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The Computerisation of the Croatian Museum Network

Summary

According to statistics, only 17 percent of museum holdings in Croatia have been computer processed. Museums lack both hardware and software. Our goal is to provide easier access to museum object information in Croatian museums through systematic acquisition of hardware and software, its installation and monitoring of museum holdings processing.

In 2004 the Ministry of Culture gave funds to MDC to act as a mediator and coordinator of the computerisation of Croatian museum network. An opportunity was given to 24 museums in Croatia to get M++, an integrated information system for museum documentation management, developed by the Link2 company. Furthermore, 27 museums that already have M++ were offered a free upgrade to a newer version and a full support and consulting service.

Twenty-three out of 24 museums accepted the offer and cooperated with Link2 and MDC. M++ was installed on 97 computers and curators were trained on how to use the newly acquired software. Also, user support and consulting service are established.

It is very important that all museum requirements are now systematically acquired and future development is coordinated by MDC. The next step is to work on the coordination of controlled terminology development. Our final goals are to establish continuous development of documentation systems that would support museological research, preservation and communication, to establish continuous preservation of documentation in digital environment and especially to encourage online access to information and knowledge about the museum objects.

The History of the Computerisation of Museums in Croatia

At the beginning of the 1970s, Dr Antun Bauer, the director and founder of MDC, the Museum Documentation Centre, wrote in the magazine "Informatica Museologica" about the importance of introducing computers into museums as a means of cataloguing museums' collections and creating documentation. At that time, the computerisation of museums in Europe was already beginning, while in America the process had begun four to five years previously. A network of computers existed on the territories of Yugoslavia, and thus Croatia, but scientific and cultural institutions were not computerised.

Dr Bauer turned to the Smithsonian Institute in Washington, and in 1976 obtained a package of software for creating SELGEM, a database of artefacts in museums. SELGEM was presented to and installed in SRCE, the University Computing Centre in Zagreb, where a central database was to be sited, maintained, and a team of curators trained in data entry. A centralised solution was the only possible one, since at that time, not one museum had its own computer. Unfortunately, the SELGEM system met with only limited success in the case of a few science and technical museums. At that time there were no minimum requirements set for documentation, there was no standard for data entry, the majority of objects were not being conserved in a systematic way, and there was no classification of items in museums. Towards the end of the 1970s, MDC took over the systematic documentation of Croatian museums. The system used by the British Museum Documentation Association (MDA) was used as a template. A list was made both for general museums and a few specialised museums of all categories of items on the inventory cards of MDA, and a set of instructions for the completion of the cards was compiled.

In 1980, MDC began a project titled "The Basic Documentation and Classification of Objects in Museums and Galleries in the Socialist Republic of Croatia", along with instructions for recording on microfilm. An important part of the project was the Museums and Galleries Information System (MUGIS). MUGIS was created as a communications network which would draw together the funds of information from museums, users, and other sources in the museums' sphere of activities.

The entire project was announced in the magazine "Muzeologija". An interdisciplinary working group consisting of museum and IT professionals, librarians and microfilm specialists was formed.

One of the fundamental motives for the initiation of the project was the compilation of a high quality set of documentation as a necessary condition for the preservation of objects in case of war. It was planned that all museums in Croatia would become part of MUGIS, and that the inclusion of all museums' general inventories into a central database would be compulsory.

The coordination of the computerisation project and the development of a network of museums and key institutions for the activities of museums on a regional and national basis should have followed, as well as the planning and provision of hardware and software for creating databases of museums' inventories. The end result of the entire project should have been an information network which operated on various levels: the level of museums, the preservation of cultural monuments and activities in the sphere of cultural information as a whole.

The aim of the project was to include all data in a national information system and also in UNESCO's international information systems. CIDOC's minimum standards for data describing objects in museums and galleries were used, and MDA's classification by type was used as the basis for the creation of a template for the classification of objects in museums and galleries. The general museum inventory card was designed so that it could be used both manually and using computers, and contained 11 primary sections for the description of artefacts.

The initial idea was to create a database in a central computer in MDC, from which the data could be distributed to the end users. This configuration was chosen bearing in mind the lack of computerisation in museums in Croatia. MODES (the Museum Object Data Entry System), a program developed by MDA, was chosen as the software solution since the project also used that organisation's general inventory card as a template. Around 100 computers were obtained, 120 curators trained, 27 installations within museums carried out, seminars and presentations of MUGIS and training courses in the DOS operating system held.

The project was never completed due to a lack of resources and experts. MODES also proved to be outdated and difficult to adapt to the needs of all museums. The catalogue card was inflexible and hard to use for certain kinds of objects. Some museums began to obtain PCs and solve their IT problems on their own initiative. The project was abandoned, but nevertheless museums which had actively taken part in it are today some of the most progressive in their use of IT.

In 1990, MDC began to publish "The Museum IT Bulletin", formerly known as "The Journal of the Computerisation of Museums' Activities". The journal was published four times a year, and the last issue (no. 9, 1/4, 1998) was available only in electronic format (URL: <http://www.mdc.hr/lzdavastvo/mdc-bilten>). The aim of this journal was to assist in the computerisation of museums by keeping people informed about new technologies and their uses, and about projects connected with the computerisation of museums. MUGIS, MODES, the museums network and the problems of standardisation and thesauruses, the internet and websites were among the subjects that appeared in the journal.

By the mid-1990s Croatian museums still didn't have their own websites, and because of this, in 1996, MDC began the project "Museums of Croatia on the Internet", with the aim of using new media and new technologies to present Croatian museums. To date, 30 museums have been presented on more than 1,500 web pages as part of that project. The latest technologies of that time were used, all pages are in both Croatian and English. For some museums, these pages are today still their only internet presence.

The Position of Computerisation in Museums in Croatia in 2004, Based on Data from the Register of Museums, Galleries and Collections

The Register of Museums, Galleries and Collections in the Republic of Croatia, which is managed by MDC, is a database of museum institutions in which details of the attributes and activities of all museums are collected.

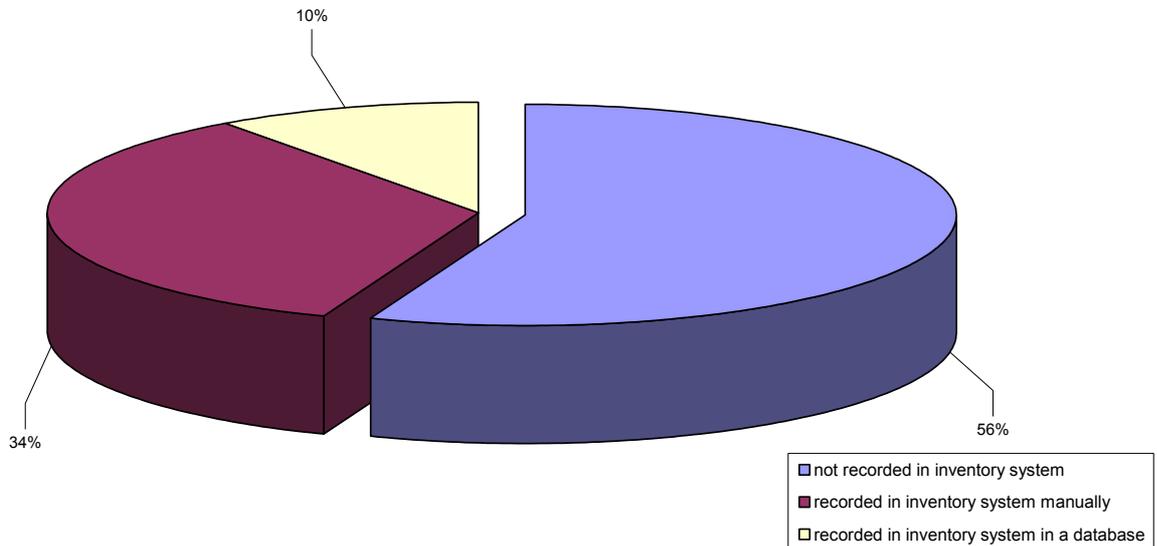
In 188 units, i.e. museums and galleries, 841 expert staff are employed (curators, documentarists, teachers, IT professionals, restorers, conservators and museum technicians), and 1,229 museum collections comprising 4,759,767 objects are entered in the Register. Out of total number of museum objects 2,608,618 or 44 % are recorded in the inventory system.

139 museums (74%) have email addresses. 101 museums (53%) have their own websites. Only 76 museums (40%) use computers for cataloguing their collections, and just 31 museums (16%) use computers for creating documentation.

Of 1,229 museum collections, computer programs for the creation of inventory are used in 491. Among 23 programs, M++ and Promus are the most common. 135 collections use Promus, and 137 M++. While M++ has a team of experts behind it who are constantly adding to and updating the software according to the needs of museums, Promus is a programming tool which was developed by the company Mikrolab, which is no longer in existence, so Promus is neither being developed nor maintained.

A large number of museums (74 collections) are still using tables in MS Office programs for documentation, while 28 collections use their own software, which probably also make use of tables in MS Office. 469,728 objects have been catalogued by computer using one of the above methods, which amounts to 10% of the total number of objects in Croatian museums, or 18% of the total sum of objects in the inventory system. There are 452 collections of museum documentation in Croatia, which include photo, film, slide, video, and sound libraries, maps, documentary drawings, newspapers and magazines, digital and magnetic recordings and archives. 128 of these collections, or 28% of the total, are recorded on computer.

Inventarization , 2004.



Despite the introduction of a new job title to the Croatian museum system - that of IT professional - only six of the same currently work within the system.

Unfortunately, there is no data on hardware facilities used by Croatian museums in the Register.

In 2002, the Ministry of Culture conducted a survey on the computerisation of cultural institutions. Among these were 93 museums, of which 64 (or 69%) responded. The results of the survey showed that 19% of institutions had a server, 25% had a local network installed, and 84% of institutions had access to the internet. It must be borne in mind that the survey was only conducted among those museums whose computerisation had been co-financed in the period 1996-2002.

Link 2 and M++

In 2004 and at the beginning of 2005, the usage of computers and the cataloguing of museums' collections and museum documentation using computers increased significantly.

This progress was achieved by the Cultural Development Programme for 2004, in which the Ministry of Culture of the Republic of Croatia, by providing M++ software produced by the firm Link2, enabled the further computerisation of the Croatian museums network, with the aim of increasing the number of objects which are catalogued on computer systems.

MDC was given a supervisory, coordinatory and advisory role in the installation of this software, its maintenance, and the cataloguing of museum objects using IT, which is an important step in protecting objects, standardising data and enabling access to objects in Croatian museums.

M++ is a complete software solution for IT documentation in museums. It was created by m.sc. Goran Zlodi, in 1998. The software is developed on a continuing basis according to the needs of museums. The program complies with the Regulations on the Content and Management of Documentation of Museum Collections by Museums (Narodne Novine no. 108/2002).

M++ has the following characteristics:

- It supports the creation of primary documentation: inventories, record books and catalogues.
- Using the module for secondary documentation, a secondary pool of documentation can be created: photo, video, newspaper and magazine archives, records of exhibitions etc.
- It supports the creation of tertiary documentation: thesauruses, lists of names, indexes of authors.
- By means of a sophisticated search facility it allows flexible access to databases and a complete overview of their contents.
- It supports multiple users in a computer network with secure data access. Reading, deleting and editing of data is authorised according to level of responsibility within a given museum collection, in order to prevent unauthorised access or loss of data.
- Export of data into PDF and XML formats.
- Complete flexibility of data display (graphics, keys, catalogue units etc.).
- A choice of search methods and means of displaying data and keys facilitates the preparation of exhibitions and the creation of print and online catalogues.
- Assists in the creation of multimedia content for distribution via a choice of media (CD-ROMs, info kiosks, web...).
- Allows various options for repeated use of digital content (text, pictures, sound, video...).

MDC and Link2 signed a contract in May 2004, under which 24 museums gained the opportunity to install the M++ software package, and 27 museums which have the software already installed gained the right to maintenance services. This includes:

- The right to install all new versions of the software.
- The use of modules for the management of secondary documentation.
- Continuing assistance and consultation in using the software. The user can seek assistance by means of electronic or snail mail, by fax or over the phone.

- Apart from comments and suggestions relating to existing functions of the software, users can also seek the development of new program functions. They are implemented according to a plan that takes into account the needs of the majority of museums.
- If a museum has problems with hardware or in carrying out backups, it can seek written instructions or advice.
- The ability to set up remote (online) access.

All new museums were contacted and forms were sent to them in which they detailed their collections, users and the exact configuration of their computers. The resulting picture showed that the hardware that museums are using varies to a great extent, but is usually out of date. Another problem which emerged was museums which had not set up local (LAN) networks, but were simply using stand-alone workstations. These workstations had to be networked prior to the installation of the software.

In September 2004, the installation was begun. Of 24 museums, 23 accepted MDC's invitation. M++ was installed on 97 workstations, training courses for curators consisting of two sessions of two-and-a-half hours were held, and instructions for users were distributed.

Users are invited to work with Link2 and MDC on a continuing basis in case of any problems or suggestions.

The majority of the installations were carried out by expert staff from both Link2 and MDC, which allowed users to ask questions and seek advice in person.

The installation of the software and professional training have continued into 2005. To date, M++ has been installed in a total of 58 museums. MDC is monitoring the process of entering the collections into the program, and together with Link2 is continuing to support museums and ensure that in this highly important part of museums' work due care is being taken.

The Museum System of the Republic of Croatia – The Croatian Museum Network

One of the necessary conditions for the standardisation of the work of museums is the creation of thesauruses – an activity which has taken place in Croatia only sporadically until now. The M++ software assists greatly in this process, since it aids in the connection and cooperation of museum experts.

This work falls under the jurisdiction of the network, i.e. the Museum System in Croatia, which is founded on the Regulations on Methodology and Standards for Connection in the Museum System of the Republic of Croatia (Narodne Novine 120/2002).

A key activity within the museum system is outline of working practices, with the fundamental aim of improving the quality of the work of museums and the setting up of standards and norms.

The harmonisation of work within the museum system is carried out through the Council of the Museum System and the Council for Key Museum Activities. The work of both Councils is coordinated by MDC, which will also support the creation of a thesaurus.

Conclusion

In order for museums to be able to fulfil their role of communication with society, they must adapt to modern technology and means of communication. Computers are used in museums on several levels: in assisting the work of curators, as technical support for exhibitions, as a means of communication with the world and a means of communication between the museums themselves. Websites, the computerisation of museum objects and museum documentation, the computer literacy of staff within museums and email communication have become necessities for the normal functioning of museums in today's society. Great effort has been invested in the computerisation of Croatian museums, but even so, there is a long road ahead of us. To help us on our journey, we must invest in equipping museums with hardware and software, and employ more staff in the field of IT.

Our final goals are to establish the continuous development of documentation systems that would support museological research, preservation and communication, to establish continuous preservation of documentation in the digital environment and especially to encourage online access to information and knowledge about museum objects.

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