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Research Report

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Contents

List of Abbreviations

ACM: Anatolian Civilization Museum

CARARE: Connecting Archaeology and Architecture in Europeana

CDL: California Digital Library

ECA: Encoded Archival Description

ECAI: Electronic Cultural Atlas Initiatives

ICA: International Council on Archives

ISAAR: International Standard Archival Authority Record

ISAD (G) General International Standard Archival Description

LC: Library of Congress

LIDO: Lightweight Information Describing Objects

NAT: National Archive of Turkey

OAC: Online Archive of California

SAT: State Archive of Turkey

SFS: Standard Filling System in Turkey

SPECTRUM: The UK Museum Documentation Standard

UCB: University of California Berkeley

Introduction

Generally cultural heritage resources that have an information content include historical records, manuscripts, historical books, ephemeral documents and audio visual materials, every kind of printed or electronic content which provide evidence about the past are keeping in libraries, archives, museums and research centers. In this view the main focus of all these resource is to give the right information about the past, and create a selection for the decision. While traditionally all cultural heritage resources were information content being created in the printed environment nowadays some resources are created in the electronic environment, too. Digitization and developing digital systems for the printed resource are still one of the major issues of the organizations. Especially after 1990s majority of the culture organizations started or planned to start digitization and digital content management programs. In the beginning of 2000s good examples of digital libraries, archives and museums seemed to appear all around the world. In past decade studies on new kind of digital content management focused on good examples, preparing international standards and integration. In addition national and international studies started for standardization, creation of guides and good examples against the problem of accessing and managing all content keeping in different organization. Not only the organizations but also the type of resources is very different from each other in the cover of cultural resources. For example for description and classification of the content while libraries are using LC, archives are using EAD (Encoded Archival Description) or SFS (Standard Filling System in Turkey) and museums SPECTRUM or local systems for informative cultural materials such as manuscripts, historic books or records, museum objects etc. On the other hand the electronic libraries, archives, museum that created for cultural heritage resource are mostly not ready to integration because of differens of the software architecture. The studies still continue on creating common metadata sets that usable for all kinds of resources that managing in one information retrieval platform. Some good examples like Online Archive of California (OAC), Electronic Cultural Atlas Initiatives (ECAI), Europeana have been already in use. A wide variety of the content coming from more than 300 culture organizations, libraries, archives, museums and research center are reachable via interface of OAC. On the browser of ECAI, as the modern kind of atlas and gazetteer, it is possible to discover the content powered by temporal and geo-

spatial tools from all around the world as part of cultural heritage. Europeana as a platform for the cultural resources has 40 million resource from 32 countries. International standards that are aiming to describe, create and manage electronic cultural resources are ready to use such us, EAD, MODS, METS, Dublin Core, LIDO, CARARE. It may be important question to ask that where we are in these developments as Turkey?

1. Literature Review

(Research results Part 1)

1.1. Changing Situation of Managing Information and Cultural Resources

According to the report of Nik (2014) 2.5 quintillion bytes data are created daily. % 90 of the data woldwide has been created in the last two years all around the world. Increasingly our daily life is depend on information systems and records in electronic environments (Duranti and Rogers, 2011, p.384). Information professions' role is changing from passive keeper to active organization (Cook, 2013, p.95). New developments also create new discussions on how to manage, integrate keep secure and usable all information in the platforms (Anderson, Bastian, Harvey, Plum and Samuelsson, 2011, p.350). In addition standardization especially in developing metadata descriptions is one of the important issues for information organizations (Askhoj, Sugimoto and Nagamori, 2008, p.118). In these circumstances different professions are beginning to work together on information retrieval systems and content management as computer science, archival management, records management, librarianship, data engineering, digital forensics, museum creator, electronic discovery and information system management (Featherstone, 2006; Müller, 2010, p.4; Huvila, 2014, p. 45). This developments are primarily effected to library, archive and museums which they are working on information resources. With the electronic systems the walls between different information organizations are break down and new information systems cover all resource in electronic environment (Baker, 2007; Marstine, 2006; Oomen and Aroyo, 2013). Especially for the resources of cultural heritage as a new disipline and working area "memory organizations" begins very popular in the area that cover description, maintenance, storage, accessing, long term preservation of electronic information resource whatever they created in digital systems or digitized from printed form (Holmberg at all 2009; Ridolfo at all, 2010; Srinivasan et al., 2009; Trant, 2009). The term "memory" organization is offer easier description to all information studies of cultural heritage in one roof (VanderBerg, 2012, Lim & Liew, 2011, Rayward and Jenkins 2007). The scholars in the area has been seeking the idea of convergence of

information disciplines and reaching one basic description of information nature as Buckland (1991; 1997) and others (Huvila, 2014, p. 46; Latham, 2012). On the other hand it has to be keep in mind that some natural differences between information organizations. Such as generally museums have embedded content (Kerns and Rinehart, 2011), libraries have published and archives have unpublished content. Besides while archival responsibilities are focusing on keeping, arrangement, collection management, libraries to accessing and museums to representation (Huvila, 2014, p. 46). It is important to take into account of differences of the contents, systems and expectations when developing integrated electronic systems (Gilliland-Swetland, 2000; Merritt, 2008; Pastore, 2009; Usherwood et al., 2005b).

Integrated electronic retrieval systems can benefit from special features of different information organizations like reference services, information literacy and retrieval services in libraries, preservation, accuracy and security in archives, and discovery and creativeness in museums (Buckland, 1991; Duranti, 1999; Genoways, 2006a; Gilliland-Swetland, 2000; Huvila, 2014, p. 47; Manžuch, 2009). These kind of integrated information platforms should also have some interactive features and social media applications as it mentioned in the studies (Holmberg et al., 2009; Huvila, 2008, Lankes et al., 2007).

Researche reveal that show it majority of the libraries, archives and museum organizations are willing to develop integrated information systems that are cover different type of resources (Duranti, 2010; Evjen and Audunson, 2009; Gilliland-Swetland, 2000; Rosa et al., 2011; Smith-Yoshimura, 2012, p.6; Ushwood, 2005a). As the example of convergence of information disciplines is establishment of The Institute of Museum and Library Services (IMLS) and its same name periodical began to be published after 2009 regularly (Pastore, 2009).

Developing Integrated information systems depend on system analysis that should be started as a first step. During the system analysis the following researches have to be done.

- The resource structures of the organizations
- Information access and retrieval requirements
- Expectations from integrated systems
- Resource acquisition, transfer, access, storage, security and retrieval policies and expectation.

- Maintenance of the system and education requirements (Smith-Yoshimura, 2012, p.7).

1.2. Digital Curation, Integration of Library and Archival Studies with Museum Studies

The state of management digital cultural resource in electronic environment created a new discipline “digital curation”. Digital curation is described beyond the keeping repositories, it cover the processes from creation to archiving, maintenance to disposition in life cycle concept of information resources (Call ve Tibbo, 2011, p.124; Guss and Gregory, 2011). In that context digital curation being developed in information profession takes some features of museum curation, records management and information systems (Scime, 2009; Yakel, 2007, p. 335). As part of the development of this new area School of Library and Information Science in North Carolina University initiated education program on digital curation in 2008, and this education content supported by library, archive and museum organizations (DigCCurr I: Preserving Access to Our Digital Future: Building an International Digital Curation Curriculum) (Guss and Gregory, 2011, p.176).

In general digital curation covers the following studies:

- Conceptualize: Consider what digital material you will be creating and develop storage option. Take into account websites, publications, email, among other types of digital output.
- Create: Produce digital material and attach all relevant metadata, typically the more metadata the more accessible the information.
- Access and use: Determine the level of accessibility for the range of digital material created. Some material may be accessible only by password and other material may be freely accessible to the public.
- Appraise and select: Consult the mission statement of the institution or private collection and determine what digital data is relevant. There may also be legal guidelines in place that will guide the decision process for a particular collection.
- Dispose: Discard any digital material that is not deemed necessary to the institution.
- Ingest: Send digital material to the predetermined storage solution. This may be an archive, repository or other facility.
- Preservation action: Employ measures to maintain the integrity of the digital material.
- Reappraise: Reevaluate material to ensure that is it still relevant and is true to its original form.

- Store: Secure data within the predetermined storage facility.
- Access and reuse: Routinely check that material is still accessible for the intended audience and that the material has not been compromised through multiple use.
- Transform: If desirable or necessary the material may be transferred into a different digital format (Watry, 2007, p.44).

1.3. Developing Systems and Metadata Models for Digital Cultural Heritage Resource

One of the most important part of the studies on developing integrated electronic information system for cultural heritage resources which are coming from library, archive and museums is formation of metadata models. According to the Haynes (2004) metadata is structured information that formed for description, explanation, location, accession of information resources. Generally three main types of metadata are used:

Descriptive metadata describes a resource for purposes such as discovery and identification. It can include elements, for example, such as title, abstract, author, and keywords.

Structural metadata indicates how compound objects are put together, for example, how pages are ordered to form chapters.

Administrative metadata provides information to help manage a resource, such as when and how it was created, file type and other technical information, and who can access it. There are several subsets of administrative data; two that sometimes are listed as separate metadata types are *Rights management metadata*, which deals with intellectual property rights and *Preservation metadata*, which contains information needed to archive and preserve a resource (Müller, 2010, p.56).

As a metadata model of cultural heritage resource, PREMIS (The Preservation Metadata: Implementation Strategies) lunched by OCLS in 2003 is one of the important example. PREMIS data dictionary describes long term preservation metadata tags supporting with XML schemes. It is expected that PREMIS will be used as a basic standard and automatically assigned by electronic systems for documentary content in the near future. PREMIS is supported by the Library of

Congress and METS (the Metadata Encoding and Transmission Standard) Editorial Committee has started to support PREMIS Schemes for using together with METS Schemes (Higgins, 2007).

As a summary PREMIS includes the following metadata tags for cultural resources.

- A unique identifier for the object (type and value)
- Information message digest, algorithm and the application used
- Size
- Format
- Original name of the object
- Information about its creation
- Where and on what medium stored
- Relationships with other objects and other entities (via identifiers)
- Getting the information about the Events occurred in the lifecycle of the Objects
- Unique identifier for the event (type and value)
- Type of event (creation, replication, message digest calculation, validation),
- Date and time
- Detailed description of the event
- A coded outcome of the event
- Detailed description of the outcome
- Agents (via identifiers), involved in the event and their roles
- Objects (via identifiers), involved in the event and their roles
- Getting the information about agents, engaged in activities impacting on the Objects' digital history
- A unique identifier for the agent (type and value)
- Agent's name
- A Digital infrastructure for trustworthiness
- Designation of the type of agent (person, organization, software)
- Extended description of the agents connected to the organization context
- Events (via identifiers) that the agents have determined
- Rights statements (via identifiers), to which the agent is related
- Getting the information about Rights statements that impact on the Objects management
- A unique identifier for the rights statement (type and value)
- Basis of right (copyright, license, statute, or other)
- More detailed information about the rights statements
- Actions allowed by the rights statement
- Restrictions on the action(s)
- Term of grant, or time period in which the statement applies,
- Objects (via identifiers), to which the statement applies,
- Agents (via identifiers), involved in the rights statement and their roles.
- Rights,

- Restrictions and accessing (Dilorio, Schaerf,Bertazzo, Guercio, Ortolani, 2013,p.66).

International Council of Archives (ICA) as a general council of archival organization all around the world is also started some studies on developing metadata models for cultural resources as the example of ICA-CER (ICA Committee on Electronic and Other Records) studies. ICA-CER decelerated that in the processes of the description of cultural resources not only the catalog information but also environmental and relational information should be take into account (Hofmen, 2000, p.3) as described in the following topic:

- Intellectual control
- Administrative control
- Physical an technical control
- Resource preservation and system control (Alexanderhof, 2011; Hofmer, 2000, p.4).

In the perspective of archival management ISAD (G) and ISAAR (CBF) developed by ICA give models for description of printed resources. On the other hand as the description standard of archival resources EAD (Encoded Archival Description) has clear metadata tags that include XML schemes is ready to use for electronic and printed documents. For current records in records management area, ISO 23081 provides clear description tags, and ISO 15489 gives an idea of records management system structures (Asproth, 2005, p.27; Niu, 2013, p.207-212; Zhang and Mauney, 2013, p.174).

In addition from 1992 to 1995, the International Federation of Library Associations (IFLA) Study Group on Functional Requirements for Bibliographic Records (FRBR) developed a conceptual model for bibliographic description that covers not only library materials but also some other kinds of contents coming from museums or archives. In 1996, the International Council of Museums (ICOM) International Committee for Documentation (CIDOC) began the development of a conceptual model for the description of museum objects. It was first attempt to describe museum objects in common sense. The Conceptual Reference Model (CRM), though initially focused on museums, came to be conceived as a reference model that could serve the broader ambition of enabling integrated access of cultural heritage, thus

encompassing archives, library, and museum access. In this regard, the International Working Group on FRBR/CIDOC CRM Harmonization was formed in 2003. The working group has focused on mapping FRBR concepts to CRM concepts and, where necessary, enhancing and refining CRM concepts to facilitate the mapping, thereby making the CRM a single, overarching semantic by. The model of CRM that developed by FRBR features published as FRBRooo. The archivists and museum specialists involved in the development of the CRM and the FRBRoo extension have expressed interest in working with the archival community to accommodate archival description and enable the model to fully incorporate the archives, library, and museum communities. RDA is a library standard based on FRBR and thus, by extension, is related also to FRBRoo and, by further extension, to CRM. The early draft of the Finnish model thus reflects the influence of RDA, FRBR, FRBRoo, and CRM. The ICA Programme Commission formed the Experts Group on Archival Description late in 2012. EGAD is charged with the harmonization of the four existing ICA standards, ISAD(G), ISAAR(CPF), ISDF, and ISDIAH, based on a formal archival description conceptual model. The EGAD's members are drawn from the international professional community and have demonstrated expertise in archival description and standards. In 2016, the final archival conceptual model will be released as a formal document, including text and diagrams, as well as formally represented in OWL (Gueguen and others, 2013, p.573-580).

2. International Examples for Managing Cultural Resources in the Platforms (Research results Part 2)

2.1. Online Archive of California: As an Example of the Platform for Managing Cultural Resources

During the first days of project studies in University of California, Berkeley, iSchool (School of Information) I've contacted with different libraries, archives and museums for getting information about the practices to manage cultural resource in electronic environment by direct contact and emailing. It was observed that almost all libraries, archives and museums that they have cultural resources in California State gathered under the electronic platform of "Online Archive of California (OAC)" coordinating by

California Digital Library (CDL). As a recent information 220.000 image and documents, 20.000 different catalog from 373 culture organizations can be reachable on OAC interface. Organizations have to be supply the metadata sets on according to EAD (Encoded Archival Description) and MARC formats for representation of their content on OAC platform. OAC gives different levels of support services to the organizations during transferring, ingestion and maintenance of their content. Copyrights of the resources are organized according to the U.P. Copyright Live Title 17, U.P.C. (Online Archive of California, 2014, 2014a).

The development of the OAC is related to Encoded Archival Description (EAD), the international standard and extensible format for describing archival collections. UC Berkeley Libraries developed an SGML prototype finding aid standard in 1993 and revised in 1995 as EAD DTD transferred to the Society of American Archivists and the Library of Congress. With the interest of librarians and archivists at UC and institutions throughout California technical development to improve access to archival finding aids have been enhanced rapidly. In June 1997, participation was extended to other California repositories. In 1998, the OAC was formally integrated into the California Digital Library, which worked on developing digital content. In 2001, CDL launched LHDRP (Local History Digital Resources Project), a program that encourages and helps public libraries and other local California institutions contribute to the OAC. In 2006, CDL launched California Cultures (Online Archive of California, 2014a-b).

Technically OAC hosts the followings typed of digital content

- EAD and supplemental PDF collection guides
- METS digital objects
- UC website URLs
- MARC collection guide and item-level records

Content in the repository conforms to the following criteria:

- Collection guides encoded using the Encoded Archival Description (EAD) standard should conform to the OAC Best Practice Guidelines for EAD.
- Collection guides or item-level records encoded using the MARC21 format should conform to the UC Bibliographic Standards for Cooperative, Vendor, and Campus Backlog Cataloging (Appendix B, "Collection Level Records"). We utilize the MARC Leader 07 field to differentiate between collection guides vp. item-level records, within the context of the OAC display.

- Digital objects are formatted using the Metadata Encoding and Transmission Standard (METS) standard, and should conform to the "Enhanced Service Level" specifications defined in the CDL Guidelines for Digital Objects.
- Collection guides and digital objects are assigned persistent identifiers according to a naming scheme called the Archival Resource Key (ARK), to ensure long-term public access. The ARK scheme was developed at the National Library of Medicine and is currently in production use at the CDL.

2.1.2. Repository Search and Delivery Platform: XTF

The repository supports a CDL-developed XML- and XSLT-based delivery platform, packaged as the eXtensible Text Framework (XTF). The XTF system contains Java Servlets and tools that permit users to perform Web-based searching and retrieval of electronic documents. It utilizes Lucene indexing technology and XSLT style sheets for generating displays.

XTF supports the search and delivery of collections that is user-friendly, flexible, and viable for the long term. XML provides a means by which the structure and meaning of a document can be specified by "tags". For example, the title of this document is:

Metadata for all objects in the repository -- regardless of format -- are mapped to the Dublin Core element set for generalizability and to support cross-collection discovery.

2.1.3. Image-Based Digital Object Search and Delivery

For search and delivery of image-based digital objects, OAC utilize XTF. Images featuring zoom-and-pan options comprise JPEG2000 files. They are derived from TIFF image files, when the latter are supplied by contributing institutions specifically for the purpose of providing detailed image views. The JPEG2000 files are generated and displayed using LuraTech's Image Content Server, a J2EE application that has been customized by the CDL for OAC.

2.1.4.Text-based Digital Object Search and Delivery

For search and delivery of TEI, PDF, or imaged text-based digital objects, Calisphere and the OAC utilize XTF. Text searches are limited to the full text of the documents.

TEI is an encoding standard for encoding textual documents. Like EAD, it enables Internet delivery of these texts and is based on a DTD following the rules of SGML and XML.

2.1.5. Collection Guide Search and Delivery

For search and delivery of EAD collection guides and MARC records, the OAC utilizes XTF. Text searches target the full text of the documents.

EAD is an encoding standard for preserving the hierarchy and designating the content of collection guides to archival holdings worldwide. It enables Internet delivery of these collection guides and also ensures their permanence by providing a stable, non-proprietary encoding format, which is maintained by the Society of American Archivists. In technical terms, EAD comprises a Document Type Definition (DTD) for encoding collection guides that is written following the syntactic rules of the SGML and XML markup languages

2.1.6. OAI Metadata System

Metadata for EAD collection guides and METS digital objects is available for harvesting via the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH Data Service). (California Digital Library, 2014).

OAC derive technical metadata required to support the orderly management of digital objects in Merritt, based on submitted content files. The Merritt Digital Repository is a service from the University of California Curation Center. Currently, the CDL utilizes the JSTOR/Harvard Object Validation Environment (JHOVE) tool to derive technical metadata for accepted content file types. Digital objects supported in OAC are managed using the METS format (Metadata Encoding and Transmission Standard). METS profiles describe classes of METS digital objects that share common characteristics, A METS profile itself is an XML document that must adhere to the METS XML Profile Schema in OAC.

In OAC system organizations must to prepare the following metadata tags before transferring their content.

OAC Descriptive Metadata Tags

Element	Status
Identifier	Required element
Title	Required element
Creator	Required element (NOTE: if no name can be supplied, provide a name in **Contributor**, **Institution/Repository**, and/or **Publisher**)
Date	Required element
Description	Recommended element
Language	Recommended element
Subject (Name)	Recommended element
Subject (Title)	Recommended element
Subject (Place)	Recommended element
Subject (Topic, Function, or Occupation)	Recommended element
Genre	Recommended element
Type	Required element
Format/Physical Description	Recommended element
Related Collection/Project	Recommended element
Institution/Repository	Required element
Contributor	Recommended element
Publisher	Recommended element

2.1.6.1. Rights Management Administrative Metadata

CDL strongly recommend including rights metadata whenever possible, using one of the following methods for OAC resource:

- Supply rights information using METSRights or PREMIS, two approved extension schema for METP.
- Use rights-related elements in the schema chosen for supplying descriptive metadata (e.g., <dc:rights> in Dublin Core, <accessCondition> in MODS). Elements in these schemas are repeatable, so if more than one rights-related element is used, provide clarifying information about each piece of rights information -- for example, use a label attribute for MODS rights elements.

2.1.6.2. OAC Right Management Metadata Guidelines

Element	Status
Copyright Status	Recommended element
Copyright Statement	Recommended element
Copyright Date	Recommended element
Copyright Owner Name	Recommended element
Copyright Owner Contact Information	Recommended element

2.1.6.3. Structural Metadata

Structural metadata must be encoded in the METS format: structural metadata is represented in the <structMap> Structural Map section of a METS document. This section defines a structure that allows users of the digital object to navigate through its hierarchical organization. Guidelines for preparing Structural Maps are documented in CDL-supported METS profiles.

2.1.6.4. Technical Metadata

CDL derive technical metadata required to support the orderly management of digital objects in Merritt, based on the content files submitted to Merritt. Currently, the CDL utilizes the JSTOR/Harvard Object Validation Environment (JHOVE) tool to derive technical metadata for accepted content file types.

Organizations may submit any additional technical metadata associated with a particular digital object (such as checksum [MD2, MD5, SHA-1, SHA-256, SHA-384, SHA-512, or CRC-32] and byte size values but are not required to do so.

Content Files

The following content file types are
currently supported in OAC.

Content File Type

Images	JPEG (medium to high quality compression, sRGB profile for color and Gray Gamma 2.2 profile for monochrome) or QuickTime VR. Images should be 800-3000 pixels (typically 800-1024 pixels) across long dimension. Adjust accordingly for QuickTime VR files. JPEG images should be 8-bit grayscale or 24-bit color. Adjust accordingly for QuickTime VR files. **Thumbnail image:** JPEG or GIF Images should fit within a boundary of 150-200 pixels across long dimension (200 pixels preferred). JPEG images should be 8-bit grayscale or 24-bit color. GIF images should be 4-bit grayscale, 8-bit color.

2.1.6.5. Master production image (optional)

TIFF [1]
Color and grayscale TIFF files should have ICC color profiles embedded in the file header, to indicate how the color and tonal values in the file are to be interpreted.

Texts	The following text file formats are supported. PDF/A and PDF: All PDF file formats are supported. Imaged text. TEI text: We recommend preparing files based on the CDL Structured Text Working Group TEI Encoding Guidelines. Submit one TEI file per digital object.

(CDL Guidelines for Digital Objects, 2011, p.13-16; CDL Structured Text Working Group TEI Encoding Guidelines).

2.2. Electronic Cultural Atlas Initiative (ECAI)

[1] Technical details for embedding ICC profiles in TIFF files can be found in the International Color Consortium's (ICC) **Specification ICC.1:2004-10 (Profile version 4.2.0.0**

The Electronic Cultural Atlas Initiative (ECAI, http://ecai.org) was started an informal international collaboration with a mission to advance scholarship and education through increased attention to time and place. ECAI originated in 1997 against to limitations of traditional printing, foresaw significant possibilities in digital technology with initial support of The Lilly Foundation. ECAI's approach emphasizes the geo-temporal analysis of cultural data, the promotion of standards that allow interoperability, promoting network-accessible resources, and community-building. During its first ten years ECAI organized conferences in thirteen different countries. ECAI identified the TimeMap software developed by the Archaeological Computing Lab at the University of Sydney, under direction of Ian Johnson as a system to dynamically display maps with time < http://www.timemap.net/ >. ECAI designed and supervised development of a Clearinghouse of network accessible resources with geo-temporal content and software for downloading, editing, viewing, and combining geo-temporal resources. In addition, ECAI has worked with individual scholars to design exemplary electronic cultural atlases, defined as online scholarly publications on cultural topics with significant geo-temporal features. With support from the California Digital Library, procedures for peer review of technical features as well as academic content were developed and preservation issues were examined (Buckland, 2008).

ECAI uses "cultural atlas" broadly for publications on cultural topics with significant geo-temporal aspects. A portal provides geographical access to numerous examples, not all associated with ECAI, http://ecai.org/culturalatlasportal/. A selection is also listed at http://ecai.org/Atlases/FeaturedProjects.asp.

The *ECAI Silk Road Atlas* (2002, http://ecai.org/silkroad/) was designed in conjunction with a concert tour by the cellist Yo-Yo Ma. A series of interactive maps illustrating the way that commodities, empires, religions, and music have traveled throughout Eurasia

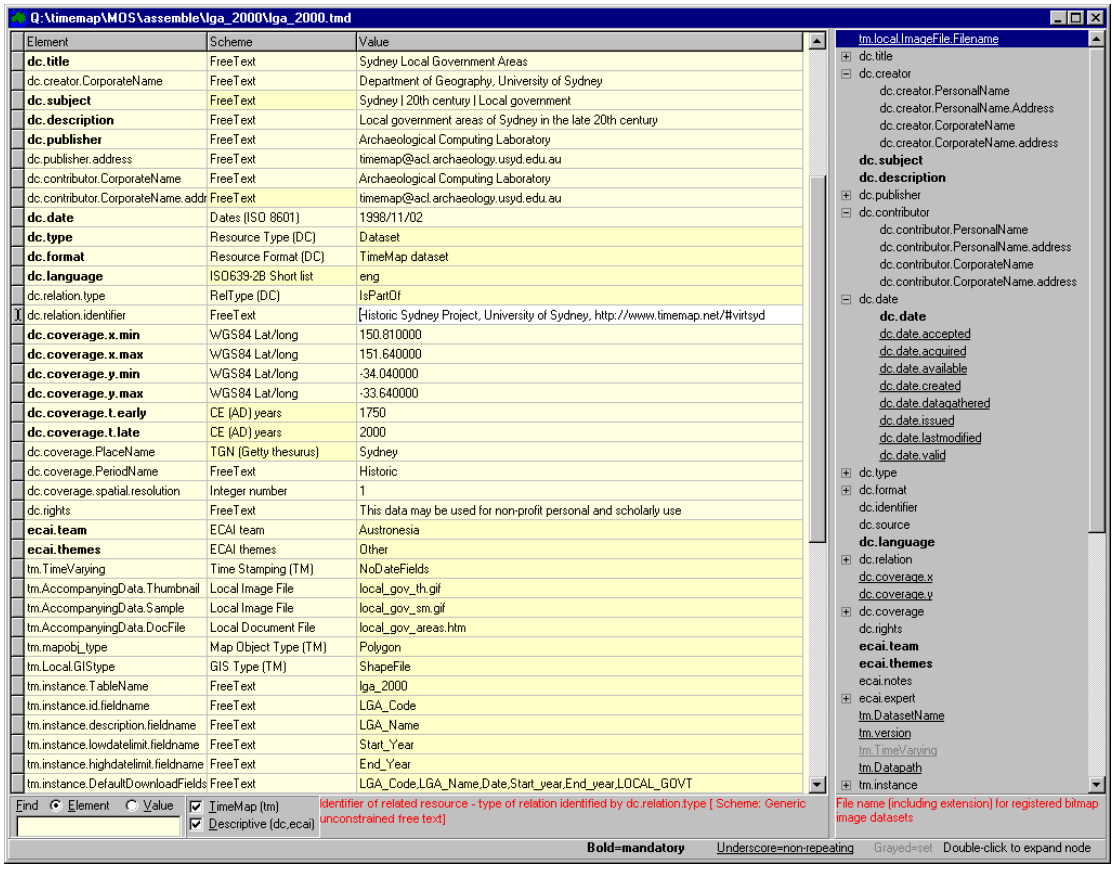
The *ECAI Iraq* cultural atlas (2003, http://ecai.org/iraq/). *ECAI Iraq* is a temporal-spatial portal into existing digital resources on hundreds of web sites around the world about history, cultural sites, archaeological excavations and heritage preservation initiatives. The spatio-temporal content was authored by ECAI.

The *Batanes Islands Cultural Atlas* < http://ecai.org/BatanesAtlas/ , part of a larger website concerned with Austronesian languages and culture, includes maps, a time line of migrations, and images of the people and material culture Batanes, the northernmost province of the Philippines comprising ten islands, three of them inhabited.

The largest current cultural atlas project is the *Religious Atlas of China and Himalaya* < http://ecai.org/chinareligion/ >. Figure shows the different spatial distribution of Islamic and Roman Catholic religious sites.

2.2.1. Creating Metadata Sets in ECAI with TimeMap

In order to make a dataset compatible with TimeMap in ECAI, it is necessary to create a suitable metadata table using the TimeMap Metadata Wizard, which is part of the TMT toolkit program. The TimeMap Toolkit program, TMT.EXE, provides all the tools it need to create metadata, register datasets with the ECAI metadata clearinghouse and upload the data to a remote data server. After creation a metadata file using the TimeMap wizard, it is displayed in a file editing window. Several files can be open in different editing windows:



This example shows a set of both descriptive (Dublin Core) and TimeMap connection metadata.

The darker shaded fields are those which have multiple values selectable from a pull down list. Branches in the tree-structured list of available metadata elements on the right can be expanded or collapsed by clicking on the + and – symbols. Elements can be inserted into the data by double clicking on the element name.

ECAI Metadata Standard is available from http://www.ecai.org/ or http://www.timemap.net/ – also included as a help file on the TimeMap software distribution. The wizard's main function is to generate the appropriate TimeMap metadata required to make the dataset TimeMap compatible, as this metadata is less obvious -and more critical- than the descriptive metadata (Johnson, 2000a).

2.2.2. General TimeMap Metadata Elements

tm.Datasetname Name by which the dataset is to be identified. This name will appear in dialogues and pull down lists which the user sees, so it is important to keep it fairly short but descriptive and unique

m.Instance.Tablename The name of the dataset instance table. For server databases this will be the name of the table or SQL 'view' containing the instance data.

tm.TimeVarying The type of dating fields used to define the time/date or range of time/date over which each feature or instance extends.

tm.Instance.MapObjType The type of spatial object recorded in the instance table. Although it is possible to record spatial objects of different vector types (by specifying *Mixed*), it is recommend limiting each dataset to a single object type

tm.Local.GISType Type of GIS file in which the spatial data is stored locally. Currently only MapInfo TAB files (MapInfo) and ESRI Shapefiles (Shapefile) are supported..

tm.Instance.DefaultDownLoadFields

This element sets up a default list of the fields which are to be downloaded for caching from a remote dataset.

tm.Instance.Linkmask A link to data or resources such as database-generated web pages (see section 5). The element specifies a URL or local file name into which values are inserted from fields in the attribute data.

tm.AccompanyingData.Sample

The name and path (relative to the metadata file) of bitmap files which show an overview of the dataset (thumbnail) and a detailed view of a small area (sample). The sample should represent the map zoomed in to a point where the data is just beginning to show jaggedness or pixellation, and should contain a scale bar. These images can be created by exporting a suitably sized map window to a bitmap or capturing a section of the screen.

Recommended size of these images is 300 pixels wide. Use GIF for maps which are primarily lines or points, JPG for air photo,

satellite or scanned maps. The image files are automatically uploaded to the remote server as part of the metadata registration/upload process.

tm.AccompanyingData.Documentation File

The name and path (relative to the metadata file) of an HTML credits/copyright file which can be displayed in the layer description dialogue in TMView.

Field definition elements

TimeMap metadata also records the names of fields in the datasets being accessed in such a way that SQL queries can be formulated by the user in terms of standard TimeMap terminology.

Instance table fields

The bolded elements are the main set of elements required to implement a minimal TimeMap compatible dataset

tm.Instance.id.fieldname

The instance table field to be used as a (normally) unique identifier of database records. Often a sequential number or set of hierarchical numbers (e.g. accession code). May also be set to a non-unique field

tm.Instance.feature.fieldname

The instance table field identifying the feature to which the instance belongs. This field is used to link instances together into a sequence for a particular feature.

tm.Instance.Description.fieldname

The instance table field to be used as a short description of the instances recorded. For example: “Mongol expansion into Vietnam”.

tm.Instance.Links.fieldname

The instance table field which will contain links to other data and media resources, typically the URLs of web pages related to the instance, but may also point to image files, multimedia resources

or other TimeMap projects. Multiple links can be specified in this field separated by (default) pipe symbols (|).

tm.Instance.Ycoord.fieldname

Only for datasets containing point objects: The fields containing the X (longitude) and Y (latitude) coordinates of point objects in the instance table. Line and polygon objects are represented by structured blob fields and do not therefore use these metadata elements.

tm.Instance.Singledate.fieldname
tm.Instance.Lowdatelimit.fieldname
tm.Instance.Highdatelimit.fieldname

If the dataset is defined as time-varying, either *SingleDate* or *LowDateLimit* and *HighDateLimit* field names must be set, to indicate the fields used to record the date or date range for each instance. An error will be reported on loading the dataset if one or other is not set (Johnson, I., 2000b).

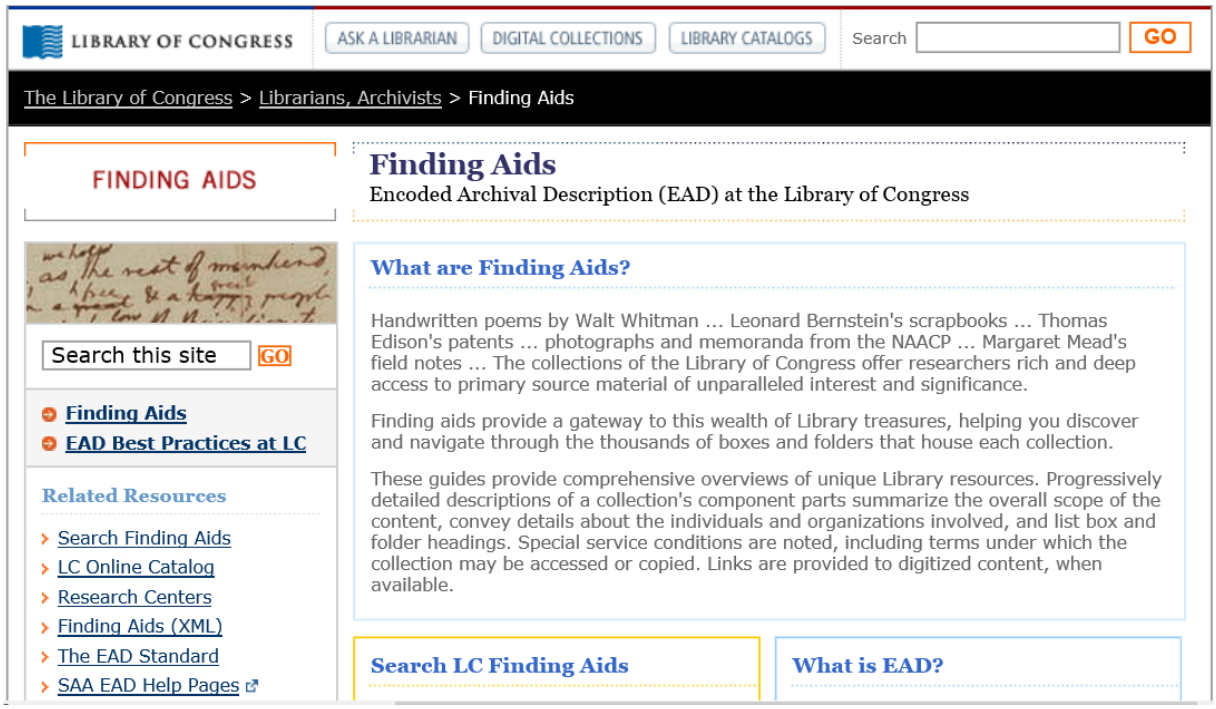
2.2.3. Metadata Sets of ECAI

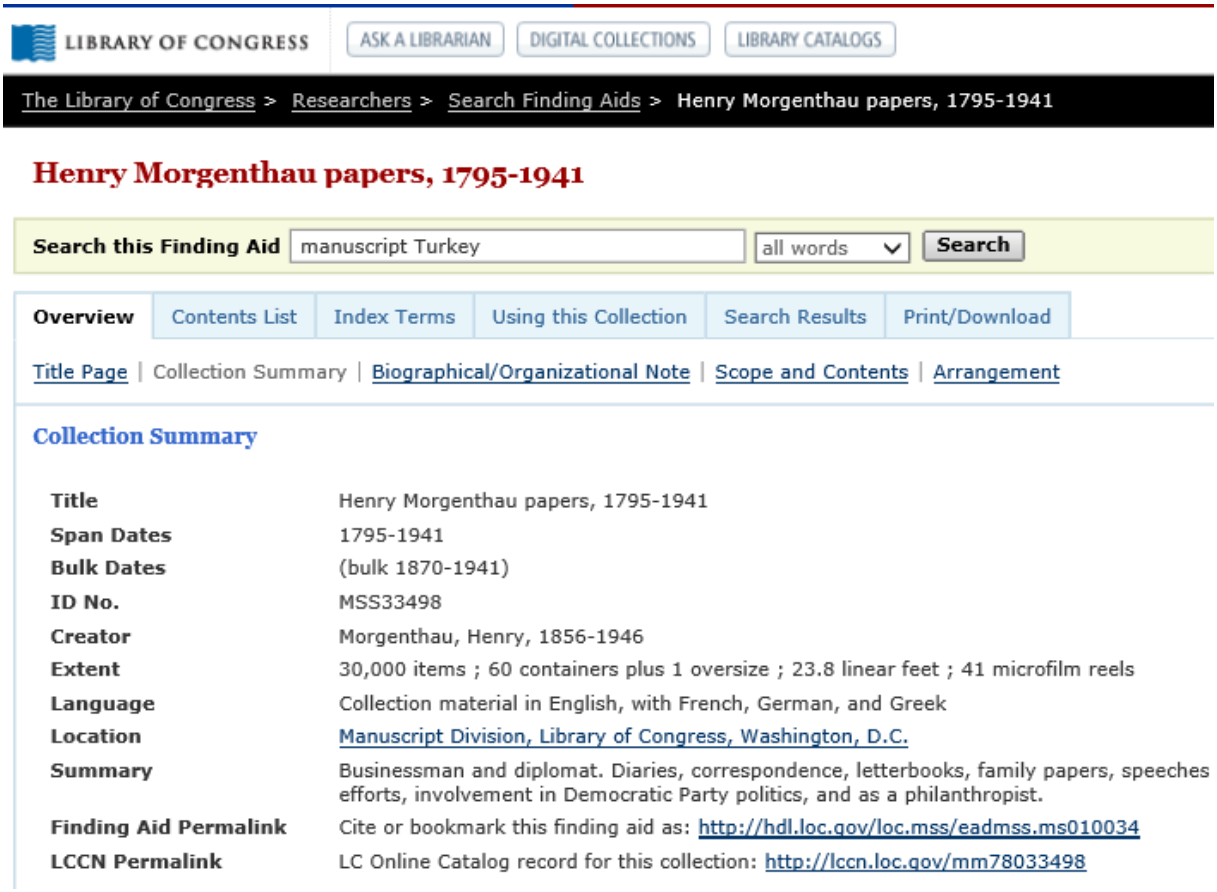
Title
Subject. specific
Description
Publisher
Publisher-address
Creator-Person-Name
Creator-Peron-Affiliation
Creator-Corporate Name
Creator-Corporate Name – Address
Date
Type-Specific
Format
Source
Language
Relation- Type
Relation-İdentifier
Coverage-x-min
Coverage-x-max
Coverage-y-min
Coverage-y-max
Coverage-t-early
Coverage-t-late
Coverage-Place name

Coverage-Period name
Rights
Subject domain
Team

2.3. Metadata Descriptions of Cultural Objects Library of Congress Finding Aids

Library of Congress in US has large amount of cultural objects that are reachable on its web page. As part of the project it seems important to get LC finding aids datasets as the example from US.





Library of Congress finding aids has basic metadata sets for cultural resources bur also includes summary information original link and Library of Congress link, and general information about record series like total amount and size of the records.

2.4. Europeana as an Information Retrieval Platform of European Cultural Resource

Europeana enables people to explore the digital resources of Europe's museums, libraries, archives and audio-visual collections. It promotes discovery and networking opportunities in a multilingual space where users can engage, share in and be inspired by the rich diversity of Europe's cultural and scientific heritage. Ideas and inspiration can be found within the nearly 20 million items on Europeana. These objects include:

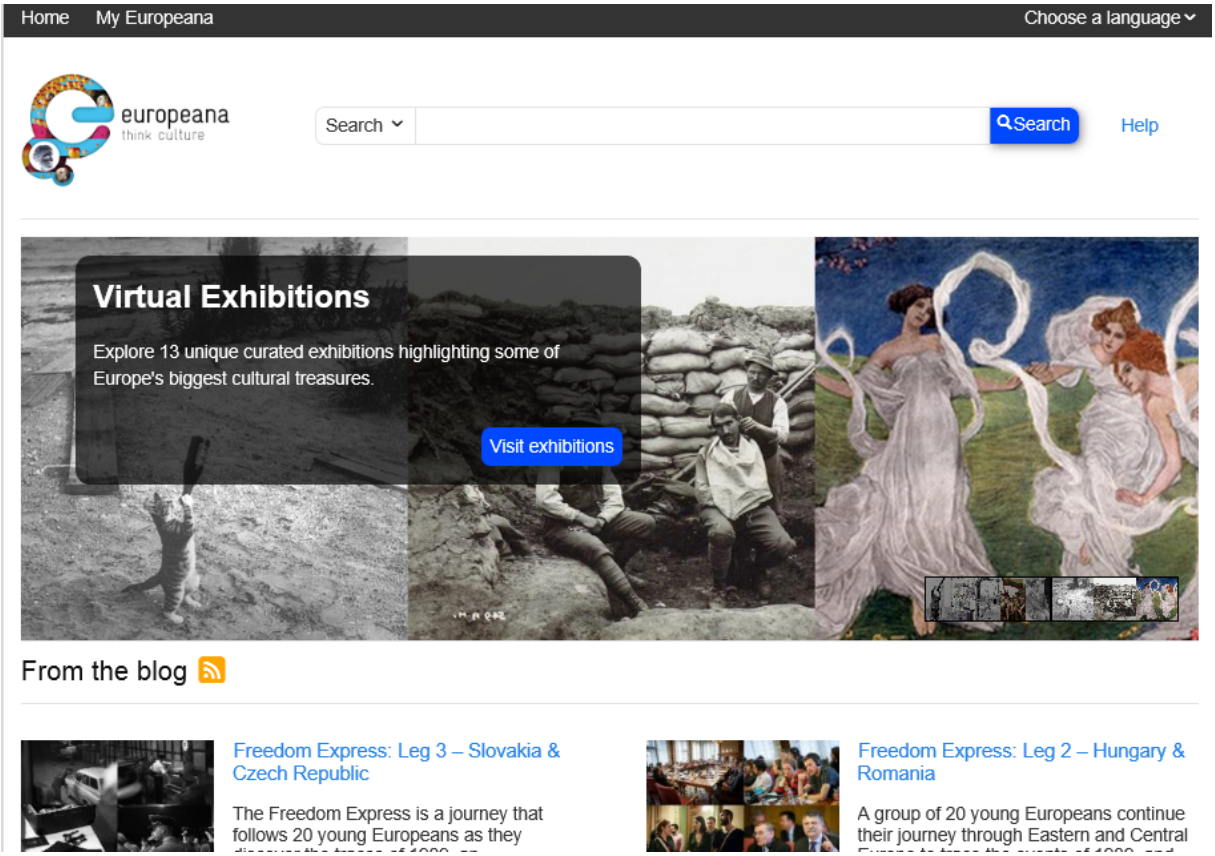
- Images - paintings, drawings, maps, photos and pictures of museum objects
- Texts - books, newspapers, letters, diaries and archival papers
- Sounds - music and spoken word from cylinders, tapes, discs and radio broadcasts
- Videos - films, newsreels and TV broadcasts

Around 1500 institutions from 32 countries have contributed to Europeana. Renowned names such as the British Library in London, the Rijksmuseum in Amsterdam and the Louvre in Paris are featured alongside smaller organizations across Europe. In 2012 with the Project of AccessIT as a first transfer from Turkey, 50.000 contents transferred from National Library and National Archive of Turkey to Europeana.

The Europeana service now gives multilingual access to 15 million items from some 1,500 of Europe's cultural and scientific heritage organizations.

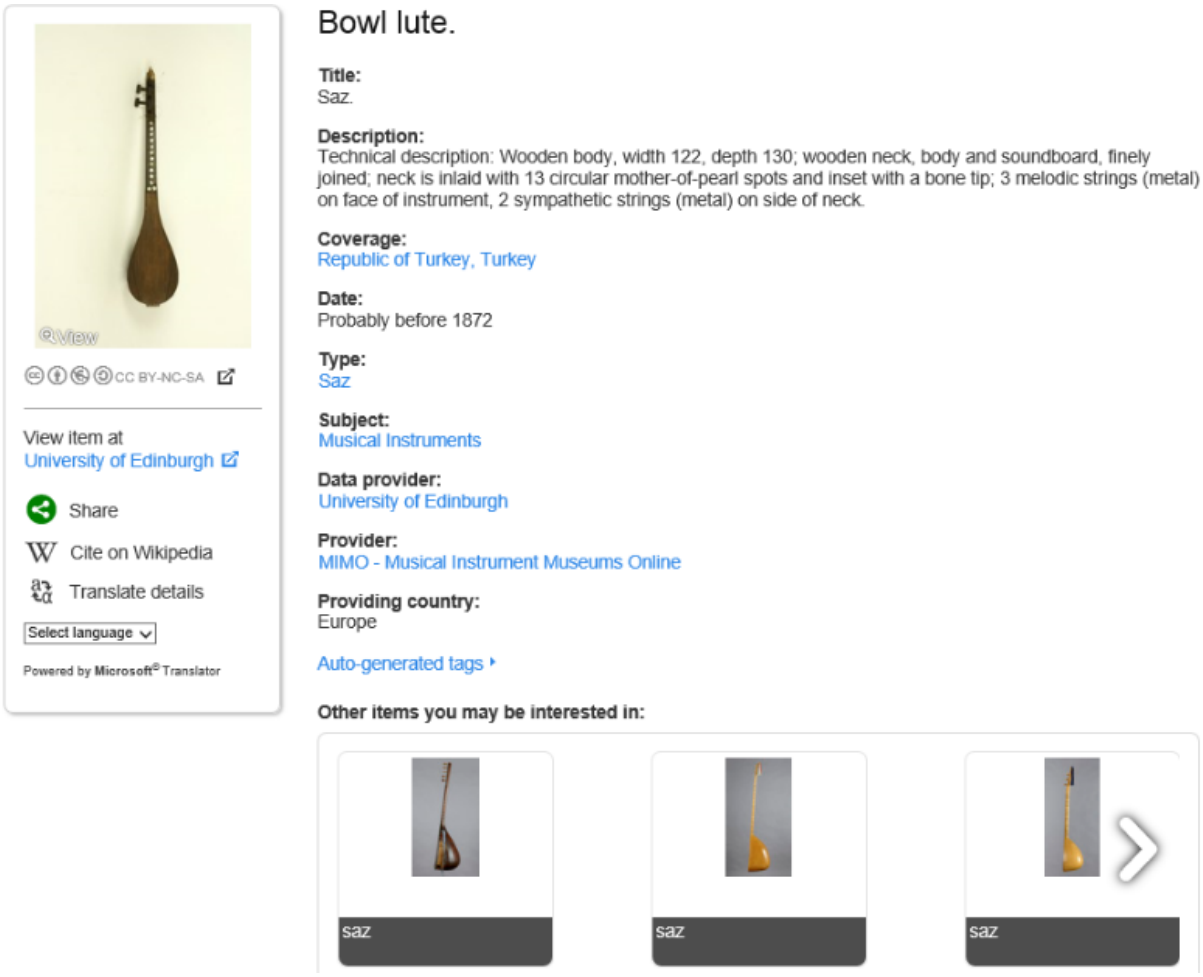
EDM – the Europeana Data Model: Europeana have worked with the keepers of the metadata standards and experts in all domains, and are now prototyping the new data model. EDM is compatible with all the professional standards but is far richer than Europeana's existing model.

Semantic web: EDM will facilitate developments with linked open data. The massive, authoritative metadata index at the heart of Europeana's service is a resource for use in experimental applications (Europeana Local, 2014).



The following is an example of a search results of “Turkey” on Europeana interface.

The following is metadata description areas of a musical instrument in Turkey on Europeana.



The following is a descriptive information about a historical document in Turkey on Europeana

2.4.1. Europeana Semantic Elements

Europeana uses Europeana Semantic Elements (ESE) for developing metadata sets for all kind of content coming from library, archive, museums or research centers.

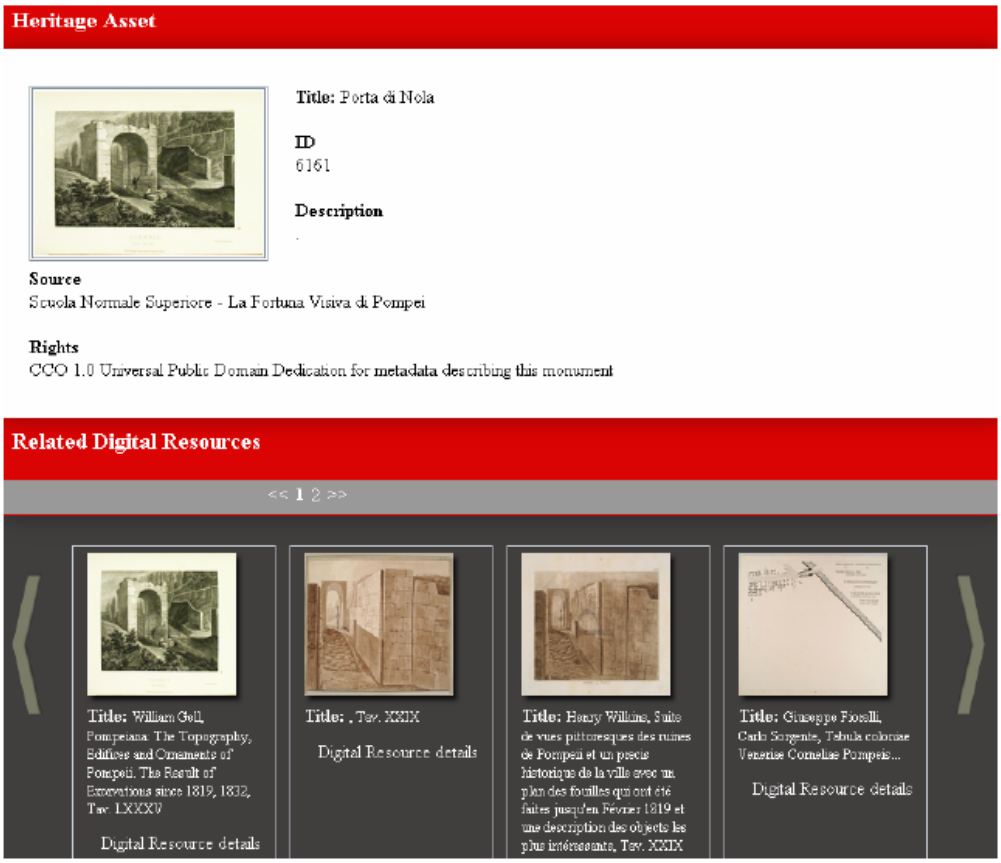
Europeana Semantic Elements (ESE)		
Source	**Element**	**Element Refinement (s)**
DC	Title	alternative
DC	Creator	
DC	Subject	

DC	Description	Table of Content
DC	Publisher	
DC	Contributor	
DC	Date	Created; issued
DC	Type	
DC	Format	
DC	Identifier	
DC	Source	
DC	Language	
DC Europeana	Relation	is version, has version, is replaced by, replaces, is required by, requires, is part of, has part of, is referenced by, references, is format of, has format, conforms tois shown by, is shown at
DC	Coverage	Spatial, temporal
DC	Rights	
DC terms	Provenance	
Europeana	Country	
Europeana	Data provider	
Europeana	Language	
Europeana	Object	
Europeana	Provider	
Europeana	Rights	
Europeana	Type	
Europeana	UGC	
Europeana	Uri	
Europeana	User Tag	
Europeana	Year	

Although Europeana datasets are based on Dublin Core, Europeana developed additional special tags for describing the content.

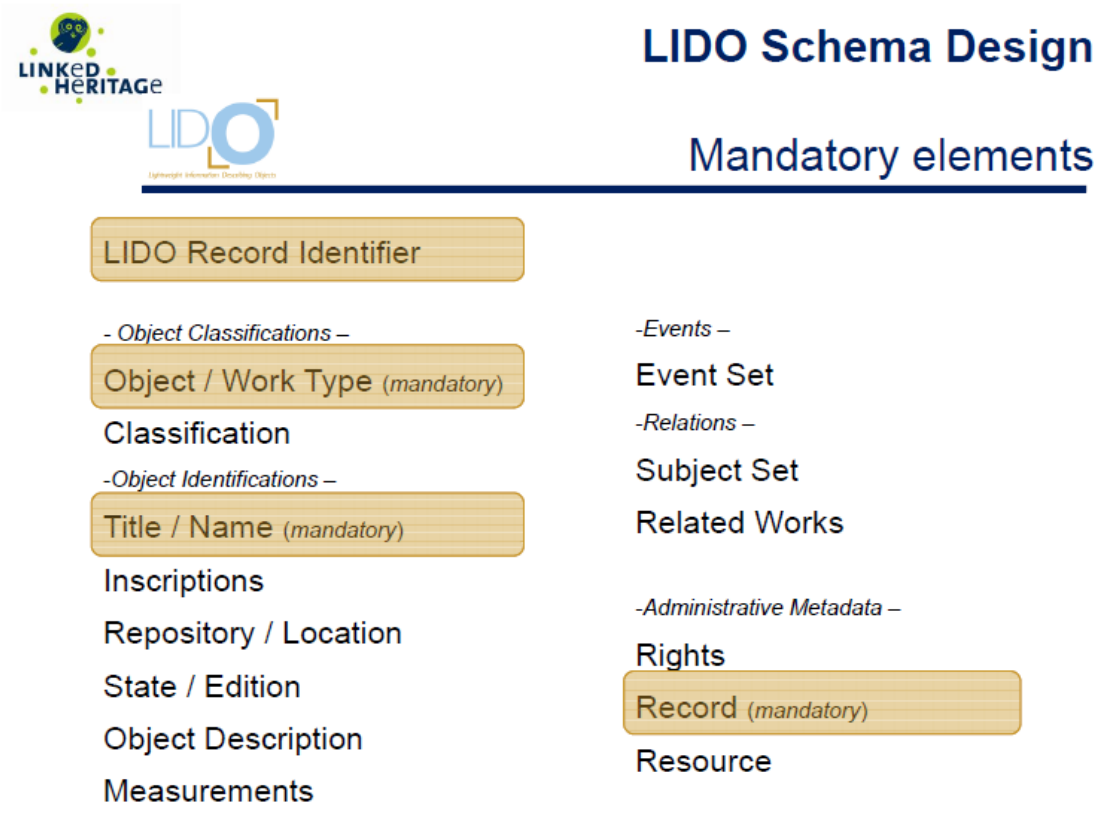
2.4.2. Special Metadata Schemes of Europeana: Lightweight Information Describing Objects (LIDO) and Connecting Archaeology and Architecture in Europeana (CARARE)

LIDO datasets were developed by the team of the Project under Europeana and used to develop CARARE model for archeological objects. CARARE aims to generate datasets for describing antique and archeological objects.

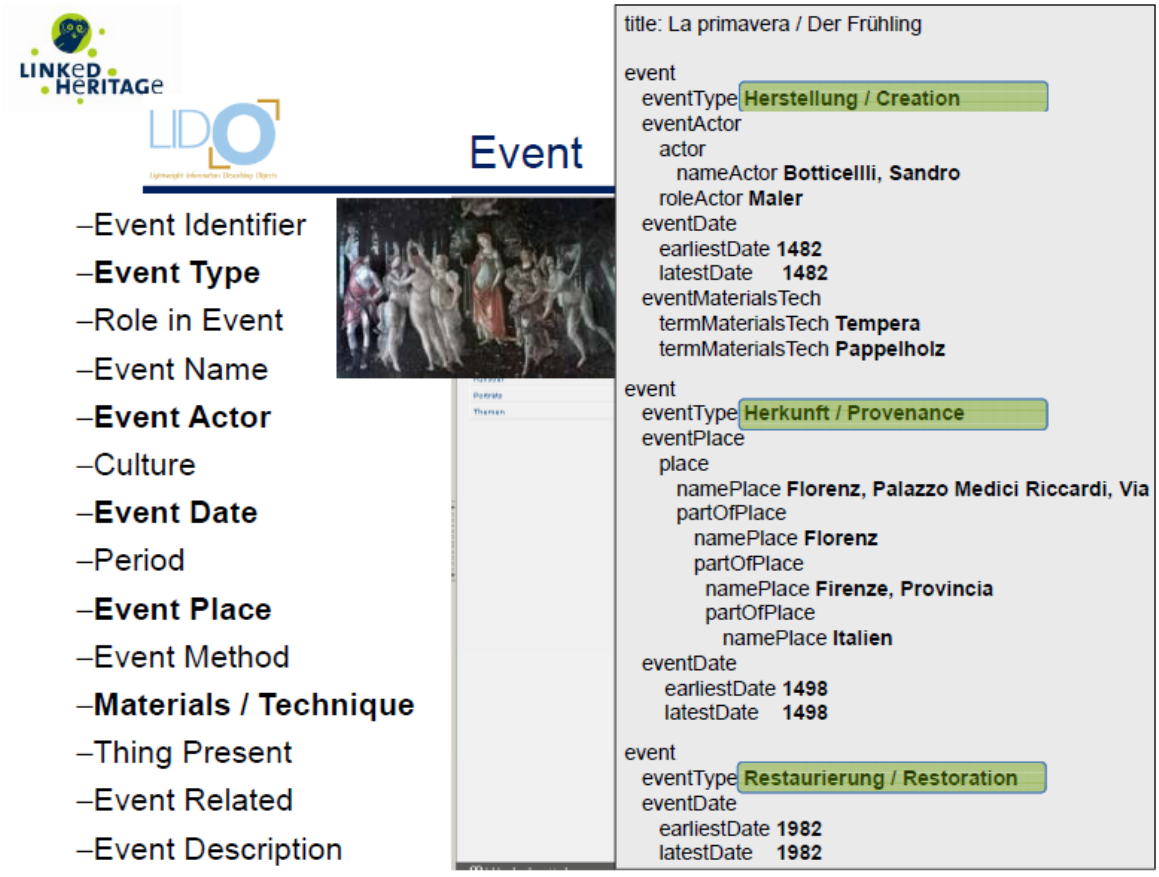


Cultural heritage assets and the objects related to it on the CARARE landing page.

The metadata areas of Title, ID, Description, Source, Rights, Related digital resources are mandatory in LIDA schema. LIDO aims to describe archeological object multiple ways. The main metadata tags are Identifier, Object/Work Type, Classification, Title/Name, Inscriptions, Repository location, State/edition, Object description, Measurements, Events, Event sets, Relations, Subject sets, Related Works, Administrative metadata , Rights, Records, Resources.



As on the figure, under the title of Events, subtitles are 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.

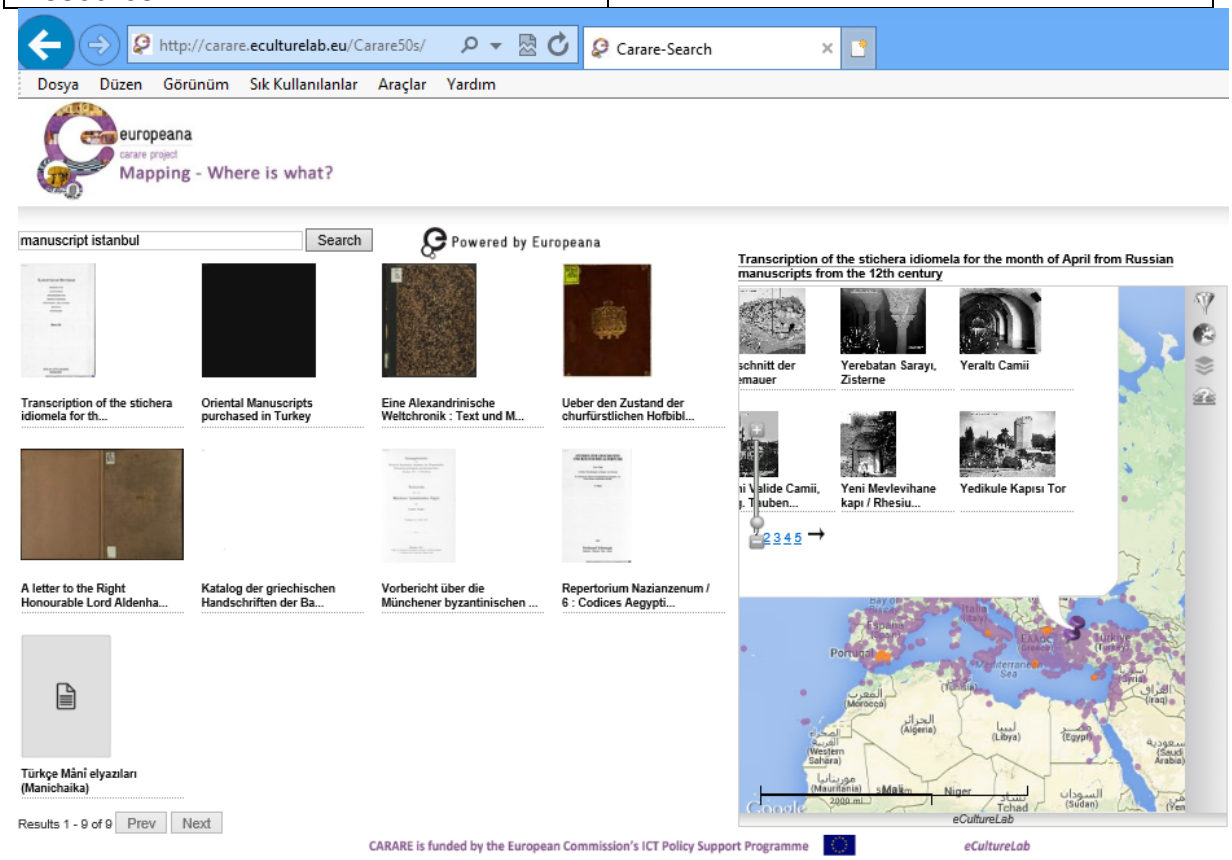


CARARE added some features to LIDO schemas such us spatial data and information retrieval structures. In addition CARARE has added map based browsing capability.

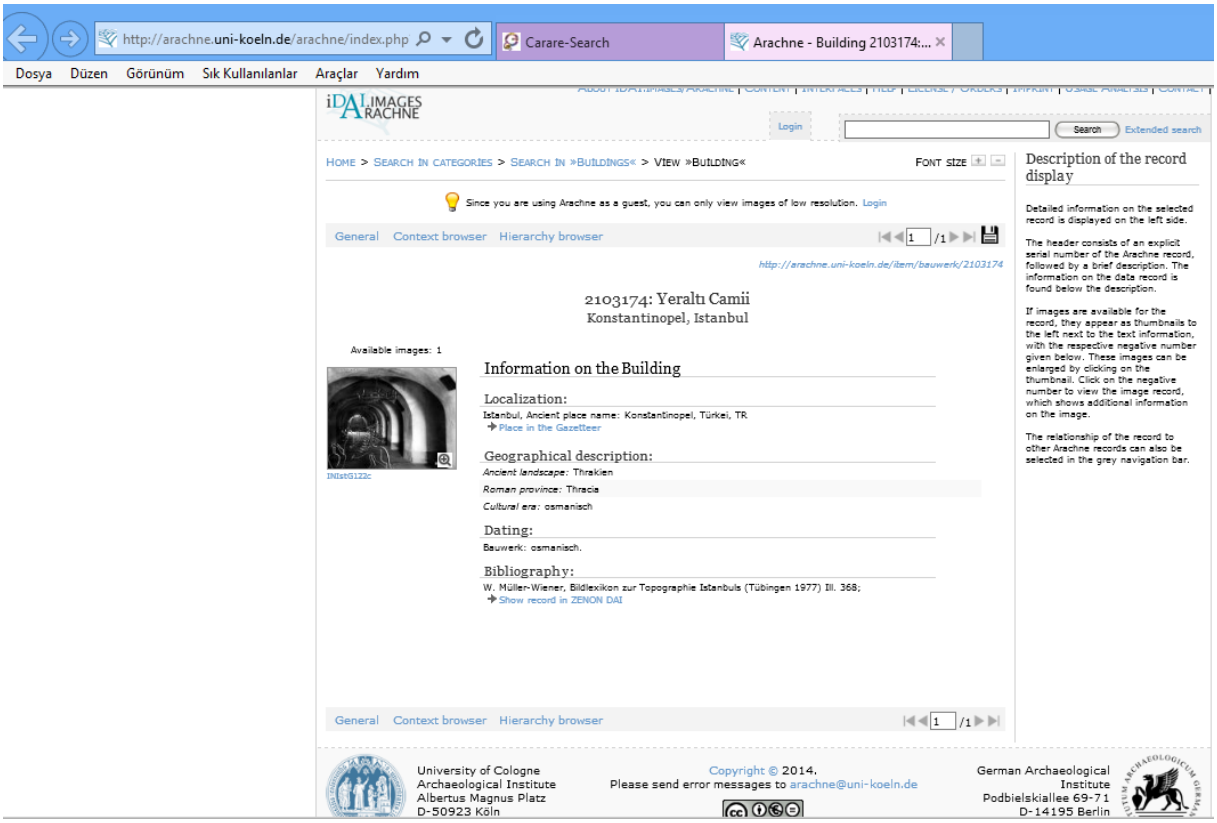
2.4.3. LIDO Metadata Sets

LIDO Identifier (mandatory)	**Events**
Object/Work Type (mandatory)	Event identifier
Classification	Event type
Title Name (mandatory)	Role in event
Inscriptions	Event name
Repository/Location	Event actor
State/Edition	Culture
Object Description	Event date
Measurement	Period
Events	Event place
Relations	Event method
Related Works	Materials/Technique
Administrative Metadata	Thing Present
Rights	Event Related
Record (mandatory)	Event Description

Resource	



CARARE interface has datasets similar to Europeana ESE. On the CARARE interface under the title of Information on building localization gives present and historical location name of the content. Also country information and codes can be accessible. Geographical description describes to ancient places with explanations. Dating gives period information. Bibliography gives the received resources.

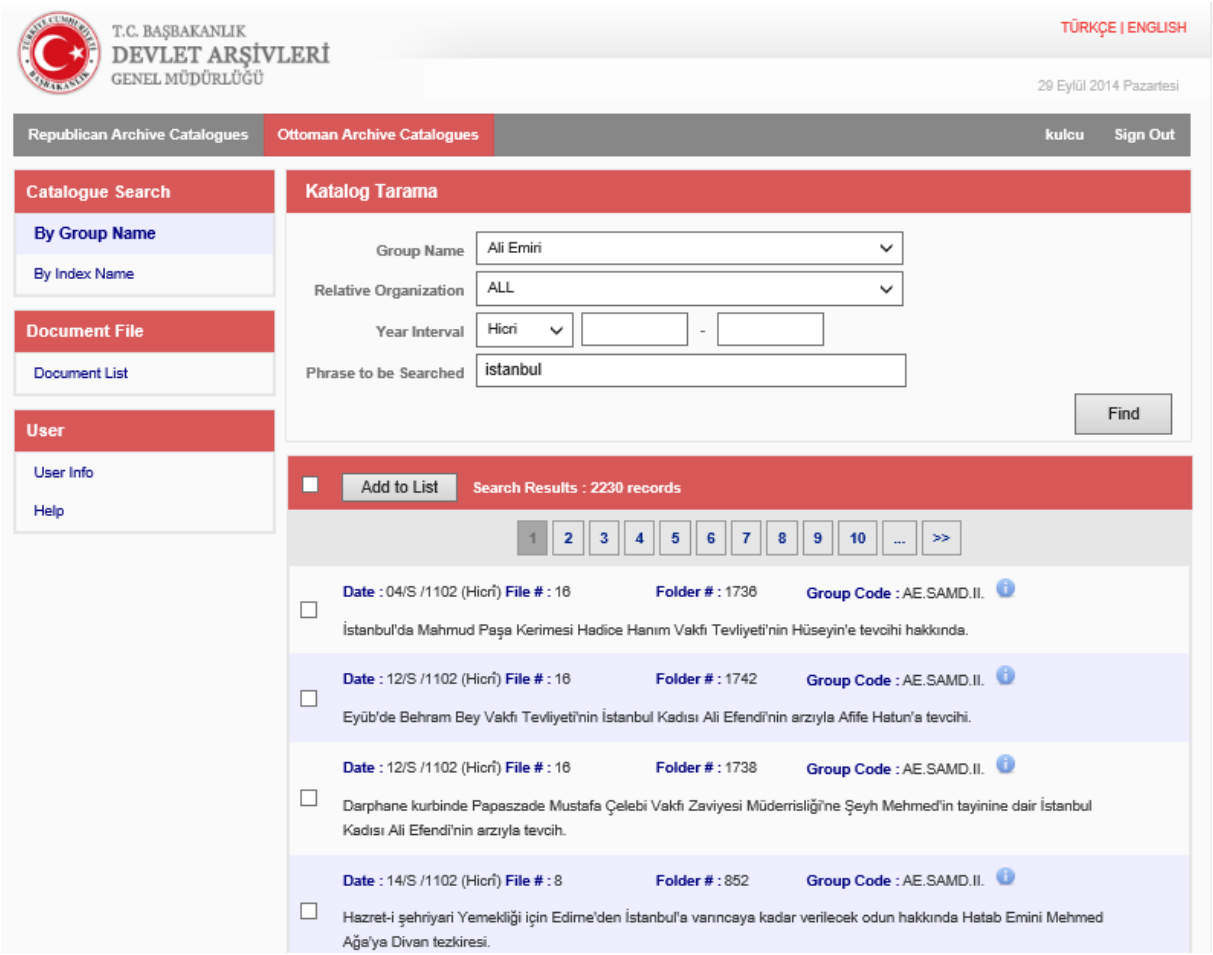


3. Metadata Descriptions of the Cultural Resource in the Archive, Library and Museums of Turkey

In the project the informative cultural resources of Turkey were evaluated under three general resource types. In this concept first resource type consisted of the records. The records have been selected from The State Archive of Turkey (SAT) that are represented in the SAT electronic catalogue and individual pages on SAT webpage. The second resource type consisted of manuscripts. As the main accessing point to the manuscripts, the platform of Ministry of Culture Turkish Manuscripts was used. The third resources consisted of museum and archeological objects. The electronic catalogue of Anatolian Civilization Museum that is still not open to public, the content on envanter.gov.tr, and electronic catalogue of the Hatay Archeology Museum which is open to public were selected as the example of museum materials in Turkey.

3.1. Ottoman Archives Catalog of State Archive of Turkey

The following is the example from Ottoman Archives Catalogeu of State Archive of Turkey



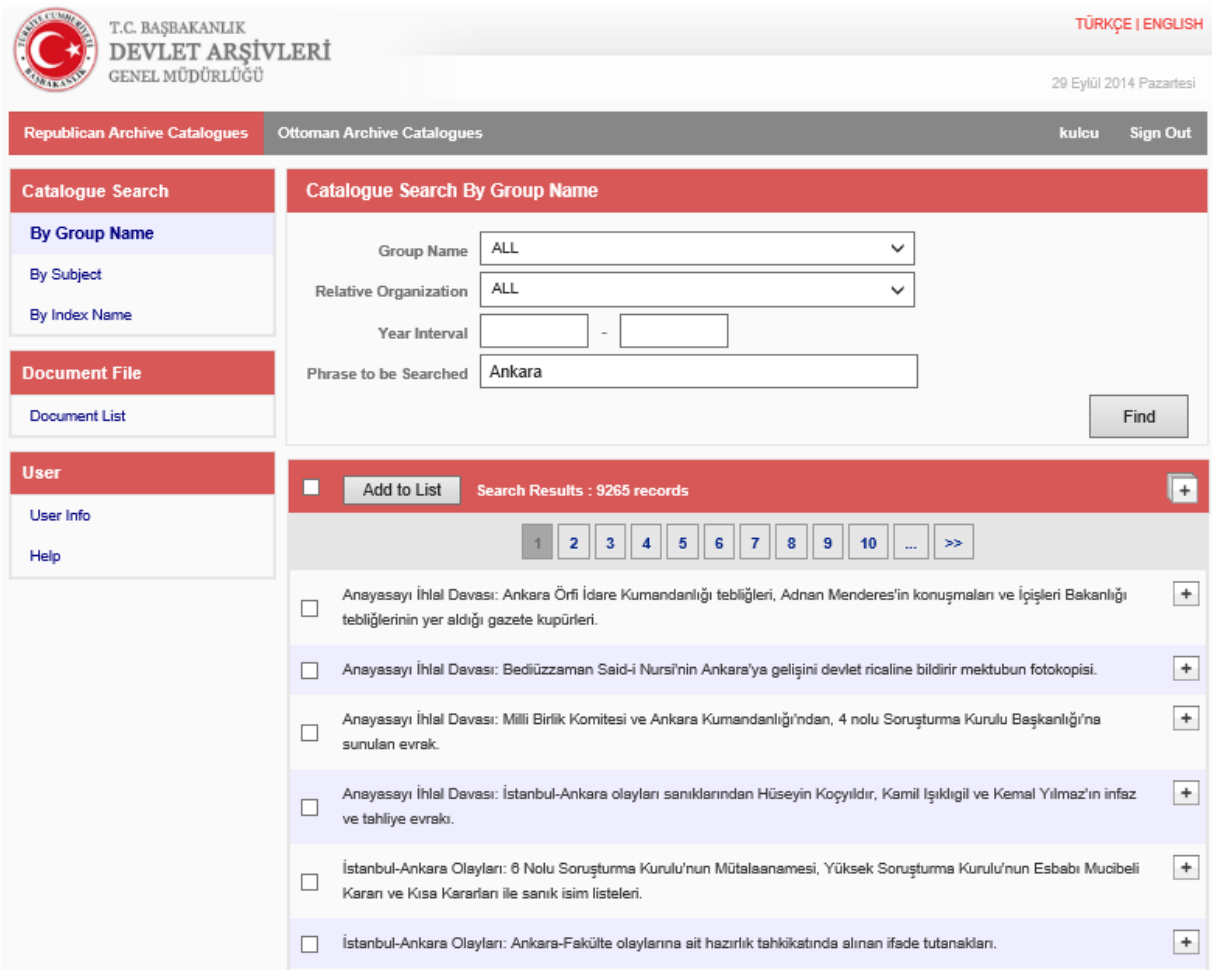
As shown in the image catalog searching is possible by group name, related organization, year interval, time span or phrase in the Ottoman Catalogue of SAT. The results are listed with date, file no, folder no, group code and summary information. The web page provides the service both in English and Turkish.

3.1.1. Turkish Republic Catalogue of State Archive of Turkey.

The following is the searching interface of Turkish Republic Catalogue of State Archive of Turkey.

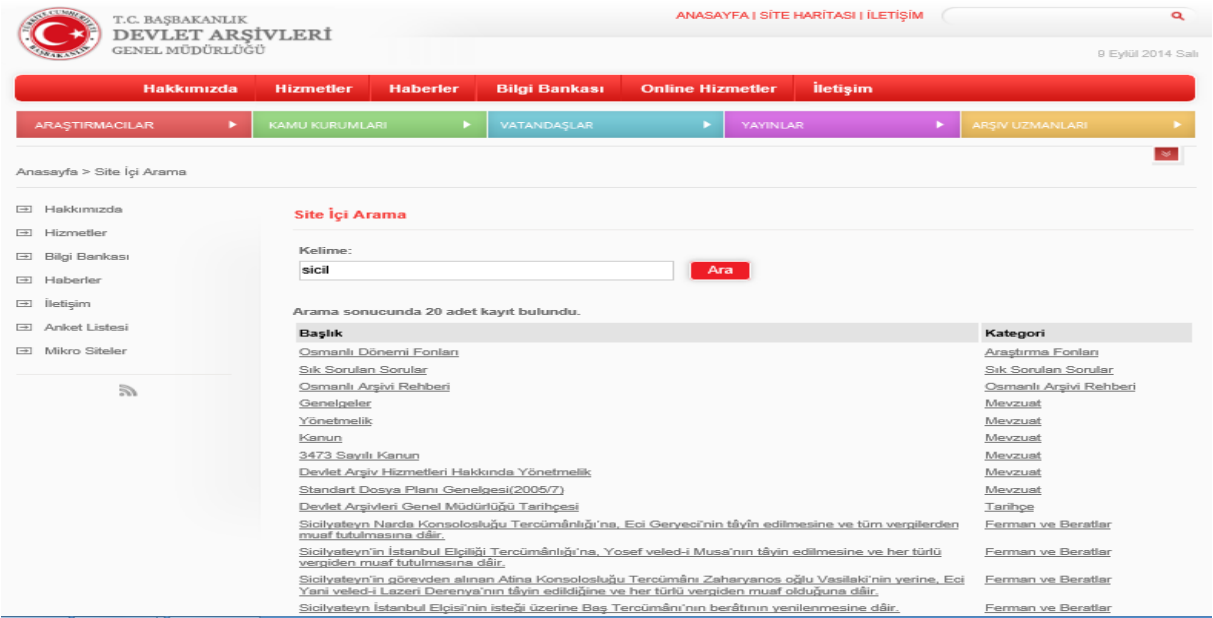
As shown in image searches of Turkish Republic Catalogue are possible by group name, relative organization, time interval and phrase.

The results are listed with date, number, file, group code, location no and summary information.



3.1.2. Special Collection in the Turkish State Archive

The following is interface of searching special collection in Turkish State Archive.



As shown in image special collections include firmans and the documents that have historic value can be reached from the webpage of The State Archive on only Turkish interface. The service on the webpage is only Turkish and limited to keywords search (kelime (keyword), başlık (title), kategori (category)).

The image below is a result of the browsing in the special collection for an inheritance in Istanbul, province of Mimar Sinan.

Record type	Firman
Reign	Mehmed IV.
Date	A.H. First decade ofRabi‘-al-awwal 1059/March 1649 C.E.
Style of Script	Cursive dîwânî. Text: 20 lines.
Dimensions	32.5 x 73 cm.
Description	Unembellished sultanic cipher drawn in gold ink. The scalloped cartouche of the sultan’s inscription to the upper left of the cipher is surrounded by a floral composition in freehand on a ground of gold wash. His inscription reading “Mûcebince ameloluna” (‘Let it be thus executed’) is sprinkled with ornamental blotting sand. A freehand floral composition also adorns the crest figure above the inscription and above which carnation motifs in freehand constitute delicate vertical accents. The frame, open at the top, consists of a heavy marginal line in lapis lazuli, edged in gold. Text inscribed in black ink.
Annotation	1. In the upper portion of the document is inscribed in the sultan’s own hand the formulation “Mûcebince amel oluna” (‘Let it be thus executed’). 2. In the lower left corner, the name of the locale wherein inscribed.
Reason issued	On the death of Hamza, the chief officer of the janissary battalion called the keeper of the Sultan’s hounds, his house in the quarter of Mimar Sinan is placed at the disposal of Bâdıseher Hanım, a Palace servant.
Repository and classification number	BOA, Illuminated FirmanCollection no. 3.

As on the above catalogue datasets of firmans and special historical record collection consist of record type, reign, date, style of script, dimensions, description, annotation, reason issued, repository and classification number.

3.2. Metadata Description and Dataset of the Manuscripts in Turkey

The below is the interface of the manuscripts browsing page of the Ministry of Culture and Tourism Turkey Manuscripts.

As on the above image catalogue description areas are the following for the manuscripts that belong to Ministry of Culture and Tourism Turkish Manuscripts.

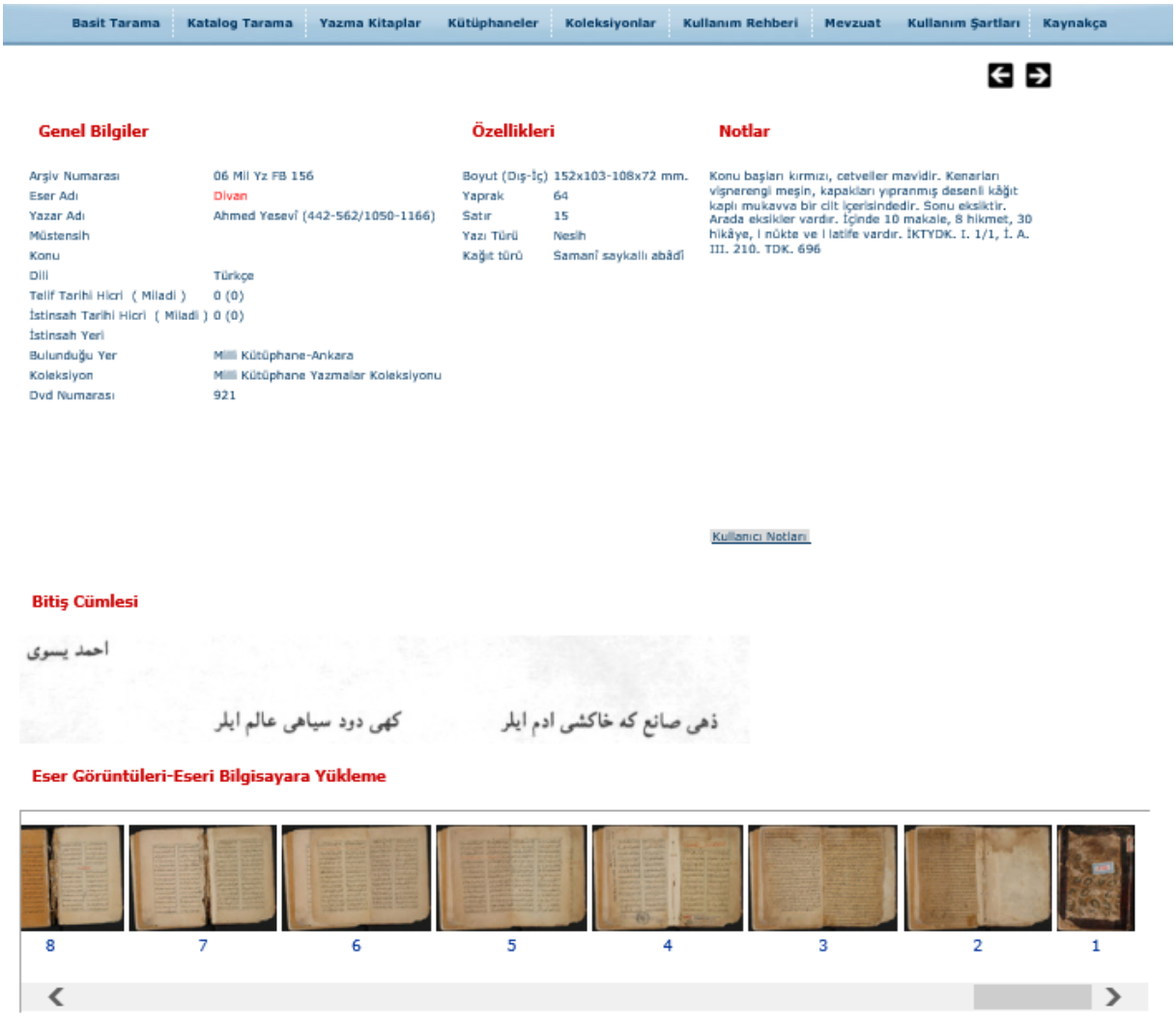
3.2.1. Metadata Sets of the Ministry of Culture and Tourism Turkish Manuscripts

Author
Collection
Location
Paper sort
Writing type
Subject
Copyright date
Show only full page
Do not use quotation note
Show 10000 records on page
Notes
Dimension
Line
Page
DVD no
Language

Yazar Adı	Eser Adı	Arşiv Numarası	Ölçü	Satır	Yaprak	G
Şeyhülislâm Mehmed Emîn b. Hüseyin Ankaravî (öl. 1098/1687)	Fetâvâ-yı Ankaravî	60 Hk 328	325x205-210x105 mm.	33	406	
Mehmed Emîn b. Hüseyin Ankaravî (öl. 1098/1687)	el-Fetâvâ'l-Ankaravî	45 Ak Ze 4577	205x140-150x80 mm.	25	VII+439	
Muhammed b. Hüseyin Ankaravî (öl. 1098/1687)	Fetâvâ-i Ankaravî	44 Dar 506	290x180-200x100 mm.	31	III,460	
Şeyhülislâm Mehmed Emîn b. Hüseyin Ankaravî (öl. 1098/1687)	Fetâvâ-yı Ankaravî	19 Hk 4461	310x195-220x100 mm.	27	V+572	
Şeyhülislâm Mehmed Emîn b. Hüseyin Ankaravî (öl. 1098/1687)	Fetâvâ-yı Ankaravî	19 Hk 4460	310x200-240x115 mm.	31	VI+427	
Mehmed Emîn b. Hüseyin Ankaravî (öl. 1098/1687)	el-Fetâvâ'l-Ankaravî	45 Hk 792	322x110-229x113 mm.	31	IV+400+XVIII	
Mehmed Emîn b. Hüseyin Ankaravî (öl. 1098/1687)	el-fetâvâ'l-Ankaravî	45 Hk 793	298x203-220x92 mm.	37	VII+319+II	

3.2.1.2. The browsing tags of Turkish Manuscripts that belong to the Ministry of Culture and Tourism

Author name
Resource name
Archive no
Dimension
Line
Page
Image



The above image is the interface of a record result of Turkish Manuscripts

3.3. Metadata Sets of the “Inventories of Turkey”

The catalogue of the Inventories of Turkey can be reached on the following web page “envanter.gov.tr. This webpage cover different kind of cultural resources under the titles of Cultural entities, Monuments, Records, Bibliographies, Maps and Public culture. The web page has some special features like map-based access, Facebook and Tweeter links, and the most viewed and archeological drafts of the resources.

The following is an archeological object in envater.gov.tr.

envanter.gov.tr

Ne Arıyorsunuz?

SİT | ANIT | BELGE | BİBLİYOGRAFYA | HARİTA | HALK KÜLTÜRÜ | KÜLTÜR EKONOMİSİ | HAKKINDA | EN

Kentsel | Arkeoloji | SMÖ | DİĞER

İstanbul | Ankara | İstanbul Arkeoloji Müzesi | Anadolu Medeniyetleri Müzesi

BİTİK HÖYÜK

0 | 0 | Beğen | Tweet

Envanter Seçkileri


SVETİ STEFAN BULGAR KİLİSESİ


FATİH CAMİİ


KILIÇ ALİ PAŞA CAMİSİ


AYASOFYA


ŞEHZADE KÜLLİYESİ CAMİİ

Temel Bilgiler

Köy
BİTİK

Tescil Durumu
Tescilli

Tescil Tarihi
20/08/2009

Tescil Derecesi
1. VE 2.

Dönem
İLK TUNÇ ÇAĞI,ORTA TUNÇ ÇAĞI

Kimlik Bilgileri

Türü:
HÖYÜK

İl:
ANKARA

İlçe:
KAZAN

Modern Adı:
BİTİK HÖYÜK

Müze Envanter No:
148-62-84

Tanım
FİNCAN. KULBU AĞIZDAN YÜKSELEN FORMDA. ÇARK YAPIMI, KIRMIZI ASTARLI .

Boyut
AG.11.9*13.2cm,Y.6.2cm,KY.8.3cm

Buluntu Türü:
ÇANAK ÇÖMLEK

Ayrıntılı Bilgiler

Araştırma Tarihçesi
1942 YILINDA R.OĞUZ ARIK TARAFINDAN BİR SEZONLUK KÜÇÜK ÇAPLI KAZI YAPILMIŞTIR. 1994 YILINDA S. OMURA TARAFINDAN TEKRAR ARAŞTIRILMIŞTIR.

İlgili Yayın
Akurgal, E,. Anadolu Kültür Tarihi, TÜBİTAK, Ankara, 2005, s.131-133. 'Arık,R.O., ' Bitik Kazısı ve Hatay Tetkikleri Hakkında Kısa Rapor', Belleten Cilt VIII- 30, 1944, s.341-372. French, D.H., Anatolia and the Aegean in the Third Millennium BC PhD Cambridge University(yayınlanmamış tez), şek.30,46,48a,48b1,48b3,52, 1968, s.219. Orthmann, W., Die Keramik der Frühen Bronzezeit aus Inneranatolien, Verlag Gebr.Mann, Berlin, 1963. Özgüç, T., 'Bitik Vazosu', AÜDTCFD, Cilt XVI, Sayı 1-2, 1958,s. 1-18. Schachner , Ş.-A., "Ankara ve Yakın Çevresinin Anadolu Arkeolojisindeki Yeri", Ankara Dergisi, C. 2, Ankara, 1993, s.73-82

Buluntu
ÇANAK-ÇÖMLEKLER,KABARTMALI VAZO PARÇALARI, MÜHÜR,PİŞMİŞ TOPRAK FİGÜRİNLER ,MIZRAK UCU, FİBULA

Buluntu Depolama Yeri
ANADOLU MEDENİYETLERİ MÜZESİ

Arşiv Türü
ESER ENVANTER DEFTERİ

Arşiv Yeri
ANADOLU MEDENİYETLERİ MÜZESİ ARŞİV ODASI DOLAP 4, ENVANTER DEFTERLERİ HAFRİYAT DEFTERLERİ BİTİK 51 NOLU DOSYA

Toplam Eser Sayısı
84

Hammadde
PİŞMİŞ TOPRAK

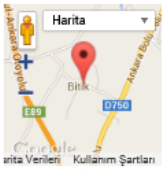
Buluntu Tipi
FİNCAN

Kazıda Bulunduğu Yer
PROFİL 1942

Müzede Bulunduğu Yer
C DEPOSU

Buluntu Kazı Numarası
Bt 90

Harita



Çok İzlenenler

5838 GORDİON BÜYÜK TÜMÜLÜS(MİDAS) MM
5005 BOTTER APARTMANI
4983 HACI BAYRAM VELİ CÂMİİ
4484 AYAZMA CAMİİ
4362 AUGUSTUS TAPINAĞI
4137 SELİMİYE CAMİİ
3736 SÜLEYMANİYE CAMİİ
3541 ANKARA İSTASYONU BİZANS MEZARI
3515 FATİH CAMİİ
3437 AYASOFYA
3219 ŞEHZADE KÜLLİYESİ CAMİİ
3208 İSTANBUL KARA SURLARI, BLAKHERNA BÖLGESİ, KULE 14
3199 GALATA KULESİ
3138 BEŞTEPELER/BÜYÜK TÜMÜLÜS
3130 KESTANE, ÇINAR, AKASYA, MEŞE AĞAÇLARI

As on the above image envanter.gov.tr catalogues give detailed information about the objects based on archeological inventories description areas that use by Turkish archeologists.

3.3.1. Metadata Set of the Archeological Objects in Turkish Inventories

Basic Information	**ID Information**
Village	Type
Registration condition	City
Registration date	Province
Registration degree	Modern name
Period	Museum inventory no
Description	Excavation type
Dimension	
Special Information	
Related publication	
Finding	
Storage area	
Archive type	
Total piece	
Raw material	
Finds type	
Where it is find	
Location in museum	
Excavation number	

The following is description of the Bayazit Mosque under the title of monuments in envanter.gov.tr

SİT | ANIT | BELGE | BİBLİYOGRAFYA | HARİTA | HALK KÜLTÜRÜ | KÜLTÜR EKONOMİSİ | HAKKINDA

EN

Kentsel | Arkeoloji | SMÖ | DİĞER

İstanbul

Ankara

BEYAZIT CAMİ

0 | 0

Beğen | Tweet

Temel Bilgiler

Günümüzdeki İşlevi
CAMİ

Kültür Dönemi
OSMANLI

Mahalle
BEYAZIT

Adres
BEYAZIT MEYDANI

Mimari Üslup
KLASİK

Yaptıran
II. Beyazıt

Yapım Tarihi
1501

Tescil Durumu
Tescilli

Dönem
OSMANLI

Kimlik Bilgileri

Türü:
CAMİ

İl:
İSTANBUL

İlçe:
FATİH

Ada:
613

Parsel:
18

<< Önceki

Harita

Google Maps | Tarihi Harita

Ayrıntılı Bilgiler

1. Onarım Tarihi
1573

Taşıyıcı Sistem
TAŞ.Yığma

Örtü Türü
Eğrisel,Kubbe

Örtü Malzemesi
Kurşun

Plan Özellikleri
Caminin 24 kubbeli revaklarla çevrilmiş kare biçiminde bir son cemaat avlusu bulunmaktadır. Avlu zemini mermer döşelidir ve ortasında şadırvan bulunur. Aslında üstü açık olan şadırvan, IV. Murat zamanında etrafına dikilen sekiz sütun üzerine oturtulmuş bir kubbe ile örtülmüştür

Cephe Özellikler
İstanbul'da orijinalliğini koruyan en eski selatin camiidir.

Devşirme Malzeme
Görülmedi

Fiziksel Özgünlük
Özgün

İşlevsel Özgünlük
Özgün

Gözlem ve Açıklamalar
Doğusu ve batısında beşer kubbe ile örtülü iki tabhanesi (kanat) olan camii, tabhaneli (kanatlı) yapıların son örneği kabul edilir. Caminin mihrap tarafında, sağda ve pencere hizasında oğlu Yavuz Sultan Selim tarafından yaptırılmış Sultan Bayezid türbesi bulunur. Yine Yavuz Sultan Selim'in yaptırdığı solundaki türbede Kızı Selçuk Hatun da yatar; Koca Mustafa Reşit Paşa'nın mezarı da burada bulunmaktadır. İstanbul'da 1509'da meydana gelen ve "Küçük Kıyamet" diye anılan depremden zarar gördü. Depremden sonra kısmen onarılan camiinin onarımını daha sonraki yıllarda tamamlayıp güçlendiren Mimar Sinan'dır. 1573'de caminin içinde bir kemer inşa ederek yapıyı güçlendirmiştir.

Başlıca Kaynaklar
Cevat Akkanat, İstanbul'da Bayezid Camii ve Külliyesi, Diyanet Dergisi, Sayı: 239, Kasım 2010

Envanter Seçkileri


GALATA KULESİ


FATİH CAMİİ


AYAZMA CAMİİ


SVETİ STEFAN BULGAR KİLİSESİ


SİNOP TARİHİ CEZAEVİ

5838	GORDION BUYUK TUMULUS(MIDAS) MM
5005	BOTTER APARTMANI
4983	HACI BAYRAM VELİ CÂMİİ
4484	AYAZMA CAMİİ
4362	AUGUSTUS TAPINAĞI
4137	SELİMİYE CAMİİ
3736	SÜLEYMANİYE CAMİİ
3541	ANKARA İSTASYONU BİZANS MEZARI
3515	FATİH CAMİİ
3437	AYASOFYA
3219	ŞEHZADE KÜLLİYESİ CAMİİ
3208	İSTANBUL KARA SURLARI, BLAKHERNA BÖLGESİ, KULE 14
3199	GALATA KULESİ
3138	BEŞTEPELER/BÜYÜK TÜMÜLÜS
3130	KESTANE, ÇINAR, AKASYA, MEŞE AĞAÇLARI

3.3.1.2. Metadata Set of the Monuments in Turkish Inventories

Basic Information	ID Information
Current function	Type
Culture period	City
District	Province
Address	Block
Architectural style	Parcel
Contractor	
Registration condition	
Period	
Detailed information	
Repair date	
Carrier system	
Cover type	
Cover material	
Plan features	
Front features	
Construction materials	
Physical originality	
Functional originality	
Observation and explanations	
Fundamental resources	

As on the above image the building and location information are described in detail with social media links, inventory anthologies and geo-spatial support.

The following is an entry of the archeological monument under the cluster of Records in envanter.gov.tr.

3.3.2. Metadata Set of the Records in Turkish Inventories

Basic Information	**ID Information**
Author	
Publication of the article	Inventory anthologies
Publication date	The most displayed records
City	
Tags	

As on the table the records have very short description list consists of only 3 tags about the resource. It seems that the entry areas of the publications were not designed by the professionals.

3.4. Datasets of the Resource of the Anatolian Civilization Museum

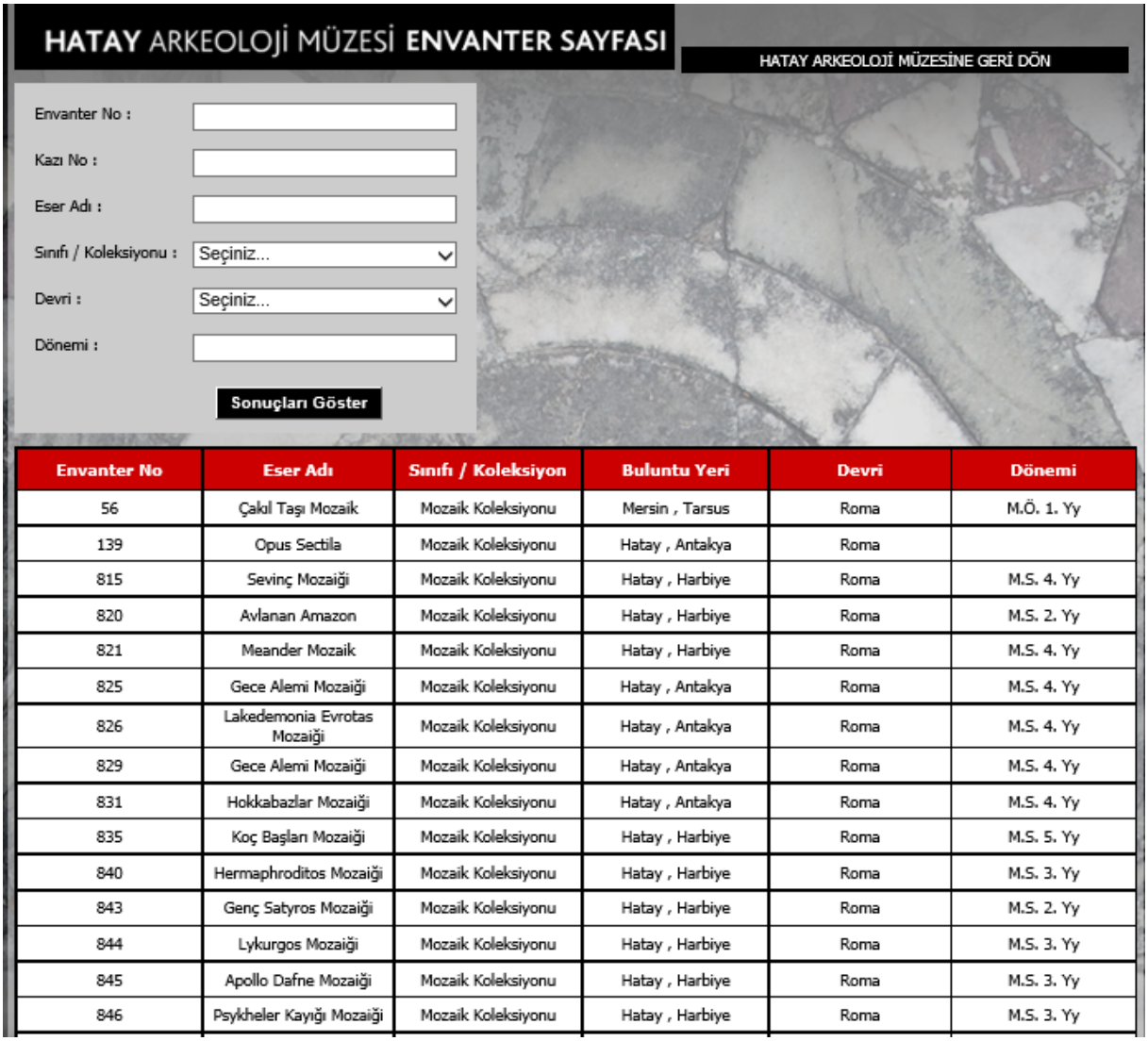
The following is an example of inventory records in the Anatolian Civilization Museum.

Resource Inventory Records	
Village	
Registration condition	
Registration date	
Registration degree	
Period	Province
Description	Finding location
Dimension	
Special Information Related Publication Finding	
Storage area	
Archive type	
Total piece	Excavation date
Raw material	Publications
Finds type	City
Where it is find	
Location in museum	Back face

The Anatolian Civilization Museum (ACM) is the biggest and ver special museum with the content on Anatolian and close region. ACM was selected as the best museum of Europe in 1997. Although they have electronic records of the datasets ACM does not yet have a public catalogue on internet. The dataset seem to be based on registry records of the archeological objects that includes detailed information about the object and location but not metadata information as the international examples.

3.5. Metadata Sets of Hatay Archeology Museum

The following is an inventory entry from Hatay Archeology Museum.



Envanter No	Eser Adı	Sınıfı / Koleksiyon	Buluntu Yeri	Devri	Dönemi
56	Çakıl Taşı Mozaik	Mozaik Koleksiyonu	Mersin , Tarsus	Roma	M.Ö. 1. Yy
139	Opus Sectila	Mozaik Koleksiyonu	Hatay , Antakya	Roma	
815	Sevinç Mozaiği	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 4. Yy
820	Avlanan Amazon	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 2. Yy
821	Meander Mozaik	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 4. Yy
825	Gece Alemi Mozaiği	Mozaik Koleksiyonu	Hatay , Antakya	Roma	M.S. 4. Yy
826	Lakedemonia Evrotas Mozaiği	Mozaik Koleksiyonu	Hatay , Antakya	Roma	M.S. 4. Yy
829	Gece Alemi Mozaiği	Mozaik Koleksiyonu	Hatay , Antakya	Roma	M.S. 4. Yy
831	Hokkabazlar Mozaiği	Mozaik Koleksiyonu	Hatay , Antakya	Roma	M.S. 4. Yy
835	Koç Başları Mozaiği	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 5. Yy
840	Hermaphroditos Mozaiği	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 3. Yy
843	Genç Satyros Mozaiği	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 2. Yy
844	Lykurgos Mozaiği	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 3. Yy
845	Apollo Dafne Mozaiği	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 3. Yy
846	Psykheler Kayığı Mozaiği	Mozaik Koleksiyonu	Hatay , Harbiye	Roma	M.S. 3. Yy

3.5.1. Inventory Entry Logbook of Hatay Archeology Museum

Inventory No	
Excavation No	
Resource no	
Class / Collection	
Era	
Period	

Inventory No	Resource No	Class	Excavation Palace	Era	Period

Although the Hatay Archeology Museum is a State Museum like the Anatolian Civilization Museum and the content of both museums are similar, the bibliographic records of the museums are rather different from each other. The entries of Hatay Museum are limited. In addition the same tags are described with different names. For example Name/type in ACM is equal to Resource name in HAM. Also the difference between era and period is not clear in HAM entries.

3.6. An Example to Museum Material Log Book in Turkey

The following is the example of Museum Material Log Book in Turkey

……..Museum General Material Registry													
,		Material						Value					
Museum Inventory No	Record No	Name	Type	Transferring way to museum	Transferring date to museum	Description	Buying price	Expecting price	Photo or map	Index or photo	Location in museum	Publication place	Comments

Description entries of the registry and ACM records are so close to each other. While the registry records have photo and comment areas the ACM records has more location information. On the other hand the style of both records seem to be created by same thinking.

4. Comparative Analysis of the Metadata Datasets between Turkey and International Examples

The following table shows the datasets that are used for describing cultural heritage resources in the Turkish and International examples. In the examples of Turkey, the archive refers to the State Archive of Turkey, Manuscript refers to the Ministry of Culture and Tourism Turkish Manuscripts, Museum refers to The Anatolian Museum Collection, Archeology refers to Hatay Archeology Museum and registry refers to Museum Material Log Book. The colors of the datasets indicate same or similar description tags of the different datasets of the organizations for easier comparison. The basic datasets of LIDO was used because detailed schemas of LIDO is outside the main of this study. LIDO has detailed sub-entries under the basic tags. In addition the datasets of Inventories of Turkey and The Anatolian Civilization Museum (ACM) was almost same and ACM has a few datasets for that reason we used only ACM datasets on the table. Different colors used to describe each metadata sets for getting easier of comparison of metadata sets as on the table. Some tags of the metadata sets which describe similar field with different terminology collected under same group. Because international examples are generally use similar terminology, the studies of creating group has focused on Turkish examples.

Metadata Sets of International and Turkish Examples

International Examples					National Examples in Turkey				
OAC	ECAI	ESE	LIDO	LC	Archive	Manuscript	Museum	Archeology	Registry
Identifier	Title	Title	LIDO Identifier	Title	Record type	Title	Village	Inventory No	Museum Inventory No
Title	Subject, specific	Creator	Object/Work Type	Span date	Reign	Author	Registration condition	Excavation No	Record No
Creator	Description	Subject	Classification	Bulk date	Date	Collection	Registration date	Excavation place	Name
Date	Publisher	Description	Title Name	ID no	Style of Script	Location	Registration degree	Resource no	Type
Description	Publisher-address	Publisher	Inscriptions	Creator	Dimensions	Paper sort	Period	Class / Collection	Transferring way to museum
Language	Creator-Person-Name	Contributor	Repository/ Location	Extent	Description	Writing type	Description	Era	Transferring date to museum
Subject (Name)	Creator-Peron-Affiliation	Date	State/Edition	Language	Annotation	Subject	Dimension	Period	Description
Subject (Title)	Creator-Corporate Name	Type	Object Description	Location	Reason issued	Copyright date	Special Information		Buying price
Subject (Place)	Creator-Corporate Name – Address	Format	Measurement	Summary	Repository and classification number	Archive no	Related publication		Expecting price
Subject (Topic, Function, or Occupation)	Date	Identifier	Events	Finding aid permalink		Notes	Storage area		Photo or map
Genre	T-Specific	Source	Relations	LCCN Permalink		Dimension	Archive type		Index or photo
Type	Format	Language	Related Works			Line	Total piece		Location in museum
Format/Physical Description	Source	Relation	Administrative Metadata			Page	Raw material		Publication place
Related Collection/Project	Language	Coverage	Rights			DVD no	Finding type		Comments
Institution/ Repository	Relation-Type	Rights	Record			Language	Where it was found		
Contributor	Relation-İdentifier	Provenance	Resource				Location in museum		
Copyright Status	Coverage-x-min	Country					Excavation number		
Copyright Statement	Coverage-x-max	Data provider					Province		
Copyright Date	Coverage-y-min	Language					Finding location		
Copyright Owner Name	Coverage-y-max	Object					Excavation date		
Structured metadata information	Coverage-t-early	Provider					Publications		
Technical metadata information	Coverage-t-late	Rights					City		
	Coverage-Place name	Type					Front and Back Face		
	Coverage-Period name	User Tag							
	Rights	Year							
	S.domain								
	Team								

The following table shows the matched metadeta sets of International and Turkish examples. As the details in the study OAC covers more that 200 archive, library and museum organizations in CA. ECAI is also a platform for accessing cultural heritage. ESE describes the datasets of Europeana. LIDO is any other example of European datasets on cultural objects. LC Finding Aids describe the culture objects. Turkish examples are to give description model of the cultural resource.

Each of the following datasets represent either a model or dataset for describing cultural in electronic environment. Even though international examples except from LC use for by more than one country resources Turkish examples use for national level.

International Examples					National Examples in Turkey				
OAC	***ECAI***	***ESE***	***LIDO***	***LC***	***Archive***	***Manuscript***	***Museum***	***Archeology***	***Registry***
Identifier		Identifier	LIDO Identifier Classification	ID no	Classification number	Achive no DVD No	Excavation number	Inventory N. Excavation N. Resource N. Class / Collection	Museum Inventory No Records No
Title	Title	Title	Title Name	Title		Title			Name
Creator	Creator-Person-Name Creator-Peron-Affiliation Creator-Corporate Name Creator-Corporate Name – Address	Creator		Creator		Author			
Date	Date	Date		Span date Bulk date	Date Reign		Date Period Excavation date	Era Period	Transferring date to museum
Description		Description	Object Description		Description Record Type		Description		Description
OAC	***ECAI***	***ESE***	***LIDO***	***LC***	***Archive***	***Manuscript***	***Museum***	***Archeology***	***Registry***
Language	Language	Language		Language		Language			
Subject (Name) (Title) (Place) (Topic, Function, or Occupation)		Subject				Subject			
Genre Type	T-Specific	Type Object	Object/Work Type Record				Archive type		Type
Format/ Physical Description	Format	Format	Measurement	Extent	Dimensions	Dimension Line Page	Dimension Raw material Finding type Front and Back Face Totsal Piece		Photo or map Index or photo
Related Collection/ Project	Relation-Type Relation-İdentifier	Relation	Relations Related Works				Related publication		
Institution/ Repository	Source	Source Provenance Provider Country	Resource Repository Location	Location	Repository	Location Collection	Village Location in museum Storage area Where it was found Province Finding location City	Excavation place	Location in museum
OAC	***ECAI***	***ESE***	***LIDO***	***LC***	***Archive***	***Manuscript***	***Museum***	***Archeology***	***Registry***
Contributor		Contributor							

Copyright Status Copyright Statement Copyright Date Copyright Owner Name	Rights	Rights	Rights			Copyright date			
	Publisher-address	Publisher		Finding aid permalink LCCN Permalink			Publications		Publication place
			Events	Summary		Notes			Comments
	Team S.domain	Data provider							
			Inscriptions		Annotation Style of Script	Paper sort Writing type			
Structured metadata information Technical metadata information				Administ. Metadata					
OAC	***ECAI***	***ESE***	***LIDO***	***LC***	***Archive***	***Manuscript***	***Museum***	***Archeology***	***Registry***
		User Tag	State/Edition						
	Coverage-x-min Coverage-x-max Coverage-y-min Coverage-y-max Coverage-t-early Coverage-t-late Coverage-Place name Coverage-	Coverege							
							Registration condition Registration Registration degree		Transferring way to museum
					Reason issued		Special Information		Buying price
									Expecting price

At first glance it appears that the dataset examples of Turkey have specific description about resources or processes that do not match the international examples. 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 no Identifier in Museum, lack of title in Archive, Museum and Archeology, no subject in Archive, Museum, Archeology and Register; no type in Archive, Archeology and Register; no format and contributor information, except from Manuscript no copyright information in all Turkish examples. In one way it is understandable no language information except from Manuscript. But during the integration of other repositories from Turkey and Internationally the entry of language should be necessary. All examples from turkey except from Manuscript describes source as where the object was found not the organizations that holds 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. The datasets in Turkish examples are almost same with the models that are used for printed documents and real objects need to be modified with the special conditions of electronic environment. As a first step working on interoperability of the sysyems 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 an exact sample. It should be able to represent the local needs and specifications on the datasets together with the expectations of the international standards and platforms.

As e result of metadata matching and an according to the literature review, following datasets are driven as a suggestion for the new description model of the electronic cultural sources in Turkey as part of the international convergence and standardization. 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.

4.1. A Sample Metadata Set of Electronic Cultural Resources in Turkey

Identifier
Title
Creator
Date
Description
Language
Subject
Type
Publication / Excavation
Format/ Physical Description
Relations
Institution/ Repository
Copyright
Coverege
Provenance
Administrative and technical metadata

5. Results of the Questionnaire

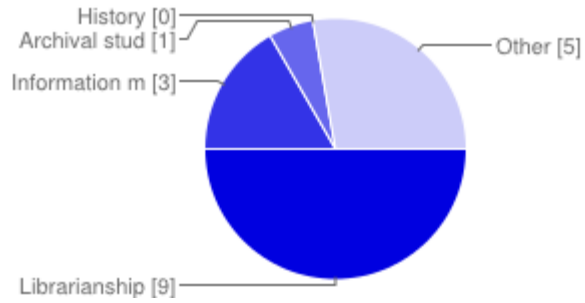
Research results Part 3

The following is the result of the questionnaire that realized with 19 individuals that are either working in library and information organizations as part of the cultural resources or have responsibilities on that kinds of works in California State.

The following table shows which organization staff participated to the questionnaire

1. **Name of the Organizations that Participated to the Analyses**
2. California State Archives
3. Online Archive of California
4. Los Angeles Philharmonic
5. UC Merced
6. Electronic Cultural ATLAS Initiative
7. San Joaquin County Historical Museum
8. Cal Poly Pomona
9. American Jewish University
10. San Francisco Public Library
11. California Digital Library
12. Oakland Public Library
13. Department of Special Collections, [University of California, Davis
14. History San Jose
15. UC Berkeley Libraries
16. Little People of America, Inc.
17. Phoebe A. Hearst Museum of Anthropology
18. University of California, Berkeley

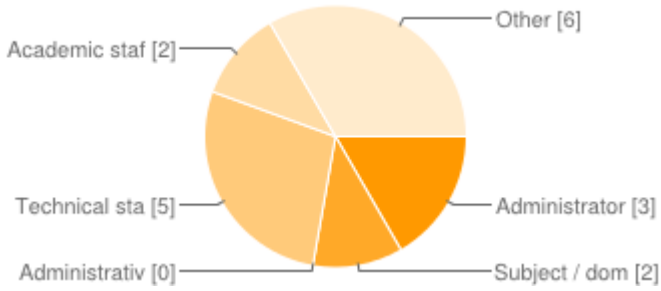
2. Which one of the following area you have graduated from?



Librarianship	**9**	50%
Information management	**3**	17%
Archival studies	**1**	6%
History	**0**	0%
Other	**5**	28%

According to the table total % 72 percent of the participant graduated from library, information and archive studies while %28 from other disciplines.

3. What is your position at your institution?



Administrator	**3**	17%
Subject / domain expert	**2**	11%
Technical staff	**5**	28%
Academic staff	**2**	11%
Other	**6**	33%

According to the table %17 of participants are working as manager, %39 as subject expert or technical staff. In spite %33 marked other but they didn't clarify their position.

4. Which administrative unit are you working under? Check all that apply.

Information services	**4**	22%
Administration	**1**	6%
Educational programs	**3**	17%
Information technologies	**3**	17%
Technical services	**1**	6%
Financial accounting	**0**	0%
Other	**6**	33%

%22 of participants marked their working service as information, %17 education programs and information technologies, %6 technical services.

5. Which kind of digital cultural assets do you primarily interesting?

Rare books such as manuscripts	**4**	22%
Historical documents with institutional content	**8**	44%
Historical documents with individual (genealogical) content	**8**	44%
Sources such as photograph, engraving, map, etc.	**14**	78%
Museum and or archaeological materials	**7**	39%
Other	**3**	17%

%78 of participants are primarily interest are cartographic materials, %44 are historical documents, %40 are museum materials and %22 are manuscripts. Only %17 marked other shows that majority of participants are working and interest in cultural heritage resources.

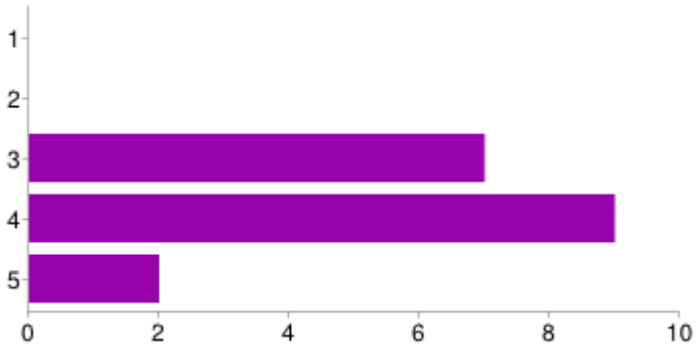
6. Which platforms, systems/project do you initially use for having digital access to cultural assets?

Online Archive of California	**12**	67%
National Archives and Records Administration (NARA)	**2**	11%
World Digital Library	**0**	0%
EUROPEANA	**1**	6%
Calisphere	**8**	44%
SNAC (Social Network in Archival Context)	**0**	0%
The Electronic Cultural ATLAS	**0**	0%
University of California Berkeley Library / Archive	**7**	39%
California State Archives	**1**	6%
California State Library	**1**	6%
Digital Public Library of America (DPLA)	**5**	28%
Family History Centers	**1**	6%
Museums	**3**	17%
Search engines such as Google, etc.	**11**	61%
Other	**3**	17%

As on the table participants use firstly Online Archive of California (%67) for accessing electronic cultural resource. As a second search engines such as Google is coming with %61. This result shows even the participants professional they are still need general search engines for accessing cultural resource that also reveals the importance of development of integrated professional platforms.

7. The following tables show the results of the question of "how would you assess the following conditions about the digital access to cultural assets in general?"
On the tables 1 being the most negative and 5 being the most positive one.

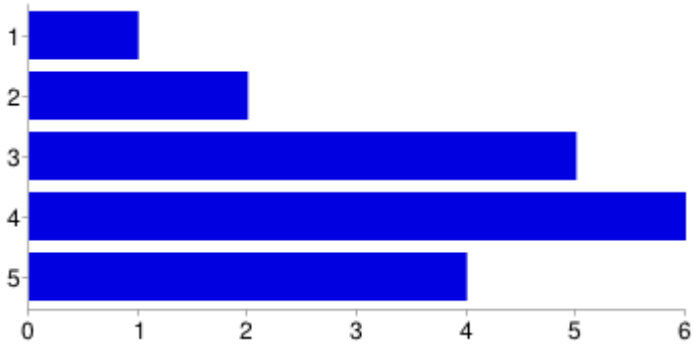
a. Having timely access to the searched content



1	**0**	0%
2	**0**	0%
3	**7**	39%
4	**9**	50%
5	**2**	11%

Above table shows that %39 of the participants are not clear about having timely access to the resource while %11 are totally satisfied.

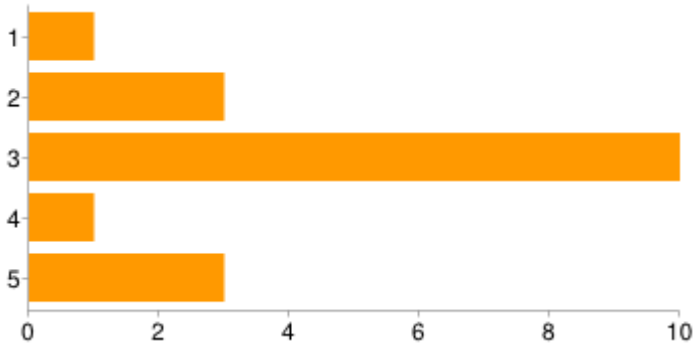
b. Defining sources in enough detail to enable access



1	**1**	6%
2	**2**	11%
3	**5**	28%
4	**6**	33%
5	**4**	22%

As on the table %45 of the participants either not clear or not satisfied about the definition of the resource as part of the accessing resource.

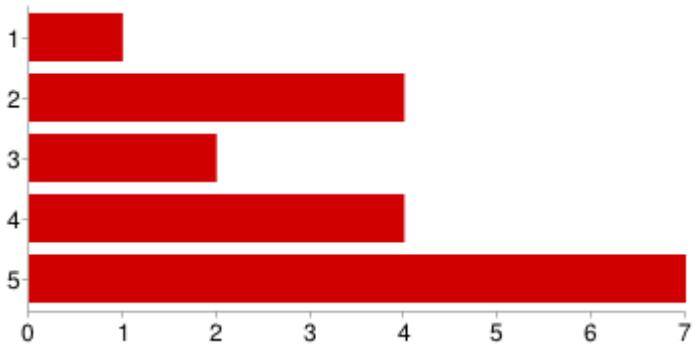
c. Having access to content without any restrictions



1	**1**	6%
2	**3**	17%
3	**10**	56%
4	**1**	6%
5	**3**	17%

It is clear on the table that majority of the participants do not happy or clear about restrictions for accessing resource (%79).

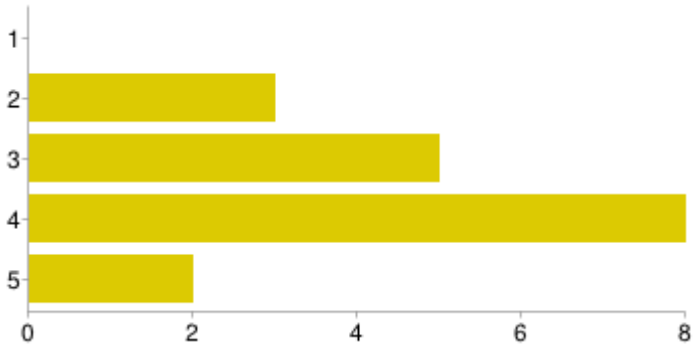
d. Protecting the confidentiality of the private content.



1	**1**	6%
2	**4**	22%
3	**2**	11%
4	**4**	22%
5	**7**	39%

It seems that participants divided two group about protection of confidential content. While %28 not happy majority is (%61) pleasant with present condition.

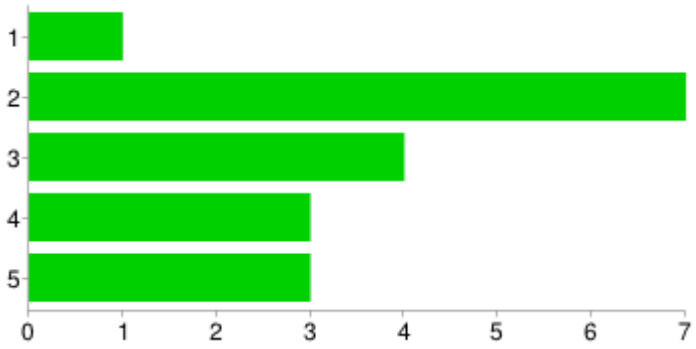
e. Having access to other contents related to the searched topic over a system/platform



1	**0**	0%
2	**3**	17%
3	**5**	28%
4	**8**	44%
5	**2**	11%

As on the table while % 55 of participants are happy about accessing related content %54 is not clear or not happy about it.

f. Having access to all content related to the searched topic over a system/platform

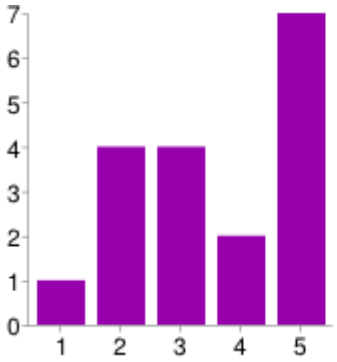


1	**1**	6%
2	**7**	39%
3	**4**	22%
4	**3**	17%

5 **3** 17%

The table show very clear that majority of participants even they are mostly information profession suffer from accessing all content that they need fir the studies. Only %34 decelerated no problem.

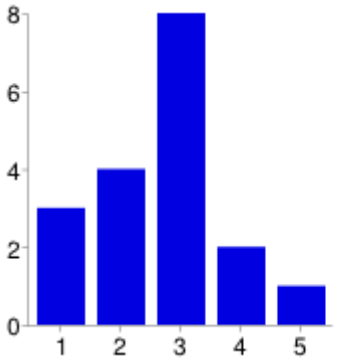
8-1. Are you interested in European cultural studies outside of USA?



1 **1** 6%
2 **4** 22%
3 **4** 22%
4 **2** 11%
5 **7** 39%

As part of the Project studies the participants' interest on cultural heritage in Europe is investigated. According to the results at least %50 of participants are interesting, while %22 is sometimes. Only %6 declared never interested about it.

8-2. Are you interested in Turkish cultural studies outside of USA?



1 **3** 17%

2	**4**	22%
3	**8**	44%
4	**2**	11%
5	**1**	6%

As on the table the interest of the participants about Turkish content analyzed. While %17 newer interest, %22 seldom, %44 sometimes, %11 generally, %6 always interest Turkish cultural resources.

9. Due to which following reasons do you generally conduct to search in the Turkish case?

Professional research (on users demand)	**2**	11%
Professional research (on any organizational interest)	**1**	6%
Personal interest	**3**	17%
No interest	**11**	61%
Other	**2**	11%

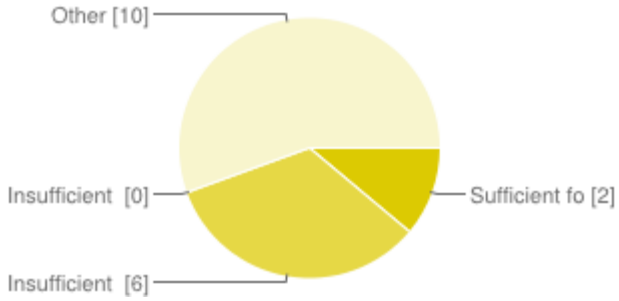
A on the table %28 interest Turkish content as part of their professional work. On the other hand %61 marked no interest and %11 other without information.

10. Which of the following mediums do you use for your research in the Turkish case?

Printed book, journal, newspaper, etc.	**4**	22%
Web platforms of the USA-originated TV channels and news-oriented media	**1**	6%
Web platforms of other media organs	**2**	11%
Electronic libraries / archives of Turkish origin	**1**	6%
Electronic libraries / archives of USA origin	**4**	22%
Google and similar search engines	**8**	44%
Social media mediums such as Facebook, Twitter	**0**	0%
Digital access platforms of USA origin	**2**	11%
EUROPEANA Digital Library	**2**	11%
Other	**9**	50%

The table shows participants firstly use google foe accessing cultural resources in Turkey. Than books and electronic resources in information organization are coming with %22. Using digital platforms and Europeana use only by %11 seem important of the studies on developing awareness of these platforms.

11. Do you think that systems / platforms aimed at the digital access to cultural assets are sufficient?

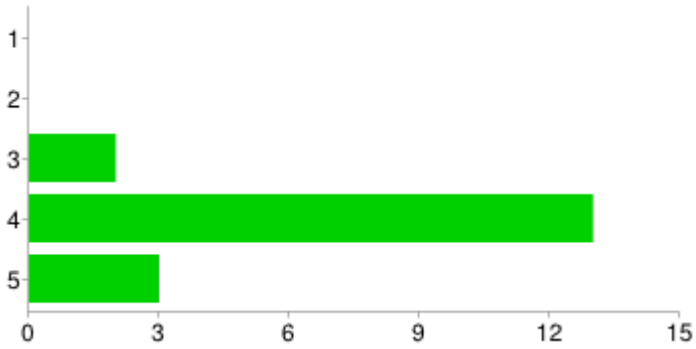


Sufficient for the content of USA origin, but insufficient for research of Turkish origin and alike	**2**	11%
Insufficient for all research of USA, and Turkish and alike origin	**6**	33%
Insufficient for content of USA origin, but sufficient for research of Turkish origin and alike	**0**	0%
Other	**10**	56%

It seems that %56 of participant do not comfortable to response of this question (%56). While %11 decelerated as sufficient, %33 decelerated insufficient about electronic platform for accessing cultural resource either in Turkey or in USA.

12. The following tables show the results of the question of "How would the opportunity to have electronic access over a single search platform to cultural assets such as historical books, archival documents, and formats which are present in the world's libraries, archives, and museums affect the conditions below?
On the tables 1 being the most negative and 5 being the most positive one.

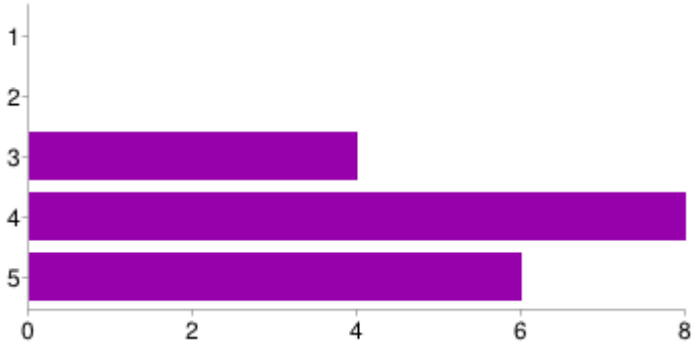
a. The opportunity to examine the facts from primary sources arises



1	**0**	0%
2	**0**	0%
3	**2**	11%
4	**13**	72%
5	**3**	17%

As on the table %89 of the participant support or strongly support the platform that will aim to cover all cultural resource for accessing first hand resource.

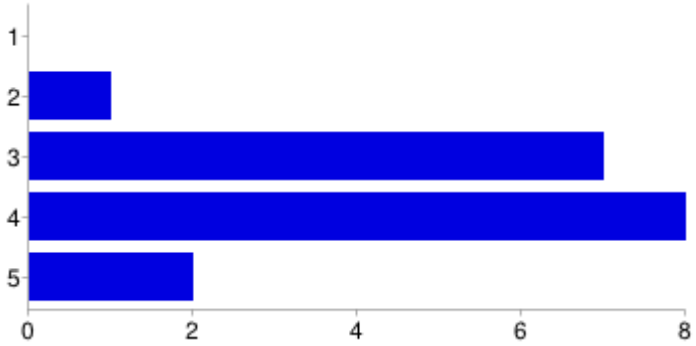
b. Conducting search over a single system/platform increases the efficiency of the access.



1	**0**	0%
2	**0**	0%
3	**4**	22%
4	**8**	44%
5	**6**	33%

The participants without any negative response strongly support of that kind of platform improve the efficiency for accessing the resource.

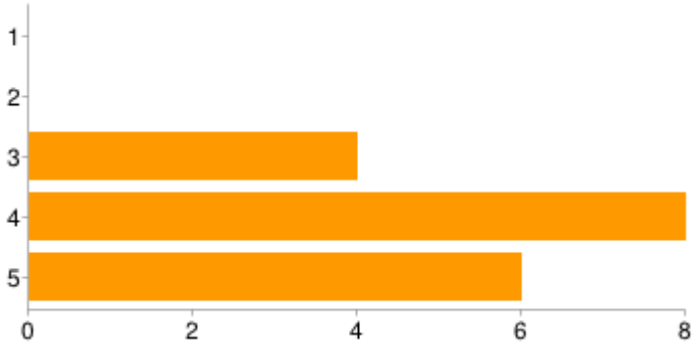
c. It serves to approximate the world cultures and to strengthen the global communication.



1	**0**	0%
2	**1**	6%
3	**7**	39%
4	**8**	44%
5	**2**	11%

Even %55 of participant support that kind of platform strengthen the global communication rest of participants are not clear about this result.

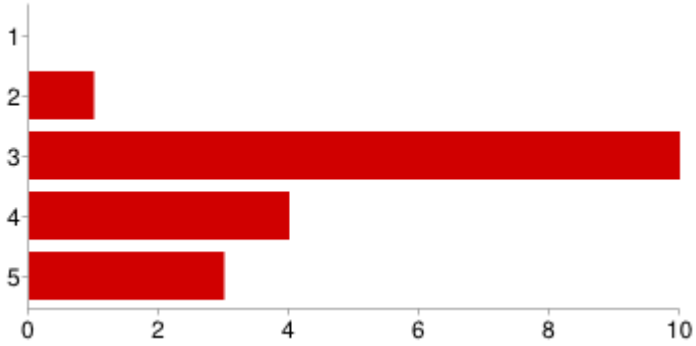
d. Standardization and coordination in content definitions are enabled.



1	**0**	0%
2	**0**	0%
3	**4**	22%
4	**8**	44%
5	**6**	33%

Participants clearly support that global platforms for accessing cultural resource in one point help for developing standardization and better coordination of the condition.

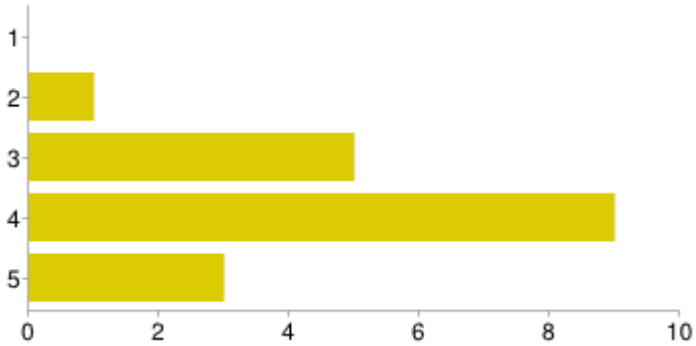
e. It contributes to extend technical application and technology transfer.



1	**0**	0%
2	**1**	6%
3	**10**	56%
4	**4**	22%
5	**3**	17%

As on the table the participants mostly do not agree that the platforms will help to technology transfer and extend technical application. As a first glance it is little difficult to understand of this result. May be participant thought their condition and do not think the technology of others can help their system better. It seem controversial.

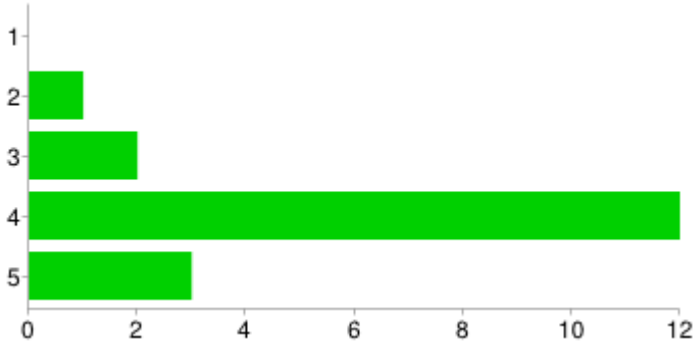
f. It integrates the similar contents in different regions.



1	**0**	0%
2	**1**	6%
3	**5**	28%
4	**9**	50%
5	**3**	17%

Most of the participant support that the platforms would be work for integration of different kind of content.

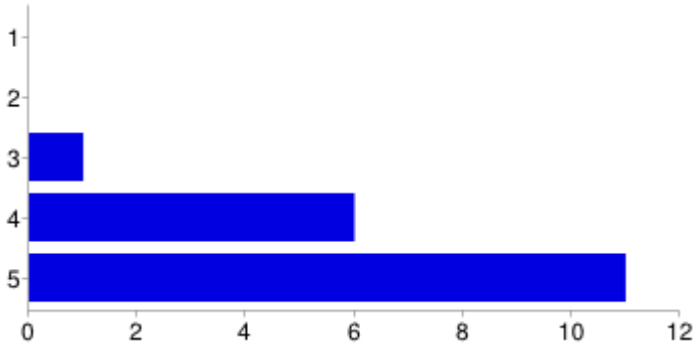
g. People can have multilateral access to sources.



1	**0**	0%
2	**1**	6%
3	**2**	11%
4	**12**	67%
5	**3**	17%

As on the table majority of the participants agree with the platform can improve multilateral access to the content.

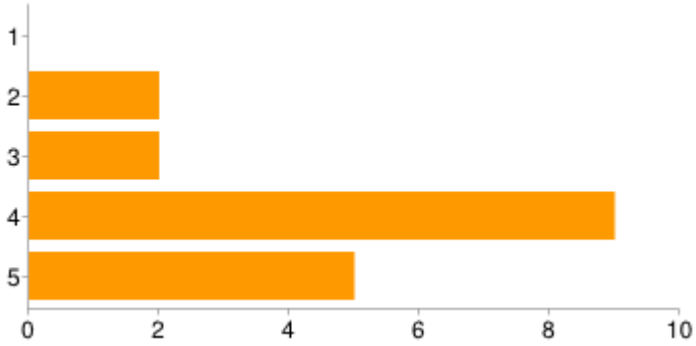
h. Forming standard metadata fields



1	**0**	0%
2	**0**	0%
3	**1**	6%
4	**6**	33%
5	**11**	61%

As on the table one of the strongest agree among this group is that kind of platforms can help forming the metadata field (%94 marked as agree (%33) or strongly agree (%61)). It is also show the expectation of the metadata mapping as in our project studies.

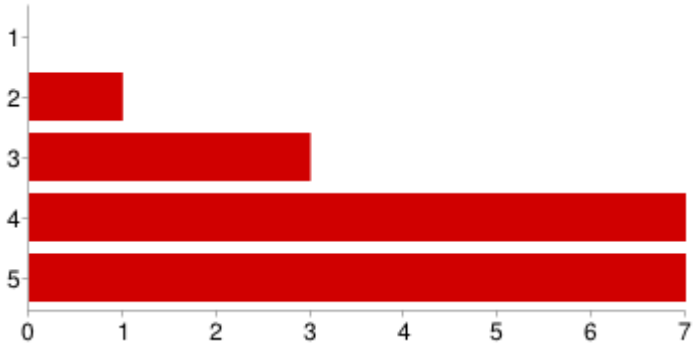
i. Developing a strong classification and index preparation structure



1	**0**	0%
2	**2**	11%
3	**2**	11%
4	**9**	50%
5	**5**	28%

Again majority of the participants are agree (%50) or strongly agree (%28) that the platforms can help to improve classification and indexing studies.

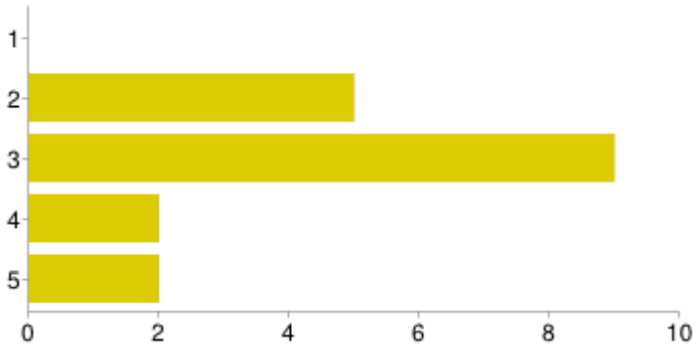
j. Defining accession rights and copyrights.



1	**0**	0%
2	**1**	6%
3	**3**	17%
4	**7**	39%
5	**7**	39%

%78 of the participant marked that the platforms can help the organization to defining accession rights and copyrights.

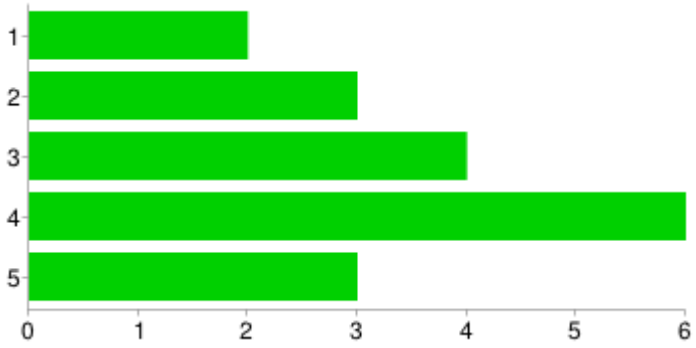
k. Map-based access and geographical information systems.



1	**0**	0%
2	**5**	28%
3	**9**	50%
4	**2**	11%
5	**2**	11%

Most of the participants do not agree that the platforms can help for developing map-based access and geographical information systems.

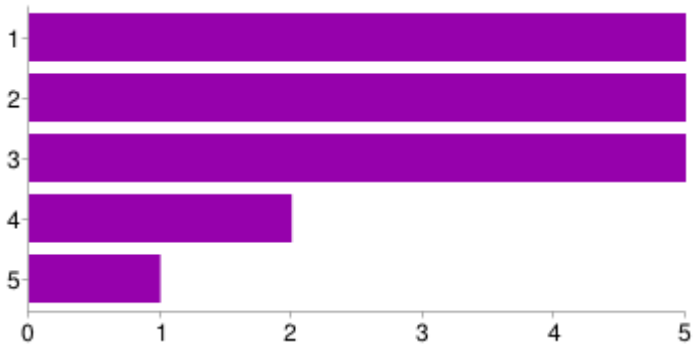
l. Adding Web 2.0 applications such as the most searched for, similar content, and user comments.



1	**2**	11%
2	**3**	17%
3	**4**	22%
4	**6**	33%
5	**3**	17%

It seem that participants are not clear about the platforms that use web 2.0 opportunities for using end user tagging etc. can help improvement of the systems.

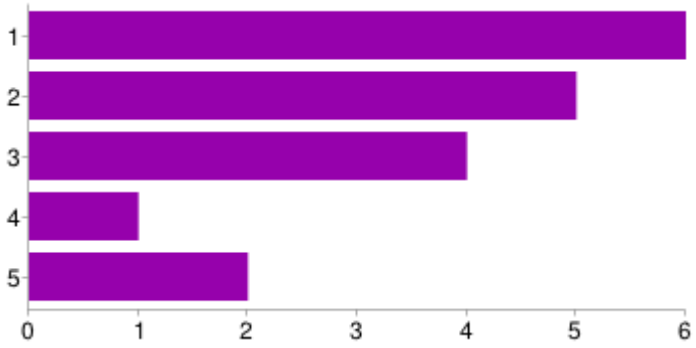
m. Integrating with social media applications.



1	**5**	28%
2	**5**	28%
3	**5**	28%
4	**2**	11%
5	**1**	6%

Majority of the participants disagree that social media applications can improve the success of t platforms. It seems that information professionals firstly focus on professional solutions than getting power of user's comments.

n. I do not think that it is necessary to develop such a platform.



1	**6**	33%
2	**5**	28%
3	**4**	22%
4	**1**	6%
5	**2**	11%

The result of the table is also shows the hypothesis of our study support by majority of the participants. Only %17 of participants do not agree that that kind of platforms are necessary. On the other hand more than %50 decelerated the importance of the development of the platforms for accessing the cultural resource from all around the world in one point.

6. Conclusions and Suggestion

During the Project period I've completed 3 major studies. First is literature review and educational researches, second is metadata mapping of electronic cultural resources between international and Turkish examples, third is the questionnaire conducted with 19 organization representatives and individuals. As mentioned in project reports one of the most of important part of developing electronic systems for cultural heritage resource is to research international conditions. In this circumstance observing the practices and operations, getting information about the infrastructure and structure of the models, learning from bad and good experiences with interviews, developing information background with literature review, investigating international good practices, guides and standards are as important as doing same things in national level. In this project with very important supports of my host professor Michael Buckland and other colleagues whom they are studying or working in different organizations in UCB and in California State level I assume that I managed to do all. The following is summarize of the results of the project studies.

As part of literature review studies fundamental information that composes the base of managing cultural heritage in electronic environment being gatherer and now ready to use for further studies and projects in our country. The topics of the gathered information are changing condition of managing information and cultural resources; digital curation, integration of library and archives with museum studies; developing systems and metadata models for digital cultural heritage resources. As part of metadata mapping the following information gathered from Online Archive of California, Electronic Cultural Atlas Initiative; Europeana; Library of Congress Finding Aids as international examples and the following information gathered from the organizations in Turkey State Archive of Turkey; National Library of Turkey; Anatolian Civilization Museum; Hatay Archeology Museum; Ministry of Culture and Tourism as national examples. The results of analysis that details in the report are outlined below:

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 retrieval, integration of different resources, long preservation of resource and copyright management rather than focusing on specific descriptions of resources or

processes Some general datasets that use by international example do not use in Turkish examples such us no Identifier in Museum, lack of title in Archive, Museum and Archeology, no subject in Archive, Museum, Archeology and Register; no type in Archive, Archeology and Register; no format and contributor information, except from Manuscript no copyright information in all Turkish examples. As a general it seem that Turkish dataset examples developed with the perspective of object oriented and do not show any logical hierarchy and relation information with other resources and repositories should be reconsidered.

The results of the questionnaire show that information professionals whom they are working on the cultural resource in California State that participated to the survey need improvement of present electronic retrieval systems of cultural heritage resource with cover more resource all around the world. They are suffering of accessing the content, unclear descriptions of the content, some restriction and copyright issues. Majority of the participants do agree with that new kind of the platforms if it possible to develop can help to solve the problems of accessing, correct description, standardization of metadata, integration of the different resource from all around the world, The result of the table is also shows the hypothesis of our study supported by majority of the participants on the importance of the development of the platforms for accessing the cultural resource from all around the world is important**.**

The questionnaire that applied in California State includes information whom they are part of the practical examples of managing cultural resources in electronic environment. The professional's opinions, expectations and suggestions should be take into account during the system development studies in Turkey.

If the questionnaire is applied with same content to Turkish professionals whom they are part of managing cultural resource, two questionnaire results can be comparable with each other as part of future studies.

I have spent very productive 5 months in California University Berkeley, School of Information. I would definitely recommend this school for TÜBİTAK scholarship students and scholars.

7. Outputs

- Research Results were presented in Seminer Class (South Hall 107) to the collegues they came from different information organizations of California State on 10.10.2014 in University of California, Berkeley, School of Information.
- Research Results Part 1 and Part 2 prepared for Chapter in Book with he following title

  Management of World's Electronic Cultural Resource in the Platforms: Mapping, Integrating and Beyond.
- Research results of part 1 and part to will be sent to international conference, too.
- Research results of 3, the questionnaire resuls will be used as the data in the national conference.
- Questionarie form will be used for national level questionnaire and comperative results will be used in international conference.
- Appendix 1 will be send to the Journals in Turkey as a research article as the title "ABD ve Türkiye Örneklerinde Kültürel Mirasın Elektronik Ortamda Yönetimi: Karşılaştırmalı Bir Değerlendirme"

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