meet the requirements set by the Ministry of Education. There were separate main catalogues or lists for each sub-collection and therefore each sub-collection had a changing number inside the collection. The uniqueness of the numbers was marked by the letter marker preceding the number, such as A1 or E1. The letter indicates the sub-collection that the object belongs to and the number indicates the position of the object in the sub-

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[14]   ERA. Fund 1108, inventory 5, archival item 873. – Draft of the Museum Act and draft of Museum administration and heritage protection act. 1936 and 1938 (Department of Research and Arts at the Ministry of Education), p 4.
[15]   ERA. Fund 989, inventory 1, archival item 1963. Inventory of State Chancellery from 1938-1940. The draft of the Museum Act developed by the Ministry of Education was read by the Chancellor of Justice on 9 November 1939.

collection. This was a convenient way of documentation, as it provided an overview of the total number of objects in a collection and by simply adding or subtracting it was possible to calculate the yearly increase and also the total number of objects in one collection or in all collections. The reports were mainly required according to sub-collections. It was considered important to preserve an entire collection in one museum. If necessary, it was also possible to relocate the objects between different museums.[16] The preservation of integral collections was therefore considered to be possible mainly in a single museum. This leads us to an understanding that was prevailing in museums for a long time, namely it was preferred to preserve objects of similar type and context in the same physical location. This was due to the limited nature of search options from information written on paper, and therefore the wholeness and availability of a collection was achieved by preserving the items together physically. It was presumed that unified study of items that are in different physical locations is difficult.

1.2.3 Systematic documentation in the period 1941–1980

The Second World War cut off the efforts of the Estonian state to prepare legislation and instructions regarding the documentation of collections. In 1941, a new guideline was prepared for the museums in the Soviet Estonia about accessioning, inventory and preserving of museum objects.[17] According to this guideline, the collections were accessioned in three main phases[18] or in other words, in order for an item to become a museum object, three main stages were needed. The first stage, primary processing, included accessioning in the register of increasing collection. In the register, the name and a short description of each object was entered. The second stage of accessioning, inventory was the main type of accessioning for "scientific preservation". Here, the object was already described scientifically, i.e. as accurately as possible, also defining

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[16]   When museum objects that form a whole have ended up in different museums then these can be deposited to one museum by force if this is needed for scientific research or in order to preserve the items. (Same, see reference 15)

[17]   The guidelines prepared in 1941 were not new as they based on the legislation that had been laid down in Estonia before.

[18]   *Juhend. Muuseumimaterjalide arvelevõtu, inventeerimise ja hoidmise kohta* 1941. Tallinn.

the features that are necessary not only to recognise the object but also for its "scientific specification". Inventory included a thorough examination of the object and its environment. The third stage of accessioning included different "supporting types" of accessioning, such as several card indices and additional registers.

We can see from this guideline that it actually means determination of information on two levels: primary processing and inventory. Additional card indices and registers are also considered to be important, meaning generalizing and structuring object data of different type in order to give an overview of the content of the collected material and make the material available for researchers.

Soviet description guidelines are characterised by very accurate prescriptions. Different types of objects had separate instructions. Each description guideline prescribed very detailed information that had to be registered in relation to each object. For instance a description of a historical collection on the basis of the given guideline had to contain the following information: 1) number of the collection (the guideline explained the formation of the number combination in detail; its structure was meant to provide important content information about the museum object to a specialist; e.g. whether it is part of a set, if it is composed of several parts, and if yes, then of how many, whether the parts can be assembled or stand separate etc.); 2) place of collection; 3) time of collection; 4) name of the collector; 5) reference to verification; 6) name of the cataloguer and the time of cataloguing; 7) description of the object according to the following list: name, material, technique, colour, shape, measurements, use of the object and specific features, condition, time and place of production, name, profession and place of residence of the producer, place of obtaining the object, person giving the object, the price of the item and verifications.[19] With similar information groups, there was also a separate guideline for ethnographic items. In addition, each museum could prepare their specific guidelines based on the general guidelines.[20]

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[19]   TM archives. - *Ajalooliste esemete kataloogimise juhend*, 1962.
[20]   ESM archives. - *Medali kirjeldamisjuhis* 1967. The guidelines for describing a medal include general requirements for cataloguing in Estonia. Also, cataloguing a medal in Poland is analysed and proceeding from this, guidelines for the Sports Museum of the Estonian SSR are prepared. Differently

As a result of all this, there were numerous different guidelines used in Estonian museums. This in turn left the museum staff with the impression that different types of objects were so different that it was impossible to harmonise them. Such detailed presentation of data left aside the generalisation of data about different types of museum objects and shared types of data were not seen. Information was highly structured for each museum object, despite the fact that visually it had been written down as one single text.

In 1959, several new registers were implemented for documenting museum objects. In the directive of the Minister of Culture, it was said, "In relation to the need to harmonise and improve the accessioning and preservation of funds in town museums, rural museums and memorial museums, in the National Natural Museum of the Estonian SSR and in the Estonian National Open Air Museum, starting from 1 May 1959 new registers are to be used."[21] This meant that information related to one object was to be written down several times in different registers. These were the times when in addition to history degree, museum staff also had to have beautiful handwriting.

Important generalising changes were also made. In 1959, the structure of number of a museum object was changed with the directive of the Head of the Cultural Education Institutions Departments of the Ministry of Culture of the Estonian SSR. The number now also included the abbreviation of the museum. This was the first step in common marking of museum objects in order to differentiate between items belonging to different museums.[22]

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from general cataloguing requirements, it is also said here that the text and the picture are presented together when describing the front and the back of a medal.

[21] TM archives. - Directive of the Head of the Cultural Education Institutions Departments of the Ministry of Culture of the Estonian SSR number 15 1959.

[22] For example: starting from 9 May 1959, with the directive of the Head of the Cultural Education Institutions Departments of the Ministry of Culture of the Estonian SSR, the museums were given signatures to mark museum objects. Starting from 9 May 1959, the Tartu City Museum was given the signature TM, which was the basis of creating numbers for museum objects.

In 1977, the new Museum Act prepared by the Supreme Soviet of the USSR was passed in the Estonian SSR.[23] The act included all the separate guidelines that had been previously given to different museums. Description and accessioning of all museum objects took place in three stages: 1) primary registration; 2) full cataloguing of items; (at the same time, supporting card indices and catalogues were prepared, which could be seen as a separate stage of accessioning); 3) monographic study and scientific description.[24]

Such emphasis on scientific description and monographic study left very little actual time to meet the accessioning requirements of the second stage. The focus was on museum research, i.e. the preparation of research papers about the museum objects.

The passed law in itself did not bring about any changes in the object description requirements in the two first stages but the lack of highly detailed guidelines that had been used until then and the implementation of so-called new accession card forms[25] (see ANNEX 5) in the 1970s conditioned larger differences in content and form in the descriptions of the second stage, the full cataloguing. Detailed dimensions were often replaced by general dimensions. The name of the person who had conducted the inventory and the time of conducting were often missing from the card. Examples of the differences between of the Inventory cards from different museums are given in the Annexes 6 – 12. Apparently the different museums described differently the same type of collections

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23   ERA. Tartu. R-3.3.10811. - *"Otsus Eesti NSV seaduse "Ajaloo- ja kultuurimälestiste kaitse ja kasutamise kohta" kehtestamisest*, 21.12.1977.
        The basis for registration and preservation were included in the act passed by the Supreme Soviet of the USSR on 29 October 1976 "Protection and use of historic and cultural heritage items" and the national act prepared in the Estonian SSR on its basis, which was passed in 1977. Earlier, there had been different acts for art musems and non-art museums: "Rules of registration and preservation of cultural heritage items" from 2 April 1968 (in Russia), and "Rules of registration and preservation of art objects" from 23 December 1971. Issued by the Ministry of Culture of the USSR.
24   *Luts, A. 1981*. Museoloogia II. Õppevahend ajalooüliõpilastele. Tartu: Tartu Ülikool, pp. 4-5.
[25] Example of EAM scientific cataloguing (inventory) card.1971. Rules of scientific cataloguing cultural-historical and art objects. Based on the example the museums of different profile may make some changes. (EAM arhiiv. Fond 149, nimistu 1, säilik 209. - Juhis, teaduslik kataloogimine (venekeelne), p. 39-55.)

At the end of the 1980s and at the beginning of the 1990s, the museums were relatively free to decide to what extent and which documents to fill and which not. This was supported by the fact that according to the law passed in 1977, each museum prepared its own system of primary registration and full cataloguing.[26] The formal difference of presenting the data in the description of museum objects was conditioned by the fact that different accession cards were used where data fields with similar content were differently structured. The diversity of descriptions was increased by museums, as these still described museum objects in their inventory books. See Annexes 3, 10a-b

The difference of scientific description level in the structuring and the content of information increased even more in the 1990s in relation to the implementation of new description forms (electronic registers and databases prepared by the museums). For instance, when looking at the full cataloguing of museum objects, then this could have been made either in the inventory book, accession cards, or as a description in electronic environment, either as a text document, a table or a database. First attempts to harmonise the description of museum objects in the Republic of Estonia were made in relation to the development of the Cultural Heritage Database (KVIS) in 1993-1995 and its wider implementation in the period 1997-2003. The use of the KVIS in documenting museum objects is discussed in the following chapter.

Summary

Throughout the history of Estonian museums, attempts have been made to systematise the collected material and structure the information related to museum objects. In the given periods, there have been certain differences in the types of data used for the documentation of museum objects and the way the data was structured. From the basic two-level accessioning (1912), accessioning in three and actually even four stages was reached (1977).

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[26]   *Luts, A*. 1981. Museoloogia II. Õppevahend ajalooüliõpilastele. Tartu: Tartu Ülikool, p 4.

When comparing the registration of the contextual and physical information of an object, it can be said that larger emphasis has been placed on noting down the physical data of objects. Documenting physical data has been more harmonised both in different museums and during different time periods. Documentation of contextual data has been much less harmonised.

From contextual data, the largest emphasis has been placed on information about preparation of the objects, which is also understandable, as the event of preparation in itself includes information that specifies the physical data of the object. Use of the object was deemed necessary especially with ethnographic and older items. When collecting contemporary material, it was often forgotten to document use-related context. The context related to the person who handed over the items has also been different content-wise, being either limited to the person's name only, or include also more specific biographic information about the person.

It can be seen from the descriptions of museum objects in museums that there was no clear and unambiguous structure for the description levels of museum objects. The description guidelines of museum objects contained a very specific amount of data that had to be written down about objects but the aims of the different levels of description had not been presented. As a result of this, there were descriptions of the second stage that already met the requirements of the third description level, and also descriptions of the second stage that merely met the requirements of the first description level. There were no general principles of describing museum objects, or in other words, the factors affecting the information that determines the collection, saving and reproducing the information had not been verbalized. The specification of the framework of the description level, in other words marking down the person who was describing the object and the time of description in the description form was also inconsistent.

It can also be seen that a more in-depth structuring of data in museums started with the accession cards where data had been structured into different fields. The use of

accession cards for describing museum objects was recommended starting from the 1970s when a common card format was developed for the entire Soviet Union. It was quite an extensive project with the aim of founding the description of museum objects on a common ground. This harmonisation between different museums was not achieved as the card format was not required but merely recommended and a museum had the right to develop a format that it found suitable. The differences between cards did not interrupt the work of museums as using accession cards and making data queries from there took place inside one single museum. These were the important reasons why no harmonisation was achieved between object descriptions in museums.

In the 1990s, the use of computers changed the way museum objects were described even more varied. A several different of electronic table databases with very different structure and content were created in museums. Even central museums had large differences in inventory, both form and content-wise.

2. USE OF THE CULTURAL HERITAGE INFORMATION SYSTEM (KVIS) IN THE DOCUMENTATION OF MUSEUM OBJECTS AND THE PROBLEMS RELATED TO THE IMPLEMENTATION THE KVIS

This chapter gives and overview of the KVIS, the first common information system of museum objects in Estonia; also, the problems that proceeded from contradictions between the new documentation system and the state legislation regarding the documentation of museum objects are analysed. It is also discussed how the KVIS was used in different museums and the differences in the ways of describing the museum objects. Thorough analysis of the KVIS is of utmost importance as the Museums'

Information System MuIS is based on it and the data in the KVIS will be transferred to the new system. In the development of the MuIS, the experience from the development of the KVIS and its implementation problems in museums were taken into account.

2.1 Creation and use of the Cultural Heritage Information System (KVIS)

The KVIS, the common information system of Estonian museums was founded in 1992 when proceeding from museums' wishes and with the help of the Ministry of Culture efforts were made to transfer the documentation of museums into an electronic database. In cooperation with the company GenNet Lab[27] the development of a possible tool for museums was started. The KVIS was created as a local database which means that although the software of the information system was the same, it worked independently in each museum.

The aim of the KVIS was said to be "to create a database of Estonian cultural heritage which would enable to document, protect, and examine objects related to different human disciplines (archaeology, art, history, ethnography, numismatics, etc.) and belonging to different periods of history"[28] In the creation of the common information system, the need to standardise was seen on several levels: standardisation was needed regarding the structure and the links between different records but also regarding the content of the data and values. The last includes common coding and syntax rules and also developing common vocabulary and a system of classification. It was also important to standardise the exchange of information, which presents rules and technical means for the exchange of information both between the systems of one institution and also with other institutions.

Achievement of these goals would have required tight cooperation between the creators of the information system and the museum staff; firstly because the expectations of the

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[27]   AS GenNet Laboratories is an information technology company established in Estonia in 1991.
[28]   *Kultuuriväärtuste Infosüsteem. Projekt.* 1993. Tartu, p.3.

people entering the information and creating the content would meet the possibilities offered by the information system, and secondly because the people entering the information and creating the content would have a common understanding of what is meant with a given type of data. As there were and are many different types of data for describing the content, it enables the people entering the information to use different methods of describing objects and the result is not unambiguously understandable. A prerequisite for the central exchange of information is the existence of unambiguous data. There was not enough discussion with the museum staff and therefore the structure of the information system was too programmer-centred.

The first version of the KVIS was finished as a pilot project in 1993 in cooperation with the Tartu Art Museum. The database was in the DOS environment and the database managing system that was used was DataEase as it had a good data query generator and was one of the best database systems of its time with large range of features. The KVIS was based on the data model of the International Council of Museums (ICOM) and the International Committee for Documentation (CIDOC)[29] and the Swedish attribute name formation standard SWETERM[30], which enables to organize the exchange of information with other databases with the help of SQL (Structured Query Language). The ICOM-CIDOC data model is an excellent model for describing a museum object. It is a flexible model with various possibilities. The database allowed describing objects, subjects, events and relations between them and the object-related processes in museums. The peculiarity of this data model was its relational nature. Each record with its attributes is described separately, i.e. the data that is directly related to the object is described in one place and the data directly related to persons is described elsewhere. Each single object can have several relations with different persons (producer, donator,

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[29] The main terms of ICOM-CIDOC data models are logical data groups (LDG) and their attributes. LDG is a collection of information that can be described independently (such as information about an object). Attributes are categories of data that describe the LDG (such as object code, name, dimensions etc.). The logical data groups of the ICOM CIDOC data model are: 1) museum object, 2) collection, archaeological find etc; 3) person – individual person, organisation or group of people; 4) place – geographic, specific, imagined etc location; 5) event – single event or a chain of events that can be described as a single event; 6) conception – terminology and classificators. (http://cidoc.mediahost.org/guidelines1995.pdf (17.12.2009)
[30] http://remus.meta.se/insam/skiss/sweterm/index.html (17.12.2009)

author etc.) and a person can be related to several objects. Such relations are defined as references. Any change in one logical data group (LDG)[31] automatically affects other related data groups (LDG).

The DOS-version of the KVIS was the first attempt to centralise the administration of Estonian museum into one electronic environment. When creating the information system, in addition to theoretical documentation issues, also the technical possibilities and limitations of the time were a problem. In real-life situations, the limitations tended to outweigh the possibilities, which in turn caused the information system's relatively small use by museums. The largest shortcoming of the DOS-version of the KVIS was that common dictionary was not created as the funding of the project ended.[32] However, some Estonian museums started using the DOS-version of the KVIS.[33] One of the most active users was the ENM who was also leading the development of the information system. The period 1993-1996 can be called the time of testing and searching. The information system found very little actual use in museums.

The long-term goal of the Ministry of Culture when developing the KVIS was to create an information system that would meet the needs of Estonian museums, give a thorough overview of museum collections and enable to follow the movement of museum objects both inside a museum and outside museums. The result would have been an information bank of Estonian cultural heritage which all interested parties could access via the Internet.[34] In order to meet this goal, in the spring of 1997, the development project of museums' information system was restarted. The aim was to transfer the KVIS to the Windows environment, to SQL servers. This would have enabled to realise the idea of the central information bank of Estonian cultural heritage. The Cultural Historical

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[31]   *Kultuuriväärtuste Infosüsteem. Projekt.* 1993. Tartu.

[32]   *Alev-Christoffersen, K*. 1998. KVIS – kultuuriväärtuste infosüsteem. – Annual accounts of IT administration; http://www.riso.ee/et/pub/1998it/311.htm (01.11.2008)

[33]   The DOS-version of the KVIS was purchased by about ten Estonian museums but it was actually used by the Estonian National Museum, the Zoological Museum of Tartu University, and the Saaremaa Museum. *Introduction of the KVIS* http://www.kul.ee/index.php?path=278

[34]   *Alev-Christoffersen, K*. 1998. KVIS – kultuuriväärtuste infosüsteem. - Annual accounts of IT administration; http://www.riso.ee/et/pub/1998it/311.htm.

Central Register of Denmark was taken as a role model (*Det Kulturhistoriske Centralregister* - DKC).[35]

The KVIS (version 2.0) was developed on a client-server platform and the application was written in *PowerBuilder* language.[36] The foundation for groups and categories of data was still the CIDOC standard.[37] A bigger change was caused by transferring from the DOS environment to the Windows environment and the implementation of the SQL server.[38] When developing the data model, the principles of object-orientated or O-O programming, which were up-to-date at the time, were implemented. Also the CIDOC recommended the use of object-orientated model for developing data models. This was discussed at the meeting of the CIDOC working group in Nuremberg in 1997.[39] The advantage of object-orientated model over the previous relational models was the simplicity, flexibility and clarity of structuring information. It also simplified the exchange of data between databases.

Another innovation was an event-based approach. While most of the museum databases back then were based on describing the objects and were therefore object-based, then the basis for the KVIS was chosen to be an event. Such description model is also supported by the new standard CRM (ISO 21127)[40], which was implemented by the CIDOC in 2006. This also joins descriptions around events instead of objects, as events join people, material and immaterial objects both in space and times.[41]

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35   The theoretical basis of the mentioned classification system was based on critical analysis of several similar systems from Western-Europe and the USA; as a result of that, the elements that suited to Scandinavia and the Baltic states were chosen (see reference 29).

36   *PowerBuilder* is a RAD tool that enables to write client-server applications for object-orientated programming; its components can be distributed in the network (*e-Teatmik: IT ja sidetehnika seletav sõnaraamat*; http://vallaste.ee/index.htm?Type=UserId&otsing=2363 (2. dets. 2009))

37   *International Committee for documentation* 1995. International Guidelines for Museum Object Information: The CIDOC information categories; http://cidoc.mediahost.org/guidelines1995.pdf

38   By 1999, the complemented version of the KVIS based on Windows software was finished.

39   *Alev-Christoffersen, K* 1998. KVIS – kultuuriväärtuste infosüsteem. - Annual accounts of IT administration; http://www.riso.ee/et/pub/1998it/311.htm

40   Conceptual Reference Model that was confirmed as an international standard ISO 21127 in September 2006; http://cidoc.mediahost.org/standard_crm(en)(E1).xml

41   *Doerr, M., P. LeBoeuf* 2006. Modelling Intellectual Processes: The FRBR CRM Harmonization– Lecture Notes in Computer Science. Berlin, Heidelberg: Springer, p. 2.

Both innovations, meaning object-orientated and event-based approaches were significantly different from the principles of describing museum objects up to then, where the central focus was placed on the physical description, not the context of the object. What turned out to be unexpectedly problematic was the comprehension of the use of dictionary that classified and systematised the substantial entry of an object in the KVIS. Use of those centralised dictionaries should have ensured common information searches related to museum objects in all museums.

The classification system of objects proceeded from the function of the object. It was presumed that each type of human activity defined as an "event" happens in a "place" and leaves a mark via "object(s)". At the same time, a "place" can also be seen as an "object" and for practical reasons, in defining the object, objects are distinguished from places. As events and objects are tightly related, then the classification system of objects is structured proceeding from the type of event and the function of the object in the event (see drawing 2).

Drawing 2. Main categories of functions in the KVIS

All museum objects had to be divided under seven main functions. These were the following:

1. human and the nature (see Fig 2. The average circle) – to be part of the nature;
2. livelihood – to obtain food;
3. settlement – to have a place to live;
4. transport- to move around;
5. personal items and expression – to express oneself via body, clothing and personal items;
6. culture – to express one's thoughts and feelings;
7. social and private life – to be part of the society and communicate;
8. unspecified – unspecified or unknown function.

The main categories were also divided into sub-categories and these in turn into groups.

The KVIS classified objects only based on the events of use. According to this, objects received specific functional names[42] or in other words, a classification according to their use inside the system. As the functional name that showed the field of use was by default dependant on the name of the object and also the other way around, it set certain restrictions for the describer of the object.

In order to solve the problem of dictionaries, a working group from five museums[43] was created. Its task was to develop the so-called national standards. Another important task was developing and organizing the terminology in Estonian. The priority was organizing the dictionaries that classified the object context, "Event" (sub-terminology

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[42]   The names of the functional groups of items were for example: means of transport, art and visual item, container.

[43]   Estonian History Museum, Viljandi Museum, Saaremaa Museum, Estonian National Museum, Tartu City Museum. The tasks related to organizing the dictionaries were divided between museums of different subject areas.

of seven main categories) and "Activity" (sub-terminology of seven main categories). Unfortunately, this work was not finished.

As the systematic terminology to describe the context of the object was incomplete, several museums considered it to be necessary to prepare their own dictionaries, at times even copying the systematic terminology. As long as the information systems functioned locally, the multitude of such dictionaries caused no problems. However, it is the main reason for different documentation or description of the substantial object-related information in the KVIS in different museums. The possibility of creating the above-mentioned independent dictionaries hindered the development of centralised terminology. The museums focused on creating dictionaries that were based on their specific interests, according to their skills and needs.

Estonian museums began using the second version of the KVIS in 2003. The Estonian Sports Museum (ESM) had an important role to play in that. In 2001, the ESM joined the existing database and started cooperation with the programmer by initiating (with the funding of the Ministry of Culture) the development and completion of several functions. One of the most significant additions that made the information system more widely used was the development of a correct accessioning function. The accessioning of objects, which is one of the main basic functions of museums, was now actually based on the information system. Up to then, the given function did exist in the KVIS but it could not be used due to technical errors; the museum objects had mainly been entered into the information system retrospectively. By enabling to accession items in the information system, the number of objects that were entered into the system retrospectively started to decrease as each object that was accessioned by the museum was at once registered in the information system.

Differently from other Estonian museums, the Estonian Sports Museum implemented the KVIS quickly and used it widely, as it was easier for a sports museum to understand event-based description – most of its objects are indeed related to a specific event – in comparison, in the case of an art museum, the event has to be retrieved e.g. from the story of a painting.

2.2 Electronic documentation of museum objects and legislation. Accessioning and description of museum objects.

Although the aim of the KVIS was to standardise the documentation and description of different types of cultural heritage items, it has to be said that the tool itself does not guarantee the desired result. Legislation has a major part to play here: it should support or require unified performance of the activities in the information system, because also user training and guidelines have to take the legislative requirements into consideration.

The Museum Act that was passed in 1996 was the foundation for the 2nd version of the KVIS but the regulation from 1998 "Principles of accessioning and preservation of museum objects" for the implementation of the act still proceeded from paper documentation method and did not give any guidelines about how to perform the prescribed operations in an information system-based documentation.

In 2003, an attempt was made to organize the documentation of museum objects. For the user training of the KVIS, also the corresponding training material named "Registration documents and reporting. Guidelines for completion and use" was prepared.[44] In spite of the suggestions made by the people who prepared the materials, the principles of the documentation of museum objects were not set, neither regarding the description requirements nor registration documents that are required to register the museum object in the collection (accession book, inventory book).

2.2.2 Describing museum objects in the KVIS and correspondence to the description requirements laid down by legislation

Description is the most important part of documenting a museum object. One of the weak features of the KVIS was ensuring the correspondence of object description to common requirements. Documentation on paper resulted in monolithic textual

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[44]   *Jeeser, K., Riina R.*. 2003. Vastuvõtuga seotud dokumendid ja aruanded. Täitmise ja kasutamise juhend. Tartu; http://www.kul.ee/failid/vastuvotuga_seotud%20dok_juhend.pdf

description. Electronic information system, however, requires data that is structured in detail. Structuring of data in the way it had been done up to then was not similarly understood by the museum staff. The confusion was yet increased by the so-called open information system where the fields and their values were not exactly specified for the user. The person entering the information had to pick the order in which to enter the information. It was up to the user to decide how the information was entered and this often depended on the knowledge and wishes of the user.

Having too many choices always causes confusion for the user. The user views were not developed and so the database could not dictate one single way of completing the fields. For instance there were no views of the description level in correspondence with legislation that would have required a compulsory amount of data. In addition it has to be said that the principles implemented in 1998 which set the description of museum items on two levels and joined full cataloguing and scientific description increased the confusion even more.

The valid requirements for the description of museum objects distinguish two levels of description: primary registration of the museum objects and full cataloguing (scientific description).[45] It is important to distinguish between the terms "full cataloguing" and "scientific description". In the current legislation, however, this distinction does not exist.

Full cataloguing is the "objective" description of an object. Scientific description, on the other hand, provides a "subjective" description of an object. In the first case, what is proceeded from is the interpretation of the describer or in other words, interpretation of the object or object-related sources by the describer. In the case of full cataloguing, the object-related data is controlled and fixed. Scientific description, on the other hand, means opening new points of view regarding the object.

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[45]   The stages of accessioning museum objects are: 1) primary registration of received museum objects: preparing the accessioning form and registration of museum objects in the accession book; 2) full cataloguing (scientific description). (RTL 1998, 261/262, 1068)

Scientific description denotes the research itself; here the researcher relies on the existing sources which they interpret according to their professional knowledge and understanding. It is obvious that the same sources can provide different results, depending on the attitudes and aims of the researcher and the methods used.

It has to be possible to separate the data that is on the level of full cataloguing and the information that is on the level of scientific description in the museum information system, so that the person reading the object description would know where the data ends and someone's interpretation begins.

As the KVIS was based on the Museum Act in which the amount of information on different levels of description was not clearly specified then in the KVIS, there is no distinction between the levels either and the amount of information related to full cataloguing is unspecified. As in the legislation full cataloguing is considered to be equal with scientific description then it is also difficult to differentiate between these two levels. Based on the existing principles, an object description cannot be completed because scientific description in its essence is an endless process. Therefore adding object-related information in the KVIS is also unlimited both by its amount and content, which in turn makes treating object-related information problematic.

Also, from the perspective of museum staff, information that is related to scientific study and fixed on the level of scientific description can be considered to be without copyright.

The museums' information system has to have a function that would enable to specify the completed description levels by registering the performer of the task and the time of completion. On this level, changes can only be made by the person with corresponding user rights. Such structure of the information system must also be laid down in the legislation where different levels of description and their goals should also be specified.

In the valid registration principles of museum object, the description requirements of the second stage correspond to the level of full cataloguing and therefore full cataloguing should again be made into a separate level of description next to scientific description.

From the perspective of information theory, the valid requirements of describing museum objects have unified the levels of information and knowledge.[46] This means that the user of the data does not know where the information that is based on checked sources ends and where the interpretation of the museum staff or the knowledge level begins.

Considering the accessioning and documentation of description in the KVIS, it would have been necessary to adjust the legislation with the digital working environment, i.e. eliminate contradictions between the stages of accessioning. Above all, it would have been necessary to specify the description levels of museum objects in more detail by presenting the goals for each description level and the amount of data types that describe the object on different levels. It is also convenient to grant access rights to well-structured data, if needed.

Regarding the documentation of museum objects in the electronic working environment, the documentation that had been deemed as necessary for the documentation of museum objects should have been reviewed. The existing regulations "Principles of accessioning and preservation of museum objects" and "Principles of keeping the record of cultural heritage items that are stored in museums" should have been amended.[47] Also, the list of documents required in the legislation should have been compared with the actual documentation; a list of mandatory documentation prepared, and specified which types of documents have to be stored both on paper and electronically, and which only electronically.

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[46]   See Chapter Three, drawing 4.
[47] The Museum Act (RT I 1996, 83, 1487, 1997, 93, 1559) implementation of the Ministry of Culture the 27th juuli 1998th by Council Regulation No 23 (RTL 1998, 261/262, 1068).

As this was not done, museums found themselves in a complicated situation. The multitude of options and possibilities brought about a lot of improvisation which contradicts the idea of creating the common information system. In a shared locally used information system, such as the KVIS, it is important to lay down necessary guiding limitations that would ensure a unified use of the database and the amount of entered data. This is the only way to have unified queries in the entire information system. Due to the numerous different options available in the information system and lack of user training we have to admit that the records in the shared information system do not enable us to search for information in all the museums that used the KVIS.

2.3 Use of the KVIS to document museum objects in different Estonian museums

In this section we discuss the differences in object descriptions based on the descriptions of museum objects in the KVIS. The KVIS offers the following possibilities of describing objects:

1. There are systematic dictionaries for classification that the museum can use, if needed, central dictionaries that are used by all museums, and individual dictionaries that can only be used in one museum.

2. There is a number of structured types of data to describe objects.

3. There is a database model from which links between different data originate from and also possibilities to make queries by using the existing data. In Annex 13, the systematic links between different data types that exist for describing objects are presented.

The describing person can use both fields with limited terminology, free text fields with certain text types and free text fields; there is also the option of adding a digital image as a descriptive element. It is possible to link up to ten different digital images with one object.

The KVIS enables to enter object-related information by using different ways of entry. As a result, there are following description levels: 1st level is the catalogue data base; 2nd

level is the catalogue / administrative database; 3rd level is the catalogue / administrative data base and object-related events of use and preparation; 4th level enables to register all kinds of cultural historic events in the database that can later be linked to objects.

From the perspective of object description, the first two levels are so-called catalogue databases which mainly provide a statistical overview of the collections. The third and the fourth level form the so-called database of knowledge, which provides varied substantial information about the collections. When comparing the description levels of the KVIS with the previously analysed description levels of the Museum Act, it appears that the levels do not correspond to each other. Such four-level description is one of the many that the KVIS has. Only the first level is limited by obligations and restrictions. When an object is registered and entered into the information system for the first time, the following data has to be entered:

- the name of the object in free text;
- the location of the object, which is fixed as a default by the database according to the museum;
- the event in connection to which the object is registered in the database;
- the time of registration, which can be changed by the user;
- the person entering the object (the name of the person can also be chosen by the user; the system only checks whether it is an employee of the museum or not)

Such step-by-step data entry gives each museum employee a chance to develop a way or a model of entry that they find convenient. All records and corrections of records are by default provided with the personal data about the person who is logged in. When describing museum objects, the museum staff has to be able to take into consideration the mandatory amount of data of description levels provided by legislation. The information system does not support such specification of different description levels.

The person who has performed the corresponding description and the time of description should also be entered together with the object description. This would require determining the structure of the information flow by the person entering the information. It would mean copying the systematic functions but would nevertheless be

necessary as it means limiting substantial information to the primary registration, full cataloguing and scientific description. This way, also the correctness of the content of information and data would be specified and only the person who is familiar with the substantial information can be held responsible for that, not the information system.

In the information system to describing the objects four different entry forms are used: pre-registration, accessioning, retrospective registration and the so-called "fast entry", to which the data fields, physical description data fields and context description data fields are added.

The most convenient form of entering objects in the information system retrospectively is "Fast entry" because all the data fields describing the object are in the same form.

So there are four different forms in which one can perform the initial registration of the objects in the data base. There are two separate forms for further description of objects: one mainly for registering the physical description and the other to register the object context. It means that the user has to move between different forms and also understand that there is only a certain fixed amount of data to describe an object, regardless of the form they are presented in or in other words, how they are structured for the viewer. In practice it means that information is entered various different ways, both regarding different data fields and content. As object-related data and information have been entered by using different data fields then it is difficult for the system to ensure common access to museum objects of different types. However, this should be one of the goals of a shared electronic database.

The following is the observation of some different versions of entry where different entry methods can be detected. The base for this is the field "full description of the object". Often no distinction is made between completing paper documents and entering information in the information system. The entire object description is in a compact free text field "legend/comment" (see Annex 14). The option of structuring different types of data in specific fields has not been used. One of the most common reasons for not

structuring the data was the user's opinion that by using only one text field to describe the object more data can be registered at once and in a shorter time period. The fact that if the data is not divided between different fields then there is no amount of structured data or support index that is important for searches from the system is not taken into account.

In another common way of description, the data of the physical description of museum objects is structured but the contextual data (preparation and use event and other historic events that also include years and persons) are nevertheless still presented as one text (see Annex 15). This is a large amount of important information but as it is presented as free text, it is not possible to search for it. If this information was been presented in a structured manner, it would enable to perform multi-layered searches, that is to change persons, events and years into search parameters. In addition, an electronic support index is created. Scarce use of structuring of contextual information in different museums can proceed from the inability to see the independent data that is included in the object context. A significant restraining factor is also the fact that dictionaries have not been fully prepared and the terminology is insufficient. This also concerns the activity dictionary through which the field of usage of the object is determined; this, in turn, is the basis for explaining the object context via usage event. The thematic index that is formed by giving a field of usage for the object is not created either.

When the KVIS was developed, the additions were made into dictionaries when required by the museums but this needed coordination and negotiations with the program administrators („GenNetLab"). A simpler and faster solution for the museums was to prepare their own dictionaries. However, these dictionaries are independent attributes which do not have a programmed connection to the years, persons or geographic locations. Therefore it only means turning the objects into key words which does not use the given information systems option of performing multi-layered context queries between different objects.

What also caused problems was the understanding of the content meaning of the fields of the database (see Annexes 16 a and b). The data was explained but the text that was entered in the field "legend/comment" of the object was actually the text that should have been in the field "physical description" of the object. The field "legend/comment" should include the initial most important data about the specific object. This requires the skill of generalizing the entire object-related information by stating the most important in "a few" words.

One of the most common problems is the misuse of the field "legend/comment". This is a text field that does not subject to specific searches. The entered information is still searchable by using text search but it definitely does not replace multi-layered   search in the specified data fields, as the text related to museum objects usually contains a lot of information.

The function of the field "legend/comment" in the information system KVIS has remained unclear for the persons entering the data. This is a field that ought to contain general information about the object. This general information includes both physical information and contextual information about the object. The text should explain the essence of the object. It should also be known that the text in the given field is transferred to the reports and documents related to the objects. For instance the text is transferred to the document "Lending form", issue documents for exhibitions, and the report "Complex object query" the output of which is a report which includes a list of searchable objects with the field "legend/comment".

This search and the report based on it is good to use to get an initial overview of objects, e.g. for preparing an exhibition or another similar activity. The user (performer of the search) can use this report efficiently if this provides a good general overview which means that all object-related information has to be visible at the same time. The most common goal of using this search is getting a list of objects that match certain features. For further more specific selection, the full description form of each single object is seen.

Therefore instead of detailed physical description, the field "legend/comment" should include the very general dimensions of an object, such as a short description or a digital image and also a few words about the object-related context, so that the field of use, dates, persons and events linked to the object would be clear.

If the text in the field "legend/comment" is too long (see Annex 16a) then it is difficult to grasp the content of the information. Also, the content of the information might not be available if only the information that was received when the object was accessioned in the museum is written in the field "legend/comment" (see Annex 16b).

As it became evident from the given examples, the biggest problem of the descriptions of museum objects that are entered into the KVIS is that the information is not divided between specific fields. The detailed physical description of a museum object should be in the field "physical description" whereas the owner-related biographical data should be entered in the person's card "participant" or if needed in the text field "legend of the owner". The information related to the preparation and/or use of the object should be entered in the form "Event" in the KVIS, where it is possible to note down the year/years, "Participants" or persons related to the museum object, topic classification or the field of usage of the museum object and historic events in designated fields. As a result of such structured records, the data can also be separately searched for. The field of object "legend/comment" has to be a summary of all the data that is explained in different fields.

The entry results are better in museums where the information entered into the information system is actively used for daily information searches and where the searches are also performed by the persons who enter the data. The skill of structuring and summarizing the information is mainly obtainable via practical experience. Unfortunately in this respect the program does not support the user because the content value of several fields cannot be understood in a unified manner by museum staff because the fields with the similar content have different names in different forms. For example the field "legend/comment" is sometimes named "legend", sometimes "comment" and sometimes "legend/comment".

Entry of object-related information in a single text field in a compact manner often proceeds from the wish to enter the so-called critical number of objects in the information system,[48] so that the information system would be convenient to use in administering the collections. At the same time, while focusing on the number of the entered objects, it is forgotten that the aim of the information entered in the information system is to ensure common access to different types of museum objects. This presupposes that the most important object-related data is entered in a structured manner. Often, the primary information is not detected from the large amount of information that is entered from paper documentation and the data is repeated unnecessarily. The aim of the description, no matter whether on paper or electronically, is to ensure physical and intellectual access to a specific object. Description on paper requires card indices to grant access to the object but when describing objects in electronic environment, indices have to be the additional result of description.

The third common problem is the classification of the object type. The dictionary "classification of functionality" in the form "Event" is meant for it. Often, however, this is the only description of the event. From the perspective of searching for information, it is important that in addition to classification of the activity and classification of the object functionality, the event would also include other data that would characterise the belonging of the specific object with the given event.

As we have seen, the information system has been used differently in museums. A distinction can be made between using the KVIS as a writing tool which creates an amount of monolithic information similar to the one on paper that cannot be used for searches in the information system, and using the KVIS as an actual information system, where the data is entered in a structured manner and can therefore be used in different searches. As a result of this, the entered data starts to create new information while it is used. The advantage of searchable data entered into electronic environment is that by being used daily, it soon becomes clear through the searches which information

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[48]   Practical experience from using the KVIS has shown that when 60% of the museum collection has been entered in the information system, it starts to simplify the operations related to managing museum collections.

is entered incorrectly or pointlessly or which information is missing. Also factual mistakes appear, such as mismatching persons and dates. Using the data corrects the mistakes in the contextual entries of museum objects.

When the KVIS was implemented, there was no theoretical foundation for data entry and the new information system was not supported by legislation either, so at the moment we have descriptions of museum objects that have been entered on very different levels. At the same time, all museums call these descriptions full cataloguing. Also the person entering the information and the time of entry, in other words the architecture of the information flow is unclear. Automatic archiving of records takes place in the database but the date of the administrative event that should determine the time of the description can be changed.

As the last large-scale innovations in the KVIS were made in 1997, it is only natural that the technical and software solutions of the KVIS are outdated in comparison with more modern possibilities and solutions:

1. This is a local system. There is no possibility of publishing the data online. Completion of certain functions of museum work is easier in an online information system.
2. Search systems have become more flexible (text search of several words) and faster. The speed of information processing in the KVIS is low.
3. In 2004, the contract between GenNet Lab and the Ministry of Culture ended and as a result of that, the KVIS was not developed any further. This has become a hindrance in completing the working functions of museums as the larger is the amount of data entered into the database, the more programming mistakes occur in the existing program.

These are the reasons why in 2005 a decision was made to create a new information system for the museums named the MuIS. The next chapter is dedicated to this information system.

Summary

It has be to admitted that the main purpose of the information system KVIS, which was to standardise the documentation and description of different types of cultural heritage so that it would in the end be a common database of cultural heritage where common searches could be made was not fully achieved. At the same time, in comparison with documenting museum objects on paper, the KVIS has made the documentation of museum objects in different museums more unified.

The information system was created with various functions that are important for museum work. The system was very flexible and gave several options for records with one and the same content information. Information system with such variety of options would have required museum staff with corresponding skills. As the KVIS was the first museum information system in Estonia, the users of the system lacked the experience and skills for using it. The users of this level would have needed programmed system restrictions limiting the activities but these did not exist in the KVIS. Also, the event-based object description was very different from the official principles of describing museum objects that had existed up to then and focused on the physical description of the object, not on its context. Some museums were able to implement the "activity classification" of the KVIS to create a thematic index. Most museums, however, did not make use of this opportunity.

So, in the end, the system that was based on common software was basically still a local system based on one museum, this both by the content and the amount of records. As there was no user training, the museums still lacked knowledge and will to work systematically with the software. The KVIS was not seen as a tool necessary for museum work but rather like a thing in itself.

The implementation of the KVIS was also made more difficult because of technical faults, insufficient dictionaries, and the general weak level of information technology at

museums – existing hardware and software were often wrongly set and implemented.[49] Therefore in the end there were more restrictions than opportunities for the museum staff.

3. ESTONIAN MUSEUMS' INFORMATION SYSTEM (MuIS)

The first and the second chapter of the master's thesis gave an overview of the documentation of museum objects in Estonia. Also the contradictions between the legislative requirements for accessioning museum objects[50] and the KVIS, the information system meant for documentation of museum items were analysed and the problems emerging from this in the documentation of museum objects were discussed. This chapter describes the creation of the cultural heritage information system MuIS and the requirements for it, some of which have been realised in the new information system while others require further development of the information system. The chapter also discusses theoretical problems related to the information system that directly affect the content of the records, the reproduction of information and understanding it. The questions of structuring and systematising the museum object descriptions are focused on as these were the issues that were not solved with sufficient clarity in the information system KVIS.

3.1 Creation of the Museums' information system (MuIS)

By 2008, the KVIS was used in 48 museums. These included both central state museums and smaller local museums. Several museums have described a significant

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[49]   Data of the Estonian Ministry of Culture. Infotehnoloogiabüroo „Infosüsteemi rakendumine muuseumides" Tallinn. 2005.
[50]   Principles of accession and preservation of museum objects. (RTL 1998, 261/262, 1068)

part of their collection in the KVIS and the collections are also administered with its help. For example the Estonian Sports Museum has entered the description of 97 per cent of its museum objects in the information system and the administration of collections is fully based on the information system. The Rannarootsi Museum and the Foreign Art Museum have also described their collections fully in the information system. All museums that use the KVIS have registered the museum objects in the information system.

This means that the new information system MuIS has to enable the transfer of data and links between data that have been inserted in the KVIS. This is also one of the reasons why the structure of data in the new information system MuIS is similar to the one in the KVIS.[51] The second reason is that the methods of documentation and description of museum objects that were used in the KVIS basically met the requirements for a modern museum information system. The MuIS uses the event-based description that was already used in the KVIS. The event-based description that was used in the KVIS in 1997 is similar to the description model of CRM (ISO 21127)[52].

The development of the new information system of Estonian museums started in the summer 2004 and was initiated by the Estonian Ministry of Culture. As the financial resources are limited and the number of museum items in Estonian museums is relatively small (about 7 million), it was found that the best option is to develop a central online database. The use of a central online database ensures common solutions for problems that are related to technical issues and data preservation. The web-based application provides wider opportunities for using the information system. The structure of describing the museum objects will also probably become more unified and this will ensure that all objects with common historical and cultural context are searchable in all Estonian museums. Another possibility would have been developing local information

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[51]   The data was still structured on the basis of data groups and categories of the CIDOC (see reference 37).

[52]   Conceptual Reference Model, which in September 2006 was confirmed as an international standard ISO 21127. This is a model that centres the description around events instead of objects. Events connect people, material objects and non-material objects in time and space. http://cidoc.mediahost.org/standard_crm(en)(E1).xml

systems for museums which would have required larger financial resources from the museums themselves.

In 2005, a detailed analysis of the new information system was prepared by the analysts of the information system and the museum staff.[53] In the course of its preparation, the activities performed in museums were reviewed once again and the logical course of these activities was discussed, taking into consideration the needs of a central online information system.

The new information system MuIS does not have more functions than the KVIS but the central information system enables to perform certain functions in all the museums that have joined the information system. Such functions are for example searching of museum objects from all museums that have joined the information system and fixing the movements that are related to the use of museum objects, which ensures an overview of the location and the condition of museum items. MuIS has the possibility of preparing common virtual exhibitions etc. In addition, the web-based information system gives museums the opportunity to use specialists from other museums to work through the collections, if needed. Also, the exchange of information between different museums improves, which also means that content-related information concerning museum objects increases. Museum collections also become available for online visitors who are offered the chance to examine the collections virtually, make advance reservations to see the collections physically and if they have the rights then also use information and digital images that are related to museum objects. The implementation of web-based functions, however, requires a more thorough structuring of functions which in turn makes the work more time-consuming for the user.

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[53] The final report of the museums' information system detailed analyses. https://kule.kul.ee/avalik/MuIS_test/MuIS_Detailanalyys.pdf

3.2 Users and the functionality of the MuIS

The functions of the information system have to be determined according to the interests of the users. Needs of very different users were taken into consideration when creating the MuIS. The users can be divided into five groups:

1. curators and museum specialists who wish to connect all research and administration-related information with the object, including notes about the performed research;

2. conservators who need to enter detailed information about the object condition and describe the conservation works of the object;

3. researchers who want to find historical and cultural information that is as accurate and scientific as possible;

4. museum visitors and online visitors who need a general summary of objects in more than one language;

5. students and children who are interested in educational and entertaining information.

Therefore a wide spectre of users is taken into consideration when developing the museum information system. The aim of the information system is to make the information in the museums available to both specialists and all other users. In the first stage of developing of the information system, it is not possible to satisfy the needs of all users equally but at the same time it is important for the museums' information system to take this polyfunctionality into consideration already in the creation process of the system. In the first stage, the main focus is on entering the data in the information system, then on the museum staff and their needs.

Museum staff's interest in using the database guarantees that an increasing amount of information is entered in the database, i.e. that the database acquires more and more content. The content that satisfies the increased needs of museum specialists also enables other users to make content queries on different levels.

In the beginning, a functionality that encompasses all the activities of a museum is developed, because the information system finds correct implementation only when all processes that are related to the administration of collections take place in one environment.

The MuIS ensures:

1. management / administration of objects, museum sub-collections and museum collections as a whole;
2. full cataloguing of objects;
3. managing content and administrative information for using objects for educational purposes;
4. option of making queries by different users.

In order to administrate the objects, museums' sub-collections and collections as a whole, sufficient information has to be entered for each object, so that it would enable to recover all additions and changes that have taken place with the most important (identifying) records of the object. Such records have to be related both to the time of entry and the person who entered it. Such important data include the primary registration during the accessioning which also includes condition, designating a number for the museum object, classification into collections and designating a physical (preservation) location for the object designating a storage place for the object. The primary registration of an object has to ensure that the object is identifiable. It has to be possible to rearrange the objects in sub-collections in the range of the museum collection. Another part of administration involves the documentation of object movement and use. This is important for administrative reporting of museum collections as it ensures a constant overview of the location of objects and their condition. In addition, this also contains museological information about the development of museums. As a result of using the administrative function, the documentation in museums becomes more unified. This is ensured by document forms present in the MuIS (see drawing 3).

Document forms in the MuIS

Registering a museum object in the museum
Registration sheet
Accession document:
To the main collection
To the supporting collection
Storage document

Accession book
Location catalogue

Object ID
Full description of object

Documents related to the movement of museum objects

Temporary use form:
Movement inside the museum, Temporary use form
Movement outside the museum, Lending form
Return form, i.e. Lending form marked as returned.
Deposit form
Inventory form
Deaccessioning form

Evaluation form

Record of the purchasing commission
Conservation passport
Exhibition passport

Drawing 3. Documentation forms in the MuIS

The information system ensures that the information related to the two initial description levels (records related to primary registration and full cataloguing) is entered. As a result of entering these records, a catalogue database is created which is common for all Estonian museums both by its structure and partly also by its content. This enables to perform common information searches.

For using the object, it is possible to fix administrative and content information both for exhibitions and pedagogical programs, print materials etc.

Queries enable to perform information searches with different content and amount of data by different users. In order to administrate the museum collection, statistical and administrative overviews are guaranteed by different reporting queries.[54]

Additionally, the information system also includes object record queries, and simple and advanced queries, which are important for both online users and museum staff. The museum staff have an access to a larger amount of information than online users. In case of an exhibition, for example, all users do not receive information that is relevant from the perspective of security

As the MuIS is seen as a database in development, it also entails some additional options. In order to implement them the first level users (administrator of the museum information system and system administration) have the option of changing certain elements in the system. These changes include e.g. the positioning of data groups in the printout form and reports and creation of dictionaries[55] .

In addition, the information system also enables:

- scientific description of objects (third level of description);

- linking with other databases (links with other databases);

- option of preparing queries.

The information system gives the opportunity to specify the further more thorough research that is related to the object by making it possible to link the object to a wider cultural historic context which is received by analysing and interpreting the existing information. This is the scientific description or the third description level, which is ensured by option of adding dictionaries /classifications.

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[54]   These are: cross-table of documents, annual accounts, report of collections, report of depository collections, report of locations, report of changes in object condition and movement, objects by condition, report of conservation works, list of registering operations of documents.

[55] Museum own dictionaries can be created   when the central dictionary does not cover this need and does crated only after obtaining authorization by the vocabularies working group. If necessary, you can to share them to the other museums. To the public the museums own dictionaries are searchable and it is also possible to make queries.

Linking information system to other databases requires a specific order. One has to know the database into which the data is converted to, which requires an intermediate program. In the MuIS, this is ensured by detailed structuring of information and using fields with limited terminology in the description process of the museum object. The administrator of the information system has the option of preparing SQL queries.

3.3 Description of the museum object in the information system and its structuring and systematisation

The administrative functions related to museum objects, such as accessioning and registration of the object, specifying condition and movements and other administrative object-related activities have an important place in the museum information system. The reports of such activities enable to plan the resources intended to administer the collections more efficiently and also record the museum history related to museum objects.

However, it is the records related to descriptions of museum items that form the central part of the museum information system. These include object-related physical features (dimensions, material etc.) which are important from the perspective of preserving, storage and identifying objects. These also have to include data which provides an overview of the content and nature of museum collections. Such information is important as it helps to plan the substantial work that is performed with collections: collection policy and working through the collections.

The information system has to ensure the correct entry and presentation of data related to museum objects but it does not only depend on the programmer and the technical solution of the information system. The museum staff also have an important role to play here as they are the ones who have substantial knowledge on the entered material. There are two significant problems related to content treatment when creating museum information systems, the solution of which is above all dependent on the museum-

theoretical proceeding point. These two problems are structuring and systematisation of description of museum items. These issues were not discussed in detail when the KVIS was created, which resulted in the fact that the description of museum objects as an important part of documentation did not meet unified requirements.

3.3.1 Structuring the description of museum objects

The amount of information related to a museum object can be endless. To cover it in the central database, it is necessary to precisely determine the primary compulsory amount of data and the extent of description.
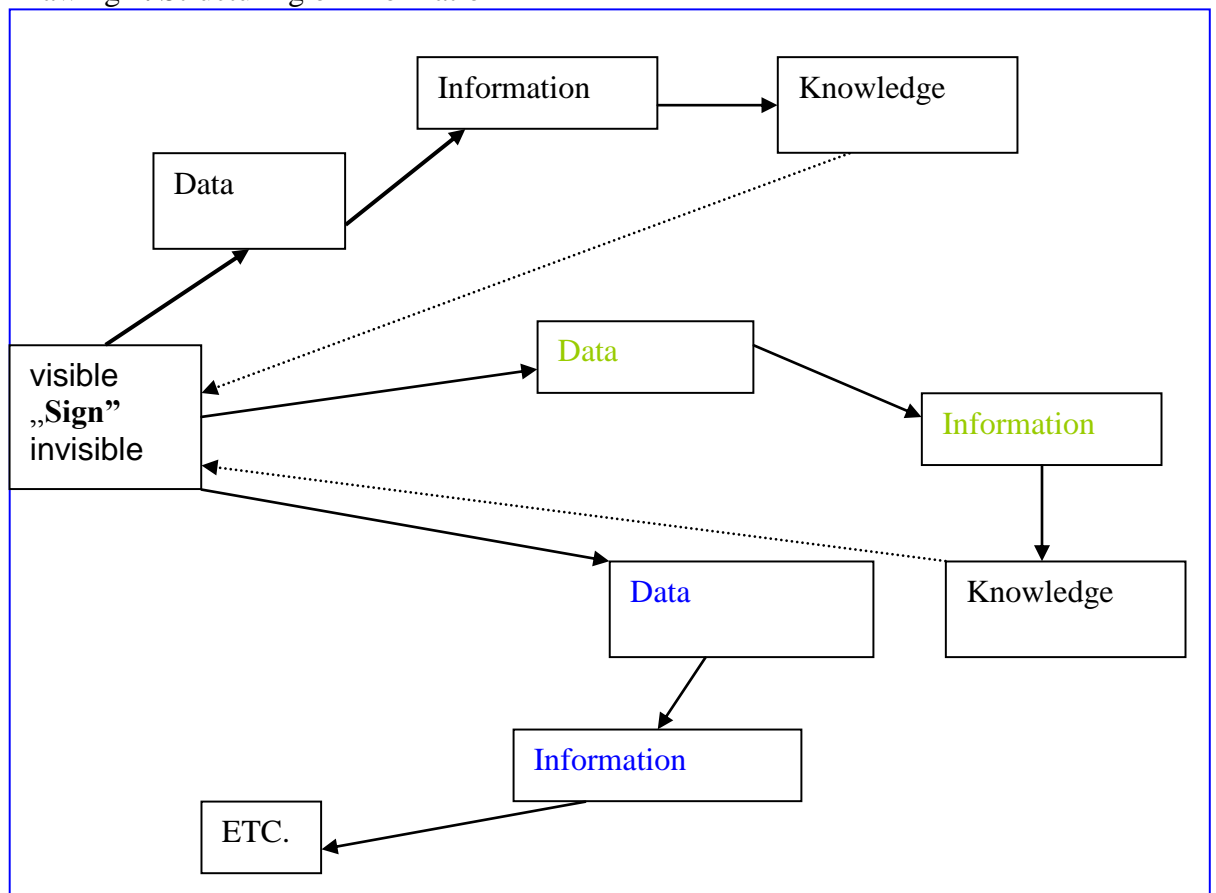
As the central Information System for Estonian Museums includes museums of various areas and their objects' descriptions, the method of structuring museum object's description must be suitable for museum objects of different kind.

The basis for the structuring of a museum object is the information theory, which does not treat information as an object, but treats information as the aspects of the formation of nature and understandability of information, which are common regardless of the area[56].

Relying on R. Capurro's information theory, we can structure information about various areas and distinguish three levels of museum object's description: data, information, knowledge. Look drawing 4. Structuring of information.

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[56]In the modern information theory the viewpoint has moved from the object-centered information approach to the subjective mechanisms of information sense, which determine discrimination, selection and interpretation. (Capurro, Hjorland 2003: 362*)
The Concept of Information (Rafael Capurro, Birger Hjørland). In: Blaise Cronin (Ed.): Annual Review of Information Science and Technology (ARIST), Vol. 37 (2003)

Drawing 4. Structuring of information

Concepts used in the drawing 4.[57].

sign (*sign; merkki; märk*) - whatever physical phenomenon to forward meaning;

data (*donnees; tiedo; andmed*) -information presentation in formalised form that is suitable for communication, interpretation and processing;

information (*information; tieto; teave*) - forwarded knowledge;

knowledge (*connaissance; tietämys; teadmus, teadmine (teadmusüksus*) - being informed of something that is based on logical thinking and can be verified.

 Each museum object includes a certain amount of "*sign*" (invisible and visible). Thus, a museum object is like a set of signs and the *"signs"* will form "*data*" (material, measures etc.) *Data* related to an object will give us "*information*" that offers a possibility to compare objects between themselves and group them.

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[57] Information and documentation 2004 (in Estonian). Estonian standard. EVS–ISO 15489–1,2:2004.

In museum work, this is expressed in objects' classification in the system of subjects. From the information we get our "*knowledge*" that in the museum, work is expressed by monographic study or exhibition, which is the usual "final production" mainly for the visitor.

Reading data from a museum object depends on the reader, his/her previous knowledge and the situation. Therefore people with different previous knowledge see in a museum object various "*data*" and reach to various "*knowledge*". *„Difference that makes a difference"*[58]

Each new knowledge may in its turn be a basis for seeing/noticing new data - the so-called hermeneutical circle.

This provides basis to bring out different layers of museum object's description that will form during gradual entering of information and supplement of description in the information system.

Therefore, museum object's description in MuIS has been divided into three description levels:

1st level or data level – primary registration

2nd level or information level – full cataloguing

3rd level or knowledge level – scientific description

First level or data level - Primary registration.

The first level specifies the transition of an object to museum's responsibility. By registration the object is registered as a museum object and it is provided with primary description, i.e. a certain amount of data is brought out, typical to that object only and by which the object can be identified among the others. In MuIS the classification of object's nature is obligatory.

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[58] Capurro, Hjorland 2003: 359

The goal of description on this level is object's indexing so that its records will be recognizable among others.

The level of a museum object's description data is, from museum's standpoint, the object's primary information or so-called *pure information*[59].

Second level or information level - full cataloguing

The goal of full cataloguing is a level of description that results in the formation of catalogues. This means the accepted museum object is placed in the museum context that is determined by the museum's area. Museum object is classified and systematised according to the museum's specificity, while also responding to the central requests.

This data will form the object's identification card or Museum object's ID card. Description of this level is accessible for the public.

On this description level, the primarily entered data has been checked and new data has been added, if necessary, and on the basis of this, own information has been added. Thus, museum specialist has added to the object information on his/her part, which means it is the so-called "incremental information on level one"[60].

Third level or knowledge level

Scientific description is the level of description where in the process of in-depth research new data related directly or indirectly to the object will be obtained. By the help of various sources dates, persons related to the museum object and events in which, where and why the museum object has directly or indirectly participated will be specified.

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[59]Information theory separates two such concepts as "pure information" and "incremental information". (Capurro, Hjorland 2003: 359). What is called "incremental information" and what "pure information" depends on the context in which this separation is observed. From the perspective of museum work, it is important to know that an "object", reaching a museum, is so-called "pure information" and each record added by a museum worker is "incremental information", that means also cataloguing/systematisation is adding information to the object or our understanding where the object's place is in the entirety.

[60]The incremental information content may by defined only with regard to „classifications" or clusters of situations connected through channels which the information is transmitted without any reference to a receiver`s interpretation.

Its goal is to provide the museum object's general historical-cultural context and develop scientific work in the museum specific area.

On this level, the described museum object has, thanks to the knowledge of museum specialist and new additional sources, reached a new level of additional information or „incremental information on level two".

The database MuIS must guarantee the possibilities for descriptions on the first two levels. The third description level, which often needs a special approach to various types of museum objects, may be filled in some other database created specially for the museum object's type.

MuIS guarantees this possibility due to data groups divided in great detail, that means thorough structuring of museum object's record. By the existence of suitable interim programmes it is possible to transfer data from MuIS to databases with different structure.

However, by using own dictionaries it is also possible to provide museum object's third level description[61] also in the information system MuIS.

Thus MuIS standardises the level of describing various types of museum objects on the levels one and two.

Museum object's description in the information system is also museum specialist's mediation of the object's „information", i.e. the given information is also influenced by several subjective factors (sender – receiver – situation or time and place).

Therefore, it is necessary to fix the person who enters, the time of entering and (additional) sources used in the description on each description level. This will form the

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[61] The description in third level needs occasional own specific terminology in different museums. Therefore come into use the museums own dictionaries.

framework of the description level or the information flow architectures that will also help to understand the content of the description.[62]

In MuIS the end of a certain description level or the framework to the description level is fixed by the enterer of the records who is also responsible for the truthfullness of the data and information.

Summary

To guarantee that museum object's description entered in the information system would be understandable and true and without possible losses not only today but also in the future and make possible to separate the so-called original data or pure information from incremental information in museum object's description, it is necessary to structure the description of museum object both substantially and formally.

This means it is necessary to:
1. determine the levels of museum object's description: data, information, knowledge;
2. determine the elements of description that form the levels of description;
3. fix the framework of the levels of description or information flow architectures.

In the development of MuIS system more attention has been paid to the documentation of museum object's description and the problems of its interpretation. These were the problems that were unsolved in KVIS. The programmer cannot offer these solutions; it is amount of problems, which can be solved by relying on information theory.

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[62] Information is like a system with own natural amount of relations or subjective factors of information, which form the information architectures. Information architectures is developing and dependent on situation and receiver (Capurro, Hjorland 2003: 359*)*

The principles of documenting a museum object's description in MuIS will be confirmed only through actual use, when the describing methods, the actually entered data and the possibilities of the information system are united.

The development of the Central Museum Information System continues. Therefore MuIS has been built on a model that enables further development and changes. The structure of the information system and formalisation of essential information support the development. The deployment of the information system in museums brings out different problems, which should be solved in cooperation between the IT specialists and museum experts.

3.3.2 Systematising the description of museum objects

The structure of the museum object is supported by dictionaries / classifications. These enable to systematise content information which in turn helps to ensure that the record of the museum object meets the requirements.

Most electronic documentation systems use pre-given terminology to determine the most important information categories of museum objects. The most common tools are lists of terms and classifications that contain pre-given vocabulary and are structured as thesaurus. These make it easier to enter data and ensure that the searches of information are accurate. Using pre-given terminology in data entry and searches presumes the existence of additional data, in other words metadata. At the same time, many museum workers consider the implementation of pre-given terminology methodologically questionable.[63] However, it is deemed as unavoidable in the administration of museum objects. Another problem is the contradictoriness of terminology that proceeds from the changing of meanings that specific terms can undergo according to the cultural context

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[63] *Dionissiadou, I.* 2006. Manipulating information, producing data - The annual conference of the International Documentation Committee of the International Council of Museums articles. Konverentsiettekanne CIDOC 2006, Gotheborg.

in which they are used.[64] It should be kept in mind that all types of classification are valid in a certain time and space. For instance a women's sleeveless shirt that was considered to be underwear in the 19th century has become an item of everyday clothing in the 20th century. Several items of making a living have become toys or pieces of sports equipment. Therefore when describing museum objects from different fields of life, the use of unified large thesauruses is questionable as it creates additional default links for the described object, which in the end increases the information noise.

Estonian museum workers experienced the contradictory nature of such thematic classification – on the one hand it is limited and on the other hand produces useless generalisations – also with the KVIS information system where the classification system of objects only supports event-based classification. The objects are classified according to topics and objects of one type are linked with a certain topic by the system.

For instance when we categorise a pair of race skis under "skis", the KVIS automatically classifies them as means of transport. According to this automatically determined classification of use, all race skis with the term "skis" in their record, are automatically also means of transport. Considering a specific pair of race skis, this is misleading information because the given skis were meant for ski racing when they were prepared and also used for this purpose. They were never used as means of transport. It is not even possible due to their technical construction. The fact that skis (which the race skis are by definition) are means of transport by their historical origin is very indirect information regarding this given pair of race skis. Presenting such context would be relevant if a research about the history of skis would be written on the basis of the specific pair of race skis.

Creating such link on the first description level, before the data related to the specific skis has been entered and the information about the specific skis explained also creates information noise for outside users. When searching for means of transport from the

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[64]   *Rengman, H*. 2008. Standardisation of museum data – a threat to the heritage? - The annual conference of the International Documentation Committee of the International Council of Museums articles. Konverentsiettekanne CIDOC 2008, Athens.

database, it would also produce race skis among other results and these are hardly considered as means of transport by anyone.

Such topic-centred classification would probably be justified in an information system for a museum of one subject area but it definitely does not suit a central information system which joins museums from very different fields.

Due to the uniqueness of museum objects, it is important to enter the information related to the specific described object in the information system (direct information). Only then can the records that show the wider context, proceeding from the specific object type, added to the object. It is actually indirect context which means that the specific described object might not even be related to the information. Proceeding from the above, it is evident that the so-called indirect context should be created by the system itself but if needed the museum staff have to enter it themselves, proceeding from each specific object, "as art and historical objects are unique and therefore tend to have only a limited number of similar characteristics. Therefore most information that is related to the description of museum objects cannot be systematised systematically without sacrificing some of its nature." [65]

This means that the information systematised by the information system itself is not the most accurate way of systematizing the object-related information due to the uniqueness of museum items. As this inevitably means generalisation, it also brings about the loss of relevant information for each individual museum object.

Based on the practical experience so far, both from Estonia and other countries, the MuIS has a very flexible classification system. In the KVIS database, 90% of fields were and are with pre-given terminology or dictionaries. This proportion is also the same in the MuIS but some central dictionaries that classify objects and their context have been transferred to the MuIS in an changed manner.

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[65]   *Dionissiadou, I.* 2006. Manipulating information, producing data - The annual conference of the International Documentation Committee of the International Council of Museums articles. Konverentsiettekanne CIDOC 2006, Gotheborg.

The following is a description of the dictionaries in the MuIS that are important for classifying objects by their nature and use. The links between dictionaries are also presented which help to create object-related consistent context in the information system.

The dictionary „Object type /entity" (see Annex17) supports grouping museum objects according to their names. This includes terminology of object names that is unequivocally understandable for everyone (also common users) and presented in the alphabetical order. The dictionary is not meant to describe the content of the object. For example, a photo would be marked as "photo" or as some type of photo such as "group photo" or "portrait photo". The image in the photograph is explained in the subsection "use/classification" [66] of the dictionary "Activities and phenomena". The same principle is followed with all visual museum objects such as paintings, linocuts, postcards etc. Also the content of a manuscript is explained in the subsection "use/classification" of the dictionary "Activities and phenomena".

When accessioning objects to the main collection, it is obligatory to complete the „Object type /entity" dictionary.

Giving a unique name for an object in the information system is supported by the free text field "Name" which enables to describe the object as considered necessary by museums. The dictionary „Object type /entity" in turn helps to group objects of the same type thanks to its pre-given terminology. It also ensures simple and fast object searches.

The dictionary "Field of use of the object"[67] (see Annex 17) is a hierarchic dictionary which gives an option to classify objects quickly according to their use. To give an example, a ball is classified as "ball" in the type dictionary but by use it could either

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[66] In year 2013 the dictionary "use/classification" renamed the Thematic classification.
[67] In year 2013 deleted dictionary "Field of use of the object", because this dictionary double the dictionary „use/classification" (the Thematic classification . 2013).

be "a toy", "a piece of sports equipment" or also "a ritual item", depending on the way the specific ball is used.

It is important that the use of the object is determined for each museum itself, i.e. museum staff creates the link between the character and the field of use of the object, depending on the needs of the particular museum. Conscious involvement of museum specialists in classification of use avoids excessive information noise that can be caused by large thesauruses where certain types of objects are implicitly related to a certain field of use.

The use classification of objects can be used independently or together with the "Activities and phenomena" dictionary which specifies the use of objects for a certain activity or phenomena.

The dictionary "Activities and phenomena" (see Annex 17) is a hierarchic dictionary. In this dictionary the dictionaries from the KVIS, "Events" and "Activities" have been joined for the user. Inside the system these dictionaries were same already in the KVIS but for the user they were shown separately. It is object classification which is related to its use with certain type of activities and phenomena. To classify the contextual information, the subsection "use/classification" of the dictionary "Activities and phenomena" is more important.[68] As a result of its use, museum objects are divided into topical indices according to their topics.

For a ball, for instance, the topics can either be "sports", "playing" and "cult activities". The specific term is determined by the museum worker depending on the specific object that is described. This dictionary creates a shared topical index for all museums and therefore enables to search for objects related to specific topics from all museums.

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[68] The subsections of the dictionary "Activities and phenomena" are "destruction, / damage", "use/classification" (the Thematic classification . 2013), "collection" and "preparation/emergence".

This dictionary is related to the entry window "Event" which can be used to describe the context related to museum objects. It is clear that a museum object cannot only be described with keywords. The context related to museum objects has to be explained through information which can be created only through consciously linked data. Connections between the data have to be created by the museum staff not by the information system. When specifying the term for the object from the subsection "use/classification" of the dictionary "Activities and phenomena" in the entry window "Event", it is also important to complete the fields "Time of occurrence" (date), "Place of occurrence" (geographic location), "Subject" (person / institution). Through these three main indicators or data groups that show the cultural-historic context of an object that are related by shared classification from the dictionary "Activities and phenomena" in the entry form "Event" a unique context related to a specific object is created. Creating three different groups of data is important because one and the same object might have very different purposes of use in different time periods. In addition, the linked description of these main indicators or data groups makes the information understandable via different persons, dates and locations that are related to the object. Therefore the use of subsection "use/classification" of the dictionary "Activity and phenomena" is obligatory in (complete) cataloguing of an object (full cataloguing or the second level of description).

As it is an object-orientated model, the independence of different data groups gives the opportunity to search objects via each single data group and also via certain links between data groups. For example the links between several different data groups can be used as search filters: "date" and "activities and phenomena", "activities and phenomena" and "geographic location", "activities and phenomena" and "subject", "date" and "subject", "subject" and "date" and "activities and phenomena". When using the links between data groups, interesting information about objects, object-related persons and the use of objects can be found; sometimes such information can also help to organize data.

The aim of museums' own dictionaries "Additional classification" and "Museum's own terms" (see Annex 17) is to enter additional information in the central information system that is only related to a specific museum and the corresponding terminology is therefore not present in the central dictionaries. First, each museum has the option of creating independent dictionaries, depending on its subject area. Second, the museum has the option of adding its own specific terms to any central dictionary thereby forming its "own dictionary". While for instance from the perspective of a central database it is important to know that the object was an archaeological finding then in an archaeological collection there might be a more specific classification for such findings. The classification in the given example or additional term should be linked with the „Object type /entity" dictionary.

The museums' own dictionaries and terms are only visible in the museums where they were entered. If needed, the own terms added to the central dictionary can be made visible to everyone. This however needs a decision by a designated commission and the requirements for supplementing the central dictionary have to be met.

Central vocabularies for cataloguing

Central – one for all museums
For objects classification:
    1) „Object type /entity"
    2) "Field of use of the object"[69]
For context classification:
    3) Activities and phenomena

    the subsection "use/classification"[70] of the dictionary

Local – museum based
For Object`s classification or for context classification:
    4) Museum's own dictionary

Such dictionary structure is present because the existing central dictionaries are insufficient and do not satisfy the description needs of different museums. The

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[69] see reference 67
[70] see reference 68

experience up to now has shown that dictionaries that are organized theoretically might not often be suitable for users. With the help of museums' own dictionaries, which have been created in the course of the actual working procedure, also the central dictionaries will be better organized in the future.

The aim of the MuIS is to have unified searches of objects and object-related information, not only in the collections of a single museum but in the collections of different Estonian museums. In order to ensure that, using central dictionaries and entering the same type of data in the special fields is of upmost importance. Unstructured text fields have the function of supporting the description or adding details. The object context has to be entered by using the entry form "Event" and the classification "Activities and phenomena".

The MuIS is an information system where the entered information that is related to different objects and information that is added by museum staff starts to create new information inside the system through using shared information. This also brings forth the content mistakes in museum descriptions, creates control over the entered data and the collections become "transparent".

Entering content information related to museum objects, the use of this information and intermediating between different collections of a museum and different museums can be summarized with a scheme (see Annex 18).

In the first inner circle, there are many individual objects or so-called "signs" whose connections and content have not been explained. The second circle consists of "data" related to the specified object. Each individual object has a certain amount of data, i.e. single objects are separated from the general aggregate by certain values. This is the precondition of accessioning objects in a museum, the so-called treasurer stage. In the third circle, the information contained in the items is structured and systematised. The objects are classified according to their type and collections are formed to manage them more efficiently. The museum actually starts on this level and its corresponding level in the database is catalogue database. In the fourth circle, the objects have been linked to

common events. By using the central dictionary "Activities and phenomena"[71], the so-called linking events have been created between objects belonging to different collections and museums. The connections between objects have been created via common events and/or objects are linked with abstract events. The fourth circle is the level where the amount of object-related information increases through use (searches) and intermediation (shared exhibitions and printed works etc.). An information network is created between items as a result of which one object starts to add information to others. The information constitutes individual knowledge for each user. This is the stage where the museum as a knowledge-based institution starts – it is here where the information system of knowledge begins.

Summary

In the creation of the new museums' information system the MuIS, the practical experience of the Estonian museum staff from working with the information system KVIS was used. The experience of other countries and the theoretical aspects of entering organized information in the information system were also taken into consideration in order to ensure that the entered information could be reproduced in a comprehensible manner.

Differently from the documentation methods of museum objects that have been used up to now, the new developed information system should unify the documentation of museum objects, including object description in different Estonian museums. The MuIS still has different ways of data entry but in entering the information that is important for museum work, the system guides the person who is entering the information. On the one hand it helps the museum staff but on the other hand it also ensures the central functioning of the information system.

The museum information system is a developing phenomenon. Therefore the MuIS is based on a model that enables upgrades and changes. The structure of the information

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[71] see referenc 68

system and the systematisation of the substantial information support the development. Implementation of the information system in museums will present the actual shortcomings of the information system and therefore it has been decided that the MuIS will be taken into use in the course of its development in order to make necessary additions to the system in cooperation between the programmers and the museum staff.

CONCLUSION

For over a century Estonian museums have collected arranged and systematic information thanks to which museums possess considerable amount of cultural properties. The modern digital methods offer additional possibilities for their management and increasing their availability. The present master's thesis „The documentation of museum objects in Estonian museums" is based on the understanding that a museum object is a carrier of information. Therefore museums act as important information mediators to the future generations and occupy an important role in the information system of the society

The choice of the topic of the master's thesis has arisen from the actual need to deal with the principles of museum object's documentation in Estonian museums and adapt them to the contemporary technical possibilities and requests. The transfer from the so-called classic ways of documentation to the documentation in the electronic environment is on the one hand unavoidable but on the other hand gives the museums a lot of opportunities to organize its work in a more effective manner and use the museum collections more extensively. The general goal is to create a common information bank of Estonian museums which is based on common data entry of museum objects from different fields of life both regarding data structuring and types of data

The general questions of the master's thesis is how to document information related to the objects preserved in museums, how it should be managed in the present and how to guarantee its unambiguous understanding and approach also in the future. For this purpose, various documentation methods and description models of museum objects

used in Estonian museums have been analysed on the basis of museological and informational-scientific theoretical discussions and the author's practical experience. The aim of the master's thesis was to give a general overview and bring out the existing problems related to the documentation of museum objects in the information system.

The documentation of museum objects in Estonian museums dates back to the beginning of the 19th century. Back then, documentation meant lists of collections, in other words catalogues prepared on private initiative. We may speak about the conscious and considered documentation of museum collection as a whole only since the beginning of the 20th century when in connection with the foundation of the Estonian National Museum in 1909 systematic collection of antiquities and documentation of the collected materials was started. In the development of museum objects' documentation we may observe stability and change. Certain types of data that are used to describe museum objects remain and other change. While comparing the recording of contextual and physical data of the objects, we may see that more stress in the documentation of object data has been laid on the recording of physical data. The documentation of physical data has also been more even in various museums and various periods. The documentation of contextual data has been much more varied. From the descriptions of museum objects at museums we can see that clear and unambiguously understandable specification of description levels of museum objects is lacking. Although the guidelines of describing museum objects contained a very specific amount of data, the goals of different description levels were not brought out. We can also see that the more serious structuring of data in the museums began in the 1970s when accession cards were put into use.

In the 1990s, the use of computers further increased the number of ways that museum objects were described. The museums created a large number of different electronic databases with very different structure and content. In 1992, the first unitary information system of Estonian museums, the KVIS was developed. This database provided basis for unitary documentation of museum objects in electronic environment in Estonia. However, it should be mentioned that the main goal of the information

system KVIS – standardisation of documentation and describing various kinds of cultural properties in order to create a common information bank of cultural properties to enable unified search in all museum collections - was not entirely achieved.

The reasons were both technical and substantial mistakes, lacking dictionaries, general weakness of the museums' information technology, but also insufficient knowledge and skills of the museum staff and difficulties in uniting the museological and information technological aspects. In relation to documentation of museum objects in the electronic working environment, the legislative acts regarding the documentation of museum items should have been reviewed. The list of documentation required by legislation should have been compared with the actual necessary documentation, the list of required documentation prepared and specified, which types of documents need to be preserved both on paper and electronically and which only electronically. However, this was not done. As a result of the numerous options of the information system and lack of user training, it has to be said that the entries in the shared information system do not allow us to make unified information searches in all the museums that used the KVIS. As a result of the analysis, the regulation of museum objects' registration and preservation valid at present has again been taken under discussion to adapt the standards established there to the possibilities offered by the information system and at the same time guarantee the correct documentation of museum objects so that during mediating information about a museum object the primary data would not disappear and that information added by museum staff, which they enter in the information system, would be clearly seen.

Starting from 2004, the new information system of Estonian museums (MuIS) has been developed. Differently from the methods that have been used to document museum objects up to now, the new information system should harmonise the documentation of museum objects, including object description, in different Estonian museums. The MuIS still has several ways of entering information but when entering the most important information for museum work, the system directs the person entering the information.

While dealing with the descriptions of museum objects and relying on information theoretical aspects the author came to the conclusion that the unambiguous understanding of the entered data and information both in the present and in the future is guaranteed by the establishment of the information flow architectures. There are three indicators for this: the name of the person who entered the information, the time of entry and additional sources used in documentation. It is important that the documentation of a museum object, that is the layers of the description would be visible and clearly separable and the connections with the substantial context of the data related to the object in different periods would be indicative and data and connections between data would be unambiguously understandable.

Considering the possibilities of the contemporary documentation system and analysing the earlier description methods of museum objects, one has to admit that in order to guarantee the general preservation and availability of cultural properties it is important to document museum object with the amount of data of the first two description levels (primary registration and full cataloguing) and only after that carry out scientific description of single objects. Full cataloguing guarantees the necessary amount of catalogue data for electronic searches and therefore makes it possible to analyse and study the information in museum collections. As a result of this, the qualitative study of museum collections should improve. The entering of data about museum objects in the information system also gives the possibility to reproduce it in various forms, which in turn brings out the blanks and mistakes of the entered data. As a result, the museum staff can arrange the data related to the collections. The entering of data in the information system is gradual and improves in the course of the actual work.

When observing the earlier description methods of museums, the use of the KVIS and the description method of the new information system, it is evident that replacing the traditional object-centred description with the event-based and context-centred description requires retraining of museum staff. Retraining sessions for museum staff

have been carried out in the course of work; in order to carry them out, the study materials regarding the initial registration and documentation have been prepared.

The author hopes that the information system MuIS, which is in use already, will improve and develop, therefore becoming more convenient for users, both for the data enterer and for the information searcher, and that the functionality of the system will cover the contemporary requirements for documentation so that the person who documents museum objects could rely on the prescriptions of the system. This would result in having museum objects, which have been documented according to the requirements, which, in turn, would make museum collections (information in the museum collections) to be unitarily administered and used not only in certain museums but also by a wider circle of interested persons.

The present work is not a final solution to the problems and a vision of an ideal information system. Its mission is to raise the problems related to the documentation of museum objects and open up discussion on this subject in the Estonian museum landscape. Several principles of documenting museum objects in the MuIS will be confirmed or not confirmed only in the course of actual use, when describing methodology, the actual entered data and the information system's possibilities have been united. The structure of dictionaries that would combine museum objects from different fields of life that was proposed in the course of work also needs continuous analysis based on actual use. The MuIS has been planned as a developing information system so that in cooperation between the museum practitioners and information technologists it would be possible to make necessary changes and updates without losing the information already entered. This thesis can therefore be seen as a summary of what has happened up to now: it has created a new vision but the further needs will become evident in the course of actual work.

REFERENCES

Alev-Christoffersen, K. 1998. KVIS – kultuuriväärtuste infosüsteem. - IT haldusjuhtimise aasta aruanne; http://www.riso.ee/et/pub/1998it/311.htm

Capurro, R., B. Hjorland 2003. The concept of information. – Annual Review of Information Science and Technology, Vol. 37. Information Today, Inc, pp. 343–411.

Dionissiadou, I. 2006. Manipulating information, producing data - The annual conference of the International Documentation Committee of the International Council of Museums articles. **Konverentsie**ttekanne CIDOC 2006, Gotheborg.

Doerr, M., P. LeBoeuf 2006. Modelling Intellectual Processes: The FRBR – CRM Harmonization (Intellektuaalsete protsesside modelleerimine: FRBR – CRM ühtlustamine). – Lecture Notes in Computer Science. Berlin, Heidelberg: Springer.

Eesti muuseumiseadus 1996. Riigi Teataja I, 83, 1487.

Eesti Rahvamuuseumi väljaanne nr 1. 1911. Tartu.

e-Teatmik: IT ja sidetehnika seletav sõnaraamat; http://vallaste.ee/index.htm?Type=UserId&otsing=2363 (2. dets. 2009).

Informatsioon ja dokumentatsioon 2004. Eesti standard. I osa EVS–ISO 15489–1:2004. II osa EVS–ISO/TR 15489-2:2004.

International Committee for documentation 1995. International Guidelines for Museum Object Information: The CIDOC information categories; http://cidoc.mediahost.org/guidelines1995.pdf

International Council of Museums 2006. ICOM Code of Ethics for Museums. Paris: ICOM; http://icom.museum/ethics.html#1def

Jeeser, K., R. Reinvelt 2003.Vastuvõtuga seotud dokumendid ja aruanded. Täitmise ja kasutamise juhend. Tartu; http://www.kul.ee/failid/vastuvotuga_seotud%20dok_juhend.pdf

Juhend. Muuseumimaterjalide arvelevõtu, inventeerimise ja hoidmise kohta 1941. Tallinn.

Keene, S. 1998. Digital Collections: Museums and the Information Age. Oxford, p. 2.

Kultuuriväärtuste Infosüsteem. Projekt. 1993. Tartu.

Luts, A. 1979. Museoloogia I. Õppevahend ajalooüliõpilastele. Tartu: Tartu Ülikool.

Luts, A. 1981. Museoloogia II. Õppevahend ajalooüliõpilastele. Tartu: Tartu Ülikool.

Museaalide arvelevõtmise ja säilitamise kord 1998. Riigi Teataja Lisa, 261/262, 1068.

Muuseumisse hoiule antud kultuuriväärtusega asjade üle arvestuse pidamise kord 1998. Riigi Teataja Lisa, 261/262, 1068.

Muuseumide IS detailanalüüsi lõpparuanne 2006; https://kule.kul.ee/avalik/MuIS_test/MuIS_Detailanalyys.pdf

Object ID. http:www.object-id.com

Rengman, H. 2008. Standardisation of museum data – a threat to the heritage? - The annual conference of the International Documentation Committee of the International Council of Museums articles. Konverentsiettekanne CIDOC 2008, Athens.

ARCHIVAL SOURCES

EAM archiv. Fond 135, inventory 11. archival item 30.

EAM archiv. Fond 135, inventory 11, archival item 91.

EAM archiv. Fond 135, inventory 11, archival item 88.

EAM archiv. Fond 149, inventory 1, archival item 40.

EAM archiv. Fond 149, inventory 1, archival item 209.

ERA. Fond 989, inventory 1, archival item 1963.

ERA. Fond 1108, inventory 5, archival item 75.

ERA. Fond 1108, inventory 5, archival item 323.

ERA. Fond 1108, inventory 5, archival item 873.

ERA. Fond 1108, inventory 5, archival item 988.

ERA. R-3.3.10811.

ERM arhiiv. - Korjamisraamat Nr 91, 1912.

ESM arhiiv. - Medali kirjeldamisjuhis 1967.

TM arhiiv. - Ajalooliste esemete kataloogimise juhend,1962.a

TM arhiiv. - ENSV Kult.min. Kultuurhariidusliku asutuste Valitsuse Ülema käskkiri nr. 15, 1959 a.

TM arhiiv. Nimistu 1, säilik 11.

ANNEXES

ANNEXES 1- 2 Example the documentation of museum objects on the years 1911-1934

ANNEX 1. The Estonian Provincial Museum (Estonian History Museum) catalogue of muuseum objects from 1911 – 1934. „Katalog des Museums der E.L.G. 1911–1934."

ANNEX 2. Estonian National Museum collection book. 1912.

№	Asja nimi.	Asja otstarve.	Kust pärit? (Kihelkond, wald, küla, talu).	Kust korjaja asja ostnud? (Kihelkond wald, küla, talu).	Kui wana?	Asja tegija.	Asja kinkija.
7343 32.	Naestre tanu			Oksa tare	30a	tanutegija	Minna Oksa
203 83	Rootsi waka nõle			Mäts Kusaff			Jaak Jõgi
603 34.	Pilt			Känni t			Minna Laane
7393 35	Rahakasti lukk			— „ —		sepp	Juh. Laane
7395 36.	Naiste kampsra			Mändi t	50a.		Jüri Mäts

Kõni alt pinni oli; mõned sandrimad peaga nööpnäela as
amet ja müöd; kampson ulatas undrussi peale; nöö ö:
Poti sinine. Wäumimine: Kusi pandi hapnema ühes sini ni
sulanud; pandi niilad sisse. Patt seisis kõige aja saaja
sees. Teinepäew maadeti; pigirtati Kuiwaks, pandi jälle

ANNEXES 3 – 12 Systematic documentation in the period 1941–1980

ANNEX 3. The Inventory book of the Cultural-historical`s collections. Tartu City Museum 1959-1960. Example of description from the 1959.

Eseme kirjeldus

ANNEX 4. Art Object description from Art Museum of Estonia, the front and back side of inventory card from 1949.

ANNEX 5. The model - guide card of the scientific cataloging, since 1971.

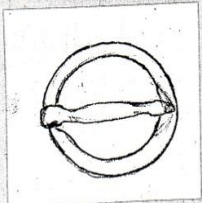Prescript of cultural - historical and applied art objects for scientific cataloging.

1		2
3	4	5
6		7
8		9

1. the object name, author if is
2. the material
3. the date of manufacture
4. the manufacturer (factory, workshop, or a company)
5. initials (year of birth of the author)
6. a physical description of the object, includes the description of decorating methods, be brief but precise
7. an image of the object or a schematic drawing
8. factory mark (description of manufacturer signs on the object - a reference to its location + reference to the source, according to which a sign identified). -
9. inventory number - if the number is a many-seater (ie too lengthy), then put a letter last number; the describer.

10	11
12	
13	
14	

10. measurements: height - the highest place in the top and the width - the widest place in the top; diameter. (of the sculpture only the height)
11. the description of condition, details of the restoration
12. the data of the acquisition: where, from whom, when,....
13. references of sources (publications, etc.)
14. additional comments

ANNEX 6. Description of museum objects. The inventory card from 1965. Viljandi Museum.

VILJANDI MUUSEUM

VM $\frac{9261:7^1}{E\ 763}$

NIMETUS Ⓔ VITSSÕLG	ASUKOHT _Eksp.-s Põltsamaa naise küljes_
MATERJAL JA TEHNIKA _valge metall, 0,2 cm laiusest alt tasasest ja pialt veidi kumerast vitsast_	KUJUTIS
SUURUS _ø 2,2 cm_ KAAL _nõela p. 2,4 cm , l. 0,3 cm_	
SEISUKORD _terve_	
VALMISTAMISKOHT _S.-Jaani, Epra kl._ VALMISTAJA AEG _19. saj. II p._	
SAADUD _Õ. Kadri Mägi S.-Jaani klk Vastemõisa v., Epra küla_	
DAATUM _akt 54 (814) 1962.a._	

79

ANNEX 7. Description of museum objects, the front and back side of inventory card from 1965. Võru County Museum.

Võru Koduloomuuseum

Nimetus: Säilituskoht:

MF $\frac{83}{Ajm\,1}$ | Autasumedal - põllumajanduse ja riigivarade ministeeriumi auraha

Materjal: pronks

Suurus: läbimõõt 6,6 sm, paksus 5 mm

Kaal:

Säilivus: Medalil on üksikuid oksiidi laike. Servades mõned üliväiksed tärned.

Saadud: Alfred Maasingult duk. Viljandi rajoon Pirmastu Kibe puukool.

Verif. Fp. I 83 ; 4. märts 1965. a.
     Vvakt nr. 9; 1962. a.

Kirjeldus: Medali esiküljel keskosas tekst:
« ОТ / МИНИСТЕРСТВА / ЗЕМЛЕДЕЛИЯ / И / ГОСУДАРСТВЕННЫХЪ / ИМУЩЕСТВЪ»
Teksti ümbritseb tamme- ja loorberilehtedest, puuviljadest ja viljapeadest pärjataoline

kaunistus.
     Medali tagaküljel keskosas on veis ja mitmesugused töö-riistad (koot, vikat, kirves, labidas, sirp, käsisaag, vigel, ader jms.). Tööriistadest pisut kaugemal viljavihk ja viinamarja-põõsas. Ringkiri: ЗА СЕЛЬСКОХОЗЯЙСТВЕННЫЯ ПРОИЗ-ВЕДЕНИЯ»
     Medali on kujundanud vene maalikunstnik Aleksei Klepikov. Ese on valmistatud Monetnõi Dvoris St. Peterburis.
     Medali mõlemal poolel on servas rant.

     Legend: Autasumedali sai 1911. a. Antsla näituselt Tikuti talu peremees Juhan Veeber lammaste väljapaneku eest. Lambad olid J. Veeberil ostetud Tsoow mõisast.

Märkused: * Alfred Maasingu abikaasa on Tikutist Juhan Veeberi tütar.

Trk. »Täht» Võrus, 1969 5592 3500

ANNEX 8. Art collection object description, the front and back side of inventory card from 1968. Tallinn City Museum.

| P-275 | TALLINNA LINNAMUUSEUM | TLM
10216 |

Autor Helene Kuma	Nimetus Vaas	Koht V – VIII – 5
Daatum 1964.a.	Materjal Savi, glasuur Tehnika Kõrgkuumus	Foto Negatiiv Foto või joonis
Suurus k. 8,5 sm ava ∅ 13,4 sm Kaal põhja ∅ 8,3 sm	Säilivus Põhja randilt killukesi lahti murenenud	
Saadud Ostetud Kunstitoodete Kombinaadist, v. v. akt № 119, 12. VI 1964.a.		

Kirjeldus, signatuur, tekstid Vaas heledast savist, glasuuritud. Ülemine
osa aheneb järsult randiga, moodustades silindrilise alumise
osa. Ülemine välimine rant maalitud mustade nelinurkwe
ga ja pruunide triipudega. Kolme nelinurga keskel
kõrged reljeefsed nupud. Alumine silindriline osa
kaetud musta glasuuriga. Seest on vaas glasuuritud
rohekashalli glasuuriga.

        Põhja alla sisse kraabitud: ∆ K 4

Märkused Eksponeeritud H. Kuma personaalnäitusel ENSV Riiklikus
        Kunstimuuseumis 1971.a.;   Moskvas 1971.a.

Tr nr 30 1968 a Tall 666—8000

ANNEX 9. Description of museum objects, inventory card from 1973. Tallinn City Museum.

		TLM
P-1307	**TALLINNA LINNAMUUSEUM**	13440

Autor	Nimetus	Koht
Armeenia	Veekruus	I ruum pingil

Daatum	Materjal Savi	Foto
II aastatuhat. e.m.a	Tehnika	Negatiiv
		Foto või joonis

Suurus k. 28,2	Säilivus Ava äärelt kilde ära
Kaal	

Saadud Kunstnike Liidust üle andnud
V. Reinholm ja V. Tigane 14. I 1972. a.
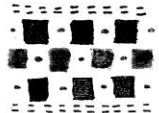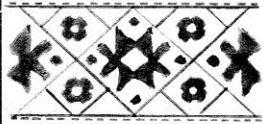v.v. akt 4, 7. I 1972

Kirjeldus, signatuur, tekstid Veekruus, savist, paunjas, kõrvaga. Keskosa kaunistuseks süvendtriibud. Üle terve kruusi pinna vertikaalsed mustad triibud.
Kruusi kaela ümber kett ja keti küljes ümmargune metallraha tekstiga:

СОЮЗУ ХУДОЖНИКОВ
ЭСТОНИИ
ДИЛИЖАН АРМ.ССР
16.09.1964 г.

Märkused

«O». 1304. 6000. 1973.

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ANNEX 10a. Museum object description in the inventory book of Viljandi Museum from 1986.

„ 2910 E 89."

16. XI 53.a.	316	_Särgi krae kiri_, tehtud Paistu kihelkonnas Holstre vallas valgele puuvillasele labasele poerüde lapile (suurus 16 x 50) õmmeldud madalpistes geomeetriline kiri punase märkniidiga. Tiiandi pikkus 30,5 cm, laius 2,7 om. Küljes valge riidest etikett, millel „VM 316 E 90."
16. XI 53.a.	2751	_Kirivöö_, tehtud Paistu kihelkonnas Kibe talus, üle 60 aasta vana. Kollakal-punasel villasel põhjal rohekassinisest, tumesinisest ja kollasest lõngast kiri. Keskel neli rohekas-sinist lõnga sisse kootud üle kolme lõnga, kahel- pool neli tumesinist lõnga sisse kootud samuti üle kolme lõnga rohekas-siniste vahe- kohtadele. Vahekohtades üksikud kollased tä- pid. Vöö servadesse sisse kootud kaks tume- sinist lõnga. Vöö pikkus 224 cm, narmad ühes otsas 11 cm, teises 8 cm pikkused, vöö laius 3 cm. Küljes valge riidest etikett, mil- lel „2751 E 91."
16. XI 53.a.	2756	_Kirivöö_, tehtud Heimta- li vallas, üle 50 aasta vana. Valgel linasel põhjal hele- punane villane kiri, servadesse sisse koo- tud kaks rohelist lõnga. Vöö pikkus 215 cm, narmaste pikkus 11 cm, vöö laius 1,8 cm. Ühele otsale õmmeldud rohelise niidiga „M".

ANNEX 10b. Museum object description in the inventory book of Viljandi Museum from 1986.

Eseme kirjeldus

põhjal punane villane kiri, südamikus
1 roheline lõng. Äärekirja eraldab vöö-
kirjast 1 kollane ja 1 roheline lõng.
Äärekiri rukkililla sinine, südamikus
2 punast lõnga. Vöö servades 1 punane
ja 1 roheline lõng.
    Vöö valmistamisaeg ja koht tead-
mata.
    Säilivus väga hea.
                            Inventeeris
                            26. III 1986.

    Vöö.
        Mõõdud: pikkus 238, laius 6 cm.
                narmad 10-12 cm.
Loojatud kirjaga, valgel linasel
põhjal punane villane kiri, südamikus
3 tumesinist lõnga, äärtes 1 tumesinine
lõng. Äärekirja eraldab vöökirjast
1 tumesinine ja 1 punane lõng.
Äärekiri tumesinine, südamikus 3
punast lõnga. Vöö servades 2
punast ja 1 tumesinine lõng.
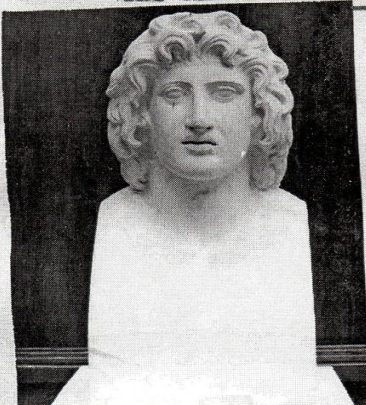   Vöö valmistamisaeg ja tegija
teadmata.
    Säilivus hea, mõnest kohast kirja-
lõng katkenud, ühest otsast narmad ära
lõigatud.
                            Inventeeris
                            26. III 1986

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LISA 11. Art collection object description of University of Tartu Art Museum, inventory card from1987.

TRÜ KLASSIKALISE MUINASTEADUSE MUUSEUM	Inv: nr. S 39

Autor   LYSIPPOS (?)

Nimetus   Aleksander Suure (Makedoonia Aleksandri) herm

Signatuur

Dateering III –I s. e.m.a.

Materjal   kips (orig. marmor)

Tehnika   valand

Mõõtmed   60 x 30 x 26

Foto nr.   Neg. nr.

Pealiskirjad, tahakirjutused jm. ш. ΑΛΕΞΑΝΔΡΟΣ/ ΦΙΛΙΠΠ

Kirjeldus Noore mehe portree täidlaste põskede, madala lauba ja sellele langevate juustega. Alusel on kiri... (Felsberg, 103) Baumeister Tad kr. 38/42 Sarnane repliik Louvre'is. (Le Louvre. Trésors du plus grand musee du monde. Paris, Bruxelles, Montreal, Zurich. 1991, lk. 109)

Säilivus   mustunud, kulunud, esiservast tükk ära

Restaureerimised   A. Ilves, I kv. 1991

Tulme nr., dokument   Verz III, 347 (174)

Näitused   põhiekspositsioon

Märkused   Orig. Berliinis. Leitud Aleksandriast ja oli kuni aastani 1839 Saulnieri kollektsioonis. Koopia valm. Berliini Kuninglik Muuseum
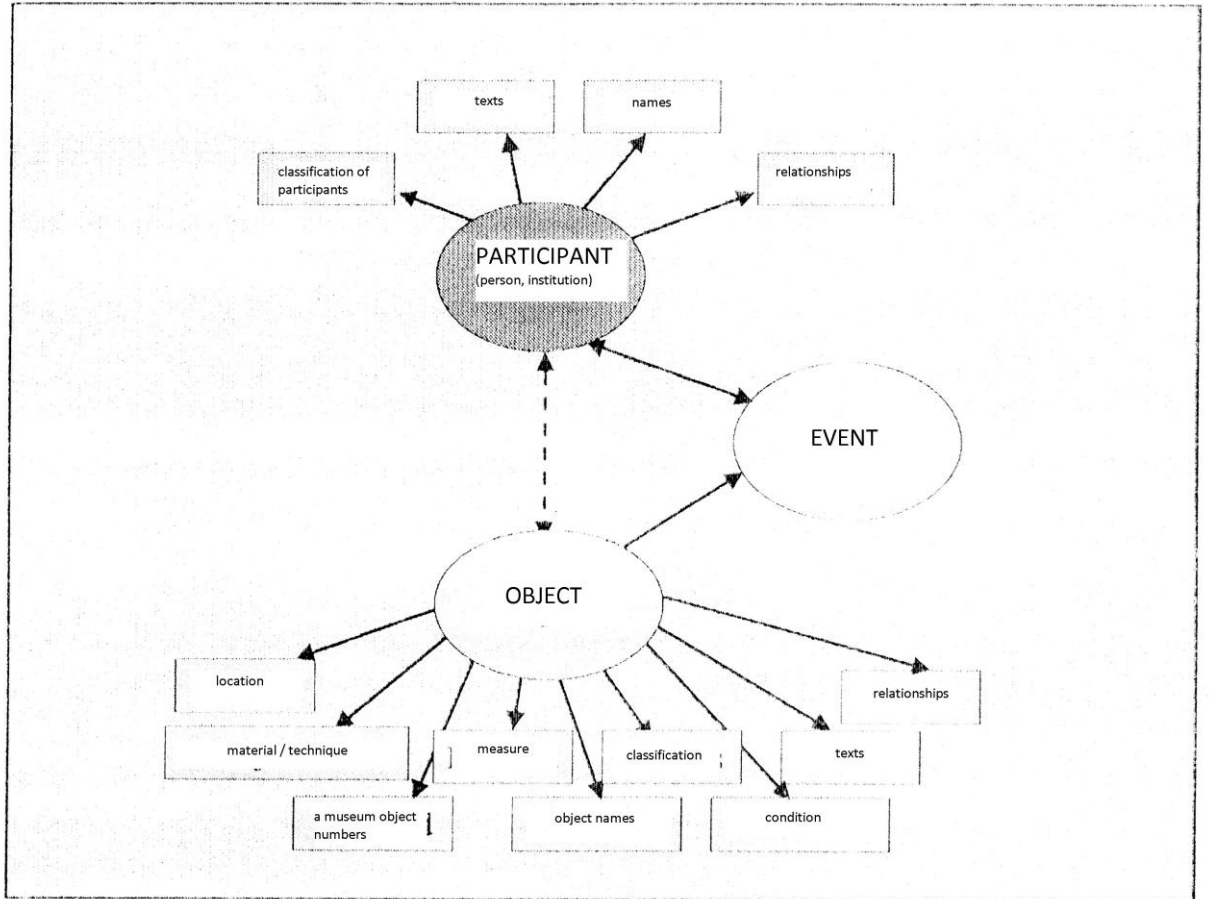
Asukoht   R 407 110   Koostaja

Trk. «Täht» Võrus. 87 4401 35 000

ANNEX 12. Art Object description of Art Museum of Estonia , inventory card 2002.
Such cards are used since 1949.

M 7135	ILMAR K R U U S A M Ä E	EKM 49613
	s. 1957	

4.a. Vanamees. 2000.   /Andres Katanaad/
   b. Tervet maali kattev kohkunud ilmega ,veidi
      punnis- pruunisilmne habeme ja vuntsidega
      mehe nägu otsevaates.Heleda juuksetüükaga
      kaetud pea,kortsus otsmik,veidi paokil suu.
      Kollasetriibuline särgikaelus pisut paistmas
      Valge,oranzi,pruunikaga maalitud nägu,ooker-
      kollane taust.Popilik kujutamisviis.
      Paremal äärel allpool kiri ülalt alla:
      VANAMEES
   c. Allvasakul äärel sign.ja daatum alt üles:
      Ilmar Kruusamäe 2000.

5.   Öli,löuend, *puitraamistuses*
6.   260,5x187,5
7.   Korras

Hind 35 000.-   Akt nr. 2553,9.sept.2002.KK ja rakenduskunsti Sihtkapo
             §3. Vanadest poolitatud puulattidest raamistus,
                mis jalgadega toetub maha.
                Pöördel alusraami pöikliistul kiri:
Ilmar Kruusamäe (sünd 1957)
                VANAMEES ↑ 260x188 öli löuend 2000 sept   *qay 2002*

ANNEX 13. Datatypes of museum object descriptions in KVIS.

ANNEXES 14 -16 The Museum object descriptions in the Cultural Heritage Information System (KVIS).

ANNEX 14. Description of Art Object in KVIS. 2007. Estonian National Museum.

Muuseum   14-06-2007

Kunstiesemed
_____

K 4819 Grabby Matthiessen Baritsch, Karin.
Moejoonis. Pärastlõunakleit

Moejoonised on kinkinud Karin Matthiessen Grabby Baritsch (s. 1913.a. 20. dets. Tallinnas, elukoht Hamburg Hegelingenstieg 18) oma külaskäikudel Tartusse 1993. ja 1995.a.
Karin Grabby Matthiessen Baritsch oli esimene saksa moekunstnik, kes päras II Maailmasõda oma loominguga välismaale pääses. Tema klientide hulka kuulus Baltimaade kõrgaadel; vürstinna von Bismarck, Edith Piaf jpt. Selle kõrval on ta teinud kostüüme mitmetele teatrietendustele ja filmidele ("Gaasivalgus", "Millest unistavad naised?", "Võimatu naine" jt). !947 a. Tutvus ta Coco Chaneliga, !951 a. oli tal Pariisis show koos Christian Dioriga. 1985.a. saatis ta mõned oma joonised Karl Lagerfeldile, kes neid 1992.a. oma kollektsiooni hulgas näitas.
Moejoonised on K.G. M. Baritsch teinud 1940. aastatel ja 1950. aastate esimesel poolel Posenis ja Hamburgis. Iga joonise järgi on valmistatud vähemalt üks kostüüm.
VT. ka ERMi arhiivi AM 1024, Fk. 2484:1-36, A 855:1-108

1990 Registreerimine dokumendi alusel
peakataloog K 2
registreerija/vastutaja -

ANNEX 15. Description of museum objects in KVIS. 2007. Estonian National Museum

Muuseum

Võõrrahvaste esemed

C 104:1 laevamudel Originaal   Hind: 0

Topo: Tartu

Mudeli omanik oli Joann Gunjashin (s 1924 Vasknarvas, surn 1997, viimane elukoht Tartumaal Kärknas), rahvuselt venelane. Perekond oli kirjas vanausulistena, kuid erilist usulist veendumust ja aktiivsust ei olnud. Joann oli Vasknarvas laevakapteni ja koduperenaise neljast lapsest noorim. Isa oli Peipsi laevakapten, sõitis Pihkva vahet. Joann õppis merelaevandust, sai kapten-laevamehhaaniku kutse. Kolm aastat töötas Eestis puksiirlaeval, seejärel 1960-70. aastatel Riia sadamas ookeanilaeval külmutusseadmete mehhaanikuna. Hiljem töötas Kärknas, läks pensionile 1979. aastal.
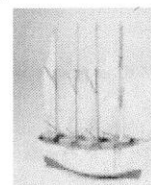
Laevamudeli kere kinkisid töökaaslased talle 1964. aastal 40. sünnipäevaks, sellele tegi ta ise mastid, purjed jm vidinad. Tegi laeva pojale mälestuseks. Poeg Edvin Gunjashin (s 1958) elab Tartus.

Lisaidentifikaatorid

vastuvõtu akti nr. : 2003: 7

Liigitus

Topograafiline : Tartu

Materjal ja tehnika:

puit mitmevärviline puidust valge kere, punane kiil, kollane laevalagi ja mastid, valgest riiest purjed ja nöörist soot

Mõõdud:

kõrgus 75,00 cm üldkõrgus (kiil+kere+mastid)

pikkus 93,00 cm üldpikkus (kere+mast)

kere kõrgus 18,00 cm

laius 20,50 cm

pikkus 73,00 cm

mastid kõrgus 56,50 cm vööripoolne mast - 26 cm

Seisukord

09.02.2003 saadud annetusena hea

09.02.2003 Saadud annetusena

2003:7

vastuvõtja -

üleandja - Tuubel, Virve

omanik/volitaja - Gunjashin, Aleksander

08.01.2007 Inventuur

2007:1

LISA 16a. Description of museum objects in KVIS.2007. The Estonian Agricultural Museum

Esemekogu
_____

EPM 2255/V8:3 E 1143 Tartu Eesti Põllumeeste Seltsi medal Originaal Hind: 7,90

vv akt 1989:133 11.05.89
Proovivalve õiend 11.01.90, kaal 31.7 grammi, proov 875.
Inv.Tuul,H. 90   objekti „legend/kommentaar"
Hõbedast, läbimõõduga 3.5 cm, servatud kitsa randiga.
Avers: ülaservas kaarjalt kiri *EESTI*PÕLLUMEESTE*SELTS*TARTUS*. All servas puu- ja juurviljad
lehtedega. Keskel stiliseeritud lüpsilehm, lehma ees naine reha õlal, tagafoonil tõusva päikese kiired.
Revers: ülaservas kaarjalt kiri *HOOLSUSE * EEST *. Külgedel kaarjalt tammelehtedest oksad. Keskel alasi
ees seisev sepp, parem käsi puusas ja teises käes haamrivars. Vasakul pool alasi kõrval ratas ja paremal
pool suur haamer.

Lisaidentifikaatorid
endine inventarinumber : EPM 197:3/V8:3

Liigitus
Esemekogu liigitus : seltsid
Esemekogu liigitus : väärismetall

Materjal ja tehnika:
  hõbe   proov 875

Mõõdud:
  läbimõõt 3,50 cm

Seisukord
11.05.1989 registreerimine dokumendi alusel rahuldav
1990 <museaalide säilitamine ja   hea
       dokumenteerimine>

  Põllundus
  medal
11.05.1989 Saadud ostuna
11.05.89
üleandja - Tarkpea, Endel
11.05.1989 Registreerimine dokumendi alusel
Peavarahoidja kabinet kaart
1990 <museaalide säilitamine ja
       dokumenteerimine>
teostaja -

ANNEX 16b. Description of museum objects in KVIS.2007. The Estonian Agricultural Museum

Foto

EPM FP 656:1 Naismehhanisaatorite kokkutulek 5-6   Originaal   Hind: 0
juuni Saaremaal 2001.a.

objekti „legend/kommentaar"

Kingitud Elmina Otsmanile. Elminat ei olnud seal.

Lisaidentifikaatorid
vastuvõtu akti nr. : 2006:18/28.09.2006

Materjal ja tehnika:
foto fotopaber värvifotograafia

Mõõdud:
foto kõrgus 15,20 cm
laius 22,60 cm

Seisukord
28.09.2006 saadud kogumistegevusest hea

05.06.2001-06.06.2001   Ühiskondlik ja ühinguline tegevus

kokkutulek grupifoto

Saare

Saaremaa : saar

28.09.2006   Saadud kogumistegevusest
2006:18

Teeneka põllumajandustöötaja, omaaegse Tarvastu kolhoosi kombaineri Elmina Otsmani tegevusega
seotud materjalid (esemed, käsikirjad, ajaleheartiklite väljalõiked, õnnitlustelegrammid, fotod jm.).
Saadud Eesti Põllumajandusmuuseumi teaduse ja kogude osakonna juhataja kt. Ell Vahtramäe
kaudu.

üleandja - Otsman, Elmina

vastuvõtja -

koguhoidja -

koguhoidja -

28.09.2006   Registreerimine dokumendi alusel

registreerija/vastutaja -

12.10.2006   Skannimine

Fotod on skaneeritud ja salvestatud CD-le (kasutuskoopia).

teostaja -

12.10.2006   Registreerimine kogus

registreerija/vastutaja -

2007   Digitaalne säilitamine

valmistaja -

ANNEX 17 Differences between dictionaries of KVIS and MuIS.

I Classification of object
The „Objects functional classification" in KVIS dictionary is divided

1. „Object type /entity"

2. "Field of use of the object"

II Context classification of museum object

KVIS „Events"

KVIS „Activities"

3. MuIS "Activities and phenomena" - use/classification (Thematic classification 2013)

III The classification that supports different areas museums.
4. Museums' own dictionaries in KVIS localized

Museums' own dictionaries or MuIS "Additional classification".

Related with centralized dictionaries.
MuIS "Museum's own terms"

ANNEX 18. Levels of classification of museuminformation

The text within the diagram, from outer to inner circles:

Objects are linked to constitute the events - the linking events

Information related to the objects is structured and systematised

Data related to individual objects is identified

Many individual objects

The MUSEUM as KNOWLEDGE-BASED INSTITUTION
the system of knowledge

MUSEUM
the system with catalogue information (formed collections)
?

DATA
related to the specified object