

# ΕΝΟΠΟΙΗΜΕΝΗ ΠΕΡΙΓΡΑΦΗ ΔΕΔΟΜΕΝΩΝ ΣΤΟΝ ΠΑΓΚΟΣΜΙΟ ΙΣΤΟ ΠΡΟΤΥΠΑ ΜΕΤΑΔΕΔΟΜΕΝΩΝ

DARIAH SEMINAR  
09/07/2015

# Scope

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- Introduce metadata standards
- Familiarize the audience with a typical metadata aggregation workflow
- Highlight the importance of high-quality metadata

# Outline

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- Basic Concepts
  - Metadata
  - Europeana
- Metadata standards
  - ESE
  - EDM
  - EDM Sounds Profile
- Aggregation Workflow & Quality of metadata

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# Basic Concepts

# Metadata

- The term metadata refers to "data about data". The term is ambiguous, as it is used for two fundamentally different concepts (types).
  - ▣ **Structural metadata** is about the design and specification of data structures and is more properly called "data about the containers of data";
  - ▣ **Descriptive metadata**, on the other hand, is about individual instances of application data, the data content. In this case, a useful description would be "data about data content" or "content about content" thus metacontent.

# Structural Metadata

- Structural metadata should be used when a digital resource is divisible into component parts and the components are useful in-and-of themselves.
- A digital book may be logically structured into chapters but "physically" exist as images for each page.
  - ▣ The structural metadata should be used to reflect how those component files are logically grouped and, ultimately, how they should be perceived.

# Descriptive Metadata

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- Descriptive metadata should be used for all the digital resources.
- Each page is a digital resource thus the metadata that provide information about it is descriptive metadata.
  - Title
  - Summary
  - Author
  - Page No


# Europeana

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- [Europeana.eu](http://Europeana.eu) is an internet portal that acts as an interface to millions of books, paintings, films, museum objects and archival records that have been digitized throughout Europe.



## □ Link to record



View

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View item at  
[Parisienne de Photographie](#)

Share

Cite on Wikipedia

Translate details

Select language

Powered by Microsoft® Translator

## WINSTON CHURCHILL

**Description:**

Winston Churchill (1874-1965), homme politique britannique, témoignant au procès d'anarchistes anglais, en 1912.;

Winston Churchill (1874-1965), British politician, giving evidence during the English anarchists' trial in 1912.

**Creator:**

[MAURICE-LOUIS BRANGER \(1874-1950\)](#)

**Geographic coverage:**

[Britain, U.K., UK, United Kingdom](#)

**Date of creation:**

1912

**Type:**

[photography](#)

**Format:**

[gelatin dry plate negatives](#); [Gelatine-Trockenplatten-Negative](#); [Black-and-white negatives](#); [schwarz-weiss Negative](#); 13x18; cm

**Subject:**

[Clj Crime Loi Et Justice](#); [litigation](#); [Anarchiste Anglais](#); [Temoin](#); [Temoigner](#); [Barre](#); [Homme Politique Britannique](#); [justice](#); [CHURCHILL WINSTON HETA BRI 1874-65](#); [Trials](#); [British Politician](#); [English Anarchist](#); [Lawsuit](#); [Witness](#); [Give Evidence](#); [barium](#)

**Identifier:**

1123-7; - Accession Number : BRA-70157

**Rights:**

© Maurice-Louis Branger / Roger Viollet

**Provenance:**

Roger-Viollet

**Data provider:**

[Parisienne de Photographie](#)

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# Metadata Standards

# Metadata Standards

- Metadata standards are requirements which are intended to establish a common understanding of the meaning or semantics of the data, to ensure correct and proper use and interpretation of the data by its owners and users. To achieve this common understanding, a number of characteristics, or attributes of the data have to be defined, also known as metadata.

# Metadata Standards

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- Different standards depending on the domain of interest
  - EBUCore – audiovisual content
  - Dublin core – networked resources
  - EDM – cultural content
- Different formats depending on the application
  - XML (XSD)
  - RDF
  - OWL

# Europeana Semantic Elements

- The Europeana Semantic elements (ESE) was the first reference metadata set used to describe cultural heritage objects in Europeana.
- It is a Dublin Core-based application profile providing a generic set of DC elements and some locally coined terms, which have been added specifically to support Europeana's functionalities.

# Europeana Semantic Elements

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## □ XSD – XML Based schema

- dc:title
- dc:creator
- dc:subject
- dc:description
- dc:publisher
- dc:contributor
- dc:date
- dc:type
- dc:format
- dc:identifier
- dc:source
- dc:language
- dc:relation
- dc:coverage
- dc:rights
- dcterms:provenance
- ese:object
- ese:provider
- ese:type
- ese:rights
- ese:dataProvider
- ese:isShownAt
- ese:isShownBy

# Europeana Data Model

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- Europeana Data Model
  - ▣ The Europeana Data Model (EDM) is aimed at being an integration medium for collecting, connecting and enriching the descriptions provided by Europeana content providers.
  - ▣ EDM is an ontology. In other words it can be considered as a vocabulary consisting of classes and properties that describe the Digitized Cultural Heritage domain

# EDM Classes and Properties

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## □ Classes

- edm:ProvidedCHO
- edm:WebResource
- edm:Agent
- edm:Place
- edm:Timespan
- skos:Concept
- ore:Aggregation

## □ Properties

- dc:title or dc:description
- dc:language for text objects
- dc:subject or dc:type or dc:coverage or dcterms:spatial
- edm:type
- edm:dataProvider
- edm:isShownAt
- edm:isShownBy
- edm:object
- edm:provider
- edm:rights

EDM full documentation at <http://pro.europeana.eu/page/edm-documentation>



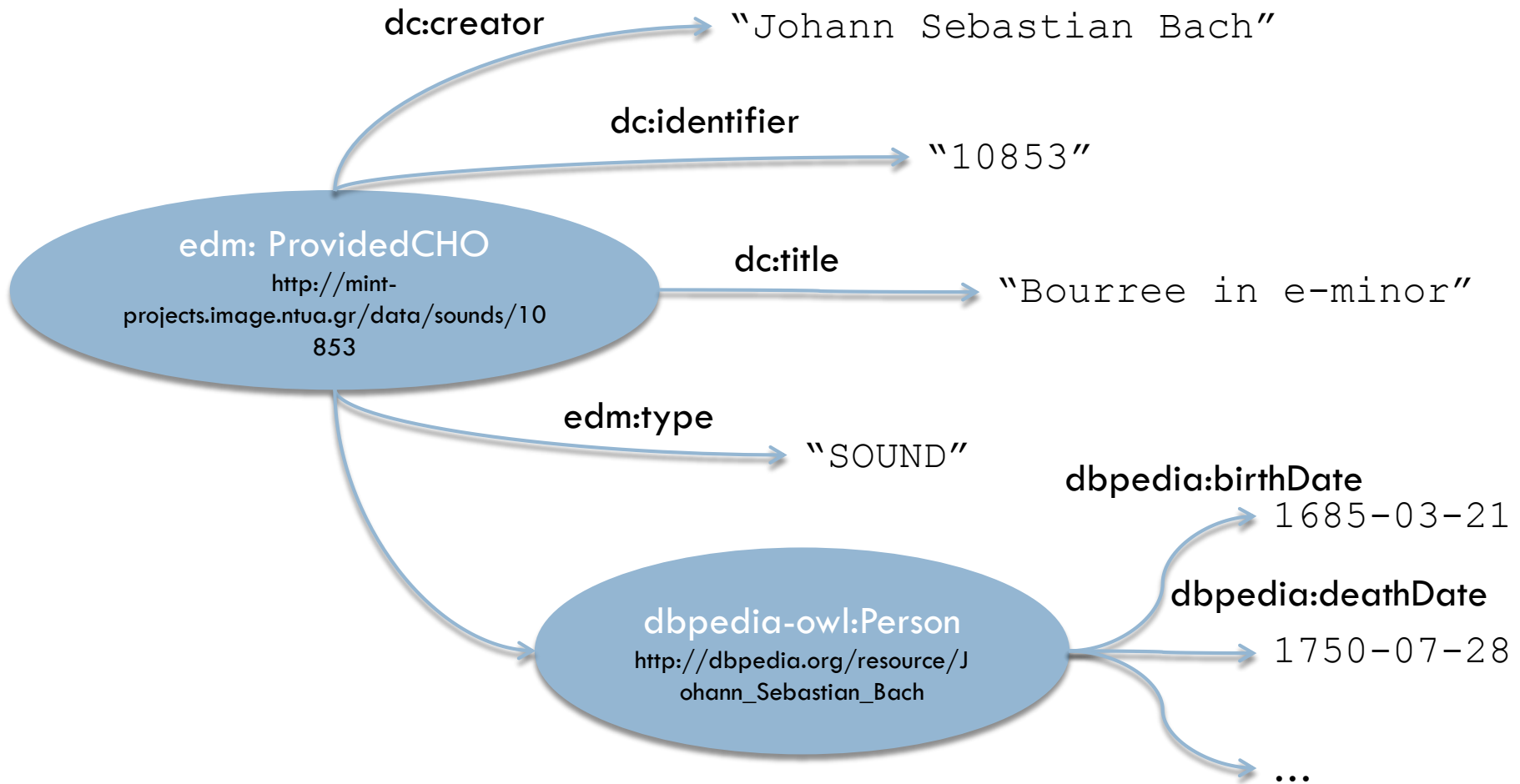
# An example in RDF

- RDF identifies things using Web identifiers (URIs), and describes resources with properties and property values.
- Explanation of Resource, Property, and Property value:
  - ▣ A Resource is anything that can have a URI, such as "<http://mint-projects.image.ntua.gr/data/sounds/10853>"
  - ▣ A Property is a Resource that has a title, such as "dc:title" and a creator "dc:creator"
  - ▣ A Property value is the value of a Property, such as "Johann Sebastian Bach" or "[http://dbpedia.org/resource/Johann\\_Sebastian\\_Bach](http://dbpedia.org/resource/Johann_Sebastian_Bach)" (note that a property value can be another resource)

# RDF Syntax

```
<edm:ProvidedCHO rdf:about="http://mint-projects.image.ntua.gr/data/sounds/10853"/>
  <dc:creator>Johann Sebastian Bach</dc:creator>
  <dc:creator
rdf:resource="http://dbpedia.org/resource/Johann_Sebastian_Bach"/>
  <dc:identifier>10853</dc:identifier>
  <dc:title xml:lang="en">Bourree in e-
minor</dc:title>
  . . .
  <edm:type>SOUND</edm:type>
</edm:ProvidedCHO>
```

# RDF as a Graph



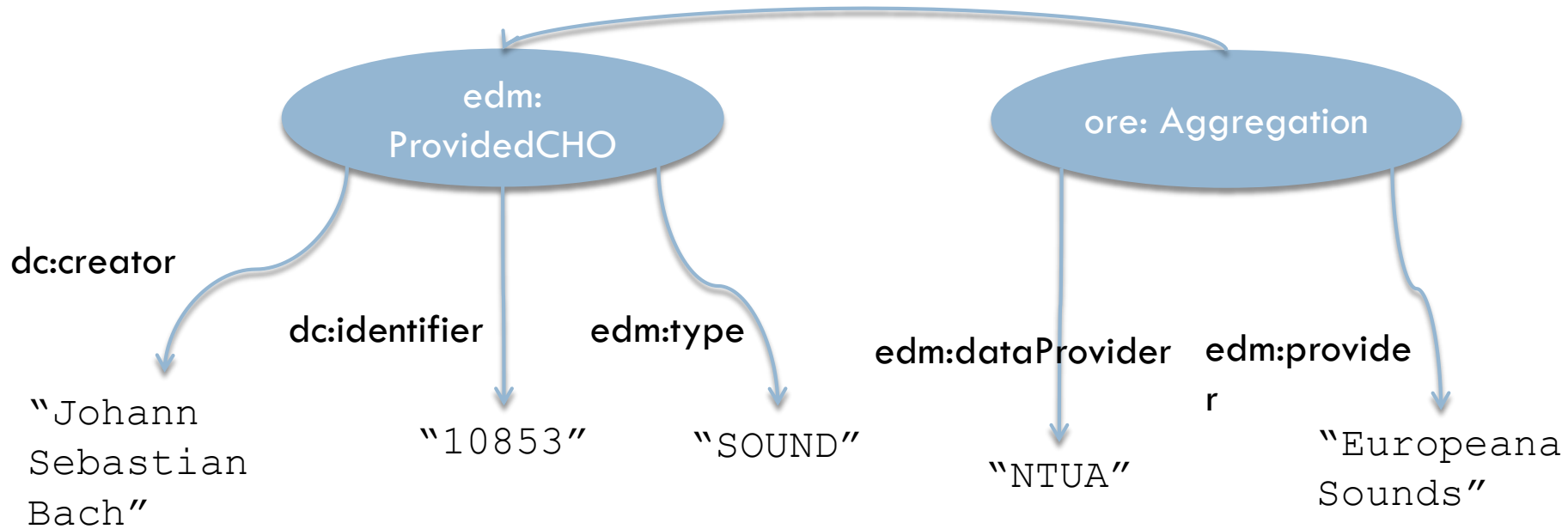
# EDM Syntax

```
<edm:ProvidedCHO rdf:about="http://mint-projects.image.ntua.gr/data/sounds/10853">
  <dc:creator>Johann Sebastian Bach</dc:creator>
  <dc:creator
rdf:resource="http://dbpedia.org/resource/Johann_Sebastian_Bach"/>
  <dc:identifier>10853</dc:identifier>
  <dc:title>Bourree in e-minor</dc:title>
  . . .
  <edm:type>SOUND</edm:type>
</edm:ProvidedCHO>

<ore:Aggregation rdf:about="http://mint-projects.image.ntua.gr/data/sounds/Aggregation_10853">
  <edm:aggregatedCHO rdf:resource="http://mint-projects.image.ntua.gr/data/sounds/10853">
    <edm:dataProvider>NTUA</edm:dataProvider>
    <edm:isShownAt rdf:resource="http://link.to.portal">
    <edm:rights>SOUND</edm:rights>
  </edm:ProvidedCHO>
```

# EDM as a Graph

edm:aggregatedCHO



# Basic Concepts – EDM Sounds

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## □ EDM Sounds Profile

- An extension of the EDM ontology for better fitting the content provided by the Europeana Sounds Project

## □ Classes

- mo:MusicGroup
- edm:Collection

## □ Properties

- mo:remaster\_of
- mo:track\_number
- ebucore:hasGenre
- ebucore:dateDigitised
- ...

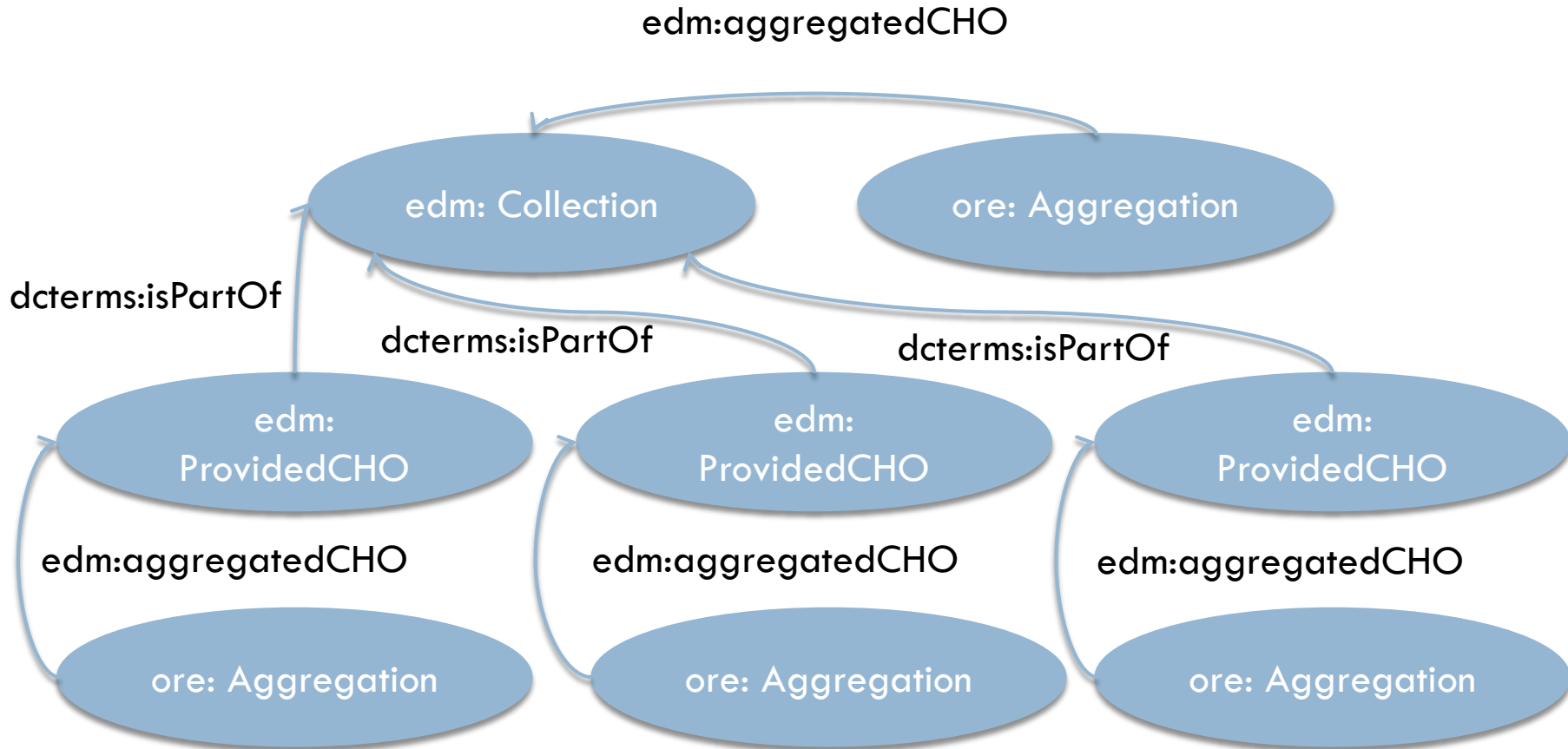
EDM Sounds full documentation at

<http://pro.europeana.eu/taskforce/edm-profile-for-sound>

# edm:Collection

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edm:aggregatedCHO



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# Aggregation Workflow & Quality of metadata



# What is MINT?

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- MINT is an open source, web based platform for Metadata INTeroperability
  - <http://mint.image.ece.ntua.gr>
  - It has been successfully used in more than 15 Europeana feeder projects
    - 300 cultural organizations
    - 500 users
  - More than 6.000.000 metadata records have been produced by it and published on Europeana

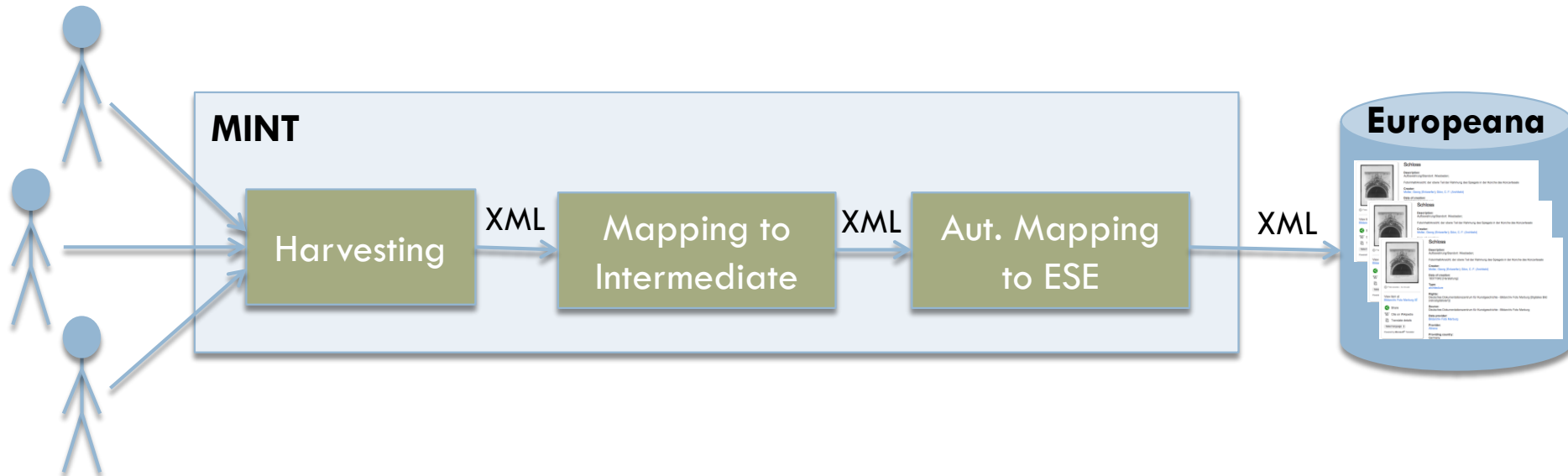
# MINT – The early days

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- MINT development started by the NTUA team during the Athena project back in 2008
- Athena's main objectives were
  - ▣ The delivery of 4.200.000 metadata records coming from 23 different museums and organisations to Europeana
  - ▣ The development of a metadata standard for the museum sector that would act as an intermediate for the project
  - ▣ The development of technical tools for assisting content providers to meet project objectives

# MINT – Initial Workflow

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# Harvesting requirements

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- Different metadata models
  - ▣ Standards e.g. Dublin Core
  - ▣ In house metadata models
- Different File formats
  - ▣ XML
  - ▣ CSV
- Different delivery protocols
  - ▣ File upload (i.e. HTTP)
  - ▣ Open Archives Initiative - Protocol for Metadata Harvesting (OAI-PMH)

# Mapping & Transformation req.

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- Agnostic to metadata input
- Target schema based on a metadata model
  - ▣ XSD support
- Crosswalks between known schemas
  - ▣ Project's intermediate to ESE
- User friendly interface
  - ▣ Most of the content providers did not have any technical background, they were (in most cases) well aware of their metadata

# Mapping Editor

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The screenshot displays the Mapping Editor interface for a LIDO 1.0 mapping. The interface is divided into three main sections, each highlighted with an orange rounded rectangle:

- Input Schema Area (Left):** A tree view of the input schema elements. The root is `tns:ImageMetadata`, which includes `@xsi:schemaLocation`, `tns:AdministrativeMetadata` (with sub-elements `tns:Identifier`, `tns:MetadataURI`, `tns:PhotoURI`, `tns:Organisation`), `tns:DescriptiveMetadata` (with sub-elements `tns:Title`, `tns:Date`, `tns:Photographer`, `tns:Photographic_Technique`, `tns:Location`, `tns:Photographic_Practice`, `tns:Material`, `tns:Description`, `tns:Copyright`, `tns:Dimensions`), and `tns:Actor`. Below this is `tns:RetrievalMetadata` (with sub-elements `tns:Subject`, `tns:Actor`, `tns:Place`, `tns:Related_Object`).
- Mapping Area (Center):** A list of mapping elements for the `lido:lido` namespace. Each element has a label, a type (e.g., `structural`), and a status icon (green checkmark, red X, or star). The elements are:
  - `lido:lido` (structural)
  - `lido:lidoRecID` (structural, value: `/Photography:000000`)
  - `lido:objectPublishedID` (unmapped)
  - `lido:category` (structural)
  - `lido:descriptiveMetadata` (structural)
  - `lido:administrativeMetadata` (structural)
- Navigation Area (Right):** A list of navigation elements, including `xml:@lang`, `lido:term`, `lido:classification`, `lido:classificationWrap`, `lido:objectClassificationWrap`, `lido:appellationValue`, `lido:titleSet`, `lido:titleWrap`, `lido:objectIdentificationWrap`, `lido:descriptiveMetadata`, `xml:@lang`, `lido:@type`, `lido:recordID`, `lido:appellationValue`, `lido:legalBodyName`, `lido:recordSource`, `lido:recordWrap`, `lido:linkResource`, `lido:resourceRepresentation`, `lido:linkResource`, `lido:resourceRepresentation`, and `lido:term`.

# Further requirements...

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- Better control of metadata and its quality
  - ▣ Metadata cleaning services
    - Many of the providers have realised that they also hold a lot of rubbish they wanted to get rid before publishing to Europeana
  - ▣ Validation according to target schema
    - Mapping to a common target schema itself did not provide high quality metadata
  - ▣ Preview interfaces
    - Providers wanted to preview their metadata for controlling its quality before the actual publication

# Mappings – Concatenate mapping

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- Allows users to combine more than one mappings for producing a new mapping

The screenshot displays a mapping editor interface. At the top, there is a header for a mapping named "skos:altLabel", which is marked as active with a green checkmark and a star icon. To the right of the header are a green plus icon and a question mark icon. Below the header, there is a list of three mappings, each with an "if" icon on the left and a green plus icon and a red minus icon on the right. The mappings are:

- Εθνικό
- Μετσόβιο
- Πολυτεχνείο

Below this list, there is a second mapping section for "@xml:lang", also marked as active with a green checkmark and a star icon. To the right of this header is a question mark icon. Below the header, there is a single mapping with an "if" icon on the left and a red minus icon on the right. The mapping is:

- Greek, Modern



# Mappings – Conditional Mapping

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- Allows users to set conditions on their mappings
  - ▣ If the value of xpath `tns:Organisation` is **equal to** “IVML” and the value of xpath `tns:PhotoURI` starts with “`http://www.image.ntua.gr`” and either the value of xpath `tns:PhotoURI` contains “`nsimou`” or “`EuPhoto`” then the value of the xpath `tns:Organisation` will be mapped to the xpath `lido:appellationValue` of the target schema

The screenshot shows a mapping tool interface for a mapping rule. The rule is titled "lido:appellationValue" and is marked as active (green checkmark) and starred. The rule is defined as follows:

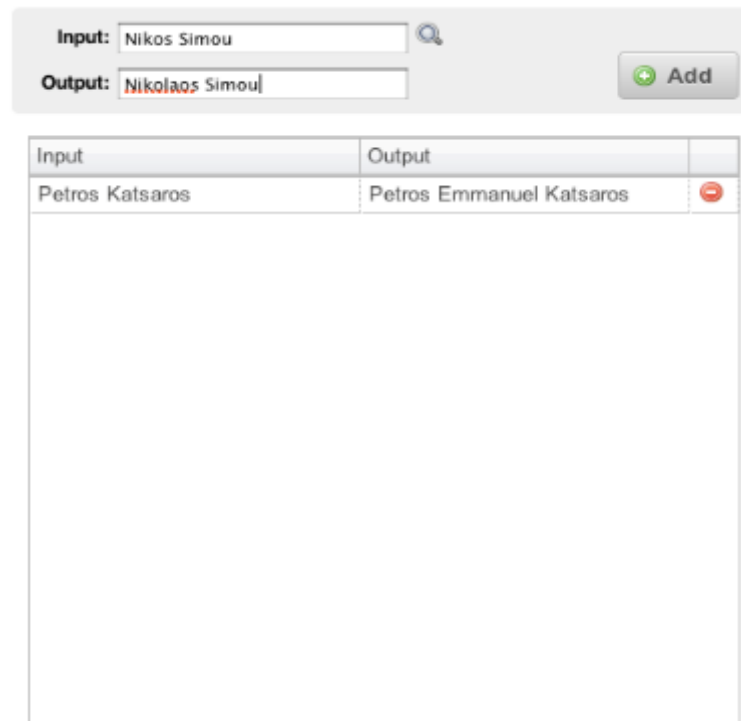
- Condition 1: `tns:Organisation` is equal to `IVML`
- Condition 2: `tns:PhotoURI` starts with `http://www.image.ntua.gr`
- Condition 3: `tns:PhotoURI` contains `nsimou` OR `tns:PhotoURI` contains `EuPhoto`

The target schema is `tns:Organisation`.

# Mappings – Value Mapping

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- Allows users to normalize their metadata by mapping values of their input to specific values they set



The screenshot shows a user interface for value mapping. At the top, there are two input fields: "Input:" containing "Nikos Simou" and "Output:" containing "Nikolaos Simou". A magnifying glass icon is next to the input field, and an "Add" button with a green plus sign is to the right. Below these fields is a table with two columns: "Input" and "Output". The table contains one row with "Petros Katsaros" in the "Input" column and "Petros Emmanuel Katsaros" in the "Output" column. A red minus sign icon is in the rightmost cell of the table.

Input	Output	
Petros Katsaros	Petros Emmanuel Katsaros	-

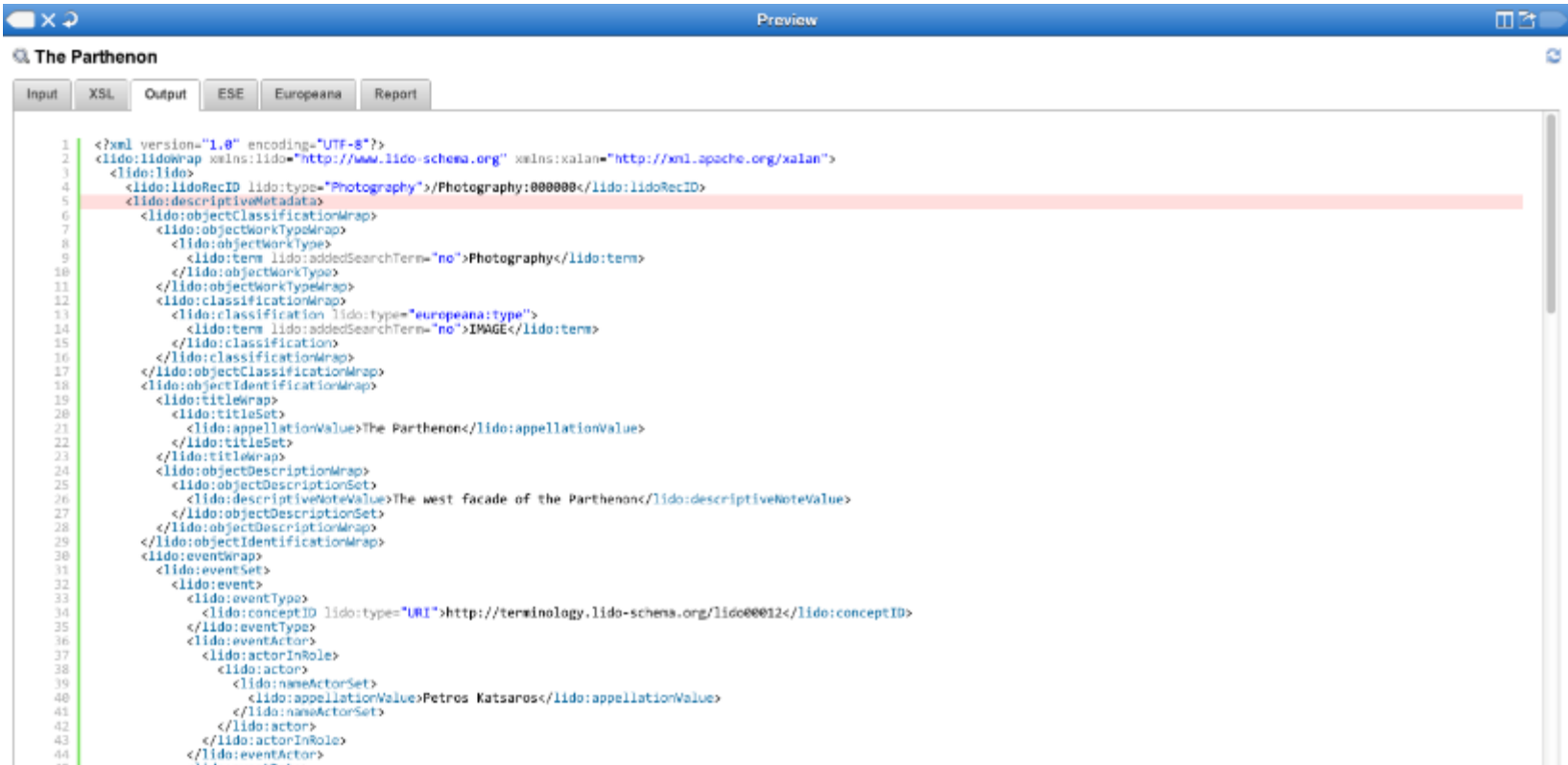
# Mappings – Functional Mapping

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- ❑ **Substring:** User sets the start and the end index.
- ❑ **Substring after:** User sets the substring of the original string after which the value is taken.
- ❑ **Substring before:** User sets the substring of the original string before which the value is taken.
- ❑ **Substring between:** User sets the substrings of the original string after and before which the value is taken.
- ❑ **Split:** User sets the delimiter for tokenization and the start index of the original string.
- ❑ **Tokenize content and generate an element per content:** User sets the delimiter for tokenization.

# Preview & Validation

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The screenshot shows a web browser window with a blue header bar containing the word "Preview" and navigation icons. Below the header, the browser title is "The Parthenon". A tabbed interface below the title shows "Input", "XSL", "Output", "ESE", "Europeana", and "Report". The "Input" tab is active, displaying XML code. The XML is an LIDO record for "The Parthenon" with a descriptive note: "The west facade of the Parthenon". The code includes various LIDO elements such as `<lido:recID type="Photography" value="000000" />`, `<lido:classification type="europeana" value="IMAGE" />`, `<lido:title value="The Parthenon" />`, and `<lido:descriptiveNote value="The west facade of the Parthenon" />`. The XML is well-formed and includes a concept ID and actor information.

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <lido:lidoWrap xmlns:lido="http://www.lido-schems.org" xmlns:xalan="http://xml.apache.org/xalan">
3   <lido:lido>
4     <lido:lidoRecID lido:type="Photography"/><lido:lidoRecID value="000000"/>
5     <lido:descriptiveMetadata>
6       <lido:objectClassificationWrap>
7         <lido:objectWorkTypeWrap>
8           <lido:objectWorkType>
9             <lido:term lido:addedSearchTerm="no">Photography</lido:term>
10          </lido:objectWorkType>
11        </lido:objectWorkTypeWrap>
12        <lido:classificationWrap>
13          <lido:classification lido:type="europeana:type">
14            <lido:term lido:addedSearchTerm="no">IMAGE</lido:term>
15          </lido:classification>
16        </lido:classificationWrap>
17      </lido:objectClassificationWrap>
18      <lido:objectIdentificationWrap>
19        <lido:titleWrap>
20          <lido:titleSet>
21            <lido:appellationValue>The Parthenon</lido:appellationValue>
22          </lido:titleSet>
23        </lido:titleWrap>
24        <lido:objectDescriptionWrap>
25          <lido:objectDescriptionSet>
26            <lido:descriptiveNoteValue>The west facade of the Parthenon</lido:descriptiveNoteValue>
27          </lido:objectDescriptionSet>
28        </lido:objectDescriptionWrap>
29      </lido:objectIdentificationWrap>
30      <lido:eventWrap>
31        <lido:eventSet>
32          <lido:event>
33            <lido:eventType>
34              <lido:conceptID lido:type="URI">http://terminology.lido-schems.org/lido00012</lido:conceptID>
35            </lido:eventType>
36            <lido:eventActor>
37              <lido:actorInRole>
38                <lido:actor>
39                  <lido:nameActorSet>
40                    <lido:appellationValue>Petros Katsaros</lido:appellationValue>
41                  </lido:nameActorSet>
42                </lido:actor>
43              </lido:actorInRole>
44            </lido:event>
45          </lido:eventSet>
46        </lido:eventWrap>
```

# Europeana Preview

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EDM Europeana Show all





© Ancient-Greece.org

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View item at [IVML - Image Video and Multimedia Systems Laboratory](#)

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 [Cite on Wikipedia](#)

 [Translate details](#)

## The Parthenon by Petros Katsaros

**Description:** The west facade of the Parthenon

**Subject:** <http://bib.arts.kuleuven.be/photoVocabulary/30808>

**Creator:** Petros Katsaros

**Place:** Athens, Greece

**Date:** 2013-09-14/

**Type:** Ancient PhotographyPhotography Ancient Photography  
<http://bib.arts.kuleuven.be/photoVocabulary/22000>

**Format:** High Quality Paper 400x323

**Identifier:** 0851b

**Rights:** Ancient-Greece.org

**Data provider:** IVML - Image Video and Multimedia Systems Laboratory

**Provider:** Europeana Photography

Search also for:

**Title**  
[The Parthenon by Petros Katsaros](#)

**Who**  
[Petros Katsaros](#)

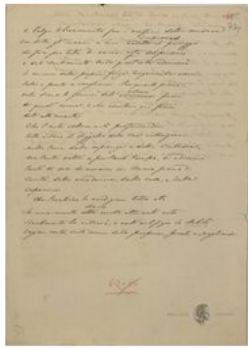
**What**  
[Ancient PhotographyPhotography](#)  
[Ancient Photography](#)

**Provider**  
[IVML - Image Video and Multimedia Systems Laboratory](#)  
[Europeana Photography](#)

# Metadata Quality

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## □ Link to record



View item at  
[Academy of Athens - Research Center for the Study of Modern Greek History / Ακαδημία Αθηνών - Κέντρο Ερεύνης της Ιστορίας του Νεωτέρου Ελληνισμού](#)



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## Αυτόγραφα Σολωμού - Σατιρικά

**Identifier:**  
local 100005 [Metadata]

**Rights:**  
Academy of Athens; Ακαδημία Αθηνών

**Source:**  
Academy of Athens - Research Center for the Study of Modern Greek History; Ακαδημία Αθηνών - Κέντρο Ερεύνης της Ιστορίας του Νεωτέρου Ελληνισμού

**Data provider:**  
[Academy of Athens - Research Center for the Study of Modern Greek History / Ακαδημία Αθηνών - Κέντρο Ερεύνης της Ιστορίας του Νεωτέρου Ελληνισμού](#)

**Provider:**  
Athena

**Providing country:**  
Greece

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Σατιρικά



Αυτόγραφα Σολωμού -  
Σατιρικά διάφορα.



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Σατιρικά διάφορα

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# The shift from ESE to EDM

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## □ Metadata Quality

### □ Metadata reconciliation

- Connecting provider's collection-specific vocabularies to controlled vocabularies on the Web

### □ Metadata Annotation

- Some of the providers had metadata of limited expressivity for publishing on Europeana

# Mappings – Thesaurus mapping

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- Target schema elements can take values from SKOS vocabularies

Up to lido:subject

lido:subjectConcept

structural

lido:conceptID

unmapped (thesaurus)

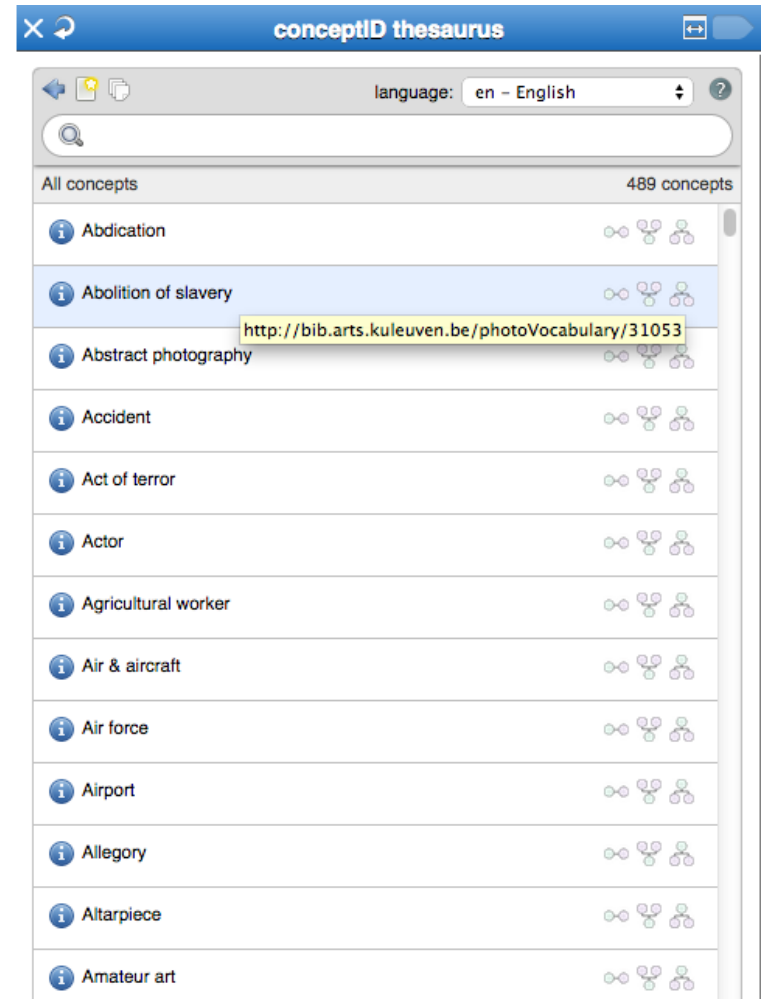




# Mappings – Thesaurus mapping

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- The user can
  - select a term from the thesaurus that will be applied to all items



# Mappings – Thesaurus mapping

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- The user can
  - align its in-house values to terms selected from the thesaurus



The screenshot shows a web application window titled "conceptID value mappings". It features an input field, an "Add" button, and a search bar. Below the search bar, there is a section titled "Narrower concepts of Photographic techniques" with 3 concepts listed: "general", "negative", and "positive". Each concept has an information icon and a cluster of three nodes. Below this section is a table with two columns: "Input" and "Output".

Input	Output
Digital Camera	<a href="http://bib.arts.kuleuven.be/pho...">http://bib.arts.kuleuven.be/pho...</a>

# Metadata Annotation

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## □ Annotator

### ▣ Create, delete and modify records

The screenshot shows the 'Annotator demo' web application. The interface includes a search bar, a list of items on the left, and a metadata editing form on the right. The metadata form is divided into three tabs: Object Descriptive Metadata, Content Descriptive Metadata, and Administrative Metadata. The 'Object Descriptive Metadata' tab is active, showing fields for Title, Series/Collection title, Title in english, Series/Collection title in english, Original Language, and three Local keyword fields. Each field has a red minus icon for deletion and a green plus icon for addition. The current values are: Title: 'Intertoto kongresszust rendeznek Budapesten', Series/Collection title: 'Retró híradók', Title in english: 'Intertoto Congress in Budapest', Series/Collection title in english: 'Retrospective newsreels', Original Language: 'Hungarian', and Local keywords: 'kommunikáció', 'piackutatás', and 'sportfogadás'.

Field	Value	Actions
Title	Intertoto kongresszust rendeznek Budapesten	[-] [+]
Series/Collection title	Retró híradók	[-] [+]
Title in english	Intertoto Congress in Budapest	[-] [+]
Series/Collection title in english	Retrospective newsreels	[-] [+]
Original Language	Hungarian	[-] [+]
Local keyword	kommunikáció	[-] [+]
Local keyword	piackutatás	[-] [+]
Local keyword	sportfogadás	[-] [+]

# Metadata Annotation

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## □ Group Edit

- ▣ Tag records using elements of the schema

The screenshot displays the 'Annotator demo' interface. On the left, a search bar contains 'red' and a list of 15 items with IDs from 00054 to 00904. The central panel shows a hierarchical schema tree for 'rdf:RDF', including elements like 'edm:ProvidedCHO', 'skos:Concept', and 'dc:color'. An 'Apply Function' dialog is open, showing 'Set constant value' and a 'New value' field containing 'http://thesaurus.europeana'. On the right, the 'Group Annotator: Actions log' shows two actions: 'search for all in dataset / select 1000 items' and 'search for red in everything / select 132 items', followed by an 'editValue' action with a complex XPath expression.



# ...and more requirements...

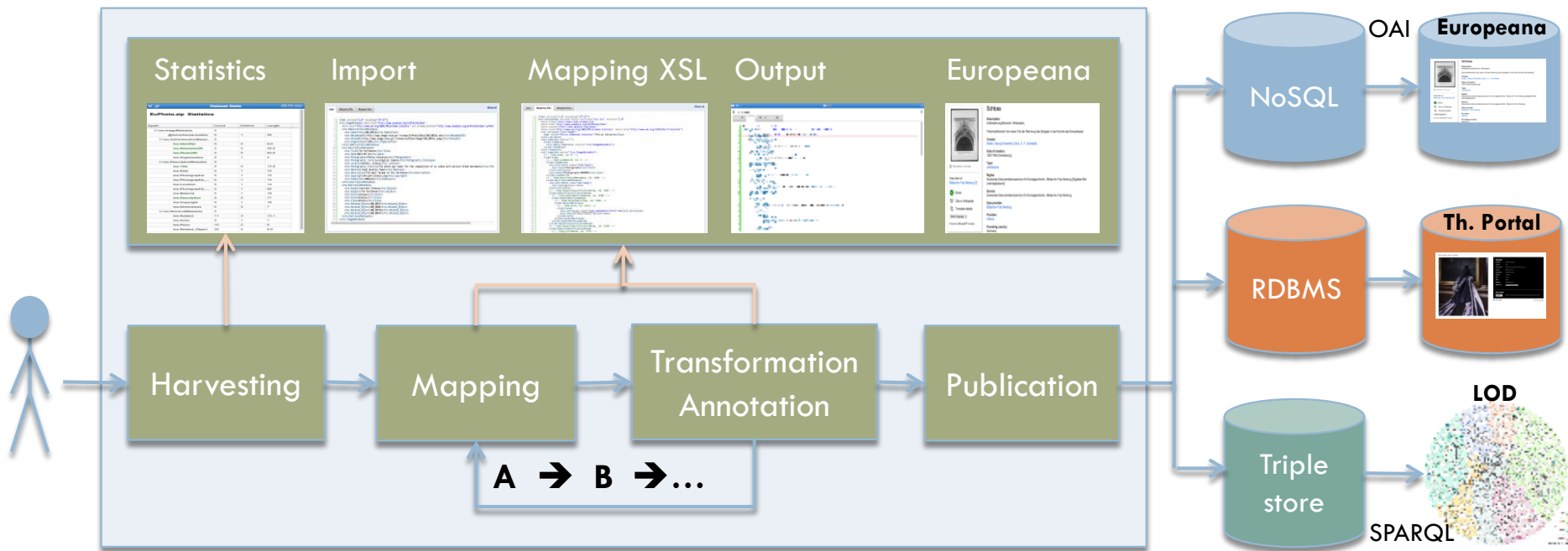
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- Publication
  - Support of multiple publications
    - Europeana
    - Thematic portals
    - Linked Open Data

# MINT – Current Workflow

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## MINT



# Lesson learnt

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## □ Metadata

- The production of high quality metadata will always depend on the user. A tool can only provide useful services

## □ Never-ending requirements

- Be one of them, find out what they'll need before they do
- Be flexible by modularizing everything as much as possible



# Future developments

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- Cleaning and Linking
  - ▣ Developing functionalities based on semantic technologies for cleaning and linking metadata to existing Linked Open Data sources
- APIs for creative applications
  - ▣ Simplify access to MINT manipulated metadata for building applications, websites and mash-ups

# Useful links

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- MINT web site
  - <http://mint-wordpress.image.ntua.gr/mint-end-user-documentation/>
- MINT Instance for training
  - <http://mint-projects.image.ntua.gr/tutorial>
- EUscreen Linked Open Data Pilot
  - <http://lod.euscreen.eu/>
- Europeana Fashion Thematic Portal
  - <http://www.europeanafashion.eu/>
- Material for the next session
  - <http://www.image.ece.ntua.gr/~nsimou/MINT/Dariah.zip>

# Contact

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# Mappings – Xpath mapping

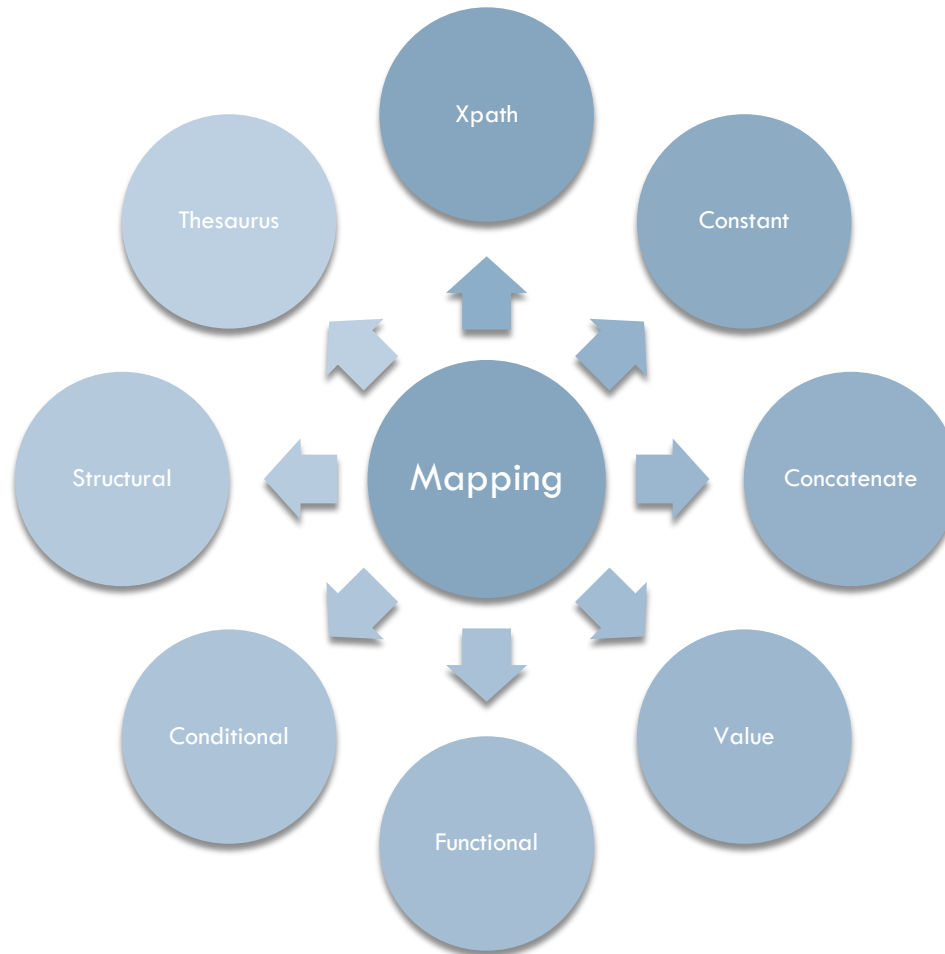
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- Xpath mapping is performed simply by dragging the xpath from the input tree and dropping it to the desired element of the mapping area



# Additional Mapping Functionalities

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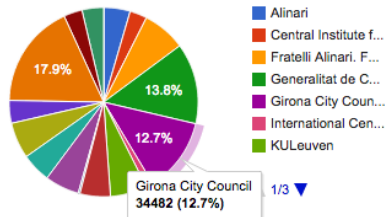


# ...last but not least...

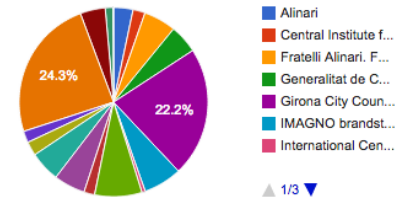
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## □ Reporting

Published Items



Imported Items



### Overall

Name	Imported	Transformed	Published	Final goal30-11-2014	Current goal30-11-2014
Alinari	25638	24429	12319	12319	12319
Central Institute for Unique Catalogue	16009	8000	8000	23000	23000
Fratelli Alinari. Fondazione per la storia della fotografia	42587	42185	20070	10000	10000
Generalitat de Catalunya Departament de Cultura	37537	39212	37537	65550	65550
Girona City Council	170729	72263	34482	50074	50074
IMAGNO brandstaetter images	50681	0	0	20000	20000
International Centre for Information Management Systems and Services	4510	3263	3263	10023	10023
KULeuven	62146	122169	17068	20000	20000
Lithuanian Art Museum	14121	14116	14121	20955	20955
Museum of History of Photography	806	806	806	3000	3000
NALIS	41374	82748	15959	15000	15000
POLFOTO JP-Politikens Hus A-S	40086	38923	13660	25000	25000
Parisiennne de photographie	18434	16759	16759	35000	35000
Theatre Institute	15169	30338	10539	10089	10089
TopFoto	187213	88061	48524	60000	60000
United Archives	33046	24435	8611	40000	40000
Video and Multimedia Systems Laboratory	30	20	5	90	90
Workers Museum	10046	10046	10041	25000	25000

# MINT – Current Workflow

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## MINT

