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Exploring Europe's Television Heritage in Changing Contexts

D4.5 – The Interoperability Guidelines

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[1] OJ L 79, 24.3.2005, p. 1.

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1. SCOPE

This document outlines the final metadata elements of EUscreen and how are mapped in EBUcore. IT also provides short intorductions to Europeana Data Model (EDM) and EBUcore. Finally, we present a visual representation of the mapping of EDM to EBUcore.

The document below is divided into five sections:

1. EUscreen Common Metadata Elements
2. Europeana Data Model
3. EBUcore model
4. EDM to EBUcore
5. Appendix: XSLT output

2. FINAL EUSCREEN COMMON METADATA ELEMENTS

The following are the list of elements (mandatory and optional) which form the final EUscreen Common Metadata Scheme based on the EBUcore schema. Each element will include an explanation of the information to be contained and in most instances examples of potential information are provided. The final mapping towards the VideoActive schema and the EBUcore schema is also provided for all of the elements.

Name	**Identifier**
Cardinality	Unique per item
Requirement	Mandatory
Definition	A unique, unambiguous reference to the item within the EUscreen repository (automatically assigned by the ingestion system)
Format	Free text
VA mapping	Identifier
EBUCore mapping	/ebucore:coreMetadataType/ebucore:identifier/dc:identifier and /ebucore:coreMetadataType/ebucore:identifier @typeLabel = “main” /ebucore:coreMetadataType/ebucore:identifier @formatLabel = “EUscreen”
Reference data	n.a.
Examples	Identifier: 'EUS_TVC002745'

Name	**Material Type**
Cardinality	Unique per item
Requirement	Mandatory
Definition	The nature or type of the item

Format	Controlled vocabulary
VA mapping	materialType
EBUCore mapping	/ebucore:coreMetadataType/ebucore:format/dc:format
Reference data	MaterialTypeList.html
Examples	Material Type: 'Video' Material Type: 'Still'

Name	**Title**
Cardinality	Unique per item
Requirement	Mandatory
Definition	A name given to the item in the provider language (the title of a specific episode (if in a series), the title of a programme, the subject of a photo, etc.). The Title is the name by which an item is formally known and that everyone should use to refer to or search for that particular item. If the item has no proper title then an assigned title needs to be defined.
Format	Free text
VA mapping	Title or episodeTitle
EBUCore mapping	/ebucore:coreMetadataType/ebucore:title/dc:title
Reference data	n.a.
Examples	Title: ‘ACHTER HET NIEUWS’ Title: ‘Ritorno alla mia valle’

Name	**Title in English**
Cardinality	Unique per item
Requirement	Mandatory
Definition	The title of the programme/episode/photo in English (it could be the same as the provider 'Title').
Format	Free text
VA mapping	EnglishProgramme Title or EnglishEpisodeTitle
EBUCore mapping	/ebucore:coreMetadataType/ebucore:title/dc:title /ebucore:coreMetadataType/ebucore:title/dc:title@xml:lang=”en”
Reference data	n.a.
Examples	Title in English: ‘Behind the news’ Title in English: ‘Back to my valley’

Name	**Series Title**
Cardinality	Unique per item

Requirement	Optional
Definition	The title of the series in the content provider language.
Format	Free text
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:alternativeTitle/dc:title and /ebucore:coreMetadataType/ebucore:alternativeTitle @typeLabel = “Series”
Reference data	n.a.
Examples	Series Title: 'Lost' Series Title: 'I Griffin'

Name	**Series Title in English**
Cardinality	Unique per item
Requirement	Optional (Mandatory if 'Series Title' is present)
Definition	The title of the series in English (it could be the same as the 'Series Title' if translation is inappropriate – for example: ‘Wochenschau’).
Format	Free text
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:alternativeTitle/dc:title@xml:lang=”en” /ebucore:coreMetadataType/ebucore:alternativeTitle @typeLabel = “Series Title in English”
Reference data	n.a.
Examples	Series Title in English: 'Lost' Series Title in English: 'Family Guy'

Name	**Clip Title**
Cardinality	Unique per item
Requirement	Optional
Definition	The title assigned to a clip extracted from a programme/episode in the provider language
Format	Free text
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:title/dc:title /ebucore:coreMetadataType/ebucore:type/ebucore:object@typeLabel=”clip”
Reference data	n.a.
Examples	Clip Title: ‘People in the streets during Christmas holidays’ Clip Title: ‘Il Papa apre la Porta Santa’

Name	**Summary**

Cardinality	Unique per item
Requirement	Mandatory
Definition	Short description of content in provider language to give an idea or sense of the item. This should be a maximum of two lines of text.
Format	Free text
VA mapping	abstract
EBUCore mapping	/ebucore:coreMetadataType/ebucore:description/dc:description and /ebucore:coreMetadataType/ebucore:description @typeLabel = “Summary”
Reference data	n.a.
Examples	Summary: ‘Amb motiu de la tancada d'uns 300 immigrants "sense papers" en una església de Barcelona, per demanar que l'administració doni resposta a les peticions de legalització’

Name	**Summary in English**
Cardinality	Unique per item
Requirement	Mandatory
Definition	Short summary of the content of the item in English language.
Format	Free text
VA mapping	englishAbstract
EBUCore mapping	/ebucore:coreMetadataType/ebucore:description/dc:description and /ebucore:coreMetadataType/ebucore:description/dc:description@xml:lang=”en” /ebucore:coreMetadataType/ebucore:description @typeLabel = “English summary”
Reference data	n.a.
Examples	Summary in English: ‘300 illegal immigrants stage a sit-in at a Barcelona church to demand a response from the government to their requests for residence and work permits.’

Name	**Extended description**
Cardinality	Unique per item
Requirement	Optional
Definition	Long description of item content that may include: individual programme description, anecdotal interpretations, shot lists or transcriptions. It could be in provider language or in English.
Format	Free text
VA mapping	description
EBUCore mapping	/ebucore:coreMetadataType/ebucore:description/dc:description and /ebucore:coreMetadataType/ebucore:description @typeLabel = “extended description”
Reference data	n.a.

Examples	

Name	**Local keywords**
Cardinality	Multiple
Requirement	Optional
Definition	Keywords used internally by the content provider for classifying the intellectual content of the item. Keywords are usually expressed in the local language of the content provider. Important note: use the field “Geographical Coverage” for names of places (if they’re normalised), and the field “Contributor” for names of persons responsible for the realisation of the described item.
Format	Free text
VA mapping	subject
EBUCore mapping	/ebucore:coreMetadataType/ebucore:subject/dc:subject and /ebucore:coreMetadataType/ebucore:subject @typeLabel = 'keywords'
Reference data	n.a.
Examples	Local keywords: ‘Piana del Fucino | Ingegneria idraulica | industria energetica | agricoltura | industria alimentare | allevamento di bovini | fiere ed esposizioni’

Name	**Thesaurus terms**
Cardinality	Multiple
Requirement	Mandatory
Definition	Keywords used to classify the item. Values are taken from the IPTC thesaurus integrated in the EUscreen annotation tool.
Format	Controlled vocabulary
VA mapping	keywords
EBUCore mapping	/ebucore:coreMetadataType/ebucore:subject/dc:subject and/or /ebucore:coreMetadataType/ebucore:subject/ebucore:subjectCode (termId) and /ebucore:coreMetadataType/ebucore:subject @typeLabel = 'IPTC subject'
Reference data	VideoActive IPTC thesaurus
Examples	Thesaurus terms: ‘Lifestyle & Leisure, Eating habits, Restaurants, Environmental Issues’

Name	**Geographical Coverage**
Cardinality	Multiple
Requirement	Optional
Definition	The spatial topic of the item (values are taken from IPTC or ISO thesaurus integrated in the annotation tool).
Format	Controlled vocabulary
VA mapping	coverageSpatial

EBUCore mapping	/ebucore:coreMetadataType/ebucore:coverage/ebucore:spatial /ebucore:location/ebucore:name @typeLabel (e.g. country or city) /ebucore:coreMetadataType/ebucore:coverage/ebucore:spatial/ebucore/location /ebucore:name
Reference data	IPTC or ISO thesaurus
Examples	Geographical coverage: 'Italy' Geographical coverage: 'Barcelona, Spain'

Name	**Genre**
Cardinality	Multiple
Requirement	Mandatory
Definition	Information about the genre of the resource (defined in EUscreen)
Format	Controlled vocabulary
VA mapping	Classification
EBUCore mapping	/ebucore:coreMetadataType/ebucore:type/genre
Reference data	genrelist.html
Examples	Genre: ‘News’ Genre: ‘Drama/Fiction’

Name	**Topic**
Cardinality	Unique per item
Requirement	Mandatory
Definition	Information about the topic of the resource (defined in EUscreen, this will include 14 Historical Topics, 2 Comparative Virtual Exhibitions and 1 Content Provider Virtual Exhibition). Please assign each item to ONE historical topic (or virtual exhibition) ONLY.
Format	Controlled vocabulary
VA mapping	topic
EBUCore mapping	/ebucore:coreMetadataType/ebucore:subject/dc:subject and /ebucore:coreMetadataType/ebucore:subject @typeLabel = 'topic'
Reference data	topiclist.html
Examples	Topic: ‘Lifestyle and consumerism’ Topic: ‘Education’

Name	**Provider**
Cardinality	Unique per item
Requirement	Mandatory
Definition	The name of the content provider for the given item. It will be automatically assigned by the EUscreen import and annotation tool.

Format	Controlled vocabulary
VA mapping	creator
EBUCore mapping	/ebucore:ebuCoreMain/ebucore:coreMetadata/ebucore:creator/ebucore: contactDetails/ebucore:name ebucore:name and ebucore:role@typeLabel= “Publisher”
Reference data	ContentProviders.html
Examples	Provider: 'Cinecittà Luce' Provider: 'BBC'

Name	**Publisher/Broadcaster**
Cardinality	Unique per item
Requirement	Mandatory
Definition	The name of the entity primarily responsible for making the item available to the public (through broadcasting, publishing and other modes of distribution). It could be the same of 'Provider'.
Format	Free text
VA mapping	publisher
EBUCore mapping	/ebucore:ebuCoreMain/ebucore:coreMetadata/ebucore:creator/ebucore: contactDetails/ebucore:name ebucore:name ebucore:role@typeLabel=”Broadcaster”
Reference data	n.a.
Examples	Publisher/Broadcaster: 'RAI'

Name	**First Broadcast channel**
Cardinality	Unique per item
Requirement	Optional
Definition	The channel that originally broadcast the item.
Format	Free text
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:publicationHistory/ ebucore:firstTransmissionChannel
Reference data	n.a.
Examples	First Broadcast channel: “BBC 2”

Name	**Broadcast date**
Cardinality	Unique per item
Requirement	Mandatory (unless non-broadcast material, if so ‘Production year’ should be included)

Definition	The first known date the item was broadcasted/transmitted.
Format	dd/mm/yyyy
VA mapping	dateTransmitted
EBUCore mapping	/ebucore:coreMetadataType/ebucore:publicationHistory/ ebucore:firstTransmissionDateTime
Reference data	n.a.
Examples	Broadcast date: 20/11/1975

Name	**Production year**
Cardinality	Unique per item
Requirement	Mandatory (if non-broadcast material)
Definition	The year the item was created (produced)
Format	YYYY
VA mapping	yearCreated
EBUCore mapping	/ebucore:coreMetadataType/ebucore:date/ebucore:created/@startYear
Reference data	n.a.
Examples	Production year: “1982”

Name	**Country of production**
Cardinality	Multiple
Requirement	Optional
Definition	The country where the item was produced
Format	ISO country codes (ISO 3166-1)
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:description/dc:description and /ebucore:coreMetadataType/ebucore:description/dc:description@xml:lang=”en” /ebucore:coreMetadataType/ebucore:description @typeLabel = “Country of Production”
Reference data	http://www.iso.ch/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html
Examples	Country of production: “BE” Country of production: “GR”

Name	**Original identifier**
Cardinality	Unique per item
Requirement	Mandatory
Definition	A unique, unambiguous reference to the item within the source archive (content provider internal identifier)

Format	Free text
VA mapping	Identifier
EBUCore mapping	/ebucore:coreMetadataType/ebucore:identifier/dc:identifier and /ebucore:coreMetadataType/ebucore:identifier @typeLabel = “Original”
Reference data	n.a.
Examples	Identifier: 'D0002745'

Name	**IPR restrictions**
Cardinality	Unique per item
Requirement	Mandatory
Definition	Statement about the presence of IPR restrictions in place on the item
Format	Controlled vocabulary (true|false)
VA mapping	Ipr
EBUCore mapping	/ebucore:ebuCoreMain/ebucore:coreMetadata/ebucore:rights/ebucore: rightsClearanceFlag (true -> IPR issues cleared)
Reference data	n.a.
Examples	IPR restrictions: 'true'

Name	**Rights terms and conditions**
Cardinality	Unique per item
Requirement	Mandatory
Definition	Information about rights held in and over the item
Format	Free text
VA mapping	Rights
EBUCore mapping	/ebucore:coreMetadataType/ebucore:rights/dc:rights
Reference data	n.a.
Examples	Rights terms and conditions: 'Copyright limited to United Kingdom satellite broadcast delivery' Rights terms and conditions: ‘Copyright owner of this material is the Hellenic National Audiovisual Archive (HeNAA). For further inquiries please e-mail to info@avarchive.gr’

Name	**Item type**
Cardinality	Unique per item
Requirement	Mandatory

Definition	Information about the type of the item
Format	Controlled vocabulary (whole | part/extract)
VA mapping	assetType
EBUCore mapping	/ebucore:coreMetadataType/ebucore:type/objectType@typeLabel
Reference data	n.a.
Examples	Item type: 'part/extract'

Name	**Item duration**
Cardinality	Unique per item
Requirement	Mandatory
Definition	Time-based duration (extent) of the item
Format	hh:mm:ss
VA mapping	assetTime
EBUCore mapping	/ebucore:coreMetadataType/ebucore:format/ebucore:duration/timeCode or /ebucore:coreMetadataType/ebucore:format/ebucore:duration/normalPlayTime
Reference data	n.a.
Examples	Item duration: '01:13:45'

Name	**Item colour**
Cardinality	Unique per item
Requirement	Optional
Definition	Information about colour reproduction of the item
Format	Controlled vocabulary
VA mapping	assetColour
EBUCore mapping	/ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat/ebucore:videoTechnicalAttributeString /ebucore:coreMetadataType/ebucore:format/ebucore:videoFormat/ebucore:videoTechnicalAttributeString@typeLabel = 'colour type'
Reference data	colourtypes.html
Examples	Item colour: 'Black & White'

Name	**Item sound**
Cardinality	Unique per item
Requirement	Optional
Definition	Information about the audio reproduction of the item
Format	Controlled vocabulary

VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:format/ebucore:audioFormat/ audiotechnicalAttributeString /ebucore:coreMetadataType/ebucore:format/ebucore:audioFormat/ audiotechnicalAttributeString @typeLabel ='audio type'
Reference data	audiotypes.html
Examples	Item sound: 'mute'

Name	**Aspect ratio**
Cardinality	Unique per item
Requirement	Optional
Definition	Aspect ratio of the item
Format	Controlled vocabulary
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:format/ebucore:aspectRatio and /ebucore:coreMetadataType/ebucore:format/ebucore:aspectRatio @typeLabel or /ebucore:coreMetadataType/ebucore:format/ebucore:aspectRatio @typeDefinition (ratio height:width)
Reference data	ebu:VisualAspectRatioCS
Examples	Aspect ratio: '16:9'

Name	**Language used**
Cardinality	Multiple
Requirement	Optional
Definition	The main language (also dubbed language or voice over) of the item
Format	Controlled vocabulary (ISO 639-1 or ISO 639-2)
VA mapping	language
EBUCore mapping	/ebucore:coreMetadataType/ebucore:language/ebucore:languageCode /ebucore:ebuCoreMain/ebucore:coreMetadata/ebucore:language/dc:language and /ebucore:ebuCoreMain/ebucore:coreMetadata/ebucore:language@typeLabel (e.g. dubbing or voice over)
Reference data	http://www.ebu.ch/metadata/cs/web/ebu_Iso639_1LanguageCodeCS_p.xml.htm http://www.ebu.ch/metadata/cs/web/ebu_Iso639_2LanguageCodeCS_p.xml.htm
Examples	Language used: 'FR'

Name	**SubtitleLanguage**
Cardinality	Multiple

Requirement	Optional
Definition	The language of subtitles, if any
Format	Controlled vocabulary (ISO 639-1 or ISO 639-2)
VA mapping	subtitleLanguage
EBUCore mapping	/ebucore:coreMetadataType/ebucore:language/ebucore:languageCode and /ebucore:coreMetadataType/ebucore:language@typeLabel = 'subtitles' or /ebucore:ebuCoreMain/ebucore:coreMetadata/ebucore:format/ebucore: captioningFormat@typeLabel='translation' or /ebucore:ebuCoreMain/ebucore:coreMetadata/ebucore:format/ebucore: captioningFormat@formatLabel='DVBSubtitling' or /ebucore:ebuCoreMain/ebucore:coreMetadata/ebucore:format/ebucore: captioningFormat/dc:language
Reference data	http://www.ebu.ch/metadata/cs/web/ebu_Iso639_1LanguageCodeCS_p.xml.htm http://www.ebu.ch/metadata/cs/web/ebu_Iso639_2LanguageCodeCS_p.xml.htm
Examples	Language used: 'EN-UK'

Name	**Original language**
Cardinality	Multiple
Requirement	Optional
Definition	The original language of the item, if different from the language used
Format	Controlled vocabulary (ISO 639-1 or ISO 639-2)
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:language/dc:language and /ebucore:coreMetadataType/ebucore:language@typeLabel = 'Original'
Reference data	http://www.ebu.ch/metadata/cs/web/ebu_Iso639_1LanguageCodeCS_p.xml.htm http://www.ebu.ch/metadata/cs/web/ebu_Iso639_2LanguageCodeCS_p.xml.htm
Examples	Original language: 'IT', 'FR'

Name	**Contributor**
Cardinality	Multiple
Requirement	Optional
Definition	A person or institution responsible for the realisation of the artistic or intellectual content of the item.
Format	Free text
VA mapping	contributor
EBUCore mapping	/ebucore:coreMetadataType/ebucore:contributor/contactDetails/name /ebucore:coreMetadataType/ebucore:contributor/organisationDetails/organsiation Name
Reference data	n.a.
Examples	Contributor: 'Peter Arnett (interviewer)'

	Contributor: 'Loach, Ken'

Name	**Information**
Cardinality	Unique per item
Requirement	Optional
Definition	Additional information about the whole programme or the series (any further information that contextualises the item – such as transmission history, awards, production notes etc).
Format	Free text
VA mapping	info
EBUCore mapping	/ebucore:coreMetadataType/ebucore:description/dc:description and /ebucore:coreMetadataType/ebucore:description @typeLabel = 'additional information'
Reference data	n.a.
Examples	

Name	**Metadata language**
Cardinality	Unique per item
Requirement	Optional
Definition	The language in which the metadata of the item is written.
Format	Controlled vocabulary (ISO 639-1 or ISO 639-2)
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:language/ebucore:languageCode and /ebucore:coreMetadataType/ebucore:language@typeLabel = 'metadata language'
Reference data	http://www.ebu.ch/metadata/cs/web/ebu_Iso639_1LanguageCodeCS_p.xml.htm http://www.ebu.ch/metadata/cs/web/ebu_Iso639_2LanguageCodeCS_p.xml.htm
Examples	Metadata language: 'DE'

Name	**URI**
Cardinality	Unique per item
Requirement	Optional
Definition	A unique internet address to access the item on the content provider site. This element will be used primarily to allow Europeana users to access directly the original metadata record in the source archive.
Format	Free text
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:format/ebucore:Location
Reference data	URI: Unique resource Identifier, URL: Unique Resource Locator :

	http://tools.ietf.org/html/rfc3986
Examples	URI: 'http://www.archivioluce.com/archivio/jsp/schede/schedaCine.jsp?db=cinematograficoCINEGIORNALI&section=/&physDoc=13788'

Name	**Relation**
Cardinality	Multiple
Requirement	Optional
Definition	Reference to an item to which the current item is related. This reference of the related item can be the 'Identifier' (EUscreen unique identifier)
Format	Free text
VA mapping	Relation
EBUCore mapping	/ebucore:coreMetadataType/ebucore:relation/dc:relation /ebucore:coreMetadataType/ebucore:relation/ebucore:relationIdentifier and/or /ebucore:coreMetadataType/ebucore:relation/ebucore:relationLink
Reference data	n.a.
Examples	Relation: 'EUS_TVR0126734'

Name	**Relation type**
Cardinality	Multiple
Requirement	Optional
Definition	To show the type of relation to another resource, e.g. identifies ways in which the resource is related by intellectual content to some other resource. The relation type shall be used if none of the following predefined relations can be used (this list is not exhaustive): isVersionOf / hasVersion isPartOf / hasPart isReferencedBy / references isRelatedTo
Format	Controlled vocabulary
VA mapping	n.a.
EBUCore mapping	/ebucore:coreMetadataType/ebucore:relation@typeLabel and /ebucore:coreMetadataType/ebucore:relation@typeDefinition
Reference data	tva_HowRelatedCS
Examples	- Two clips (**clip1** and **clip2**) from the same program can be connected via a relation “isRelatedTo”: ***clip1*** isRelatedTo ***clip2*** - An **item A** (e.g. a news story) that contains footage from another **item B** has a relation “references” with it: **item A** *references* **item B** or **item B** *isReferencedBy* **item A**

Name	**File name**
Cardinality	Unique per item
Requirement	Mandatory
Definition	The file name of the associated digital item (it could be the same as the “original identifier”, if this is the naming convention internally used)
Format	Free text
VA mapping	n.a.
EBUCore mapping	n/ebucore:coreMetadataType/ebucore:format/ebucore:fileName
Reference data	
Examples	File name: ‘16374939’ File name: ‘M_04653’

3. EUROPEANA DATA MODEL

In this section a short introduction to the Europeana Data Model (EDM) is given. EDM was proposed in order to structure the data that Europeana ingests, manages and publishes and it is a major improvement of Europeana Structural Elements (ESE), which was the initial data model that Europeana began life with. Figure 3.1 graphically summarizes the hierarchy of the EDM classes.

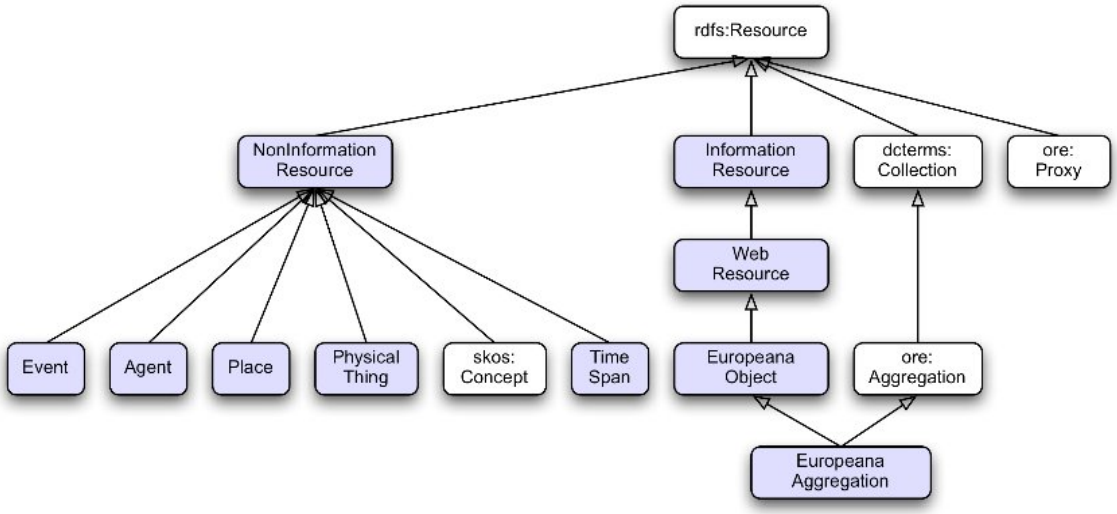


Figure 3.1 *The EDM Class hierarchy. The classes introduced by EDM are shown in light blue rectangles. The classes in the white rectangles are re-used from other schemas; the schema is indicated before the colon.*

As we can observe, the classes that are defined in EDM (blue rectangles) can be divided into NonInformation and Information Resources. Information Resource class represents resources whose essential characteristics can be conveyed in a single message e.g. a text is an Information Resource. Web Resource is a subclass of Information Resource and more specifically it is defined as an Information Resource that has at least one Web Representation and at least a URI. EuropeanaObject and EuropeanaAggregation are subclasses of WebResource, but since these classes are only used from Europeana for managing the data and they are beyond the interest of this document.

On the other hand, all the resources that are not Information Resources are instances of the NonInformation Resource class that has various subclasses. Firstly, class Event represents a change of states in cultural, social or physical systems, regardless of scale, brought about by a series or group of coherent physical, cultural, technological or legal phenomena or a set of coherent phenomena or cultural manifestations bounded in time and space. The second subclass of NonInformation Resource, that is Agent class, comprises people, either individually or in groups, who have the potential to perform intentional actions for which they can be held responsible. Class Place represents an extent in space, in particular on the surface of the earth, in the pure sense of physics: independent from temporal phenomena and matter. The next one is PhysicalThing class, which represents a persistent physical item such as a painting, a building, a book or a stone. Finally, class TimeSpan is an abstract temporal extent having a beginning, an end and duration.

The following figure illustrates the properties defined in EDM to interconnect the classes. Detailed explanation of their semantics is not given in this section. A short description for some of the properties is provided in the next section.

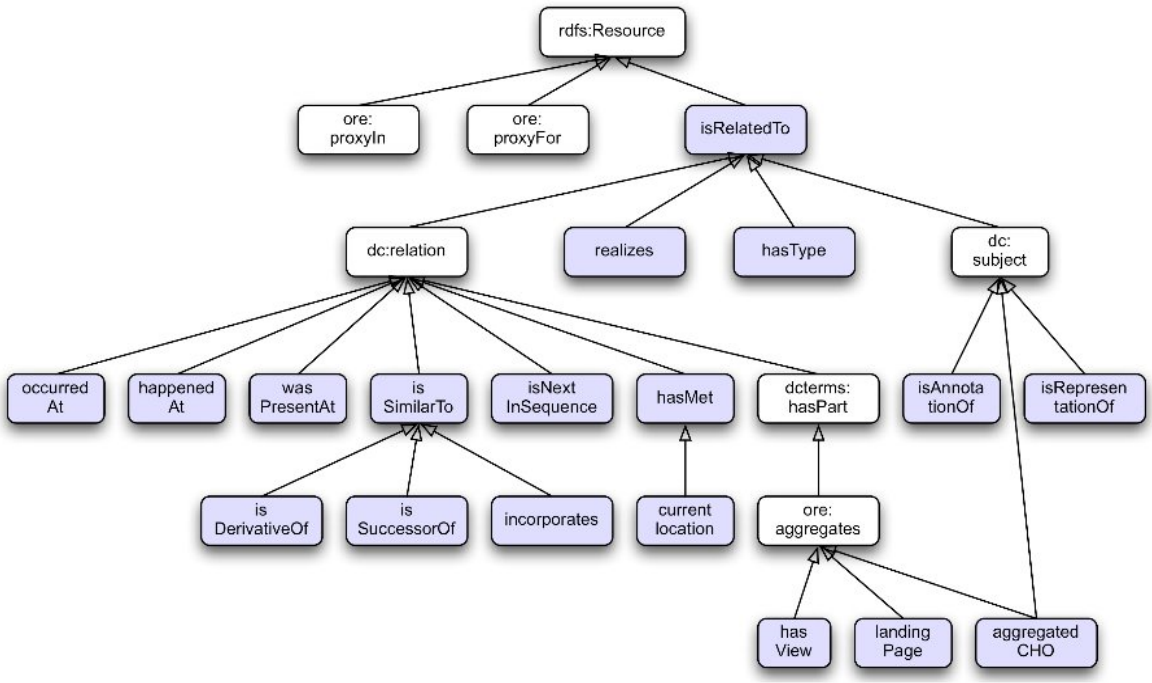


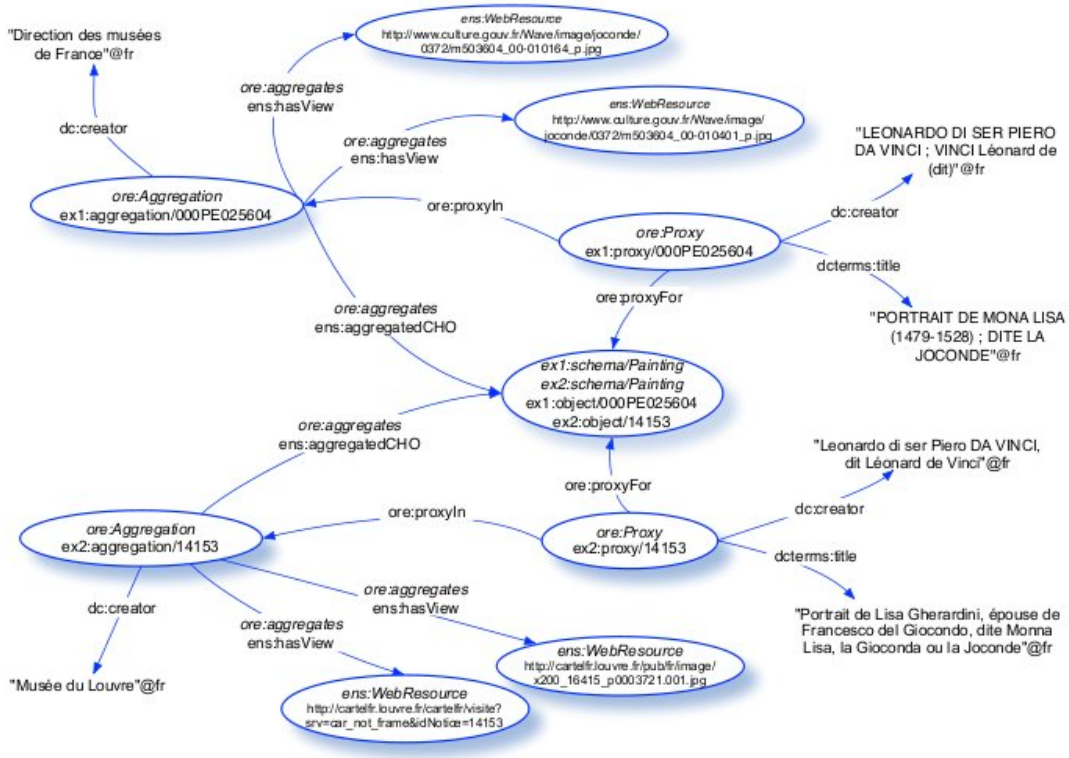
Figure 3.2 *The EDM property hierarchy without the properties included in ESE (for readability). The properties introduced by EDM are shown is light blue rectangles. The properties in the white rectangles are re-used from other schemas.*

The overall data structuring within EDM is based on two classes borrowed from Object Reuse and Exchange (ORE) schema ore:aggregation and ore:proxy. Every cultural heritage object (e.g. a painting) has a digital representation (e.g. a thumbnail of painting's digital picture). Therefore a distinction between the actual works and the digital representation is necessary. EDM manages this distinction by following the ORE specification and using aggregations. Hence, EDM considers that the provided object, together with the digital representations that are contributed by one provider, form an aggregation. Proxies, on the other hand, are used in order to handle the fact that Europeana takes data from many providers and this data may be about the same real world resource, thus giving multiple views on the same resource. In addition, Europeana can add its own data about that resource giving yet another view on the same resource. Therefore, since it very likely that the metadata differ,

e.g., different names may be used for the same creator, these views remain distinct by using ore: proxies.

Figure 3.3 *EDM Representation for two providers for an object.*

To better understand the way data are represented using EDM, let us assume that we have two records of Mona Lisa, one from the Joconde database and another from the Louvre. Each data submission to Europeana gives rise to a specific instance of the ore:Aggregation class, used to group all the elements related to one resource that come from one provider. Both providers indeed contribute a different set of



digital representations, e.g., different resolutions, different file types and, of course, different locations for the representations. In this way an aggregation is one provider's contribution for an object. Moreover each metadata record provided to Europeana also gives raise to a specific proxy for the object described, modelled using the ore:Proxy resource. This proxy is specific to a given provider, and is used to represent the description of the provided object, as seen from the perspective of that specific provider. With proxies it is possible to represent different, possibly conflicting pieces information on provided objects, while still keeping track of the provenance of this information. A proxy is connected to the resource by using the ore:proxyFor property while it is connected to its provider's aggregation using the ore:proxyIn property. **Error! Reference source not found.** provides a graphical representation of the described example.

4. EBUCORE METADATA STANDARD

EBUCore has been purposefully designed as a minimum list of attributes to describe audio and video resources for a wide range of broadcasting applications including for archives, exchange and publication. It is also a Metadata schema with well-defined syntax and semantics for easier implementation.

It is based on the Dublin Core to maximise interoperability with the community of Dublin Core users. EBUCore expands the list of elements originally defined in EBU Tech 3293-2001 for radio archives, also based on Dublin Core.

More information on the role of this specification with regard to other related EBU Metadata specifications is provided in the 'Metadata' section of the EBU TECHNICAL website (http://tech.ebu.ch/metadata).

The "EBUCore" set of Metadata defined in this specification has been identified as being the minimum information needed to describe radio and television content.

"If you can't find it, you don't have it!", this should not happen in modern IT-based production environments. Metadata is the glue between production operations. Documenting audiovisual resources with EBUCore information is a minimum requirement corresponding to fundamental investment with guaranteed return.

This specification addresses the creation, management and preservation of material that can be re-used as originally produced, or may provide input material for new programmes, be it as the result of programmes exchanges between broadcasters or between production facilities in a distributed environment. The EBUCore can also be used to describe content for distribution.

The core set of Metadata presented in EBUCore is an extension to the Dublin Core. It is a minimum list of attributes characterising a media resource. An XML representation is also specified to facilitate implementation, e.g. in archive exchange projects using the Open Archive Initiative's Protocol for Metadata Harvesting (OAI-PMH).

The Dublin Core is being used as a core Metadata set by librarians and in cultural heritage projects with which radio and television archives have a natural link. The EBUCore, used for such archives, offers a bridge between cultural heritage databases, broadcasting production systems broadcasting archive repositories, and world-wide-web ontologies.

5. EBUCORE TO EDM

In this section, we provide a first attempt of the mapping from EBUcore to EDM. This mapping will enable the transfer of EUscreen metadata to Europeana. The mappings have been produced in the EDM mapping tool (http://oreo.image.ntua.gr:8080/edm). The first screenshot demonstrates how the EBUcore elements are mapped to the Europeana elements. The second screenshot demonstrates the preview of the mappings in XSL transformation. This deliverable is not intending to present the complete EBUcore to EDM mapping but an implementation of it (more info about the mapping tool can be found in D4.4).

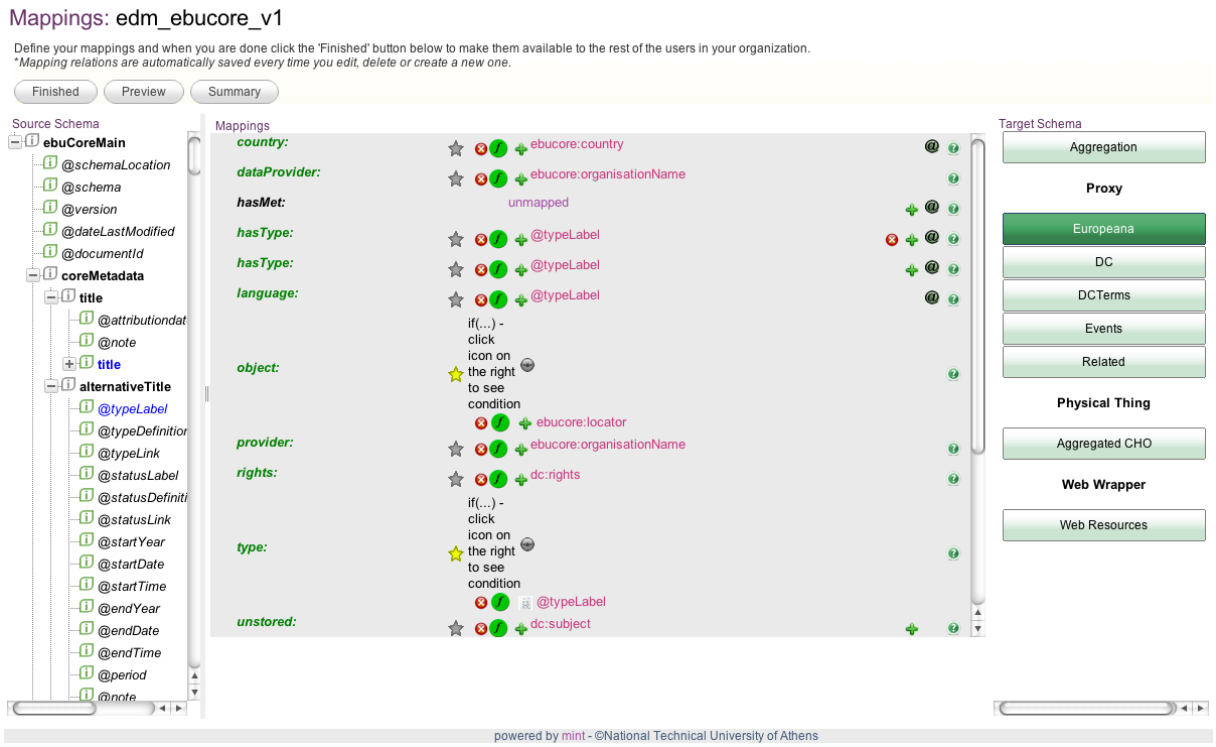


Figure 4.1 – Screenshot of the EDM mapping tool

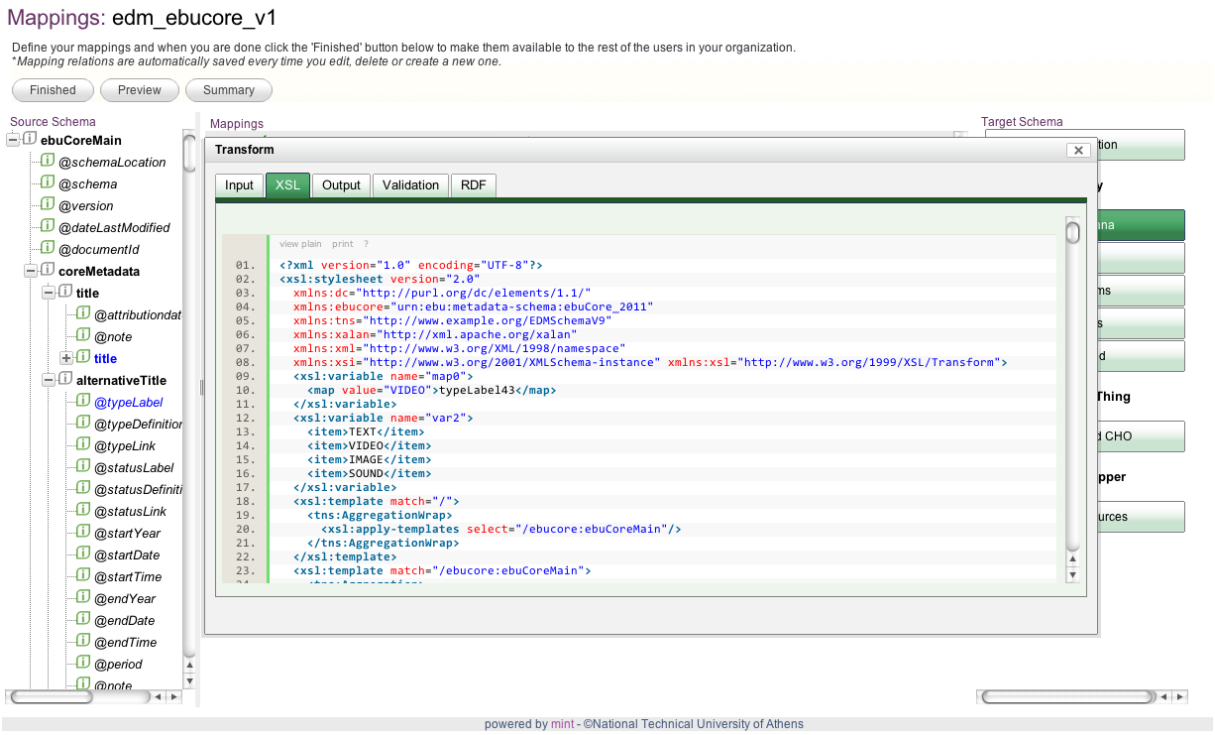


Figure 4.2 – Screenshot of the EDM mapping tool

5. APPENDIX A: EBUCORE TO EDM XSL TRANSFORMATION

Below is presented the XSL transformation that has been created in order to create EDM records out of EBUcore records.

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="2.0"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xmlns:ebucore="urn:ebu:metadata-schema:ebuCore_2011"
  xmlns:tns="http://www.example.org/EDMSchemaV9"
  xmlns:xalan="http://xml.apache.org/xalan"
  xmlns:xml="http://www.w3.org/XML/1998/namespace"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:variable name="map0">
    <map value="VIDEO">typeLabel43</map>
  </xsl:variable>
  <xsl:variable name="var2">
    <item>TEXT</item>
    <item>VIDEO</item>
    <item>IMAGE</item>
    <item>SOUND</item>
  </xsl:variable>
  <xsl:template match="/">
    <tns:AggregationWrap>
      <xsl:apply-templates select="/ebucore:ebuCoreMain"/>
    </tns:AggregationWrap>
  </xsl:template>
  <xsl:template match="/ebucore:ebuCoreMain">
    <tns:Aggregation>
      <tns:proxy>
        <tns:Europeana>
          <xsl:for-each
select="ebucore:metadataProvider/ebucore:organisationDetails/ebucore:details/ebucore:addre
ss/ebucore:country">
            <xsl:if test="position() = 1">
              <tns:country>
                <xsl:value-of select="."/>
              </tns:country>
            </xsl:if>
```

```
        </xsl:for-each>
        <xsl:for-each
select="ebucore:metadataProvider/ebucore:organisationDetails/ebucore:organisationName">
          <xsl:if test="position() = 1">
            <tns:dataProvider>
              <xsl:value-of select="."/>
            </tns:dataProvider>
          </xsl:if>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:mimeType/@typeLabel">
          <tns:hasType>
            <xsl:value-of select="."/>
          </tns:hasType>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:type/ebucore:objectType/@typeLabel">
          <tns:hasType>
            <xsl:value-of select="."/>
          </tns:hasType>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:language/@typeLabel">
          <xsl:if test="position() = 1">
            <tns:language>
              <xsl:value-of select="."/>
            </tns:language>
          </xsl:if>
        </xsl:for-each>
        <xsl:if     test="(ebucore:coreMetadata/ebucore:format/ebucore:locator/@typeLabel     =
'thumbnail')">
          <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:locator[(@typeLabel = 'thumbnail')]">
            <xsl:if test="position() = 1">
              <tns:object>
                <xsl:value-of select="."/>
              </tns:object>
            </xsl:if>
          </xsl:for-each>
        </xsl:if>
        <xsl:for-each
select="ebucore:metadataProvider/ebucore:organisationDetails/ebucore:organisationName">
          <xsl:if test="position() = 1">
```

```
            <tns:provider>
              <xsl:value-of select="."/>
            </tns:provider>
          </xsl:if>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:rights/dc:rights">
          <xsl:if test="position() = 1">
            <tns:rights>
              <xsl:value-of select="."/>
            </tns:rights>
          </xsl:if>
        </xsl:for-each>
        <xsl:if test="(ebucore:coreMetadata/ebucore:subject/@typeLabel = 'typeLabel10')">
          <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:mimeType/@typeLabel[(../../../ebucore
:subject/@typeLabel = 'typeLabel10')]">
            <xsl:if test="position() = 1">
              <xsl:variable name="idx1" select="index-of($map0/map, .)"/>
              <xsl:choose>
                <xsl:when test="$idx1 > 0">
                  <tns:type>
                    <xsl:value-of select="$map0/map[$idx1]/@value"/>
                  </tns:type>
                </xsl:when>
                <xsl:otherwise>
                  <xsl:if test="index-of($var2/item, .) > 0">
                    <tns:type>
                      <xsl:value-of select="."/>
                    </tns:type>
                  </xsl:if>
                </xsl:otherwise>
              </xsl:choose>
            </xsl:if>
          </xsl:for-each>
        </xsl:if>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:subject/dc:subject">
          <tns:unstored>
            <xsl:value-of select="."/>
          </tns:unstored>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:format/ebucore:locator">
          <xsl:if test="position() = 1">
```

```
            <tns:uri>
              <xsl:value-of select="."/>
            </tns:uri>
          </xsl:if>
        </xsl:for-each>
        <tns:year>
          <xsl:for-each
select="ebucore:coreMetadata/ebucore:date/ebucore:digitised/@startYear">
            <xsl:value-of select="."/>
          </xsl:for-each>-01-01</tns:year>
        <tns:year>
          <xsl:for-each
select="ebucore:coreMetadata/ebucore:date/ebucore:modified/@startYear">
            <xsl:value-of select="."/>
          </xsl:for-each>-01-01</tns:year>
        <tns:year>
          <xsl:for-each
select="ebucore:coreMetadata/ebucore:date/ebucore:issued/@startYear">
            <xsl:value-of select="."/>
          </xsl:for-each>-01-02</tns:year>
        <tns:year>
          <xsl:for-each
select="ebucore:coreMetadata/ebucore:date/ebucore:created/@startYear">
            <xsl:value-of select="."/>
          </xsl:for-each>-01-01</tns:year>
      </tns:Europeana>
      <tns:DC>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:contributor/ebucore:organisationDetails/ebucore:organ
isationName">
          <tns:contributor>
            <xsl:value-of select="."/>
          </tns:contributor>
        </xsl:for-each>
        <tns:contributor>
          <xsl:for-each
select="ebucore:coreMetadata/ebucore:contributor/ebucore:contactDetails/ebucore:familyNa
me">
            <xsl:value-of select="."/>
          </xsl:for-each>,                                    <xsl:for-each
select="ebucore:coreMetadata/ebucore:contributor/ebucore:contactDetails/ebucore:givenNam
e">
```

```
          <xsl:value-of select="."/>
        </xsl:for-each>
      </tns:contributor>
      <xsl:for-each
select="ebucore:coreMetadata/ebucore:contributor/ebucore:organisationDetails/ebucore:organ
isationName">
        <tns:contributor>
          <xsl:value-of select="."/>
        </tns:contributor>
      </xsl:for-each>
      <xsl:for-each select="ebucore:coreMetadata/ebucore:coverage/dc:coverage">
        <tns:coverage>
          <xsl:value-of select="."/>
        </tns:coverage>
      </xsl:for-each>
      <tns:creator>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:contributor/ebucore:contactDetails/ebucore:familyNa
me">
          <xsl:value-of select="."/>
        </xsl:for-each>,                                    <xsl:for-each
select="ebucore:coreMetadata/ebucore:contributor/ebucore:contactDetails/ebucore:givenNam
e">
          <xsl:value-of select="."/>
        </xsl:for-each>
      </tns:creator>
      <xsl:for-each
select="ebucore:coreMetadata/ebucore:date/ebucore:digitised/@startDate">
        <tns:date>
          <xsl:value-of select="."/>
        </tns:date>
      </xsl:for-each>
      <xsl:for-each
select="ebucore:coreMetadata/ebucore:date/ebucore:modified/@startDate">
        <tns:date>
          <xsl:value-of select="."/>
        </tns:date>
      </xsl:for-each>
      <xsl:for-each select="ebucore:coreMetadata/ebucore:date/dc:date">
        <tns:date>
          <xsl:value-of select="."/>
        </tns:date>
```

```
        </xsl:for-each>
        <tns:description>
          <xsl:for-each select="ebucore:coreMetadata/ebucore:description">
            <xsl:value-of select="."/>
          </xsl:for-each>:                                                    <xsl:for-each
select="ebucore:coreMetadata/ebucore:description/@typeLabel">
            <xsl:value-of select="."/>
          </xsl:for-each>
        </tns:description>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:format/ebucore:fileSize">
          <tns:format>
            <xsl:value-of select="."/>
          </tns:format>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:fileFormat/@formatLabel">
          <tns:format>
            <xsl:value-of select="."/>
          </tns:format>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:mimeType/@typeLabel">
          <tns:format>
            <xsl:value-of select="."/>
          </tns:format>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:format/dc:format">
          <tns:format>
            <xsl:value-of select="."/>
          </tns:format>
        </xsl:for-each>
        <tns:identifier>
          <xsl:for-each select="ebucore:coreMetadata/ebucore:identifier/dc:identifier">
            <xsl:value-of select="."/>
          </xsl:for-each>:<xsl:for-each
select="ebucore:coreMetadata/ebucore:identifier/@typeLabel">
            <xsl:value-of select="."/>
          </xsl:for-each>;<xsl:for-each
select="ebucore:coreMetadata/ebucore:identifier/@formatLabel">
            <xsl:value-of select="."/>
          </xsl:for-each>
        </tns:identifier>
```

```
        <tns:language>
          <xsl:for-each select="ebucore:coreMetadata/ebucore:language/dc:language">
            <xsl:value-of select="."/>
          </xsl:for-each>:<xsl:for-each
select="ebucore:coreMetadata/ebucore:language/@typeLabel">
            <xsl:value-of select="."/>
          </xsl:for-each>
        </tns:language>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:publisher/ebucore:contactDetails/ebucore:name">
          <tns:publisher>
            <xsl:value-of select="."/>
          </tns:publisher>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:publisher/ebucore:organisationDetails/ebucore:organis
ationName">
          <tns:publisher>
            <xsl:value-of select="."/>
          </tns:publisher>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:hasTrackPart/ebucore:relationLink">
          <tns:relation>
            <xsl:value-of select="."/>
          </tns:relation>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:hasPart/ebucore:relationLink">
          <tns:relation>
            <xsl:value-of select="."/>
          </tns:relation>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:isPartOf/ebucore:relationLink">
          <tns:relation>
            <xsl:value-of select="."/>
          </tns:relation>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:isRequiredBy/dc:relation">
          <tns:relation>
            <xsl:value-of select="."/>
          </tns:relation>
        </xsl:for-each>
```

```
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:isReplacedBy/ebucore:relationIdentifier/dc:identifier"
>
          <tns:relation>
            <xsl:value-of select="."/>
          </tns:relation>
        </xsl:for-each>
        <tns:relation>
          <xsl:for-each select="ebucore:coreMetadata/ebucore:relation/dc:relation">
            <xsl:value-of select="."/>
          </xsl:for-each>:<xsl:for-each
select="ebucore:coreMetadata/ebucore:relation/@typeLabel">
            <xsl:value-of select="."/>
          </xsl:for-each>
        </tns:relation>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:rights/ebucore:rightsLink">
          <tns:rights>
            <xsl:value-of select="."/>
          </tns:rights>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:rights/ebucore:rightsClearanceFlag">
          <tns:rights>
            <xsl:value-of select="."/>
          </tns:rights>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:rights/dc:rights">
          <tns:rights>
            <xsl:value-of select="."/>
          </tns:rights>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/dc:source">
          <tns:source>
            <xsl:value-of select="."/>
          </tns:source>
        </xsl:for-each>
        <tns:subject>
          <xsl:for-each select="ebucore:coreMetadata/ebucore:subject/dc:subject">
            <xsl:value-of select="."/>
          </xsl:for-each>:<xsl:for-each
select="ebucore:coreMetadata/ebucore:subject/@typeLabel">
            <xsl:value-of select="."/>
```

```
        </xsl:for-each>
      </tns:subject>
      <xsl:for-each select="ebucore:coreMetadata/ebucore:title/dc:title">
        <tns:title>
          <xsl:value-of select="."/>
        </tns:title>
      </xsl:for-each>
      <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:mimeType/@typeLabel">
        <tns:type>
          <xsl:value-of select="."/>
        </tns:type>
      </xsl:for-each>
      <xsl:for-each select="ebucore:coreMetadata/ebucore:type/dc:type">
        <tns:type>
          <xsl:value-of select="."/>
        </tns:type>
      </xsl:for-each>
    </tns:DC>
    <tns:DCTerms>
      <tns:alternative>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:alternativeTitle/dc:title">
          <xsl:value-of select="."/>
        </xsl:for-each>:<xsl:for-each
select="ebucore:coreMetadata/ebucore:alternativeTitle/@typeLabel">
          <xsl:value-of select="."/>
        </xsl:for-each>
      </tns:alternative>
      <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:signingFormat/@formatLabel">
        <tns:conformsTo>
          <xsl:value-of select="."/>
        </tns:conformsTo>
      </xsl:for-each>
      <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:captioningFormat/@formatLabel">
        <tns:conformsTo>
          <xsl:value-of select="."/>
        </tns:conformsTo>
      </xsl:for-each>
```

```
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:videoFormat/ebucore:videoEncoding/
@typeLabel">
          <tns:conformsTo>
            <xsl:value-of select="."/>
          </tns:conformsTo>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:audioFormat/ebucore:audioEncoding/
@typeLabel">
          <tns:conformsTo>
            <xsl:value-of select="."/>
          </tns:conformsTo>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:ImageFormat/ebucore:imageEncoding/
@typeLabel">
          <tns:conformsTo>
            <xsl:value-of select="."/>
          </tns:conformsTo>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:format/ebucore:fileFormat">
          <tns:conformsTo>
            <xsl:value-of select="."/>
          </tns:conformsTo>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:date/ebucore:created/@startDate">
          <tns:created>
            <xsl:value-of select="."/>
          </tns:created>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:format/ebucore:duration">
          <tns:extent>
            <xsl:value-of select="."/>
          </tns:extent>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:format/dc:format">
          <tns:hasFormat>
            <xsl:value-of select="."/>
          </tns:hasFormat>
        </xsl:for-each>
```

```
        <xsl:for-each select="ebucore:coreMetadata/ebucore:hasVersion/@typeLabel">
          <tns:hasVersion>
            <xsl:value-of select="."/>
          </tns:hasVersion>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:isFormatOf/ebucore:relationIdentifier/dc:identifier">
          <tns:isFormatOf>
            <xsl:value-of select="."/>
          </tns:isFormatOf>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:isReferencedBy/dc:relation">
          <tns:isReferencedBy>
            <xsl:value-of select="."/>
          </tns:isReferencedBy>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:isReplacedBy/ebucore:relationIdentifier/dc:identifier"
>
          <tns:isReplacedBy>
            <xsl:value-of select="."/>
          </tns:isReplacedBy>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:isRequiredBy/dc:relation">
          <tns:isRequiredBy>
            <xsl:value-of select="."/>
          </tns:isRequiredBy>
        </xsl:for-each>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:date/ebucore:issued/@startDate">
          <tns:issued>
            <xsl:value-of select="."/>
          </tns:issued>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:isVersionOf/ebucore:relationIdentifier/dc:identifier">
          <tns:isVersionOf>
            <xsl:value-of select="."/>
          </tns:isVersionOf>
        </xsl:for-each>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:medium/@typeLabel">
          <tns:medium>
```

```
          <xsl:value-of select="."/>
        </tns:medium>
      </xsl:for-each>
      <tns:provenance>
        <xsl:for-each select="ebucore:coreMetadata/ebucore:format/ebucore:locator">
          <xsl:value-of select="."/>
        </xsl:for-each>:<xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:locator/@typeLabel">
          <xsl:value-of select="."/>
        </xsl:for-each>
      </tns:provenance>
      <xsl:for-each
select="ebucore:coreMetadata/ebucore:references/ebucore:relationIdentifier/dc:identifier">
        <tns:references>
          <xsl:value-of select="."/>
        </tns:references>
      </xsl:for-each>
      <xsl:for-each select="ebucore:coreMetadata/ebucore:replaces/ebucore:relationLink">
        <tns:replaces>
          <xsl:value-of select="."/>
        </tns:replaces>
      </xsl:for-each>
      <xsl:for-each select="ebucore:coreMetadata/ebucore:requires/ebucore:relationLink">
        <tns:requires>
          <xsl:value-of select="."/>
        </tns:requires>
      </xsl:for-each>
      <tns:spatial>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:coverage/ebucore:spatial/ebucore:location/ebucore:na
me">
          <xsl:value-of select="."/>
        </xsl:for-each>:<xsl:for-each
select="ebucore:coreMetadata/ebucore:coverage/ebucore:spatial/ebucore:location/@typeLabel
">
          <xsl:value-of select="."/>
        </xsl:for-each>
      </tns:spatial>
      <xsl:if test="ebucore:coreMetadata/ebucore:description/@typeLabel = 'Table of
contents'">
```

```
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:description/dc:description[../@typeLabel = 'Table of
contents']">
          <tns:tableOfContents>
            <xsl:value-of select="."/>
          </tns:tableOfContents>
        </xsl:for-each>
      </xsl:if>
      <xsl:for-each
select="ebucore:coreMetadata/ebucore:coverage/ebucore:temporal/ebucore:PeriodOfTime/@
period">
        <tns:temporal>
          <xsl:value-of select="."/>
        </tns:temporal>
      </xsl:for-each>
      <tns:temporal>
        <xsl:for-each
select="ebucore:coreMetadata/ebucore:coverage/ebucore:temporal/ebucore:PeriodOfTime/@s
tartDate">
          <xsl:value-of select="."/>
        </xsl:for-each>/<xsl:for-each
select="ebucore:coreMetadata/ebucore:coverage/ebucore:temporal/ebucore:PeriodOfTime/@e
ndDate">
          <xsl:value-of select="."/>
        </xsl:for-each>
      </tns:temporal>
    </tns:DCTerms>
  </tns:proxy>
  <tns:aggregatedCHO>
    <xsl:for-each select="ebucore:coreMetadata/ebucore:identifier/dc:identifier">
      <xsl:if test="position() = 1">
        <tns:identifier>
          <xsl:attribute name="resType">Local ID</xsl:attribute>
          <xsl:value-of select="."/>
        </tns:identifier>
      </xsl:if>
    </xsl:for-each>
    <xsl:for-each
select="ebucore:coreMetadata/ebucore:format/ebucore:mimeType/@typeLabel">
      <xsl:if test="position() = 1">
        <tns:type>
          <xsl:value-of select="."/>
```

```
          </tns:type>
        </xsl:if>
      </xsl:for-each>
    </tns:aggregatedCHO>
    <tns:webResources>
      <xsl:if test="(ebucore:coreMetadata/ebucore:format/ebucore:locator/@typeLabel = 'Landing Page')">
        <xsl:for-each select="ebucore:coreMetadata/ebucore:format/ebucore:locator[(@typeLabel = 'Landing Page')]">
          <xsl:if test="position() = 1">
            <tns:landingPage>
              <xsl:value-of select="."/>
            </tns:landingPage>
          </xsl:if>
        </xsl:for-each>
      </xsl:if>
      <tns:hasView>http://<xsl:for-each select="ebucore:coreMetadata/ebucore:format/ebucore:locator">
          <xsl:value-of select="."/>
        </xsl:for-each>
      </tns:hasView>
    </tns:webResources>
    <xsl:for-each select="ebucore:metadataProvider/ebucore:organisationDetails/ebucore:organisationName">
      <tns:creator>
        <xsl:value-of select="."/>
      </tns:creator>
    </xsl:for-each>
  </tns:Aggregation>
 </xsl:template>
</xsl:stylesheet>
```