Evaluating Metadata Description Schemas of the Cultural Heritage Organizations in Electronic Environment for Interoperability

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Outlines

- Managing Cultural Heritage in Electronic Environment
- Manuscripts, historical records, museum materials
- From Archives, Libraries and Museums
- Newly talking concepts convergence and interoperability but still need more steps
- Main problems are consensus and technical integration
- Some examples OAC, Europeana, ECAI
- Some technical standards EAD, METS, MARC21, SPECTRUM, EDM (Europeana), LIDO, ATHENA, CARARE
- World is going to economic integration where is the culture organizations?
- Where is Turkey in these developments?
Current Challenges

- Developing Electronic Archival/Records Management System
  - Formal communication systems
  - Business transactions
  - National/international standards,
  - Legal regulation
  - Expectations!!!

- Integrations with e-government applications, Trustworthy, Interoperable, Accessible, Reliable electronic systems for formal communication and business transaction

- Structure of ERMS /EA
  - Transforming
  - Creating a model.
Periphery of Information Management
Important points

• One of the most important parts of developing electronic systems for cultural heritage resource is shown by research on international conditions.

• In these circumstances observing practices, getting information about the systems, learning from bad and good experiences, investigating international good practices, guidelines and standards are important.

• As part of the literature review studies fundamental information on the basis of managing cultural heritage in electronic environment were gathered.
Methodology

• As part of metadata mapping information was gathered from
  – Online Archive of California, the Electronic Cultural Atlas Initiative; Europeana; and the Library of Congress Finding Aids
  – As international examples and, from the organizations in Turkey, the State Archive of Turkey; the National Library of Turkey; the Anatolian Civilization Museum; the Hatay Archeology Museum; and the Ministry of Culture and Tourism.

• The problem was that the datasets of the electronic cultural resources in Turkey need to be revised.

• Datasets have to be prepared with the idea of efficiency of information discovery, integration of different resources, long term preservation of resources and copyright management rather than focusing on local descriptions of resources or processes.
International and Local Examples that Evaluated

- International
  - OAC
  - ECAI
  - LC Finding Aids
  - ESE - Europeana
  - LIDO
- National
  - The State Archive of Turkey
  - National Library of Turkey
  - Anatolian Civilization Museum
  - Hatay Archeology Museum
  - Ministry of Culture and Tourism Logbooks
“Your Archives is an exciting and accessible resource that enables anyone to share their knowledge of Britain's rich archival heritage and to reuse historical information in a way that has not previously been possible.”

(http://yourarchives.nationalarchives.gov.uk/)
Museum 2.0 = Web 2.0 and Museums

- **Museum 2.0**: blog that started in November 2006 (by Nina Simon)
- **Main goal**: to explore the ways that the philosophies of Web 2.0 can be applied in museums to make them more engaging, community-based.
- **Web 2.0 technologies** → static content of museums is transformed to dynamic platforms (content generation and sharing is enhanced by the visitors-users).
- **Web 2.0** → opens up new opportunities, demonstrating at the same time their weaknesses.
Printed and electronic documents, books and other materials are helping us for imagination but we need now real pictures.
Freedom of Information

• Information had been chained behind the walls (not refer to Umberto Eco)...libraries
  – Electronic environment broken down the walls (not refer to Pink Floyt )

• But information in printed and electronic materials is still captivated in the pages

• How to release information from the walls and pages

• Transferring the information where it belongs to, the time it has been, to the real World in fuzzy reality
WHERE. Geo-temporal search interface. Place names found in documents. Gazetteer provided lat. & long. Places displayed on map.

Hindi Surprise Language Project - Document Display in Java TimeMap
For convenience this Map Index allows direct access to all the dynamic and static maps incorporated in ECAI Iraq. The other methods of accessing the information are through the links at the top of the page: Historical Sites, Eras & Empires, Institutions, and Preservation.

ECAI uses TimeMap software to create dynamic maps. Clicking on the segments of the blue timeline allows users to choose a dynamic map for a specific time range. Below the timeline are thumbnail images of additional dynamic maps that can be activated by clicking on the image. Following this are lists of links to maps available on the web.

Dynamic Maps:
Click on a time period segment to view its dynamic map.

- **Dynamic Map of Historic Sites**
- **General Information about the region around Iraq**
- **Era and Empire Boundaries 7000 BCE - 2000 CE (avi 2.56mb)**
- **Islamic Empire Boundaries** from the ECAI Silkroad Project
- **Islamic Empire Boundaries (avi 1.75mb)** from the ECAI Silkroad Project
- **The Sasanian Empire** - a component of the ECAI epublication, A Sasanian Seal Collection in Context
Web Interface - Access by map
Screenshots from ECAI Iraq.
First CARARE content in Europeana!

The first CARARE dataset was successfully uploaded into Europeana at the beginning of February from the Swedish National Heritage Board (SwNHB). This achievement is the result of two years of hard work on data preparation, creation of a CARARE metadata schema tailored towards archaeological content and the technology for the complete ingestion process.
The 3D-ICONS Project starts

Two years after CARARE started, a related project by the name of 3D-ICONS has just started with the aim of bringing a range of very special 3D models and related digital content to Europeana. 3D-ICONS refers to a selection of architectural and archaeological “masterpieces” which are to be digitised and aim to provide a series of highly engaging content to end users that is of high quality and well organised. In particular, 3D-ICONS will focus upon UNESCO Words Heritage monuments and will include 3D models and reconstructions, enlarged models of important details and images, text and video.

The project partners come from nine different Europeana countries and include six existing CARARE partners. 3D-ICONS is being co-ordinated by the Archaeological Dept. of the Università degli Studi di Napoli L'Oriente. The project will start by reviewing existing materials and a proposed list of monuments so that a finalised list can be agreed upon before the digitisation work starts. The appropriate tools and methodology will be agreed and strict quality controls enforced during the digitisation process. Metadata creation is also an important part of 3D-ICONS as well as implementation of a publication process to Europeana. The project will continue the work carried out in CARARE on publication formats as it is anticipated that other formats in addition to 3D PDF may become available during the project lifetime.
Europeana GIS services and archaeology/architecture site data

A recently published CARARE report resulting from WP3 (Testing and Prototyping) discusses the findings of an investigation undertaken by CARARE partner Institute for the Protection of Cultural Heritage of Slovenia into the GIS services offered by Europeana and their application to the archaeological/architecture sector. Geographical co-ordinate location is an important feature of archaeology as it is independent of geo-political boundaries and can change over time (i.e. by size or location – there are many monuments that have been moved from their original locations). Specifically, the Europeana geoparsing service, Europeana gazetteer, EuropeanaConnect media annotation tool and the OpenLayers API were tested and appraised. The findings can be briefly summarised as follows:

The Europeana geoparsing service takes a text word or phrase that constitutes a geographic name and matches this to the most probable geographic location (co-ordinates) from a database where possible. The current tool is Beta status and proved to be very effective. It will provide a useful means for data providers to validate their geographic data when supplying geographic co-ordinates via the CARARE metadata schema to Europeana. However, it is not helpful for spatial navigation as the accuracy is very limited – in excess of 5 to 10m.
Finding Aids
Encoded Archival Description (EAD) at the Library of Congress

What are Finding Aids?

Handwritten poems by Walt Whitman ... Leonard Bernstein's scrapbooks ... Thomas Edison's patents ... photographs and memoranda from the NAACP ... Margaret Mead's field notes ... The collections of the Library of Congress offer researchers rich and deep access to primary source material of unparalleled interest and significance.

Finding aids provide a gateway to this wealth of Library treasures, helping you discover and navigate through the thousands of boxes and folders that house each collection.

These guides provide comprehensive overviews of unique Library resources. Progressively detailed descriptions of a collection's component parts summarize the overall scope of the content, convey details about the individuals and organizations involved, and list box and folder headings. Special service conditions are noted, including terms under which the collection may be accessed or copied. Links are provided to digitized content, when available.
Virtual Exhibitions

Explore 13 unique curated exhibitions highlighting some of Europe’s biggest cultural treasures.

Visit exhibitions

From the blog ⚡

Freedom Express: Leg 3 – Slovakia & Czech Republic
The Freedom Express is a journey that follows 20 young Europeans as they discover the bustle of 1930s.

Freedom Express: Leg 2 – Hungary & Romania
A group of 20 young Europeans continue their journey through Eastern and Central Europe to trace the events of 1930 and...
Event

- Event Identifier
- Event Type
- Role in Event
- Event Name
- Event Actor
- Culture
- Event Date
- Period
- Event Place
- Event Method
- Materials / Technique
- Thing Present
- Event Related
- Event Description

```
title: La primavera / Der Frühling

event
  eventType Herstellung / Creation
  eventActor
    actor
      nameActor Botticelli, Sandro
      roleActor Maler
  eventDate
    earliestDate 1482
    latestDate 1482
  eventMaterialsTech
    termMaterialsTech Tempera
    termMaterialsTech Pappelholz

event
  eventType Herkunft / Provenance
  eventPlace
    place
      namePlace Florenz, Palazzo Medici Riccardi, Via
      partOfPlace namePlace Florenz
      partOfPlace namePlace Firenze, Provincia
      partOfPlace namePlace Italien
    eventDate
      earliestDate 1498
      latestDate 1498

event
  eventType Restaurierung / Restoration
  eventDate
    earliestDate 1982
    latestDate 1982
```
Bowl lute.

**Title:**
Saz

**Description:**
Technical description: Wooden body, width 122, depth 130; wooden neck, body and soundboard, finely joined; neck is inlaid with 13 circular mother-of-pearl spots and inset with a bone tip; 3 melodic strings (metal) on face of instrument; 2 sympathetic strings (metal) on side of neck.

**Coverage:**
Republic of Turkey, Turkey

**Date:**
Probably before 1872

**Type:**
Saz

**Subject:**
Musical Instruments

**Data provider:**
University of Edinburgh

**Provider:**
MIOM - Musical instrument Museums Online

**Providing country:**
Europe

**Auto-generated tags**

Other items you may be interested in:
Guidelines for Geographic Location Description

It is just a matter of time when we would realise that merely browsing by "word" or searching for a combination of words will not be enough for efficient object discovery in increasingly larger pool of objects in cultural collections of Europeana portal. Collections momentarily consist of tens of millions of objects but soon expected to be counted in several hundreds of millions. The efficient search engine could not be imagined without consideration of spatial and time dimension of objects, their historical and cultural context.

We consider geographic location as one of the most important aspects of information which pertains to every cultural heritage item. Examples include provenience, current institution, location of event, etc. Therefore the formalized location attribute (e.g. geocode, geographical coordinates) will significantly enhance the power of searching and visualizing the cultural content of Europeana and other cultural portals as well.
What?  
Who?  
Where?
Enriching records

Cloud-based micro-services for metadata enrichment and capture:

• Where
  • Geo-location
  • Historic Place Names service
  • Geo-coding application

• What
  • Vocabulary service
  • Vocabulary matching service
  • Background linking service
Core infrastructure to aggregate the metadata from our partners and provide to Europeana:

- **MINT**
  - Metadata mapping and ingestion

- **MORe aggregator framework**
  - Metadata harvesting, validation and enrichment
  - User-friendly interface for data providers
Sample Cloud Ecosystem
National Examples from Turkey
Katalog Tarana

- **Group Name**: Ali Emiri
- **Relative Organization**: ALL
- **Year Interval**: Hori
- **Phrase to Be Searched**: istanbul

Search Results: 2230 records

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İstanbul'da Mahmud Paşa Kerimesi Hadice Hanım Vakfı Tevliği'nin Hüseyin'e tevoih'i hakkında.

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Eyüb'de Behram Bey Vakfı Tevliği'nin İstanbul Kadısı Ali Efendi'nin arzıyla Aife Hatun'a tevoih'i.

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Darphane kurbinde Papaszade Mustafa Çelebi Vakfı Zaviyesi Müderrisliği'nin Şeyh Mehmed'in tayinine dair İstanbul Kadısı Ali Efendi'nin arzıyla tevoih.

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Hazret-i şehriyari Yemekliği için Edirne'den İstanbul'a vanncaya kadar verilecek odun hakkında Hatab Emin Mehmed Ağa'ya Divan tezkiresi.
Catalogue Search By Group Name

Group Name: ALL
Relative Organization: ALL
Year Interval: ---- ----
Phrase to be Searched: Ankara

Find

Search Results: 9265 records

- Anayasayı İhlal Davası: Bediuzzaman Said-i Nursi'nin Ankara'ya gelişini devlet ricaine bildirir mektubun fotokopisi.
- Anayasayı İhlal Davası: Milli Birlik Komitesi ve Ankara Kumandanlığı'ndan, 4 nolu Soruşturma Kurulu Başkanı'na sunulan evrak.
Site İçi Arama

Kelime:
sicil

Arama sonucunda 20 adet kayıt bulundu.

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<td>Sık Sorulan Sorular</td>
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### Katalog Tarama

**Aranan Kelime**: Eser Adı=Ankara,
**Sonuç**: 40

Sayfa Sayısı: 1, Göörnülenecek Kayıt Sayısı: 40

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**Bitik Höyük**

**Temel Bilgiler**
- **Köy:** Bitik
- **Tarih Durumu:** TÜİK
- **Tarih ve Yer:** 29/03/2009
- **Vakfı:** 1 VE 2
- **Doğrunun İki Tung Çağlortası Tung Çağları**

**Kimlik Bilgileri**
- **Tip:** Höyük
- **İl:** Ankara
- **İlace:** Kütahya
- **Mucit:** Bitik Höyük
- **Müze Envanter No:** 148-02-84

**Tanım:** Fincan, kulbu ağızdan yükselen formda, çark yapımı. Kırmızı astarlı.

**Boyut:** AG 11,9*13,2cm, Y 6,2cm, KY 8,3cm

**Ayrıntılı Bilgiler**

Araşımının Tarihçesi

İlgili Yayınlardan:
- Akurgal, E., Anadolu Kültür Tarihi, TÜİK, Ankara, 2005, s.131-133.

Buluntu Tarihi:
- ÇANAK-CÖMLEKLER KABARTMALI VAZO PARÇALARI. MÜHÜR, PIŞİŞTOPRAK FIGÜRLERİ. "MIZRAK UÇU, FİBULA"

**Çok İzlenenler**
- **5835** Gordion Büyük Tümlüüs(Midas) MM
- **5608** Botter Apartmani
- **4863** Hacı Bayram Velî Camii
- **4484** Ayazma Camii
- **4252** Augustus Tafınaği
- **4137** Selimiye Camii
- **3735** Süleymaniye Camii
- **1489** Uşakkköy Höyük Sığıntısı

**Harita**
"OSMAN BEY'İN ILK FETHİ: KARACAHİR KALESİ" YÜZEY ARAŞTIRMASı 1999

Resim 1: Hava fotoğrafı. Temizlik öncesi
Belgeler PDF Formataında indirmek için tıkayınız.

Temel Bilgiler
Yazar
HALIME DOĞRU

Makalenin Bünyesinde Yayın
KÜLTÜR VARIKLARI VE MÜZELELER GÉNEL MUTÜRLÜGÜ ARAŞTIRMALARı TÖPLANTILARI 181. SAYI
Yayınlanma Yılı
2000
Fili Yılı
1999
ISTANBUL

Kimlik Bilgileri
<< Önceki Sonraki >>

Çok İzlenenler
3501
KASTAMONU İLİ TASKÖPRÜ İLEȘI POMPEIOPOLUS (ZIMBILI TEPESİ HÖYÜĞÜ) 1984 YILI KURTARMA KAZIŞI

2294
"CORпус DER DENKMÄLER MIT LYKISCHER SCHRIFT" DIE KAMPAGNE 2004

2023
16-18 YÜZÜYLLİRLERDE NÖDE VE ÇEVRESİNDE HİRŞTİYAN DİNİ MİMARIŞİ

1727
1993 YILI ORDU-MESUDİYE VE SİVAS-KOYLUHIRAR YÜZEY ARAŞTIRMASI

1535
1991 YILI ORDU-MESUDİYE YÜZEY ARAŞTIRMALARı

1554
"OSMAN BEY'İN İLK FETHİ: KARACAHİR KALESİ YÜZEY ARAŞTIRMASI 1999

1593
1995 YILI ANTALYA KORKUTELI VE BURDUR YÜZEY ARAŞTIRMALARı

1512
1999 YILI ÇORUM YÖRESİ YÜZEY ARAŞTIRMASI

1500
MİLAS 1065

1579
1994 YILI KAHİR KULAKSIZLER MERMER İDÔL ATÖLYESİ YÜZEY ARAŞTIRMASI

1569
1998 DE AYKARADA MEYDANA ÇIKARTILAN ASAR ATIK

1544
1992 YILI BURDUR ÇEVRESİ PREHİSTORİK ARAŞTIRMALARı

1546
1994 YILI ANTALYA-KORKUTELI YÜZEY ARAŞTIRMASI
### Metadata Sets of International and Turkish Examples

#### International Examples

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<th>OAC</th>
<th>ECAI</th>
<th>ESE</th>
<th>LIDO</th>
<th>LC</th>
<th>Archive</th>
<th>Manuscript</th>
<th>Museum</th>
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#### National Examples in Turkey

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**Note:** The table provides a comparative analysis of metadata datasets between Turkey and international examples, focusing on various fields such as identifiers, titles, creators, dates, descriptions, languages, subjects, genres, formats, related collections, institutions, and repositories.
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</table>
Comparison

• Dataset examples of Turkey have only specific description **about resources or processes** that do not match the international examples are focusing on access.
  – For examples datasets of reign, reason issued from Archive, DVD no from Manuscripts, registration condition, registration date, registration degree, archival type, raw material, where it was found, raw material, excavation number, front and back side information of objects from Museum; transferring way/date, buying price, expecting price from Registry.

• On the other hand some general datasets in the International example are not used by the Turkish examples such us
Discussion

• In one way it is understandable no language information except from manuscript.

• All examples from Turkey describes source as where the object was found not the organizations that holds on it.

• In general it seems that Turkish dataset examples were developed with an object oriented perspective and do not show any logical hierarchy relation information with other resources and repositories.

• The Turkish examples mostly describes the processes as part of the bureaucratic procedures rather than technical perspective of information retrieval and information seeking behaviors of users.
• Besides it should be considered that the models in **electronic environment** have to have some special features different from printed environment.

• As a first step **working on interoperability** of the systems and the processes would be **getting easier of integration issues**.

• Than it may be helpful to **create general datasets** matching between international and local examples.

• It is not the meaning that Turkish examples have to use **one system** as a model for all content.
Results

• It should be able to represent the **local needs and specifications** on the datasets together with the expectations of the international standards and platforms.

• On the other hand usage of datasets **should be flexible** and open to narrowing and expansion in each datasets depend on the type of resource.

• For example date of the archeological objects should include excavation date, transferring to museum date, object date etc. or some object cannot have any creator information.
As a result of metadata mapping and literature review, following datasets are driven as a suggestion as a metadata model on electronic cultural sources in Turkey.

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Conclusion

• Each local cultural resource should be considered as part of the World property

• Integrated platforms are still local, regional or limited

• Need more effort for developing metadata models proper to all resources in narrower and broader sense

• Turkish metadata examples that are mostly object or process oriented should be re-considered.

• Organizations and individuals should be encouraged for sharing their content.

• We have to create our new Googles for accessing cultural resources with different dimensions.
MANY
THANKS

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InterPARES Trust