The Internet-based Museum Information System MuIS in Estonian Museums

Estonia
Indrek Eensaar, Kaie Jeeser

There are 33 state museums in Estonia, 26 of which are under the authority of the Ministry of Culture. The Central Information System for Museums is used by 39 museums. These also include city museums and museums of smaller municipalities.

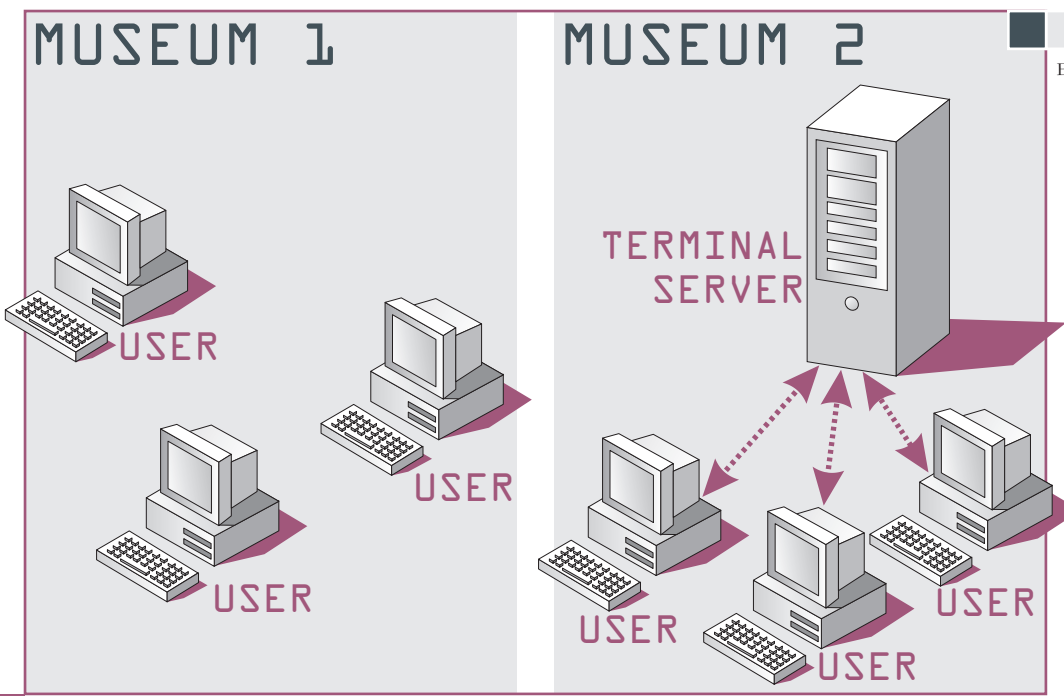
The information technology age began in Estonian museums in the mid-nineties. The earlier software was installed on personal computers and there was no connection between different databases, even within one museum. A more advanced solution enabled a connection using a terminal server within one museum.

The advantages of separated local databases were:

- everyone could work separately without having to depend on other users, museums and overall standards;
- users were independent of Internet or LAN connections;
- users could use their own thesauruses and modify them without negotiating with other museums.

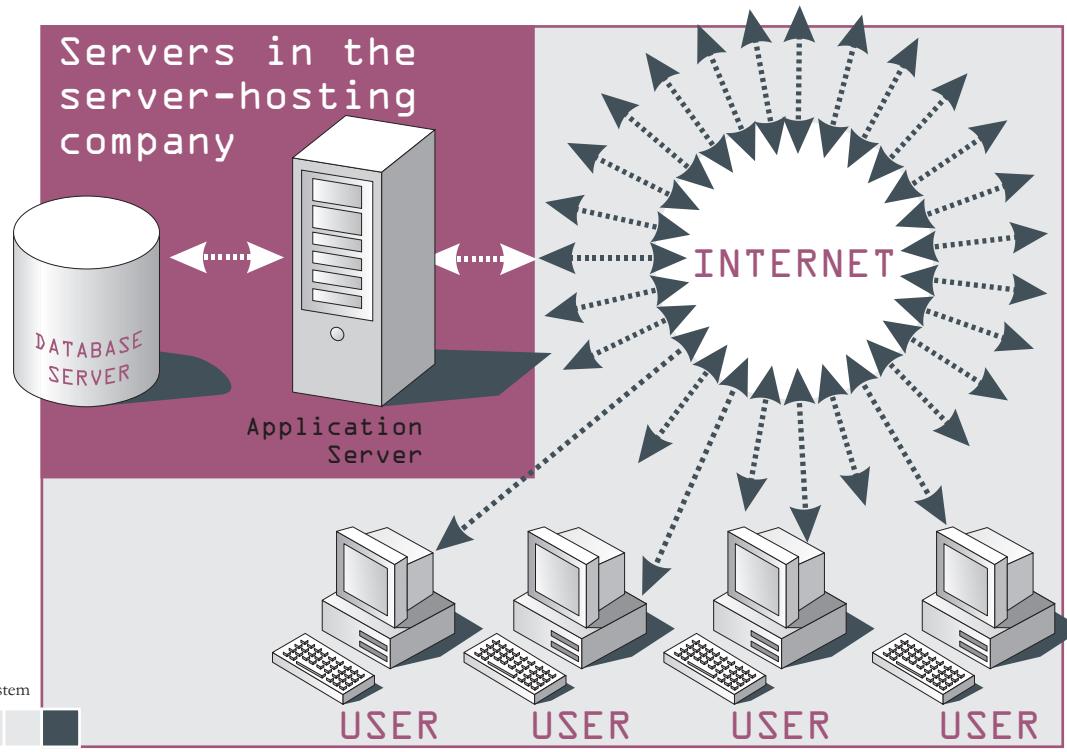
The disadvantages of separated local databases were:

- they were very expensive to maintain - due to lack of IT knowledge in smaller museums;



Earlier solutions

The goal of MuIS is to make it possible to retrieve unified information about museum objects, and not only from the collections of one museum but from those of various Estonian museums.



Internet-based system

- they resulted in fragmented work methods;
- it was difficult and costly to create a common museum portal for public users;
- the software did not allow exchanging data with other museums.

In light of these disadvantages, it was decided to develop new museum software as a central Internet-based system. In this system all the data is stored in one central database server and software works as a Web-service. The only thing that the user must have is a computer with Internet connection and a browser with Java-script support installed. Nothing is saved into the local computer and it is not necessary to install any software.

Advantages of a central information system:

- much cheaper to maintain;
- unified workflow and processes;
- unified thesauruses;
- easy to exchange data among museums;
- easy to create a common museum portal for public users;
- data is entered only once.

Disadvantages of a central information system:

- difficulties with giving up habitual working methods and beliefs;
- dependence on an Internet connection and a central server.

The main users of software:

• curators, who enter different levels of information about objects;
• conservators, who enter detailed information about the state of objects and describe their conservation treatment;
• researchers, who wish to retrieve all the available historical and cultural information describing objects;
• museum visitors and virtual visitors on the Web, who need less-detailed information in different languages;
• students, who are interested in museum objects for educational purposes.

The main groups of functionality of information systems:

• administrative management of museum objects, museum collections and sub-collections
• full cataloguing of museum objects (two levels of cataloguing are obligatory and a third level is recommended);
• making queries:
  - statistic administrative queries reports;
  - queries based on object descriptions for museum specialists;
• public portal and educational work related to the objects.

As the Central Information System for Estonian Museums includes museums of various fields and various kinds of object descriptions, the method of structuring museum object descriptions must be suitable for museum objects of different kinds.

The structuring of museum objects is based on information theory, which does not treat information as an object, but instead as aspects of the formation process of nature and as understandability of information, which are common regardless of specific fields.

This provides the basis for distinguishing among different layers of museum object descriptions which form during the gradual entering of information and supplementing of descriptions in the information system.

Therefore, as mentioned above, museum object descriptions in MuIS have 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 a museum's responsibility. During the procedure the object is registered as a museum object and provided with a primary description (a certain amount of data is brought out by which the object can be identified among others). In MuIS the classification of an object's nature is obligatory.

The goal of description on this level is indexing the object, so that its records will be recognizable among other records.

Second level or information level - full cataloguing

The purpose of full cataloguing is to place an object into the museum context determined by the museum's field. A museum object is classified and systematized according to the museum's specificity, while also responding to the central requests.

Information entered on the second level will form the museum object's identification card. The description of this level is accessible to the public.

Third level or knowledge level - scientific description

The aim of the scientific description level is to provide the museum object description with a general historical-cultural context and also with information discovered during scientific research in the museum's specific field. Historical dates, related persons and events will be specified, using the help of various sources.

In conclusion

During the development process of the Central Information System for Estonian Museums, previous experience with earlier software has been taken into account, as well as the experience of other countries and theoretical aspects of information handling.

The goal of MuIS is to make it possible to retrieve unified information about museum objects, and not only from the collections of one museum but from those of various Estonian museums.

Unlike the museum object documentation methods used so far, the new central information system should unify museum object documentation, including object descriptions in various Estonian museums. Some differences still exist in the ways the data is entered into MuIS, but when entering the most important data, the system guides the information enterer.

The development of the Central Museum Information System is an ongoing process. Therefore, MuIS has been built on a model that enables further development and changes. The deployment of the information system in museums brings out different problems, which should be solved in the future in cooperation among IT specialists and museum experts.

In the framework of the ATHENA project, information contained in MuIS will also be delivered to Europeana.