

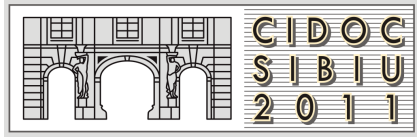
**The 23rd Annual Conference of CIDOC, SIBIU 2011**

**Knowledge Management and Museums**

# **ABSTRACTS,**

## **Workshops and People**

**4 - 9 September, 2011 - Sibiu, Romania**



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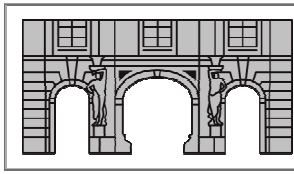
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# **CIDOC 2011**

The 23rd Annual Conference of CIDOC, SIBIU 2011  
**KNOWLEDGE MANAGEMENT AND MUSEUMS**

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Sibiu, Romania

4 – 9 September, 2011

## **Epigraphic Monuments and Knowledge Management**

**Ioan ALBU**

The aim of epigraphic projects overall is to collect and edit the inscriptions of a historical period, either of the classical antiquity or the medieval and pre-modern times.

Various institutions undertake different issues in their discourse, such as *The Institute for Greek and Roman Antiquity*, *DIO (Deutsche Inschriften Online)* *Epigraphica Hispania*, or *EpiDoc*.

There is a strong tendency towards the harmonization of the criteria and methods that should be involved. Different projects work in accordance with existent epigraphy digital initiatives, especially those established by the *International Association of Greek and Latin Epigraphy* and *CIDOC* standard *CRM*.

A real progress in historical knowledge requires systematic collection and editing of epigraphic sources in electronic databases, meant to include all essential data, and to publish them in open epigraphic corpora available online to researchers and general public. The database fields should include information about area, storage place, date of time, short description - type and category of inscription. To these are added by the wearer epigraphic iconographic description, dimensions and character of the inscription / inscriptions, epigraphic types of writing, inscription text, translation, epigraphic and iconographic commentary, information about places and people mentioned in inscriptions, the device's critical text, comments, explanatory notes and references, bibliography and citation methods.

The paper discusses techniques, systems and issues of the main epigraphic projects and the potential further epigraphic approach.

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**Ontologies aspectuelles et granularité à profondeur variable: deux exigences inévitables pour des musées virtuels adaptatifs.  
Un exemple de visite multi-profil dans un musée virtuel de peinture thématique.**

***Rica Simona ANTIN***

Nous assistons de nos jours à un intérêt croissant sur les possibilités d'unifier les logiques patrimoniales, culturelles et éducatives. Les musées mutent, ils deviennent des espaces hybrides offrant culture, apprentissage et même divertissement, à un visiteur diversifié, qui occupe la place centrale dans leurs plans de développement. Les musées virtuels radicalisent cette tendance en cherchant des moyens innovants pour répondre de manière satisfaisante à l'impératif d'une accessibilité démocratisée aux collections numériques. Cependant, le concept d'accessibilité va plus loin que la gestion des contraintes techniques et débouche vite à la question de la lecture et de la compréhension des œuvres.

Dans cette communication, nous présentons les arguments en faveur d'une architecture de musée virtuel thématique, susceptible de satisfaire le réquisit d'accessibilité pour différents profils de visiteur. Nous discutons, tout d'abord, l'exigence d'une ontologie « multi-points de vue » et « multi-niveaux » pour soutenir l'adaptabilité des ressources ; en effet, l'organisation des connaissances doit se départager en qualités et granularités de finesse différentes, correspondant aux profils visés par le service proposé. Nous cherchons à clarifier, ensuite, l'importance d'une prédéfinition des scénarios de visite et les formes de leur plasticité. Nous proposons, enfin, un moyen généralisable susceptible de collecter les traces d'un parcours de visite afin d'offrir au visiteur une aide contextuelle riche et significative. Nous illustrons nos arguments au travers d'un musée virtuel thématique que nous construisons actuellement ; il concerne un fonds de plus de cent tableaux de peinture occidentale sur le thème de *Judith et Holopherne*.

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**Old fashion - new fashion, in museology**  
**Ph. D. Rodica ANTONESCU**

*Introduction:*

The modernization of museums tends to involve all the aspects of the domain, changing almost anything. Maybe is a good trend. But some aspects of this all days work must be preserved for the future, considering the principle of the field: keeping alive the past.

*Objectives:*

A cultural object is interesting for a museum because of its exemplarity, or from the moment when it is considered in danger to disappear. So, a lot of common items arrived in time at a new level and raise their values, leaving their original place in the world and entering in museums. The presented few examples will introduce the already known case of Photographic Materials, in order to plead for another approach of modernization, by preserving the old elements of actual use, for a somehow new idea: a museum of museum and museology. The tangible heritage of the hidden life of museums must be emphasized and turn to the public knowledge.

*Conclusions:*

Because we are still in the beginning of modernization, will be a great mistake to waste all the information about how we do in present days our work. The future museologists, who will use some other technology, will look to the actual neglected things we use today as to some quite exotic ones. So let's preserve them, from now.

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**The documentation and the enhancement of a collection: The case of Ignacio Merino Municipal Art Gallery**  
**Teresa ARIAS ROHAS**

**Introduction:**

The case of the Municipal Gallery Ignacio Merino (Lima-Peru), is interesting because it is an example of recovery of the documentary memory of one of the most important collections of paintings from Peru. The process was carried out from the updated inventory, verification of the conservation status of the collection, a photographic record of the paintings and documents, identification of authorship and provenance of works of art from the nineteenth century. The result of this material resulted in the publication of a book.

**Objective:**

Share the experience of the enhancement of the Gallery, as found in the collection, difficulties in finding documents and procedures performed.

**Conclusions:**

The first step to get to know the collection is to identify all documentary material about the works, old inventories, wills, documents of donations of works, etc. This allows to define the origin of the work, authorship, cultural context, etc. Valuable information to know and value the cultural heritage of a collection.

Título: “La documentación y la puesta en valor de una colección: El caso de la Pinacoteca Municipal Ignacio Merino”.

Introducción:

El caso de la Pinacoteca Municipal Ignacio Merino (Lima-Perú), es interesante porque se trata de un ejemplo de recuperación de la memoria documental de una de las colecciones de pintura más importantes del Perú. El proceso se realizó desde la actualización del inventario, verificación del estado de conservación de la colección, el registro fotográfico de las pinturas y de los documentos, identificación de autorías y procedencia de obras de arte del siglo XIX. El resultado de este material terminó con la publicación de un libro.

Objetivo:

Compartir la experiencia de la puesta en valor de la Pinacoteca, como se encontró la colección, dificultades en la búsqueda documental y los procedimientos realizados.

Conclusiones:

El primer paso para conocer a fondo la colección es identificando todo el material documental en torno a las obras, inventarios antiguos, testamentos, documentos de donaciones de obras, etc. Esto permite definir el origen de las obras, su autoría, el contexto cultural, etc. Información valiosa para poder conocer y valorar el patrimonio cultural de una colección.

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## **LIDO (Lightweight Information Describing Objects) as a unified data-delivery tool for Finnish museums**

***Riitta AUTERE and Mikael VAKKARI***

The Finnish National Digital Library (NDL) is a national initiative which aims to improve the online accessibility and usability of cultural heritage resources held by libraries, museums and archives by combining the services and collections to a versatile public user interface.

To make the descriptive metadata of these resources available and the harvesting and normalization feasible, each of sectors involved has agreed to provide standardized data. For the museums, a unified content was a challenge due to the amount of different collection management systems and the data formats in use. Museums have traditionally organized themselves in small groups and developed collection management systems and formats of their own. Depending on the definition of a museum collection management system there were more than 30 different systems used in professionally held museums in 2009.

The LIDO schema developed by the Data Harvesting and Interchange Working Group of CIDOC seemed to be a worth-to-try solution for the data exchange needs. The data structure is sufficiently rich and suitable for cultural history objects and art works. After some consideration we ended up testing it for the delivery of the metadata of the National Gallery and the National Board of Antiquities. The metadata was mapped to the LIDO template and the results were encouraging. We now had a method of providing uniform metadata to the NDL. At the moment we are testing the first version of a national level LIDO XML schema in the data delivery of three museums for NDL user interface.

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## **GEOLOGICAL INSTITUTE'S HISTORICAL ARCHIVE - 125 YEARS OF RECORDS SURVEYS GEOSCIENCES IN THE STATE OF SÃO PAULO - BRAZIL.**

**Ramos José BARCELLOS, Fernando Alves PIRES**

The Geological Institute of the Environment Secretariat of São Paulo, which originates from the Geographical and Geological Commission (1886-1931), created in 2009, the Curator of the Historical Archive to manage its documentation that covers the period from 1886 to 1975 and is divided into the following funds (archives groups):

Geographical and Geological Commission (1886-1931), Astronomy and Geography Institute (1931-1935), Geographical and Geological Survey Department (1935 -1938), and Geographical and Geological Institute (1938-1975).

The aim of this paper is to present the fund (arquivo groups) Geographical and Geological Commission and make a description of actions that the Historical Archive is developing in three structural areas: in the field of the documentary based on the theories and methods of archival science in the field of preservation / conservation following the techniques and principles in this area of knowledge on papers and in the field of information and communication regarding the disclosure and dissemination of historical knowledge, scientific and cultural heritage that represents.

We believe the report of our experiences is already a way to disseminate our collection and an opportunity to exchange experiences with people who work in this area of knowledge.

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**CultureCloud**  
**The European Cultural Heritage Information Space**

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**Jacob LUNDQVIST**

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**Christian-Emil ORE**

**Thomas WIKMAN**

CultureCloud is an initiative for building a distributed architecture and a set of tools for sharing, linking and enriching cultural heritage content. CultureCloud will develop a set of best practices in this area to support local content providers, e.g. museums. In addition to a higher quality of the data provided to Europeana, this will enable collaboration and interlinking of data on all levels from the small village museum to the national and international level. CultureCloud is currently developed for

- a EU project proposal in the ICT PSP 2011, “Aggregating Content for Europeana” call;
- and as a work in progress in the “the Delving Open Source Community” based on the EuropeanaLabs code base donated by Europeana  
<https://github.com/delving/delving>

CultureCloud is aimed at implementing services, long term strategies and roadmaps for:

- A highly scalable, distributed bi-directional, plug-in based, interoperability infrastructure based on the XMPP-protocol for museum to museum collaboration and aggregation and distribution of content to aggregators and Europeana.
- A distributed co-reference service network optimized for persistent identifier resolution, data enrichments and metadata alignments.
- A social community based crowd sourcing service inviting users to participate in managed processes in the co-reference service network to achieve rapid normalization and better quality of content delivered to aggregators and Europeana.
- A model for long term sustainable implementation of CIDOC standards, best practices, guide lines and strategies in the museums community.

The paper will describe the initiative, its rationale, purpose and goals, and also propose a new CIDOC Working Group - The “CIDOC CultureCloud Special Interest Group” harnessing knowledge from other CIDOC Working Groups as the “CRM Special Interest Group”, the “Co-reference Working Group”, The “Documentation Standards Working Group” and the “Data Harvesting and Interchange Working Group”.

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## **New perspectives on museum's information and knowledge management systems: the case of Pinacoteca do Estado de São Paulo**

***Gabriel Moore Forell Bevilacqua, Ph.D. cand.***

The social transformations presented by global dissemination of new technologies contributed to a major change on how various publics can, will, need or want to interact with the museum. This new paradigm deeply connected with the rapidly transformation of human cultural forms of production propose a complex challenge to our institutions demanding a new perspective towards museum practice and its dynamic interaction to museum theory and methodology.

This paper intend to present selected experiences developed at Pinacoteca do Estado de São Paulo (São Paulo state art museum) that point to multidisciplinary work and research tools based on databases and information systems. Among the main projects discussed are the organization of the Documentation and Memory Center, the integrated research interface for both art collection, archives and library cataloging database systems and the common based acquisition policy and management standards for all the museum holdings and collections. Another objective is to understand how records and archives management systems could play a fundamental role on the development of more integrated and effective museum workflows. At last this presentation expect to contribute with the debate on preservation strategies for non-object and conceptual art experiences, which best chances of social permanence could lie on dynamic, cooperative and technology based documentation and information systems.

As a conclusion this study will point that a collaborative and multidisciplinary work associated with a more conscious and broader use of information technology could indicate an interesting strategy to undertake some of the challenges faced the contemporary museum.

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## **Ethnography, ethnology and museology: a complex endeavor for the management of cultural inheritance**

**Camelia BURGHELE, Ph. D.**

Field anthropological research within Romanian villages (and not only; our perception is that certain theoretical problems are also raised within many other European areas) has led to different perspectives in the last few years. We have gone over numerous opinions belonging to anthropologists, researchers, professors, or people of culture – however, in this paper we will attempt to tackle the matter from an ethnography museologist's perspective.

Not necessarily an original approach, but one to systematize and generate themes for reflection, we discuss four great problems, in and from field research, which generate a series of analyses in the efforts of modern thought:

- a. The informant's statute (that of the subject, source or interviewed)
- b. Subjectivity versus objectivity, generated by the researcher's attitude towards field
- c. A stronger and stronger emergency ethnology and risk anthropology
- d. From field to the museum archive, the anthropological exhibit and public relation

The cultural immaterial heritage is – of course – harder to store than the material one. In museums, field information requires a primary processing by digitizing it and then storing it in a specialty archive, organized after the modern museology principles. Afterwards, this information can be used and exploited within the museum, serving as a starting point for theme expos which will motivate the museum to become more open towards its public.

### **Etnografie, etnologie, muzeologie: un demers complex pentru managementul cunoașterii patrimoniului cultural**

Cercetarea antropologică de teren în arealul ruralității românești (și nu numai; percepția noastră este aceea că anumite probleme teoretice se ridică în multe alte arealuri europene) a suscitat, în ultimii ani, numeroase luări de poziție. Am parcurs numeroase opinii aparținând unor antropologi, cercetători, profesori sau oameni de cultură, dar, în lucrarea de față vom încerca abordarea subiectului din perspectiva muzeologului etnograf.

Fără pretenții de originalitate, ci doar din dorința de a sistematiza și a genera teme de reflecție, luăm în discuție patru mari probleme, ivite *din și în practica terenului* și care suscită o serie de decantări în eforturile moderne de teoretizare:

- e. statutul *informatorului* (al *subiectului*, al *sursei*, al *interviewatului*)
- f. raportul dintre *subiectivitate* și *obiectivitate* generat de atitudinea cercetătorului față de teren
- g. conturarea tot mai acută a *etnologiei de urgență* și a *antropologiei riscului*
- h. de la teren la *arhiva de muzeu*, *expoziția antropologică* și *comunicarea cu publicul*

Patrimoniul cultural imaterial este, desigur, mai greu de stocat decât cel material. În muzee, informațiile de teren necesită o prelucrare primară, prin digitalizarea lor, iar apoi trebuie stocate într-o arhivă de specialitate, organizată după principiile muzeologiei moderne. Ulterior, aceste informații pot fi utilizate și exploatate muzeografic, constituind

punctul de plecare pentru expoziții tematice ce vor motiva deschiderea muzeului către publicul său.

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**"Smartphones, iPads, and adaptative web interfaces for museums. New IT technologies as a multifunctional toolkit providing an easier scientific research as well as attractive visitor's multimedia guides."**

**Daniela CHRZANOVSKI**

**Laurent CHRZANOVSKI, Ph.D.**

Le musée virtuel n'est plus, depuis longtemps, un simple rêve d'informaticiens. Cependant, dans l'énorme majorité des cas, les institutions culturelles détentrices de patrimoine mobile ont privilégié deux outils indépendants et dissociés: d'une part les bases de données scientifiques internes, d'autre part les guides multimédia de visite pour le public.

Or, il est de plus en plus utile et avantageux de fusionner ces deux outils, en matière de coûts de fonctionnement et de flexibilité. Pour cela, la seule exigence est de créer des équipes interdisciplinaires constituées de muséographes et d'informaticiens.

L'outil ainsi créé devient polyvalent : à partir d'un seul et unique système, il est facile de gérer, de modifier et d'enrichir toutes les interfaces destinées aux différents groupes d'intérêt:

1. Une base de données sécurisée en intranet accessible aux seuls collaborateurs du musée (inventaire, archive photographique, archive multimédia).
2. Une synthèse de cette base (photographie non piratable et court texte descriptif) pour le site public du musée
3. Un outil multimédia développé avec les deux éléments précédents, permettant la visite virtuelle du musée
4. Un outil multimédia (texte, audio, vidéo) adapté aux téléphones mobiles pour la visite guidée du musée

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## **Registry of the Fine-Art Collections**

**David CIGÁNEK**

This year goes to its end the project aimed at the introduction of national authority files used by librarians into the museum environment which started on 2007 and had been presented at CIDOC meeting in Athens. Despite of its rather theoretical alignment, first practical outcomes are already available. The most notable one is the massive use of authority driven vocabularies in the "Registry of the Fine-Art Collections" which is implemented in co-operation with the Czech Association of Galleries (RG) and our methodological center. The Registry has form of joint collection catalog of 26 participating galleries and includes more then 80 000 works of art by now.

Within the framework of the project we have elaborated methodology for recording data into Demus01 – Fine Arts (the common collection management system used in all participating galleries) and prepared a special data transformer for transfer from local Demus01 installations into the Registry. Each of the participating galleries stays responsible for data content and the quality and authorship of the supplied pictures.

We are convinced that the Registry will contribute to the quality of data content of the individual datasets because it detects not only small typing errors but mainly disunity in the notation of important fields. Making fine art collections more open and their objects linked in the semantic sense is another great outcome.

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## **The use and value of the web 2.0 for participatory University Museums**

**Elena CORRADINI**

### **Introduction**

Thanks to their peculiar identities linked to the specific disciplines which determined their creation, University Museums offer an interesting experience to reflect on the role that the community of museum professionals and experts can engage within the production of cultural content - in particular through the use of databases of their collections - to activate social tools, and to design interfaces for contents typical of applications offered by the Web 2.0.

### **Objectives**

This new set of standards and services - which is very easy and intuitive as well as free to produce – can be a useful tool to provide and share online text content, photographs, audio-visual, constructed and manipulated by museum professionals also in collaboration with the users, in order to give a wider visibility and diffusion to University Museums heritage.

The use of web 2.0 tools, which allow the direct intervention of users in creating and sharing content, promotes the participation of publics and a fluid approach to University Museum information, which means a greater openness and sharing in order to spread the knowledge.

Moreover, web 2.0 tools activate pathways of social learning, where the flow of knowledge is not unidirectional but in all possible direction, according to a knowledge conception which is not hierarchical but rather democratic.

### **Conclusion**

My paper will present results and new proposals issued from the international seminar and round table of Italian Rector Delegates for University Museums, which I have been organising and will take place on June 10<sup>th</sup> 2011 at the University of Modena and Reggio Emilia, in order to reflect on the use and the value of new web 2.0 technologies within University Museums

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**Data – Information – Knowledge**  
**Nicholas CROFTS Ph.D.**

The terms *data*, *information* and more recently *knowledge* have acquired specific meanings when used in a technical context – meanings that differ in some significant respects from everyday usage. Knowledge management, in particular, seems to imply a degree of mastery that may be interpreted as technical hubris. Can knowledge really be managed with software? How about belief, opinion and prejudice? The paper takes a quixotic look at epistemology – the theory of knowledge – in an attempt to strip out some of the hype and come up with a working definition.

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## **An aggregation system for cultural heritage content**

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Ongoing activities for digitization, cataloguing and preservation of cultural heritage are taking place in Europe, United States and the world, involving all types of cultural institutions, i.e., galleries, libraries, museums, archives, and all types of content. In parallel, aggregation and indexing initiatives, such as Europeana, illustrate the benefits and added value of metadata interoperability for repository owners and the end user. Modeling efforts are directed in facilitating the aggregation of diverse, proprietary metadata records under well defined, machine understandable reference data models. However, the mapping and transformation procedure is not always a straightforward task, varying according to existing infrastructure and data and requiring the involvement of domain experts and content providers. In this paper, we present an intuitive platform offering functionality for management, alignment and aggregation of metadata records, in order to effectively handle the complexity of mapping cases and to maintain and evolve the alignment of content holding repositories to the aggregation. More specifically, the overall architecture of the system is presented providing details regarding aggregation management, the user interface, the mapping editor and functions and, the resulting repository and publishing interfaces. The system is currently deployed for many European and national aggregation and digitization projects as well as for prototyping efforts for LIDO and the Europeana Data Model.

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## **Romanian churches from Alba County. Research stage** **Ana DUMITRAN Ph.D.**

The subject is of interest for more than a century. A first research was made by Nicolae Iorga in 1906. But a systematic study was made about the '70s, when both the Patrimony Office new created and the researchers of the institutes affiliated to the Romanian Academy, visited almost all the communities, taking thorough stock the new found patrimony. The result of this effort was cumulated first of all by Ioana Cristache-Panait and Marius Porumb.

The research was recently retaken, the results of the investigations of the last years showing an impressive quantity of unknown pieces and giving a new perspective to the Romanian artistic phenomenon of the 17<sup>th</sup> to 19<sup>th</sup> centuries. The systematic re-investigation of each church shows also the dimensions of the danger that is threatening the artistic patrimony, which is exposed to the changes the monuments are subject, disposed and stored in inappropriate conditions or illegal traffic. But not just the restoration of the identified inventory some decades ago is a problem. The study of the parish archives shows just a little useful data about the cult objects, often these being lost and the information about the lost objects from the intimacy of the community is hard to achieve. But the positive results justify wholly the effort, for it helps to the protection of the patrimony, which survived by its addition in the scientific circuit and the warning of the necessity of its inclusion in restoration projects. Also, the mobility of the artists and the reception of western influences, even at the level of the art pieces buyers, appear in a different light.

Subiectul este de interes de mai bine de un secol. O primă cercetare a efectuat Nicolae Iorga în 1906. Un studiu sistematic a fost întreprins însă abia în anii '70 ai veacului trecut, când pe de o parte oficiile de patrimoniu atunci create, pe de altă parte cercetători ai institutelor adiliate Academiei Române au vizitat aproape toate comunitățile, inventariind minuțios patrimoniul artistic găsit. Rezultatul acestui efort a fost cumulat în principal de Ioana Cristache-Panait și Marius Porumb.

Cercetarea a fost reluată recent, rezultatele investigațiilor din ultimii ani scoțând la lumină o cantitate impresionantă de piese necunoscute și punând într-o altă perspectivă evoluția fenomenului artistic românesc în veacurile XVII-XIX. Reinvestigarea sistematică a fiecărei biserici dă, însă, și dimensiunea pericolului în care se află patrimoniul artistic, expus prefacerilor la care sunt supuse monumentele, dezafectat și depozitat în condiții improprie sau traficat ilegal. Dar nu doar reconstituirea inventarului identificat acum câteva decenii este o problemă. Studiul arhivelor parohiale aduce prea puține date concrete despre obiectele de cult, adeseori chiar și acestea s-au pierdut, iar pătrunderea în intimitatea comunității de credincioși pentru a afla ce s-a întâmplat cu obiectele dispărute este foarte dificilă. Rezultatele pozitive justifică, însă, pe deplin efortul, căci contribuie la protejarea patrimoniului care a supraviețuit prin introducerea sa în circuitul științific și atenționarea asupra necesității includerii sale în proiecte de restaurare. De asemenea, apare într-o altă lumină mobilitatea artiștilor și receptarea influențelor occidentale, inclusiv la nivelul consumatorilor de artă.

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## **Aspects du développement de l'inventaire informatisé dans les collections muséales de Roumanie**

***Aurelia Duțu***

L'auteur discute sur l'importance du développement de l'inventaire informatisé en Roumanie. On présente la situation de l'inventaire informatisé au temps du régime communiste, après la promulgation de la loi sur la protection du patrimoine culturel national (63/1974). Après l'année 1990, dans le nouveau contexte politique et législatif, on a projeté un système informatisé national (DOCPAT) pour la réalisation de l'inventaire des biens culturels mobiles. On présente des détails concernant le développement du nouvel programme DOCPAT administré par l'Institut de Mémoire Culturelle (CIMEC) et utilisé dans les collections muséales de Roumanie pour la réalisation de l'inventaire national informatisé et la classification des biens culturels dans le patrimoine national. Selon les données statistiques conservées à l'Institut de Mémoire Culturelle (CIMEC) jusqu'à présent, la plupart des musées et collections muséales roumaines ont reçu le programme DOCPAT. On discute sur la protection du patrimoine culturel et le rôle de l'inventaire informatisé national dans la répression du trafic de pièces culturelles mobiles.

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**Museum vs. Original Context. Refining the Knowledge of Medieval Art Works by Restoring their Initial Setting.**

**Case study: the altarpieces of the parish church in Sibiu / Hermannstadt**

***Ciprian FIREA, Ph.D.***

It is widely recognized that museums play a crucial role for the preservation, investigation, and communication of the medieval art. The thorough analyses of oeuvres carried out in such institutions conduct to a more refined knowledge of their material dimension as well as to an increasing familiarity with the artists' craftsmanship. On the other side, the exhibitions influences on the way in which medieval art is perceived by modern public: a close and un-mediated approach. Nevertheless, in the Middle Ages, the communication between religious art and public was often intermediated by ritual, and especially by the liturgical ritual. Much of the physical appearance as well as of the "content" of artworks was dictated by their original integration in ritual.

The presentation aims to demonstrate that, in some cases, the advance of knowledge regarding medieval art requires a "decomposition" of modern collections (or museums) in order to restore the original environment of the artworks. Such an endeavour brings a significant contribution to the better understanding of both form and content of the analysed objects.

The present demonstration is based on material preserved in museums (especially in Brukenthal Museum), namely medieval and Renaissance altarpieces. The reconstitution of the liturgical matrix which characterised the urban parish church in Sibiu in the medieval period led us to the conclusion that some of the preserved artworks, labelled as from "unknown provenance", were in fact part of this specific liturgical setting.

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**Persistent identification of collection descriptions as a means to provide rich cross-domain context information about the objects in the Semantic Web.**

**Giuliana DE FRANCESCO**

Throughout their lives, objects belong to various groupings. They are created or excavated together with other objects, become part of an owner's collections, enter into museum collections or library or archival funds, are displayed in exhibitions. They are described by catalogues, registered through inventories, reproduced in digital collections, combined with other objects into learning objects, made accessible through virtual exhibitions... Objects gathered, temporarily or permanently, in collections or other groupings can be of similar or different types and can belong to institutions of different domains.

The description of the collections or groupings of objects offers context information relevant for each of the objects gathered. It is useful that this information is registered in a formal way and made consistently available to professional audiences. A former European project, MICHAEL (Multilingual Inventory of Cultural Heritage in Europe) proved that collection-level descriptions also offer means to quickly and effectively give access to cultural information to the general public.

The proposal for an International Standard Collection Identifier was just registered for formal approval by ISO as FDIS 27730. The release of such a new standard will provide the best means to systematically and unambiguously create persistent identifiers, such as persistent urls, allowing to locate in the Web and dynamically embed collection-level descriptions in any object description, thus (potentially) automatically connecting to each other all objects belonging to the same grouping.

Such persistent identifiers would also allow to publish the information as Linked Data, fostering the wider circulation in the Semantic Web of quality cultural information.

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**Knowledge management and museum's informatics. Proposition of a flexible organization for museum's database.**

**Anna LORENTE I GALL**

**Ioannis KANELLOS**

This paper aims to propose an alternative system for the indexation of works of art adapted to the hypertext condition and new practices of accessibility from the World Wide Web. Awarded of the easy and open accessibility to museums databases and with an aim to conciliate it with the educational practices of museums, we propose an alternative system of organization able to adapt their presentation to different visitor's needs and interests. To that end, we first introduce the reading and interpretation paradigm. Considering works of art as non-written documents and based on the traditional practices of museums, we believe that these practices and their learning become the most important way to access and understand works of art. Next, we analyze how the information established by CIDOC standards is currently presented. Despite being thought for a first approach and study of works of art, their use and establishment by Art and museums experts is restricted to this community, not adapted to their open and general access through the WWW. Finally, we present our system of indexation, based on the development of a series of ontologies each of them corresponding to different basic information about artworks. Their conception for being used in an hypertext context, allow to offer a system of organization and consultation flexible enough for supporting different glances and ways to access the museum collection. We conclude about the need of reformulating the way to index and present works of art, more adapted to the new museological practices and to the use of Technologies of information and Communication.

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**Data interchange format for cultural environment data**  
**Miikka HAIMILA MA**

Current development on the Finnish cultural environment data management aims to increase automatic information delivery between data systems. Information managed within different organisations and stored in different databases has similar content but data structures vary. Good experiences in applying LIDO as an interchange format between museum's collection management systems and the Finnish National Digital Library has lead us to think that developing suchlike format for cultural environment data would solve many problems.

The National Board of Antiquities is at central point in developing common use of the cultural environment data. On-going projects with provincial museums, Metsähallitus (Finnish forestry organisation) and Ministry of Environment require a format which would allow interchange of a data of many different cultural environment objects e.g. archaeological sites, build heritage and cultural landscapes. The main objective is to develop a general format that could be utilised with various cases. The CIDOC CRM is an excellent framework and LIDO has turned out to be useful in practise. Combining these with Open Geospatial Consortium's web feature service would provide a versatile base for our needs.

As a part of an international project LIDO has shown that there is no reason to restrict interchange format's development to a domestic level. At this point we are very grateful to have such things as CIDOC CRM. We are also interested in comparing notes on similar projects with other organisations and we hope that our project could be one step on a way creating a cultural environment data interchange format for wider use.

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**Google – World's Largest Online Museum?  
Knowledge Management in Museums in the Age of Networks  
Ari HÄYRINEN**

Studies and everyday practises have shown that generic search engines - like Google - are the most important entry points to the Internet. Therefore it is surprising to see how weakly museums are present in the search engine universe. Unless the search query includes the name of the museum, it is very likely that the top hits for cultural historical queries are coming from somewhere else than from museum sites: individual blog articles, Wikipedia, different kind of volunteer-based virtual museums, commercial sites and occasional home pages. Secondly, even if the resource provided by the museum is found, the content is often traditional collection management data that is not designed for public use and which looks very sparse and non-contextualised when compared to the information found from other sources.

I will analyse the current situation and reasons for the museums' digital silence in the search engine universe. The question is whether this silence is a problem or not, and if it is a problem, then what kind of actions could be taken in order to improve situation knowing the limited resources of the museums. I argue that what is needed is a knowledge management model accepting the fact that very relevant information sources about museum's collections lies outside the museum and that these resources should be seen as a possibility, not a threat. This model relies on sharing of visual content, crowdsourcing and using unique images as linking elements between sources. The model is demonstrated with example cases.

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## MuseumID

**Georg HOHMANN**

### Introduction

Currently there is no defined standard or community agreement about unique and persistent identifiers for museum objects on the internet. Persistent identifiers used in other domains have a different scope, are not suitable to identify real-world objects or require a cost-intensive maintenance infrastructure.

### Objectives

MuseumID<sup>1</sup> is a proposal about persistent identifiers for museums and museum objects. It defines the format of such identifiers and describes a workflow and techniques to create and use them. Objects play the central role in museums. MuseumID takes this into account and enables the representation of real-world museum objects on the internet by enabling the identification of real objects or museums themselves rather than any data about it. The proposal has many advantages over other approaches. The uniqueness of MuseumID identifiers is guaranteed by a standardized workflow and the use of well-known algorithms. They do not consist of any part that refers to a real world item (an URL<sup>2</sup>, a name, a place etc.). And finally they only consist of standard ASCII characters and numbers so they integrate smoothly in the current technical infrastructure of the internet. Their practical use and benefits are illustrated by examples in combination with current formats like LIDO<sup>3</sup> or the EDM<sup>4</sup>.

### Conclusion

The primary purpose of these identifiers is their usage in the context of the Semantic Web<sup>5</sup> and the Linked Open Data cloud. MuseumIDs are a crucial part of the global exchange of metadata regarding museum objects and the knowledge about them.

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<sup>1</sup> <http://museumid.net>

<sup>2</sup> Uniform Resource Locator, <http://www.w3.org/TR/uri-clarification/>

<sup>3</sup> Lightweight Information Describing Objects, <http://www.lido-schema.org/>

<sup>4</sup> Europeana Data Model

<sup>5</sup> <http://www.w3.org/standards/semanticweb/>

## **A platform for curating knowledge: the WissKI system**

**Georg HOHMANN M. A.**

### **Introduction**

The demands on memory institutions to regard several (new) information standards dealing with digital cultural heritage are constantly rising. A new peak is reached by taking the Semantic Web<sup>1</sup> into account. On one side its approach enables new ways of documentation, but on the other side it comes with even more sophisticated technologies and methods. So despite of its advantages the Semantic Web widens the gap between the level of digital documentation a museum with limited resources can achieve and the capabilities of up-to-date digital knowledge representation and management.

1 <http://www.w3.org/standards/semanticweb/>

2 German acronym for „Wissenschaftliche Kommunikationsinfrastruktur“, <http://wiss-ki.eu>

3 Web Ontology Language, <http://www.w3.org/TR/owl2-overview/>

4 CIDOC Conceptual Reference Model, ISO 21127, <http://cidoc-crm.org>

5 <http://erlangen-crm.org>

6 Open Archives Initiative Protocol for Metadata Harvesting,  
<http://www.openarchives.org/pmh/>

7 Lightweight Information Describing Objects , <http://www.lido-schema.org/>

8 Resource Description Framework, <http://www.w3.org/TR/rdf-primer/>

9 <http://www.w3.org/wiki/SweoIG/TaskForces/CommunityProjects/LinkingOpenData>

### **Objectives**

We present the open source software system WissKI<sup>2</sup> that enables museums to use and benefit from Semantic Web technologies whilst being easy to use and maintain. WissKI combines the benefits of common content management and wiki systems and serves as platform for curating knowledge. It allows to manage structured information using forms as well as and non-structured information using semi-automated text annotation. Underneath the systems uses solely Semantic Web technologies. All input is managed using an upper ontology, an OWL<sup>3</sup> implementation of the CIDOC CRM<sup>4</sup> called Erlangen CRM<sup>5</sup>. In addition application ontologies allow a detailed and specialized knowledge representation for each knowledge domain whilst assuring the compatibility of all entered information. The data is stored in a unified triple store and can be provided via several interfaces and formats like OAI-PMH<sup>6</sup>, LIDO<sup>7</sup> or RDF<sup>8</sup>.

### **Conclusion**

By using WissKI a museum can instantly join the Semantic Web and Linked Open Data<sup>9</sup> communities and benefit from the advantages of this approach. Combining sophisticated Semantic Web technologies and ease of use WissKI can help to decrease the gap between museums and up-to-date digital cultural heritage.

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## **A condition documentation system for multimedia works**

**Gert HOOGEVEEN**

**Feroza VERBERNE-KHURSHID**

### Introduction

Establishing the audiovisual collection care department in the Stedelijk Museum Amsterdam in 2008 provided the opportunity to develop a condition documentation system for the museum's multi-media collection.

The museum's conservation department had already developed condition surveys for the other collections, as well as condition survey databases. In order to complement the existing documentation system, a specific condition survey for multimedia works was developed.

### Objectives

The goals we needed to achieve and all the issues we needed to address before setting up a condition documentation format tailored to the specific needs of multimedia works and thereafter a database, will be fully discussed in the paper.

Furthermore, the development and content of the chosen documentation format, a condition survey, how it functions, and the information included in the database, will be described.

The condition documentation format for the audiovisual collections did not come to into being overnight. It needed several months of trial and error, as well several trial runs before the format took its present design. The decisions we needed to take in order to achieve a survey format for the condition reporting of this specific type of collection will also be addressed in the paper.

### Conclusion

In the conclusion, an evaluation of the condition documentation format for the audiovisual collection after the trial period will be discussed. Several issues will be overviewed such as the feasibility of the condition surveying audiovisual collections using this particular format, what needed to be readapted and what needed to be changed.

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## **ART ontology: Experiences with CRM-based organization of heritage images.**

***Daniel ISEMANN, M.A., Prof Khurshid AHMAD***

### **Introduction**

The representation of information related to cultural artifacts is at the heart of knowledge representation for museums. Traditional systems, which are used to represent this body of curated knowledge, leave the burden of search and interpretation of a rich data set to the end-user. There are moves to use reasoning systems to reduce this burden of interpretation using methods based on description logic for example. We have utilised the CIDOC CRM in an experimental image retrieval system for aesthetic images. The evaluation of the system involved art and heritage experts, including documentation experts, from the National Gallery of Ireland in Dublin.

### **Objectives**

Our objective was to evaluate how successful expert and lay users can use curatorial information that is based on an extension of the CRM for image retrieval. We looked at whether people unfamiliar with knowledge representation techniques and logical formalisms can express CRM compatible information using a user interface that is flexibly created from an underlying knowledge base. We have based our system on the Erlangen CRM / OWL implementation.

### **Conclusion**

We will present our CRM based modeling approach and give feedback on some characteristics of CRM that could possibly lead practitioners to unexpected results. We will report on how some of the modeling complexity of the CRM was “hidden” from users of our system and point out and justify, where, on occasion, we have deviated from the CRM standard. Finally, we will report on the results of our prototype evaluation, involving expert and lay evaluators.

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**Résumé d'une contribution « éclairé » (10 min)**

**Michèle VAN KALCK**

L'idée défendue dans cette courte communication est que les archives institutionnelles de musées peuvent (aujourd'hui) être traitées de manière parfaitement conforme aux principes directeurs de l'archivistique et parfaitement répondre aux besoins muséaux en matière d'information et de documentation des collections. Les deux approches — archives et documentation des collections — ne sont ni contradictoires ni exclusives l'une de l'autre. Toutefois, cette vision rénovée des archives muséales, pour être « mise en œuvre », suppose 1) un véritable approfondissement des connaissances sur les archives de musées et la diffusion, la valorisation de cette connaissance ; 2) un véritable dialogue interdisciplinaire, c'est-à-dire la prise en compte *coordonnée* des pratiques normalisées des différents secteurs concernés et des nouveaux modes de traitement et d'accès à l'information.

Il importe aujourd'hui de ne pas obérer, par une méconnaissance des archives muséales, les possibilités futures d'intégration de celles-ci aux réseaux d'informations. Dès lors, il est urgent de s'interroger : les musées doivent-ils participer aux réseaux d'information sur le patrimoine culturel uniquement par le canal de (l'information se rapportant à) leurs (objets de) collections propres ou peut-on envisager pour eux une participation élargie prenant en compte d'autres ressources et notamment celles livrées par les archives institutionnelles organiquement constituées ?

Le propos sera émaillé de 4 exemples choisis pour éclairer la nature particulière et l'apport des archives institutionnelles.

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## Knowledge Management in Georgian Museums

**Lana KARAIA**

Knowledge Management is a range of strategies and practices to document, preserve and share knowledge within organizations. In Georgian museums this field is more or less developed. First of all there are still used card indexes, records and documents are as a discrete set of material usually controlled and maintained by those who created them. In that regard main weak points are:

- Mostly documentation is done in free-text form, no classification and indexing art objects;
- No standard or opportunities to exchange information with other museums;
- Information is mainly accessible to museum staff and not by public at large.

Within Museums Reform's programme Ministry of Culture and Monuments Protection of Georgia developed standard of museum passport and provided computers and digital cameras only to its museums (24) to create database at first. But in general these database systems are mainly designed for small groups inside museums and in Ministry.

The field in Georgia needs to be advanced through the development of knowledge tools, standards and other forms of technology. The electronic or written information should be:

- Easy to access, navigate and contribute;
- Possible for users to understand, accept and use not only on short term but also for future generations;
- Appropriated context to support learning/research for all categories of users;
- Adaptable to new perceptions of artifacts promoted by emergent practices.

As a result knowledge management will be beneficial in supporting integration of museum informational resources (exhibition catalogues, press releases, memberships) in an electronic environment.

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## **Feature Analysis and Typology of Prehistoric Rock Art in Finland**

**Karoliina JÄRVINEN, Master of Arts**  
**Mika NYMAN**

### **Introduction**

The paper presents a feature analysis of prehistoric rock art images. These features are used to create a typology for rock art. The research material used in this pilot project comes from rock paintings in Finland.

Rock painting images in Finland can be divided into main categories and their subcategories. In this paper the three main categories are: humans, animals and geometric motifs. These categories can then be divided into subtypes. Image types are formed by identifying feature properties and feature combinations: for example, feature properties can be the position of arms or the bending angle of the legs of a human figure, the number of an animals legs or the direction of the animals head, or the end protrusion of a curve motif. Main motif types can be characterized using prototypes. The full typology will be assimilated into a rock art ontology and will work as a tool to mark up images with identifiers enabling comparison of images from different areas of the world.

### **Objectives**

The main objective is to present a methodology, where a distinction is made between features and types of rock art images. The same methodology can be applied to many other kinds of objects, where the use of types is relevant for description and classification of objects. Types can then be used in traditional information systems as well as emerging systems such as Linked Data and the Semantic Web. The paper includes reflections on the concept of “Feature” in the CIDOC CRM. Another topic is the creation of a CIDOC CRM based ontology for prehistoric rock art.

### **Conclusion**

A stable typology is an important tool in managing the vast data of rock painting images. Marking images with type identifiers based on an explicit feature analysis will help researchers and other users of rock art archives in their search of certain image with certain motif features and properties.

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## **Linked Data across Libraries, Archives and Museums: design patterns for interoperability**

***Richard LIGHT***

As we move from the possibility of Linked Data towards Linked Data as a practical reality, this brings new challenges to the Library, Archive and Museum communities. The first challenge for each of these communities is to assess their own data recording practice, and work out how it might be expressed in a Linked Data idiom. This is equally challenging for libraries, starting from AACR II, MARC and FRBR; archives, starting from ISAD(G) and EAD; and museums, starting from frameworks such as SPECTRUM and CDWA Lite. This paper will assess the approach being adopted by each community, and summarize discussions on the possibility of interoperable Linked Data raised by events such as the LOD-LAM Linked Data Summit, to be held in San Francisco in June 2011.

An approach to interoperability based on “design patterns” will be presented. These will use the CIDOC CRM (in its RDF manifestation) as a base syntax to describe common information features which might be found in library, museum or archive data. The potential benefit of this approach is to provide a degree of interoperability, even where the Linked Data generated by different communities might otherwise show marked differences.

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**Digital archaeological libraries in Romanian Museums and the digitization project of the Brukenthal National Museum journals.**  
***Adrian LUCA MA***

Most of the archaeological journals from Romania were not fully digitized yet, just a few numbers are available on-line. We tried to develop a digitization method which would keep the costs as low as possible in order to have all of the Brukenthal National Museums journals available for the public on the website. The work involves scanning the journals, processing the images and afterwards, they are exported into a single PDF document. The scanning procedure is completed when all the scanned articles are added into a database.

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Sub-theme – ALM

**MASP and the preservation of all information, the good, the bad and the embarrassing**

***Tariana MAICI DE SOUZA STRADIOTTO***

MASP is the most important classical art museum in Brazil, date sense 1947, and has now almost 8000 items. All the documentation was done by hand and kept on physical archives until 2005 when they museum won a funding given by VITAE to buy computers and got the use right of DONATO an program develop by MNBA (Museu Nacional de Belas Arte) free of charge. The typology of the collection is very diverse going from the normal art museum types like, paintings, sculptures, drawings, but also clothing, majolica, kitsch, videos etc. The project is now on a second phase, that consist on the compilation of the more complex information such as complete descriptions and a more extensive biography of each piece. This paper will show the specifications of this program and how we deal with this variety of typologies on the same data base.

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**Le management de la connaissance des identités culturelles dans les musées de l'environnement multi-ethnique des comtés de Mures, Harghita et Covasna (Roumanie)**

***Dorel MARC, Ph.D.***

Ce travail vise à saisir les aspects liés à la manière dont, à ce moment, le management des institutions muséales de recherche et valorisation du patrimoine réussisse à contribuer à une meilleure compréhension de l'identité culturelle des Roumains, des Hongrois et des Allemands de la région des comtés de Mures, Harghita et Covasna en Roumanie.

L'étude de cas cherche à montrer les modalités et le degré actuel de connaissance des collections du patrimoine muséale qui est représentatif pour révéler les marques identitaires.

Nous évaluerions la façon dont la culture du chaque groupe ethnique du territoire soumis à la recherche portent les styles de vie particuliers et distinctes, les significations, les valeurs, les idées, ainsi comme elles sont repris et promus par les institutions culturelles, d'enseignement ou administratives, par les organisations non gouvernementales, en habitudes, dans traditions, dans l'utilisation des objets du patrimoine.

La contribution de notre travail consistera en une surveillance de l'état de la connaissance des identités culturelles par formes spécifiques muséales et proposera quelques solutions concernant l'égalité de chance pour que chaque groupe ethnique se valorise, représenté à travers les activités muséales.

L'étude proposée apportera de nouveaux arguments sur l'amélioration du management de la connaissance muséale pour accomplir les objectifs de promouvoir l'inter-culturalisme et la multi-culturalité dans les environnements sociaux caractérisés par la diversité ethnique et culturelle.

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## **Managing Museum Documentation at Portugal - The use of SPECTRUM and CIDOC-CRM in Science Museum of the University of Coimbra**

**Alexandre MATOS**  
**Fernando CABRAL**

Since its creation, in 1996, Sistemas do Futuro has invested heavily in the development of collections management systems created in accordance with international best-known standards. Since then, more than 200 museums have been working with the applications we have developed and have contributed with their knowledge and needs to improve our systems. In the same line of work the company has decided to fund a set of advanced studies, doctorates and master's degrees that could, in some way, certify the quality of the work done so far.

So this communication intends to present two parts of this research project (the doctorate projects) that we are developing with Science Museum of the University of Coimbra: the adaptation and translation of *SPECTRUM: the UK museum Documentation Standard* to Portuguese and its inclusion in museum collection software for subsequent application to Collections Trust Partners Scheme in one hand and for the other the different steps that are being taken to implement the the ISO 21127:2006 (CIDOC-CRM).

The use of standards in museum documentation is an imperative that should have happened in a generalized way like libraries and archives, however, for various reasons this has happened to late. Now, the dissemination of knowledge, with tools like Internet, to a global audience and projects such as Europeana will require museums to hasten this work to facilitate the communication and management of their collections. Science Museum of the University of Coimbra is working with us, as technology partners, to adapt, develop and test in some european projects and with the portuguese reality all the new benefits that SPECTRUM and CIDOC-CRM can do for their collections documentation.

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**Hardlines – Ontology-based ideological discourse analysis methods**  
***Efthimios MAVRIKAS, Ph.D. MEng ACGI***

This paper outlines a semantic approach to the mining and analysis of ideological discourse from texts contained within cultural heritage digital collections. This approach integrates a qualitative social scientific method of textual analysis (Critical Discourse Analysis) with a quantitative reasoning and information retrieval method using semi-automatic natural language processing techniques. The ontology-based methods extend the existing alignment of the CIDOC CRM and DOLCE-Lite top classes to corresponding classes of the General Ontology for Linguistic Description (GOLD). They are applied to the analysis of a large thematic collection, containing nearly 15,000 texts. The application focuses on the acquisition of emerging schemas, which can contribute to the classification of unknown cultural texts according to their ideological perspective.

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## **Applicability of CIDOC CRM in Digital Libraries**

**Cezary MAZUREK, Krzysztof SIELSKI, Justyna WALKOWSKA, Marcin WERLA**

### **Introduction**

CIDOC CRM is a mature ontology intended to facilitate the integration of heterogeneous cultural heritage information. It has been created with museum collections in mind and has proved to be useful in practice. Since 2002 Polish NREN PIONIER connected institutions (e.g. research centers, universities, libraries, museums) with the advanced infrastructure which helps building digital libraries (DL) as well as facilitates an efficient management of their content, making it accessible in the Internet. PIONIER DL resources (currently over 600.000 of digital objects) form a part of the cultural heritage, so we sought whether CIDOC is suited to serve as an ontology describing a digital-library-originated knowledge base.

### **Objectives**

As a part of the SYNAT national research project, we are working to create an integrated knowledge system for science (sources are digital museums, libraries, archives, scientific information systems). We looked for one ontology expressive enough to describe all mentioned sources. As CIDOC is often mentioned in the context of intermediate representations for schema mapping, we examined its applicability. In this paper we want to present the results of CIDOC's analysis from the DL point of view.

### **Conclusion**

We propose an application profile of CIDOC sufficient for DL use. We also name additional elements to be considered in the specification. The proposed classes are only specifications (subclasses) of existing ones, but a number of new properties had to be added to meet our goals. We used CIDOC to describe 600,000 DL publications (mapped automatically from a DL schema) and the results are promising.

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**Linked Data: Some preliminary results of the Linked Heritage Project**  
**Gordon MCKENNA**  
**Regine STEIN**

The Linked Heritage project is an EC funded project that started in April 2011. Its main objective is to contribute a large quantity of new content to Europeana, from both the public and private sectors (c3 million items).

In addition the project will show how:

- To enhance the quality of Europeana content, in terms of its metadata richness, its re-use potential and its uniqueness;
- To enable improved search, retrieval and use of Europeana content.

The authors are working in this project as leading partners in the 'work package' *Linking Cultural Heritage Information*. This will, amongst other things, be exploring best practice report on cultural heritage linked data and metadata standards. This paper will give some preliminary results of the research that has been undertaken.

Questions that will be discussed include:

- What is Linked Data?
- Is all of it 'Open', and in which sense is it 'Open'?
- What actual use is being made of linked data in cultural heritage at the moment?
- What experiences are being reported regarding availability and reliability of resources?

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## **History and present in documentation, exchange and data communication. Unexpected shortcomings – The Brukenthal National Museum**

***Iulia MESEA Ph.D.***  
***Alexandru SONOC***

The interest to document the Museum's collections and to organize them systematically dates since the time of the founder of the museum, Baron Samuel von Brukenthal (1721-1803). Later on documentation and systematization followed the fashion and the technical possibilities of each period, beginning with the inventory lists, records and registers until the analytical computerized evidence records of today.

Despite the fact that the first printed catalogues date back to mid 19<sup>th</sup> century, there was always a certain, sometimes understandable refrain in making information about museum's patrimony accessible. The first printed catalogues lead to buying offers for some items of the collection, which could severely affect its integrity and the public discussions aroused about the value of the paintings from this museum could be seen as one of the impulses for the theft of 1968.

The circulation of the information concerning the collections was extremely restricted during the communist period.

After the Revolution of 1989, the Museum answered enthusiastically to the solicitations for information and participation in exhibitions abroad. A consequence of this unrestricted communication was the abusive use of the information and of the images provided by the Museum, ignoring the literature quotation and the copyright. The intellectual property and the copyright laws are recent in Romania and the European procedures to recuperate the damages suffered by the abusive use of the images of different Museum items are very complicated and expensive.

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**Online virtual exhibitions: guidelines for realisation  
short presentation**

***Maria Teresa NATALE***

One of the main goals of public and private cultural institutions is the promotion and dissemination of knowledge. They accomplish their mission thanks to knowledge dissemination tools that include temporary and permanent exhibitions and exhibits that follow codified models, whose goal is to expose citizens to the national and international cultural heritage. The meeting between the languages and methods of traditional cultural promotion (non-virtual exhibits and exhibitions) and the promotion and dissemination of knowledge through web-based methods (online virtual exhibitions) have made it necessary to draft guidelines that encourage the use of the web and maximize its potential. Exhibits designed with IT languages and destined for the web are increasingly acquiring institutional relevance and a strong public profile: museums, archives, libraries, and cultural institutions all should recourse to them and be considered an important strategic activity and as such must be well-planned and supported to foster their long-term growth. Virtual online exhibitions are not merely aimed at specialists, but rather at an audience that is larger and more heterogeneous than ever before, and which is difficult to frame in traditional profiles. This is the reason why project choices must arise from a careful analysis of modes of expression, architecture, and language. The exhibition's architecture must be designed according to effective management models that can generate diversified virtual routes while keeping production costs acceptable, in order to meet the needs of the various user groups. This document aims to illustrate the state of the art in online virtual exhibitions, both on the basis of the actual experience accrued by various Italian institutes and the observation and analysis of international products. It documents the outcome of collective deliberation on the part of experts and operators from all cultural sectors, who discussed their experiences in an ad hoc Italian working group within the Italian Ministry of Cultural Heritage.

P.S. This document is also available in English, currently it is under language revision, and it will be published on the web within 10 days.

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**”It’s a clever camel that goes to the well”  
Practical experiences from the cooperation between archives,  
libraries and museums in Eskilstuna, Sweden  
*Susanne NICKEL***

Almost everybody in Culture-Sweden, who is working at one of the institutions archive, library or museum, is talking about cooperation between them. But only a very few do it in fact and still fewer do it on a practical physical level instead of a virtual one (e.g. cooperation for web services or websites).

Eskilstuna has gone this last way by localizing together not only a great variety of archives from different institutions but also the staff of these institutions. As a first positive effect of the centralization one can already point out the increasing knowledge at all personnel about the different archives and activities. Now everybody working at the different institutions knows who of his or her colleges is specialist for what. That has lifted the service to the public. Our users now get professional answers from every institution which has something to contribute in less time than before.

The paper will by the example of Eskilstuna discuss the advantages and some of the difficulties by physically localize together a not only great variety of archives but also the staff of the library, the city museum and the different archives. It will point out the need not only to concentrate on cooperation for web services but also to go on with cooperation for personal services to the users by giving them the opportunity to meet professionals of all institutions at a popular and regular frequented place (which in Sweden is the library).

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## **The Collection Knowledge Management in the Pushkin Fine Arts Museum**

**Lev NOL**

I have never met the universal definitions of the concept **Knowledge** in the popular or scientific literature. So, in my paper, when discussing a description of museum objects, I suggest to define three conceptual Knowledge Levels: **Data, Information. Knowledge**

**Data.** Data is presented in a particular sign system and on a certain material carrier to provide opportunities for storage, transmission, reception and processing.

**Information.** Data, accompanied by meaning, placed in some context,

**Knowledge.** I suppose that it is possible to allocate some properties which are inherent in the concept KNOWLEDGE, for example:

**The Description Depth:** a detailed, scientific character of the text in the object description,

**The quantity of aspects** in the text descriptions increases,

**iconic series** (the high quality images of the object) accompany the text description.

**Communication (links) of the described object** with other objects, the phenomena, events.

The Pushkin Fine Arts Museum New Portal could be considered as a new approach to present the Museum Collection Knowledge Management

The Portal Structure includes the Core Site [www.arts-museum.ru](http://www.arts-museum.ru) and a group of 12 cross referenced Satellite Sites, designed with different Knowledge Levels. The Core contains only brief Museum information. Each Satellite is dedicated to the concrete division. (collection, exhibition, museum department etc.). The Satellite Content shows the best correlation with the Museum Cultural Resource Knowledge demands. Digital content includes the form of text, images, multimedia files (such as audio or video). One of the most sophisticated is the British Engraving Satellite Site, [www.britishprints.ru](http://www.britishprints.ru).

New Museum Portal as a very effective instrument to meet the challenge – to create the full-fledged Museum Cultural Resource Knowledge Sharing.

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## **Who owns museum information?**

***Irina OBERLANDER-TÂRNOVEANU***

For a long period museums have been the absolute masters of information regarding their collections. There were the institutions to decide what and how much to give to the public and what to keep hidden in their reserves. Museum staff had the privileged and often exclusive access to information gathered with public money. They were entitled to see, publish, take photos and mediate access to museum collections, archives and documentation as they wished. Things changed dramatically in the past twenty years through new public policies, democratisation in society and rapid technological progress. Or not? Or not everywhere? Despite the publication of museum catalogues and full inventories online as a must in several countries, or national databases searchable on the web, in the museum community there is still resistance towards openness. Financial reasons ('we have to sell our information'), copyright reasons ('there are our artefacts'), research priorities ('we have to publish first, we cannot grant access to unpublished material'), conservation and protection ('heritage in danger'), content vulnerabilities ('there are mistakes in our records, we cannot let anybody else see them until...'), lack of resources (staff, equipment), tradition and nationalistic consideration, and others are often brought into discussion. In the meantime, new information and communication technologies change entirely the way we publish, learn and exchange information. Today the social networks disseminate the largest ever number of images from exhibitions, heritage sites and museum events around the world. It is funny to see signs in museums that forbid the use of photo and video cameras at a time when any mobile phone can do these easily. I try to identify what is behind the long list of reasons against free access to information and what museums can lose and gain in this debate.

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## **SOCIAL NETWORKING TOOLS: EFFECTIVE KNOWLEDGE MANAGEMENT (KM) TOOLS IN AFRICAN MUSEUMS**

***Ogechukwu OKPALANOZIE***

In museums, KM includes all the processes that are used in creating, disseminating and utilizing knowledge. Its main purpose is to share and disseminate knowledge among different people within and outside the museum. Some social networking tools like facebook, twitter, blogsites and flickr can be used to achieve this.

The documented form of many collections in the museums in Africa is still in hard copy form, that is, the information about these collections are only stored in books and index cards. In such situations where an accessible database has not been created for these collections, social networking tools become very useful for gaining access to the information about these rich and unique collections. Facebook can be used to make enquiries and gain knowledge about the collections in these museums. Tweets of these museums and those of its friends also help in KM. Moreover, community tools give everybody the opportunity to participate and contribute in providing knowledge about the cultural heritage of a museum. No single person can boast of monopoly of knowledge about a single object in a museum, so everybody is legible to contribute to knowledge sharing. Museum professionals (practitioners), researchers and the community as a whole have a role to play in KM.

Finally, social networking tools have improved KM in museums in Africa and it is a window through which the information about the rich tangible heritage of Africa is shared globally.

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**Conservation – restoration documentation – vector of scientific information in museum research / Documentatia de conservare restaurare vector de informatie stiintifica pentru cercetarea muzeistica**

**Dan Octavian PAUL Ph.D.**  
**Luminita PAUL Ph.D. cand.**

The paper will approach several principles of interdisciplinary research methods in museums. The role of the final conservation-restoration result, after establishing the diagnosis of cultural goods (Historical and artistic research, anamnesis, physical-chemical-biological analysis data regarding materials, working techniques, deterioration processes, etc) and results of conservation-restoration work (new information that widen the comprehensible area of cultural objects) are a proof of peremptory evidence that the first function of museums, conservation, is an important information vector that lays in many cases at the basis of archeological, historical, art history research.

Comunicarea va aborda cateva principii ale cercetarii interdisciplinare in cadrul muzeelor. Rolul documentatiei de conservare-restaurare rezultate, atat in urma cercetarii bunurilor culturale pentru stabilirea diagnosticului (documentarea istorico-artistica, anamneza, datele analizelor fizice-chimice-biologice privind materialele, tehnicile de lucru, procesele de deteriorare, etc.) cat si datele rezultate in urma interventiilor de conservare-restaurare (noi informatii care largesc aria de comprehensibilitate a bunurilor culturale) sunt dovezi peremptorii ca prima functie a muzeelor, cea de conservare, este un vector important de informatii care stau de multe ori la baza cercetarii din arheologie, istorie, istoria artei etc.

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## **Knowledge Management and Museums** ***Kamani PERERA, Dinesh CHANDRA***

### Introduction

Knowledge management in museums can be briefly defined as a conscious strategy of acquiring right knowledge to the right people at the right time and supporting people to share and place information into action in ways that make effort to improve museum performance. It is people to people contact as well as people with information and helps to manage the information.

### Objectives

With the advent of World Wide Web (WWW), the role of museums have changed and expanded their services beyond the traditional boundaries. Using knowledge management tools, museum professionals can provide effective services to their users. In the past, museums have defended for the entertainment of visitors and now they have become establishment for learning and enjoyment. Knowledge management helps museums to get a clear idea of their target audiences. There are visitors who make general visits as well as special visits. Therefore, research needs to concentrate visitor type, their motivation, why they visit, visitor needs etc. This type of research helps to organize special events to attract more audiences to the museums. In addition, most of the time visitors attend permanent collections. Hence, permanent collections should keep under care and preservation for future generations. Museums conduct programs to educate younger generation on the value of rare collections and to prevent conservation. Various projects are being carried out globally for the restoration and conservation of world heritage.

### Conclusion

Knowledge management helps for a systematic approach that ranges from technology-driven methods of accessing, controlling, and delivering information to the developing society. It is an art of creating value from intangible assets.

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## **Digital representation of collections – a rebirth of the authoritarian anachronistic museum?**

***Per Øyvind Riise***

The stereotype museum, so often depicted in popular culture, is a massive display of relics from the past – near or distant – with a great variety of intentions. Whatever intention, there are some characteristics in common of these exhibits, and the rationale of many of these characteristics have been questioned and largely abandoned in the making of more recent museum exhibitions. My questions in this paper is based upon a reflection on the similarities between the organisation of early museums exhibitions and the present drive for presenting museum collections on the web. Two central characteristics I will use is the authoritarian and anachronistic museum.

My conclusion is that many museums in several respects don't seem to be able to transfer the conceptual evolution of the role of the museums in the aftermath of the informational revolution, to the large-scale digitalisations projects being carried out throughout the world. The creation of databases like Europeana or the Norwegian national equivalent "The digital museum" - if used as a communication concept – seems to adopt the same characteristics as the museum displays of the early 20<sup>th</sup> century: we invite our audience to have a look at our treasures, and by our good will we are prepared to share our knowledge with an ignorant public. ICOM states that museums by definition should be in service of society – what should the consequence be for the use of the social web?

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## **The 'EMu @ QMA' project: Knowledge management and collections in Qatar Museum Authority**

**Laura PHILLIPS**

**Dana Al GHAFRI**

Qatar Museums Authority are currently implementing a bi-lingual version of EMu (Electronic Museum) across their multi-disciplinary, world class collections. Their extensive collections range from photographs, Islamic art, Islamic coins, weapons, Orientalist art, Qatari social history, modern Arab art, local archaeology, heritage sites, sports memorabilia, public art and beyond. Aside from the day-to-day collections management, there are multiple new museums being planned for the next decade, which the new database will help to manage through the stages of design, object acquisition, display, conservation, and multi media displays.

Unlike most public museums and institutions in Europe and North America, who gradually acquired object collections through colonial rule and economic expansion over the last (roughly) 200 years, Qatar have had a period of rapid accumulation of world class objects for their museum collections since the last decades of the 20<sup>th</sup> century. Qatar enters the international museum circuit at a time when the technology for knowledge management is already at an advanced stage. As a result, QMA have the advantage of being able to implement cutting edge technology for knowledge management in their museums, and also develop their national documentation and collections management procedures to international standards.

The key text in this poster would include:

- A brief history of QMA
- A summary of QMA museums and collections
- A summary of the EMu @ QMA project
- Examples of our customized bi-lingual database
- Examples of how we are managing our bi-lingual data entry through look up lists and thesauri

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## **MANAGEMENT OF KNOWLEDGE IN GEOLOGICAL MUSEUM – MUGEO – SÃO PAULO – BRAZIL.**

***Fernando A. PIRES, Rodrigo DIAS DUTRA, José BARCELLOS RAMOS, Rogerio R. RIBEIRO, Diego AMORIM GROLA, Daniel RODRIGUES DE FRANÇA***

The MUGEO is a museum in the area of Geosciences and Environment, belonging to the Geological Institute of the Environment Secretariat of São Paulo. Its collection is comprised of collections of minerals, rocks, fossils, objects and documents. Besides the activities museum has two sections: the Geological Monuments and Curator of the Historical Archives. The Geological Monuments manages, investigates, researches and oversees geological monuments of the State of São Paulo, and the Curator of the Historical Archives, manages the funds (archive groups) originated from the foundation of the Geographical and Geological Commission (1886 to 1931) and after the Astronomy and Geography Institute (1931-1935), Geographical and Geological Survey Department (1935-1938), and

IGG - Geographical and Geological Institute (1938-1975) .

We are currently developing a database that should cover the needs and characteristics of the three areas: Museum, The Monuments and Historical Archive, which covers the registration of profiles, registration and tip, cataloging, classification, indexing, multimedia uploads, consultation and Research and accessibility. The databases have specific characteristics, but will be interconnected, allowing for consultation and joint research of different bases, with the aim of adding value to information at the time of the search. This will enable greater agility in managing the knowledge and the generation of actions and products.

The database is partially available to the public, providing access to consult and research.

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## **Capturing Rich Data about Landscapes for Information Systems** **Maritta Pitkänen, Antti Vallius, Researcher, Mika Nyman**

### Introduction

The core data used in this paper consist of images of landscape paintings and art historical analysis of these paintings. Additional material consist of photographs of the sites in their current state including aerial photographs and GIS data. The data for this paper is collected in a dedicated research project by Museum Director emerita and Art Historian, Lic. Phil. Maritta Pitkänen. Her project has been funded by the Swedish Cultural Foundation. Additional insights to the paper are provided by Antti Vallius, who is studying pictorial representations of rural landscapes published in Finnish landscape publications (c. 34 books) between years 1845–2007. In his work, discovering the structural elements and revealing the meanings of the rural landscape imagery takes place in the visual analysis in the contexts of semiotics and history of ideas. A separate part of Mr. Vallius' work related to this paper has been financed by the Center for Economic Development, Transport and the Environment of Central Finland.

The paper reflects over the means to extract knowledge from rich source material which is open to different interpretations. The starting point of the paper and its underlying project, “Journey in the Landscape”, is a refusal to use a simplistic schema as the only means to describe rich, open and elusive content. Simple schemas can be used to describe many aspects of the provenance and contexts of works in addition to their characteristics, but additional theoretical work is needed to bring out the richness of the source.

### Conclusion

Simple descriptive schemas are necessary but insufficient means to describe works of art. Complementary methods are needed to address the challenge to describe and store rich data in information systems. In the paper some of these methods developed within the framework of the “Journey in the Landscape” project are presented. Several Finnish museums are collaborating as sources of primary material in this project.

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**Section ALM (Archives, Libraries, Museums / Arhive, Biblioteci, Muzeu)**

**Le KM dans les archives d'art contemporain**

**Magda PREDESCU**

Le Département *Archives & Mémoire digitale* du MNAC où je travaille comme chercheur est un centre documentaire spécialisé dans la conservation, la documentation et le catalogage des faits artistiques des dernières décennies, y compris le patrimoine photographique. Le département a développé également des fonds documentaires concernant les critiques d'art et une bibliothèque de spécialité. Mais ce fond d'archive si précieux pour la recherche en histoire de l'art manque de visibilité – résultat d'une capacité réduite à développer des programmes de description plus fine des documents et à nouer des partenariats avec les acteurs culturels et éducationnels.

Pourtant, au niveau européen il y a de nombreux exemples de gestion réussie des connaissances dans le domaine de l'art contemporain. Comme étude de cas je propose une institution – les *Archives de la critique d'art* de Rennes - que je connais assez bien grâce à un stage de recherche pendant lequel j'ai eu l'occasion de partager des informations avec les professionnels du domaine. Cette expérience m'a permis de répondre à beaucoup de questions concernant la constitution et la valorisation d'un fonds d'archive grâce à une politique documentaire qui attire des financements et développe des partenariats avec les universités, les centres de documentation, les bibliothèques publiques, les musées, les maisons d'édition et les librairies, tant au niveau local, qu'au niveau régional et (inter)national. Les archives et les centres de documentation peuvent être développés par des programmes de recherche, fait qui implique, aussi, une bonne connaissance des milieux éducatifs et culturels.

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## **How to guarantee unitary access to museum objects of various types? By the example of the information system MuIS**

**Mirjam RÄÄBIS**

**Kaie JEESER MS**

In 2009 Estonian museums made transition to the web-based central database MuIS (Information System of Estonian Museums). The goal of MuIS is to guarantee unitary access to museum objects of various types and exchange of information between various institutions. Formerly, Estonian museums used the information system KVIS (Information System for Museums and Antiquarian Institutions) which was based on unitary software, yet operated locally.

In this paper we analyze the event/subject based model connecting museum objects of various kinds in MuIS. The model is aimed to unify data processing and thereby guarantee the unity of access. Relying on actual experience, we consider problems regarding the transition from the local to the web-based database.

MuIS should enable one to describe museum objects of various types (art, archive documents, ethnography, archaeology, numismatics, etc) with maximum amount of data and to administrate them in the system (specification of use and search). How much data is actually needed for a central search?

Relying on practical work experience, dictionaries of a simple type are used in MuIS. Why cannot thesauruses be always used? To what extent are they helpful and to what extent do they produce information not directly concerned with the particular museum object? Are relations generated by the system always the most appropriate ones? Or would relations created by museum workers themselves be a better solution?

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## **MANAGEMENT OF CONSERVATION DOCUMENTATION**

***Marija RADIN MA***

ICOM-CC has adopted new terminology that defines conservation as all measures and actions aimed at safeguarding tangible cultural heritage while ensuring its accessibility to present and future generations. Conservation documentation includes recording all measures and actions, but also proper usage of those dates and information and it has significant importance to the process of cultural heritage safeguarding.

Documentation of conservation treatment offers reports made by experts that include data on condition of particular cultural object, detailed information on undertaken treatment, and also records of utilized material, tools, technique and methods. Usage and sharing all this information contributes to development of the conservation profession and general improvement of the protection of cultural assets. For all these reasons, conservation documentation represents one of the foundations of preventive conservation. Central institute for conservation in Belgrade (CIK) has developed "ARTEMIS" date base for management of conservation documentation of the remedial conservation actions performed in CIK. It is a prototype of a specialized documentation system for the protection of cultural heritage created in Filemaker database application, following instructions of experience conservators.

This paper will present project concerning management of conservation documents and it will in same time review this segment of museum documentation and knowledge management.

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## **Digital Technology and Knowledge Management in Museums** **Abdur RASHEED**

A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment<sup>6</sup>. It has shown systematic approach in managing the collection of varied nature, a significant leap has noticed after the emergence of digital technology. CIDOC-International Committee for Documentation has constantly been addressing the issue pertaining to use of digital technology in museums; and in this conference focus is made on knowledge management. In 20<sup>th</sup> century after a decade, new generation is becoming more techno savvy and their involvement towards creativity activity is supported by digital medium. Many museums have sensed the transition and embraced the revolutionary technology whereas many have no idea about technological advances and still using pre-digital technology.

The paper aims to discuss the modern technological approach of museums towards documentation, archiving, web application, networking and dissemination of knowledge. Now the museums have become centre of learning as well place for entertainment and has have taken the place of class room; some modern museums are offering classes in its premises for all group, ranging from schools to Post Doctorate. Through video conferences it has become possible to exchange the ideas, debate and theorize the subject. It has taken responsibility to inculcate historical understanding through active engagement of new generations. In its important tools for practical training, the use of latest technology has been greatly. In the conservation of artifact, during their documentation latest technology plays pivotal role in determining the extent of damage as well the remains of previous intervention. This revolution has changed the approach and results are noticeable. The paper will also highlight the use of different light such as UV lights, IV lights and raking for condition assessment in laboratory

The advent of fast moving technology, high speed internet, high end camera Scanning Electron Microscope (SEM) and different instruments for diagnostic purpose. Besides it there are several computer programs which enabled executing the task swiftly and accurately. This all developments have attracted masses as well contributed in research activities.

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<sup>6</sup> ICOM's definition of Museum

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## **Museums and Social Media: New Forms of Engagement with the Visitor**

***Waltraut RITTER M.A., M.B.A.***

Museums, libraries, and archives, both public and private, are places of interaction and engagement with knowledge; they are not only memory institutions, recording cultural and intellectual legacy for future generations, but also contribute directly to our current social life and well-being.

This paper outlines the development of knowledge management strategies and practices in museums in Hong Kong, a city with a short history of less than 50 years of museums culture.

The rapid development of information technologies and the Internet has enabled museums to provide access to their collections not only through physical displays but also online, and attract even wider audiences than those that visit the museums. Opening new forms of access to cultural knowledge repositories also includes textual, audio and visual content of libraries and archives, leading to the digital convergence of previously independent and non-connected memory institutions. Museums around the world are developing strategies to increase access to collections on the internet, as well as developing new user interaction and interface concepts for personalized access of digital and on-site cultural heritage.

Museums in Hong Kong still largely represent “old”, pre-digital media, object-oriented and non-communicative; the museums are local in space and time, ignoring the opportunities of expanding into the digital information space, where visitors/users can access content on their PC and smart phones. The personalisation of the services leads to new applications, such as interaction with conceptual and structured knowledge as well as communicative interfaces.

Few museums have developed a knowledge management strategy that includes all aspects of a museum, from collection, preservation, administration and curation in the physical and virtual world.

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**The Working Group of Art and Museum Libraries  
(Arbeitsgemeinschaft der Kunst- und Museumsbibliotheken – AKMB):  
an approach to support, enhance and evaluate the work within  
cultural heritage institutions in German speaking countries**

**Margret SCHILD**

The Working Group of Art and Museum Libraries was founded in 1995, initiated in the main by colleagues coming from small institutions (museums, archives and libraries dedicated to the history of art and culture in general) and supported by a few large special scientific libraries, responsible for the supply of research, education and teaching in the field of art history in Germany.

The working group (with about 280 institutional and personal members at the moment) offers support by organising workshops and lectures as well as by publishing a journal, enhances the communication and information exchange by offering a discussion list and a website, has founded special interest groups to discuss current developments in the field of information technology and management. One important point is the establishment and maintenance of contacts to relative organisations on the international level, another important aspect is the collaboration between traditional different branches – archives, libraries and museums – and their different ways of managing knowledge about the objects, their history and context.

The paper gives an overview about the activities of the working group and presents the developed procedure concerning quality management and measurement of information services within art libraries and museums, which is really unique and has been a focal point of the work during the last years. It shows how small institutions of art and culture history become able to meet current challenges of day-to-day work and middle- and long-term strategic planning.

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## **Cooperation and networking among archives, libraries and museums: some examples of good practice in Germany**

**Margret SCHILD**

The Theatre Museum and the Film Museum at Duesseldorf are small institutions with little staff and large unique and highly specialised collections. The paper shows approaches to record, manage and present the collection and other working results within the community of cultural heritage institutions.

Within the cultural institutes at Duesseldorf exists a long and successful tradition of cooperation and networking: a computer-based union catalogue of the libraries has been established at the begin of the 1980es, the cultural institutes initiated d:kult (Digital Archive of Art and Culture at Duesseldorf) at the turn of the 21<sup>st</sup> century - one common collection management system to record, manage and present completely the heterogeneous objects, they are responsible for.

On the local level professional rules for cataloguing, national standards for data formats and authority files have been implemented to facilitate the transfer of information into other portals and contexts – for example to specialised virtual libraries or to portals, enabling access to digitised cultural heritage as Art Libraries Net, Virtual Special Library Media Theatre Film, German Digital Library, Athena, Europeana.

With regard to the federal structure of Germany networking is necessary – the paper will present important partners, the cultural institutes at Duesseldorf are working with since the beginning and covering the spectrum of archives, libraries and museums: the “Arbeitsgemeinschaft der Kunst- und Museumsbibliotheken (AKMB)” [Working Group of Art and Museum Libraries], “Arbeitskreis Filmbibliotheken” [Working Group of Film Libraries], “Fachgruppe Dokumentation” [Special Interest Group Documentation].

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(see above)

## **The use of databases in the museological field: a case study of the Brazilian Museum System**

***Anna Paula da SILVA BA***

This paper presents the current situation of the Brazilian Museum System, emphasizing the databases used by the institutions, according to informations gathered through the Brazilian Institute of Museums (IBRAM), responsible for the museum national politics of Brazil. The methodology includes analysing the proposition of the System, in order to understand the development of databases and the limitations of its use in the museological field. The paper starts with a brief history of the use of databases in Brazilian's museology, showing its importance, scope, advantages and disadvantages. It continues discussing the functionality of the Brazilian Museum System as a database accessible to people and institutions connected to museology. Finally, it intends to stress the importance of the database technology as a tool of collections, ensuring access to available knowledge, quality of search tools and agility of the retrieval of information.

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**Archives, libraries and museums from Romania: knowledge management of special collections of historical images of towns<sup>7</sup>**  
**Anda-Lucia SPÂNU Ph.D.**

During the past four centuries, pictures/images of Romanian towns have been made on a wide range of supports as: walls (of houses or chapels), coins and medals, shrines and other religious objects, scenic backgrounds, documents and other guild objects, playing cards and even on tableware. They were marked by the spirit of the time they belonged to, by the artistic styles and by the purposes they served. Many of the town-views can be found on canvas paintings and other works of art, but the vast majority of them were printed images.

Compared to other European countries, which have strong traditions in studying the representations of towns, – in this context I will mention the conferences of The International Commission for the History of Towns (*Imago Urbis*, Bologne, September 2001; *Image and Perception of Town*, Vienna, October 2003) – we do not pay great attention to this kind of representations. Consequently, they were only superficially investigated.

One of the reasons why papers about historical images, in general, and towns, in particular, have not yet been written, is that many persons who come into contact with them are working in museums, libraries and archives with special collections, being foremost devoted to cataloging and labeling of images. They do not enjoy a special interest in the interpretation of these artifacts in terms of historical information.

This paper aims at presenting the way special collections of historical images of towns from present day Romania are exploited.

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**Le catalogue d'exposition – instrument de documentation du patrimoine museal. Exemples au Musee d'Art de Cluj-Napoca, 2009-2011.**

***Călin STEGEREAN***

La communication presentera les different types de catalogues realisées pour les expositions temporaires organisées dans la période 2009-2011 avec des oeuvres d'art du patrimoine du musée.

Ils seront analysées du point de vue thematique, du concept graphic-estétique et surtout du type d'information fourni.

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## **Knowledge Management and Copyright** **Erin L. THOMPSON, Ph.D.**

A crucial aspect of museums' knowledge management strategy is the goal of sharing knowledge with the public, thus fulfilling museums' goal of education. In the course of this educational outreach, museums often communicate using the works of persons not affiliated with the museum, such as reproducing a painting by a contemporary artist on the museum's website.

This outreach goal and outside source of knowledge mean that museums face certain unique problems when implementing a knowledge management system. This paper addresses one of these problems: copyright. Copyright is the set of rights given by statute to the author or creator of a work, which in most jurisdictions include the rights to copy, distribute, and adapt the work. These rights can lead to clashes with the goals of museums. For example, the reproduction of a painting on the website may violate the painter's right to control the reproduction of his work – even if the museum owns the painting.

The paper, one of the first to address the interaction of knowledge management and copyright, will give an brief overview of copyright in the EU and the US, identify the various situations in which copyright must be considered in knowledge management design, and give examples of successful strategies of museums dealing with copyright issues, including: securing agreements with artists, choosing which works to communicate publically, and forming clear copyright policies in order to take advantage of the fair use doctrine.

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## **NATURAL HISTORY MUSEUM – DATA RECORDING AND TRANSMISSION**

***Ghizela VONICA, Ph.D. cand., Rodica CIOBANU, Ph.D., Ana-Maria MESAROȘ, Gabriela CUZEPAN, Ioan TĂUȘAN, Ph.D. cand., Raluca STOICA***

Recording the information related to the natural history collections, belonging to an old museum, like the Natural History Museum of Sibiu, which comprises a heritage of over a million specimens included in various scientific domains, is a permanent challenge. Retrieving the information regarding an object using the old records is either impossible or requires a lot of time and effort from the curators. Obtaining the information linked to the specimens and its transmission can be achieved with the help of a database, which facilitates the process. The concept of a general database has been used for a long time in the great museums of the world with impressive collections.

In Romania, at national level, there are regulations on how the museum, starting from the old written records, should computerize this data, which theoretically should serve the bi-univocal relationship assets - information. Unfortunately the standards are the same for all museum heritage areas (art, history, natural history, etc.). In this paper we intend to analyze the efficiency of this recording system when it is applied to natural history collections, based on case studies from our museum. The survey is completed with proposals to improve the actualization of these natural history databases.

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## Open Source Tools and Museums *Ion VASILE*

The paper could have been “Open Source Tools and *Knowledge Management*”, but *KM* is still too big a hat in museums we happen to know, in terms of information technology. Of course, people do try to improve their computer skills, yet they are in need of a **common framework**, with sound standards and easiness of use, to better manage computer based data records and *their exchange, via the internet portals, with other similar organizations*. This framework should be a web-oriented application, *which would permit the practitioner focus on cultural heritage content alone*, rather than *face various IT paraphernalia*.

So far, *domestic data records* fill up Excel tables, or simple Access databases, and *our best shot is a Microsoft Access application* (provided by an institute in Bucharest), with two obvious handicaps: the limited size of such a database and platform dependency. When it comes to exchanging/transferring data *in real time* on the internet, we are perhaps at a standstill even more.

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There are many theoretical management solutions available; therefore, choosing a good framework is only guesswork. *Let those who guess better guess last (and for all)*: in other words, we don't expect end-users do developers' job.

The platform dependency issue brings up another aspect: practitioners' reluctance in employing open source software that would make their life so much easier on a very daily basis.

That is why we find it important to concentrate on suggesting *some open source platforms and applications*, which could make up a very useful bunch of *tools of trade* for everyday use in a museum, in terms of office applications, image files editing and storing, graphic design, multimedia, etc.

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Not only these tools simplify some daily tasks and routines, but also prepare those, who seldom venture away from their favourite word processor, for quantum leap in realms of metadata and web technologies.

Of course, we could only speak for ourselves and this conference is the best opportunity to speak up.

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## **Content Management System for museum documentation - WWW resources**

**Ion VASILE**

**Radu OBADA**

### **General Benefits of CMSs:**

- Dynamic content — changes done in real time
- Ease of use in making changes—no need of a developer assistance, just a browser will do, with editing tool similar to Word
- Possibility to add or (re)order pages and other content (site navigation and sections)
- Control over layout and design
- Add photos, links, and other media content in a snap
- Good control over the website
- Multiple users can manage the site
- etc.

### **On line collection catalogue and photo gallery with at least some of the following features:**

- arrangement of pictures in categories and albums;
- picture information stored in database;
- full multimedia support
- creation of thumbnails and intermediate size pics;
- search feature;
- last added;
- random picture;
- caption, title, description and user defined fields for each picture (searchable);
- etc.

### **Online collaboration**

- user management (private galleries, groups);
- users can upload pictures with web interface or ftp (and admin can batch-add to database);
- etc.

-----  
The main question to be answered is “**How many of the above mentioned tasks (and more) can be fulfilled with ease, without sending museum practitioners back to long years schools?**”

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## **The documentation in support of the museum management and knowledge management**

***Lucy del Carmen VEGA MARTÍNEZ BS***

### Introduction

The sign of our times is the use of technology has forever changed the information, communication and education. Society may be the determinant of scientific and technological development, but also the application of science and technology causes social effects.

This analysis is essential to the museum because its mission is currently creating a multicultural space. For this, the museum first must be fully complied with the function of education.

### Objective

The museum should be noted that science and technology have different paths. The technology does not seek truth as science, but the effectiveness is characterized by the synchronization information and communication speed. You can apply the technology to better inform, but not all information can generate knowledge. Scientific truth should be accomplished at the museum through the knowledge management of their cultural heritage.

Management is action. Manage a museum involves acting with established processes. All activities of the museum generate data that must be transformed into information, and this knowledge. To do this, requires documentation procedures to ensure the registration and evaluation of its activities, before computerization.

### Conclusion

The documentation is evidence of management, and is the one that achieves a knowledge management environment quality or scientific truth. Only in this way, the museum can meet the goal of educating and distribute knowledge freely and openly.

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### **Sub Theme-Technique and systems**

#### **Towards an integrated export management environment: preparing the collection management software for exportation and exchange of museum data in a standardised way**

**Roxanne WYNS**

Visibility on the internet for cultural heritage collections has become more important in the past years and will continue to grow with the existence of initiatives like Europeana and national portals. Museums only now begin to see what impact the selection of a certain collection management software in the past can have on their future participation on the web.

In May 2010 the KMKG started a project to create an interoperability environment for exchange and publication of collection metadata for digital cultural heritage (DCH). In the development of a LIDO-exporter, KMKG served as the test case and worked in close collaboration with Zetcom to build a sustainable environment. A difficult task since it was to become a standard application for the entire museum community working with M+ to benefit from in the future.

In the same period KMKG hired an in-house programmer to create an export of the M+ database in generic XML, transform this data to LIDO and to deposit this in an OAI repository for harvesting. The work of the programmer, however excellent, was only meant to be a temporary solution for KMKG to respect European project deadlines. The environment could not be maintained, but the experience of the collaboration where of great value.

This case will provide insight for every small, medium and even big museum thinking about publishing and exchanging DCH on the web.

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ICOM CIDOC Working Group



Transdisciplinary Approaches  
in Documentation

ICOM - CIDOC  
Working Group



CIDOC  
COMITÉ INTERNATIONAL  
POUR LA DOCUMENTATION



INTERNATIONAL COUNCIL OF MUSEUMS  
CONSEIL INTERNATIONAL DES MUSEES

# TRANSDISCIPLINARY APPROACHES IN DOCUMENTATION

Digital documentation as a  
methodological subject of research

September 4th, 2011

For more than 100 years the methodological background of documentation in scientific and scholarly disciplines hasn't substantially changed. The conceptual goals of structuring information within modern databases are still quite similar to those concepts used in traditional card index boxes. They provide, if at all, a limited support for a well structured documentation of information in form and content. The traditional 'analogous' practice of documentation is mainly based on 'card indexes' which often consists of simple field names such as inventory number, measurements, creator or provenance.

With modern approaches the documentation becomes more focused on processes and events. Thus the above mentioned entities what, who, where and when or object/concept, person, place, time and activity, respectively, have to be related to each other. In this manner, in science and humanities an efficient way to document information in their scientific depth is provided as opposed to mere administration. In addition a documentation of processes and events is a prerequisite for transdisciplinary information integration on top of which knowledge networks and knowledge representation tools on the internet can be developed.

The CIDOC WG Transdisciplinary Approaches in Documentation is a forum for discussing the nature of digital documentation as a methodological subject of research. Researchers from scientific and scholarly domains are invited to collaborate on issues such as:

- What are the specific concepts used in research languages?
- How to make these specific concepts or domain-specific thoughts universally understandable?
- Are there any differences between the methodological structure of classification systems in science and humanities?
- How to map scientific and scholarly knowledge in a domain-neutral way?

## Workshop Program

**Siegfried Krause**

### ***Transdisciplinary Approaches in Documentation***

Introduction to the topics, aims and activities of the Working Group

**11:15 - 12:30 Session II**

**9:45 - 11:00 Session I**

**Siegfried Krause**

### ***How to use Ontologies***

A brief introduction to the concept of ontologies in general and the CIDOC CRM in particular. It introduces the CRM as pre-requisite for the transdisciplinary aspects of documentation in a light way and discusses its methodological and technical aspects.

**Günther Görz**

### ***Technical problems and solutions in transdisciplinary approaches***

An overview of the concept of transdisciplinarity and its impacts and challenge for technical solutions for cultural heritage.

**Mark Fichtner, Georg Hohmann, Martin Scholz**

### ***The WissKI Project***

Introduction to semantic museum documentation in practice with WissKI, a software system that utilizes the CIDOC CRM ontology for cultural heritage data integration and semantic text analysis.

**12:30 - 13:30 Lunch Break**

**13:30 - 16:30 Practical Session**

**Siegfried Krause (+Karl-Heinz Lampe)**

### ***New Research Methods in Documentation***

Goals, problems and obstacles of the transdisciplinary approaches regarding information integration in linking cultural heritage information. Mapping of domain specific knowledge, mutual verification of data and the phenomenon of multiple instantiation.

**11:00 - 11:15 Coffee Break**

### ***Hands-on the WissKI Prototype***

Collecting and managing data with the WissKI Software Prototype. Semantic Driven Data Management and data enrichment with semantic text analysis on the background of the CIDOC CRM.



## WORKSHOP

On Spectrum pre Conference

### Here is some information

**SPECTRUM: From Policy to Practicality**  
By the beginning of 2010 the SPECTRUM collections management standard, from the UK's Collections Trust had been licensed for use in over 100 countries worldwide by over 6000 organisations and individuals. 2008 saw the launch of 2 Dutch language versions of SPECTRUM which had been localised for the Netherlands and for Flanders in Belgium; and the transformation of MDA into the Collections Trust with its expanded set of responsibilities. This workshop will explore all of these:

### Outline Agenda

1. Introducing the Collections Trust;
2. SPECTRUM – theory and practice;
3. An international perspective;
4. Using XML - authoring and schema generation;
5. Panel Discussion



# On Spectrum pre Conference

**Gordon McKenna**

**September 4th, 2011**

## WORKSHOP

Linked Data is currently one of the hot topics in the area of “Knowledge management and museums”, being mentioned in many conference talks and papers on the future prospects for access to cultural heritage. This workshop offers an **introductory tutorial** on Linked Data for the cultural heritage sector. It will cover techniques for publishing and consuming Linked Data, requirements for cultural Linked Data, and actual Linked Data developments in the cultural heritage area.

The following topics will be covered. In the process, the acronyms and buzzwords listed below will be translated into a more comprehensible framework!

### **What is Linked Data?**

- “Web of Data”
- RDF – Resource Description Framework; graph structure
- URIs for concepts, persons, objects
- SPARQL - SPARQL Protocol And RDF Query Language queries

### **General Linked Data initiatives**

- Domain standards: SKOS – Simple Knowledge Organization System, FOAF – Friends of a Friend, and others
- Authorities: LCSH - Library of Congress Subject Headings, VIAF - Virtual International Authority File, and others
- Implementations: DBpedia, GeoNames, and others

### **Linked Data initiatives for cultural heritage institutions**

- Attempts to harmonize practice:
  - for libraries: LLD – Linked Library Data
  - for archives: LOCAH - Linked Open Copac Archives Hub
  - for museums: CIDOC Linked Data guidelines
- Investigating first steps in museum practice (LIDO – Lightweight Information Describing Objects, EDM – Europeana Data Model)

### **A potential framework for “museum” Linked Data**

- Object details
- Lightweight “event” framework

### **Publishing your collections as Linked Data**

- Strings to URLs
- Dynamic or static publication
- Implementing content negotiation



## Linked Data for cultural heritage, a half day workshop

Richard Light and Regine Stein

September 4th, 2011

### Overview:

Organizations need to provide information on their objects to many portals including thematic, cross domain, regional, national and international. The LIDO XML harvesting schema has been developed to enable organizations to participate in such initiatives in a standard way.

Being an application of the CIDOC Conceptual Reference Model (CRM) it provides an explicit format to deliver museum's object information, for use in a variety of online services, from an organization's online collections database to portals of aggregated resources, as well as exposing, sharing and connecting data on the web. Its strength lies with its ability to represent the full range of descriptive information about museum objects. It can be used for all kinds of object, e.g. art, cultural, technology and natural science, and it supports multilingual portal environments.

This workshop offers a thorough introduction to the LIDO format and presents practical mapping exercises to the LIDO format. Participants are invited to bring their own data examples for discussion. If possible these examples may be submitted in advance to [r.stein@fotomarb.de](mailto:r.stein@fotomarb.de).

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**CIDOC**  
COMITÉ INTERNATIONAL  
POUR LA DOCUMENTATION

The logo for the International Council of Museums (COM). It features a stylized 'COM' in a bold, serif font, with a horizontal line below it. To the left of the 'C' are several vertical bars of varying heights, resembling a bar chart or a stylized 'I'.

INTERNATIONAL COUNCIL OF MUSEUMS  
CONSEIL INTERNATIONAL DES MUSÉES

## LIDO – Lightweight Information Describing Objects, a practical introduction

Richard Light and Regine Stein

**September 4th, 2011**

