ENRICHING CULTURAL HERITAGE

ABSTRACTS & PROGRAMME

CIDOC2012

HELSINKI • FINLAND • 10.–14.6.2012

PROGRAMME AT A GLANCE

Time	Sat 9th June	Sun 10th June	Mon 11th June	Tue 12th June	Wed 13th June	Thu 14th June
9:00			CIDOC Board Meeting	Parallel Session 2A	Parallel Session 5A	Excursion Day
9:30						
10:00		Workshop Day	Opening National Museum	Parallel Session 2B	Parallel Session 5B	
10:30				Transfer time		
11:00			Keynote: Nick Poole National Museum	Parallel Session 2C	Parallel Session 5C	
11:30				Keynote: Patrick le Boeuf National Museum	Transfer time	
12:00			Lunch		Plenary Session National Museum	
12:30				Lunch		
13:00					Lunch	
13:30			Keynote: Ora Lassila National Museum	Parallel Session 3A	CIDOC AGM Closing National Museum	
14:00				Parallel Session 3B		
14:30			Coffee	Parallel Session 3C	Coffee	
15:00			Parallel Session 1C	Coffee	CIDOC Board Meeting	
15:30			Parallel Session 1B	Parallel Session 4A		
16:00			Parallel Session 1A	Parallel Session 4B		
16:30			Working Groups Intro and Sessions	Parallel Session 4C		
17:00						
17:30	Optional WG Day	CIDOC Board Meeting			Farewell Party Restaurant Kaisaniemi	
18:00	Preparatory Board Meeting					
18:30						
19:00			Welcoming Reception National Museum Lobby	Networking Reception Helsinki City Museum		
19:30						
20:00	Pub Meet	Pub Meet	Pub Meet	Helsinki Day Evening Out		
20:30						
21:00		Midnight Cruise				
21:30						
22:00						

WORKSHOPS AT A GLANCE (Sun 10th June)

Place / Time	National Museum of Finland Auditorium	Kiasma Seminaari	Sports Museum	National Board of Antiquities	Design museum
10:00 – 12:30	**Workshop 1** Harmonized models for the Digital World: CIDOC CRM, FRBROO, CRMDig and Europeana EDM *Martin Doerr and Stephen Stead*	**Working group meeting** Museum Process Implementation *Walter Koch*	**Workshop 4** Linked Data for Cultural Heritage *Regine Stein and Richard Light*	**Workshop 6** Dive into WissKI – A virtual research environment for scientific documentation *Siegfried Krause, Georg Hohmann, Günther Görz, Mark Fichtner, Martin Scholz*	**Workshop 2** An overview of the CIDOC Summer School *Nicholas Crofts*
13:00 – 13:30	Lunch National Museum of Finland	Lunch National Museum of Finland	Lunch National Museum of Finland	Lunch National Museum of Finland	Lunch National Museum of Finland
14:00 – 16:30	**Workshop 1 (cont.)** Harmonized models for the Digital World: CIDOC CRM, FRBROO, CRMDig and Europeana EDM *Martin Doerr and Stephen Stead*	**Workshop 3** CIDOC Summer school Course 404 From Procedures to Business Processes *Walter Koch*	**Workshop 5** LIDO – Lightweight Information Describing Objects: An introductory tutorial *Regine Stein*	**Workshop 6 (cont.)** Dive into WissKI – A virtual research environment for scientific documentation *Siegfried Krause, Georg Hohmann, Günther Görz, Mark Fichtner, Martin Scholz*	**Workshop 7** Object ID: Documentation and illicit trafficking CIDOC Summer School Course 203 *Nicholas Crofts*

CIDOC2012 HELSINKI • FINLAND

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FOREWORD

The CIDOC annual conference 10.–14.6.2012 in Helsinki aims to discuss the new ways and possibilities offered by the information society to search and use cultural heritage collections. Under the main theme *"Enriching Cultural Heritage"* the conference will tackle key actual questions such as interoperability of data resources, cross sector portals, semantic web, ontologies and linked data, social media, multilingualism and regional cultures and innovations in documentation.

The conference has three prominent key note speakers: Nick Poole, Patrick Le Boeuf and Ora Lassila. The call for papers brought us 90 contributions, from among which the scientific committee chose the most interesting ones.

This publication contains all the abstracts chosen to the conference. A selection of them together with the key note speeches will be published later on in the CIDOC Bulletin.

The Local Organisation Committee thanks warmly all the contributors. We are sure that the papers presented will offer us interesting perspectives and new ways to face the challenges and possibilities offered by the new technology.

We also want to present our compliments to the Scientific Committee, who had the liable task to make the selection between all the contributions sent to us.

Warm thanks also to all who have participated in making this conference possible, especially the Board of CIDOC and the president Nicholas Crofts. We thank our sponsors and organizations who have supported us by offering financial support, personnel resources or venues for the conference: the National Board of Antiquities and the National Museum of Finland, The Ministry of Education and Culture, the Federation of Finnish Learned Societys, Ambassade de France, Institut français de Finlande, Air France, The Finnish National Gallery, Designmuseum, The Sports Museum, Helinä Rautavaara Museum, Vapriikki/Tampere museums and Profium.

For the translations we thank Paul Parant, who has done all the translations from English to French. Most papers were sent to us in English, but those originally in French were translated into English by Heikki Nylund.

On behalf of the Local Organisation committee

Sirkka Valanto

Chair

ORGANISERS

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Conceptual Reference Model Special Interest Group: Martin Doerr, Greece
Co-reference: Mika Nyman, Finland
Data Harvesting and Interchange: Erin Coburn, USA and Regine Stein, Germany
Digital Preservation: Stefan Rohde-Enslin, Germany
Documentation Standards : Richard Light, UK
Information Centres: Monika Hagedorn-Saupe, Germany
Multimedia: Maja Sojat-Bikic, Croatia
Museum Process Implementation: Dr. Walter Koch, Austria
Transdisciplinary Approaches in Documentation: Siegfried Krause, Germany; Günther Görz, Germany; Georg Hohmann, Germany

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CONFERENCE INFORMATION

Registration and information desk

The registration and information desk of CIDOC2012 is located at the main conference venue on the ground floor of **The National Museum of Finland / Auditorium** (address: Mannerheimintie 34).

Registration will be open on following times:

- Sunday, June 10 at 8:30–17:30
- Monday, June 11 at 8:30–16:30
- Tuesday, June 12 at 8:30–16:30
- Wednesday, June 13 at 8:30–14:00

Registration closes on Wednesday afternoon and will not be open on the excursion day, Thursday, June 14.

Instructions for speakers

Conference sessions: All presentations are to be delivered for uploading to the Speaker ready room preferably one day prior to the presentation, or at least two hours prior to your session. The speakers' assistant will be helping you to upload your presentation. You can also ask for help from the registration desk.

The accepted formats are PDF and Power point. The file has to be named with your last name, first name and the code of your session. (You'll find the session codes from the conference program). E.g. *Valanto_Sirkka_1A.ppt* .

The conference assistant assigned for your session will transfer the presentation to the computer used at the session venue. Personal laptops are not permitted for presentations due to time constraint and security.

When preparing your presentation please keep in mind the the time allocated for your talk:

- full presentation is 30 min (20 min presentation and 10 min discussion)
- short presentation is 15 min (10 min presentation and 5 min discussion)

You will find Speaker ready room at the Exhibition hall (2nd floor of the National Museum)

Session Chairs

Sunday Workshops, Plenary and Parallel sessions: A conference assistant will be available to assist the Chairs at the venue of the workshops/session 30 minutes prior to the scheduled starting time and throughout the sessions. They will inform the chairs of any known changes to the program, upload the presentations on the computer used on the meeting room and help in tracking the time.

Name Badges

Upon registration you will receive a name badge which should be worn at all conference events, including the social functions. It is the only invitation and ticket you need to the events you have registered for. Entrance to the meeting rooms is with a proper delegate name badge only.

Internet

The conference venues have a free wireless access to internet. Information about usernames and passwords is availabe at conference registration desk. You can also inquire from the ticket booth of each venue.

Lunch and coffee

Warm lunch and coffee are included in your delegate fee on conference days (10.–13.6.). The lunch is served in the National Museum of Finland on the ground floor lobby outside the Auditorium.

Afternoon coffee is served at the venues of parallel sessions.

National Museum, Kiasma, Designmuseum and Ateneum have also cafés which are open during the museum opening hours.

Exhibition hall and CIDOC Lounge

You will find the exhibition and CIDOC Lounge on the 2nd floor of the National Museum. The exhibition provides an opportunity to explore commercial collection management systems and to meet representatives of their providers.

You are invited to visit the exhibitors and relax in the lounge during the following opening hours:

- Monday, June 11, 13:00–18:00
- Tuesday, June12, 9:00–17:00
- Wednesday, June 13, 9:00–16:00

CONFERENCE VENUES

Main Venue

The National Museum of Finland , Auditorium
Address: Mannerheimintie 34, 00100 Helsinki

National Board of Antiquities, Meeting rooms
Address: Nervanderinkatu 13, 00100 Helsinki
How to get there: *http://www.nba.fi/en/about_us/premises*

Other venues

Kiasma, Museum of Contemporary Art, meeting room Seminaari
Address: Mannerheiminaukio 2, 00100
How to get there *http://www.kiasma.fi/contactinfo*

Sports Museum of Finland, Meeting room
Address: Olympiastadion, Paavo Nurmentie 1, 00250 Helsinki
How to get there: *http://www.urheilumuseo.fi/Default.aspx?tabid=3028*

Design Museum, Meeting room and Auditorium.
Address: Korkeavuorenkatu 23, 00130 Helsinki
How to get there: *http://maps.google.fi/maps?um=1&ie=UTF-8&q=Design+Museum&fb=1&gl=fi&hq=Design+Museum&hnear=0x46920cf26702d201:0xfdc9503ff59df1b5,Helsinki&cid=0,0,16196179533418429946&ei=-Ib0TtWMK6Lj4QTdv8yNCA&sa=X&oi=local_result&ct=image&ved=0CB8Q_BI*

Ateneum, the Museum of Finnish Art
Address: Kaivokatu 2, FI-00100 HELSINKI
How to get there: *http://www.ateneum.fi/default.asp?docId=12563*

Helsinki City Museum
Address: Sofiankatu 4, 00170 Helsinki
How to get there: *http://www.hel.fi/palvelukartta/?lang=fi&id=8663&city=91*

Restaurant Kaisaniemi
Address: Kaisaniementie 6, 00100 Helsinki
How to get there: *http://maps.google.com/maps?q=Kaisaniementie+6,+00100+Helsinki,+Suomi&hl=fi&client=safari&oe=UTF-8&geocode=FQE6lgMdIZR8AQ&hnear=Kaisaniementie+6,+Helsinki,+Suomi&t=h&z=15*

VENUES

1. The National Museum of Finland (National Board of Antiquities)
   Mannerheimintie 34, 00100 Helsinki
   1b. National Board of Antiquities, Meeting rooms
   Nervanderinkatu 13, 00100 Helsinki
2. Kiasma, Museum of Contemporary Art
   Mannerheiminaukio 2, 00100 Helsinki
3. Ateneum Art Gallery, The National Gallery of Finland
   Kaivokatu 2, 00100 Helsinki
4. Sports Museum of Finland
   Olympiastadion, 00250 Helsinki
5. Design Museum
   Korkeavuorenkatu 23, 00130 Helsinki
6. Helsinki City Museum
   Sofiankatu 4, 00170 Helsinki

Recommended hotels:

A. Hostel Academica,
   Hietaniemenkatu 14
B. Hotel Arthur,
   Vuorikatu 19
C. Crowne Plaza,
   Mannerheimintie 50

Other:

R. Restaurant Kaisaniemi
   Kaisaniementie 6, 00100 Helsinki
M. Midnight Cruise,
   departure Market Square
   (Kauppatori)

SOCIAL PROGRAMME AND CONFERENCE EXCURSIONS

Full Day Excursion To Tampere

	14.6.2011 Thursday	location
8:30	Departure to Tampere (Charter bus) travel time about 2 hrs	Bus stop in front of KIASMA, Mannerheiminaukio 2
10:30	Arriving to Museum Center Vapriikki. Coffee Welcome to Tampere and introduction to Tampere Museums	Museum Center Vapriikki Auditorium and riverside lobby
11:30	Guided tours to some of the exhibitions History of the region: Finnish Civil War: Tampere seen through the camera lens of an Englishman: *http://www.tampere.fi/english/vapriikki/exhibition.html*	Museum Center Vapriikki Tammerkoski Tampere 1918 Dear Maggie—William Lomax & Tampere
12:45	Lunch at Museum restaurant Valssi	Museum Center Vapriikki
13:30	PARALLEL TOURS outside and inside	
1)	Walk and a photo safari on the footsteps of Willian Lomax, guided tour on the river front	starts from Vapriikki , ends to Finlayson area
2)	Reusing the industrial heritage, stories about the factories by the river, guided	starts from Vapriikki , ends to Finlayson area
3)	Innovation and mobile technologies, new start-up companies and their projects with, guided	Group first walks over the river to Finlayson area (10 min), building TR1, and stays there
14:30	Werstas, the workers' museum: Textile Museum, Printer's workshop, Steam engine … Exhibition Koijärvi, Kessi and the Kuusamo Rapids examines how the social discourse sparked by the environmental movement has altered our values and ideas. *http://www.werstas.fi/?q=en*	Finlayson area, Väinö Linna Square
16:00	Bus picks us up from Finlayson area	Finlayson church
16:10	Open Air Museum of workers' housing and a nice café *http://www.tampere.fi/amuri/startpage.htm*	Amuri worker's housing museum, Café Amurin Helmi
17:30	Departure from Tampere (charter bus)	Worker's housing museum
	stop at Tampere bus station if necessary	
	travel time about 2 hrs	
19:30	Arriving to Helsinki	Stops at Crowne Plaza and Bus station (near KIASMA)

Half Day Excursion To Espoo

	14.6.2011 Thursday	location
9:00	Departure to Espoo (Charter bus) travel time about 20 min	Bus stop in front of KIASMA, Mannerheiminaukio 2
	A half-day (9–14) guided tour to Espoo, will take you to Otaniemi campus, famous for Alvar Aalto's and Raili and Reima Pietilä's architechture. The tour will continue to Tapiola. 9.20 Guided bus tour in English. Duration about 30 min 9:50 guided walks on Aalto University Campus 10.30 Coffee at Alvari café 11.00 Bus leaves Aalto University Campus for WeeGee 11.15 Espoo, the WeeGee Center 11.15 Visitors welcomed at Exhibition Center WeeGee by guides: Helinä Rautavaara ethnographic museum; Finnish Museum of Horology, Toy Museum. A joint tour in the museums 12–12.30 visits by your own choice in the Exhibition center (Futuro house only for extra fee) 12.30-13.15 lunch at Sis.Deli & café, ground floor	
	http://www.aalto.fi/en/about/campuses/technology/architecture/ *http://www.weegee.fi/etusivu.asp?path=91526* *http://helinamuseo.fi/en/*	
13:30	Departure from Espoo.	WeeGee Exhibition Center
14:00	Arrival to Helsinki city center	

CIDOC WORKING GROUPS

CIDOC has a number of Working Groups, each of which is devoted to a specific topic. Generally, the annual CIDOC conference is the time for the Working Groups to come together, have discussions about their topics and relate to the other groups. The Working Groups are open to all CIDOC members, and we encourage your participation. The Working Groups will also hold workshops and tutorials during the first day of the conference.

CIDOC Helsinki wants to emphasize the importance of working groups and getting things done together. The conference is not only about listening; we want existing and new members to get involved! In working groups you will have a chance to meet like-minded colleagues, discuss, learn, argue and become part of the CIDOC family. Make sure you do not miss the thing which makes people travel to conferences year after year: inspiring meetings with fantastic people!

Kicking off a new working group

The initiative to start a new working group should come from interested CIDOC members, and has to be proposed to an Annual General Meeting of CIDOC.

ICH
A new working group concentrating on the documentation of Intangible Cultural Heritage is about to see the daylight as soon as it finds a Chairperson. If you are interested in Chairing or joining this working group, please contact CIDOC Chair Nicholas Crofts. (nicholas@crofts.ch)

Meeting schedules of the CIDOC Working Groups

Check the dates and times from the registration desk or the chairperson of the group.

Archaeological Sites: Stephen Stead, UK (steads@paveprime.com)
http://network.icom.museum/cidoc/working-groups/archaeological-sites.html
Monday, June 11, 16:30–18:30

Conceptual Reference Model Special Interest Group: Martin Doerr (martin@ics.forth.gr)
http://network.icom.museum/cidoc/working-groups/crm-special-interest-group.html
Meets before the conference on Saturday, June 9 at the Design Museum from 10–17

All CIDOC members are welcome to participate and get acquainted with our working group, regardless of whether they feel to be experts in the topics.

Sunday, June 10: full day workshop

Meeting time during the conference will be announced later.

Co-reference: Mika Nyman, Finland (mika.nyman@synapse-computing.com)
http://network.icom.museum/cidoc/working-groups/co-reference.html
Meeting time will be announced later.

Data Harvesting and Interchange: Erin Coburn (erin.coburn@metmuseum.org) and Regine Stein (r.stein@fotomarburg.de)
http://network.icom.museum/cidoc/working-groups/data-harvesting-and-interchange.html
Meets before the conference on Saturday, June 9 at the Sports Museum from 10–17

Sunday, June 10 : two half day workshops (Linked Data for Cultural Heritage, LIDO)

Monday, June 11, 16:30–18:30

Documentation Standards: Richard Light, UK (richard@light.demon.co.uk)
http://network.icom.museum/cidoc/working-groups/documentation-standards.html
Meets during conference days on Monday, June 11, 16:30–18:30

Information Centres: Monika Hagedorn-Saupe, Germany (m.hagedorn@smb.spk-berlin.de)
http://network.icom.museum/cidoc/working-groups/information-centres.html
Meeting times will be announced later.

MPI - Museum Process Implementation: Walter Koch, Germany (walter.koch@stw.de)
http://network.icom.museum/cidoc/working-groups/mpi-museum-process-implementation.html
Meets before the conference on Saturday, June 9 , in the afternoon. (14–17, time and place tbc)

Sunday, June 10, 10–13
Sunday afternoon, June 10: half day workshop (404 Museum procedures and business processes)

Monday, June 11, 16:30– 8:30

Transdisciplinary Approaches in Documentation: Siegfried Krause, Germany (s.krause@gnm.de)
http://network.icom.museum/cidoc/working-groups/transdisciplinary-approaches-in-documentation.html

Sunday, June 10: full day workshop (Dive into WissKI - A virtual research environment for scientific documentation)

Monday, June 11, 16:30 – 18:30

You'll find current information on the Working groups from the CIDOC website *network.icom.museum/cidoc/working-groups* and the meeting schedules from the conference website *www.cidoc2012.fi*.

If you want to know more, do not hesitate to contact the Working Group Chairs for more information!

CIDOC2012 PROGRAMME

Monday 11th June

10:00 **Opening of the Conference**
National Museum of Finland, Auditorium

Juhani Kostet, Director General of the National Board of Antiquities

Minna Karvonen, Counsellor for Cultural Affairs, Ministry of Education and Culture

Nicholas Crofts, Chair, ICOM/CIDOC

Sirkka Valanto, Senior Adviser, Chair of the Local Organizing Committee of CIDOC 2012

11:00 **Key note speech**

Nick Poole, CEO, Collections Trust: *Powering the Museum of tomorrow—Challenges and opportunities for museums information*

Discussion
National Museum of Finland, Auditorium

12:00 **Lunch**

13:30 **Key note speech**

Ora Lassila, Technology Strategist, Nokia: *Title TBC*

Discussion
National Museum of Finland, Auditorium

14:30 **Coffee**

15:00 **Parallel Session 1A: Co-operation & exchange**
National Museum of Finland, Auditorium

Elina Anttila, Heli Kautonen and Tapani Sainio: *The National Digital Library of Finland – experiences from collaboration and service development*

Chryssoula Bekiari, Gerald de Jong, Mika Nyman, Christian-Emil Ore and Thomas Wikman: *CultureCloud*

Monika Hagedorn-Saupe: *Easy access to Cultural Heritage - Europeana and the German Digital Library*

Rolf Källman: *National coordination of digitisation, digital preservation and digital access to cultural heritage (TBC)*

15:00 **Parallel Session 1B: Semantic Web**
Design Museum

Nikolaos Simou, Eleni Tsalapati, Nasos Drosopoulos and Regine Stein: *Evolving LIDO based aggregations into Linked Data*

Katerina Tzompanaki and Martin Doerr: *A New Framework for Querying Semantic Networks*

Lec Maj, Joshan Mahmud and Emmanuelle Delmas-Glass: *Cross organization data harmonization and access, linked data decentralized approach*

15:00 **Parallel Session 1C: Social Media**
Sports Museum

Ogechukwu Okpalanozie: *Enriching a nation's cultural heritage using social media: a new dawn in National Museum, Lagos*

Irina Krayneva: *Historical factography technology: from archive to social network*

Roman Artemenko: *Comparative analysis of enthusiastic-volunteer's and official archives web-based activity in Russia*

Jesmond Calleja: *Documentation and the mobile device*

Merete Sanderhoff: *Building a shared mobile museum experience on existing platforms*

Nick Tyson, Erica Calogero, Phil Blume and Amy Miller: *My House My Street: Engaging Local Communities of Volunteers to Learn, Train and Gain from Lost Local Heritage*

16:30 **Working Groups: Introduction**

Nicholas Crofts, Chair of ICOM/CIDOC
National Museum of Finland, Auditorium

In parallel: Working Group Meetings

Chairpersons of ICOM/CIDOC Working Groups
Venues to be announced later

19:00 **Welcoming Reception**
National Museum of Finland, Main lobby

Tuesday 12th June

09:00 **Parallel Session 2A: Co-operation & exchange**
National Museum of Finland, Auditorium

Lies Van De Cappelle, Barbara Dierickx, Christine Sauter and Kristine Briede: *Reconciling the diversity of art institution profiles in a collaborative project*

Cezary Mazurek, Krzysztof Sielski, Justyna Walkowska and Marcin Werla: *From MARC21 and Dublin Core, through CIDOC CRM: First Tenuous Steps towards Representing Library Data in FRBRoo*

Judith Merges, Martin Scholz and Günther Görz: *Erlangen Implementation of FRBRoo*

Pekka Henttonen: *Conceptual model for records and archives management*

09:00 **Parallel Session 2B: Semantic Web**
Kiasma Seminaari

Georg Hohmann: *Publishing Museum Objects on the Semantic Web*

Eero Hyvönen, Thea Lindquist, Juha Törnroos and Eetu Mäkelä: *History on the Semantic Web – An Event Gazetteer and Timeline for World War I*

Snezana Popovic, Zoran Cvetkovic, Vesna Bizic-Omcikus and Miroslav Mitrovic: *A semantic extension of the system's model for searching and presentation cultural heritage*

Michael Freiberg and Dietmar Pravida: *About the 'Faust' image database at the Goethe-Haus*

09:00 **Parallel Session 2C: Innovations in Documentation**
Sports Museum

Teija Oikarinen: *Expanding the Evolving E-infrastructures Model of E-Science into Archaeological Context and Digital Curation*

Jyue Tyan Low: *A practical documentation practice for the management and preservation of digital video/ media and installation art*

Nkirote Freda M'Mbogori: *Documentation of African artifacts outside Africa*

Lucy Vega Martínez: *A proposed methodology for document management*

Michèle Van Kalck: *When Archives and Fine Art meet. Different perspectives on plural interests.*

11:00 **Key note speech**

Patrick Le Boeuf, Bibliothèque National de France*: An example of library and museum cooperation: the FRBRoo conceptual model*

Discussion
National Museum of Finland, Auditorium

12:00 **Lunch**

13:30 **Parallel Session 3A: Co-operation & exchange**
National Museum of Finland, Auditorium

David Parsell and Emmanuelle Delmas-Glass: *Using open source tools to expose cross collection data in the LIDO schema*

Norman Rodger and Rodolphe Bailly: *MIMO – "Striking a Chord for Musical Instrument Museums"*

Bert Lemmens and Henk Vanstappen: *Cultural Heritage Standards Toolbox: building a local community of cultural heritage professionals on digital cultural heritage*

Satu Savia: *Developing Collection Management – Museum 2015*

13:30 **Parallel Session 3B: Semantic Web**
Kiasma Seminaari

Gerald de Jong and Thomas Wikman: *The SIP-Creator: Meeting the challenge of metadata harmonization*

Geertje Jacobs and B. Nederveen: *Towards an Open Rijksmuseum*

Johanna Enqvist: *Ontologies of Archaeological Heritage*

Miikka Haimila: *Dissemination experiments with archaeological data*

13:30 **Parallel Session 3C: Innovations in Documentation Special Session: Intangible Cultural Heritage**
Sports Museum

Louisa Onuoha: *Digital technologies and intangible cultural heritage in Nigeria : problems and prospects*

Suvi Kettula and Eero Hyvönen: *Cataloguing Processes of Intangible Cultural Heritage*

Vesna Bizic-Omcikus, Snezana Popovic, Miroslav Mitrovic and Zoran Cvetkovic: *Visualizing the tangible and intangible cultural heritage*

Fredrick Nsibambi Ssenyonga: *Salvaging the Cultural Heritage of the Batwa and enhance its appreciation in Ugandan and beyond*

Teresa Arias: *Cultural diversity and cultural heritage documentation. Registration experience in the collection of offerings in the valley of Urubamba (Cusco-Peru)*

Shashi Bala: *Digital inventories on cultural memories and Intangible Cultural Heritage: Case Study of Yadav community of Haryana*

15:00 **Coffee**

15:30 **Parallel Session 4A: Innovations in Documentation**
National Museum of Finland, Auditorium

Walter Koch and Gerda Koch: *Cultural Heritage: On the Way to Europeana*

Elisa Alaluusua: *Sketchbooks in archives and in artists' studios*

Emanuela Ribeiro: *Documentation in Science & Technology: accessibility to diverse audiences*

Gabriel Bevilacqua: *Collecting personal papers in art museums: new documentation practices at Pinacoteca do Estado de São Paulo*

Marie-France Cardonna: *Le Centre de documentation des musées de France et les bases de données du Ministère de la culture et de la communication : bilan et perspectives*

15:30 **Parallel Session 4B: Co-operation and exchange**
Kiasma Seminaari

Mikael Vakkari and Magdalena Laine-Zamojska: *Adapting the IT-architecture of the museum sector to the Enterprise Architecture - the requirements and the expected results in different sized institutions*

Stefano Valtolina and Barbara Rita Barricelli: *A Model for the Digital Integration and Collaborative Exploration of Cultural Heritage Assets*

Kimmo Antila: *Collaborating, Interacting and Sharing: "Inventing Europe" and Culture Heritage Partners*

15:30 **Parallel Session 4C: Co-operation and exchange**
Sports Museum

Zéphirin Cossi Daavo: *Apports de l'archéologie à l'enrichissement du patrimoine culturel : cas de l'Afrique de l'ouest*

Marianne Koski: *Powerpoint and brain activity - managing collections in local museums in Finland*

Yuri van der Linden: *The Relocation Database: a tool to facilitate the de-accessioning of museum objects*

Magdalena Laine-Zamojska and Cezary Zamojski : *ViMuseo project. Presentation of the preliminary research results and graphical user interface.*

Lieneke Nijkamp: *The Low Countries reunited: some remarks on a future shared database on Flemish art between the Rubenianum (BE) and the Rijksbureau voor Kunsthistorische Documentatie (NL)*

Leena Furu: *Museum 2015 and the improvement of cataloguing*

19:00 **Evening Reception**
Helsinki City Museum

Wednesday 13th June

09:00 **Parallel Session 5A: Multilingualism and regional cultures**
National Museum of Finland, Auditorium

Goran Zlodi, Jelena Rubić Lasić and Ivana Družetić: *An Example of Interactive Online Heritage Resource as a Service of Enriching Regional Cultural Heritage*

Lina Nagel: *Tesauro de Arte Arquitectura and Tesauro Regional Patrimonial: Multilingualism*

Fernando Cabral, Marta Lourenço and Marcus Granato: *One language, two countries– the project of developing a thesaurus of scientific instruments*

Venkata Ramana Rayaprolu: *Challenges to documentation of museum objects in a polylingual society*

Valerie Kabov and Marcus Gora: *Teaching the Man to Fish in a Landlocked Country: Role of Intercultural Dialogue in Museum Education*

09:00 **Parallel Session 5B: Innovations in documentation**
Design Museum

Keletso Gaone Setlhabi: *Bojale Drum: Documentation of a Three-Tier Lifecycle Object*

Maria Vanha-Similä: *Memories from the Weaving Mill 1979-2009*

Katri Hirvonen-Nurmi and Jonina Jansson: *From object-based to contemporary documentation – how to incorporate field work material in ethnographic museum's collections*

Fidelity Phiri and Terry S. Nyambe: *Digitalization of archives, the Livingstone Museum experience*

Maurice Barasa: *The documentation of traditional media in Africa: a survey of the emergent post-colonial folk media storage systems in Africa, 1963–2012*

09:00 **Parallel Session 5C: Innovations in documentation: heritage registers**
Sports Museum

Gerald de Jong, Cris Kremers, Torsten Nilsson, Christian-Emil Ore, Thomas Wikman,

Chryssoula Bekiari and Martin Doerr: *SOFIE – Open for all*

Marija Segan and Milos Milovanovic: *The monuments and sites of Toplica district of Serbia in digital catalogue of cultural monuments*

Ekaterina Vorobyeva: *The National Catalogue of the All-Russian Museum Fund. Past, Present and Future*

Tiina Paavola and Riitta Kela: *The major challenges for the collection management in Tampere Museums – how to build up a system suitable for all kinds of (future) needs?*

11:00 **Plenary Session: Enriching the Cultural Heritage**
National Museum of Finland, Auditorium

Judith Coombes: *Transforming core documentation practices: developing a focus on engaging content and diverse audiences*

Jonathan Whitson Cloud: *The documentation of scientific analysis and conservation at the British Museum: the path to sharing*

Eero Hyvönen, Aleksi Lindblad and Eetu Mäkelä: *TravelSampo System for Creating Mobile Audio Guide Tours Enriched with Linked Data*

Ioannis Kanellos and Simona Antin: *Expositions virtuelles adaptatives. Organisation des connaissances, multi-narrativité et design centré sur le visiteur*

Discussion

12:30 **Lunch**

13:30 **CIDOC Annual General Meeting**
Closing of the Conference
National Museum of Finland, Auditorium

15:00 **Coffee**

19:00 **Farewell Party**
Restaurant Kaisaniemi

Thursday 14th June

Excursion day/Conference Tours

CIDOC 2012 WORKSHOPS

Workshop 1

Title: *Harmonized models for the Digital World: CIDOC CRM, FRBROO, CRMDig and Europeana EDM.*
Presenter: *Martin Doerr, Steve Stead (t.b.c.)*
Format: Full-day Workshop (6 hours)
6 hours in units of 1.5 hours:
3 hours CIDOC CRM,
1:15 hours FRBRoo
1 hour CRMDig
45 min EDM

Outline:
This tutorial will present a set of rich conceptual models or "core ontologies of relationships" for the digital world that are completely integrated and cover, in a complementary way, a vast spectrum of key conceptualizations for memory institutions and the management of digital content. It is argued that core ontologies of relationships are fundamental to schema integration and play a vital role in practical knowledge management completely different to the role played by specialist terminologies. The vision is not merely to aggregate content with finding aids, as current DLs do, but to integrate digital information into large scale, trans-disciplinary networks of knowledge. These networks will then support not only accessing source documents, but also using and reusing the integrated knowledge embedded in the data and metadata themselves while managing the increasingly complex digital data aggregates and their derivatives.

CIDOC Conceptual Reference Model (CIDOC CRM)
Firstly, this tutorial we will introduce the audience to the CIDOC Conceptual Reference Model (CIDOC CRM), a core ontology and ISO standard (ISO 21127:2006) for the semantic integration of cultural heritage information with library, archive and other information. The CIDOC CRM was developed by a Working Group of the International Committee for Documentation (CIDOC) of ICOM. It concentrates on the definition of relationships, rather than terminology, in order to allow for i) homogeneously accessing heterogeneous database schemata and metadata structures, ii) for the migration between such sources and iii) for merging the information they contain. The meaning of its concepts and relationships were constructed by the analysis of hundreds of relevant data structures used by memory institutions, initially from museums. This led to a compact model of 86 classes and 134 relationships, easy to comprehend and suitable for service as a basis for mediation of cultural and library information. The model has recently enjoyed rapid uptake in large-scale information aggregation projects. The tutorial will present the motivations for the model and its overall philosophy. It will present the key concepts as partial models realizing functional aspects of the model, and conclude with application considerations.

FRBRoo
The CIDOC CRM, as an effort of the museums community, is paralleled by the Functional Requirements for Bibliographic Records (FRBR) crafted by IFLA for the library community. Both Working Groups have come together and developed, between 2003 and 2008, a conceptual model capturing the concepts of FRBR as a core ontology (FRBROO), and integrated it with the CRM in a modular way. This process implied adaptations of the CRM itself. The model captures in an ontologically rigorous manner the aggregation of intellectual content by origin and derivation, as intended by FRBR, and formalizes the documentation of performing arts. The model was jointly approved by IFLA and ICOM in 2009. The tutorial will present the key ideas of FRBR and how these have been realized as a formal ontology. It will continue to present the key concepts as partial models realizing functional aspects of the model and describe how CRM and FRBROO complement each other.

"CRMDig", a generic Digital Provenance model
In the framework of the European Integrated Projects CASPAR and 3D-COFORM, FORTH has developed "CRMDig", a generic Digital Provenance model. The model has been verified by highly diverse test cases, such as digitization of museum content, documentation of Digital Performances and European Space Agency data. Within 3D-COFORM, the model is being applied to document all stages of the production and reuse of 3D-models from cultural heritage objects and sites, including all kinds of digitization processes and the digitized objects themselves. The project is about to produce and document larger amounts of data, and has yielded already sufficient verification of CRMDig. CRMDig is much richer and more generic than the "Open Provenance Model", the only competitive attempt to generalize Digital Provenance data. The tutorial will present the problem of generic Digital Provenance documentation, the principles and key concepts of the model and give real-life application examples.

Europeana EDM model
Finally, the tutorial will introduce to the Europeana EDM model. Europeana is a very large-scale metadata repository and aggregation service for all kinds of cultural heritage information from Europe. The EDM model will be

used as core schema in order to describe the content aggregation and core semantic relationships to be indexed by the service across all kinds of content and metadata. The EDM model reuses elements from Dublin Core, CIDOC CRM, FRBROO and ORE. It provides powerful abstractions even over Dublin Core and CIDOC CRM concepts that will ensure sufficient recall when accessing this vast collection. Europeana will accept CIDOC CRM data as specialization of the EDM, whose description can be completely integrated with DC, CIDOC CRM, FRBRoo and ORE. The tutorial will present the problem of querying metadata at that level of diversity, and the semantic indexing Europeana intends to provide.

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Workshop 2

Title: *An Overview of CIDOC Summer school*
Presenter: *Nicholas Crofts*
Format: Half-day Workshop (3 hours)

Outline:
ICOM and CIDOC recognise professional training as a strategic priority. As an International Committee, and thanks to the expertise of our members, CIDOC has a significant potential role to play. The CIDOC Summer School is a comprehensive training programme that we are developing in partnership with the Museum of Texas Tech University. It covers both introductory material for newcomers and specialised topics for established documentation professionals.

Courses will be offered in all three ICOM languages, both online and in traditional classroom settings. ICOM plans to use this innovative programme as a template for other committees wishing to provide professional training. This session gives an overview of the CIDOC Summer School, how it is organised, what courses are already on offer, and how you can participate, as a student, as an author of training materials, as a tutor, or even as a host institution. Two examples of CIDOC Summer School modules will be presented in the afternoon, so you can start your training right away.

Workshop 3

Title: *CIDOC Summer school Course 404 From Procedures to Business Processes*
Presenter: *Dr. Walter Koch*
Format: Half-day Workshop (3 hours)

Outline:
From Summer School Catalogue
404 Museum procedures and business processes
Participants should be familiar with common museum business processes, either through experience or by following module 112 Defining and maintaining a Procedural Manual. The course covers the basic elements of business process engineering and their application in modelling museum procedures.

From ICOM/CIDOC web page
Objective
The working group aims at implementing reference workflows for main business processes as found in museums, galleries and similar organisations. The elaborated work flows should constitute a basis on which museums of different kind and size can build up their own workflows adapted to their special needs. The design of the workflows is based on the BPMN (Business Process Modelling Notation) which has been standardized in 2010 by OMG (Object Modelling Group). To elaborate the workflows an open source tool will be used which converts the graphical desing into an XML presentation which directly can be executed by native BPMN processing engines.

Work Programme
The working Group (WG) identifies core processes which are used in museums and develops generic workflow models derived from these core processes. These models will be elaborated using a graphical open source

tool ("BPMN Designer") and implemented on open source BPMN processing engine. The models are reference models (aka "CIDOC Process References " - CPR) which can be adapted to the needs of museums using a BPMN Designer. The WG will test the elaborated models in praxis and will develop guidelines how to implement the workflow models in museums ("CPR - Best Practice Guide"). The models will be tested against existing standards. In a second phase the process models will be extended by a data model comprising all data to be entered during different steps of different processes delivering a reference model for collection management systems.

Tasks for 2012
- Preparation of the cooperation platform
- Introduction in business process management methodology (BPM)
- Modelling of a training process and preparation of a tutorial
- Analysis of common used processes in museums

Workshop 4

Title: *Linked Data for Cultural Heritage*
Presenters: *Richard Light and Regine Stein*
Format: Half-day Workshop (3 hours)

Outline:
Linked Data is currently one of the hot topics 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: 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
  - Object details
  - Event framework

Publishing your collections as Linked Data
- Strings to URLs
- Dynamic or static publication
- Implementing content negotiation

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Workshop 5

Title: *LIDO – Lightweight Information Describing Objects: An introductory tutorial*
Presenter: *Regine Stein*
Format: Half-day Workshop (3 hours)

Overview:
Organizations need to provide information on their objects to many online services including those that are 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@fotomarburg.de.

For further information about LIDO contact the CIDOC Working Group "Data Harvesting and Interchange" and visit the webpages at www.lido-schema.org

Regine Stein,
Chair CIDOC WG Data Harvesting and Interchange

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Workshop 6

Title: *Dive into WissKI - A virtual research environment for scientific documentation.*
Presenter: *Siegfried Krause, Georg Hohmann, Günther Görz, Mark Fichtner, Martin Scholz*
Format: Full-day Workshop (6 hours)

Overview:
The project WissKI (http://wiss-ki.eu) has reached its final year and would like to share its outcome with the community. The project developed a virtual research environment that supports the documentation of cultural heritage. The software, which is available as open source, uses solely semantic web and linked data technology. A unique feature is the way WissKI deals with data: Each entry is treated as an individual according to the CIDOC Conceptual Reference Model (CRM) and stored in a graph-based storage. So, scientific documentation is turned into a complex semantic network which can be queried, browsed and visualized.

The workshop gives a comprehensive overview of the WissKI system. We will examine the theoretical background and give practical tutorials on how to install, organize, maintain and use the system. Every step will be done by example, and there is also enough time for questions and discussion. After the workshop the participants will be able to install and use the system in their own environment and for their own purposes.

Programme:
10:00 - 10:15 Welcome
10:15 - 10:45 Project Overview
10:45 - 11:15 Practical Introduction
11:15 - 11:30 Coffee Break
11:30 - 13:00 Installation and System Setup
13:00 - 14:00 Lunch
14:00 - 14:45 Theoretical Framework - From RDF to Semantics
14:45 - 15:45 Semantic Documentation by Example I
15:45 - 16:00 Coffee Break
16:00 - 17:00 Semantic Documentation Creation by Example II

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Workshop 7

Title: *CIDOC Summer School Course 203 Object ID: Documentation and illicit trafficking*
Presenter: *Nicholas Crofts*
Format: Half-day Workshop (3 hours)

Overview:
Recovering stolen items is always difficult - without basic documentation it becomes almost impossible. This course takes a detailed look at the Object ID standard, which was developed by the Getty Information Institute and is promoted by ICOM. Object ID provides a set of guidelines for documenting items so that they can be readily identified, even by non experts. In doing so, it contributes to the fight against illicit trafficking.

This course will be of interest to anyone responsible for valuable items that are at risk.

There are no prerequisites for this course other than an understanding of standard documentation practice.

The course covers the following:

- Scope and aims of the Object ID standard
- Illicit trafficking and the responsibilities of museums
- detailed examination of the Object ID elements
- organisations and systems using Object ID
- Adapting Object ID to local needs
- Limits and possible extensions of the Object ID standard
- How to integrate Object ID with an existing documentation system

ABSTRACTS

CIDOC2012

HELSINKI • FINLAND • 10.–14.6.2012

In this document the abstracts are presented in chronological order, following the conference time-table. The papers presented in parallel sessions are arranged in the alphabetical order of the parallel sessions, and the name of the session appears in the header

THE NATIONAL DIGITAL LIBRARY OF FINLAND – EXPERIENCES FROM COLLABORATION AND SERVICE DEVELOPMENT

ANTTILA Elina, Heli Kautonen and Tapani Sainio
The National Board of Antiquities, Finland, The National Library of Finland

The National Digital Library (2008–) is the most extensive cooperation project to date between archives, libraries and museums in Finland. The National Digital Library promotes the availability of digital information resources and develops the long-term preservation of digital cultural heritage materials. Project has brought significant long-term changes, not only to technical infrastructure but also to ways organizations develop their services and co-operate with each other and their customers.

The National Digital Library also contributes to the European Union's objectives concerning the digitization of cultural materials and scientific information. The priorities of the project are creation of a joint public interface for digital materials and services, digitization of key materials and development of a long-term preservation solution for digital cultural heritage materials.

One of the outcomes of the project is the Public interface, with which users can search through the digital information resources of libraries, archives and museums and use a wide variety of digital services. Public interface provides access to vast amount of digital material including photographs and maps, old newspapers, church records, works of art, museum objects, e-journals and library catalogues.

The increase and intensification of co-operation between organizations has been visible right from the beginning of the project. Convergence has taken place both between ALM sectors and within each individual sector. As services are developed jointly, the solutions chosen have a shared support. Moreover, the lively exchange of ideas and perspectives opens up new ways to cooperate and to meet the needs of our audiences.

CULTURECLOUD

BEKIARI, Chryssoula, Gerald de Jong, Mika Nyman, Christian-Emil Ore and Thomas Wikman
Foundation for Research and Technology - Hellas (FORTH), Greece; Delving, Netherlands; Synapse Computing, Finland; University of Oslo, Norway; Delving, Netherlands

Abstract: CultureCloud is an open initiative developed over the last 6 years with the objectives to enable collaboration and interlinking of cultural heritage data on all levels from the small village museum to the national and international level. This is done by designing a generic, standards based information architecture and specifying a set of tools for sharing, linking and enriching cultural heritage content. The main software developer is currently the Dutch company Delving, and all software solutions are open source.

The rationale of the CultureCloud is the simple observations:

The basic interlinking mechanisms underlying the Semantic Web or portals like the Europeana are necessary to link data about our cultural heritage. However, these mechanisms are in themselves not sufficient to establish a cultural heritage information space as formulated in for example the strategic documents of Europeana. The reason is that in most cases the metadata in the memory institutions is not collected for the purpose of interlinking.

The necessary normalization requires a massive computer aided human effort. The best knowledge of the collections and their metadata is in the institutions but also in the head of highly specialized scholars (specialists and amateurs). Thus the only realistic way to a cultural heritage information space is to supply the institutions an specialists with a set of distributed tools and do the job based on crowd sourcing based on common standards, formats and practices like CIDOC-CRM, LIDO and Spectrum.

Since the CultureCloud idea was presented at CIDOC2011 a lot has been implemented. The architecture of CultureCloud is based on a flat network of CultureHubs. These nodes can be anything from a wrapper for an institution's CMS, to the information systematized by local history societies individual scholars. A cultureHUb or a set of such can be run on anything from a small laptop to systems supporting national aggregators. The hubs contain currently simple mechanisms for normalizing data and storytelling. This will be further developed.

The presentation will focus on the principles, implementations and the current status of the initiative.

EASY ACCESS TO CULTURAL HERITAGE – EUROPEANA AND THE GERMAN DIGITAL LIBRARY

HAGEDORN-SAUPE, Monika
Institute for Museum Research SMB-PK, Germany

The New Renaissance Report (published 2011) and communications from the EC will be discussed in their relevance for museums and their relation to Europeana.

Europeanas new developments will be presented as well as the changes due to the new DEA will be reflected in their effect on museum data in Europeana.

All EU member states are asked to create a national digital library as a national aggregator for Europeana. In Germany such a library ís under development and the current state will be presented.

EVOLVING LIDO BASED AGGREGATIONS INTO LINKED DATA

SIMOU, Nikolaos, Eleni Tsalapati, Nasos Drosopoulos and Regine Stein
National and Technical University of Athens, Greece; National and Technical University of Athens, Greece; National and Technical University of Athens, Greece; German Documentation Center for Art History "Bildarchiv Foto Marburg", Germany

During the last few years digital evolution of the Cultural Heritage field has accelerated rapidly, not least through the aggregation of cultural content into Europeana. In this process the LIDO harvesting schema has been successfully used in many EU projects (ATHENA , JUDAICA and others) due to its ability to support the full range of descriptive information about museum objects.

The next step, currently being explored in the Linked Heritage project, is the processing of LIDO metadata in order to publish it on the Web as Linked Data, and connecting it to other Linked Data resources. The aim is to provide a generally valid path for the transfer of data from LIDO XML documents to linked RDF resources, and to highlight successful enrichment steps that can be performed on LIDO metadata.

This paper will firstly discuss different possible ways that can be used for the RDF representation of LIDO metadata, e.g. the use of one single vocabulary or the combination and reuse of vocabularies from different namespaces, attempting to address their strong and weak points. The proposals will then be evaluated using content from the Linked Heritage project, in terms of practicability, maintenance and retrieval. From this exploration the paper will draw some conclusions on the prerequisites and practical steps to be undertaken for successfully publishing LIDO-based cultural heritage information as Linked Data.

A NEW FRAMEWORK FOR QUERYING SEMANTIC NETWORKS

TZOMPANAKI, Katerina and Martin Doerr
ICS-FORTH, Greece; ICS-FORTH, Greece

Repositories of textual content can successfully be accessed by text search engines using combinations of keywords. "Open World" semantic networks of RDF triples however, the core of the Semantic Web and the state-of-the-art of metadata repositories for museum and other cultural information, are not easily accessible by such a global query paradigm. Only a small part of the information can be related to words in labels. Querying individually dozens of different kinds of properties as in ISO21127 (CIDOC CRM), many of which are optional, leaves a huge recall gap compared to text retrieval. On the other hand a global restriction to "core metadata", to a flat set of very few properties as in Dublin Core or VRA, deprives the systems of the reasoning capability about the integrated knowledge in the semantic network.We propose and have been implementing a new query paradigm: A very small set of "fundamental" categories and relationships, as we are used to from core metadata, are presented to the user in the form of a system of invisible to them complex deductions from a rich underlying network of more specialized actual metadata, rather than being primary documentation elements. Using as schema the ISO21127 and specializations (extensions) of it, we are practically able to achieve high recall rates (even 100%) with a compact set of very simple, comprehensive questions in an application comprising general cultural heritage data about museum and archaeological objects and digital provenance data of 3D digitization of the latter. But except from efficiency we also provide simplicity, as the user does not need to be experienced in any way with the concepts of the CIDOC CRM in order to obtain the desired results. Application of the presented framework can easily be adjusted to many other domain ontologies and user preferences.

CROSS ORGANIZATION DATA HARMONIZATION AND ACCESS, LINKED DATA DECENTRALIZED APPROACH

MAJ, Lec, Joshan Mahmud and Emmanuelle Delmas-Glass
Yale University, US; British Museum, UK; Yale University, US

Yale recently implemented campus wide Cross Collections Discovery (CCD) system mapping various metadata standards into a central index. The system provides harmonization of data within the campus but does not solve the problem of integrating this knowledge with that of other organizations. The CIDOC-CRM provides the framework for cross organization harmonization and integration, but although the promise of the semantic web is to support peer to peer federation, inference and reasoning, other projects have tended to implement semantic systems in centrally curated stores to mitigate practical issues.

Yale Center for British Art (YCBA) and British Museum (BM) has joined in partnership to test alternative decentralized approaches to utilizing linked data. Our paper describes challenges of extending the CRM, linking, exposing, and concurrently querying our collection data across separated semantic databases.

ENRICHING A NATION'S CULTURAL HERITAGE USING SOCIAL MEDIA: A NEW DAWN IN NATIONAL MUSEUM, LAGOS

OKPALANOZIE, Ogechukwu
National Museum, Lagos, Nigeria

National Museum, Lagos (NML) is the custodian of over forty one thousand objects from different parts of Nigeria in West Africa. Recently, the use of facebook (a social medium) was introduced in the museum which is a major breakthrough in the history of the museum. Although the use of this social medium is still in its infancy in the museum, it has made positive impacts on the museum. On its page on facebook, the museum tells the public about upcoming events, exhibitions, its activities and achievements. The museum also uses the facebook to announce the release of its regular online newsletter which contains information about the antiquities in the museum. With the aid of the facebook, the museum's audience ask questions about the museum, its activities and collections. They also share the information they have about these tangible cultural heritage with the public. Although the application of social media to the museum has been acclaimed by users, it has its challenges which include lack of awareness of its existence by the public and poor usage by curators and conservators in the museum. I am of the opinion that other social media like YouTube, flickr, twitter, blog and ning be introduced in the museum for better and optimum interaction between the museum and its audience. The introduction of this social medium in NML has greatly helped in enriching and disseminating information about these unique collections.

HISTORICAL FACTOGRAPHY TECHNOLOGY: FROM ARCHIVE TO SOCIAL NETWORK

KRAYNEVA, Irina
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Technology. On the basis of Semantic Web, we have developed an approach to creation of digital archives. An essential feature of this approach is access provided to both records and digital images of the documents stored in the archive. The content operations include storage, file transfer and processing, external image publication, file content modification, etc. Cassettes, a special file structure, were used as a data storage.

Archive. To collect and classify photodocuments on the history of science in Siberia, a project "Electronic photoarchive of the Siberian Branch of the Russian Academy of Sciences (SB RAS)" has been started. At present, its database contains more than 25 thousand photos and about 100 documentaries. The archive of a scientific weekly "Nauka v Sibiri (Science in Siberia)" – more than 11000 images – has been digitized; its description is in process, in particular, its 1706 issues have been presented as Deep Zoom Image Source zip-archives.

Social importance. The project "SB RAS Electronic photoarchive" http://www.soran1957.ru was started in 2006. Now it is a real integrating social media for institutions and researchers, experts and amateurs, involved in the problems of cultural heritage preservation. As the project gets known, its content acquires features specific to social networks. Photodocumtents come from all places wherever former and current SB RAS staff employees live and work. The project results are useful for SB RAS institutes and museums (about 40 of them), as well for the Novosibirsk museum of regional history, mass media and a wide circle of Internet users.

The system is available at *http://sergey.iis.nsk.su/pa/soran1957.aspx*

COMPARATIVE ANALYSIS OF ENTHUSIASTIC-VOLUNTEER'S AND OFFICIAL ARCHIVES WEB-BASED ACTIVITY IN RUSSIA

ARTEMENKO, Roman
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In this paper I would like to discuss changes in the way of public access to rare historical materials caused by appearance of new communicating and analog-to-digital transfer technologies, as well as to show some examples of non-profit projects, which were done mainly by enthusiasts and compare their results with state's archives, which able to get support for their projects from government.

In everyday's activity of researcher, lecturer or museum specialist question of fast and easy access to reliable sources – it's a question of their professional skill and responsibility, of course, as well as a question of archive system conditions – network speed, server hardware, software, well-structured content and flexible search engine. It sound completely banal for any specialist, but to make such a system working well in all aspects it's almost always necessary to solve non-banal problems – sponsor and funding sources, reliable hosting, reserve data-base storage and additional copies, forum support, further development, copyright and so on.

Big state's archives, libraries and museums today rather paralyzed by such amount of question to solve – especially with no any serious instructional and methodological help from their higher patrons. In most of cases state's archives web-pages present their brief history, funds, list of free and commercial services, current events, published materials and contact info. No remote access to material available on-line. So to get necessary material from federal archive you will need to make a small or big trip – depends in which part of country archive based. Postal system also might cause a problem – up to 4 weeks of waiting even within Moscow region. Necessity is the mother of invention, so it's not a big surprise that different historical materials (manuscripts, letters, old news-papers, magazines, users or service manuals, long out-of-print books, photos, sound recordings, movies) collected by various individuals with help of modern technologies appear in the Internet – big and good surprise it's a fact, that many of such sites is free for users, provide rare material with necessary quality and gives you a chance to non-formal communication with thematically-interested group. Relatively small quantity of documents in personal collection, well-thought-out decision about best structure for material, based on collector's own experience and deep knowledge of content, fast response with additions to published materials – it's a good example how enthusiastic persons able to solve state's problem (unsolved by bureaucratic machine) – keep national heritage and provide free access for any interested researcher. Viva Enthusiasm!

DOCUMENTATION AND THE MOBILE DEVICE

CALLEJA, Jesmond
Art Gallery of New South Wales, Australia

For many years, the Art Gallery of New South Wales has been at the forefront of offering its visitors learning experiences that extend beyond traditional exhibit labels within gallery kiosks and audio guides. More recently, the Gallery has continued to lead the way by adding cell phone tours, podcasts and platform specific applications in an effort to capitalise on the commonly owned portable devices – iPhones, iPods, iPads, MP3 players, Blackberries – that visitors already carry in their pockets. Museum professionals see great potential in reaching new audiences and pleasing old ones by providing content and social interaction via mobile devices. This presentation will demonstrate how we approach documentation in the age of the smart phone and iPads. It will focus primarily on the last two years of working with new media projects at the Gallery.

BUILDING A SHARED MOBILE MUSEUM EXPERIENCE ON EXISTING PLATFORMS

SANDERHOFF, Merete
Statens Museum for Kunst, Denmark

9 museums
5 workshops with users
3 dogmas
1 shared mobile experience

A collaborative project between Danish art museums works to create a shared mobile platform of networked collections. 5 workshops will be conducted where users help us create a mobile tool that will enhance both physical museum visits and independent digital/mobile art experiences.

The project stands on 3 dogmas:
1. All interaction design is co-created with target users
2. All content is freely accessible and reusable under Creative Commons licenses
3. The project uses existing social media platforms such as Twitter and Youtube

Delegates will take away:
a) Inspiration for next generation museum practices based on sharing of resources and tools, and collaboration between institutions and users
b) Practical advice on how to get actionable guidelines out of a crowdsourcing process
c) An open invitation to join the project and add their collections and content to the shared platform

Participating museums
- Ribe Kunstmuseum (*http://www.ribekunstmuseum.dk/*)
- Vejle Kunstmuseum (*http://www.vejlekunstmuseum.dk/SEEEMS/27.asp*)
- Fyns Kunstmuseum (*http://museum.odense.dk/museums/funen-art-museum.aspx*)
- Fåborg Museum (*http://www.faaborgmuseum.dk/english/index_english.htm*)
- Thorvaldsens Museum (*http://www.thorvaldsensmuseum.dk/en*)
- J.F. Willumsens Museum (*http://www.jfwillumsensmuseum.dk/index.php?id=1&L=1*)
- Sorø Kunstmuseum (*http://www.sorokunstmuseum.dk/en*)
- Den Hirschsprungske Samling (*http://www.hirschsprung.dk/default.aspx*)
- Statens Museum for Kunst (*http://www.smk.dk/en/*)

MY HOUSE MY STREET: ENGAGING LOCAL COMMUNITIES OF VOLUNTEERS TO LEARN, TRAIN AND GAIN FROM LOST LOCAL HERITAGE

TYSON, Nick, Erica Calogero, Phil Blume and Amy Miller
The Regency Town House, UK; University of Brighton, UK; The Regency Town House, UK; The Regency Town House, UK;

MyHouseMyStreet is an HLF* funded, community-based digital archive providing information about Brighton & Hove's historic houses and streets. Initiated by The Regency Town House, the aim of the project is to encourage and enable exploration of the local heritage of the less fashionable 'back-street' neighbourhoods in the city through an online database of property-related information that has largely been collected, digitized and documented using crowd-sourcing. The project website provides a database of local heritage information through the vector of local people's homes and as such has inspired a high degree of engagement with community stakeholders. The outcomes of the project have been an enhanced pride-in-place, neighbourliness and civic awareness of the local residents. It is argued that these factors that have been key in recruiting and retaining volunteers in this community-led digital archiving initiative. The website implements a "drupal" content management system with faceted browsing with a specially created taxonomy to facilitate ease of use for local history researchers. Information has been gathered, digitized and catalogued for 25 streets, which contain 1200 homes, and which provide the basis for community-led "street histories" for each of the streets in the pilot project. The outcomes of the project show that volunteers commit their time to projects for specific reasons: on the one hand for the pleasure of autotelic learning, on the other, for fostering a sense of place and history. Social media has played a fundamental part of the communication strategy of the project.

RECONCILING THE DIVERSITY OF ART INSTITUTION PROFILES IN A COLLABORATIVE PROJECT

DIERICKX, Barbara, Christine Sauter and Kristine Briede
PACKED vzw, Belgium; PACKED vzw, Belgium; LCCA, Latvia
Paper given by Lies Van de Cappelle

Abstract: "DCA – Digitising Contemporary Art" is an ICT PSP Pilot B project for digitising 30,000 objects and aggregating them to Europeana. The consortium consists of 4 technical partners and 21 partners exhibiting and archiving contemporary art, representing cultural heritage from 10 European member states plus Iceland and Croatia (associated EU countries).

The challenge for the coordinator is the reconciliation of the different profiles of the content providing partner institutions to ensure an efficient team performance. The different profiles, from state museums to smaller non-profit art institutions and international festival organisations, unsurprisingly entail a diversity of facets to deal with.

For a successful outcome of the project, the preliminary task was to undertake a detailed assessment of the found diversity in terms of focus, objectives, mission, and financial support, availability of resources, scope and nature of expertise. In addition to this, the technical support faced a variety of object types. The art collections range from multimedia installations and video art, to book art, photography and paintings. These entail different technical requirements and specifications.

In view of fruitful teambuilding, the assessment was followed by filling the salient gaps and motivating the partners to share knowledge. Next, we focused on defining common denominators and fixing respective parameters. A common ground for the work performance was ensured by establishing the digitisation workflow and developing a digitisation plan template for all. Workshops, hands-on tutorial, elaborate guidelines and an active communication practice back up the continuous elaboration of solutions to deal with the diversity of the DCA consortium.

FROM MARC21 AND DUBLIN CORE, THROUGH CIDOC CRM: FIRST TENUOUS STEPS TOWARDS REPRESENTING LIBRARY DATA IN FRBRoo

MAZUREK, Cezary, Krzysztof Sielski, Justyna Walkowska and Marcin Werla
Poznań Supercomputing and Networking Center, Poland

In the paper we discuss the issues concerning (automatic) mapping of MARC and PLMET metadata records to FRBRoo, comment on FRBRoo's compatibility with both FRBR and with CIDOC CRM, and discuss the consequences FRBRoo has had on the Semantic Web knowledge base.

ERLANGEN IMPLEMENTATION OF FRBRoo

MERGES, Judith, Martin Scholz and Günther Görz
Computer Science 8, University of Erlangen-Nuremberg, Germany

This paper reports on ongoing research implementing the FRBRoo in the description logic language OWL-DL. This implementation is called Erlangen FRBRoo (EFRBRoo). The goal to be fully compatible to Erlangen CRM / OWL (ECRM) is achieved by applying the same implementation patterns of ECRM wherever possible. In order to preserve the FRBRoo specifications at the same time EFRBRoo keeps also as close as possible to the text of the FRBRoo definition. The EFRBRoo is made available online.

To evaluate and improve the quality of the EFRBRoo implementation, the software development method of static unit testing is applied: simplified test cases have been designed, which consist of representative datasets in OWL-DL, SPARQL queries and respective results. In addition, validators (RDF, OWL) and frameworks (Protégé, Sesame, WissKi) have been used for validating formal correctness and class consistency.

In order to extend the evaluation to real world applications, the data of the bibliographic SQL database of the International Consortium for Research in the Humanities (IKGF) has been converted to OWL-DL. Research at the IKGF focuses on differences in prognostication and strategies to cope with destiny in China and medieval Europe. The impact of these historical differences on the immediate present and our respective way of coping with the future is analyzed. The bibliographic data contain many different languages such as German, English, Chinese, Latin and Sanskrit. With more than 1400 publications the bibliography of the IKGF provides an ideal extent to sample real world applicability.

CONCEPTUAL MODEL FOR RECORDS AND ARCHIVES MANAGEMENT

HENTTONEN, Pekka
University of Tampere, Finland

Abstract: National Archives Service of Finland (NAS) has started a two-year project whose primary goal is to develop a common archival descriptive information system for archival institutions in Finland. At the same time the project aims to renew Finnish rules for archival description to enable effective combined description of both traditional and electronic archival records. In part to support this, a sub-project creates a CIDOC CRM compatible conceptual model (similar to FRBRoo) for records and archives management. From the perspective of the overall project the purpose of the conceptual model is to help to integrate traditional archival descriptions with records management metadata. In the sub-project the NAS has two research participants, University of Tampere (Finland) and Mid-Sweden University (Härnosand, Sweden). The sub-project started in February 2012 by analyzing ICA's rules of archival description, ISO 23081 Records management metadata standard, and two records management metadata models, EU-wide MoReq2010 (Modular Requirements for Records Systems) and Finnish SÄHKE2. The paper takes a look at the present stage of the sub-project and its results so far.

PUBLISHING MUSEUM OBJECTS ON THE SEMANTIC WEB

HOHMANN, Georg
Germanisches Nationalmuseum, Germany

Abstract: In 2012 the Germanische Nationalmuseum (GNM) established a new online portal[1] which gives public access to metadata and images of nearly 70.000 objects ranging from bifaces of the Middle Paleolithic Period to Paintings of the 19th and 20th century. Besides providing the common functionalities to search and browse the collections this portal is the starting point to built-up an infrastructure for publishing the metadata to the Linked Data Cloud[2] and the Semantic Web[3]. This effort brings together different applications and initiatives we have developed and established over the years.

The ID-Resolver[4] of the GNM plays the central role. It provides persistent URIs[5] for all objects corresponding to common recommendations.[6] Additionally it resolves MuseumIDs[7], an URN-Scheme to identify museum objects. The data will be available as RDF/XML, but in contrast to many other linked data initiatives we take the term "semantic" seriously. The Department of Cultural Informatics has gained professional knowledge in dealing with semantic metadata by developing the Erlangen CRM[8] – an OWL-DL[9] implementation of the CIDOC CRM[10] – and being involved in corresponding projects.[11] So the metadata of the objects is strictly ECRM-compliant and therefore bears full-featured and valid CIDOC CRM semantics. This strictness is a unique feature compared to other projects[12] dealing with CRM-compliant metadata.

Based on this infrastructure we will semantically enrich our metadata by linking it to authorities and data providers on the Linked Data Cloud. Overall we aim to give an example of good practise on how to publish CRM-based metadata in a standard, valid and useful way on the Semantic Web.

[1] *http://objektkatalog.gnm.de*
[2] *http://linkeddata.org*
[3] *http://www.w3.org/standards/semanticweb/*
[4] *http://id.gnm.de*
[5] *http://www.w3.org/TR/uri-clarification/*
[6] *http://patterns.dataincubator.org/book/*
[7] *http://museumid.net*
[8] *http://erlangen-crm.org*
[9] *http://www.w3.org/TR/owl2-overview/*
[10] *http://cidoc-crm.org*
[11] e.g. *http://wiss-ki.eu*
[12] e.g. *http://collection.britishmuseum.org*, *http://data.clarosnet.org*

HISTORY ON THE SEMANTIC WEB — AN EVENT GAZETTEER AND TIMELINE FOR WORLD WAR I

HYVÖNEN, Eero, Thea Lindquist, Juha Törnroos and Eetu Mäkelä
Aalto University and University of Helsinki, Finland; Colorado University Boulder, US;Aalto University and University of Helsinki, Finland; Aalto University, Finland

Events are an essential component of cultural heritage (CH) Linked Data (LD): they link actors, places, times, objects, and other events into larger narrative structures, providing a rich basis for semantic searching, recommending, analysis, and visualization of CH data. This paper argues that shared vocabularies (gazetteers, ontologies) of events, such as the "Battle of Normandy" or "Crucifixion of Jesus", are necessary to facilitate the aggregation and linking of heterogeneous content from various collections. For example, biographies, histories, photos, and paintings often reference or depict events.

Ontologies have been used in CH portals as metadata schemas for harmonizing content and value vocabularies for populating schema property (element) values. For example, the CIDOC CRM is an "event-based" metadata schema, and the Getty vocabularies TGN, AAT, and ULAN are drawn upon for values for places, objects, and actors, respectively. However, shared-value vocabularies for events are still lacking.

This paper presents an overview of a case study to model and represent World War I events. An event schema for historical events and collaborative editing environment for populating the schema are described. The resulting gazetteer is published automatically as a searchable, faceted event catalog for human use; and web service APIs and a SPARQL endpoint are generated for machine use. We show how the system is utilized to create a semantic portal for the University of Colorado Boulder Libraries' WWI Collection Online based on collection metadata, term lists from the Imperial War Museum London, data from Wikipedia, and other related content

A SEMANTIC EXTENSION OF THE SYSTEM'S MODEL FOR SEARCHING AND PRESENTATION CULTURAL HERITAGE

POPOVIC, Snezana, Zoran Cvetkovic, Vesna Bizic-Omcikus and Miroslav Mitrovic
School of Computing, Serbia; Infotrend, Serbia; Ethnographic Museum in Belgrade, Serbia; Ethnographic Museum in Belgrade, Serbia

New technologies increasingly provide opportunities for a more complete presentation and interpretation of different kinds of cultural artefacts. It is possible to extend existing models of cultural institutions' information systems by using semantic data-oriented classes and by geotagging the information.

This article presents a generic meta-model for providing semantic consistency in such systems. The meta-model can be used: as a scheme for semantic information, aimed at ensuring semantic consistency; as a model for the creation of artefacts, that can be described in a consistent collection of symbols, providing a unique basis for communication among the participants; to support required, additional semantic Web services' or existing models' descriptions; to enable the semantic interoperability of systems by the inclusion of semantically described Web services.

The necessary semantic descriptions are supported by a controlled vocabulary - created in the form of a corresponding domain ontology. The application of the developed methodology makes possible the simultaneously searching and presentation of different types of cultural artefacts, on the exact basis of the criteria from user queries.

The system's feasibility depends on the willingness of cultural institutions to join to the system, as well as on the existence of domain ontologies. The availability of domain databases, however, provides a good basis for the efficient development of domain ontologies.

The described methodology has been tested in the Ethnographic Museum in Belgrade. The results are have been encouraging and motivating, so the proposed system could be applied to all the domains of heritage protection, including a wide range of different types of cultural artefacts.

ABOUT THE 'FAUST' IMAGE DATABASE AT THE GOETHE-HAUS

FREIBERG, Michael and Dietmar Pravida
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Ever since its first appearance in the beginning of the 19th century, Goethe's 'Faust' has been and continues to be a favourite subject for book illustration and the graphic arts. Art historical studies have shown how some special motives and themes devised by individual artists have been the origin of a diverse tradition, which has developed into multiple contexts within different art periods. This iconographic inheritance forms a whole visual discourse on its own.

The Goethe-Museum in Frankfurt houses a significant collection of illustrations (of all type) of Goethe's works. Among them are about two thousand drawings and prints of 'Faust' from the early 19th century until the present. These are archived using durable master TIFFs which will be produced and stored along with the metadata using LIDO to describe objects. In addition, the images will be divided to allow the identification of motifs, persons and objects with relevance to 'Faust'.

Interconnections and annotations are expressed in an RDF-based ontology, which implements the CIDOC CRM. The image database will represent traditions, references and influences as mentioned above. The graphical interface allows the user to view image-textrelations, browse trough a visualization of the iconographic interrelations and to enrich the database with new annotations.

This model of organizing image data and text will allow the use of automatized techniques of interpretation and analysis that can support research in cultural studies and will hopefully lead to the discovery of emerging relations that have as of yet gone unnoticed

EXPANDING THE EVOLVING E-INFRASTRUCTURES MODEL OF E-SCIENCE INTO ARCHAEOLOGICAL CONTEXT AND DIGITAL CURATION

OIKARINEN, Teija
University of Oulu, Finland

Archaeology has a specific role as a science, because materiality and different kind of documents have had a major role in its scientific history. Archaeological documentation and the process of digitalization in overall process of documentation are still in different stages in globally. Converting archaeological collections and documents into digitally curated form have been defined as dematerialization and as transforming those items into cultural heritage data.

In the generic DCC Curation Lifecycle model the digital objects and data are viewed as the starting point. In this presentation the author will discuss how this common model could be extended into the archaeological context, for example by careful pre-planning of documenting of the excavation. Other factors that have an effect to this specified model and must be taken into consideration are the demands produced by local archaeological quality standards and global visions in e-science.

E-science describes the evolving e-infrastructures as an axis pair consisting of global-local and social-technological dimensions. This description could be further expanded to archaeological context: whereas the local dimension consists of for example the research type, authorities and researchers, the technological dimension is based on the technologies used and their specific characteristics and demands.

In future the e-science can be seen as a framework in which the archaeological documenting is conducted. The reality of the archaeological field work is still often realized as paper-based forms filled manually and hand-drawn maps, which are digitalized afterwards, resulting to unnecessary work load and incompatible data between excavations. For the constantly developing documentation practices open source licensed software would be a great asset.

A PRACTICAL DOCUMENTATION PRACTICE FOR THE MANAGEMENT AND PRESERVATION OF DIGITAL VIDEO/ MEDIA AND INSTALLATION ART

LOW, Jyue Tyan
Heritage Conservation Centre/ National Heritage Board, Singapore

Video/media and installation art are art genres that are often impalpable and ephemeral in nature. Their documentation thus acts as persistent evidence that might likely outlast the art itself. Good documentation has already been recognized among museums, art communities, and academia as an essential component for the preservation of these art forms. Expectedly, this recognition has given rise to "new" document/ record types: records that document artist's intent; visual records that document the installation process, behaviour of the work, and visitors' interaction with the work; source code or instructions needed to instantiate the work etc. These documents/ records usually exist in many formats – e.g., paper, digital text, image and moving image – and need systematic management and preservation attention themselves.

Using the collections under the custody of the Heritage Conservation Centre, this paper proposes that museums use an industrial-grade digital asset management system (DAMS) to manage their video/ media collection. The paper explains how employing DAMS is a necessary step to manage the digital objects, provide access to the digital artefact itself, and achieve basic digital preservation requirements. Apart from managing, preserving and providing access to the digital artefact itself (i.e., the video file), DAMS can also serve as a digital dossier for other documents/ records of complex installation artworks. While there is no lack of initiative on how best to manage the myriad documents/records of complex artworks, this paper shows that the use of DAMS is a practical and employable solution for museums wanting to preserve complex installation artwork.

DOCUMENTATION OF AFRICAN ARTIFACTS OUTSIDE AFRICA

M'MBOGORI, Nkirote Freda
National Museums of Kenya, Kenya

African material culture comprises artifacts of great artistic, aesthetic and cultural value. However, documentation of these artifacts in most regions outside Africa seem to emphasis on the artist's impression totally ignoring the cultural value which may have been ritualistic, ceremonial or even functional. Thus presenting a simplistic dimension of the museum curator who documents only what he/she sees leaving out the reason behind the creation of the artifact in question. This form of documentation and exhibition denies the viewer full knowledge and appreciation of the minority cultures that created the artifact in question.

This paper therefore, recommends that museums that only document and exhibit the curator's views should change their approach by conducting research among the producers of given items so as to fill essential gaps and properly present cultures of the makers. This will also recreate rituals/ceremonies/functions of these collections in the minds of the public/users.

A PROPOSED METHODOLOGY FOR DOCUMENT MANAGEMENT

VEGA MARTINEZ, Lucy
Universidad Tecnológica Equinoccial, Ecuador

A museum in operation generates data and information. For this reason the operational management is linked to document management.

Information should be collected and systematized in order to serve for decision making inside organizations and for public access in education.

The document management is achieved by designing database that have been made based on management processes of the museum and from the viewpoint of management theory.

It is desirable that museums in Ecuador not only focus their attention on the computerization of cataloging their collections, but also worry about to systematize the information generated in the museum's operative processes in order to conform systems for databases management. For example, many Ecuadorian museums overlook information generated in conservation and restoration processes of their collections when designing their databases.

It is necessary to define the methodological principles to identify the processes that generated significant information within the organizational structure in order to design a system for managing databases.

The identification of the operational processes of the museum is essential to select the data to be collected and will form the management system documentation, but it is also important to achieve continuous improvement and achievement of quality management according to the models based on the ISO standard.

WHEN ARCHIVES AND FINE ART MEET. DIFFERENT PERSPECTIVES ON PLURAL INTERESTS

VAN KALCK, Michèle
Royal Museums of Fine Arts of Belgium, Belgium

See Late Additions, *page 70*.

USING OPEN SOURCE TOOLS TO EXPOSE CROSS COLLECTION DATA IN THE LIDO SCHEMA

PARSELL, David and Emmanuelle Delmas-Glass
Yale Center for British Art, US

Effective December 2011, the Yale Center for British Art (YCBA) started exposing collection data in the LIDO schema. We believe we are the first US museum to do so. To date, the data has been harvested by ARTstor and the Yale University single search portal which harvests data from libraries, natural history and art museums as well as public affairs units, and builds a central database for cross collection discovery (CCD): http://discover.odai.yale.edu/ydc/. The YCBA online cross collection catalogue is sourced from the CCD database (http://britishart.yale.edu/collections/search) although it displays a richer data set than the one exposed through CCD.

The paper will be two fold, with the first half focusing on the role of LIDO as a schema supporting rich data sets for the benefit of researchers and general public alike, especially in a cross collection environment that aggregates data from multiple collections from different domains. The second half will go over the preparation, tools and techniques used to successfully complete this project and demonstrate the ease of exposing collection information with available open source tools.

The paper will provide a detailed roadmap for cultural heritage institutions that wish to disseminate their collections information with the LIDO schema by exploring each phase of the YCBA project from conception and cataloguing implementation to extraction.

MIMO – "STRIKING A CHORD FOR MUSICAL INSTRUMENT MUSEUMS"

RODGER, Norman and Rodolphe Bailly
University of Edinburgh/MIMO; UK; Cité de la Musique, France

MIMO is the acronym for Musical Instrument Museums Online. Beginning life as a European Commission funded project, in September 2009, MIMO is a consortium of 11 museums working towards establishing a single point of access to information on the world's public collections of musical instruments.

Before the project there was a long standing recognition that not only was it difficult to find information about collections online but there was no common standard for the online presentation of musical instruments.

The aim for MIMO was therefore to create a resource that would significantly improve access to museum collections of musical instruments. We also sought to develop documentation that established common standards for digitising musical instruments, update classification and create a web based vocabulary tool to facilitate multilingual key word searching.

The project was a tremendous success and we now have over 45,000 images of instruments, with supporting metadata, available online, along with just under 2000 sound files and 300 video clips. We have also completed and published the digitisation standards document, which we hope will shortly be formally adopted as the worldwide standard by the global musical instrument community.

We are now actively recruiting new museums in order to bring their collections online and create a global museum resource.

The aim of this presentation is therefore to give an overview of the MIMO project, the challenges we faced and the lessons learned in achieving our goals, and our plans for moving from a European funded project to a worldwide initiative.

CULTURAL HERITAGE STANDARDS TOOLBOX: BUILDING A LOCAL COMMUNITY OF CULTURAL HERITAGE PROFESSIONALS ON DIGITAL CULTURAL HERITAGE

LEMMENS, Bert and Henk Vanstappen
PACKED vzw, Belgium; PACKED vzw, Belgium

November 2011, Europeana's CCPA User Engagement Group published a White Paper proclaiming that contributions of cultural heritage professionals are vital for the sustainable development of an inspiring, educative and more engaging user environment for Europeana.

This conclusion evolved from the observation that discovery and accessibility of digital resources largely depend on the standards and software that have been used for the creation and online publication of these resources.

Since 2010, the Flemish Community supports the formation of a local, cross-domain expert community on digitisation of cultural heritage through the development of a Cultural Heritage Standards Toolbox (CEST).

CEST serves as an instrument helping organisations select the right standards and directives for their digitisation project. Proliferation of standards and best-practices should enable cross-domain exchange of digital cultural heritage and establish a solid base for organizations developing new ways of user interaction.

CEST is built around a "wiki": a knowledge base supporting cultural heritage professionals in the Flemish Region and maintained by PACKED vzw, Centre of Expertise in Digital Heritage.

CEST comprises registers of standards and software, best-practice guidelines for cataloguing, creating, storing and publishing digital cultural heritage, and acts as a platform for sharing expertise among curators, archivists and librarians in Flanders.

This paper discusses the purpose of setting up local expertise networks and how to engage heritage professionals from different types and scales of organisations in building consensus on best-practices.

DEVELOPING COLLECTION MANAGEMENT – MUSEUM 2015

SAVIA, Satu
National Board of Antiquities, Finland

Museum 2015 is the largest and most wide-ranging project ever in Finland concentrating on collection management in professional museums. The project aims to improve collection management by developing standardized cataloguing practices and providing an enterprise architecture for the whole museum sector in Finland. The project will also examine the possibility of providing the Finnish museum sector with a centralized digital collection management system along with all the associated services. The project staff will also support the data transfer of museums who are taking part in the National Digital Library. Museum 2015 is a project common to all Finnish museums and is being led by the National Board of Antiquities together with the Finnish National Gallery and the Finnish Museums Association.

Museum 2015 exists largely because of the experience gained from the National Digital Library -project. NDL's piloting revealed numerous inconsistencies in the cataloguing information museums currently produce, and pointed out how difficult it is to transfer data seamlessly to the NDL at the present moment. It is obvious that museums need standardized cataloguing rules. In the background of the other main focus in Museum 2015 - the enterprise architecture - lies the Act of Information Management. The Finnish museum sector is one of the leading instances producing an enterprise architecture in 2012.

The main outputs are made in working groups that consist of museum professionals and other specialists. The project enhances cooperation and joint decision making by encouraging museums for networking, interactive learning and sharing of information.

THE SIP-CREATOR: MEETING THE CHALLENGE OF METADATA HARMONIZATION

DE JONG, Gerald and Thomas Wikman
Delving BV, Netherlands; Delving BV, Netherlands

The Delving SIP-Creator is an open source tool for analyzing metadata, mapping it to one or more target metadata formats, and publishing it to a server-side Metadata Repository. It is a standalone application, launched and updated online, and built to consume almost any XML input data format that is encoded in UTF-8. Automatic detailed analysis of the input data revealing histograms and random samples of input content gives domain experts the information they need for them to make informed mappings.

The SIP-Creator makes building simple mappings very easy, but it is especially well suited to handle the most difficult corner cases which would otherwise require much more time and effort.

The trickiest mapping challenges can be successfully solved because the SIP-Creator's mapping engine is based on one of the richest available programming languages: Groovy.

The SIP-creator is used in the national aggregators in Norway and the Netherlands as well as in several regions in the Netherlands, and deployments in Sweden are also currently in the works.

Upcoming work:

- Full support for mapping of hierarchical data such as LIDO, CIDOC CRM, EAD etc
- Extended statistics module for providers and dataset statistics for aggregator owners
- Data quality validation and reporting
- Data cleaning tools and provider feedback of cleaned data
- Interactive documentation, guidelines, and frequently used code snippets for assisting domain experts in developing mappings to standard formats.
- Support for Metadata alignments and enrichments, persistent IDs and co-reference

This paper will discuss current developments of the SIP-Creator, experiences from existing implementations and strategies and challenges for the future. The SIP-Creator tool is ideally suited to become the focus of a much needed educational effort, since metadata format harmonization is a universal challenge that could be greatly assisted by a collaborative effort to spread best practises.

TOWARDS AN OPEN RIJKSMUSEUM

JACOBS, Geertie and B. Nederveen
Rijksmuseum Amsterdam, The Netherlands; Rijksmuseum Amsterdam, The Netherlands

Now that the reopening of the Rijksmuseum is at hand, we're in the final stage of completing our new presentation of art and history from the Middle Ages to the 20st Century. Our efforts will lead to an internationally acclaimed museum and knowledge institute, suitable for millions of visitors, housed in a beautiful, clear building. An open museum, which includes the sharing of knowledge and information (through presentations, publications, new media etc.) among its objectives and invites the public to participate in the building up of knowledge of our National Museum and its collections.

The department of Collection Information contributes to this open museum with many projects focussing on open data and the exchange of information, such as large scale digitisation projects and cooperative projects with Dutch universities (Institute for Mathematics & Computer Science and Information Sciences). On CIDOC 2012 we'll focus on:

1. Our cooperation with the Semantic Web Group of the Amsterdam Universities, which resulted in a prototype tool for semantic subject annotation. We'll provide input about our experiences with enriching rather straightforward object metadata through semantic technologies and we'll report on the importance of collaboration between art historians and IT researchers.

2. The Rijksmuseum Open Data Set. We'll share technical and organizational aspects of implementing Open Data and we'll discuss our experiences and the results of our project. Finally we would like to share our plans for the future: how can Open Data help us to create more, new and better ways of distributing our collection?

ONTOLOGIES OF ARCHAEOLOGICAL HERITAGE

ENQVIST, Johanna
University of Helsinki, Finland

Archaeological heritage can be seen as real-world entity, but also as social and conceptual construction. I am preparing a multidisciplinary PhD dissertation, which concerns these different ontological perspectives on archaeological heritage. I will explore meanings, concepts and values attached to archaeological heritage in the fields of Finnish cultural heritage management and academic archaeology, but also in the minds of ordinary people. As part of the study I will create semantic web ontology of archaeological heritage, which represents the research object as conceptual system. Ontology of archaeological heritage could be later on included in Finnish Ontology Library Service ONKI and thereby available for anyone. For example, the ontology would enable development of nationwide database of protected archaeological sites (maintained by Finnish National Board of Antiquities) and opening it up as a Linked Open Data resource. This would make it easier for researchers, land-use planners, enthusiasts and every citizen to search for information on cultural heritage. It is most crucial to both cultural heritage management and academic research to have quick access to all research documentation and possibility to make comprehensive and accurate searches.

DISSEMINATION EXPERIMENTS WITH ARCHAEOLOGICAL DATA

HAIMILA, Miikka
National Board of Antiquities, Finland

This presentation gives a short description of on-going efforts to disseminate the metadata of cultural environment objects in Finland. During the last year there have been some experiments to map information of archaeological sites to LIDO and MIDAS. LIDO is used for testing dissemination of the data for the Finnish National Digital Library and MIDAS as an interchange format between systems of Finnish organisations maintaining the core data. Also a test web service is built for adding new data, removing unused information, version control and keeping data synchronised in different systems.

DIGITAL TECHNOLOGIES AND INTANGIBLE CULTURAL HERITAGE IN NIGERIA: PROBLEMS AND PROSPECTS

ONUOHA, Louisa
National Museum, Lagos, Nigeria

There is no gainsaying that intangible cultural heritage has been under serious threats of extinction in recent times. These threats come as a result of series of factors and have been acknowledged both in Nigeria and the world over. Alissandra Cummins, the then President of ICOM in the editorial column of the ICOM News 2004 made the following statements "One of the most important outcomes of the 21st General Assembly of ICOM was the approval of the Seoul declaration, endorsing the UNESCO convention for the Safeguarding of the Intangible Cultural Heritage. ICOM urges all governments to ratify the convention and to adopt and implement legislation and policies which will ensure its effective implementation. Over the next three years ICOM has pledged that it will encourage states to become signatories to the convention and to help manage and promote intangible heritage notably through the development of skills and resources".

This paper, therefore, aside from making a case for the significance of ICH in the daily lives of the people also examines how relevant cultural agencies in the country can play major roles in the preservation of Nigeria's intangible cultural assets for a better future. Taking cognizance of possible challenges that may hinder this process, the paper has made recommendations that will facilitate the collection, documentation, preservation and display or dissemination of Nigeria's intangible cultural assets using digital technology.

The paper is divided into four sub headings and are as follows:

1 a. Various definitions of intangible cultural heritage and digital technology.
  b. Importance and significance of ICH and digitalization.

2. Collection, preservation and transmission of ICH through digital means.

CATALOGUING PROCESSES OF INTANGIBLE CULTURAL HERITAGE

KETTULA, Suvi and Eero Hyvönen
Espoo City Museum, Finland; Aalto University, Finland

UNESCO established 2003 in Paris the convention for the safeguarding of the intangible cultural heritage, i.e. practices, representations, expressions, knowledge, and skills, such as traditional craftsmanship that communities, groups, and individuals recognize as part of their cultural heritage. In museum cataloguing practices this requires recognizing and focusing on the phenomenon of immaterial culture itself and the properties of processes which one should catalogue. We need a new approach to metadata schemas for cataloguing systems. At the moment content of processes of intangible heritage recorded by tangible media such as films, photos and other artefacts, is mainly expressed only in terms of keywords without describing the underlying phenomenon.

This article addresses the problems of describing aspects of craftsmanship skills in production-based events involving producer, materials, and artefacts. In our view, such information should be stored more explicitly when cataloguing immaterial culture on those processes. The article gives a suggestion of metadata types concerning immaterial cultural heritage and museum cataloguing databases. In the process of making an artefact, there are qualities like temporality (durability), sequences (order of parts of a process), and methodological aspects (order of methods and tools, circumstances of process), which an end-user should be able to utilize when searching databases. The article will present a case study, where a process of filmed craftsmanship was described as a semantic process description, annotated using ontologies, and finally published on the web as part of Culture-Sampo portal.

VISUALIZING THE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

BIZIC-OMCIKUS, Vesna, Snezana Popovic, Miroslav Mitrovic and Zoran Cvetkovic
Ethnographic museum in Belgrade, Serbia; School of Computing, Serbia; Ethnographic museum in Belgrade, Serbia; Infotrend, Serbia

During the last twenty years, the wide availability of computers has allowed the gradual computerisation of museum paper documents. The success of the transition, from manual to computer processing, has been based on the professional analysis of the museum systems, on the use of logical and physical models and on resulting database structures. These databases provide the foundation for the subsequent upgrading and expansion of museum information systems, supported by the further development of information technologies.

This article presents a methodology, successfully applied in the Ethnographic Museum in Belgrade from 2005 onwards, for documenting tangible and intangible cultural heritage and for visualizing artefacts. Data integration was first planned on the logical level using a unique meta-model to represent both tangible and intangible cultural heritage. Next, the heritage meta-model was integrated with a visualization meta-model. An extended meta-model then permitted the unique representation of any cultural heritage artefact by an arbitrary number and by related multimedia visualization artefacts.

At the end of 2011, the database at the Ethnographic Museum included about 50,000 data records of tangible and intangible cultural artefacts and about 40,000 illustrative, multimedia data records. Besides the basic functions for data capturing, software solutions created over a single database also allows ad hoc multi-criteria searches. Search results can simultaneously list data on cultural heritage artefacts and associated multimedia artefacts.

SALVAGING THE CULTURAL HERITAGE OF THE BATWA AND ENHANCE ITS APPRECIATION IN UGANDAN AND BEYOND

SSENYONGA, Fredrik Nsibambi
Cross-Cultural Foundation of Uganda, Uganda

Who are the Batwa People and where are they found?

The Batwa are people who speak Lumbuti, Luyanda and Lutwa languages. They are believed to have been the indigenous peoples of the East and Central African forests. That explains why the Batwa are currently found in about 10 countries in east and central Africa, including Burundi, Tanzania, Rwanda, Uganda, Central African Republic, DR Congo, Cameroon and Gabon among others. The Batwa constitute a very small percentage of the total population of Uganda. In 2006, there were about 5,591 Batwa out of about 32m Uganda.

In Uganda, the cultural practices of the Batwa have become targets of negative propaganda and stereotyping. As a result, they are forced to abandon their customs and adopt the cultures of their closest or dominant neighbouring communities. In this case the Batwa in the districts of Kisoro and Kanungu are for instance being assimilated into the dominant cultures of the Bakiga and Bafumbira respectively. The only instance where cultural heritage of the Batwa is being promoted, it is only for tourism purposes. In many cases the Batwa are paraded as tourist attractions. They are deprived of opportunities to promote their heritage and transmit to their young generations.

According to Minority Rights Group International, there are an estimated 70,000-80,000 Batwa people living in Africa. The Batwa have a cultural distinctiveness which needs to be preserved. Batwa tradition is rich in song, dance and music, and cultural gatherings are firmly integrated in the social life of the Batwa. However, these are no longer communicated in the indigenous language of the Batwa but rather in languages of their hosts. There is need to salvage the Lutwa through research and documentation, pass it on to young people and share it with other communities.

In my paper I intend to discuss effective ways to enhance the documentation of the cultural practices/heritage of the Batwa people and enhance the appreciation of this heritage by other Ugandans and other people outside Uganda. Suggestions on how to effectively document the cultural heritage of the Batwa and enhance the appreciation of their cultural heritage will be made.

CULTURAL DIVERSITY AND CULTURAL HERITAGE DOCUMENTATION. REGISTRATION EXPERIENCE IN THE COLLECTION OF OFFERINGS IN THE VALLEY OF URUBAMBA (CUSCO-PERU)

ARIAS, Teresa
Escuela Nacional de Bellas Artes del Perú, Peru

Show the process of recording and cataloging of the collection of the Sanctuary of the Lord of Torrechayoc of the province of Urubamba in Cusco. This sanctuary is created by parishioners who manage and care for the offerings that are delivered annually at the feast of Pentecost. Urubamba is a province made up mostly by farmers who have adapted Andean rituals and Catholic beliefs with the Andes. In several villages of Peru is often collect the offerings given to the patron saints of the community, gifts that express the faith and cultural aspects of the peasants. His record is a must because many times these sanctuaries were pillaged by thieves.

The Association of Devotees of the sanctuary to be converted into a museum of the offerings of the Lord of Torrechayoc faith showing that the village has its patron saint.

The work of registration in this case is to try real peculiarity whose information is not written but belongs to the cultural heritage of society therefore requires interviews taking into account the respect for religious beliefs, the traditions and local terminology. The mantles are local iconography that needs to be described with the help of those who created and information is the same miracle stories and characters specific to the province.

DIGITAL INVENTORIES ON CULTURAL MEMORIES AND INTANGIBLE CULTURAL HERITAGE: CASE STUDY OF YADAV COMMUNITY OF HARYANA

BALA, Shashi
National Museum Institute, New Delhi, India

All communities across the globe has their own social and cultural memories such as ritual, customs, traditions and folk lore being practiced over a long period using folk music, folk dance, chanting and other oral methods. In India almost every community has its own oral history and intangible cultural heritage. We, the Indians are losing our oral history, traditions and intangible cultural heritage very fast. There is an urgent need to connect our cultural heritage memories with digital technologies using available methodologies such as digital documentation of cultural memories. Yadav's are one of the prominent castes in Indian society and their oral history and Intangible cultural heritage is not passing out to next generation in a proper manner. As a result once our old generation is lost, we also lost the links of socio-cultural memories. So called 'Globalization' and 'Modernization' are affected the Yadav community in terms of Oral History and Intangible Cultural Heritage. The advent of technology has enabled us to support and save the cultural memories of the communities.

CULTURAL HERITAGE: ON THE WAY TO EUROPEANA

KOCH, Walter and Gerda Koch
AIT Angewandte Informationstechnik, Austria; AIT Angewandte Informationstechnik, Austria

Documenting content and metadata which comes from Cultural Heritage Organisations (Museums, Archives, Libraries, etc) needs the establishment of guidelines and standards related to the captured information (data) and the workflow into which data capturing is embedded. Workflows can be considered as implementation of Business Processes (or Processing Steps) which follow policies and business rules and can be visualised using graphical design tools and can be executed using Business Process Execution Engines. In the Museum Application Domain being part of the Cultural Heritage Domain the development of "Procedures" which describe Processes like "Object Entry", "Object Loan", "Movement Control" only to name a few, have been done in several countries like in the UK (SPECTRUM), Germany, and others. The application of Business Process Modelling (BPM) techniques is quite new in the CH-Domain and will be discussed in this Paper.

As an example how to apply BPM methodology, the OpenUP! Project (http://open-up.eu/ EU-funded under the ICT-PSP Programme) was selected. One of the project target is to collect (harvest) data from different data providers (data contain infomation of different species - Plants or Animals) map them into a "standard" data presentation developed by the European Digital Library, "Europeana", aggregate all mapped data using an aggregation platform and hand over the aggregated metadata to the "Europeana Metadata Store". There are four main components of the OpenUp!-System to be integrated into the "aggregation workflow": the "Metadata Harvester", "The Metadada Transformation Tool", "The Validation Checker", and the "OAI-Data Provider" which involve different actors in the system, eg. Data Providers as "Human Actors" or Business Intelligence Software (used for data transformation) as "Non-Human Actor". The Process Modelling and Execution is done by using Open Source Software which is compliant with BPMN 2.0 (Business Process Model and Notation).

In addition to the "aggregation" example the migration of the SPECTRUM Procedure "Object Entry" into a business process model will be outlined and the processing of some process steps will be demonstrated. Finally the co-operative creation of a vocabulary supported by Business Process Management will be presented (based on the DISMARC.EU project).

SKETCHBOOKS IN ARCHIVES AND IN ARTISTS' STUDIOS

ALALUUSUA, Elisa
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How do artists use sketchbooks and how do they understand their sketchbooks as a part of their creative processes? I am conducting a practice-led PhD using video interviews and the drawn image working towards developing a better understanding of the function of the sketchbook within the artist's creative strategies. Two main categories of sketchbooks have been looked at: sketchbooks in artists' studios and sketchbook in archives. The sketchbooks viewed in both contexts can be very similar but the experience is radically different. In this presentation I will consider what is lost and what is gained when looking at sketchbooks in archives compared to looking at sketchbooks with artists who created them. In the Royal Academy's recent (Nov 2011 – Feb 2012) Driven to Draw exhibition publication I wrote: "Looking at sketchbooks always feels like a privilege to me. It does not matter if it happens in archives or with the artist whose sketchbook I am viewing. It feels that I am looking into someone's life where their thoughts are made visible on the pages." I will consider what happens to the working journal when it is placed in archives and also present the experiments I have made when recording sketchbooks in both contexts. This is an artist practitioner's view and I claim that the recent digitalization of sketchbooks in a number of collections, such as Ateneum in Helsinki or Tate in London, is admirable but hopeless.

DOCUMENTATION IN SCIENCE & TECHNOLOGY: ACCESSIBILITY TO DIVERSE AUDIENCES

RIBEIRO, Emanuela
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This communication aims to present theoretical and methodological reflections about documentation work of science and technology university museums' collections, which we have been developing at the Federal University of Pernambuco, the largest state university located in the northern and northeastern Brazil.

Given the documentation's specificity in this museum type, which have been coining a professional culture and a language that is very specific at the regional museum environment – the academic world culture and the university environment language - we believe that our work fits perfectly in the discussions about "multilingualism and regional cultures".

We believe that, as in Portugal (Cf: DELICADO, 2008), in the northern and northeastern Brazil, C&T museums gradually change its function from spreading scientific knowledge and generate a positive attitude towards science, to having a direct participation in the scientific field (DELICADO, 2008, p. 55).

We would like to reflect with our colleagues, the prospect that changing the Museum of Science and Technology's profile has produced a different cultural environment for these museums, reflecting also the need for documentation activities which are appropriate for the academic culture and "translate" the technical-scientific language for the various non-academic audiences at the same time.

We believe that the collections' documentation has a key role in the communication process between public users and academic world, serving as a mediator between different concepts and contributions to science and technology, experienced differently by universities and non-academic society.

COLLECTING PERSONAL PAPERS IN ART MUSEUMS: NEW DOCUMENTATION PRACTICES AT PINACOTECA DO ESTADO DE SÃO PAULO

BEVILACQUA, Gabriel
Pinacoteca do Estado de São Paulo, Brazil

The main objective of this paper is to present practices regarding a police on collecting and managing personal papers and other documental resources in Pinacoteca do Estado de São Paulo. In order to demonstrate how the implementation of an integrated collection's police involving personal papers can enhance and amplify research and other documentation activities developed by museums, with a more specific focus on art museums, this work will point and enumerate a series of possible methods and conceptual questions related to collecting, cataloging, preserving and accessing artists, curators, art historians and museum former staff archives. The complex processes derived from an integrated perspective on managing the hole museum material or immaterial holdings (art collection, archives and library) will also be a main focus of attention of the discussion.

Pinacoteca do Estado de São Paulo (São Paulo State Art Gallery in a free translation) was founded in 1905 and is the oldest art museum of São Paulo. Nowadays its collection holds more than eight thousand works of Brazilian Art from the colonial era to contemporary production. The Center of Documentation and Memory (Cedoc) was created in 2005 during the first centenary of the museum and started its activities as the department responsible for the organization, preservation and access of Pinacoteca's archive. In 2007 the Cedoc mission was expanded to collect mainly artists personal papers and other kind of original documents to broaden the art research resources offered to historians, curators, conservators, registrars, students and the museum staff.

As a central conclusion this study will try to point that collecting documental resources related to the museum main activities and collections could be a very interesting strategy to complement and qualify the research and documentation processes developed by museums. Another expected objective intended by this paper is to demonstrate how artists personal papers and other collections of documents can help museums to preserve, understand, contextualize and fully document some works of art. Moreover, this debate can also indicate that some practices of contemporary art, especially conceptual art forms, rely on archival documents and documentation practices alone to assume some level of materiality and permanence.

THE DOCUMENTATION CENTER OF THE MUSEUMS OF FRANCE AND THE DATABASES OF THE MINISTRY OF CULTURE AND COMMUNICATION: OVERVIEW AND PROSPECTS

CARDONNA, Marie-France
Ministère de la Culture et de la Communication, France

1. The Documentation Centre of museums of France. The Documentation Centre collects information on all museums of France in their scientific, administrative, legal and financial aspects. It is interested in museological issues. Since 1996, it has preserved the documentation of the ICOM (International Council of Museums). It provides various services: consultation on-site and on-line; the CAPADOCE database. It publishes a museological bibliography. It makes studies on demand and a selective distribution of information on the basis of observation of various domains related to museums and museology. It participates in networks and several on-going projects.

2. The databases of the French Ministry of Culture and Communications (MCC): a single box office at the MCC; the engine "Collections", one of the national collectors of Europeana.

3. Developments for the coming years:
digitisation.
On the way to normalisation.

– Participation in the French translation of standard 21127; information and documentation; an ontology of reference for the exchange of information on cultural heritage; the implementation on the level of the MCC of a normative framework for the production of cultural data. "HADOC project"

Platform project on documentation in museology of sciences and technologies, common to seven French bodies, with an international French-speaking mission. Development of the MCC's "genealogy" and "collections" engines.

ADAPTING THE IT-ARCHITECTURE OF THE MUSEUM SECTOR TO THE ENTERPRISE ARCHITECTURE – THE REQUIREMENTS AND THE EXPECTED RESULTS IN DIFFERENT SIZED INSTITUTIONS

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The Finnish museum sector currently uses mostly out-dated collection management systems (CMS) which are at the end of their life span and thus in need of a complete and coordinated overhaul. The sector also lacks best-practices and standards for collection management. The development of a common IT-infrastructure, processes and acquisition of new CMS for the museums should be planned and implemented according to the guidelines proposed by an enterprise architecture (EA). The EA describes how the various elements of an organization or an operation (such as a project) – organisational units, people, processes, information and information systems – relate to each other and function as a whole. Implementing the EA is needed in order to accomplish a comprehensive overview, which supports the interoperability of the whole museum IT-infrastructure critical to the envisioned joint services of the sector, data harvesting and standardization requirements of the National Digital Library project. Moreover, it is required by the new information management legislation of 2011 (Laki julkisen hallinnon tietohallinnon ohjauksesta 10.6.2011/634).

This paper explores the requirements and potential effects and benefits of implementing an Enterprise Architecture for IT-infrastructure and information management processes in the museum sector. We argue that the successful adaptation of the EA for the museums is a massive and arduous undertaking requiring the involvement, co-operation and participation of the different sized institutions. To facilitate the massive change required by the EA-process, stakeholders must be informed on the process and requirements concerning their institutions. A criteria for organizations capability for implementing the EA and a clear definition of expected benefits is needed to ensure resourcing, concrete results and active participation in the process.

The National Digital Library (NDL) Enterprise Architecture and the ongoing EA-work of the Museum 2015 project, based on the Enterprise Architecture design method for the Finnish Government, will be used as guideline cases.

A MODEL FOR THE DIGITAL INTEGRATION AND COLLABORATIVE EXPLORATION OF CULTURAL HERITAGE ASSETS

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Abstract: Cultural Heritage (CH) is nowadays supported by several systems specialized for access, management, and enjoyment of cultural assets. As to data management, ontology-based solutions are well established for supporting information integration and retrieval strategies able to explicit, aggregate and convey cultural knowledge.

The expanding scale of most collaborative projects in CH requires more comprehensive knowledge than any single domain expert can possess. In order to work collaboratively and reach common goals, experts from different disciplines have to share their specialized knowledge, skills, and practices. Meeting these requirements needs to design a Knowledge-Management (KM) system able at supporting such collaboration. On the one hand, a generic ontology is required to structure information so as to allow data and results to be shared through KM system. On the other, contents and structures that fit domain-specific interests and practices are needed to support domain experts.

This paper presents an approach to conceptualization and design of KM systems that support collaboration across multiple, heterogeneous domains and, at the same time, provide each domain with specific tools and structures. The novelty of our approach lies in the combination of different semantic technologies for retrieving data from a variety of knowledge sources in integrated manner with well-defined semantics. The idea is to provide a two-level ontology. The first level uses the Conceptual Reference Model CIDOC to integrate CH databases and the second level maps the CIDOC model with a knowledge representation of a given CH fitting the mental model of domain experts.

COLLABORATING, INTERACTING AND SHARING: "INVENTING EUROPE" AND CULTURE HERITAGE PARTNERS

ANTILA, Kimmo
Museum Centre Vapriikki, Finland

In my presentation I will concentrate on the European online project "Inventing Europe" and discuss on project from the cultural heritage partner point of view. The "Inventing Europe" Virtual Exhibit is a collaboration project between historians, web designers, and cultural heritage institutions throughout Europe to create a new exploratory environment for understanding recent European technological history.

Museum Centre Vapriikki has been one of the first five members of the heritage institution collaborators with the project carried out during the years 2008–2012. The first part of the project was released in 2009 under the title "Europe, Interrupted". After the first phase more ambitious goals were set for the second phase. The project is based on research from the six-part book series Making Europe: Technology and Transformations 1850-2000 to be published 2013 onwards. The virtual exhibit explores the themes of globalization, consumption, communication, infrastructures, knowledge societies, and governance. These themes form the basis for case studies or stories that allow users to make connections within and between growing online collections of museums, archives and libraries throughout Europe.

I will discuss the role of a collaborator in a Inventing Europe project. Are the museums just mere providers for the material or are they active partners in a large network of researchers and several institutions? What are the benefits for a single museum from this kind of collaboration? I shall also discuss the technical solutions and interfaces used in the Inventing Europe. Participating heritage institutions are offered a solution to share relevant content from their online collections easily. The materials appear as related content next to the objects within the exhibit, and serve as a portal for further exploration on the web and within various heritage partners own sites. It is also important to discuss briefly about the relationship with other European projects (primarily Europeana) aiming to share knowledge and museum materials.

CONTRIBUTIONS OF ARCHAEOLOGY TO THE ENRICHMENT OF CULTURAL HERITAGE: THE CASE OF WEST AFRICA

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As formulated, the notion of enriching the cultural heritage deserves to be clarified, and the different outlines and fields deserve to be well defined. In the first place, enrichment means bringing new elements to grow the extent of what existed. We therefore have to place this operation on two levels: the national level and that of the institutions constituted by museums and other services of cultural heritage. Although the two levels are complementary, it is important to place each one of them in its context.

On the national level, the most generalised tendency for every country is to boast the richness and authenticity of its cultural heritage. That would mean that an enrichment is not an inherent fact, but must be understood as a process distributed over time, in the course of which new elements appear, thanks to the work of artists, architects and other creators of works of the spirit. A selection is carried out from among these creations, and the best pieces are integrated into the national heritage. Let us point out here that a work perceived as unimportant during its creation may turn out to be of great patrimonial value after several decades or centuries - thence the complexity of the selection criteria of national heritage. The enrichment of national heritage takes place also through studies aiming at detecting elements that are non-manifest, because buried in the ground or hidden by individuals or communities. In these cases, the contribution of archaeologists and other researchers proves crucial.

On the level of museums, enrichment is often derived from collection campaigns organised by the persons in charge. But the museum also receives numerous objects coming from archaeologists, anthropologists and collectors. Research is also one of the missions of the museum, which undertakes studies on the patrimonial and aesthetic value of objects and then shows them to the public through exhibitions and publications.

In West Africa, archaeological studies have gained importance after the colonial era through the work of African archaeologists educated in France or elsewhere in the West. In the majority of cases, the studies have been carried out by mixed teams consisting of African and Western experts. These studies have born concrete results, such as exhibitions (sometimes itinerant), publications, extensions of museums, the creation of museums, symposia and other scientific meetings.

For example, the exhibition "Valleys of the Niger" has been organised after digs carried out in the countries traversed by the river Niger. Each of these countries has received this exhibition, whose publications are among some of the best archaeological documents of the West African sub-region. In Benin, studies have been carried out around several subterranean caves situated in the southern part of the country. These studies have made possible the creation, in 2008, of a museum in situ, the Agongointo Archaeological Park, which is already one of the most visited museums of Benin.

Thus, archaeology is increasingly becoming in Africa a major scientific tool in the enrichment of cultural heritage. It gives valuable information on the past of peoples and on their connections and, in so doing, contributes to their rapprochement. Such an options is all the more useful for today's Africa, in which inter-ethnic conflicts keep multiplying and are sometimes stoked up by certain politicians.

POWERPOINT AND BRAIN ACTIVITY – MANAGING COLLECTIONS IN LOCAL MUSEUMS IN FINLAND

KOSKI, Marianne
Lahti City museum, Finland

The Ministry of Education and Culture appointed a working group to develop the local museums of Finland in September 2010. The task of the working group was to investigate the present state and development needs of the local museums, owned by municipalities, associations and foundations. A survey was conducted, concerning the museums' collections, buildings and premises, volunteer work and financial resources. The final report of the working group will be published in February/March of 2012.

According to the survey, the 730 local museums hold over 2,4 million objects in their collections. The collections of

the local museums comprise a remarkable part of the common cultural heritage and collective memory – but the accessibility, documentation and usability of the collections create a severe challenge for the small actors in the cultural heritage sector. Most of the museum objects have been catalogued, but usually manually. About 1/3 of the local museums stated, that they had some kind of an application or database for managing their collections. Over 20 different applications or programs were named by the respondents. Most of them were just ordinary office programs. The systems for the digital cataloguing and preservation included versions such as "Mr. N.N.'s brain activity" and "a typewriter".

It is quite clear, that an easy access, affordable and joint solution for the local cultural heritage actors is desperately needed.

THE RELOCATION DATABASE: A TOOL TO FACILITATE THE DE-ACCESSIONING OF MUSEUM OBJECTS

VAN DER LINDEN, Yuri
Netherlands Cultural Heritage Agency, The Netherlands

The disposal of unwanted items has been an accepted part of museum collection management in the Netherlands since 1999. The ICN, forerunner of the Netherlands Cultural Heritage Agency, published a Guide to the de-accessioning of museum objects in the Netherlands. The Guide was accepted by the Netherlands Museum Association and is regarded as the standard procedure for the responsible disposal of museum items.

The so-called relocation database was developed to facilitate compliance with the rule from the Guide that a museum should make every effort to ensure that items are transferred to another museum, before being sold at auction or via the internet. The database went online in 2006, and since then more than 10.000 objects have been offered by some fifty museums and institutions. A few hundred objects were transferred to other museums.

In 2012, work started on an updated version of the relocation database, which is developed by Delving B.V. The database will be part of DIMCON, based on the Europeana framework.

During the presentation, the following subjects will be dealt with: the process of de-accessioning of museum objects in short, presentation of the relocation database, and some best practices.

VIMUSEO PROJECT. PRESENTATION OF THE PRELIMINARY RESEARCH RESULTS AND GRAPHICAL USER INTERFACE

LAINE-ZAMOJSKA, Magdalena and Cezary Zamojski
University of Jyväskylä, Finland; Studio Zamojski, Poland

This presentation will discuss the preliminary results of the research on small museums and digital technologies. The main objectives of the research are: (1) to investigate the possibilities of new media in presenting cultural heritage; (2) to analyse the cooperation between the researcher, graphic designers and programmers; and (3) to construct the tool (ViMuseo) to create a virtual museum in order to improve online accessibility to small, local history museums in Finland. The research has been conducted at the Department of Art and Culture Studies at the University of Jyväskylä (Finland) and within the doctoral programme of the Finnish Research Education Network on Society's Memory Functions (MEMORNET). The results of the research may contribute to other projects, such as Museum2015, and this potential contribution will be also discussed.

In the second part of the presentation, the potential of graphic design in cultural heritage projects will be discussed. Digital technologies have brought wonderful opportunities to memory institutions, but cultural heritage projects are facing many challenges and problems which are often discussed at conferences. However, it seems that there is too little attention paid to design in cultural heritage projects. Focusing on standards, technology and data is very important, but coherent design can improve final results and solve many technology-related problems. This presentation will therefore discuss the importance of design in the development process. The process of co-designing can bring results that meet the requirements and expectations of the end-users. Appropriately-designed graphical user interfaces follow the technological requirements, but are at the same time user-friendly.

THE LOW COUNTRIES REUNITED: SOME REMARKS ON A FUTURE SHARED DATABASE ON FLEMISH ART BETWEEN THE RUBENIANUM (BE) AND THE RIJKSBUREAU VOOR KUNSTHISTORISCHE DOCUMENTATIE (NL)

NIJKAMP, Lieneke
Rubenianum, Belgium

With this paper I would like to take the opportunity to present the recent co-operation on an art object oriented database between two documentation centres respectively in Belgium and in the Netherlands. The Rubenianum in Antwerp and the RKD in the Hague are both institutes for art history housing documentary, library and archival material. The presentation touches upon the challenge of digitizing an analogue collection, dealing with born digital objects, and working across separate institutions in different countries.

Traditionally, both the RKD and the Rubenianum document Flemish art by classifying and arranging photographs and archival documents in an analogue manner. In the 1980's the RKD commenced classifying images and data in a custom made registration system, and they have gradually moved their focal point towards digitally storing information instead of documenting on paper ever since. The Rubenianum, being much smaller in staff, evidently had not succeeded in structurally digitizing its rich holdings. Only recently, renewed efforts are taken to join forces on a single database on Flemish art, using the already existing RKD Image database as the foundation.

As the project kicked off last Fall, only as much as a broad outline had been discussed when submitting this abstract. At the time of presenting this paper, I hope to proudly show the first results of our image- and database on Flemish art, but also point out the technical and legal issues concerning digitizing documentation, website publishing, and co-operating between different countries, that will certainly unfold during the process.

MUSEUM 2015 AND THE IMPROVEMENT OF CATALOGUING

FURU, Leena
National Board of Antiquities, Finland

Museum 2015 is a common project to all Finnish museums and is led by The National Board of Antiquities with The National Gallery and The Finnish Museums Association. Museum 2015 aims to improve Finnish museums collections management by developing enterprise architecture and national cataloguing instructions. Project will also examine the possibilities to provide the Finnish museums a centralized digital collection management system and services.

This lightning talk will concentrate on the nationwide cataloguing instructions. Museums produce un-coherent information about their collections because there are not common guidelines on how and what to catalogue about objects. When the metadata is not homogeneous the data transfer and searching becomes challenging. Without a standardized cataloguing method the quality of metadata between museums remains variable.

Finnish museum sector needs a standardized cataloguing guideline to unify and qualify the information about our cultural heritage. Museum 2015 provides a standardized cataloguing instruction to all Finnish museums despite of the collections management systems they use. Instructions will be made in a large working group whose members are Finnish museums professionals. In the presentation it is shortly described how we are standardizing cataloguing information and cataloguing process.

AN EXAMPLE OF INTERACTIVE ONLINE HERITAGE RESOURCE AS A SERVICE OF ENRICHING REGIONAL CULTURAL HERITAGE

ZLODI, Goran, Jelena Rubić Lasić and Ivana Družetić
University of Zagreb, Croatia; Ministry of Culture of Republic of Croatia, Croatia; Heritage information specialist, Croatia

Exhibition project „Slavonia, Barany and Syrmia - the Origins of European Civilisation", presented in 2009 in Zagreb, Croatia, has provided the most complete overview of this cultural region, portraying its historical, artistic and economic aspects. Due to its broad conceptual scope, elaborated through more than 2000 items assembled from 153 heritage institutions (museums, galleries, libraries, archives, theatres, church and private collections), the exhibition space was extended in electronic medium in a form of an interactive catalogue published on http://www.bastina-slavonija.info/. This catalogue provides multiple points of access to heritage objects - through timelines, interactive maps and advanced database search. Together with contextual information on 257 thematic units this catalogue enables a polymorphous access to multilayered collections that require a thorough overview on synchronic and diachronic level. Every heritage object is accompanied with catalogue unit and extended descriptions, photographs and references to other resources. Interactive navigation through display floor plans offers the possibility of further explorations of the exhibition. Integration with the portal www.kultura.hr allows interlinking of this valuable information resource, keeping it open to the public and encouraging new additions. This structured system of links among the collections and heritage institutions involved in this complex cultural project ultimately provides comprehensive access to fragmented and dislocated heritage, now reunified in the electronic medium. In our presentation we wish to elaborate new initiatives for enrichment and transformation of this project from online catalogue to dynamic cultural and educational resource linked to various cultural initiatives and synchronization with school and university curriculums.

TESAURO DE ARTE ARQUITECTURA AND TESAURO REGIONAL PATRIMONIAL: MULTILINGUALISM

NAGEL, Lina
Centro de Documentación de Bienes Patrimoniales, Chile

Recognizing the need to standardize the terminology for documenting cultural heritage, the Centro de Documentación de Bienes Patrimoniales (CDBP) decided to produce a complete Spanish-language translation of the Art Architecture Thesaurus (AAT). The goal of the Tesauro de Arte & Arquitectura (TAA) is to keep a one-to-one correspondence between the Spanish and English versions of the AAT, so as to have a truly bilingual tool for both documentation and retrieval.

Also the CDBP developed a thesaurus, Tesauro Regional Patrimonial (TRP) that describes objects belonging to Pre-Colombian cultures and ethnographic collections in Latin America. The TRP is still in its initial phase; we are focusing on editorial revision, structuring of the hierarchies, and entering new terms that will meet the needs of archaeologists specializing in pre-Columbian cultures. For the first time, scholars of the Andean area have a thesaurus to assist in researching pre-Columbian cultural heritage.

Our experience with museums in Latin America reveals that the AAT lacks some widelyused terms corresponding to pre-Columbian, colonial American or religious objects. This lack of terminology prevents the use of the TAA or doesn't allow the community to make full use of it; therefore the CDBP is contributing with new terms for Spanish or for vernacular languages.

The development of both thesauri has been of great benefit, signifying an opening towards the national and international specialized community: we contribute to the standardization, improvement of the information on the cultural heritage, and maintain the minority cultures languages.

ONE LANGUAGE, TWO COUNTRIES – THE PROJECT OF DEVELOPING A THESAURUS OF SCIENTIFIC INSTRUMENTS

CABRAL, Fernando, Lourenço Marta and Marcus Granato
Sistemas do Futuro, Ltd, Portugal; Museu da Ciência - Universidade de Lisboa, Portugal; Museu de Astronomia e Ciências Afins, Brazil

The use of thesaurus and 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.

The preservation of scientific heritage is a major challenge in present-day society. Dispersed through a multitude of institutions – from universities to schools and research laboratories – and unprotected by cultural heritage legislation, the preservation of scientific heritage needs to gradually change from a museum-based approach to an approach increasingly oriented towards in situ preservation, sustained by networks and partnerships at national and international scale. The Museum of Astronomy and Related Sciences of Rio de Janeiro (MAST) and the Museum of Science of the University of Lisbon (MCUL) realized that few reference materials exist, both in Portuguese and in other languages. Since 2006, and inspired by similar experiences in France and Italy, they have been involved in the production of a thesaurus of scientific instruments in Portuguese. This task involved from the beginning a network of institutions. Apart from the MAST and the MCUL, the following institutions are involved: in Brazil, Pedro II Secondary School (Rio), Museum of the Polytechnic School (UFRJ), Dynamic Museum of Science and Technology (UFJF/Juiz de Fora), Museum of Pharmacy Lucas Marques do Amaral (UFJF/Juiz de Fora), Museum of Science and Technology of the Mining School (UFOP/Ouro Preto), Center of Memory of Pharmacy (UFOP/Ouro Preto); and in Portugal, Science Museum (Coimbra), Museum of Science (Porto), Museum of the Faculty of Engineering (Porto), Museum of Physics of the High Institute of Engineering (Lisbon), Museum of the High Institute of Engineering (Porto. The thesaurus will be an important terminology control and access tool for museums and other institutions with collections of scientific instruments.

In this paper, we will present the recent developments of this project, especially how new information and communication technologies can be an excellent tool not only for the development of the thesaurus itself, as well as a working platform for cooperation between museums experts from different countries.

CHALLENGES TO DOCUMENTATION OF MUSEUM OBJECTS IN A POLYLINGUAL SOCIETY

RAYAPROLU, Venkata Ramana
The Maharaja Sayajirao University of Baroda, India

India had been an amalgam of cultures -native and exotic for the contacts it had with the external world and the transformations it underwent within. In addition to a long and growing list official languages and approved usage of English by the government, there are many dialects spoken and host of scripts in usage. This offers an exciting and challenging experience to its citizens at travel and work across the country. The post-colonial regional identity of the country had been essentially based on the linguistic differences, with border areas continuing to have problems (eg. Belgam). This diversity is a virtue and constraint of at museum work. The paper seeks to focus on this paradox.

TEACHING THE MAN TO FISH IN A LANDLOCKED COUNTRY: ROLE OF INTERCULTURAL DIALOGUE IN MUSEUM EDUCATION

KABOV, Valerie and Marcus Gora
University of Paris 1, Sorbonne, France; First Floor Gallery Harare, Zimbabwe

Visual culture and perception of differences in visual culture are frequently crucial factors contributing to failures of communication and distrust on national, ethnic and racial basis. Contemporary museums often become the bastions of established culture and fail to engage effectively with cultural plurality of globalised and multicultural contemporary audiences they are meant to serve. Achieving meaningful engagement and participation requires a shift in the historical and learning paradigms and ideologies employed by museum educators.

This paper will argue and demonstrate through reference to a range of educational and exhibition projects conducted in France and Zimbabwe including conducting courses as part of the EU Grundtvig Lifelong Learning Programme for curators and museum educators and the British Council Creative Enterprise Programme Zimbabwe over the past several years how contemporary curatorial and education practice and ideologies in fact impede engagement and empowerment of audiences especially in dealing with audiences of non-mainstream cultural backgrounds – migrants and ethnic minorities.

Development of effective models requires educators to step outside historical art hierarchies and re-appraise the concept of visual cultural literacy in order to engage audiences in dialogue based on mutual acknowledgement and reciprocity and to reclaim art history as a truly global and contemporary resource of cultural and ultimately political empowerment.

BOJALE DRUM: DOCUMENTATION OF A THREE-TIER LIFECYCLE OBJECT

SETLHABI, Keletso Gaone
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The New Museology recommends active collaboration between museums and their communities as the latter own museum objects. This paper discusses the relationship between material culture, that is, the bojale drum, its custodian and a community museum, Phuthadikobo in Mochudi, Botswana. Its aim is to demonstrate how the exclusion of intangible cultural heritage attributes of objects in their documentation affects their interpretation. Museum practitioners have in the last decade realized the essentiality of intangible cultural heritage. The earlier museum practice was to preserve only tangible heritage which resulted in misinterpretation of heritage. Bojale drum is played in a girl's initiation ceremony, bojale. The three-tier lifecycle includes the custodianship, museum and use in bojale phases. The drum's intangible attributes such as oral traditions, sacredness, meaning and songs are barely documented in its museum record. This paper recommends that the drum's documentation should integrate its tangible and intangible attributes because culture in its totality includes both attributes. In conclusion, bojale drum is an example of a living culture that has connected a museum with its community. Museums should therefore portray the living culture in their documentation by integrating all object attributes.

MEMORIES FROM THE WEAVING MILL 1979–2009

VANHA-SIMILA, Maria
Forssan museo, Finland

In 1847, the Swedish-born Axel Wilhelm Wahren founded the Spinning Mill Forssa in the middle of Tavastian countryside. In the best years in the 1970s the industries gave work to more than 2000 people. In 2009, 162 yrs of textile industry in Forssa came to its end. What we have now to remind us of it is beautiful industrial architecture from 1849-1963 and vast textile archives in the museum.

In 2009, when the huge printing machines where being packed for new Pakistani owners, two textile artists collected and stored archive and marketing material, textile models, tools – ca. 80 sqm storage full of variety of items for the museum to choose what to preserve. We felt ignorant and helpless in front of all that material. How to choose right things to the museum? How to understand what the material tells? How to open it for the public?

We planned the project "Memories from the Weaving Mill 1979-2009". National Board of Antiquities gave support to it and the documentary film maker Ville Koivisto agreed to collaborate. The concept of the project is to go through the material with people who have been producing it; to interview people who have worked in the mills during those 30 yrs.; to collect photographs that show the factory people, life and practices beside the production.

In my paper, I will show what we have done and are doing to document the saved material, and to place it in our data-base. We also will open data-base to our customers.

The whole "Memories from the Weaving Mill 1979-2009" project has been very interesting and it has had important influence to community. We have used several ways to document textile industry in Forssa 1979-2009. We have collect material for the documentary film. Interviews, opportunities for reminiscence, exhibition, photographs. Versatile documentation has been mainline in this project.

FROM OBJECT-BASED TO CONTEMPORARY DOCUMENTATION – HOW TO INCORPORATE FIELD WORK MATERIAL IN ETHNOGRAPHIC MUSEUM'S COLLECTIONS

HIRVONEN-NURMI, Katri and Jonina Jansson
Helinä Rautavaara Museum, Finland

Helinä Rautavaara Museum's future Brazil exihibition will include material collected by Helinä Rautavaara (HR) and other field-workers. HR got access to places where the uninitiated were usually not allowed. From HR's Brazil-trips there are only few dozens of objects, but hundreds of hours of audio and hours of film recordings, and more than 10000 slides and photographs in the museum. The old way to look at the collections was to focus on objects and leave other kinds of field-work materials aside. In an ethnographic museum it would be wise to consider this material as collections to be given ID numbers of their own.

In museum's Brazil-collections primarily HR's objects are documented. Recent digitization projects incorporated 1500 new items in the database, representing 10% of HR's photographic collections from Brazil. During last three years the museum has acquired new contemporary collections of objects and audiovisual material on Afro-Brazilian religious traditions. They show interesting developments particularly in Brazilian Umbanda rituals and its paraphernalia, one example being the figure of Preto velho, entity represented by a statue or a person. The aim is to help the exhibition builder track the interesting topics and narratives across different acquisitions.

Experience from urban and contemporary anthropology shows that the reflective understandigs gained through the experiences of the ethnographer makes the ethnographer her-/himself an aspect of what is told. In order to understand the nature of contemporary field-work documents entering collections it seems essential to include biographical notes on the collectors, too, in the database.

DIGITALIZATION OF ARCHIVES, THE LIVINGSTONE MUSEUM EXPERIENCE

PHIRI, Fidelity and Terry S. Nyambe
Livingstone Museum, Zambia

Livingstone Museum is the largest of the four national museums under the mandate of National Museums Board of Zambia. It holds in its collections a variety of artifacts ranging from archaeology, history, ethnography, Natural History and a rare collection of personal effects belonging to the famous Scottish missionary Dr David Livingstone.

The Livingstone Museum houses an archive which has a vast collection. The museum has collaborated with the National Archives of Zambia to digitize this very important collection. This project is funded by the Finish Embassy in Zambia. The objectives of this project includes

- Preserving the archival material which has become brittle and begun to fade.
- To ensure that many people have access to digital information beyond the walls of the museum
- Reorganizing of the archival material and creation of new catalogue for easy retrieval of information.
- Sharing of information between Livingstone museum, National Archives of Zambia and other public and private institutions.

With the help of some staff from the National Archives of Zambia, the museum has made strides in the digitization of the archival materials. The museum has so far digitize 3,710 photographs covering different aspects of Zambian history, production of catalogue of about 6,000 Archival collections covering different subjects, digitalisation of over 600 maps, procurement of carton boxes for storage of archival materials and procurement and fitting of new shelves in the archives.

With the support of the Finnish embassy, the museum has continued to carry out the digitalization of the archival material and also hopes to digitalize some rare books in the library this year and avail such books in digital format to the users. New security system will be installed at the library to reduce theft of books.

At the conference we hope to share with our colleagues from various parts of the world the experience, achievements and challenges that we have met as a museum in trying to digitize our archives. The conference will also provide a platform for us to also learn more about what are other museums professionals are doing in trying to make information more accessible to the public.

THE DOCUMENTATION OF TRADITIONAL MEDIA IN AFRICA: A SURVEY OF THE EMERGENT POST-COLONIAL FOLK MEDIA STORAGE SYSTEMS IN AFRICA, 1963–2012

BARASA, Maurice
Nairobi Railway Museum, Kenya

Although by 1963 oral traditions in Africa were still largely intact, influences from Christianity, Islam, and Western education and technology had began eating into them. European Anthropologists and Administrators had had African folksongs, tales, Poems, riddles and other forms of oral literature written down. Thus African folklore not only reached its recipients orally but also in the form of books. However, after 1963, African scholars in Kenya launched their own researches into African cultures with a view of giving the correct interpretation of our traditions which had been misinterpreted by European writers. Today these books can be accessed in electronic form.

After 1963 oral traditions were recorded to be replayed on cassette players and gramophones. The recording technology has been changing tremendously and today sounds and motion pictures are captured digitally on Compact Discs, DVDs, MP3s, among other formats. These can then be replayed on laptops, mobile phones, computers, i-pads, radio and television thus extending the reach of folklore beyond ethnic boundaries.

This research will therefore seek to examine why and how the form, and documentation of folk media in Africa have been changing over time.

SOFIE – OPEN FOR ALL

DE JONG, Gerald, Cris Kremers, Torsten Nilsson, Christian-Emil Ore, Thomas Wikman, Chryssoula Bekiari and Martin Doerr
Delving BV, Netherlands; Erfgoed Brabant, Netherlands; Västerbottens museum, Sweden; University of Oslo, Norway; Delving BV, Netherlands; ICS-FORTH, Greece; ICS-FORTH, Greece

SOFIE, developed by Västerbottens museum, is a museum documentation system used by more than 300 small and medium sized museums and local heritage societies in Sweden. In 2010 the museum initiated a process for the redevelopment of SOFIE into a distributed, open source, open data system fully integrated with the "Culture-Cloud" infrastructure. The goals of the current pre-study is:

- Finding a more sustainable environment for long term SOFIE development
- Developing a state of the art, open source and standardized museum documentation system for the (Swedish) museums community based on the CIDOC CRM.
- Finding, developing and evaluating suitable and sustainable business models for the migration of SOFIE into an open source environment
- Transforming the 300 current "customers" into an active open source community
- Complying to Linked Open Data
- Opening up for "added" services like co-ref, persistent id resolution, rapid metadata alignment etc
- Ensuring 2-way communication with Europeana, aggregators, LoD sources and other sources with "Enhanced Content"

Partners are: Västerbottens musem and Grenna Museum, Sweden. FORTH, Greece, Oslo university, Norway and Delving B.V. and, the Province of Noord-Brabant in Netherlands.

The paper will describe the initiative, its rationale, purpose, goals and chosen approach.

THE MONUMENTS AND SITES OF TOPLICA DISTRICT OF SERBIA IN DIGITAL CATALOGUE OF CULTURAL MONUMENTS

SEGAN, Marija and Milos Milovanovic
Mathematical Institute of the Serbian Academy of the Sciences and Arts, Serbia

Abstract: Guided by the wish to briefly, clearly and completely introduce to the world the history, archaeology, art, tradition and the natural beauty of the Monuments and Sites of Toplica District of Serbia, that great writers such as Evliya Çelebi and Felix Kanitz have described in their works, we, as a part of the multidisciplinary research team, have digitized them in the Catalogue of Cultural Monuments. In this paper we are presenting the obtained results, as well as the problems that encounter in this process. Since there is no national strategy and standards dedicated to the issue of the digital preservation of the cultural heritage, we have given the proposal process of digitization of any Monuments and Sites in order to preserve and store the existing data as well as leave the possibility of their further updates. We will also try to answer at a first glance trivial questions as the need for digital preservation of Monuments and Sites, to whom we preserve, who are the „stakeholders" of digitization, etc? Comparing to the worlds' and nationals' contributions in this field, our approach proved to be functional, efficient and meaningful.

THE NATIONAL CATALOGUE OF THE ALL-RUSSIAN MUSEUM FUND. PAST, PRESENT AND FUTURE

VOROBYEVA, Ekaterina
The main computer center of the Ministry of culture of Russia, Russian Federation

According to the current legislation the National Catalogue of All-Russia Museum Fund is the electronic data base which includes the main information about every museum item and every museum collection included into the All-Russia Museum Fund.

The Ministry of culture of Russian Federation, all museums in Russian Federation, the Main computer Center of the Ministry of culture takes part in the formation and the conducting of the National Catalogue.

The purposes and tasks of the conducting of the National Catalogue, the rules of the granting of data, possibilities of the using of the information from the Catalogue are discribed in the current legislation: laws, regulations and instructions.

The National Catalogue is conducted with 1996. The software was upgrade in the end of the last year. Now the software allows at the same time to registrate museum items and museum collections under the rules described in the current legislation and to change the procedure of the registration if the legislation will be changed.

The conducting of the Catalogue on the base of the registration documentation of the owners of the items and collections are the most important methodological principle of the Catalogue.

The technology of a digital signature is used in the Catalogue to confirm and to fix the responsibility of the museum for the completeness, urgency and reliability of the information about museum items and collections.

The information given in the Catalogue should be popular. So that there is the Official National Catalogue Web Portal (http://goskatalog.ru/site/) in the structure of the Catalogue program complex. The Web Portal carries out a complex of functions: it shows the items and collections, it gives all necessary information on the participation, it introduces with the history of the project and with the latest news.

The requirements of the current legislation are observed at the publication of data. We are not allowed to publish the information about the owners and deals with items. We should provid the right of the first publication to museums also.

THE MAJOR CHALLENGES FOR THE COLLECTION MANAGEMENT IN TAMPERE MUSEUMS – HOW TO BUILD UP A SYSTEM SUITABLE FOR ALL KINDS OF (FUTURE) NEEDS?

PAAVOLA, Tiina and Riitta Kela
Tampere Museums, Finland

Abstract: Tampere Museums collection management system, called Siiri, is ten years old. The brand new database version with new collection based requirements and several new features has been taken in use 2011.

The specification of requirements of the system has been done by the staff in Tampere Museums. While planning the new version of the collection management system one of the starting points was Tampere city strategy: it requires also the museums to build up customer oriented services which are equally available to all citizens. Other important thing was to keep the focus on the collections – it was important to develop one specific system to manage different kinds of material: objects, photographs, archaeological sites, historical buildings etc.

Many challenges have been faced during the development project. We would like to share some of our questions with the conference audience. We are also ready to tell what kind of solutions we have already found and how we will continue our work with the issues.

The major questions are: How to develop collection management system more open to serve all the needs in museums, taking into account also the needs researches and local customers? Is it even possible and what are the obstacles? How to develop traditional collection management system more customer friendly and interactive? And how to take our customers as a part of our work in our collection portals?

One big issue is how to integrate all the functions needed to the same database: how to manage a large 'hands on' collection of the museum, or what to do with the information on deaccessions of the museums? What specific requirements do the 'born digital' collections set to the database system? Or is it reasonable to integrate all needs to the same collection management system at all?

Our solution to challenges is a new kind of collection management system which is easily usable online and also reusable in new different services and integration scenarios.

TRANSFORMING CORE DOCUMENTATION PRACTICES: DEVELOPING A FOCUS ON ENGAGING CONTENT AND DIVERSE AUDIENCES

COOMBES, Judith
Powerhouse Museum, Sydney, Australia

Although a focus on retrospective digitisation of collections is important, it is also vital that collecting institutions ensure that core documentation practices are transformed to maximise meaningful access to collection knowledge. In recent years, documentation practice at the Powerhouse Museum has increasingly focused on embedding the creation of high quality content for diverse online audiences into our core collection management processes. Arising from a strong commitment to maximising the sharing of collection knowledge, documentation is created from the earliest stages of acquisition to be accessible, engaging and understandable by a range of audiences. Through automatic monthly harvesting from EMu into our OPAC, new and updated collection knowledge is available internationally within a very short timeframe.

Australian museums have had a strong focus on the inclusion of significance statements over the past five years, with the Powerhouse Museum taking up the practice in 2001. Our interpretation of significance focuses on telling the object's "most compelling story" rather than using a formulaic criterion based model. The significance concept is integrated into all our documentation practices. We now have more than 99,000 objects online, with over 30,000 of these with significance stories included, along with stories of the production and history of the objects, detailed subject keywords, provision for user tagging, and Open Calais tags for people and places. All documentation by curators and registrars includes both specialist and accessible language. Planning is underway to build on current practices for linking collection level stories and individual's stories to individual objects. Additional initiatives to maximise use include the launch of an API of all collection data and inclusion in national projects such as the National Library's TROVE resource.

THE DOCUMENTATION OF SCIENTIFIC ANALYSIS AND CONSERVATION AT THE BRITISH MUSEUM: THE PATH TO SHARING

WHITSON CLOUD, Jonathan
British Museum, UK

Abstract: The British museum has been recording museum object conservation effort and outcomes since the appointment of Dr Alexander Scott in 1918. As with other areas of documentation the emergence of digital technologies has provided new opportunities for recording, systemising, retrieving and sharing this information. The British Museum has taken some steps along this path moving, in some areas rapidly, from long standing paper records through systematic digitisation to the production of linked data. This paper will look at the approach and discoveries made, noting the needs of Conservation and Science documentation as they differ and coincide with the documentation of museum objects and will examine the effect of the current sharing driven environment on the documentation of Science and Conservation.

TRAVELSAMPO SYSTEM FOR CREATING MOBILE AUDIO GUIDE TOURS ENRICHED WITH LINKED DATA

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TravelSampo [1] is a prototype system, by which museums are able to create interactively audio guide tours inside museums and outside in the open air. The system includes a web-based editor by which a curator can describe objects in an exhibition, or in the open air, using a set of shared ontologies published in the National Ontology Service ONKI (http://onki.fi/), and upload related audio descriptions, text, and images. Each exhibit object is given an identifier and a geo-location. When the end-user is near the object, either in a museum or in the open air, information related to the object can be given to her based on the object's identifier or the mobili phone's GPS location. A major novelty of TravelSampo lies in its ability to associate the object metadata automatically with millions of semantically related pieces of information available though the Linked Data cloud (http://linkedata.org/) and the CultureSampo system (http://www.kulttuurisampo.fi/). For example, a painting can be linked, based on the underlying ontologies and metadata, with the biography of the painter in Wikipedia or in the National Biography, with other paintings of the artist in the collections of other museums, with photos and books about the artist, and so on. This gives the end-user a richer experience than is possible with traditional audio guide systems. For the museums, TravelSampo offers a cost-efficient and dynamic way of creating information rich audio guide programs, and re-using and linking each others collections through linked data, leading to a win-win situation in collaborative content creation. The paper presents and discusses the underlying ideas of TravelSampo and our experiences in developing the systems especially from the content publishers', i.e. the museums' viewpoint.

[1} E. Mäkelä, J. Väätäinen, R. Alitalo, O. Suominen, E. Hyvönen: Discovering Places of Interest through Direct and Indirect Associations in Heterogeneous Sources - The TravelSampo System. Terra Cognita 2011: Foundations, Technologies and Applications of the Geospatial Web, CEUR Workshop Proceedings, Vol-798, 2011. http://ceur-ws.org/Vol-798/proceedings.pdf

ADAPTIVE VIRTUAL EXHIBITIONS. ORGANISATION OF KNOWLEDGE, MULTI-NARRATIVITY AND DESIGN FOCUSING ON THE VISITER'S DEMAND

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It would perhaps not be too daring to argue that the core of the effort in the research and development of systems of digital museology comes, still today, from institutional logics. The "real" museum remains emblematic in people's thinking, and the intended object remains, in general, the rather traditional modelling of museum practice. Certainly, the renovation of our technological paradigm through ICT arouses important considerations of these practices, but not to the point of overturning our conceptions of the semiotic model that connects the visitor to the visited object. Even when the visitor is taken into account, still even when developments pay attention to educational aspects for the general public, the vision seems to be overall obstructed by the categories of thinking of the institution. The patrimonial offer is limited to the intelligence of objects. However, there is also the intelligence of the presentation of objects, which is more sensitive to their reception and to the conditions of their semiotic appropriation. In fact, virtual exhibitions, legitimate heirs of the promises of ICT, could also draw important advantages in order to allow multiple accesses to various contents of cultural heritages.

We intend to present within the framework of CIDOC 2012 an on-going project, which aims at putting in place a system of presentation of a collection of works adapted to different intentions of visit. More precisely, we intend to present directive ideas concerning the modelling, design and implementation of a prototyping platform of virtual exhibitions focussed on the visitor's profile. We shall first develop the argument of a structured ontology following several points of view (i. e. following several different qualities) and scaling on several levels of depth (that is, an ontology that combines the aspectuality and granularity of knowledge). We shall then define the notion of "adapted visit" as a function of choice on top of a matrix [aspects of knowledge X levels of knowledge].

We shall show in which sense such visits adapt to different profiles and can support varying narrations of a work or a collection of works. These narrations will differ according to the quality and sophistication of the information given. We shall also show in which way they can enrich themselves at will, offering foundations to diverse museological projects. Finally, we shall give some elements of implementation of this enterprise as well as examples of use showing the flexibility created in the realisation of virtual exhibitions focussing on the visitor's demand (whether cultural, educational, introspective, recreational, social, playful, etc.).

WHEN ARCHIVES AND FINE ART MEET. DIFFERENT PERSPECTIVES ON PLURAL INTERESTS

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Royal Museums of Fine Arts of Belgium, Belgium

Archives that are produced as a by-product of normal museum activities can be processed in accordance with the principles of archival science, while still meeting museum needs in terms of information flow and documentation of collections. Archival and documentary approaches are no longer contradictory or mutually exclusive. However, this renewed vision of museum archives relies on interdisciplinary dialogue and requires greater efficiency, for a truly effective implementation, taking into account coordinated practices, standardized across sectors, and new methods of treatment and access to information. With the integration of major museums in cultural heritage information networks, it is important to consider "extended" participation, taking into account not only the information they possess and distribute, but also that which they hold "organically" in their institutional archives, along with unexploited documentation of unique collection objects. It is clear that museums operate better if more information about objects held by a museum (M1) can help document an object stored elsewhere, possibly by another museum (M2). The presentation of the principle is accompanied by three or four examples to illuminate the archival approach to fine arts.

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