MANAGEMENT OF CONSERVATION DOCUMENTATION

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INTRODUCTION

There is no opposition to the statement that it is professional obligation for conservators and institutions to create and maintain documentation for conservation treatment of cultural heritage objects. Importance of this documentation is acknowledged as the essential part of cultural heritage protection that contributes to development of conservation science and education of professionals, and presents one of the foundations for preventive conservation planning. Conservation documentation contains reports made by experts that include information about object condition, technical studies, detailed information about remedial treatment and recommendation for further protection of object. Advantages and benefits of sharing conservation documentation are numerous – education of colleagues and conservation students and promotion of learning process at all levels, broadening museum audience, simulation of new research, improving standards of documentation, improvement in communication between colleagues and professional groups and encouraging collaboration in solving problems, offering better understanding of art works (their conservation history, materials and techniques) etc.

Having in mind that the conservation documentation is important, it is essential to make it available and easy to use. Otherwise it loses its purpose and significance. The task of making conservation documentation available and easy to use is difficult one, because it implies management of variety dates and information in different file formats (word, jpg, tif, pdf etc.), for variety of purposes, and it also requires involvement of people with different expertise, such as conservators, managers, software and hardware experts etc. This paper will present some of the key areas and dilemmas in process of management of conservation documentation as well as present solution of one institution – Central Institute for Conservation in Belgrade (CIK).

MANAGING CONSERVATION DOCUMENTATION

Due to institutional policy and practice, there are often two levels of management conservation documentation: Management of information inside the institutional system and Management of the process of sharing documentation with persons outside the institution. Conservation information is complex and different from curatorial information and it has to be the part of a larger information system. But even if that is not a case, conservation documentation is still available among the employees in one institution. Due to the fact that conservation documentation should be available outside one institution, there are several questions that should be answered before thinking about the ways to accomplish it:

1. What kind of information should be shared: entire conservation file, or some data should be retained?
2. Who is interested in receiving this information?

Andrew W. Mellon Foundation has organized two meetings of conservators, scientific researchers and other museum professionals, in Metropolitan Museum of Art in New York on April 27th 2006 and again in British Museum on May 25th 2007, on subject of conservation documentation "Issues in Conservation Documentation: Digital Formats, Institutional priorities and Public Access"[1]. It was opportunity for professionals to give their opinion and to present their institutions answer on above questions. Standards and methods for organizing and managing conservation documentation vary from institution to institution but their experience is very useful for all the institutions that are starting the same process.

It is common conclusion that some information should be restricted for non-institutional and non-professional user due to the possibility of misuse or endangering the cultural heritage object. Every institution decides what data should be retained according to internal policy and past experience - information about condition or location of object or were it was found, about authenticity, owner and donor, or about financial value of the object. Sometimes old conservation files should be kept retain due to the nature of applied conservation treatment and methods that are now considered incorrect and not according to the standards. Untrained person could misinterpret conservation file and perform treatment described in some report with adverse consequence. Accessibility of conservation information impales that they are revised from conservation notes (created during the treatment) to conservation report so that there is no potential for misinterpretation of raw, uninterrupted data. Sometimes, key factor for publishing and sharing some information is time and not the meaning and context. That is a case if conservation record is part of study or article that is unpublished work in progress so protection of ownership of intellectual content is as important as protection information from misusing. Most institution came to conclusion that best solution are establishing practice of formal request for access to collection information and edited conservation report. Some museums and conservation institutes provided opportunity for interested parts to become register users on their internet sites.

Which information should be shared and which methods of sharing must be used, are also determined according to the users of those information. There are several groups of recipients and their interests are quite different: conservators, curators, scientists, art historians/

archaeologists/ anthropologists, conservation students, general public etc. It is obvious that there is no great interest of general public for the technical information about conservation treatment. Besides that, the professionals more often request the access to the technical studies of material than to the conservation documentation. There are several finished and projects in pilot phase, designed as research resource for providing access to art historical, technical and conservation information about works of artists or museum collections:

1. EROS (European Research Open System) is the C2RMF (Center of Research and Restoration of the Museums of France) database that provides access to records of photography and scientific imaging works analyzed and / or restored at the Centre for Research and Restoration. This database was specifically developed to meet the needs of curators, conservators and scientists. It provides a visualization and analysis of high-definition images, a multilingual access, several modules of image recognition and pattern recognition module[2].
2. Raphael Research Resource project - study of paintings by Raphael has produced an exceptional collection of material, covering their history and provenance as well as the materials and techniques used in their making. Initially the project was based on the extensive studies of the ten paintings by Raphael in the Gallery collection, but it has now been developed to hold information provided by a growing number of other institutions and collaborators[3].
3. The Cranach Digital Archive project, still in its pilot phase, is an interdisciplinary collaborative research resource, providing access to art historical, technical and conservation information on paintings by Lucas Cranach (*c.*1472-1553)[4].
4. The Rembrandt Database**,** a multi-lingual online research resource capable of integrating conservation, technical and art historical documentation on paintings by or (formerly) attributed to Rembrandt from different museums and international institutions[5].

Maybe one of the conclusion after first meeting in New York best illustrate position of conservation professionals on significance of sharing information "As the meeting concluded, unanimous agreement was expressed that the digitization of conservation documentation and the sharing of such information among conservators, scientists, museum curators, art historians, and other scholars was highly desirable and of vital importance. It was also acknowledged that while public access to such information ultimately would be important, the immediate priority should be the development of mechanisms for the exchange of information among professionals, and that effecting change in institutional practice would be essential if these emerging priorities were to be adequately recognized and served"[6]

Important segment of internal and external management of conservation documentation is digitalization old conservation documentation. Beside potentional controversy of its context that derives from the act of sharing it, methods for digitizing paper files typed, handwritten, or printed documents and film based images and extent of digitized documentation is left to every museum or institution to decide.

ARTEMIS database for management of conservation documentation in CIK

National Museum in Belgrade, as a central museum preservation institution in Serbia, is developing the Museum Information System in Serbia (MISS). The core of MISS represents the database that includes all data regarding the cultural heritage situated in museums of Serbia. The Central database is accessed via web application package ETERNITAS for registered users. Database format is Microsoft SQL Server and methodology of design and development of database, in the phase of external and conceptual design, is Object Role Modeling (ORM). When finished, MISS structure will obtain 11 entities or subsystem and information about condition of the object, treatment and research analyzes will be integrated in them.

Regarding conservation documentation in museums and other institution for protection of cultural heritage in Serbia, most of them keep conservation files in the form of hard copy documents (basic information and conservation notes in word document) available only to professionals on request. Central institute for conservation (CIK) is one of few institution with database for managing conservation documentation. The Central Institute for Conservation is an interdisciplinary, educational, scientific, research and conservation centre and a specialised institution of cultural heritage protection. Its underlying task is organisation of efficient protection services of tangible and intangible cultural heritage. CIK undertakes creating a multidisciplinary professional and scientific databases in the field of heritage protection, implementation of multidisciplinary research in the field of preventive conservation, creating a professional documentation record system, rising the level of professional expert institutions all over the country, protection services networking, as well as involvement of the public and the relevant authorities in heritage preservation and heritage protection strategies. CIK aims at implementing an integrative protection concept of both tangible and intangible cultural and natural heritage with an emphasis on preventive conservation methodology.

During 2010 CIK undertook the project of creating database for internal and external management of conservation documentation of the remedial conservation actions performed in CIK that could be use as prototype of a specialized documentation system for the protection of cultural heritage. “ARTEMIS” database is created in FileMaker Pro database software. After some research and consultation, FileMaker Pro was selected as software for creating easy to use custom made database applicable for Windows, Mac, and the Web. Due to financial factors, the role of server computer are performing two HP computers, one as database server and other as server for photographs, insert documents and web application.

Efficient management of any documentation system applies creating some sort of database where usage of information is flexible and effective because data is organized and stored in relational structures. For conservators in CIK first step in creating ARTEMIS was analyzing structure of data in conservation documentation, their division into groups and defining relationship between groups. In this stage, most important part was applying extensive conservators experience not just in conservation but also in creating and utilization conservation documentation. CIK exist as independent institution since 2009 but it originate from Department for preventive conservation in National Museum in Belgrade that existed since 1997 and some of the professionals in CIK had years of practice in conserving cultural object and maintaining the documentation.

Conservators abstract seven main types of information:

1. Object identification
2. Administration data
3. Current condition
4. Results of research studies
5. Remedial treatment
6. Recommendations for object storage, transport and display
7. Users

ARTEMIS application is divided in four main units:

1. OBJECT - Administration data (Dates of object entrance and exit, Name of conservator, Number of conservation file, Name of owner, ID number, Site information, Object history, Notes) and Object identification (according to category defined by Object ID, an international standard for describing art, antiques and antiquities - Type of Object, Materials & Techniques, Measurements, Inscriptions & Markings, Distinguishing Features, Title, Subject, Date or period, Marker)
2. CONSERVATION (Object condition, Results of research studies, Remedial treatment, Recommendations for storage, transport and object display)
3. MATERIALS (List of chemical substances and tools used in conservation)
4. USERS (Data about the conservators who are using ARTEMIS)

Second step in creating ARTEMIS was defining priorities and functions of the system. A primary requirement for a digital documentation system is the capacity to manage all the information that is generated by conservation, preservation, and scientific activities, including texts of examination records, treatment reports, analytical results and photographs. Conservators gave software developer four objectives that had to be fulfilled:

1. Database must be easy to use
2. Database must be easy to search
3. Database screens and reports must be visible
4. The possibility of error must be reduced

Properties of easy to use database for CIK conservators refer above all to process of data entry that should be simplified and made easy to do. Data entry should be made in accordance with the conservation treatment, without length limitations for text entry fields. A conservation treatment, used methods, tools, chemical substances even treatment duration, varies according to type of materials objects are made of. This fact implies different structure of conservation reports, with specific information organization. ARTEMIS has five separated modules for conservation report: Ceramic, Porcelain, Amber and Glass as one module; Metal; Mosaic; Textile and Paintings. For example, for mosaic module it was important to separate description and examination of mosaic base and teselatum, which is not the case for ceramic module.

Other condition was the easy insertion and accessibility of photographs and accompanying documents in electronic formats (research results, official documents etc.) in every segment of conservation file.

One of the major disadvantages of hard copy documentation is difficult themes search. For example, if someone wants to research effects of particular substance in conservation of ceramic, he/she has to know what conservation files contain those dates or which person is aquainted with it. Experience with difficulties in usage of old conservation documentation was the reason why conservators asked for very broad search of the ARTEMIS content. A query can be a single word and search results are generally presented in a list of results that could be filtered by categories, such as: Treatment phase, Material, Type of object.

CIK is institute dedicated to the conservation of cultural heritage without its own collections. All the objects that are and will be conserved in CIK conservation studios belong to the museums and other institutions for protection of cultural heritage. Since elaborate conservation report is required, ARTEMIS generates readable conservation report in two formats – PDF and HTML. Information are divided in main groups – Administration data, Object identification, Current condition, Results of research studies, Remedial treatment and Recommendations for object storage, transport and display. All the subgroups, like Technical analyses of textile within current condition group, or other subtitle in text, are viewed as headlines that are distinguished in order to introduce reader into the content of text. Visibility is also required for database interface so the process of data entry could be simplified. ARTEMIS database has separate field for text and input of photographs, radiographs, additional documents, notes etc.

How to reduce possibility for errors and what type of errors is most frequently?
Learning from past experience, conservator looked for the way to avoid loss of information as a result of creating conservation file at the end of the treatment that lasted for months, or sometime after ending a treatment. Every module has three main groups – Current condition, Remedial treatment and Recommendation and these groups are divided into subgroups according to the specific features of material treatment. The idea is that module lead the process of editing conservation notes (taken during the treatment) to coherent report. Also, it was important to avoid errors concerning correct title of used chemical substances, or errors of recording incorrect substance in file. One of the main database unit is Materials, where head of conservation department creates a list of conservation tools and chemical substances generic name, with short description if necessary. When conservator is creating report, he/she can write down in text field everything he assess as important but he/she has to abstract in separate table list of all substances used during treatment and in this point he/she can only choose substances and tools already listed. This table is separated from the field for the text entry in database screen as well as in printed report, due to the conservators common conclusion that these information are important for every database and report user, and needed to be prominent.

CONCLUSION

First aim in creating ARTEMIS database was to initiate effective internal management of conservation documentation. As institution without collection, CIK was in rare position to carry out this complex task fresh from a start.

Knowing and recognizing the situation in Serbia, we decided to initiate the project of creating web application where edited conservation report, with owner's permission, will be submitted to the interested colleagues and wide public. It is complex and time consuming task with the aim to initiate communication between professionals, suggest methods for internal management of conservation documentation and inform interested public about less frequent segments of the complex process of cultural heritage protection. But most of all, our aim is to create space where conservators from Serbia could be informed about treatments and different possibilities in native language.

Sharing conservation documentation trough internet is quickest and easiest way for professionals to learn and to improve. Although there are obstacles and dilemmas, not just financial ones, this complex project could be implemented also by learning from others experience and sharing information between institutions.

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