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1 Executive Summary and Report Scope

ECLAP portal provides access to a wide range of content on the performing arts field. This report provides information about aspects related to:

- integration with Europeana
- multilingual into the metadata and queries
- accessibility of the portal and of the other ECLAP tools.

The integration with Europeana is a key aspect and it allows ECLAP content to be accessible from the Europeana portal. The production of content from ECLAP to Europeana is one of the main goals of the project. Europeana acquires metadata for indexing from providers as single files and also using an OAI-PMH based interface. About the metadata modelling Europeana recently passed from the flat model (ESE) to the richer model called EDM. ECLAP metadata are mapped to EDM, and the report describes how this process has been performed and it is possible. ECLAP has successfully provided the planned number of content to Europeana and the procedures set up in the ECLAP back office allowed to stimulate the ECLAP content providers to produce the metadata for Europeana with the needed level of quality and details.

The **multilingual** aspects are addressed in ECLAP with the aim of enriching the metadata and improving the quality of experience in query them. To this end, ECLAP has tested the possibility of using some metadata translation tool with the aim of providing a first fast draft of the metadata translation to the experts. They are the only one authorized to validated metadata and pass them to Europeana. This is just an option, since the request of automated translation can be performed only by authorized delegated personnel that should return to the content to polish and validate the performed translations by using the ECLAP Metadata Editor. The results reported in other deliverable shown that the usage of this kind of tools has been limited with respect to the globality of ECLAP content and significant only for the featured content which are promoted in the first page of ECLAP.

The **accessibility** of the major ECLAP tools has been assessed, namely: the ECLAP portal, the Content organizer tool to access at ECLAP via mobiles, and the MINT tool for metadata ingestion and mapping. The guidelines applied have been conformant to the W3C. The results reported in this document are referring to the version of the tools in April 2013. The general assessment has demonstrated that the tools are satisfactory and only minor changes have been requested. In some cases, they cannot be applied without compromising the visual aspects of the performing arts performances. Recently a new round of improvements on the mentioned tools has also solved a part of the minor problems identified. The list of those improvements are reported in <http://www.eclap.eu/130961> and in App.5

2 Interoperability aspects with Europeana

This section reports the work performed for the integration of ECLAP with Europeana and in general to make accessible ECLAP metadata to a wider audience in a machine friendly way using the Linked Open Data paradigm. Details about the LOD facilities and ECLAP are reported in the DE4.2.2 also accessible on ECLAP portal.

2.1 Integration with Europeana

2.1.1 Europeana EDM – current status

Europeana Data Model is the standard way to submit metadata to Europeana, now (June 2013) EDM is in the first months that it is the default method for submitting metadata to Europeana, and not all the ingestion tools at Europeana have been updated to support EDM (e.g. Content Checker). The ingestion with EDM is done getting metadata in the original XML schema and using an XSLT to map the original schema to the EDM schema. Metadata can be provided both as single XML files or by using an OAI-PMH service.

EDM can describe a wide range of cases (see [3], [4] for details) but in the simplest case it provides:

- a *ProvidedCHO* element representing the Cultural Heritage Object (CHO) that is going to be provided to Europeana (e.g. a painting, a sculpture, a book, a manuscript), this element have associated the metadata (using dublin core) and the relations with the contextual information (e.g. Spatial, Temporal, Events) of the CHO;
- a *WebResource* element that is associated with an URL, that is used to represent the CHO on the Web, it can be a raw resource (e.g. an image) or a complete web page showing the resource, it can have specific metadata, in the current implementation only the *dc:rights* and *edm:rights* element can be provided;
- an *Aggregation* element that is used to associate the *ProvidedCHO* with the *WebResource* and with other information like the provider (ECLAP project in our case), the data provider (the ECLAP partner in our case).

Moreover other contextual information can be provided as:

- *Concepts* eventually organized in a taxonomy, representing abstract concepts (as subjects) to be associated with the CHO;
- *Agents*, representing persons or institutions that were important in the life of the CHO;
- *Places*, representing places where the CHO is present or it is depicted in the CHO;
- *TimeSpans*, representing a time period relevant for the CHO.
- *Events*, representing important events in the life of the CHO. Events can be related with *Agents* participating in an event, as well as a *TimeSpan* and a *Place* when/where the event occurred. The current implementation of EDM at Europeana does not support *Events* that will be available in a future version.

All these elements are identified using an URI.

2.1.2 Mapping ECLAP Schema to EDM

In this section, it is reported how the ECLAP metadata (see the complete metadata schema in appendix) is mapped to EDM using an Object centric perspective (the only one that now Europeana supports), it has to be noticed that in the material to be provided to Europeana in many cases it does not represent strictly an Object (like a book, a painting, a sculpture, ...) while often it represents an event happened in the past, the performance.

In the following, it is reported how the ECLAP metadata are mapped to EDM elements. The Dublin core elements (*dc* and *dcterms*) are mapped directly to the *ProvidedCHO* elements while the *PerformingArts* metadata are mapped to *DublinCore* elements where possible, also the taxonomy associations are mapped to

DublinCore depending on the top hierarchy element (Subject is mapped to dc:subject, PerformingArtType to dc:type, HistoricalPeriod to dcterms:temporal, etc.).

For each ECLAP content is provided: one *ProvidedCHO* element, one *WebResource* element representing the ECLAP portal page showing the content and one *Aggregation* element aggregating the two preceding ones. The @ sign indicates an attribute of the element.

edm:ProvidedCHO

@rdf:about	<i>axoid</i>
dcterms:*	All ECLAP dcterms fields
dcterms:issued	“<PerfArts.FirstPerformance.Date> (first performance)”
dcterms:issued	PerfArts.Performance.Date
dcterms:spatial	PerfArts.Performance.Place
dcterms:spatial	PerfArts.Performance.City
dcterms:spatial	PerfArts.Performance.Country
dcterms:temporal	PerfArts.HistoricalPeriod
dcterms:temporal	
@rdf:resource	“http://www.eclap.eu/Classification/HistoricalPeriod/<histPeriodId>”
dcterms:references	PerfArts.PieceRecord
dc:*	All ECLAP dc fields
dc:date	PerfArts.RecordingDate
dc:creator	PerfArts.PerformingArtsGroup
dc:contributor	“<PerfArts.Professional> (<role>)”
dc:contributor	PerfArts.Cast
dc:contributor	PerfArts.PerformersAndCrew
dc:contributor	PerfArts.PersonRecord
dc:contributor	PerfArts.ProductionRecord
dc:description	PerfArts.PlotSummary
dc:description	PerfArts.Object
dc:subject	
@rdf:resource	“http://www.eclap.eu/Classification/Subject/<subjId>”
dc:subject	PerfArts.Genre
dc:subject	
@rdf:resource	“http://www.eclap.eu/Classification/Genre/<genreId>”
dc:type	PerfArts.PerformingArtsType
dc:type	
@rdf:resource	“http://www.eclap.eu/Classification/PerformingArtType/<paTypeId>”
dc:type	PerfArts.ArtisticMovementAndActingStyle
dc:type	
@rdf:resource	“http://www.eclap.eu/Classification/ArtisticMovementAndActingStyle/<amasId>”
edm:type	based on Resource.Format (video, audio, image, document)

The *histPeriodId*, *subjId*, *genreId*, *paTypeId*, *amasId* are the ids of the terms in the ECLAP taxonomy to which the content is associated with. The SKOS taxonomy defining the concepts used are provided to Europeana by using a specific file.

edm:WebResource

@rdf:about	“http://www.eclap.eu/drupal?q=home&axoid=<axoid>”
edm:rights	IPR.EuropeanaRightsUrl

ore:Aggregation

@rdf:about	“<axoid>:aggregation”
edm:aggregatedCHO	<i>axoid</i>
edm:dataProvider	eclap:ProviderName

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edm:provider	“ECLAP, e-library of Performing Arts”
edm:rights	IPR.EuropeanaRightsUrl
edm:isShownAt	“http://www.eclap.eu/drupal?q=home&axoid=<axoid>”
edm:object	eclap:Preview

This mapping should be enhanced by enriching the metadata with associations with Places, TimeSpans, Agents thus integrating the text metadata with an association with an rdf resource coming from linked open data initiatives or well known authority files as VIAF for person names, GeoNames for places etc.

The following is an example of mapping the metadata of an Image from the Dario Fo and Franca Rame Archive.

The source metadata is:

```
<eclap:Content axoid="urn:axmedis:00000:obj:36b2407e-0ca0-4f44-892b-ebf254118a2d">
  <eclap:url>http://www.eclap.eu/drupal?q=home&axoid=urn:axmedis:00000:obj:36b2407e-0ca0-4f44-892b-ebf254118a2d</eclap:url>
  <eclap:mid>35923</eclap:mid>
  <eclap:Version>2</eclap:Version>
  <eclap:InsertUpdateTime>2011-08-06T00:36:26</eclap:InsertUpdateTime>
  <eclap:ProviderId>CTFR</eclap:ProviderId>
  <eclap:ProviderName>Dario Fo & Franca Rame Archive</eclap:ProviderName>
  <eclap:DefaultMetadataLanguage>it</eclap:DefaultMetadataLanguage>
  <eclap:Resource>
    <eclap:Format>image</eclap:Format>
    <eclap:Type>image</eclap:Type>
    <eclap:Width>597</eclap:Width>
    <eclap:Height>800</eclap:Height>
    <eclap:Extension>.jpg</eclap:Extension>
  </eclap:Resource>
  <eclap:Platforms>
    <eclap:AvlForPDA>yes</eclap:AvlForPDA>
    <eclap:AvlForIPhone>yes</eclap:AvlForIPhone>
    <eclap:AvlForPC>yes</eclap:AvlForPC>
  </eclap:Platforms>
  <eclap:IPR>
    <eclap:IsPublic>yes</eclap:IsPublic>
    <eclap:IPRTitle>CTFR IPR</eclap:IPRTitle>
    <eclap:IPRDescription>CTFR model</eclap:IPRDescription>
    <eclap:EuropeanaRightsUrl>http://www.europeana.eu/rights/rr-f/</eclap:EuropeanaRightsUrl>
    <eclap:LicenseUrl>http://bpnet.eclap.eu/drupal/?q=node/2862</eclap:LicenseUrl>
  </eclap:IPR>
  <eclap:Preview>http://www.eclap.eu/gif/urn_axmedis_00000_obj_36b2407e-0ca0-4f44-892b-ebf254118a2d.gif</eclap:Preview>
  <eclap:DublinCoreMetadata>
    <dc:description xml:lang="it">Tavole a colori di Dario Fo.</dc:description>
    <dc:terms:extent xml:lang="it">I pagine</dc:terms:extent>
    <dc:rights xml:lang="it">Archivio Dario Fo e Franca Rame, alcuni diritti riservati</dc:rights>
    <dc:title xml:lang="it">Sant'Ambrogio - 2005 Testa teatrale di Dario Fo. 32/116</dc:title>
    <dc:type xml:lang="it">Disegni</dc:type>
    <dc:date xml:lang="it">2005</dc:date>
    <dc:language xml:lang="it">it</dc:language>
  </eclap:DublinCoreMetadata>
  <eclap:PerformingArtsMetadata xml:lang="it">
    <eclap:Performance>
      <eclap:Country>Italia</eclap:Country>
    </eclap:Performance>
  </eclap:PerformingArtsMetadata>
  <eclap:Classification>
    <eclap:term id="504" vid="5" root="664" path="664">
      <eclap:label xml:lang="it">Teatro</eclap:label>
      <eclap:label xml:lang="en">Theatre</eclap:label>
      <eclap:label xml:lang="da">Teater</eclap:label>
      <eclap:label xml:lang="nl">Theater</eclap:label>
      <eclap:label xml:lang="fr">Théâtre</eclap:label>
      <eclap:label xml:lang="de">Theater</eclap:label>
      <eclap:label xml:lang="el">Θέατρο</eclap:label>
      <eclap:label xml:lang="hu">Színház</eclap:label>
      <eclap:label xml:lang="pl">Teatr</eclap:label>
      <eclap:label xml:lang="pt">Teatro</eclap:label>
      <eclap:label xml:lang="es">Teatro</eclap:label>
      <eclap:label xml:lang="ca">Teatre</eclap:label>
    </eclap:term>
  </eclap:Classification>
</eclap:Content>
```

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```
<eclap:label xml:lang="sl">Gledališče</eclap:label>
</eclap:term>
</eclap:Classification>
<eclap:Group id="2862">
  <eclap:label xml:lang="en">Dario Fo & Franca Rame Archive</eclap:label>
</eclap:Group>
</eclap:Content>
```

That is mapped to EDM as:

```
<rdf:RDF ...>
  <edm:ProvidedCHO rdf:about="urn:axmedis:00000:obj:36b2407e-0ca0-4f44-892b-ebf254118a2d">
    <dcterms:extent xml:lang="it">1 pagine</dcterms:extent>
    <dcterms:spatial>Italia</dcterms:spatial>
    <dc:description xml:lang="it">Tavole a colori di Dario Fo.</dc:description>
    <dc:rights xml:lang="it">Archivio Dario Fo e Franca Rame, alcuni diritti riservati</dc:rights>
    <dc:title xml:lang="it">Sant' Ambrogio - 2005 Testo teatrale di Dario Fo. 32/116</dc:title>
    <dc:type xml:lang="it">Disegni</dc:type>
    <dc:date xml:lang="it">2005</dc:date>
    <dc:language xml:lang="it">it</dc:language>
    <dc:type rdf:resource="http://www.eclap.eu/Classification/PerformingArtsType/504"/>
    <edm:type>IMAGE</edm:type>
  </edm:ProvidedCHO>

  <edm:WebResource rdf:about="http://www.eclap.eu/drupal?q=home&axoid=urn:axmedis:00000:obj:36b2407e-0ca0-4f44-892b-ebf254118a2d">
    <edm:rights>http://www.europeana.eu/rights/rr-f/</edm:rights>
  </edm:WebResource>

  <ore:Aggregation rdf:about="urn:axmedis:00000:obj:36b2407e-0ca0-4f44-892b-ebf254118a2d:aggregation">
    <edm:aggregatedCHO rdf:resource="urn:axmedis:00000:obj:36b2407e-0ca0-4f44-892b-ebf254118a2d"/>
    <edm:dataProvider>Dario Fo & Franca Rame Archive</edm:dataProvider>
    <edm:provider>ECLAP, e-library for Performing Arts</edm:provider>
    <edm:rights>http://www.europeana.eu/rights/rr-f/</edm:rights>
    <edm:isShownAt rdf:resource="http://www.eclap.eu/drupal?q=home&axoid=urn:axmedis:00000:obj:36b2407e-0ca0-4f44-892b-ebf254118a2d"/>
    <edm:object rdf:resource="http://www.eclap.eu/gif/urn_axmedis_00000_obj_36b2407e-0ca0-4f44-892b-ebf254118a2d.gif"/>
  </ore:Aggregation>

  <skos:Concept rdf:about="http://www.eclap.eu/Classification/PerformingArtsType/504">
    <skos:prefLabel xml:lang="it">Teatro</skos:prefLabel>
    <skos:prefLabel xml:lang="en">Theatre</skos:prefLabel>
    <skos:prefLabel xml:lang="da">Teater</skos:prefLabel>
    <skos:prefLabel xml:lang="nl">Theater</skos:prefLabel>
    <skos:prefLabel xml:lang="fr">Théâtre</skos:prefLabel>
    <skos:prefLabel xml:lang="de">Theater</skos:prefLabel>
    <skos:prefLabel xml:lang="el">Θέατρο</skos:prefLabel>
    <skos:prefLabel xml:lang="hu">Színház</skos:prefLabel>
    <skos:prefLabel xml:lang="pl">Teatr</skos:prefLabel>
    <skos:prefLabel xml:lang="pt">Teatro</skos:prefLabel>
    <skos:prefLabel xml:lang="es">Teatro</skos:prefLabel>
    <skos:prefLabel xml:lang="ca">Teatre</skos:prefLabel>
    <skos:prefLabel xml:lang="sl">Gledališče</skos:prefLabel>
  </skos:Concept>
</rdf:RDF>
```

In the portal there is a way to preview the metadata mapping for Europeana that displays the EDM using an XSL style sheet as shown in Figure 3.1.

Europeana metadata preview

Europeana Type	IMAGE
Is Shown At	http://www.eclap.eu/drupal?q=home&axoid=urn:axmedis:00000:obj:36b2407e-0ca0-4f44-892b-ebf254118a2d
Object	
Europeana Rights Url	http://www.europeana.eu/rights/rr-f/
Data Provider	Dario Fo & Franca Rame Archive
Provider	ECLAP, e-library for Performing Arts
title	it Sant'Ambrogio - 2005 Testo teatrale di Dario Fo. 32/116
description	it Tavole a colori di Dario Fo.
date	it 2005
language	it it
spatial	Italia
rights	it Archivio Dario Fo e Franca Rame, alcuni diritti riservati
extent	it 1 pagine
type	it Disegni Theatre (http://www.eclap.eu/Classification/PerformingArtsType/504)

Figure 3.1 EDM mapping preview on the ECLAP portal

2.1.3 Providing metadata to Europeana

In this section, the infrastructure used to transmit the ECLAP metadata to Europeana (OAI-PMH service) is presented.

When content is provided via ingestion using MINT or via web upload it is associated with ‘Europeana’ workflow. After a week of the upload date an automatic rule is executed to validate the metadata, to see if all the mandatory fields necessary for Europeana have been provided. The checks performed are:

- See if the digital resource is present.
- See if the title or description is present.
- See if subject or coverage or spatial or type are present.
- See if content is associated with an IPR model and if this model has a valid license url among the ones defined by Europeana.
- See if content is associated with the provider group.

If the content and metadata pass the checks the content pass to the UNDER-APPROVAL state otherwise it stays in the Uploaded state and an email is sent to the provider highlighting the problem.

Content that is UNDER-APPROVAL state needs to be checked and published for Europeana, this can be done manually or automatically. Some partners have a huge amount of records to be approved and it is not feasible to do it manually and in this case for specific partners a periodic rule is used to publish content that is under approval.

When a content on the ECLAP portal is marked to be published to Europeana a periodic AXCP rule is used to publish the metadata on the OAI-PMH Server. When published the metadata is stored in XML format on

the server, there is also the case that some metadata were wrong and needs to be corrected for this reason another periodic rule checks once a day if there are such modifications and updates the metadata on the OAI-PMH server.

OAI-PMH service

A PHP based OAI-PMH service has been setup to publish ECLAP metadata to be harvested from Europeana. Only the ECLAP metadata format is supported for harvesting. The url is <http://www.eclap.eu/oai2>. The metadata is get from a table and as identifier is used the AXOID. To publish a new content the publish rule adds or update a row in the metadata table.

2.1.4 Using Europeana API

Europeana offers an API to access content and metadata on their portal. The API has the capability to search Europeana using full-text search across semantically enriched metadata fields.

In ECLAP, a module based on this API was implemented, which main purpose is to recommend items from Europeana to users. In this sense, recommendation is based on the analysis of user’s search queries and their geographical location information. The module was implemented in the form of a widget that can be configured by the user to be shown alongside the ECLAP content. It is way to valorise and promote the Europeana content to the ECLAP users.

A detailed description of the capabilities of the widget (and its currently planned features) as well as the possibilities of the Europeana API are available in DE3.3.1: *Infrastructure: Content and metadata processing and semantification*. <http://www.eclap.eu/69416>

An impression of the current state of the module (Figure 2.1-1) is shown below.



Figure 2.1-1 Europeana widget

3 Multilingual aspects

This section reports the work done for the implementation of multilingual support on the ECLAP Portal.

3.1 Automated Back Office for Translations on demand

Translating metadata in different languages is a kind of metadata enrichment. Metadata can be translated automatically using an external service and/or manually using the ECLAP Metadata Editor as described in section 4.1.4 of “DE 3.3.1 Infrastructure: Content and Metadata processing and semantification”, <http://www.eclap.eu/69416>. The Automatic translation service is accessible by the ACTIONS local menu when playing content or the ACTIONS block as reported in Figure 3.1. By clicking on “Translate Metadata”, the translation process is fired in the ECLAP Back Office. The purpose of automated translation is only for shortening the work of professionals involved in the translation and validation. In fact, the request of

automated translation can be performed only by authorized delegated personnel that should return to the content to polish and validate the performed translations by using the ECLAP Metadata Editor.

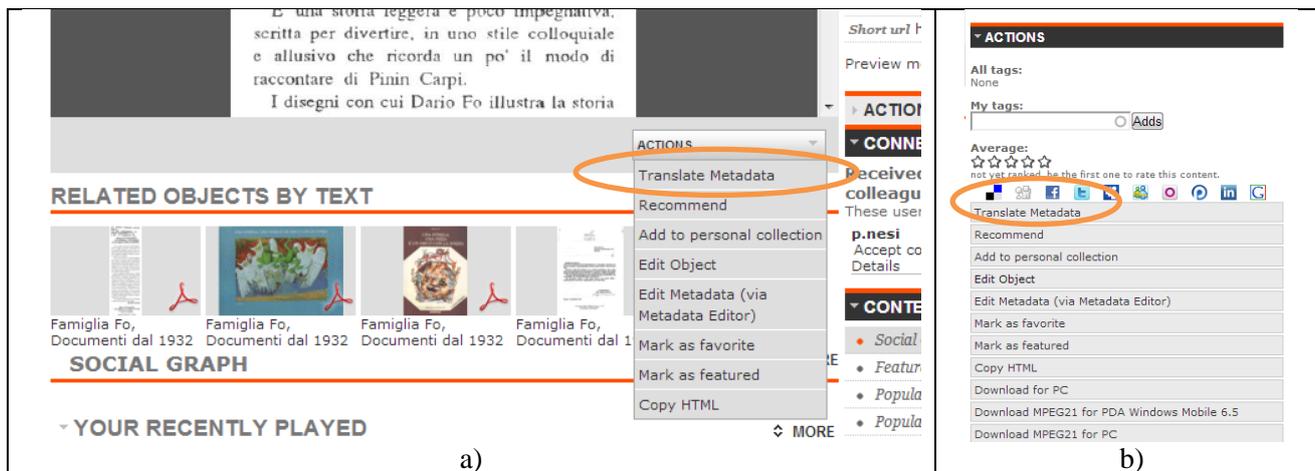


Figure 3.1 - Access to the Translate Metadata Service: a) Local menu b) Actions block

Such back office process works according to the ECLAP Workflow and produces metadata in different languages by using web service for text translation. The original metadata are translated according to the languages managed by the ECLAP portal.

The main steps of the translation process are described as following:

1. **ECLAP Workflow lock request:** a workflow request is sent to the ECLAP Workflow to perform the transition from the UPLOADED to the UNDER-AXCP status (according to the ECLAP workflow state diagram). If the transition is not performed (i.e. since a user is editing the content) the Automatic translation is resubmitted to the AXMEDIS Grid by scheduling it to a new time schedule and the current activity is stopped.
2. **Metadata retrieval & Original Language detection:** load of the DCMI metadata and the original language set during the upload or content generation
3. **Metadata translation:** each metadata is translated for each default languages by accessing to a third party translation service. If a metadata is already available in the language under translation, it is skipped.
4. **New Metadata saving:** translated metadata are saved in the database
5. **ECLAP Workflow Tables Update:** the *workflow* tables are updated in order to store the new translated metadata and workflow information as described in the workflow section. Each translated metadata is marked as “produced by the AXCP” in order to differentiate from those provided/edited by the user.
6. **ECLAP Workflow unlock request:** a workflow request is sent to the ECLAP Workflow to perform the transition from the UNDER-AXCP to the UPLOADED status (according to workflow diagram).
7. **Indexing request:** The indexing service is invoked to index/update metadata in the ECLAP Index Database.
8. **Automatic translation resubmit:** The resubmission with a new time schedule is done in event of connection failure with the external service and library.

3.2 Expanded query via translations and present multilingual indexing

In order to improve the search experience, and increase the retrieval effectiveness of the system, the search infrastructure of the ECLAP portal has been integrated with automatic translation at query time, using Google Translate (for this purpose a general agreement has been signed with them). Each query clause is thus expanded by translating it into English, Italian, French, Spanish and German, and then processed and sent to the search service. In the case of missing translated terms, the assembled query may include a limited set of terms, or at least only the original query term. The translation workflow introduces a few delay in the

query processing depending on the network usage and the service availability. The expanded query system, is thus able to retrieve documents written in a different language from the issued query, that may have more relevance with respect to other documents with the same language of the query. The combination of multilingual metadata and query expansion produces higher quality results in terms of precision and recall with respect of adopting only one of those techniques.

The ECLAP index features the languages of the content partners. Each content resource can have multiple metadata for each defined localization, fully searchable in the index. Considering the semantic importance of some metadata, certain fields are boosted in relevance when issuing a query to the search system, so to conduct a search giving a higher score to those field with respect to the others.

Simple queries are performed across the set of metadata fields in the index. Each localized metadata is indexed in a separate field. When performing a simple or advanced search a set of catchall fields is used to include all the localized fields, in order to build a more compact query. The localized metadata are the textual ones described in the ECLAP Metadata Schema.

Advanced query can be performed matching the content of a particular field, or combination of fields, and specifying if the query expression must match the entire content of the field, or only a part, thus searching within the substring. Advanced query does not support localization, and are built considering the whole set of language included in the ECLAP Metadata Schema.

4 Web Content Accessibility Assessment and Evaluation

This Section covers a wide range of recommendations for making the ECLAP portal more accessible. Following these guidelines will make content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these. Following these guidelines will also make ECLAP content more usable in general.

The Section is based on Section 4 of ECLAP deliverable “Infrastructure: Integration with Europeana and Multilingual Support” <http://www.eclap.eu/69414>. It follows the recommendations described in the “Web Content Accessibility Guidelines 2.0” document, which is a World Wide Web Consortium (W3C)¹ [1] recommendation.

The rest of this section is constructed as follows:

- Appendix 0 describes in detail the “Web Content Accessibility Guidelines” and is a synopsis of the official W3C document².
- On Section 4.4.1 the “Social Service Portal” conformance to these guidelines is examined. For each guideline or success criterion that is not met an appropriate Modification is proposed.
- On Section 4.2 the “Mobile Player” conformance to these guidelines is examined.
- On Section 4.3 the “Metadata Ingestion Tool” conformance to these guidelines is examined.

4.1 ECLAP Social Service Portal Conformance to Web Content Accessibility Guidelines

The *ECLAP Social Service Portal* is a socially enabled portal that is the main front end for the networked user to upload, enrich, and work on content. It provides support for access to the content, make queries via PC/Mobile, create communities/groups for the ECLAP Networking, discussions on content and on group topics, augment content and metadata with additional information and free tagging etc.

As already stated the ECLAP Social Service Portal offers different kinds of functionalities. Its evaluation will be based on its main functionality, that is, a simple search for multimedia content. A test case related to this type of functionality will be created in order to evaluate the conformance to the W3C’s “Web Content

¹ <http://www.w3.org/>

² <http://www.w3.org/TR/WCAG20/>

Accessibility Guidelines”. If an accessibility guideline is not met, then an appropriate modification will be proposed. As a result, the following test case is created:



Figure 4.1. ECLAP top menu bar

The user wants to perform a simple search to the ECLAP social service portal. The user wants to search about video objects related to the playwright “Bertolt Brecht”.

1. The user enters the ECLAP social service portal <http://www.eclap.eu>.
2. The user logs in entering his user name and password.
3. The user selects his preferred language from the language combo box (combo box 1 in **Errore. L'origine riferimento non è stata trovata.**).
4. The user enters the keyword “Bertolt Brecht” in the appropriate text field (text field 2 in **Errore. L'origine riferimento non è stata trovata.**).
5. The user chooses to search only for video objects from the appropriate combo box (combo box 3 in **Errore. L'origine riferimento non è stata trovata.**).
6. The user presses the search button (button 4 in **Errore. L'origine riferimento non è stata trovata.**) and the search is performed. As a result a set of documents appears corresponding to the search criteria previously presented.
7. The user selects the 3rd video object from the answer set and the video starts playing.

Test Case 1: Simple search to the ECLAP social service portal.

The evaluation of the ECLAP portal was performed on a Mozilla Firefox, version 18.0, running on a Windows 7 operating system. If some specific plug-in or some other browser was used in order to evaluate a guideline, it will specifically be mentioned.

Principle 1: Perceivable

Guideline 1.1: Text Alternatives

- Success Criterion 1.1.1 (Text Alternatives): The intent of this Success Criterion is to make information conveyed by non-text content accessible through the use of a text alternative. Text alternatives are a primary way for making information accessible because they can be rendered through any sensory modality (for example, visual, auditory or tactile) to match the needs of the user. Providing text alternatives allows the information to be rendered in a variety of ways by a variety of user agents. For example, a person who cannot see a picture can have the text alternative read aloud using synthesized speech. A person who cannot hear an audio file can have the text alternative displayed so that he or she can read it. In the future, text alternatives will also allow information to be more easily translated into sign language or into a simpler form of the same language.

In order to evaluate the specific text criterion for text alternatives for non-text content we used the *image*

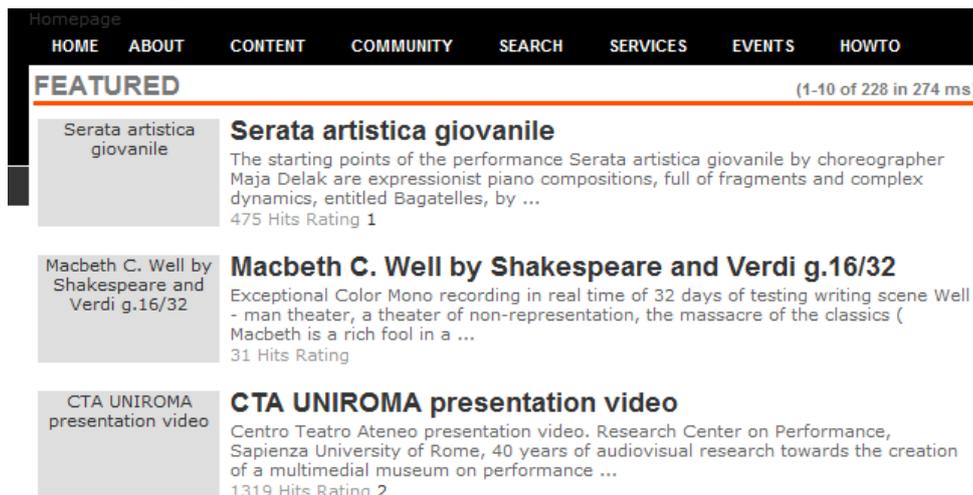


Figure 4.2: Print screen of the ECLAP Web portal with the image block plug-in enabled.

block (version 2.1) Firefox plug-in. This plug-in adds a toggle button that conditionally blocks/allows loading of images on Web pages. With the specific plug-in enabled we can see that a text alternative is provided for any non-text content. Awkwardly, when the specific plug-in is enabled the top search menu is absent as it can be seen in Figure 4.2.

Modification 1 (High Priority)

The ECLAP Web portal should provide access to the main search menu even when images are disabled.

Guideline 1.2: Time-based Media

- Success Criterion 1.2.1 (Audio-only and Video-only): The intent of this Success Criterion is to make information conveyed by pre-recorded audio-only and pre-recorded video-only content available to all users. Alternatives for time-based media that are text based make information accessible because text can be rendered through any sensory modality (for example, visual, auditory or tactile) to match the needs of the user. In the future, text could also be translated into symbols, sign language or simpler forms of the language (future).

An example of pre-recorded video with no audio information or user interaction is a silent movie. The purpose of the transcript is to provide an equivalent to what is presented visually. For pre-recorded video content, authors have the option to provide an audio track. The purpose of the audio alternative is to be an equivalent to the video. This makes it possible for users with and without vision impairment to review content simultaneously. The approach can also make it easier for those with cognitive, language and learning disabilities to understand the content because it would provide parallel presentation.

The ECLAP portal selects and delivers content and metadata for a wide range of user communities based on its harvesting metadata schema and its semantic mappings to a spectrum of commonly used standards. Since a variety of providers contribute content to the ECLAP portal it is unrealistic to consider that each content provider will contribute an alternative for each time-based media. The same also applies for Guidelines 1.2.2 (Captions Prerecorded) and 1.2.3 (Audio Description or Media Alternative Prerecorded) related to captions and audio description or media alternative.

Modification 2 (Low Priority)

The ECLAP portal should provide the capability to:

- **Relate different forms of media objects. For example a video-only representation of an event should be related to an audio-only description of the same event. Therefore people with visual**
-

impairment can have access to its audio form.

- **The ECLAP portal should provide the capability of closed captioning and subtitling so that video content should be available to people with hearing impairment and to people that cannot understand the language or accent of a multimedia object. Closed captioning and subtitling are both processes of displaying text on a television, video screen or other visual display to provide additional or interpretive information. Closed captions typically show a transcription of the audio portion of a program as it occurs (either verbatim or in edited form), sometimes including non-speech elements.**
-

- Success Criterion 1.2.4 (Captions Live): The intent of this Success Criterion is to enable people who are deaf or hard of hearing to watch real-time presentations. Captions provide the part of the content available via the audio track. Captions not only include dialogue, but also identify who is speaking and notate sound effects and other significant audio.

Since the ECLAP portal focuses on pre-recorded multimedia, the previously mentioned guideline can be neglected. The same also applies for guideline 1.2.9 (Audio-only Live).

- Success Criterion 1.2.5 (Audio Description Prerecorded): The intent of this Success Criterion is to provide people who are blind or visually impaired access to the visual information in a synchronized media presentation. The audio description augments the audio portion of the presentation with the information needed when the video portion is not available. During existing pauses in dialogue, audio description provides information about actions, characters, scene changes, and on-screen text that is important and is not described or spoken in the main sound track.

Similar to guidelines 1.2.1, 1.2.2 and 1.2.3 the ECLAP portal cannot guarantee that each content provider will provide his data with conformance to this guideline. Nevertheless, if Modification 2 is implemented, it should guarantee the capability of doing so. The same also applies for Guidelines 1.2.7 (Sign Language Prerecorded), 1.2.8 (Media Alternative Prerecorded).

- Success Criterion 1.2.6 (Sign Language Prerecorded): The intent of this Success Criterion is to enable people who are deaf or hard of hearing and who are fluent in a sign language to understand the content of the audio track of synchronized media presentations. Written text, such as that found in captions, is often a second language. Because sign language provides the ability to provide intonation, emotion and other audio information that is reflected in sign language interpretation, but not in captions, sign language interpretation provides richer and more equivalent access to synchronized media. People who communicate extensively in sign language are also faster in sign language and synchronized media is a time-based presentation. The ECLAP social service portal does not provide the ability to relate a multimedia representation with a sign language description.

Modification 3 (Low Priority)

The ECLAP social service portal should provide the ability to relate a multimedia representation of an event with a sign language description of the same event. According to [1], sufficient techniques to ensure that sign language interpretation is provided for all prerecorded audio content in synchronized media are the following:

- **Including a sign language interpreter in the video stream.**
 - **Providing a synchronized video of the sign language interpreter that can be displayed in a different viewport or overlaid on the image by providing sign language interpretation through synchronized video streams in SMIL 1.0 or 2.0.**
-

Guideline 1.3: Adaptable

- Success Criterion 1.3.1 (Info and Relationships): The intent of this Success Criterion is to ensure that information and relationships that are implied by visual or auditory formatting are preserved when the presentation format changes. For example, the presentation format changes when a screen reader reads the content or when a user style sheet is substituted for the style sheet provided by the author.

In order to examine the specific success criterion we must examine if a user can browse the ECLAP portal, based on Test Case 1, when the *Cascading Style Sheets (CSS)* are disabled. In order to disable the

CSS functionality from Firefox the user chooses the option View → Page Style → No Style. It can be easily examined that the user can go through Test Case 1 without the use of any style sheet.

- Success Criterion 1.3.2 (Meaningful Sequence): The intent of this Success Criterion is to enable a user agent to provide an alternative presentation of content while preserving the reading order needed to understand the meaning. It is important that it be possible to programmatically determine at least one sequence of the content that makes sense. Content that does not meet this Success Criterion may confuse or disorient users when assistive technology reads the content in the wrong order, or when alternate style sheets or other formatting changes are applied.

By setting the ECLAP portal to no style we can easily determine that a correct reading sequence can be programmatically determined.

- Success Criterion 1.3.3 (Sensory Characteristics): The intent of this Success Criterion is to ensure that all users can access instructions for using the content, even when they cannot perceive shape or size or use information about spatial location or orientation. Some content relies on knowledge of the shape or position of objects that are not available from the structure of the content (for example, "round button" or "button to the right"). Some users with disabilities are not able to perceive shape or position due to the nature of the assistive technologies they use. This Success Criterion requires that additional information be provided to clarify anything that is dependent on this kind of information.

This success criterion is satisfied since the user can perform search queries without the use of any style or images.



Figure 4.3: Screen shot of the ECLAP Web portal with the paintitgrey plug-in

Guideline 1.4: Distinguishable

- Success Criterion 1.3.1 (Use of color): The intent of this Success Criterion is to ensure that all users can access information that is conveyed by color differences, that is, by the use of color where each color has a meaning assigned to it. If the information is conveyed through color differences in an image (or other non-text format), the color may not be seen by users with color deficiencies. In this case, providing the

information conveyed with color through another visual means ensures users who cannot see color can still perceive the information.

In order to inspect this success criterion, we used the “paintitgrey 0.2” Mozilla Firefox plugin. As it can be seen in Figure 4.3 the ECLAP Web portal is operable when color is absent and the user can perform Test Case 1 without any difficulty.

- Success Criterion 1.3.2 (Audio Control): This success criterion is trivially satisfied since the ECLAP Web portal does not play any audio.
- Success Criterion 1.3.3 (Contrast Minimum): The intent of this Success Criterion is to provide enough contrast between text and its background so that it can be read by people with moderately low vision (who do not use contrast-enhancing assistive technology). For people without color deficiencies, hue and saturation have minimal or no effect on legibility as assessed by reading performance (Knoblauch et al., 1991). Color deficiencies can affect luminance contrast somewhat. Therefore, in the recommendation, the contrast is calculated in such a way that color is not a key factor so that people who have a color vision deficit will also have adequate contrast between the text and the background.

By using “WCAG Contrast checker 1.1.02” Mozilla Firefox plug-in it can be verified (Figure 4.4.4) that the ECLAP Webpage conforms to the specific success criterion. With the WCAG contrast checker we also checked that success criterion 1.3.6 (Contrast Enhanced) is also satisfied).

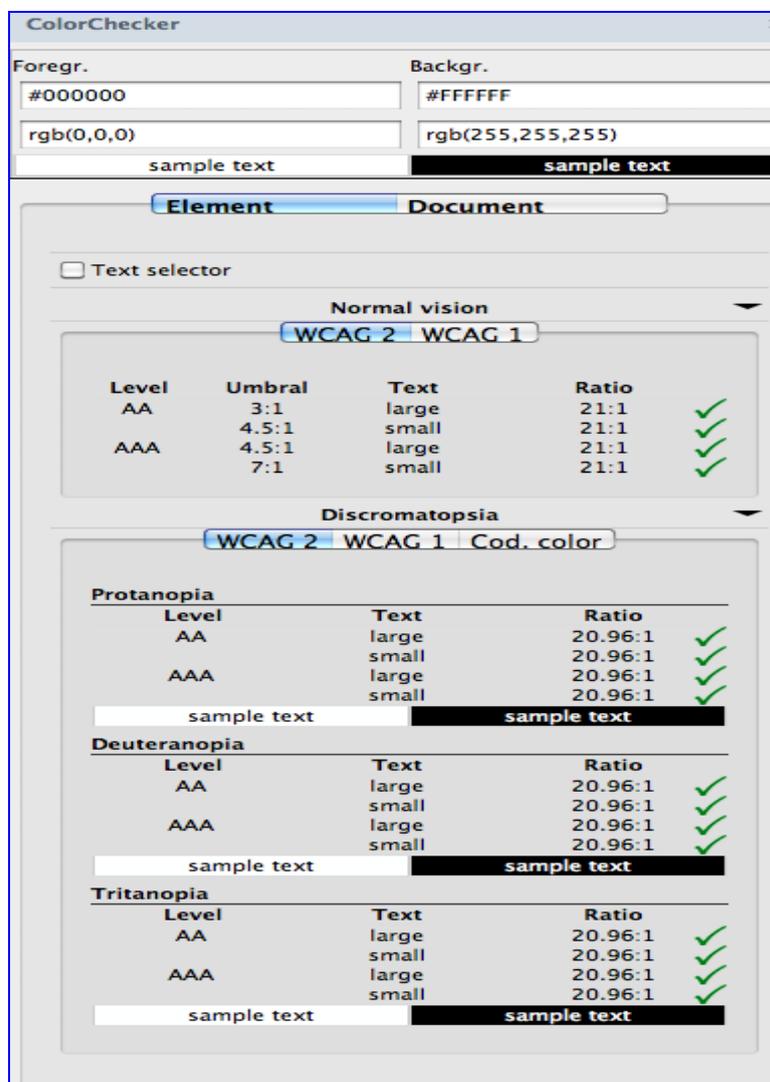


Figure 4.4: Compliance to the contrast success criteria.

- Success Criterion 1.3.4 (Resize Text): The intent of this Success Criterion is to ensure that visually rendered text, including text-based controls (text characters that have been displayed so that they can be seen can be scaled successfully so that it can be read directly by people with mild visual disabilities, without requiring the use of assistive technology such as a screen magnifier. Users may benefit from scaling all content on the Web page, but text is most critical.

By scaling the Web page to a 200% scale ratio it can be easily verified that the ECLAP portal remains operable in a higher portion of a page.

- Success Criterion 1.3.5 (Images of text): The intent of this Success Criterion is to encourage authors, who are using technologies which are capable of achieving their desired default visual presentation, to enable people who require a particular visual presentation of text to be able to adjust the text presentation as needed. This includes people who require the text in a particular font size, foreground and background color, font family, line spacing or alignment.

This success criterion is satisfied

since text is used to convey information rather than images (Images are used only as logotypes). For the same reasons success criterion 1.3.9 (Images of Text No Exception) is also satisfied.

- Success Criterion 1.3.7 (Low or no background audio): The specific success criterion is trivially satisfied since the ECLAP Web portal does not contain any background audio.
- Success Criterion 1.3.8 (Visual Presentation): The intent of this Success Criterion is to ensure that visually rendered text is presented in such a manner that it can be perceived without its layout interfering with its readability. People with some cognitive, language and learning disabilities and some low vision users cannot perceive the text and/or lose their reading place if the text is presented in a manner that is difficult for them to read.

The specific criterion is not satisfied since the ECLAP Web portal: does not have the capability of selecting the foreground and background colors, has a width of more than 80 characters.

Modification 4 (Low Priority)

The ECLAP social services portal should provide 1) a mechanism for selecting the foreground and background colors by using CSS techniques; 2) Techniques to ensure width is no more than 80 characters or glyphs:

- **Not interfering with the user agent's reflow of text as the viewing window is narrowed (HTML) OR**
 - **Using relative measurements to set column widths so that lines can average 80 characters or less when the browser is resized (CSS).**
-

Principle 2: Operable

Guideline 2.1: Keyboard Accessible

- Success Criterion 2.1.1 (Keyboard): The intent of this Success Criterion is to ensure that, wherever possible, content can be operated through a keyboard or keyboard interface (so an alternate keyboard can be used). When content can be operated through a keyboard or alternate keyboard, it is operable by people with no vision (who cannot use devices such as mice that require eye-hand coordination) as well as by people who must use alternate keyboards or input devices that act as keyboard emulators. Keyboard emulators include speech input software, sip-and-puff software, on-screen keyboards, scanning software and a variety of assistive technologies and alternate keyboards. Individuals with low vision also may have trouble tracking a pointer and find the use of software much easier (or only possible) if they can control it from the keyboard.

The evaluation of the specific success criterion was based on Test Case 1. Although the ECLAP Web portal provides the ability to perform simple queries with only the use of keyboard, it does not allow browsing through the results of the query using only the keyboard.

Modification 5 (High Priority)

All functionality of the content should be operable through a keyboard Interface. The proposed techniques mentioned in [2] are the following:

- Ensuring keyboard control for all functionality
- Ensuring keyboard control by using one of the following techniques.
 - Using HTML form controls and links (HTML)
 - Ensuring correct tab and reading order in PDF documents (PDF)
 - Providing links and link text using the /Link structure element in PDF documents (PDF)
 - Providing interactive form controls in PDF documents (PDF)
 - Providing Keyboard Shortcuts that Work Across the Entire Silverlight Application (Silverlight)
- Providing keyboard-triggered event handlers using one of the following techniques:
 - Using both keyboard and other device-specific functions (Scripting)
 - Making actions keyboard accessible by using the onclick event of anchors and buttons (Scripting)
 - Using redundant keyboard and mouse event handlers (Scripting)
 - Handling Key Events to Enable Keyboard Functionality in Silverlight (Silverlight)
 - Providing Custom Control Key Handling for Keyboard Functionality in Silverlight (Silverlight)
- Providing keyboard access to a Flash object and avoiding a keyboard trap (Flash) AND using the following techniques as applicable:
 - Adding keyboard-accessible actions to static elements (Flash)
 - Making actions keyboard accessible by using the click event on standard components (Flash)

Using redundant keyboard and mouse event handlers in Flash (Flash)

- Success Criterion 2.1.2 (No Keyboard Trap): The intent of this Success Criterion is to ensure that content does not "trap" keyboard focus within subsections of content on a Web page. This is a common problem when multiple formats are combined within a page and rendered using plug-ins or embedded applications.

This success criterion cannot be evaluated since the Success Criterion 2.1.1 is not fully satisfied. The same applies for Success Criterion 2.1.3 (Keyboard No Exception).

Guideline 2.2: Enough Time

- The Success Criteria 2.2.1 (Timing Adjustable), 2.2.2 (Pause, Stop, Hide) are trivially satisfied since the ECLAP portal does not contain time limits and does not involve moving, blinking and scrolling. Similarly success criterion 2.2.4 (Interruptions) is trivially satisfied since the ECLAP Web portal does not contain any interruptions.
- Success Criterion 2.2.3 (No Timing): The intent of this Success Criterion is to minimize the occurrence of content that requires timed interaction. This enables people with blindness, low vision, cognitive limitations, or motor impairments to interact with content.
Since the ECLAP Web portal involves timing only considering non-interactive synchronized media and real-time events, this success criterion is trivially satisfied.
- Success Criterion 2.2.5 (Re-authenticating): The intent of this success criterion is to allow all users to complete authenticated transactions that have inactivity time limits or other circumstances that would cause a user to be logged out while in the midst of completing the transaction.
Since the ECLAP does not involve complex activities by the user this success criterion is ignored.

Guideline 2.3: Seizures

This guideline along with its success criteria is trivially satisfied since the ECLAP web portal does not contain any flashes.

Guideline 2.4: Navigable

- Success Criterion 2.4.1 (Bypass Block): The intent of this Success Criterion is to allow people who navigate sequentially through content more direct access to the primary content of the Web page. Web pages and applications often have content that appears on other pages or screens. Examples of repeated blocks of content include but are not limited to navigation links, heading graphics, and advertising frames. Small repeated sections such as individual words, phrases or single links are not considered blocks for the purposes of this provision.

The only block of content that is repeated on multiple Web pages is the right frame of the ECLAP portal, which is depicted in Figure 4.5. Since this frame adds functionality to the ECLAP portal we consider that this criterion is satisfied.

- Success Criterion 2.4.2 (Page Titled): The intent of this Success Criterion is to help users find content and orient themselves within it by ensuring that each Web page has a descriptive title. Titles identify the current location without requiring users to read or interpret page content. When titles appear in site maps or lists of search results, users can more quickly identify the content they need. User agents make the title of the page easily available to the user for identifying the page. For instance, a user agent may display the page title in the window title bar or as the name of the tab containing the page.

This criterion is satisfied since each Web page in the ECLAP portal has a title that describes its topic or purpose. For the same reason success criterion 2.4.6 is also satisfied.

- Success Criterion 2.4.3 (Focus Order): The intent of this Success Criterion is to ensure that when users navigate sequentially through content, they encounter information in an order that is consistent with the meaning of the content and can be operated from the keyboard. This reduces confusion by letting users form a consistent mental model of the content. There may be different orders that reflect logical relationships in the content. For example, moving through components in a table one row at a time or one column at a time both reflect the logical relationships in the content. Either order may satisfy this Success Criterion.

We cannot check if the specific applies since not all forms in the web page are keyboard accessible. Therefore, provided that guideline 2.1 is satisfied in order to meet this criterion it must be ensured that:

1. Placing the interactive elements in an order that follows sequences and relationships within the content.
2. Giving focus to elements in an order that follows sequences and relationships within the content using one of the following techniques:
 - a. Creating a logical tab order through links, form controls, and objects (HTML).
 - b. Using the tabIndex property to specify a logical reading order and a logical tab order in Flash (Flash).
 - c. Making the DOM order match the visual order (CSS).
 - d. Ensuring correct tab and reading order in PDF documents (PDF).
 - e. Using the Silverlight Default Tab Sequence and Altering Tab Sequences With Properties (Silverlight).
3. Changing a Web page dynamically using one of the following techniques:
 - a. Inserting dynamic content into the Document Object Model immediately following its trigger element (Scripting).
 - b. Creating Custom Dialogs in a Device Independent Way (Scripting).
 - c. Reordering page sections using the Document Object Model (Scripting).



Figure 4.5: ECLAP frame.

- Success Criterion 2.4.4 (Link Purpose in Context): The intent of this Success Criterion is to help users understand the purpose of each link so they can decide whether they want to follow the link. Whenever possible, provide link text that identifies the purpose of the link without needing additional context. Assistive technology has the ability to provide users with a list of links that are on the Web page. Link text that is as meaningful as possible will aid users who want to choose from this list of links. Meaningful link text also helps those who wish to tab from link to link. Meaningful links help users choose which links to follow without requiring complicated strategies to understand the page. Since the purpose of each link on the ECLAP portal can be determined from the link text alone, this criterion is satisfied. For the same reason success criterion 2.4.9 (Link Purpose, Link only) is also satisfied.
- Success Criterion 2.4.5 (Multiple Ways): The intent of this Success Criterion is to make it possible for users to locate content in a manner that best meets their needs. Users may find one technique easier or more comprehensible to use than another.

In order to satisfy the specific success criterion the [2] document suggests two or more of the following techniques:

1. Providing links to navigate to related Web pages.
2. Providing a Table of Contents.
3. Creating bookmarks in PDF documents (PDF).
4. Providing a site map.
5. Providing a search function to help users find content.
6. Providing a list of links to all other Web pages.
7. Linking to all of the pages on the site from the home page.

Based on the proposed techniques and since some of them are already implemented (for example there already exist links to navigate to related Web pages and there exists a search function to help users find content), we believe that a site map would aid the process of navigating through the ECLAP Web portal.

Modification 6 (Low Priority)

A site map should be added to the ECLAP portal.

- Success Criterion 2.4.7 (Focus Visible): The intent of this Success Criterion is to ensure that there exists at least one mode of operation where the keyboard focus indicator can be visually located. Unfortunately when navigating through the ECLAP portal there exist some cases where the focus is not visible. For example it is not evident when the search button  has the focus.

Modification 7 (Low Priority)

In order to satisfy the specific criterion, the [2] document proposes a set of techniques that the ECLAP portal should follow (priority high):

- **Using user interface components that are highlighted by the user agent when they receive focus.**
- **Using CSS to change the presentation of a user interface component when it receives focus (CSS).**
- **Using the default focus indicator for the platform so that high visibility default focus indicators will carry over.**
- **Using an author-supplied, highly visible focus indicator.**
- **Using script to change the background color or border of the element with focus (Scripting).**
- **Reskinning Flash components to provide highly visible focus indication (Flash).**
- **Changing the Visual Focus Indicator in Silverlight (Silverlight).**
- **Designing a Focused Visual State for Custom Silverlight Controls (Silverlight).**

-
- Success Criterion 2.4.8 (Location): The intent of this Success Criterion is to provide a way for the user to orient within a set of Web pages, a Web site, or a Web application and find related information. The specific success criterion is not yet implemented.

Modification 8 (Low Priority)

In order to satisfy the specific criterion, the proposed site map (Modification 6) should also provide the user's location within a set of Web pages.

- **Success Criterion 2.4.10 (Section Headings):** The intent of this Success Criterion is to provide headings for sections of a Web page, when the page is organized into sections. For instance, long documents are often divided into a variety of chapters, chapters have subtopics and subtopics are divided into various sections, sections into paragraphs, etc. When such sections exist, they need to have headings that introduce them. This clearly indicates the organization of the content, facilitates navigation within the content, and provides mental "handles" that aid in comprehension of the content. Other page elements may complement headings to improve presentation (e.g., horizontal rules and boxes), but visual presentation is not sufficient to identify document sections.

This success criterion is trivially satisfied since the content of an ECLAP portal Web page is not divided into chapters.

Principle 3: Understandable

Guideline 3.1: Readable

- **Success Criterion 3.1.1 (Language of Page):** The intent of this Success Criterion is to ensure that content developers provide information in the Web page that user agents need to present text and other linguistic content correctly. Both assistive technologies and conventional user agents can render text more accurately when the language of the Web page is identified. Screen readers can load the correct pronunciation rules. Visual browsers can display characters and scripts correctly. Media players can show captions correctly. As a result, users with disabilities will be better able to understand the content.

This success criterion is satisfied since the ECLAP portal provides a language button, as depicted in **Figure 4.6**, to select from a variety of different languages and the language of each Web page can be determined of its html headers. For example a Web page written in English has a header:

```
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en-US" lang="en-US">
```

- **Success Criterion 3.1.2 (Language of Parts):** The intent of this Success Criterion is to ensure that user agents can correctly present content written in multiple languages. This makes it possible for user agents and assistive technologies to present content according to the presentation and pronunciation rules for that language. This applies to graphical browsers as well as screen readers, braille displays, and other voice browsers.

This success criterion is trivially satisfied since a single language characterizes each Web page.

- **Success Criterion 3.1.3 (Unusual Words):** Certain disabilities make it difficult to understand nonliteral word usage and specialized words or usage. Certain disabilities make it difficult to understand figurative language or specialized usage. Providing such mechanisms is vital for these audiences. Specialized information intended for non-specialist readers is encouraged to satisfy this Success Criterion, even when claiming only Single-A or Double-A conformance. The same refinements can be also applied for Criterion 3.1.4.

The ECLAP portal does not satisfy this success criterion.



Figure 4.6: Language selection menu.

Modification 9 (Low Priority)

In order to satisfy the specific criterion the [2] document proposes the following for identifying specific definitions of words or phrases used in an unusual or restricted way:

Situation A: If the word or phrase has a unique meaning within the Web page:

- Providing the definition of a word or phrase used in an unusual or restricted way for the first occurrence of the word or phrase in a Web page using one of the following techniques: 1) Linking to definitions, 2) using definition lists (HTML), 3) using the link element to link to a glossary (HTML), 4) using inline definitions, 5) using the dfn element to identify the defining instance of a word (HTML).
- Providing the definition of a word or phrase used in an unusual or restricted way for each occurrence of the word or phrase in a Web page using one of the following techniques: 1) Linking to definitions, 2) using definition lists (HTML), 3) using the link element to link to a glossary (HTML), 4) providing a glossary, 5) providing a function to search an online dictionary.

Situation B: If the word or phrase means different things within the same Web page:

- Providing the definition of a word or phrase used in an unusual or restricted way for each occurrence of the word or phrase in a Web page using one of the following techniques: 1) Linking to definitions, 2) using definition lists (HTML), 3) using the link element to link to a glossary (HTML), 4) using inline definitions, 5) using the dfn element to identify the defining instance of a word (HTML).

-
- **Success Criterion 3.1.5 (Reading Level):** Content should be written as clearly and simply as possible. The intent of this Success Criterion is: to ensure that additional content is available to aid the understanding of difficult or complex text; to establish a testable measure indicating when such additional content is required.

Since the ECLAP portal contains content from a large variety of contributors, while content is dynamically added to the ECLAP portal, it is impossible to ensure that the specific success criterion is satisfied. The same applies for the pronunciation success criterion (3.1.6).

Guideline 3.2: Predictable

- **Success Criterion 3.2.1 (On Focus):** The intent of this success criterion is to ensure that functionality is predictable as visitors navigate their way through a document. Any component that is able to trigger an event when it receives focus must not change the context.

The ECLAP portal satisfies the specific criterion since in general no action is triggered when a component receives focus.

- **Success Criterion 3.2.2 (On Input):** The intent of this Success Criterion is to ensure that entering data or selecting a form control has predictable effects. Changing the setting of any user interface component is changing some state in the control that will persist when the user is no longer interacting with it. So checking a checkbox or entering text into a text field changes their setting, but activating a link or a button does not. Changes in context can confuse users who do not easily perceive the change or are easily distracted by changes. Changes of context are appropriate only when it is clear that such a change will happen in response to the user's action.

The ECLAP portal trivially satisfies this success criterion since no actions are triggered when changing the setting on any user interface component.

- **Success Criterion 3.2.3 (Consistent Navigation):** The intent of this Success Criterion is to ensure that functionality is predictable as visitors navigate their way through a document. Any component that is able to trigger an event when it receives focus must not change the context.

This success criterion is satisfied since the navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated. Performing a simple search on the ECLAP and then ensuring that the order of the navigational mechanisms does not change certifies the success of this criterion.

- **Success Criterion 3.2.4 (Consistent Identification):** The intent of this Success Criterion is to ensure consistent identification of functional components that appear repeatedly within a set of Web pages. A strategy that people who use screen readers use when operating a Web site is to rely heavily on their familiarity with functions that may appear on different Web pages. If identical functions have different labels on different Web pages, the site will be considerably more difficult to use. It may also be confusing and increase the cognitive load for people with cognitive limitations.

The ECLAP Web portal satisfies this success criterion since labels, names, and text alternatives are used consistently for content that has the same functionality.

- **Success Criterion 3.2.5 (Change on Request):** The intent of this Success Criterion is to encourage design of Web content that gives users full control of changes of context. This Success Criterion aims to eliminate potential confusion that may be caused by unexpected changes of context such as automatic launching of new windows, automatic submission of forms after selecting an item from a list, etcetera. Such unexpected changes of context may cause difficulties for people with motor impairments, people with low vision, people who are blind, and people with certain cognitive limitations.

The ECLAP Web portal satisfies this success criterion since it does not allow for automatic updates, automatic redirects, pop-up windows and on-change events.

Guideline 3.3 Input Assistance: Help users avoid and correct mistakes.

- **Success Criterion 3.3.1 (Error Identification):** The intent of this Success Criterion is to ensure that users are aware that an error has occurred and can determine what is wrong. The error message should be as specific as possible. In the case of an unsuccessful form submission, re-displaying the form and indicating the fields in error is insufficient for some users to perceive that an error has occurred. Screen reader users, for example, will not know there was an error until they encounter one of the indicators. They may abandon the form altogether before encountering the error indicator, thinking that the page simply is not functional.

This criterion is satisfied since if a form contains fields for which information from the user is mandatory, the ECLAP portal provides text descriptions to identify required fields that were not completed and client-side validation and alert. Also if information provided by the user is required to be in a specific data format or of certain values the ECLAP portal provides a text description when user input falls outside the required format or values.

- **Success Criterion 3.3.2 (Labels or Instructions):** The intent of this Success Criterion is to help users avoid making mistakes when their input is required. To help avoid mistakes it is good user interface design to provide simple instructions and cues for entering information. Some users with disabilities may be more likely to make mistakes than users without disabilities or recovery from mistakes may be more difficult, making mistake avoidance an important strategy for users with disabilities. People with disabilities rely on well-documented forms and procedures to interact with a page. Blind users need to know exactly what information should be entered into form fields and what the available choices are. Simple instructions visually connected to form controls can assist users with cognitive disabilities or those accessing a page using a screen magnifier.

Since not any labels or instructions are provided when content requires user input, the specific success criterion is not satisfied. This has been recently improved by highlighting the messages to the users.

Modification 10 (Low Priority)

The user ECLAP portal should provide labels or instructions when content requires user input. According to the [2] document the ECLAP portal should be:

1. Providing descriptive labels AND one of the following:
 - a. Providing expected data format and example.
 - b. Providing text instructions at the beginning of a form or set of fields that describes the necessary input.
 - c. Positioning labels to maximize predictability of relationships.
 - d. Providing text descriptions to identify required fields that were not completed.
 - e. Indicating required form controls using label or legend (HTML).
 - f. Indicating required form controls in Flash (Flash).
 - g. Indicating required form controls in PDF forms (PDF).
 2. Using label elements to associate text labels with form controls (HTML).
 3. Using auto labelling to associate text labels with form controls (Flash).
 4. Setting the label property for form components (Flash).
 5. Labelling a form control by setting its accessible name (Flash).
 6. Providing labels for interactive form controls in PDF documents (PDF).
 7. Using LabeledBy to Associate Labels and Targets in Silverlight (Silverlight).
 8. Providing a description for groups of form controls using fieldset and legend elements (HTML).
 9. Adding a group name to the accessible name of a form control (Flash).
 10. Using the title attribute to identify form controls when the label element cannot be used (HTML).
 11. Displaying HelpText in Silverlight User Interfaces (Silverlight).
 12. Using an adjacent button to label the purpose of a field.
-

- **Success Criterion 3.3.3** (Error Suggestion): The intent of this Success Criterion is to ensure that users receive appropriate suggestions for correction of an input error if it is possible.
Since the use of the ECLAP Web portal is straightforward there is no immediate need to implement the specific success criterion.
- **Success Criterion 3.3.4** (Error Prevention for Legal, Financial, Data): The intent of this Success Criterion is to help users with disabilities avoid serious consequences as the result of a mistake when performing an action that cannot be reversed. For example, purchasing non-refundable airline tickets or submitting an order to purchase stock in a brokerage account are financial transactions with serious consequences.
Since the ECLAP portal does not involve transaction of legal, financial, or other kind of sensitive data, this criterion can be omitted.
- **Success Criterion 3.3.5** (Help): The intent of this Success Criterion is to help users avoid making mistakes. Some users with disabilities may be more likely to make mistakes than users without disabilities. Using context-sensitive help, users find out how to perform an operation without losing track of what they are doing.
The success of the specific criterion is ensured provided that Modification 10 is implemented.
- **Success Criterion 3.3.6** (Error Prevention AII): The intent of this Success Criterion is to help users with disabilities avoid consequences that may result from making a mistake when submitting form data. This criterion builds on Success Criterion 3.3.4 in that it applies to all forms that require users to submit information.
Since the user does not submit any form data using the ECLAP social service portal, this success criterion should be examined in Section 4.3 that involves the *ECLAP Metadata Ingestion Portal*.

Principle 4: Robust

Guideline 4.1: Compatible

- **Success Criterion 4.1.1 (Parsing):** The intent of this Success Criterion is to ensure that user agents, including assistive technologies, can accurately interpret and parse content. If the content cannot be parsed into a data structure, then different user agents may present it differently or be completely unable to parse it. Some user agents use "repair techniques" to render poorly coded content.

This success criterion is satisfied since the ECLAP Web portal is fully conforming to HTML specifications.

- **Success Criterion 4.1.2 (Name, Role, and Value):** The intent of this Success Criterion is to ensure that Assistive Technologies (AT) can gather information about, activate (or set) and keep up to date on the status of user interface controls in the content.

This success criterion is satisfied since the ECLAP Web portal uses standard user interface components in HTML and markup features to expose the names and roles of all user interfaces.

4.2 ECLAP Mobile Player Conformance to Web Content Accessibility Guidelines

ECLAP content can be downloaded and used on a large range of mobile devices. The Content Organizer is a tool that allows accessing, organizing, and downloading content from the ECLAP portal into a mobile device. Once the content is downloaded into a mobile, the user can manage it as his personal collection of content in the mobile device, search content, browse, get information, etc.

The mobile devices supported are iPhone, iPad, iPod, Android and Windows Phone 7. Some differences are available on the different platforms. In the most powerful version, the Content Organizer may organize and play ePub, video, audio, cross media content, images, documents, pdf, etc. The user may start download/play content from QR code (see the technical metadata of each content), access content via GPS locations, upload content from his mobile device, etc.

- iPhone/iPad, iOS, Content Organizer: To get it, the user must go on App Store, search for Content Organizer, download and freely install on his device in Italian and English. The Content Organizer for iOS is most powerful, it is capable to download, collect, search and play with ePub, video, audio, documents, cross media content, images, documents, pdf, ePub, MPEG-21, etc.; may start download/play from QR (see the technical metadata of each content), may access to content via GPS locations, my permit upload of content from your mobile, etc.
- Windows Phone 7, Content Organizer: To get it, the user can go on the Microsoft MarketPlace and search for Content Organizer, download and install it on his mobile.
- Android, Content Organizer: The beta version can be freely downloaded and installed from this link: <http://www.eclap.eu/android/Content-Organizer-Beta-Android-March-2012-v0-1.apk>.

For the evaluation of the mobile application we must take into account that this application is intended for use on specific devices. Therefore when evaluating its conformance to these guidelines the characteristic of these devices should be taken into account. For example, there is no point to examine keyboard accessibility since all of these devices are intended for use with a touch screen. Therefore many of the success criteria and guidelines can be omitted.

The ECLAP mobile player application was evaluated on an iPad (generation 3) device. As depicted in Figure 4.7 the ECLAP mobile player application can be divided in five different sub-applications:

- The “Objects” application allows the user to view the documents that he has collected from the ECLAP portal along with the metadata related to them. It should be noted that the object application is

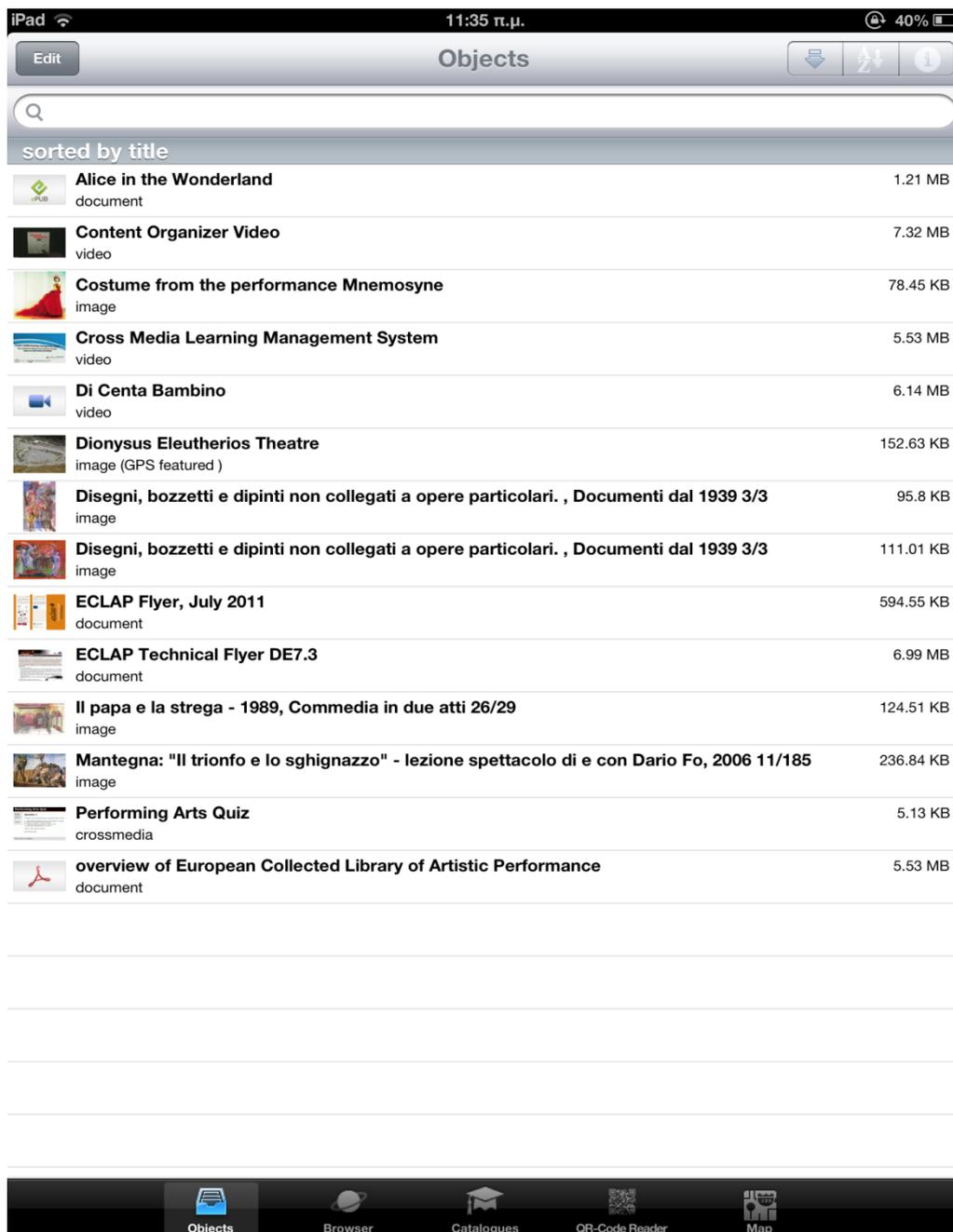


Figure 4.7 ECLAP Mobile Player

compatible with other Web portals containing metadata. Therefore the user may collect objects from the “Mobile Medicine Social Network by AXMEDIS”³, the “Agenzia per la promozione della ricerca europea”⁴, the “Florence University Incubator”⁵ and other Web portals. The user is able to filter these objects through keywords in their titles and metadata related to them. Moreover the user is able to preview each document object along with its metadata and alter some of the metadata related to it.

³ <http://mobmed.axmedis.org/>

⁴ <http://www.apretoscana.org/>

⁵ <http://iuf.csavri.org/>

- The “Browser” application allows the user to connect to the “ECLAP Social Service Portal” or some other portal such as those described in the previous paragraph. Browsing through the “ECLAP Social Service Portal” is fully functional, while the user is also capable of downloading documents that he will later parse through the “Objects” application. Moreover the user also has the ability to upload content while defining the metadata describing it.
- The “Catalogues” application allows the user to perform faceted browsing on the objects he has collected. Faceted browsing is a technique for accessing information organized according to a faceted classification system, allowing users to explore a collection of information by applying multiple filters. A faceted classification system classifies each information element along multiple explicit dimensions, enabling the classifications to be accessed and ordered in multiple ways rather than in a single, pre-determined, and taxonomic order. Therefore the user may browse through the objects he has collected based on Taxonomies, Groups, Portals and Your Tags. In Figure 4.8, we have a tree of the faceted search the user may perform.
- The “QR-Code Reader” allows searching for documents based on their QR codes. QR codes are optical machine-readable labels attached to items that record information related to the item.
- Finally the “Map” application allows browsing through a set of collected documents based on their map location. For example the user may browse through the theatres locating in Europe based on their locations.

The evaluation of the accessibility of the ECLAP portal will be performed based on the Guidelines presented in Section 0. The evaluation will be performed on the *Objects* sub-application of the ECLAP content organizer. The *Catalogues* application has a similar structure to the *Objects* application and therefore there is no need to evaluate its accessibility. The *QR code reader* and the *Map* applications are designed for very

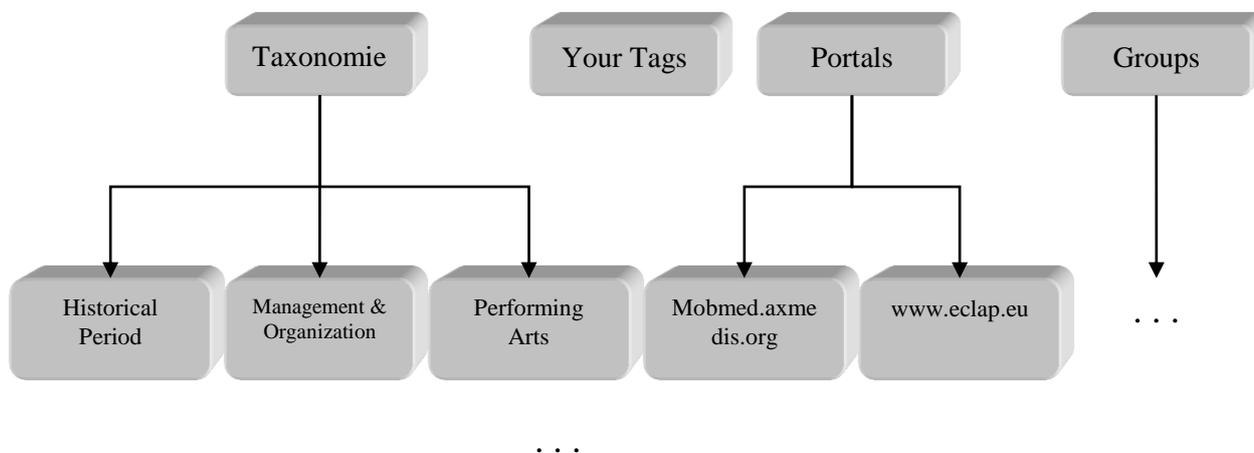


Figure 4.8: Faceted search options.

specific tasks and therefore there is no need to evaluate them, while the *Browser* application has already been evaluated in the previous Section. We continue the evaluation based on the principles/guidelines/criteria introduced in Section 4.

Principle 1: Perceivable

Guideline 1.1: Text Alternatives

- Since each ECLAP collected object has an associated title as depicted on Figure 4.9, we can consider that this guideline is trivially satisfied.

Guideline 1.2: Time-based Media

- The improvements related to the specific guideline are the same as those presented in Modification 2. It should be also noted that the ECLAP social service portal can be used as an object document viewer for the *Objects* application and therefore there is no need to re-implement these modifications.

Guideline 1.3: Adaptable

- Success Criterion 1.3.1(Info and Relationships): Since we are referring to an application and not to a web page the specific success criterion must be ignored. This is due to the fact that neither a screen reader may have access to the content of the application, nor the style sheet related to the application may be altered. The same applies for the success criteria 1.3.2 (Meaningful Sequence) and 1.3.3 (Sensory Characteristics).

Guideline 1.4: Distinguishable

- Success Criterion 1.3.1 (Use of Color): This success criterion is satisfied since the *Object* application uses black color and dark shades of grey as font colors, and white as background color. For the same reason success criteria 1.3.3(Contrast Minimum) and 1.3.6 (Contrast Enhanced) are satisfied.
- Success Criterion 1.3.2 (Audio Control): This success criterion is trivially satisfied since the application does not play any audio.
- Success Criterion 1.3.4 (Resize Text): This success criterion is not satisfied since the application does not provide the ability to resize text. Nevertheless the devices for which this application was built for provide very easy to use interfaces for zooming into the screen. Therefore there is no need to add the ability of text resizing to the application.
- Success Criterion 1.3.5 (Images of text): This success criterion is trivially satisfied since text is used to convey information rather than images (Images are used only as logotypes). For the same reasons success criterion 1.3.9 is also satisfied.
- Success Criterion 1.3.7 (Low or no background audio): The specific success criterion is trivially satisfied since the application does not contain any background audio.
- Success Criterion 1.3.8 (Visual Presentation): This criterion is satisfied by the *Objects* application with the only exception that the user cannot select background and foreground colors, which is of trivial importance.

	Alice in the Wonderland document	1.21 MB
	Content Organizer Video video	7.32 MB
	Costume from the performance Mnemosyne image	78.45 KB

Figure 4.9: Screenshot of three different types of objects in the ECLAP *Object* application

Guideline 2.1: Keyboard Accessible

Since the ECLAP mobile application was designed for use on specific devices that are not operated via a keyboard interface, such as tablets and mobile phones with touch screens, this guideline can be ignored.

Guideline 2.2: Enough Time

- The Success Criteria 2.2.1 (Timing Adjustable), 2.2.2 (Pause, Stop, Hide) are trivially satisfied since the ECLAP *Objects* application does not contain time limits and does not involve moving, blinking and scrolling. Similarly Success Criterion 2.2.4 (Interruptions) is trivially satisfied since the ECLAP Web portal does not contain any interruptions.
- Success Criterion 2.2.3 (No Timing): Since the ECLAP mobile application portal involves timing only for non-interactive synchronized media and real-time events; this Success Criterion is trivially satisfied.

- Success Criterion 2.2.5 (Re-authenticating): Since the ECLAP Objects application does not involve complex activities by the user this success criterion is of minor importance.

Guideline 2.3: Seizures

This guideline along with its success criteria is trivially satisfied since the ECLAP Object application does not contain any flashes.

Guideline 2.4: Navigable

The simplicity and the intuitive interface of the Objects application guarantees that it is navigable, i.e. that it provides ways to help users navigate, find content, and determine where they are.

Principle 3: Understandable

Guideline 3.1: Readable

- Success Criterion 3.1.1 (Language of Page): Since the application has a single language this success criterion is trivially satisfied. The same applies for success criterion 3.1.2 (Language of Parts).
- **Success Criterion 3.1.3 (Unusual Words):** This success criterion will be satisfied provided that **Modification 9** is applied also for the Mobile application.
- **Success Criterion 3.1.5 (Reading Level):** Since the ECLAP portal contains content from a large variety of contributors, while content is dynamically added to the ECLAP portal; it is impossible to ensure that the specific success criterion is satisfied. The same applies for pronunciation success criterion (3.1.6).

Guideline 3.2: Predictable

- **Success Criterion 3.2.1 (On Focus):** The ECLAP mobile application satisfies the specific criterion since in general no action is triggered when a component receives focus. For example when a text box of the application receives focus a virtual keyboard appears on the iPad display. Nevertheless no other action is triggered. The same applies for success criterion 3.2.2 (On Input).
- **Success Criterion 3.2.4 (Consistent Identification):** The ECLAP mobile application satisfies this success criterion since labels, names, and text alternatives are used consistently for content that has the same functionality.
- **Success Criterion 3.2.5 (Change on Request):** The ECLAP mobile application satisfies this success criterion since it does not allow for automatic updates, automatic redirects, pop-up windows and on-change events.

Guideline 3.3 Input Assistance: Help users avoid and correct mistakes.

- **Success Criterion 3.3.1 (Error Identification):** This success criterion cannot be evaluated since we cannot identify the possible errors produced by the mobile application. The same applies for success criteria 3.3.3 (Error Suggestion) and 3.3.4, 3.3.6 (Error Prevention).
- **Success Criterion 3.3.2 (Labels or Instructions):** The specific success criterion is not satisfied since any labels or instructions are provided when content requires user input.

Modification 11 (Low Priority)

The ECLAP mobile application should provide instructions when content requires user input. In general the ECLAP mobile application does not provide any user instructions or help file. Though the browsing is intuitive such functionality would aid through the browsing process.

Principle 4: Robust

Guideline 4.1: Compatible

- **Success Criterion 4.1.1 (Parsing):** This success criterion is trivially satisfied since the ECLAP mobile application is not implemented using markup languages.
- **Success Criterion 4.1.2 (Name, Role, and Value):** Since the ECLAP mobile application is not implemented using markup languages this success criterion cannot be satisfied.

4.3 ECLAP Metadata Ingestion Portal Conformance to Web Content Accessibility Guidelines

The *Metadata Ingestion Portal (MINT tool)* is responsible for transferring metadata & content from the content partners' archives to the ECLAP portal. Each content provider's metadata not only are transferred but are also adapted in order to be accessible to ECLAP and Europeana users.

It should be noted that the metadata ingestion portal does not address to the average ECLAP user searching for data. Those who will access the MINT tool are content providers such as archive institutions, libraries, museums, and universities. In perspective, we consider that they have a technical background and access to the appropriate technology. Therefore the criteria for web content accessibility should not be so strict. In order to evaluate the MINT tool for ECLAP we will consider the following test cases:

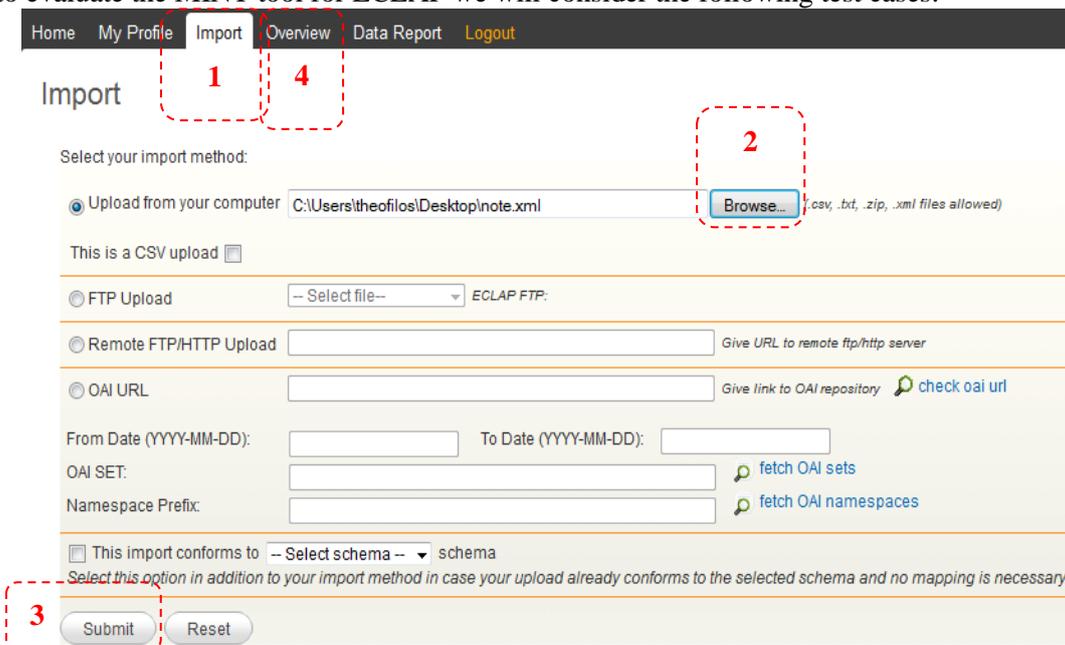


Figure 4.10: The ECLAP Import page.

The user wants to upload a metadata file to the ECLAP portal. The uploading is performed directly from the web browser.

1. The user enters the ECLAP metadata ingestion portal <http://mint-projects.image.ntua.gr>.
2. The user presses the Import menu button (menu button 1 in Figure 4.10).
3. The user presses the browse button (button 2 in Figure 4.10) and selects the file to be uploaded.
4. The users presses the submit button (button 3 in Figure 4.10) and the metadata file has been uploaded to the ECLAP portal.

Test Case 2: Metadata uploading to the ECLAP portal.

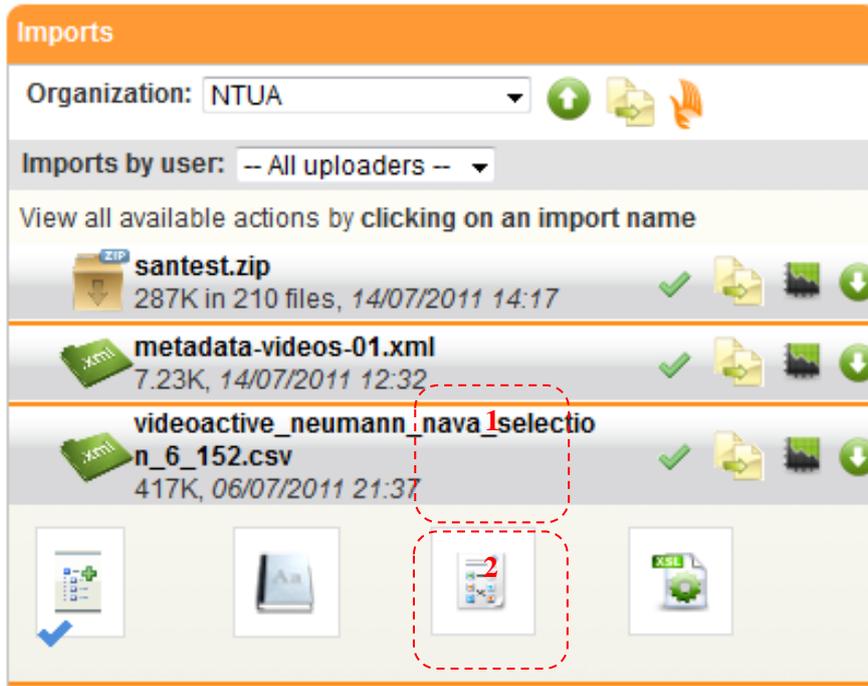


Figure 4.11: The ECLAP Overview frame.

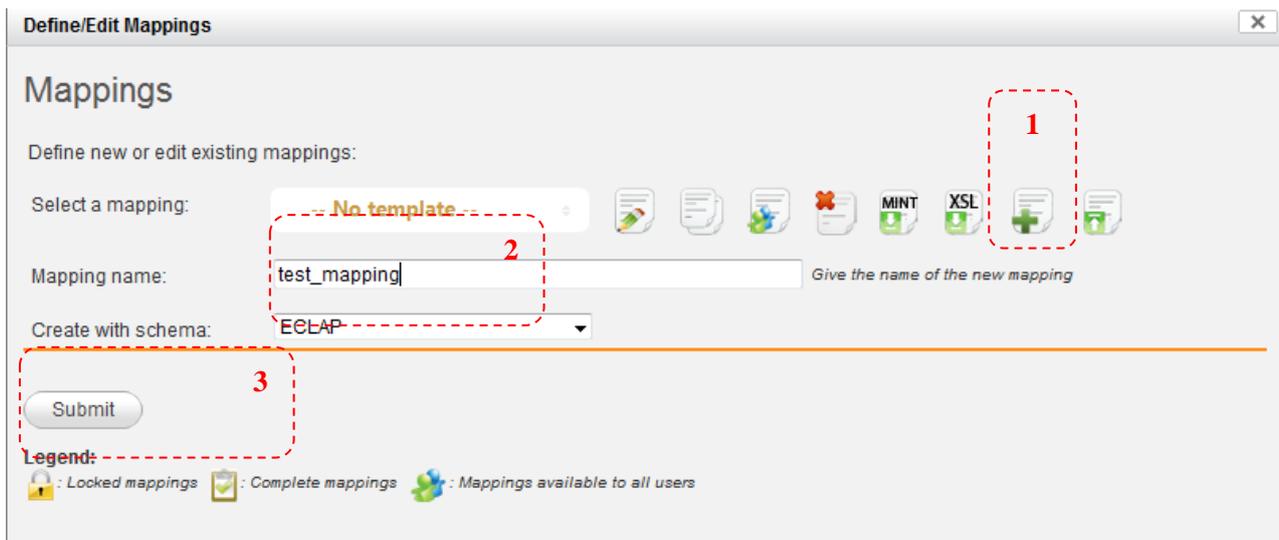


Figure 4.12: Define/Edit Mappings frame.



Figure 4.13: The mapping frame.

The user wants to map the uploaded metadata from their native schema to the ECLAP metadata schema.

1. The user enters the ECLAP metadata ingestion portal <http://mint-projects.image.ntua.gr>.
2. The user presses the *Overview* menu button (menu button 4 in Figure 4.10).
3. The user selects the metadata file he wants to edit and expands by clicking on it (textfield 1 in Figure 4.11).
4. The user presses the mapping button (button 2 in Figure 4.11) to create a new mapping from the existing metadata schema to the ECLAP metadata schema.
5. From the new frame that appears the user chooses to create a new mapping by pressing the corresponding button (button 1 in Figure 4.12).
6. The user enters the name of the new mapping in the appropriate textfield (textfield 2 in Figure 4.12), presses submit button (button 3 in Figure 4.12) and the mapping frame appears (Figure 4.13). The mapping frame is divided in the source schema area (area 1 in Figure 4.13), the target schema area (area 3 in Figure 4.13), and the mappings area (area 2 in Figure 4.13).
7. The user chooses the target schema, i.e. “Performing Arts Metadata” by pressing the appropriate button and the mappings area is filled with the fields of the target schema.
8. The user creates the mapping by drag and dropping elements from the source schema to the appropriate fields of the Target Schema.
9. The mapping is completed when the user presses the submit button (button 4 in Figure 4.13).

Test Case 3: Metadata mapping via the MINT tool.

The evaluation of the assessment of the MINT tool is based on the two previously mentioned test cases.

Principle 1: Perceivable

Guideline 1.1: Text Alternatives

- Success Criterion 1.1.1 (Non-text Content): In order to evaluate the specific text criterion we used the *image block (version 2.1)* Firefox plug-in. This plug-in adds a toggle button that conditionally blocks/allows loading of images on Web pages. With the specific plug-in enabled we can see that the user cannot perform a metadata mapping since the buttons are invisible as depicted in Figure 4.14.

Modification 12 (Low Priority)

Provide text alternatives for image buttons in the MINT portal.

Guideline 1.2: Time-based Media

This guideline may as well as be ignored since the MINT ingestion portal is not used to display time-based media objects.

Guideline 1.3: Adaptable

- Success Criterion 1.3.1 (Info and Relationships): The intent of this Success Criterion is to ensure that information and relationships that are implied by visual or auditory formatting are preserved when the presentation format changes. The MINT ingestion server was designed for operation by a specific group of trained personnel, coming from institutions that contribute content. Therefore we consider that information and relationships that are implied by visual or auditory formatting can be employed since the MINT's presentation format won't change. For example a screen reader won't access the MINT tool. Therefore this success criterion can be ignored. The same applies for success criteria 1.3.2 (Meaningful Sequence) and 1.3.3 (Sensory Characteristics).

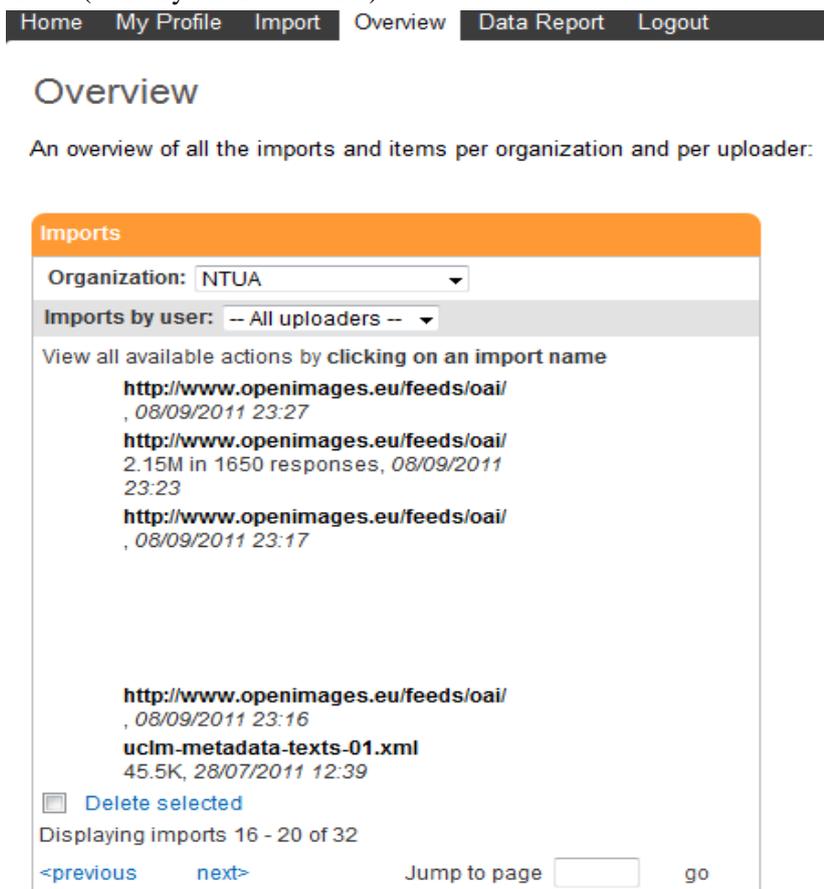


Figure 4.14: Screenshot of the Overview application with images blocked.

Guideline 1.4: Distinguishable

- Success Criterion 1.3.1 (Use of color): The intent of this Success Criterion is to ensure that all users can access information that is conveyed by color differences. In order to inspect this success criterion we used the “paintitgrey 0.2” Mozilla Firefox plugin. As it can be seen in Figure 4.15 the MINT tool is operable when color is absent and the user can perform Test Case 3 without any difficulty.

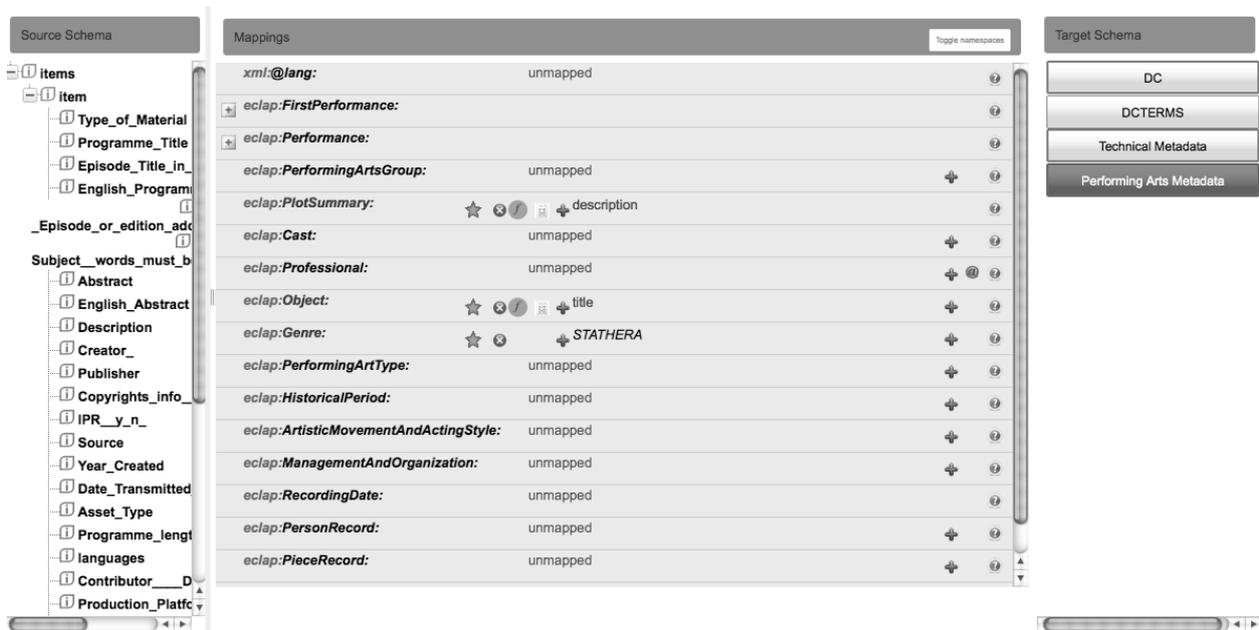


Figure 4.15: Screenshot of the ECLAP mapping tool with the paintitgrey plugin enabled.

- Success Criterion 1.3.2 (Audio Control): This success criterion is trivially satisfied since the MINT tool does not use any audio.
- Success Criterion 1.3.3 (Contrast Minimum): By using “WCAG Contrast checker 1.1.02” Mozilla Firefox plug-in it can be easily verified that the ECLAP Webpage conforms to the specific success criterion. Similarly success criterion 1.3.6 (Contrast Enhanced) is also satisfied.
- Success Criterion 1.3.4 (Resize Text): By scaling the Web page to a 200% scale ratio we conclude that the MINT mapping application (Test Case 3) loses its functionality. This behavior is acceptable due to the nature of the application, which demands that the Source Schema, the Mappings, and the Target Schema are displayed on the same screen.
- Success Criterion 1.3.5 (Images of text): This success criterion is satisfied since the MINT application does not use any images of text. The same applies for success criterion 1.3.9 (Images of Text, No Exception).
- Success Criterion 1.3.7 (Low or no background audio): The specific success criterion is trivially satisfied since the MINT Web tool does not contain any background audio.
- Success Criterion 1.3.8 (Visual Presentation): The intent of this Success Criterion is to ensure that visually rendered text is presented in such a manner that it can be perceived without its layout interfering with its readability.

Due to the MINT application’s nature its layout is of primary importance for its usability. Therefore we will ignore that this success criterion is not satisfied.

Principle 2: Operable

Guideline 2.1: Keyboard Accessible

The specific guideline can as well as been ignored. Since the MINT tool was designed for operation by a specific group of trained personnel, coming from institutions that contribute content, we consider that this personnel has mouse access. There is no point in making the MINT tool keyboard accessible since that would make the application difficult to operate.

Guideline 2.2: Enough Time

- The Success Criteria 2.2.1 (Timing Adjustable), 2.2.2 (Pause, Stop, Hide), 2.2.3 (No Timing), 2.2.4 (Interruptions) are trivially satisfied since the MINT user wont perform any timing depended operations.
- Success Criterion 2.2.5 (Re-authenticating): The intent of this success criterion is to allow all users to complete authenticated transactions that have inactivity time limits or other circumstances that would cause a user to be logged out while in the midst of completing the transaction.

Based on Test Case 3 we infer that the MINT tool satisfies the specific success criterion. Specifically, when the user creates a mapping in the ECLAP tool, logs out before competing it, and then logs in he receives the message: “These mappings are locked under your account and cannot be used unless they are unlocked. Make sure you unlock items when you have finished working with them.” along with a list of all the unfinished mappings.

Guideline 2.3: Seizures

This guideline along with its success criteria is trivially satisfied since the MINT tool does not contain any flashes.

Guideline 2.4: Navigable

- Success Criterion 2.4.1 (Bypass Block): This success criterion is satisfied since no block of content is repeated on multiple Web pages.
- Success Criterion 2.4.2 (Page Titled): The MINT users may orient themselves through the MINT main menu bar (depicted in Figure 4.16). Therefore there is no need to specify the purpose of each page on the page title. For the same reason success criterion 2.4.6 is also satisfied.
- Success Criterion 2.4.3 (Focus Order): Since the MINT tool was designed for operation with the combined use of keyboard and mouse, there is no need to evaluate the specific success criterion. The same also applies for success criterion 2.4.7 (Focus Visible).
- Success Criterion 2.4.4 (Link Purpose in Context): Since the purpose of each link on the ECLAP portal can be determined from the link text alone, this criterion is satisfied. For the same reason success criterion 2.4.9 (Link Purpose, Link only) is also satisfied.
- Success Criterion 2.4.5 (Multiple Ways): The intent of this success criterion is to make it possible for users to locate content in a manner that best meets their needs. Since the MINT tool was not designed to access and locate content, this criterion won’t be examined.



Figure 4.16: MINT menu bar.

- Success Criterion 2.4.8 (Location): The intent of this Success Criterion is to provide a way for the user to orient himself within the MINT tool. The user can be oriented through the main menu (depicted in Figure 4.16).
- Success Criterion 2.4.10 (Section Headings): This success criterion is trivially satisfied since the content of an ECLAP portal Web page is not divided into chapters.

Principle 3: Understandable

Guideline 3.1: Readable

- Success Criterion 3.1.1 (Language of Page): Since the MINT portal is intended for use only in English, the specific success criterion is trivially satisfied. The same applies for success criterion 3.1.2 (Language of Parts).
- Since the MINT tool addresses to users with the appropriate technical background, guidelines 3.1.3 (Unusual Words), 3.1.4 (Abbreviations), 3.1.5 (Reading Level) and 3.1.6 (Pronunciation) are ignored.

Guideline 3.2: Predictable

- **Success Criterion 3.2.1 (On Focus):** The MINT tool satisfies the specific criterion since in general no action is triggered when a component receives focus.
- **Success Criterion 3.2.2 (On Input):** The MINT tool trivially satisfies this success criterion since no actions are triggered when changing the setting on any user interface component.
- **Success Criterion 3.2.3 (Consistent Navigation):** This success criterion is satisfied since the navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated.
- **Success Criterion 3.2.4 (Consistent Identification):** The MINT tool satisfies this success criterion since labels, names and text alternatives are used consistently for content that has the same functionality.
- **Success Criterion 3.2.5 (Change on Request):** This success criterion is satisfied since the MINT tool does not allow for automatic updates, automatic redirects, pop-up windows and on-change events.

Guideline 3.3 Input Assistance: Help users avoid and correct mistakes.

- **Success Criterion 3.3.1 (Error Identification):** This criterion is satisfied since if a form contains fields for which information from the user is mandatory, the MINT provides text descriptions to identify required fields that were not completed and client-side validation and alert. The same applies for success criterion 3.3.3 (Error Suggestion). For example when the user performs Test Case 3 and does not map some mandatory fields of the target schema, he receives the appropriate identification as depicted in Figure 4.17.

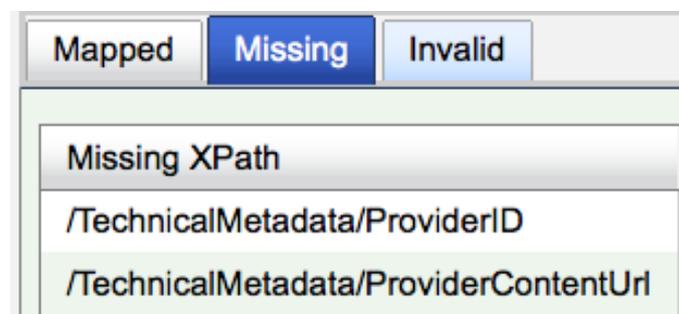


Figure 4.17: Error identification for missing mappings.

- **Success Criterion 3.3.2 (Labels or Instructions):** The intent of this Success Criterion is to help users avoid making mistakes when their input is required. For trivial actions the appropriate labels and instructions are provided. For complicated actions, providing partial information, when content requires user input, would be meaningless. Instead a detailed user manual on how the MINT tool operates is provided⁶. The same applies for success criterion 3.3.5 (Help).
- **Success Criterion 3.3.4 (Error Prevention for Legal, Financial, Data):** Since the MINT tool does not involve transaction of legal, financial, or other kind of sensitive data, this criterion can be omitted.
- **Success Criterion 3.3.6 (Error Prevention AII):** In order to evaluate the specific success criterion we were based on Test Case 3 where the user defines a mapping from one schema to the ECLAP schema. This success criterion is satisfied since as we can see in Figure 4.18, the user has various options on altering an existing mapping such as: edit, copy, delete. Moreover each mapping can be checked for

⁶ <http://mint.image.ece.ntua.gr/redmine/projects/mint/wiki>

input errors, and a mechanism is available for reviewing, confirming, and correcting information before finalizing the submission (Figure 4.17).



Figure 4.18: Available actions related to creating or altering a metadata mapping.

Principle 4: Robust

Guideline 4.1: Compatible

- **Success Criterion 4.1.1 (Parsing):** This success criterion is satisfied since the MINT tool is conforming to HTML specifications. The same applies for success criterion 4.1.2 (Name, Role, and Value).

Appendix - Web Content Accessibility Guidelines

WCAG 2.0 was developed through the W3C process with a goal of providing a shared standard for Web content accessibility that meets the needs of individuals, organizations, and governments internationally. WCAG 2.0 was designed to apply broadly to different Web technologies now and in the future, and to be testable with a combination of automated testing and human evaluation.

WCAG 2.0 Layers of Guidance

The individuals and organizations that use WCAG vary widely and include Web designers and developers, policy makers, purchasing agents, teachers, and students. In order to meet the varying needs of this audience, several layers of guidance are provided including overall *principles*, general *guidelines*, testable *success criteria* and a rich collection of *sufficient techniques*, *advisory techniques*, and *documented common failures* with examples, resource links and code.

- **Principles:** At the top are four principles that provide the foundation for Web accessibility: *perceivable*, *operable*, *understandable*, and *robust*.
- **Guidelines:** Under the principles are guidelines. The 12 guidelines provide the basic goals that authors should work toward in order to make content more accessible to users with different disabilities. The guidelines are not testable, but provide the framework and overall objectives to help authors understand the success criteria and better implement the techniques.
- **Success Criteria:** For each guideline, testable success criteria are provided to allow WCAG 2.0 to be used where requirements and conformance testing are necessary such as in design specification, purchasing, regulation and contractual agreements. In order to meet the needs of different groups and different situations, three levels of conformance are defined: A (lowest), AA, and AAA (highest).
- **Sufficient and Advisory Techniques:** For each of the *guidelines* and *success criteria* in the WCAG 2.0 document itself, the working group has also documented a wide variety of *techniques*. The techniques are informative and fall into two categories: those that are *sufficient* for meeting the success criteria and those that are *advisory*. The advisory techniques go beyond what is required by the individual success criteria and allow authors to better address the guidelines. Some advisory techniques address accessibility barriers that are not covered by the testable success criteria. Where common failures are known, these are also documented.

All of these layers of guidance (principles, guidelines, success criteria, and sufficient and advisory techniques) work together to provide guidance on how to make content more accessible.

WCAG 2.0 Guidelines

This paragraph describes the guidelines that authors should work toward in order to make content more accessible to users. These guidelines are organized under the four principles that provide the foundation for Web accessibility.

Principle 1: Perceivable

Information and user interface components must be presentable to users in ways they can perceive.

Guideline 1.1 Text Alternatives: Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, Braille, speech, symbols or simpler language.

1. All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. (Level A)
-
-

Guideline 1.2 Time-based Media: Provide alternatives for time-based media.

1. **Audio-only and Video-only (Prerecorded):** For prerecorded audio-only and prerecorded video-only media, an alternative for time-based media is provided that presents equivalent information for prerecorded audio-only (video-only) content. (Level A)
 2. **Captions (Prerecorded):** Captions are provided for all prerecorded audio content in synchronized media. (Level A)
 3. **Audio Description or Media Alternative (Prerecorded):** An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such. (Level A)
-
4. **Captions (Live):** Captions are provided for all live audio content in synchronized media. (Level AA)
 5. **Audio Description (Prerecorded):** Audio description is provided for all prerecorded video content in synchronized media. (Level AA)
-
6. **Sign Language (Prerecorded):** Sign language interpretation is provided for all prerecorded audio content in synchronized media. (Level AAA)
 7. **Extended Audio Description (Prerecorded):** Where pauses in foreground audio are insufficient to allow audio descriptions to convey the sense of the video, extended audio description is provided for all prerecorded video content in synchronized media. (Level AAA)
 8. **Media Alternative (Prerecorded):** An alternative for time-based media is provided for all prerecorded synchronized media and for all prerecorded video-only media. (Level AAA)
 9. **Audio-only (Live):** An alternative for time-based media that presents equivalent information for live audio-only content is provided. (Level AAA)
-
-

Guideline 1.3 Adaptable: Create content that can be presented in different ways (for example simpler layout) without losing information or structure.

1. **Info and Relationships:** Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)
 2. **Meaningful Sequence:** When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined. (Level A)
 3. **Sensory Characteristics:** Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound. (Level A)
-
-

Guideline 1.4 Distinguishable: Make it easier for users to see and hear content including separating foreground from background.

1. **Use of Color:** Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. (Level A)

2. *Audio Control: If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. (Level A)*

 3. *Contrast (Minimum): The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following (Level AA):*
 - *Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1. 2)*
 - *Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.*
 - *Logotypes: Text that is part of a logo or brand name has no minimum contrast requirement.*
 4. *Resize text: Except for captions and images of text, text can be resized without assistive technology up to 200% without loss of content or functionality. (Level AA)*
 5. *Images of Text: If the technologies being used can achieve the visual presentation, text is used to convey information rather than images. (Level AA)*
 - *Customizable: The image of text can be visually customized to the user's requirements;*
 - *Essential: A particular presentation of text is essential to the information being conveyed.*

 6. **Contrast (Enhanced): The visual presentation of text and images of text has a contrast ratio of at least 7:1, except for the following: (Level AAA)**
 - **Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 4.5:1;**
 - **Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.**
 - **Logotypes: Text that is part of a logo or brand name has no minimum contrast requirement.**
 7. **Low or No Background Audio: For prerecorded audio-only content that (1) contains primarily speech in the foreground, (2) is not an audio CAPTCHA or audio logo, and (3) is not vocalization intended to be primarily musical expression such as singing or rapping, at least one of the following is true: (Level AAA)**
 - **The audio does not contain background sounds.**
 - **The background sounds can be turned off.**
 - **20 dB: The background sounds are at least 20 decibels lower than the foreground speech content, with the exception of occasional sounds that last for only one or two seconds.**
 8. **Visual Presentation: For the visual presentation of blocks of text, a mechanism is available to achieve the following: (Level AAA)**
 - **The user can select Foreground and background colors.**
 - **Width is no more than 80 characters or glyphs (40 if CJK).**
 - **Text is not justified (aligned to both the left and the right margins).**
 - **Line spacing (leading) is at least space-and-a-half within paragraphs, and paragraph spacing is at least 1.5 times larger than the line spacing.**
 - **Text can be resized without assistive technology up to 200 percent in a way that does not require the user to scroll horizontally to read a line of text on a full-screen window.**
 9. **Images of Text (No Exception): Images of text are only used for pure decoration or where a particular presentation of text is essential to the information being conveyed. (Level AAA)**
-
-

Principle 2: Operable

User interface components and navigation must be operable.

Guideline 2.1 Keyboard Accessible: Make all functionality available from a keyboard.

1. Keyboard: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. (Level A)
 2. No Keyboard Trap: If keyboard focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away. (Level A)
-
3. Keyboard (No Exception): All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. (Level AAA)
-

Guideline 2.2 Enough Time: Provide users enough time to read and use content.

1. Timing Adjustable: For each time limit that is set by the content, at least one of the following is true: (Level A)
 - Turn off: The user is allowed to turn off the time limit before encountering it; or
 - Adjust: The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or
 - Extend: The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or
 - Real-time Exception: The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or
 - Essential Exception: The time limit is essential and extending it would invalidate the activity; or
 - 20 Hour Exception: The time limit is longer than 20 hours.
 2. Pause, Stop, Hide: For moving, blinking, scrolling, or auto-updating information, all of the following are true: (Level A)
 - Moving, blinking, scrolling: For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and
 - Auto-updating: For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential. (Level A)
-
3. Timing is not an essential part of the event or activity presented by the content, except for non-interactive synchronized media and real-time events. (Level AAA)
 4. Interruptions: Interruptions can be postponed or suppressed by the user, except interruptions involving an emergency. (Level AAA)
 5. Re-authenticating: When an authenticated session expires, the user can continue the activity without loss of data after re-authenticating. (Level AAA)
-

Guideline 2.3 Seizures: Do not design content in a way that is known to cause seizures.

1. Three Flashes or Below Threshold: Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds. (Level A)
-
2. Three Flashes: Web pages do not contain anything that flashes more than three times in any one-second period. (Level A)
-

Guideline 2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are.

1. Bypass Blocks: A mechanism is available to bypass blocks of content that are repeated on multiple Web pages. (Level A)
 2. Page Titled: Web pages have titles that describe topic or purpose. (Level A)
 3. Focus Order: If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability. (Level A)
 4. Link Purpose (In Context): The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general. (Level A)

 5. Multiple Ways: More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process. (Level AA)
 6. Headings and Labels: Headings and labels describe topic or purpose. (Level AA)
 7. Focus Visible: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. (Level AA)

 8. Location: Information about the user's location within a set of Web pages is available. (Level AAA)
 9. Link Purpose (Link Only): A mechanism is available to allow the purpose of each link to be identified from link text alone, except where the purpose of the link would be ambiguous to users in general. (Level AAA)
 10. Section Headings: Section headings are used to organize the content. (Level AAA)
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Principle 3: Understandable

Information and the operation of user interface must be understandable.

Guideline 3.1 Readable: Make text content readable and understandable.

1. Language of Page: The default human language of each Web page can be programmatically determined. (Level A)

 2. Language of Parts: The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text. (Level AA)

 3. Unusual Words: A mechanism is available for identifying specific definitions of words or phrases used in an unusual or restricted way, including idioms and jargon. (Level AAA)
 4. Abbreviations: A mechanism for identifying the expanded form or meaning of abbreviations is available. (Level AAA)
 5. Reading Level: When text requires reading ability more advanced than the lower secondary education level after removal of proper names and titles, supplemental content, or a version that does not require reading ability more advanced than the lower secondary education level, is available. (Level AAA)
 6. Pronunciation: A mechanism is available for identifying specific pronunciation of words where meaning of the words, in context, is ambiguous without knowing the pronunciation. (Level AAA)
-
-

Guideline 3.2 Predictable: Make Web pages appear and operate in predictable ways.

1. On Focus: When any component receives focus, it does not initiate a change of context. (Level A)
2. On Input: Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component. (Level A)

3. Consistent Navigation: Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless the user initiates a change. (Level AA)

4. Consistent Identification: Components that have the same functionality within a set of Web pages are identified consistently. (Level AA)
 5. Change on Request: Changes of context are initiated only by user request or a mechanism is available to turn off such changes. (Level AAA)
-
-

Guideline 3.3 Input Assistance: Help users avoid and correct mistakes.

1. Error Identification: If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text. (Level A)
 2. Labels or Instructions: Labels or instructions are provided when content requires user input. (Level A)
 3. Error Suggestion: If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content. (Level AA)
 4. Error Prevention (Legal, Financial, Data): For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true: (Level AA) 1) Reversible: Submissions are reversible. 2) Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. 3) Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.
 5. Help: Context-sensitive help is available. (Level AAA)
 6. Error Prevention (All): For Web pages that require the user to submit information, at least one of the following is true: (1) Reversible: Submissions are reversible. (2) Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. (3) Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. (Level AAA)
-
-

Principle 4: Robust

Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.

Guideline 4.1 Compatible: Maximize compatibility with current and future user agents, including assistive technologies.

1. Parsing: In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features. (Level A)
 2. Name, Role, Value: For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies. (Level A)
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APPENDIX - ECLAP metadata schema

In this appendix the current ECLAP metadata schema is reported.

The metadata schema is divided in the following parts:

- General information about the content
- Information about the digital resource
- Information on IPR
- GeoSpatial information about the resource
- Dublin Core metadata (DC and DCTERMS)

- Performing Arts metadata
- Taxonomy based classifications
- ECLAP Groups
- ECLAP Aggregations (Collections & Playlists)

General information

axoid

unique identifier identifying the content on the portal, the id is based on UUID identification

url

The url on the portal where the content is available it is of the form:

http://www.eclap.eu/drupal?q=home&axoid=<axoid>

nid

drupal node id identifier, id associated by drupal to the content.

Version

Version number of the content, it is incremented when an update is performed

InsertUpdateTime

Date and time when the content was uploaded or when it was updated. The date is in the format YYYY-MM-DDThh:mm:ss.

ProviderId

ECLAP provider acronym used to identify the provider

ProviderName

Complete name of the provider

DefaultMetadataLanguage

default language used for the description of the resource, it should be a 2 letter ISO language code.

Digital resource information

Format

The resource format it can be “audio, video, document, image, crossmedia, archive, tool, playlist, collection”

Type

Specifies better the resource format for crossmedia (html, flash) and document (document, epub, pdf, excel, slide, braille music)

Width

Width of the frame for image or video

Height

Height of the frame for image or video

Duration

Duration of audio or video resource in the form “hh:mm:ss.mm”

AvIMDVideo

Is “yes” if a medium definition video resource is available

AvlHDVideo

Is “yes” if a high definition video resource is available

Extension

The file extension for the digital resource.

Preview

Url used for the content preview, for video it is an animated gif.

AvlForPDA

Is “yes” if a version for WindowsMobile 6.5 has been produced

AvlForIPhone

Is “yes” if the content can be used on iPhone or in general on Smart Phones (iOS, Android, WindowsPhone7)

AvlForPC

Is “yes” if the content can be used on a Personal Computer (Windows/MAC/Linux)

IPR information

IsPublic

Is “yes” if the IPR model associated with the content is public

IPRTitle

The title given to the IPR model associated with the content

IPRDescription

The description given to the IPR model associated with the content

EuropeanaRightsUrl

The Europeana Url given to the IPR model associated with the content

LicenseUrl

The license url given to the IPR model associated with the content

GeoSpatial Information

This section can provide a set of GPS coordinates

Latitude

The decimal representation of the latitude

Longitude

The decimal representation of the longitude

Radius

The radius in meters of the area where the content is “active”

Performing arts metadata

In this section are reported the metadata specific for performing arts.

FirstPerformance Place

Name of the theatre or venue where the performance taken place for the first time.

Examples	“Théâtre des Bouffes du Nord”
Count (1, 0..1, 0..many, 1..many)	0..1
Notes	the first performance is the première, therefore its “place”, might not correspond with the place in which the show was recorded. For example: the opening night of “The Tragedy of Hamlet” directed by P. Brook might be held at: “Théâtre des Bouffes du Nord”, but what we are looking at on the ECLAP portal might be a video of the performance held months later - while the show was touring – at “The Globe Theatre”
Refinement of	EDM Place

FirstPerformance City

Name of the city where the first performance taken place.

Examples	“Paris”
Count (1, 0..1, 0..many, 1..many)	0..1
Notes	the first performance is the première, therefore its “City”, might not correspond with the city in which the show was recorded. For example: the opening night of “The Tragedy of Hamlet” directed by P. Brook might be held in: “Paris”, but what we are looking at on the ECLAP portal might be a video of the performance held months later - while the show was touring – in “London”
Refinement of	EDM Place

FirstPerformance Country

Name of the country where the first performance taken place

Examples	“France”
Count (1, 0..1, 0..many, 1..many)	0..1
Notes	the first performance is the première, therefore its “Country”, might not correspond with the country in which the show was recorded. For example: the opening night of “The Tragedy of Hamlet” directed by P. Brook might be held in: “France”, but what we are looking at on the ECLAP portal might be a video of the performance held months later - while the show was touring – in “England”.
Refinement of	EDM Place

FirstPerformance Date

Date of the first performance

Examples	“2000-11-20”
Count (1, 0..1, 0..many, 1..many)	0..1
Notes	the first performance is the première, therefore its “date”, might not correspond with the date in which the show was recorded. For example: the opening night of “The Tragedy of Hamlet” directed by P. Brook might be held in:

	“2000-11-20”, but what we are looking at on the ECLAP portal might be a video of the performance held months later, in “2001-04-05”
Refinement of	DCTerms.issued

Performance Place

Name of the theatre or venue where the shown performance taken place

Examples	“The Globe Theatre”
Count (1, 0..1, 0..many, 1..many)	0..1
Notes	the first performance is the première, therefore its “place”, might not correspond with the place in which the show was recorded. For example: the opening night of “The Tragedy of Hamlet” directed by P. Brook might be held at: “Théâtre des Bouffes du Nord”, but what we are looking at on the ECLAP portal might be a video of the performance held months later - while the show was touring – at “The Globe Theatre”
Refinement of	DCTerms.spatial? or EDM Place

Performance City

Name of the city where the shown performance taken place.

Examples	“London”
Count (1, 0..1, 0..many, 1..many)	0..1
Notes	the first performance is the première, therefore its “City”, might not correspond with the city in which the show was recorded. For example: the opening night of “The Tragedy of Hamlet” directed by P. Brook might be held in: “Paris”, but what we are looking at on the ECLAP portal might be a video of the performance held months later - while the show was touring – in “London”
Refinement of	DCTerms.spatial

Performance Country

Name of the country where the shown performance taken place

Examples	“England”
Count (1, 0..1, 0..many, 1..many)	0..1
Notes	the first performance is the première, therefore its “Country”, might not correspond with the country in which the show was recorded. For example: the opening night of “The Tragedy of Hamlet” directed by P. Brook might be held in: “France”, but what we are looking at on the ECLAP portal might be a video of the performance held months later - while the show was touring – in “England”.
Refinement of	DCTerms.spatial

Performance Date

Date of the shown performance

Examples	“2001-04-05”
Count	0..1

(1, 0..1, 0..many, 1..many)	
Notes	the first performance is the première, therefore its “date”, might not correspond with the date in which the show was recorded. For example: the opening night of “The Tragedy of Hamlet” directed by P. Brook might be held in: “2000-11-20”, but what we are looking at on the ECLAP portal might be a video of the performance held months later, in “2001-04-05”
Refinement of	DCTerms.issued

PerformingArtsGroup

Name of the theatre or dance company or musical group (if present)

Examples	“Momix”
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	None
Refinement of	DC.creator

PlotSummary

Summary of the plot

Examples	“Prince Hamlet mourns both his father's death and his mother, Queen Gertrude's remarriage to Claudius. The ghost of Hamlet's father appears to him and tells him that Claudius has poisoned him: Hamlet swears revenge, etc.”
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	None
Refinement of	DC.description

Cast

Name/Names of a member of the cast.

Examples	“Ryszard Cieślak, Rena Mirecka, Antoni Jahołkowski, Mieczysław Janowski, Maja Komorowska, Stanislaw Scierski”
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	Use this element only if the Professional elements cannot be used, as the case of a cast written in a single text that cannot be easily split in all the different professional people
Refinement of	DC.contributor

PerformersAndCrew

Name/Names of a performers and crew of a performance.

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	Use this element only if the Professional elements cannot be used, as the case of a performers written in a single text that cannot be easily split in all the different professional people
Refinement of	DC.contributor

Professional

A list of the people involved in the performance indicating which role each person had in the performance (eg. Actor, director, set designer etc.). It includes all the information listed in a playbill, such as the artistic cast of the show and the technicians, but also the names of the troupe which recorded the performance (eg. Cameraman, Director of Photography, etc.). Possible roles are:

- Acrobat
- Actor
- Adaptator
- Architect
- Assistant_director
- Casting
- Choreographer
- Clown
- Composer
- Concept_originator
- Costume_designer
- Critic
- Dancer
- Director
- Dramaturge
- Hairdresser
- Light_designer
- Make-up_artist
- Marketing_manager
- Mask_designer
- Mime
- Musician
- Patron
- Performer
- Playwright
- Producer
- Puppet_designer
- Scenographer
- Seamster
- Set_builder
- Set_designer
- Singer
- Sound_designer
- Stage_manager
- Technician
- Theatre_manager
- Theoretician
- Translator
- Other

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	None
Refinement of	DC.contributor

Object

Objects used in the performance, (i.e. Sets, Costumes, Props, Programs, Prints, Drawings,...)

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	
Refinement of	DC.description

Genre

The genre in which the work can be categorized (i.e. Ballet, Butho, Commedia dell'Arte, Drama, Feast Flamenco, etc)

Examples	“Tragedy”
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	we will work on a shared vocabulary for this
Refinement of	DC.subject

PerformingArtType

Type of performing art present in the content.

Examples	“theatre”
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	identified in WP4 as cinema, dance, music, theatre, performance art
Refinement of	DC.type

HistoricalPeriod

Historical period the topic of the resource refers to.

Examples	“XV century”
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	None
Refinement of	DCTerms.temporal

ArtisticMovementAndActingStyle

Artistic movement and acting styles in which the work can be categorized (e.g. Classicism, Dada, Epic, Expressionism, etc.)

Examples	“Futurism”
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	we will work on a shared vocabulary for this
Refinement of	DC.type

ManagementAndOrganization

management and organization...

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	Deprecated

RecordingDate

Date of creation of the digital object,

Examples	...
-----------------	-----

Count (1, 0..1, 0..many, 1..many)	0..many
Notes	Use this element in case what it is recorded is not a public performance (e.g. an interview) otherwise use the Performance Date
Refinement of	DC.date

PersonRecord

Credits for the audio or video recording

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	Deprecated, use Professional elements
Refinement of	DC.contributor

PieceRecord

Credits for the text or image. The meaning of this field is a bit complex.... The text we are dealing with in this field is the script of the play. We intend this field to be filled out with the original title of the performance (eg. Medea) - which might differ from the title of the item (eg. Photo of Medea_2) - and with the name of the person who wrote the script. The records pertaining to the novel or the literary work which inspired the script should be mapped in the field "reference" instead; the field "reference" should also include the title of the novel and its author(s).

Examples	Title: Il Principe Costante; scenario: Jerzy Grotoski; adaptation: Julius Slowacki
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	None
Refinement of	DCTerms.references

ProductionRecord

Credits of the production team. the name of the producer(s) and of other people involved in the organization.

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Notes	Deprecaed, use the Professional element with the appropriate role
Refinement of	DC.contributor

DC – dublin core metadata

This section contains information about the dublin core metadata to be associated with the content to be ingested:

title

The name given to the resource. Typically, a Title will be a name by which the resource is formally known. The title of the original analog or born digital object. The title should be significant.

Examples	“Romeo and Juliet”
Count (1, 0..1, 0..many, 1..many)	1..many
Language	Mandatory
Notes	None

creator

An entity primarily responsible for making the content of the resource. Examples of a Creator include a person, an organization, or a service. Typically the name of the Creator should be used to indicate the entity. In ECLAP, the name of Partner uploading is kept automatically in a separate field. This is the name of the creator of the original analog or born digital object. . This field should be used only to indicate the creator of the work of art (usually the director for a performance, the author if we are dealing with a book, the composer if we are uploading a script and so on). Often, in devised work, the creator might be the whole company or the actors might collaborate with the director. Nevertheless I guess we need to set a rule to be applied to every situation, so that I would consider actors and other artistic figures as contributors and eventually explain in the field "description" if their role as creator of the performance was capital.

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Language	Optional
Notes	None

subject

The topic of the content of the resource. Typically, a Subject will be expressed as keywords or key phrases or classification codes that describe the topic of the resource. Recommended best practice is to select a value from your own classification scheme. This is the subject of the original analog or born digital object.

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Language	Mandatory
Notes	None

description

An account of the content of the resource. Description may include but is not limited to: an abstract, table of contents, reference to a graphical representation of content or a free-text account of the content. A description of the original analog or born digital object.

Examples	...
Count (1, 0..1, 0..many, 1..many)	0..many
Language	Mandatory
Notes	None

publisher

The entity responsible for making the resource available. Examples of a Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity. In ECLAP, the name of Partner that has provided the content is automatically tracked and stored in a different field. The name of the publisher of the original analog or born digital object.

Examples	In case of a performance review the name of the newspaper where the review was published
Count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
Notes	None

contributor

An entity responsible for making contributions to the content of the resource. Examples of a Contributor include a person, an organization or a service. Typically, the name of a Contributor should be used to

indicate the entity. In most cases, the authors of a document are listed here. The name of contributors to the original analog or born digital object. This could be a person, an organisation or a service.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

date

A date associated with an event in the life cycle of the resource. Typically, Date will be associated with the creation or availability of the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [Date and Time Formats, W3C Note, <http://www.w3.org/TR/NOTE-datetime>] and follows the YYYY-MM-DD format. If the full date is unknown, month and year (YYYY-MM) or just year (YYYY) may be used. Many other schemes are possible, but if used, they may not be easily interpreted by users or software. Use for a significant date in the life of the original analog or born digital object. Use dcterms:temporal (or dc:coverage) if the date is associated with the topic of the resource.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

type

The nature or genre of the content of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary (for example, the DCMIType vocabulary <http://dublincore.org/documents/dcmi-type-vocabulary/>). To describe the physical or digital manifestation of the resource, use the FORMAT element. The type of the original analog or born digital object as recorded by the content holder, this element typically includes values such as photograph, painting, sculpture etc.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Mandatory
notes	None

format

The physical or digital manifestation of the resource. Typically, Format may include the media-type or dimensions of the resource. Examples of dimensions include size and duration. Format may be used to determine the software, hardware or other equipment needed to display or operate the resource. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [<http://www.iana.org/assignments/media-types/>] defining computer media formats). The unqualified element includes file format, physical medium or dimensions of the original and/or digital object. Use this element for the file format of the digital object or born digital originals. Internet Media Types [MIME] are highly recommended (<http://www.iana.org/assignments/media-types/>). Use of the more specific elements dcterms:extent (dimensions) and dcterms:medium (physical medium) is preferred where appropriate.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

identifier

An unambiguous reference to the resource within a given context. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Examples of formal identification systems include the Uniform Resource Identifier (URI) (including the Uniform Resource Locator (URL), the Digital Object Identifier (DOI) and the International Standard Book Number (ISBN). This is the identifier for the original analog or born digital object.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

source

A Reference to a resource from which the present resource is derived. The present resource may be derived from the Source resource in whole or part. Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. In general, include in this area information about a resource that is related intellectually to the described resource but does not fit easily into a Relation element. In ECLAP, this value should be the URL or the filename of the original resource. The file uploaded and the URL provided in the upload form are tracked automatically in different fields. This element can be used for several different types of source that are related to the object (such as reference sources). The name of the content holder should no longer be recorded here as a new element.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

language

A language of the resource. Use ISO 639 two letter language tags (it, en, fr, de, el, ...) Use this element for the language of textual objects and also where there is a language aspect to other objects e.g. sound recordings, posters, newspapers etc). If there is no language aspect to the digital object (e.g. a photograph), please ignore this element. This element is not for the language of the metadata of a resource, which may be described in xml:lang attribute. In case the digital object presents more languages, use more language elements, one for each language.

examples	en, it, fr, de, el, hu, es, ca
count (1, 0..1, 0..many, 1..many)	0..many
language	No
notes	None

relation

A reference to a related resource. Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. This is information about resources that are related to the original analog or born digital object.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

coverage

The extent or scope of the content of the resource. Coverage will typically include spatial location (a place name or geographic co-ordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [Getty Thesaurus of Geographic Names, <http://www.getty.edu/research/tools/vocabulary/tgn/>]). Where appropriate, named places or time periods should be used in preference to numeric identifiers such as sets of co-ordinates or date ranges. Coverage is the unqualified spatial or temporal coverage of the original analog or born digital object. Use of the more specific dcterms:spatial and dcterms:temporal elements is preferred where possible.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

rights

Information about rights held in and over the resource. Typically a Rights element will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. If the rights element is absent, no assumptions can be made about the status of these and other rights with respect to the resource. This is a free text element and should be used for information about intellectual property rights or access arrangements for the digital object that is additional to the controlled value provided in europeana:rights.

examples	“All rights reserved”
count (1, 0..1, 0..many, 1..many)	0..many
language	Mandatory
notes	None

DCTERMS – dublin core terms metadata

In this section are reported the dcterms elements that are supported, that are the ones supported by Europeana.

alternative

An alternative name given to the resource. Typically, an Alternative title will be a name by which the resource is alternatively referred and it is different from the formal Title. Any alternative title by which the original analog or born digital object is known. This can include abbreviations or translations of the title.

Examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Mandatory
notes	None

tableOfContents

A list of subunits of the resource. A list of the units within the original analog or born digital resource object.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Mandatory
notes	None

created

Date of creation of the resource. This is the date when the original analog or born digital object was created.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

issued

Date of formal issuance (e.g., publication) of the resource. The date when the original analog or born digital object was issued or published.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

extent

The size or duration of the resource. Refinement of format. Size or duration of the digital object and the original object may be recorded.

examples	“30 pages”, “01:15:20”
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

medium

The material or physical carrier of the resource. Refinement of dc:format.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

isVersionOf

A related resource of which the described resource is a version, edition, or adaptation. Changes in version imply substantive changes in content rather than differences in format. Refinement of dc:relation. See also dcterms:hasVersion.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

hasVersion

A related resource that is a version, edition, or adaptation of the described resource. Changes in version imply substantive changes in content rather than differences in format. Refinement of dc:relation. See also dcterms:isVersionOf. Use dcterms:hasFormat for differences in format.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional

notes	None
--------------	------

isReplacedBy

A related resource that supplants, displaces, or supersedes the described resource.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

replaces

A related resource that is supplanted, displaced, or superseded by the described resource.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

isRequiredBy

A related resource that requires the described resource to support its function, delivery, or coherence.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

requires

A related resource that is required by the described resource to support its function, delivery, or coherence.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

isPartOf

Is Part Of - A related resource in which the described resource is physically or logically included. Use for the name of the collection which the digital object is part of.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

hasPart

A related resource that is included either physically or logically in the described resource. Refinement of dc:relation. See also dcterms:isPartOf.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

isReferencedBy

Is Referenced By: A related resource that references, cites, or otherwise points to the described resource.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

references

A related resource that is referenced, cited, or otherwise pointed to by the described resource.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

isFormatOf

A related resource that is substantially the same as the described resource, but in another format. Refinement of dc:relation. See also dcterms:hasFormat.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

hasFormat

A related resource that is substantially the same as the pre-existing described resource, but in another format. Refinement of dc:relation. See also dcterms:isFormatOf. Use dcterms:hasVersion for differences in version.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

conformsTo

An established standard to which the described resource conforms. Refinement of dc:relation. The names of standards that the digital object (digitized or born digital) complies with and which are useful for the use of the object.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

spatial

Spatial characteristics of the resource. Information about the spatial characteristics of the original analog or born digital object, i.e. what the resource represents or depicts in terms of space. This may be a named place, a location, a spatial coordinate or a named administrative entity.

examples	...
count	0..many

(1, 0..1, 0..many, 1..many)	
language	Optional
notes	None

temporal

Temporal characteristics of the resource. The temporal characteristics of the original analog or born digital object i.e. what the resource is about or depicts in terms of time. This may be a period, date or date range.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

provenance

A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity, and interpretation. The statement may include a description of any changes successive custodians made to the resource. This relates to the ownership and custody of the original analog or born digital object.

examples	...
count (1, 0..1, 0..many, 1..many)	0..many
language	Optional
notes	None

Taxonomy Classification

For each drupal taxonomy term associated with the content it is reported:

label

The label of the term in each available language

id

attribute with the drupal id for the term

root

attribute with the id of the root term where the term is a descendent.

vid

attribute with the id of the vocabulary of the term

path

attribute with the term ids separated by spaces from the root to the term (e.g. “664 668”)

ECLAP Groups

For each drupal og group associated with the content it is reported:

label

the label of the group

id

attribute with the id of the group

ECLAP Aggregations

If the content is a playlist or a collection are reported the set of axoids that belong to the playlist/collection.

For playlists more information is provided for each content in the playlist:

For audio and video:

startTime

attribute with the time instant in seconds from the audio/video start representing the time in the resource to start resource Audio/Visual rendering, if omitted the resource start time is intended

endTime

attribute with the time instant in seconds from the audio/video start representing the time in the resource to end the resource Audio/Visual rendering, if omitted the resource end time is intended

For images:

duration

the duration in seconds of the image display

5 Appendix ECLAP recently SOLVED problems

The texts are mainly reported as they were written and **DO NOT REFER to the portal in the present version** but to the version at the time of testing.

- *The home page of the user is rigid and the social graph is not needed, If the options like social graph, calendar etc. are necessary it should be very easy to disable them. The home page of the person should be more personally shaped.*
 - SOLVED: The Home Page of the user can be fully customized with the order of segments, suggestions, content lists, etc., to be presented and with the possibility of closing them, including the closure of the Social Graph. Most of the users appreciated the Social Graph, so that we left them the possibility to close it on/off. The selection and the movement of section is very easy and drag and drop. The configuration is remembered from one section to another and from one computer to another.
 - The users can also define which block on the right side they would like to have. The selection can be performed on their profile.
- *Animated icons for video are distracting, too many impulses when enter the portal: too many things move and change giving the impression of chaos.*
 - SOLVED, static icons are now the only available. The animated icons for videos have been removed.
- *See preferably with larger font size for a better reading experience (for example for seeing-impaired visitors) and less distracting elements,*
 - SOLVED: the whole portal page can be scaled up and down in fonts by pressing button Ctrl and the SCROLL. ECLAP is fully compliant on this directive of accessibility and compatibility with browsers.
- *the address of content items/pages in the address bar of the browser shows lengthy names. Is there a way to create a field in the meta data editor to bypass this method and create the opportunity to overrule this name*
 - SOLVED: a short link can be taken from the metadata block on right side in the form: <http://www.eclap.eu/92987>
 - ALSO: a short link to content of different kind can be in the form of <http://www.eclap.eu/urn%3Aaxmedis%3A00000%3Aobj%3Ab9076a6c-23f1-42d6-af73-9b6f97599eeb>
- *The registration process seems to be too complex, the captcha not really easy to understand, the fact that the registration is performed in two step and there is the need of clicking in the received email to confirm the registration is not clear.*
 - SOLVED: the captcha has been simplified, larger fonts and easier to be read.

- COMMENT: the registration process is going to be simplified, with better and more evident comments about the steps to be performed, and the fact that the user has to respond to an email to confirm the registration process. All the comments and alerts have to be more visible and clear for the users.
- In most cases, important messages to the users are reported in normal text on top of the central page. They are not much visible to the user that need to be informed of relevant action that he has to do or that have been done successfully for him.
 - SOLVED: a new modality of messaging to the user from the portal has been created. BLUE Rounded boxes are shown to inform the user and help in getting the message immediately. They automatically disappear when context is changed.
- *The presentation of metadata elements needs to be reconsidered, turning to a focus on the few most important ones. Suggestion: skip the different tabs, chose two presentations: an simple, elementary one plus a complete overview of all metadata together.*
 - SOLVED they have been restructured according to the indication of users
- *The search capabilities for content sometime seems that one searched and the results are not shown.*
 - SOLVED: now every time one perform a query from the frontal text box or by using a preformed query (such as, clicking on featured, etc.) the page is aligned/scroll to show precisely the point in which the search results are shown.
- *the logos on the home page are making a very bad impression. They should be hidden in ABOUT or PARTNERS section.*
 - SOLVED. The logo of the partners are: <http://www.eclap.eu/3578>
- *The Automatically Translated texts should be only shown in English. Multilinguism needs to be improved or removed from the user interface and kept in the infrastructural depths of the search functionality.*
 - SOLVED, since all the texts in the user interface has been validated by language experts.
 - SOLVED, the query expansion generate the translations to increase the precision and recall of query performed
- *Make it easy possible to separate trusted content/metadata from user generated content/metadata.*
 - SOLVED, at the moment we do not have any user generated content presently. All the content has been provided by qualified content providers. All the user generated content provided would be assessed and passed to the portal only if approved.
- *All logos should be moved to information about project/partners or down to the bottom of the page. The worse is that all logos are visible not only on the main page but also when i work directly with content material. It makes my work as researcher very inconvenient.*
 - SOLVED: the partner logo have been already moved.
 - The remaining logos are going to be moved on the bottom. We cannot remove all of them since the logo of Europeana, European Commission and ICT are mandatory for all EC projects. Moreover, we have also some logo as credits to avoid paying licensing.
- *The results of the query sometime seems to the wrong. For instance if I search in the frontal search box by wiring: Alberto Sordi. The results obtained contain also record that do not perfectly match.*
 - COMMENT: this is correct since when you write two words Alberto Sordi the system works like Google. This means that first you will get record with both keywords Alberto and Sordi, then those that contains only Alberto and only Sordi, then those that contains similar words, such as: Albero, Sardi, Surdi, Aleberto, etc... for a total of more than 6000 results. If you would like to search for a perfect match, please write Alberto AND Sordi, thus obtaining only 1600 records now, or even less if you search for the precise string match "Alberto Sordi".
- *The interface of the portal is too heavy and cluttered, clean up, too match functionality which sometimes makes it not user friendly*
 - COMMENT: we hope to have solved it. The number of menu sub items has been strongly reducing removing duplications and the number of functionalities exposed at the first level into the menu. Those that have been removed from the menu items are now accessible only in the contextual menus.

- *rich content & meta/data editor for content owners, although a quick and extended mode would improve and simplify/fasten uploading experiences. Too many functionalities presented at once: the drop-down menus on the home page alone contain more than 42(!!!) options. Most people will get lost on ECLAP immediately.*
 - COMMENT: try the fast upload interface. <http://www.eclap.eu/drupal/?q=ugc/fastupload>
- *black and orange background of ECLAP portal.*
 - COMMENT: the colours have been identified by a large sondage. Who participated selected the shape and the combination of colours among 8 different solutions. A new round of a sondage would be accessible for the next renovation.
- *The time to see passing content from ECLAP to Europeana is too high.*
 - COMMENT: it does not depend on ECLAP. Europeana is taking the content once per month. So that it may depend on the day in which you provide the content.
- *MyStoryPlayer you cannot edit your annotations. You need to delete them and then start over what makes work more difficult.*
 - SOLVED: you can delete your annotations, you can save your experiences: <http://www.eclap.eu/3748>
- *The presentation of the collection content needs to be separated from other content, like project documents. In the structure and handling of documents a clear distinction should be made between heritage collection files and project files. This will improve the search functionality and will result in a better match for users only searching for collection content and not management files.*
 - COMMENT: this has been considered a strong fact from other users. Some of the project content has been also requested by the EC to be posted on Europeana.
- *The institutions and workgroups are shown as the same thing when looking at groups. It's really hard to find your way when you have all groups mixed up and you don't know the difference as a person from outside the project.*
 - SOLVED: the groups have been divided in two kinds: thematic and content providers, the users can see those list on distinct right side blocks.
- *The splash page is confusing and distracting, in the end it will not result in happy users. Users (new users we guess) should land on a nice, clean starting page with some visual entry points to the ECLAP collections, in which they can also see there is a possibility to register and interact with other performing art lovers.*
 - COMMENT: if you are a new user, from the splash, you have the possibility of selecting one of the 5 most relevant issues to understand more about ECLAP. Among them also the promotional video of ECLAP has been placed, that give you an overview of ECLAP aims. It is strongly selected.
 - COMMENT: if you are a returning user, and if you saved the user name and password you land directly on your customizable personalized home page for a personal experience and work on your dedicated and preferred views.

6 Bibliography

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