DELIVERABLE

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D6.7 - CARARE final conference, Copenhagen, 8-9 November 2012

Revision: Final

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Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Contents

1 Executive Summary

This deliverable is the report on CARARE's final conference in Copenhagen, November 8-9 2012.

The report describes the thoughts and work that went into the conference, the conference itself and the dissemination efforts before, during and after the event. The report also synthesises all the presentations made at the conference including the speeches made at the welcome reception on the evening of the main conference. There were 23 presentations from 10 different European countries in seven sessions, a welcome reception with three speeches, and three social events for the delegates to network and debate outside the pre-designated topics. 82 people attended during the two and a half days plus non-registered participants who listened in on one or two presentations. The conference programme included presentations on the technical approach to interoperability and 3D representation, experiences of the partner institutions, user studies, hack days and app development, outreach, sustainability and CARARE's place in the grander scheme of the digitisation and promotion of European cultural heritage.

The conference was organised mainly by MDR Partners and the Danish Agency for Culture with help from the session chairs, individual speakers and the CARARE partners. The programme and presentations*[1] are available and are published on the CARARE web site (http://www.carare.eu/eng/Activities/CARARE-Final-Conference).

The conference was instrumental in uniting the project managers and the partners on the overall outcome of CARARE and helped spark ensuing sustainability efforts which is the subject of a different report (D7.3)

Welcoming delegates to the conference

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[1] Sadly, one presentation was lost due to a stolen laptop. See http://www.carare.eu/eng/Activities/CARARE-Final-Conference/Programme-presentations

2   Introduction

At the welcome reception on the evening of November 7th 2012, the delegates who were already in Copenhagen gathered at the Thorvaldsen's Museum in central Copenhagen. Speeches were given by the museum's director, Stig Miss, and project manager Kate Fernie, MDR Partners. Director general of the Danish Agency for Culture, Anne Mette Rahbæk, gave an account of CARARE seen from the point of view of the project lead. The speech is reproduced below to serve as an introduction to this report.

2.1   Welcome speech at the welcome reception

Director general of the Danish Agency for Culture, CARARE welcome reception, Thorvaldsen's Museum, Copenhagen, November November 7th 2012.

"Good evening everybody. Welcome to Copenhagen. Welcome to the final CARARE conference.

Many of you standing here have participated in the project, and worked hard these last three years to make the project a success. I would like to thank all of you for your co-operation with us at the Danish Agency for Culture – and for co-operating with each other.

I have not personally been involved with setting up repositories and mapping xml - I admit I have no idea how to do that, but my Danish CARARE team tells me that the project has not only been a great learning experience, but a fun project to be involved with, because of the enthusiasm and great sense of humour among the participant. I would also like to thank Kate [Fernie] for all her hard work as project manager of the CARARE project. Kate has been involved with everything in this project – from overall project plans to looking through the mappings of every individual partner. It has been an enormous effort. Thanks you, Kate.

We at the Agency for Culture have appreciated the chance to be involved in this project, and we look forward to maybe working together again in the future.

So what has the CARARE project achieved? Well, for one thing, if I want to know something about this beautiful museum building, that we are standing in today, I can very soon look it up on the Europeana portal. I can also look up Polish castles, Andalusian ceramics, English rock art, and Icelandic excavations. Partners from 20 different European countries have provided data for Europeana in the CARARE project – so it is a long and very impressive list of data collections.

Europeana's goal is to assemble the most comprehensive, trustworthy and authoritative collection of European cultural heritage ever compiled. In the areas of architecture and archaeology, it has certainly become much more comprehensive thanks to CARARE. I think we can safely say that thanks to you – the partners in the CARARE projects - the data provided is also both trustworthy and authoritative, because you all represent institutions, which have been entrusted to preserve and interpret the cultural heritage of your countries. And you have all shown great commitment and professionalism in this project.

The network between our institutions, which has been build up during this project, is an important thing to sustain. I know that work is going on in the project on a plan for sustaining the network and the technological setup – so that CARARE can keep up aggregating content after January next year. I for one look forward to hearing more about that. Another thing, that I think is also a great achievement of this project, is that we have all signed a Data Exchange Agreement with Europeana. I said before, that I had not been personally involved in work on the project – but actually - I did personally sign this agreement.

Of course that was no great effort in itself, but the implications of this data exchange agreement are indeed great, because not only can people look up our data on the Europeana portal - they can reuse it - for what ever purpose they see fit. The data is now in the Public Domain. It's a provocative thought isn't it? It is provocative because it means that we have let go – not only of the data – but of our monopoly on the right to interpret and communicate about "our" content. By making the data freely available we have opened up for the possibility that new players can take the raw material in our digitized collections and databases and process it, re-sample it, re-interpret it - and thus participate in creating new value for culture and society. Culture has great potential to become a much greater creative driving force in society, and free access to culture data is a big step in the right direction.

Tomorrow you will have a chance to see what happened, when we invited a bunch of software developers and designers to do exactly that – to take our data and create new apps or websites with it. A few weeks ago we – that is the Agency for Culture, the National Library, the National Museum, and, the National Archive - hosted the very first cultural heritage hackaton in Denmark called Hack4DK - inspired by Europeana's Hack4Europe events. It was a great success, and some of the developers have promised to show up tomorrow and tell you about their ideas and the prototypes they built. You can look forward to that – there were some fun and interesting ideas on how to re-use the data and how to engage different user groups.

You can also look forward to the rest of the conference programme. Tomorrow there will be a presentation of the results of the CARARE project, and an evaluation of the technological approach. Friday there will be sessions on how to sustain the results achieved in an EU funded project like CARARE and on the users of heritage data. Last but not least: I know that the Danish team has arranged a number of interesting activities – city walks, guided tours and a wonderful dinner tomorrow night. I hope you will all enjoy this last opportunity to meet and network as CARARE partners. Thank you for your attention – and have a great conference!"

3 Organisation of the CARARE Final Conference

The planning of the CARARE Final Conference started in March with the formation of an Organisation Committee consisting of Kate Fernie (CARARE Technical Coordinator) and Sheena Bassett (Dissemination Leader) from MDR Partners (henceforth MDR), Christian Ertmann-Christiansen and Kristine Hoff Meyer of the Danish Agency for Culture (henceforth DAC), Stuart Jeffrey of University of York's Archaeology Data Service (henceforth ADS) and Henk Alkemade of Cultural Heritage Agency (henceforth CHA). A draft programme was drafted in March with chairs allocated to seven themed sessions and suggestions made for speakers. The Committee Members each followed up and confirmed the availability (or otherwise) of their proposed speakers. The programme was developed and revised over the following months with a finalised version available by October 2012.

During the six months, there were three Skype meetings with the Committee members to discuss the various aspects such as the programme, the budget, social activities, marketing and design of the website and reimbursement of speakers travel expenses. DAC were able to provide both the venues (see below) for the evening reception prior to the conference and the two day event and MDR assisted with putting together the web pages for the Final Conference on the CARARE website and marketing of the event. DAC used their own conference registration application which was accessed through the website.

The main DAC team: (left) Jeanette Helmer Poulsen, Kristine Hoff Meier and Mikkel Christoffersen
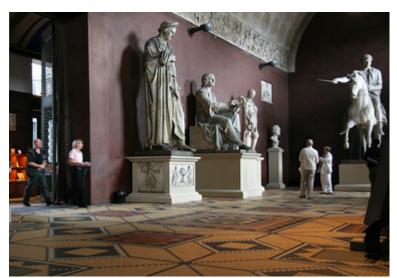
3.1 Venues

The outline of the programme meant that venues were needed for a welcome reception on the evening of the main conference, the two-day main conference itself, and a place for the conference dinner. For the reception, the organisers chose Thorvaldsen's Museum in the centre of Copenhagen and neighbour to the Danish Parliament. The organisers chose the National Museum of Denmark for the main event and the associated restaurant was booked for both lunches and the conference dinner.

Thorvaldsen's Museum
Thorvaldsen's Museum is the oldest museum in Denmark. It was built in 1848, four years after the death of famous Danish sculptor Bertel Thorvaldsen to whose work the museum is dedicated. The museum holds most of the models of Thorvaldsen's original works which are spread all over the world. The museum is no stranger to the challenges of digital representations in 3D and it was a conscious decision on part of the organisers to gather the conference attendees in a place surrounded by large, impressive three-dimensional works of art.

The National Museum of Denmark
The National Museum of Denmark is also in the old city centre of Copenhagen. The museum's collections and exhibitions show the history of the Danes from prehistoric times to the present day. The museum traces its history back to the Royal Art Collection of king Frederik III founded in 1650 to house the royal family's large collection of works of art, weapons, artifacts etc. Its buildings were erected in 1743, built as a mansion to the then crown prince Frederik (Frederik V).

Thorvaldsen's Museum's sculpture hall where the reception took place

The museum houses the restaurant Julian, which is part of the new line of restaurants that focuses on the new and historical Nordic cuisine. The restaurant is also an example of the new environmental

trend of sustainable food. Restaurant Julian catered the two lunches of the conference and the conference dinner held at the museum at night.

The National Museum of Denmark seen from the North

3.2   Invitations, promotion and attendance

The CARARE partners were asked to send out invitations and to use their own mailing lists to promote the Final Conference. However, as many of them were also organising their own Dissemination Workshops, it was recognised that most of the people that might attend the Final Conference would be more likely to go to a national event as this would be cheaper and more convenient for them. Attendance incl. lunches, conference dinner and other relevant events was free of charge, which made very broad awareness efforts somewhat risky. The success criterion was informally set between the Danish Agency for Culture and MDR Partners at 80 attendees of the potential circle of core stakeholders after a review of all possible parties.

A variety of channels were used to market the Final Conference. In addition to the CARARE partners, the target audience was policy makers and management who would be responsible for the digital assets within their own cultural heritage organisations.

CARARE Newsletters
The Conference was announced in Issue 6 (March 2012) and Issue 7 (July 2012) with a link to the website. The Newsletter was sent to 252 and 267 subscribers respectively. In October an email only about the Final Conference was sent to 280 CARARE Newsletter subscribers.

Email Groups
Emails were sent to the Europeana COMMs mailing list in July to announce the conference and then again in October. The COMMS mailing list has several hundred subscribers. A further email was sent to 1,174 subscribers of the Europeana Local newsletter in October.

Social Networks

Information about the Conference was published on the CARARE LinkedIn Group (494 members) in early October with a follow-up at the end of October

Website

A News article about the conference was published on September 24th 2012 on the CARARE web site. When the final CARARE conference was being organised, the CARARE website (www.carare.eu) was used, as the CMS is relatively easy to manage - also with regards to continuously updating information.

Under the menu 'Activities' there was a site made for the conference - 'CARARE Final Conference' - with a small description and the provisional programme of the conference. Three sub-sites were made to the conference site with the following headlines: 'Venues', 'Programme & presentations' and 'Speaker biographies'. Kristine Hoff Meyer and Jeanette Helmer Poulsen of DAC helped each other building the structure and then updated information on the fly. Later, Sheena Bassett replaced Kristine Hoff Meyer.

For registration Danish Agency for Culture's form system, Capevo XForm, was used. The system has an option for data extraction. A link to the registration form was placed on the main page 'CARARE Final Conference'. After the conference Sheena Bassett has updated the main page, and she has uploaded almost all the PowerPoint and documents used during the conference as many of the participants were very interested in copies of the presentations.

The webpage and sub-sites are still available: http://www.carare.eu/eng/Activities/CARARE-Final-Conference.

Attendance

The organisers decided against broadening the scope of invitees beyond this circle of main stakeholders and their networks, because the organisers were afraid of having to turn people down due to the natural restraints of the conference room and the budget. However, invitations did go out to relevant, national university programmes and relevant, national memory institutions.

The conference had 82 registrations with approximately 45 people turning up for the evening reception before the main event, and approximately 50 people turning up for the official conference dinner. There were a few people who came for only one of the days. 70 people were present during day 1 of the main event and 63 for day 2.

4 Programme

The aim of the final conference was not only to get the partners, and stakeholders and other interested parties together, but to debate the impact, sustainability and future of CARARE.

Presentation of scope
The conference was presented in the following manner on the web site www.carare.eu:

> As CARARE nears completion, the project has developed a rich metadata schema specifically for the archaeological domain, established a full infrastructure for the mapping and supply of metadata to Europeana and is supplying thousands of photographs, drawings, 3D models and maps of famous (and not so famous) sites and buildings to end users.
>
> The mission of the CARARE project is to bring content about Europe's unique archaeological monuments and architectural heritage to Europeana users. CARARE has achieved this by bringing together heritage agencies, archaeological museums, research institutions and digital archives from all over Europe in a best practice network funded by the European Commission's ICT Policy Support Programme from 2010 to 2012.
>
> The objectives of the CARARE conference are:
>
> - To present the results of the CARARE project, and evaluate the technological approach,
>
> - To debate how to sustain the results achieved in a project like CARARE after EU funding runs out,
>
> - To put the project results into some perspective and investigate why it is worth the effort.
>
> The conference sessions cover Europeana and the application and impact of digitisation on the cultural heritage domain, success stories and experiences from CARARE partners, the technologies used by the project and policy and sustainability.

The reception
The reception had three speeches on the overall importance and impact of projects like CARARE and European heritage in general.

- Director of the Danish Agency for Culture, Anne Mette Rahbæk, gave a personal opinion on the importance of CARARE in the larger scope of integrating digitised European cultural

heritage and thanked the partners for all their hard work and project manager Kate Fernie for being involved in everything from start to finish (See section 2.1)

- Project manager, Kate Fernie, of MDR Partners talked about the main scope of CARARE and what it had accomplished.

- Museum director of Thorvaldsen's Museum talked about the history of the venue and European cultural heritage

Kate Fernie (MDR) speaking at the reception

The main conference
The organisers decided that day 1 should be about CARARE with presentations from partners and other stakeholders and to broaden the scope on day 2 to sustainability, impact and use of cultural data. Day 2 would also be used to reach out to conceptually related projects and initiatives.

The National Museum's banquet hall

Hence the layout of the two days became:

Day 1
Session 1: Keynote speeches
Chair: Mikkel Christoffersen, DAC

Session 2: CARARE project results
Chair: Kate Fernie, MDR

Session 3: Use of cultural data
Chair: Kristine Hoff Meyer, DAC

Session 4: CARARE – evaluation of the technical approach
Chair: Christian Ertmann, Royal Library of Denmark

Day 2
Session 5: Keynote speeches
Chair: Kate Fernie, MDR

Session 6: Sustainability and policy
Chair: Stuart Jeffrey, ADS

Session 7: The impact of digitisation on the use of cultural heritage
Chair: Julian Richards, ADS

Social events
In order for the attendees to network and share experiences, the conference provided such opportunities not only with the initial evening reception, but also with a conference dinner at the National Museum on the evening of day 1, and a selection of guided city walks on the morning of day 2 as well. Attendees could choose between post-Medieval Copenhagen, archaeological digs, and the modern-day city. The National Museum also provided the conference attendees with guided tours in English of the museum's special collections of pre-historic and modern eras.

A 3-D souvenir from Copenhagen Central Hall Square, created by Anestist Koutsoudis

5   Presentations

Presentations are available in their entirety on the CARARE web site:
http://www.carare.eu/eng/Activities/CARARE-Final-Conference/Programme-presentations

Day 1, session 1: Keynote speeches

Jill Cousins, Europeana
"Europeana – digging into the past to create a many faceted future"
Jill Cousins gave a keynote speech about the past, present and future of Europeana, the status and strategy for 2013, and how projects like CARARE fit into the greater scheme of things. Europeana has grown from a portal thinking to being an umbrella for all kinds of projects great and small in the digitisation and dissemination of European cultural heritage. Europeana is working on a fine-tuned and multifaceted connectivity between the supply side of producers, owners and holders on one hand and the heterogeneous demand side of single users and communities of amateurs and professionals alike on the other. Now that the metadata of approximately 20 million objects have been released using a CC0 license (i.e. no rights reserved), Europeana has taken a step forward. Rather than employing a simple access model, Europeana is now engaged with all parts of the continuum of aggregation, tools building, distribution, and marketing through projects, the Europeana network and by providing its API free of charge. In the future, Europeana aims to foster further development by facilitating business-to-business relations to supplement the business-to-consumer relations that dominate now. Jill Cousins further highlighted the importance of projects like CARARE in order to offer both domain-specific and enhanced data to specialists and laymen alike.

Krzysztof Nichczynski, European Commission : DG Connect
"Digitization and online accessibility of online cultural heritage – our common mission"
CARARE's contact person in the European Commission, Krzysztof Nichczynski, gave the other keynote speech. Krzysztof Nichczynski gave an account of the changes made by the European Commission that resulted in the formation of DC Connect. The main purposes are underlining the importance of ICT, focusing on growth and job creation, and adapting to Horizon 2020 and Connect Europe Facility. The Commission regards the digitisation, preservation and dissemination of Europe's shared cultural heritage as a moral obligation, as a way of promoting the richness and variety of European culture and as an input to creative industries enhancing their growth potential. Krzysztof Nichczynski further highlighted the recommendation from the Commission to the member states of October 27th 2011. The recommendation asks the member states to step up their efforts with regards to digitisation and aggregating metadata to Europeana and to ensure private funds in public-private partnerships. Digitisation is mostly a national endeavour while the Commission works to remove barriers at the European level through directives such as the Orphan Works directive. The Commission also recommends member states to look specifically at digitising more audio-visual material, to promote Europeana broadly and to forge strategic ties with the creative industries.

Day 1, session 2: CARARE project results

Ann Degraeve, MRBC – Heritage Direction, Archaeological Department
"The Brussels capital region and CARARE – opportunities and intricacies"

Ann Degraeve started the session of CARARE project partner presentations. With a presentation of one beautiful photograph after the other of buildings, monuments, and trees from the Brussels region, Ann Degraeve described the project that originates in the Ministry of the Capital Region of Brussels. The Ministry is charged with the protection, management, and restoration of the region's physical heritage such as building, landscapes, trees and archaeological sites incl. those underground. There are 2.300 safeguarded sites and buildings. The inventory of the architectural heritage contains more than 10,000 buildings and over 20,000 illustrations of various kinds. Similarly, the inventory of remarkable trees contains over 5,600 trees from the region. Ann Degraeve listed the unmovable nature of these kinds of heritage as a challenge as well as trying to unite personal and professional wishes with the practicalities of the possible. Conversely, joining forces with other heritage professionals and institutions and coming up with joint technical solutions was listed as a major benefit.

Sophora japonica f. pendual, avenue Beau Séjour 87, Uccle (from Ann Defraeve's presentation)
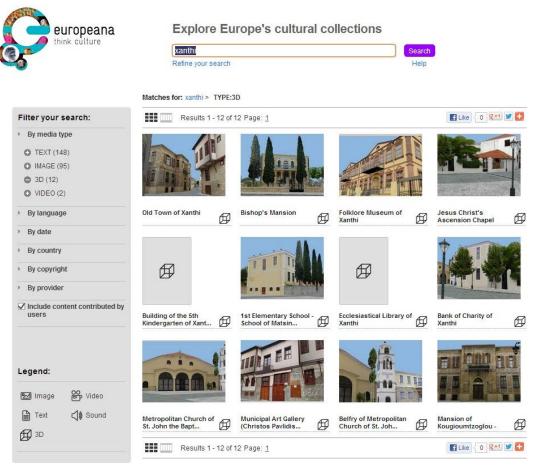
Anestis Koutsoudis, Athena Research and Innovation Centre
"On providing 3D content to Europeana – the case of Athena R.C."

Dr. Koutsoudis provided a comprehensive tour of the work of the Athena Research and Innovation Centre with 3D representation. Providing 3D presentations is in fact a major role of the centre both for thematic web sites and for stand-alone applications. The centre works with three thematic areas: 1. Urban areas of cultural importance; traditional settlements of Eastern Macedonia and Thrace. 2. Byzantine churches in Greece; complete 3D reconstructions of two temples in Mani. 3. Byzantine castles in the region of Eastern Macedonia and Thrace; the Byzantine castle of Kavala. Dr. Koutsoudis described the process of going through the recommended CARARE content preparation pipeline from preparing the files to the delivery and display of the files and associated descriptions in the Europeana portal. Interspersed were examples of presentations and viewing and exploration options for the end-user. The work will continue in 3D Icons.

Presentation of a search result containing some of Athena's files (from Anestis Koutsoudis'
presentation)

Henk Alkemade, Rijksdienst voor het cultureel Erfgoed
"CARARE: the road to Europeana"
Henk Alkemade described the Dutch Cultural Heritage Agency, part of the Ministry of Education Culture of Science, and their efforts to get their data into Europeana. The agency is charged with the preservation of and research on built monuments, archaeology, historical landscapes and works of art. The agency joined CARARE in order to not only increase the amount of Dutch content in CARARE, but also to join the network of actors and institutions both nationally and internationally. The agency's data collections include heterogenous sets of various objects and data on everything from archaeological sites, protected cityscapes to the individual monuments and includes an image collection as well. CARARE gave the agency an opportunity to utilise a national aggregator role, to integrate various kinds of heritage such as movable and immovable kinds, improving data quality and quality assurance procedures and to work with international standards and software. The agency will continue to get more content providers involved in the service and to publish more data sets in Europeana while still integrating different kinds of heritage.

Ingrida Vosyliuté, Vilnius University
"Connecting Lithuanian archaeology to CARARE: our experience"
Ingrida Vosyliuté og Vilnius University's Faculty of Communication described the work being carried out on Lithuanian archaeology and the Faculty's reasoning behind joining CARARE. The faculty is already part of a professional network nationally but saw CARARE as an opportunity to promote Lithuanian archaeology online and to present it to the international community. The faculty maintains the largest database on Lithuanian archaeology in existence with data on more than 300 sites in the form of archaeological excavations, field surveys, and archaeological artefacts.

Ingrida Vosyliuté presenting

**Paola Ronzino (w. Sorin Hermon), Science and Technology in Archaeology Research Centre –
The Cyprus Institute "Pyrga loves monuments"**

Paola Ronzino was a surprise addition to the session on project partners. The organisers wanted her
to speak, because the Cyprus project has been extra focused on the dissemination and promotion of
Cypriot archaeology to school children. The European Commission's recommendation mentioned
earlier specifically asks member states to get students involved with cultural heritage from an early
age. Paola Ronzino described the work with the Hellenistic Roman Theatre of Paphos; a beautifully
preserved, excavated traditional theatre site typical of the era. The site offers many challenges to 3D
rendition, integration with related movable objects and overall description. In a dissemination
experiment, Pyrga school children were interacting not only with the sites and objects themselves
but with the representations as well. They even went on field trips approaching the sites in a different
manner by having questionnaires to fill out. The questions would make the children think about the
sites in new ways. The questionnaire results would often surprise the researchers. For instance, some
children would suggest remodelling some monuments by knocking down select walls. The
conclusion is that 3D rendition and integration of different kinds of objects make for a much
improved product for dissemination and in this case it goes well together with on-site didactic
experiments.

Pyrga school children taking pictures (from Paola Ronzino's presentation)

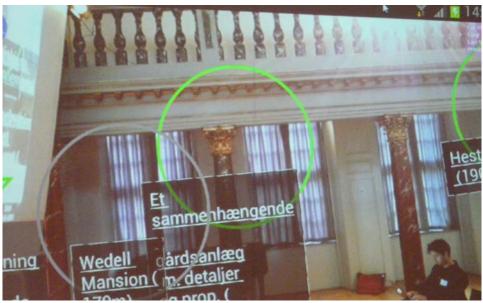*Day 1, session 3: Use of cultural heritage data*

Kristine Hoff-Meyer, Danish Agency for Culture
"Announcing the winner of HACK4DK and demonstrations of the projects"
The Royal Library of Denmark hosted a very successful hackathon in October of 2012. 25 programmers with almost as many so-called hang-arounds used online available cultural data to develop applications over two days. The organisers learned a couple of sometimes surprising lessons in the process. First and foremost you can never make too much data available. Data needs to be in its most raw form. Also, don't try to approach developers with too much formality and government logos. Finally, don't close the doors at night. Development is not a 9-5 job. The apps mentioned below tap into the Danish database for immovable heritage.

Apps developed included "Adopt-a-mound." Denmark is littered with burial mounds that aren't marked. The app allows you to search for them and to adopt them as your own pledging to look after it. The app is made primarily for schools.

The app "Near something" alerts you when you're getting close an entity in the database. It will then track you distance to it as you move closer or further away.

The winner was the app "Kulturarv" (= cultural heritage), which also taps into Flickr data. The app works by turning smartphones into a video camera viewer with graphical marks in the view of nearby heritage or entries in Flickr or Wikipedia. The app is available free of charge from the firm 'codeunited' (http://codeunited.dk/kulturarv/).

Kulturav being demonstrated during the conference

Day 1, session 4: CARARE – evaluation of the technical approach

Vassilis Tzouvaras, National Technical University of Athens
"How we achieved metadata interoperability in CARARE"

Vassilis Tzouvaris gave a comprehensive talk about the history and nature of the MINT tool, which is tool of choice for CARARE and one behind which Vassilis Tzouvaris himself was the main driving force. Achieving interoperability between data sets from various countries and languages on different subject matters in different formats is no easy feat. In CARARE, interoperability of the metadata is achieved by transforming or mapping it to the CARARE schema. The MINT tool also harvests, normalises and packages the metadata with an easily comprehensible web interface. The

A delegate has found power for his laptop

developers will continue to improve the MINT tool with various editing features such as find & replace and the ability to edit the XML itself. Also in the works is full-text searching. One of the major lessons learned in the process is that no matter how good the technology and the tools are, in and of itself it will not ensure the final quality of the metadata. Human supervision is always needed.

Daniel Pletinckx, Visual Dimension
"3D objects in Europeana: results and perspectives"

The three-dimensional aspect of representing archaeological sites and artefacts and architectural entities and objects has always been central to the CARARE vision. Daniel Pletinckx has been a central figure in the relevant work package, and he gave a presentation of the work over the years with the challenges and why PDF 3D was ultimately chosen as the recommended standard. A host of examples of the functionality of PDF 3D from CARARE partners were shown.

Daniel Pletinckx presenting

Costis Dallas (with Dimitris Gavrilis) Athena Research Centre
"Enter MoRe: what is a real repository doing in the Europeana aggregation line?"

Costis Dallas provided an intriguing look into the back-office machinery of the CARARE aggregation service between the content providers – i.e. the memory institutions themselves – and Europeana. The CARARE service provide its own repository, which allows for much more service and quality assurance than a simple aggregation service. The latter is a simple three-stage process with no maintenance of the metadata, while the introduction of an intermediate repository allows for multistage processes and preservation and indexing centrally of the metadata as well as the introduction of further enrichment services. These services include first and foremost de-duplication and the adding of spatial data of various kinds. There are more advantages to the intermediate repository. Content providers need not worry about the continuous changes to neither schemas nor data models anywhere in the aggregation line. Results indicate large differences in the completeness of metadata being ingested with somewhere between 25% and 75% being the norm. The future promises not only a move to a cloud-based service but also allowing further enrichment of records at the provider point as well as integration with external data for enhanced dissemination.

Day 2, session 5: Keynote speeches

Sarah MacSeveny-Aril, Arts Council of Norway
"Is a national technical infrastructure for the cultural heritage sector the backbone of aggregation and service building?"

Sarah MacSeveny-Aril gave a fascinating view of a very holistic approach in Norway to engaging end users with digitised cultural heritage and dissemination services. The Norwegian framework incorporates collections in Europeana with information in Wikipedia pages and digital stories developed on special web sites. The social infrastructure underpinning this framework is a collaboration between government entities at the central level to authorities and institutions at the local level that provide objects such as imagery and metadata to the central service Norvegiana. The central service for its part highlights, promotes and contextualises the local institutions. For instance, there are now apps using added geographical information, which allows users to use their present location to find, learn about and navigate the cultural heritage in their immediate vicinity. 1.3 million objects in Europeana come from Norvegiana.

Sarah MacSeveny-Aril, Arts Council of Norway

Jacob Riddersholm Wang, National Museum of Denmark
"Digitisation in 3D – challenges and perspectives"

Jacob Riddersholm Wang provided a tour de force of current and future trends in cultural heritage dissemination technology today and the near future and challenged the audience to consider the possibilities and impacts of technology. Drawing from examples of popular culture eye-openers such as then world chess champion Garry Kasparov's defeat at the 'hands' of IBM's Deep Blue computer back in 1997 and the recent success of Jeopardy computer program Watson, he posed the question: what happens when we all have a Watson in our pockets and want to interact with a museum? The national museum's mission is to make accessible a nation's history through collections so people may gain insight into their cultural history. Digitisation is key of course, because it's digitisation that allows the representations of the objects to be manipulated and used in endless contexts, but traditional museum pedagogy and outreach is challenged at a deep level by all the knowledge already being in the hands of the users.

Jacob Riddersholm Wang

Day 2, session 6: Sustainability and policy

Tobias Golodnoff, Danish Broadcasting Corporation
"EU Screen as a case"

Danish Broadcasting Corporation (DR) recently received €10 million for digitisation of as much of its archival material as possible. Tobias Golodnoff described in his presentation the project resulting from this funding and mandate. DR decided to define the value of cultural heritage not in its immediate use but rather in its re-use. Re-use depends on retrievability and access. DR approached the problem in a new and innovative manner by establishing an experimental almost Facebook-like web service. The service is called danskkulturarv.dk (= Danish cultural heritage) and is in beta. The site will offer access and interaction with aggregated material from other important stakeholders in Denmark such as the State Library, the National Gallery of Denmark etc. DR also participated in EU Screen as partner. EU Screen involved 27 partners and has so far contributed 35.000 TV-related items to Europeana. The challenges faced in EU Screen with multilinguality and IPR were considerable.

Tobias Golodnoff, Danish Broadcasting

Hans de Haan, N303
"Sustainability and standardization in heritage"

Hans de Haan presented a focused look at the requirements for standardisation across Europeana content and content providers. Standardisation is also important for sustainability. The quest has been the implementation of a set of minimum requirements that would ensure standardisation across all of Europe's digital cultural heritage in general, and in this case with the introduction of the INSPIRE (Infrastructure for Spatial Information in the European Community) directive in particular. INSPIRE is actually a bottom-up initiative and is a standard negotiated and maintained by the 27 member states. Hans de Haan described the relationship between minimum interoperability requirements, INSPIRE, the Europeana Data Model (EDM) and how the Netherlands comply with them.

Simon Hodson, JISC/Dryad
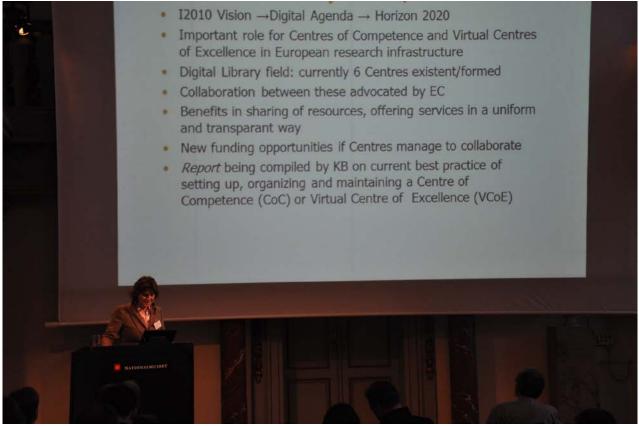**"JISC Managing Research Data Programme: drivers, policy, activity, sustainability"**

Simon Hodson gave a talk about the ways JISC goes about ensuring the preservation and re-usability of research data. Research data is comparable to cultural data in most ways and so most of the challenges and the possible solutions are the same. The problems of data preservation, description, findability and re-use are well-known and it takes an entire institutional and social ecology along with a technical infrastructure to solve them. Simon Hodson described the current status of the ecology and the infrastructure and used Dryad as an example. Dryad is an Anglo-American project and a repository for research data underpinning scholarly publications in mostly the biological sciences with core partners in evolutionary biology and ecology. The institutions' obligations in this endeavour are considerable and need clear policies, strategies and business models.

Hildelies Balk, Royal Library of the Netherlands
"Sustaining project value in Centres of Competence"

Hildelies Balk presented an overview of the six Centres of Competency (CoC) in Europe in the field of digital libraries and how they relate to projects. Setting up a centre or a Virtual Centre of Excellence with support of the partners in finishing projects is a way of sustaining the results of the project and the strategic partnerships forged in them. Centres need strong support from the original consortium and a business plan. Revenue tends to be a mix of support from institutions, membership fees, income from paid services, and funds from other projects. Hildelies Balk described in detail the IMPACT Centre of Competency stemming from the original IMPACT project (FP7) and now has 26 partners across Europe. The IMPACT centre has been successful partly due to its ability to attract 3rd party private partners and because of the enthusiastic support from its founding partners. The challenge is to keep up the innovation and relevancy of the service.

• I2010 Vision →Digital Agenda → Horizon 2020
• Important role for Centres of Competence and Virtual Centres of Excellence in European research infrastructure
• Digital Library field: currently 6 Centres existent/formed
• Collaboration between these advocated by EC
• Benefits in sharing of resources, offering services in a uniform and transparant way
• New funding opportunities if Centres manage to collaborate
• *Report* being compiled by KB on current best practice of setting up, organizing and maintaining a Centre of Competence (CoC) or Virtual Centre of Excellence (VCoE)

Hildelies Balk, Royal Library of the Netherlands

Day 2, session 7: The impact of digitisation on the use of cultural heritage

Martin Dammers, Wiki Loves Monuments
"Wiki Loves Monuments"

Another way to achieve longevity of project results such as those from CARARE is to make them have an impact in sources outside the usual disciplines. Martin Dammers described the results of the 2011 and 2012 Wiki Loves Monuments photography drive. Both years the project ran for the month of September. In 2012 the numbers were bigger than in 2011 (2011 numbers in parenthesis); 35 countries participated (18), 14,000 people (5,000) and 365,000 images were uploaded (168,000). The project engages Wikipedia users since contest images must be self-taken. The images in Wikimedia are linked to the relevant Wikipedia entries via unique identifiers, and through geographical information the data can be used in mobile apps. Among the future goals are indexing of all images, getting images from other collections and overall improvement of data quality.

Mette Bom, Danish Ministry of Culture
"1001 stories about Denmark"

1001 Stories about Denmark is yet another successful crowdsourcing project. People have the chance to tell stories about places they know and the stories are collected and made available from a web site with added geographical information making the information available on-site. The project and app have been well received and is being used as a tool for cultural tourism. In that vein, it has always been the philosophy not to limit content to highbrow culture but to include objects such as fastfood restaurant, industrial plants, music festivals etc. Project management decided early to promote the project's tangible deliverables such as the web site, app etc. broadly in everything from app magazines and local media. There are now 30,000 new registered users every month and the number is rising. The future plans include collaboration with local memory institutions and making use of the data they hold to enhance the service.

Birte Christensen-Dalsgaard, Royal Library of Denmark
"Data in their own right – also in Europeana"

Birte Christensen-Dalsgaard gave an overview of linked open data and how it relates to digital cultural heritage. Presently, we have reached many of the web 2.0 goals with semantic technologies such as RDF (Research Description Framework) that enables machine-readable statements about content, attribution and relationships between resources. As long as semantic statements are held within an accepted standard such as RDF, they can be meshed from various sources - ultimately making a universal network of cultural data. The same technologies may be used for disambiguation in centrally maintained authority files, and it may find – and indeed already has - use in mobile applications. The key is setting the data free. This is the only way the data can be repurposed and it's usually a prerequisite for successful crowdsourcing efforts as well. Birte Christensen-Dalsgaard used the Keyhole Markup Language used in EuropeanaConnect as an example.

Geert Kessels, EuroClio
"Historiana – your portal to the past"

EuroClio is the European associan of history educators and was founded 20 years ago by on request by the Council of Europe. EuroClio has 78 member and associated member associations in 58 countries and maintains the open access history portal Historiana in collaboration with memory institutions. The portal is relevant to CARARE which has among its desired deliverables educational resources. Historiana faces the challenge that web sites rarely make good source material, but EuroClio is constantly working with institutions and individual history educators to expand the range of available material and right now there's a call to make an educational resource about the industrial revolution.

6 Mid- and post-conference dissemination

Mid-conference promotion was done by Twitter, while post-conference dissemination was done by articles in various media.

Mid-conference dissemination

The Conference had several tweets sent over the 8th and 9th November by both speakers and attendees. Tweeters included the Europeana News project, Lars Linqvist (SwNHB), Mikkel Christoffersen (KUAS), Julian Richards (ADS), Niels J from Copenhagen and four of the speakers. CARARE has 325 followers.
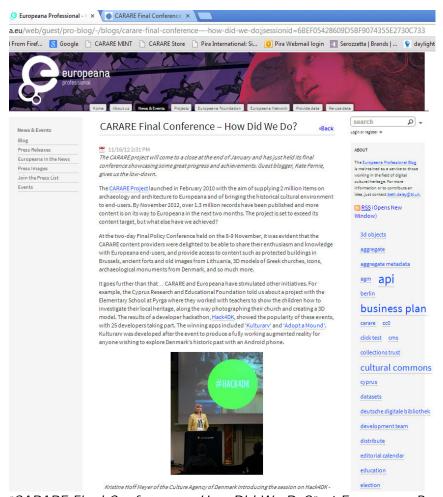

Sample of the tweets

Post-Conference Dissemination

The Conference was written up as a News Article on the web site which was included in Newsletter No. 8 (http://www.carare.eu/eng/News/CARARE-Final-Conference) published at the beginning of December.

The Europeana Blog also featured an item on the 16th November entitled "CARARE Final Conference - How Did We Do?" (See http://pro.europeana.eu/web/guest/pro-blog/-/blogs/carare-final-conference-%E2%80%93-how-did-we-do;jsessionid=6BEF05428609D5BF9074355E2730C733).

An article was also published in the Heritage section of the online publication "Digital Meets Culture: http://www.digitalmeetsculture.net/article/carare-final-conference/ (and via their Facebook page at: http://www.facebook.com/home.php#!/Digitalmeetsculture)

"CARARE Final Conference - How Did We Do?" at Europeana Pro

7 Conclusion

The aim of the final conference was to bring project management, partners, and important stakeholders together to discuss the results obtained in CARARE and the sustainability from this point forward. This aim was achieved through two and a half days filled with presentations, question time and networking. The presentations from various partners and work package leaders demonstrated clearly CARARE's achievements.

Seen as a whole, the partners' experiences joining forces across disciplinary and organisational boundaries in their respective countries to join a shared technological approach showed the added value of creating tools for disciplinary domains across borders and collecting data and metadata in one common repository. The logic behind the conference programme meant that the technological approach was described in a couple of presentations afterwards. CARARE has produced a set of online tools, a metadata schema to map between local approaches and the Europeana Data Model, and interjected its own repository infrastructure in between for added services. The added value of geographical information and 3D representation means a whole new dimension to the dissemination of archaeological and architectural heritage.

Sustainability and user studies were also at the forefront and will feed into the discussions of how to carry on the CARARE legacy – technically, infrastructurally and certainly socially as well, because as the days in Copenhagen demonstrated above all else, the CARARE people are dedicated and diligent professionals who cannot help but enthusiastically discuss their work.

The project management team feels confident, the results from CARARE will be carried forward and will continue to ensure interoperability between the individual archaeology or architecture collection and Europeana and improve the presentation and dissemination of our cultural heritage.

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http://carare.eu/

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