

## XML Metadata, Schemas and XSL

### D8 Report on the XML descriptions of the database of cultural objects

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## Report Documentation Page

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## Glossary

Terms	ARCO Glossary File
For a complete glossary of ARCO terms see	ARCO-Glossary-R-1.0-280402.doc

## Summary

This document describes a metadata element set constituting the AMS—ARCO Metadata Schema used in the ARCO system for describing cultural objects, their digital representations and the procedures a user goes through in order to achieve a representation stored in the database.

The element set is drawn from various standard schemas currently in use and adopted for the ARCO project. The basis for the proposed schema is the metadata review undertaken for the project [1]. The ARCO project specific elements are also included. Finally, the ARCO data model is illustrated that describes a museum artefact as a Cultural Object defined as an Acquired or Refined Object, and the logical architecture of the schema is presented.

A major goal of the AMS is to provide the specification that informs the various XML Schemas required (currently 11 XML Schemas are defined to support the second prototype ARCO system and components). The XML implementation of the AMS element sets is described in the Deliverable D9 – "Report on XML Schemas, XSL Stylesheets and X-VRML Technology".

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## 1. Introduction

This document details the element sets of the *AMS—ARCO Metadata Schema*—used by the ARCO prototypes. The metadata element set is drawn from several standard schemas (DC, AMICO, SPECTRUM) currently in use and adopted for the ARCO project. The basis for the proposed schema is the metadata review undertaken for the project [1]. ARCO project specific elements are also included. Within the ARCO project we expect that no single metadata schema will be adequate for the requirements of the project. Thus, ARCO will adopt element sets from several standard schemas. We envisage reliance on the concept of Application Profiles [2] as developed in the SCHEMAS project [3]. An application profile mixes and matches elements from various metadata schemas and adopts them for use within a specific application or project.

Given the objectives and user requirements [4] of the ARCO project we envisage several types of metadata that will be required. These can broadly be divided into metadata for resource discovery, curatorial metadata, and technical metadata [4].

The AMS element sets developed for the second ARCO prototype detailed in this document are expected to change and evolve as the project progresses and requirements that are more detailed become apparent.

The XML implementation of the AMS element sets is described in the Deliverable D9 – "Report on XML Schemas, XSL Stylesheets and X-VRML Technology" [13].

### 1.1 Resource Discovery

The Dublin Core Metadata Element Set (DCMES) [5] was initially developed for resource discovery on the Web. It has subsequently been adopted for cross-domain resource discovery by many projects and initiatives in a bid to make their resources universally accessible. We propose that the ARCO project adopts suitable elements from the DCMES to enhance the potential for cross-domain discovery of museum artefacts.

### 1.2 Curatorial Metadata

This is essentially curatorial knowledge and will comprise descriptive elements drawn from the Dublin Core, SPECTRUM [6] and other cultural heritage metadata element sets. It will represent similar details to those recorded for the actual cultural object which was used to create the Acquired Object (AO), see Section 2. As far as possible, compatibility will be maintained with the metadata being used at the museum pilot sites.

The development of an export function to transform the MODES database into appropriate ARCO XML schemas is under consideration to allow easy transfer of archived material from the SussexPast database to the ARCO database.

### 1.3 Technical Metadata

This will be used to record the types of hardware, software and various technical parameters used in the creation, modification and maintenance of the Acquired Object and constituting it Media Objects. It may include metadata used to record the processes that the AO undergoes within the system. This type of metadata can also be used to address issues relating to digital preservation. Example metadata would include camera parameters, software versions, etc.

Note that it will be necessary to maintain metadata for individual photographs that were used in the creation of a digital representation of the artefact. The photographic metadata will be modelled on the VAM photographic schema. The technical metadata will also include data relating to modelling, refinement and rendering changes.

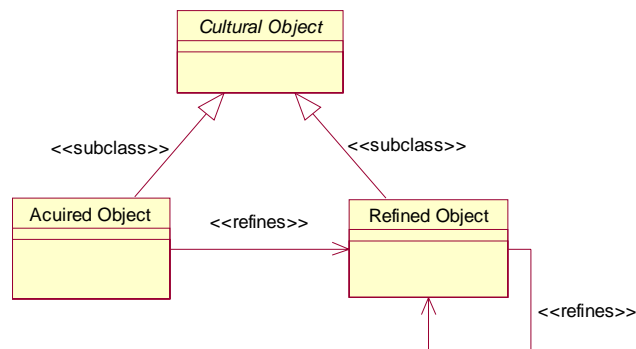
Technical metadata is recorded in the ARCO database at the level of Media Objects. For details relating to the representation of Acquired Objects (AOs), Refined Objects (ROs) and Media Objects (MOs) refer to the ARCO data model, presented in Section 2 below.

## 2. The ARCO Data Model

The ARCO data model for the second prototype consists of several objects, which are related to each other. A Cultural Object (CO) is an abstract concept, which represents a digital representation of a physical artefact in the ARCO system. There are two non-abstract entities, which are subclasses of the Cultural Object:

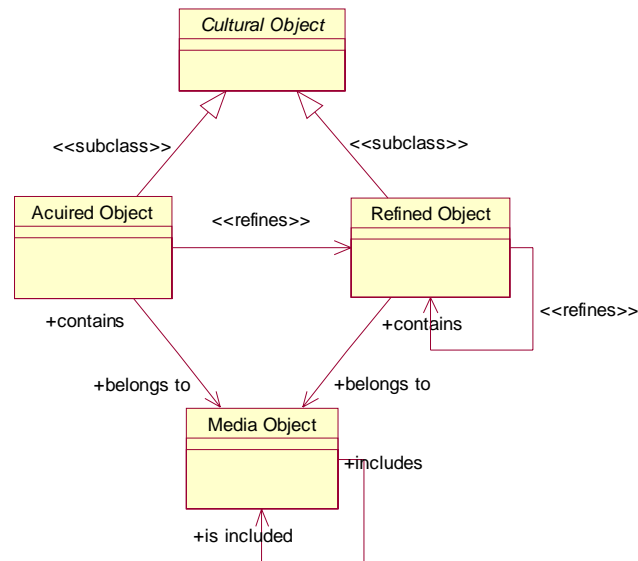
- Acquired Object (AO)—being the simple digitisation of the physical artefact, and
- Refined Object (RO)—being a particular refinement of an Acquired Object or another Refined Object.

Refined Object is an interpretation (refinement) of a Cultural Object. There may be more than one RO created from an AO or RO (Figure 1)



**Figure 1. Inheritance and refinement hierarchy of Cultural Objects**

A Cultural Object (i.e. AO or RO) may be composed of one or more Media Objects (MO) as shown in Figure 2. The Media Objects are representations (or descriptions) of the Cultural Object in a particular medium. Examples of Media Objects are 3D Model, Simple Image, Panoramic Image, and Description. A Refined Object may add or remove Media Objects from the Cultural Object it refines. For example, a museum curator may create a RO from an AO by adding a Description.



**Figure 2. Association between Media Objects and Cultural Objects**

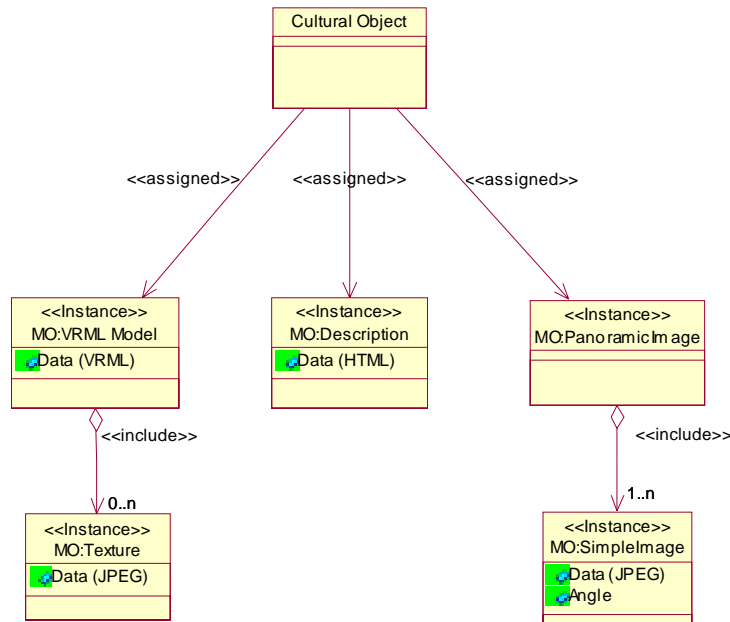
There are two main categories of Media Objects—simple Media Objects and composite Media Objects.

Simple Media Objects correspond to media that can be represented in one object—such as Description and Simple Image. Simple Media Objects contain directly the textual or binary object data.

Composite Media Objects do not contain all the data directly, but instead are associated with a number of other Media Objects—either simple or composite. Composite Media Objects represent data objects with complex structure such as VRML Model, Multiresolution Image or Panoramic Image. The Media Objects that are children of composite Media Object may have additional attributes that result from the parent-child Media Object relationship.

An example of a Cultural Object containing three Media Objects—VRML Model, Description and Panoramic Image is shown in Figure 3. The Description is a simple Media Object and contains directly object data (text). The VRML Model and Panoramic Image are composite Media Objects. The VRML Model is composed of the VRML model file (stored in the parent MO) and zero or more texture files (stored in child MOs). The Panoramic Image Media Object is composed of one or more Simple Image Media Objects (stored in child MOs). Each Simple Image that belongs to the Panoramic Image has a specific attribute—angle. This attribute is defined in the parent-child relationship between the Panoramic Image and the Simple Image.

A powerful feature of the ARCO system is the extensibility of the Media Types supported by the system. By the use of the ACMA—ARCO Content Management Application a user may define new types of simple or composite Media Objects. These new types of Media Objects are then immediately supported by both ACMA and ARIF tools.



**Figure 3. Cultural Object Example**

The association of AMS metadata descriptions to the ARCO data model entities is presented in Figure 4. The AMS descriptions are used at two levels:

- Cultural Object level, and
- Media Object level.

At the Cultural Objects level there are three sub-schemas:

- Cultural Object AMS—common for all COs (AOs and ROs) and inherited between COs in the refinement hierarchy,
- Acquired Object AMS—specific for Acquired Objects, and
- Refined Object AMS—specific for Refined Objects.

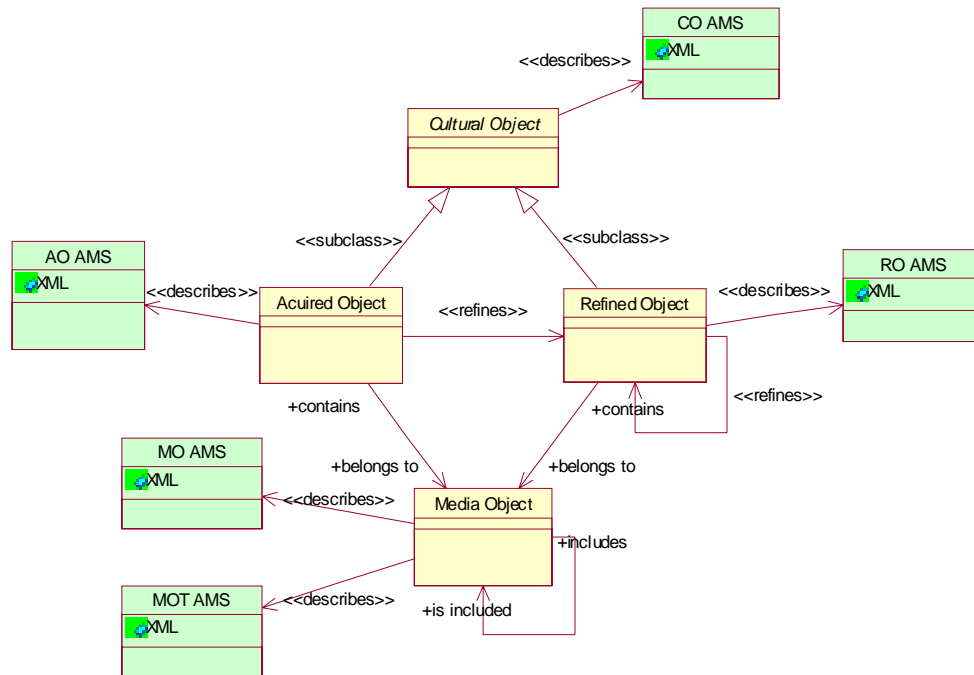
As a result, each Acquired Object is associated with two sub-schemas: CO AMS and AO AMS, and each RO AMS is also associated with three sub-schemas:

- CO AMS—inherited from its original AO and describing the physical artefact,
- AO AMS—inherited from its original AO and describing the original digitisation of the artefact, and
- RO AMS—containing description of this particular refinement.

At the Media Objects level there are two sub-schemas:

- Media Object AMS—common for all Media Object Types, and
- MO Type specific AMS (e.g., Simple Image AMS, Panoramic Image AMS).

As a result, each Media Object is associated with two sub-schemas: the generic MO AMS and the MOT AMS specific for the particular type of the Media Object.



**Figure 4.** AMS descriptions of ARCO data model entities

### 3. Proposed Metadata Element Set

The following information is identified for each of the elements recommended, this is based on the ISO/IEC 11179 standard for the specification of data elements [8]. Note that a subset of attributes is taken from the standard and supplemented with additional information relevant to the ARCO system.

Element Name	The label assigned to the data element.
Identifier	The unique identifier assigned to the data element (could include the namespace from where the element definition is taken)
Definition	A statement that clearly represents the concept and essential nature of the data element
Registration Authority	The entity authorised to register the data element
Content guideline/scheme	Some rules for content
Comment	A remark concerning the application of the data element
Obligation	Indicates if the data element is required to always or sometimes be present (contain a value)  For example, whether the element is mandatory (Mandatory) or optional (Optional)  If the element is generated by 'System' or 'User/System' it should be always mandatory.
Data Type	Indicates the type of data that can be represented in the value of the data element
Maximum Occurrence	Indicates any limit to the repeatability of the data element, but not necessarily the XML element itself
Language	The language in which the content of the data element is specified
Example/s	Examples of content
Generated by	User, System, User/System
General Purpose	Whether the element is used for browsing (Browse), searching (Search) or display only (Display)
Specific Purpose	Whether the element is used for browsing (Browse), searching (Search) or display only (Display) by specific functionality

### 3.1 Administrative Metadata

There is a need to keep track of the creator of a metadata record and any modifications that are made to it. Initially, we propose a simple method, which records the creator, the creation date and modification date of the metadata description. If required, additional data could be kept regarding the modifier and modifications.

The meta-metadata data are stored in the database separately from the metadata record they describe. However, when the metadata record is exported from the system, the appropriate XML element are automatically generated and filled with the data retrieved from the database. This approach enforces internal and external consistency of the meta-metadata.

#### 3.1.1 Creator

Element Name	Creator
Identifier	<a href="http://purl.org/dc/elements/1.1/creator">http://purl.org/dc/elements/1.1/creator</a>
Definition	An entity primarily responsible for the creation of the metadata
Registration Authority	DCMI
Content guideline/scheme	LastName, FirstName
Comment	Not user-editable; generated automatically by the system. User identity verified by login/password.
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Smith, John
Generated by	System
General Purpose	Display
Specific Purpose	Search (IMRR, ACMA), Data Exchange

#### 3.1.2 Date Created

Element Name	Date Created
Identifier	<a href="http://purl.org/dc/terms/created">http://purl.org/dc/terms/created</a>
Definition	Date on which the metadata record was created
Registration Authority	DCMI
Content guideline/scheme	W3C-DTF: W3C Encoding rules for dates and times - a profile based on ISO 8601 Chosen format: YYYY-MM-DDThh:mm:ssTZD
Comment	None
Obligation	Mandatory
Data Type	W3C-DTF



Maximum Occurrence	1
Language	English
Example/s	1997-07-16T19:20:30+01:00
Generated by	System
General Purpose	Display, Search
Specific Purposes	Data Exchange

### 3.1.3 Date Modified

Element Name	Date Modified
Identifier	<a href="http://www.dublincore.org/documents/dcmes-qualifiers/modified">http://www.dublincore.org/documents/dcmes-qualifiers/modified</a>
Definition	Date on which the metadata record was changed for the last time
Registration Authority	DCMI
Content guideline/scheme	W3C-DTF: W3C Encoding rules for dates and times - a profile based on ISO 8601 Chosen format: YYYY-MM-DDThh:mm:ssTZD
Comment	None
Obligation	Mandatory
Data Type	W3C-DTF
Maximum Occurrence	1
Language	English
Example/s	1997-07-16T19:20:30+01:00
Generated by	System
General Purpose	Display, Search
Specific Purposes	Data Exchange

## 3.2 Cultural Object Metadata

In this section, the structure of AMS metadata associated with Cultural Objects is described. The Cultural Object Metadata Schema (CO AMS) is used by both Acquired and Refined Objects. Moreover, the data (values) is shared the Acquired Object and all Refined Objects derived from it.

### 3.2.1 Source

Element Name	Source
Identifier	<a href="http://purl.org/dc/elements/1.1/source">http://purl.org/dc/elements/1.1/source</a>
Definition	A unique identifier for the physical artefact for which the CO is

	a surrogate
Registration Authority	DCMI
Content guideline/scheme	The identifier will be unique for the museum, e.g. LEWSA (institution).1973 (year when object was acquired for museum). 3 (a unique number for the donor). 5 (individual numbers for the objects within the donor's bequest).
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	LEWSA:1964.1.158
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.2.2 Name

Element Name	Name
Identifier	<a href="http://purl.org/dc/elements/1.1/title">http://purl.org/dc/elements/1.1/title</a>
Definition	A formal name given to the Cultural Object within the ARCO system
Registration Authority	DCMI
Content guideline/scheme	Where possible, the name of the original artefact should be used. Where a name does not exist, a caption could be used instead. Where a name or caption does not exist, a one-sentence description of the content should be added.  This would map to Simple Name in SussexPast MODES database
Comment	Typically, the artefact will be formally known by this name
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Castor, mortar
Generated by	User
General Purpose	Browse, Search, Display
Specific Purposes	Data exchange

### 3.2.3 Name Alternative

Element Name	Name Alternative
Identifier	<a href="http://purl.org/dc/terms/alternative">http://purl.org/dc/terms/alternative</a>
Definition	Any form of the name used as a substitute or alternative to the formal name of the resource.
Registration Authority	DCMI
Content guideline/scheme	This maps onto Other Name in the MODES database
Comment	This qualifier to the DC Title element can include Name abbreviations as well as translations
Obligation	Optional
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	Trophy, household
Generated by	User
General Purpose	Browse, Search, Display
Specific Purposes	Data exchange

### 3.2.4 Creator

Element Name	Creator
Identifier	<a href="http://purl.org/dc/elements/1.1/creator">http://purl.org/dc/elements/1.1/creator</a>
Definition	An entity primarily responsible for the creation of the physical artefact
Registration Authority	DCMI
Content guideline/scheme	Personal names: the preferred form would provide last name first, on general library indexing principles.  Organisation names: organisation names should be entered in direct order, the larger organisation first,
Comment	If appropriate, the name could be qualified, e.g. Attributed to Rembrandt van Rijn, School of Caravaggio, Michelangelo Merisi da
Obligation	Optional
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	Smith, John    Loughborough University, Water, Engineering and Development Centre

Generated by	User
General Purpose	Browse, Search, Display
Specific Purposes	Data exchange

### 3.2.5 Contributor

Element Name	Contributor
Identifier	<a href="http://purl.org/dc/elements/1.1/contributor">http://purl.org/dc/elements/1.1/contributor</a>
Definition	An entity responsible for making contributions to the creation of the physical artefact
Registration Authority	DCMI
Content guideline/scheme	<p>This would be the name of the person or entity which contributed to the creation of the cultural object, but is not the primary creator</p> <p>Personal names: the preferred form would provide last name first, on general library indexing principles.</p> <p>Organisation names: organisation names should be entered in direct order, the larger organisation first.</p>
Comment	None
Obligation	Optional
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	Smith, John    Loughborough University, Water, Engineering and Development Centre
Generated by	User
General Purpose	Browse, Search, Display
Specific Purposes	Data exchange

### 3.2.6 Date Created

Element Name	Date Created
Identifier	<a href="http://purl.org/dc/terms/created">http://purl.org/dc/terms/created</a>
Definition	Date of creation of the physical artefact
Registration Authority	DCMI
Content guideline/scheme	None
Comment	<p>This maps to Production Date in MODES database</p> <p>Year or month.year or day.month.YYYY or period</p>

Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	1900    1900-10    1900-10-09    roman
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.2.7 Type

Element Name	Type
Identifier	<a href="http://purl.org/dc/terms/type">http://purl.org/dc/terms/type</a>
Definition	The nature or genre of the cultural object
Registration Authority	DCMI
Content guideline/scheme	<p>This will correspond to the different types of physical object represented as cultural objects in the database.</p> <p>SPECTRUM guidelines state that an object's name is 'a description of the form or function of an object'. These are far too numerous to list and different names will be necessary for different types of collections, which are differentiated according to academic discipline eg, art, history, and archaeology. Should be as clear and descriptive as possible e.g. jug, chair, print, sword, book. More detail is then entered into under 'name alternative' e.g. book could then be described as diary</p>
Comment	ARCO may produce a master list of object types, which will be used mainly for browse access
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Coin, Vase, Pot
Generated by	User
General Purpose	Browse, Search, Display
Specific Purposes	Data exchange

### 3.2.8 Description

Element Name	Description
Identifier	<a href="http://purl.org/dc/terms/description">http://purl.org/dc/terms/description</a>

Definition	A short description characterising the physical artefact
Registration Authority	DCMI
Content guideline/scheme	This should be a free text description of the physical object. It should contain as much information as possible, as it will be the main information that will be used by the end-user to judge its suitability for retrieval. It should not assume too much expertise on behalf of the user, but should describe things as specifically as possible
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Shaped bow, probably once enamelled
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.2.9 Completeness

Element Name	Completeness
Identifier	<a href="http://www.arco-web.org/schemas/reach/completeness">http://www.arco-web.org/schemas/reach/completeness</a>
Definition	The completeness of the object
Registration Authority	SPECTRUM
Content guideline/scheme	One of Complete, Incomplete, Uncertain
Comment	ARCO should have this as a qualifier to DC Description. Description Completeness (from MODES database)
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Complete
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.2.10 Condition

Element Name	Condition
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Identifier	<a href="http://www.arco-web.org/schemas/reach/condition">http://www.arco-web.org/schemas/reach/condition</a>
Definition	A record of the condition of the physical object
Registration Authority	SPECTRUM
Content guideline/scheme	One of Poor, Fair, Good
Comment	ARCO should have this as a qualifier to DC Description. Description Condition (from MODES database)
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Poor
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.2.11 Production Period

Element Name	Production Period
Identifier	<a href="http://www.arco-web.org/schemas/reach/period">http://www.arco-web.org/schemas/reach/period</a>
Definition	A broader example of date 'the date when a stage in the design, creation or manufacture of the object took place', which allows historical periods to be expressed.
Registration Authority	SPECTRUM
Content guideline/scheme	This may be in textual form e.g., late 19th century, iIon Age (using normal grammar and punctuation) or numerical form e.g., 1830=1860 (the = sign is always used to separate components). This is used for cataloguing and is recorded only once.
Comment	Production Period (from MODES database)
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Late 19th century, iIon Age
Generated by	User
General Purpose	Search, Display, Browse
Specific Purposes	Data exchange

### 3.2.12 Production Method

Element Name	Production Method
Identifier	<a href="http://www.arco-web.org/schemas/reach/method">http://www.arco-web.org/schemas/reach/method</a>
Definition	This element may be found referred to as 'technique', 'processes, methods, techniques and tools used to fabricate or decorate an object'
Registration Authority	SPECTRUM
Content guideline/scheme	The maps to Technique in VRA Core Production Method (from MODES database) Single terms are used with no punctuation and terms for specific tools that are sufficiently significant may be included. A list of standard terms should be maintained and suggested sources include 'The Art & Architecture Thesaurus'. Again this is used for cataloguing purposes
Comment	ARCO may produce a master list
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Carved, Painted, Turned, Pencil
Generated by	User
General Purpose	Search, Display, Browse
Specific Purposes	Data Exchange

### 3.2.13 Format Medium

Element Name	Format Medium
Identifier	<a href="http://purl.org/dc/terms/medium">http://purl.org/dc/terms/medium</a>
Definition	The substance(s) of which the object is made (from REACH)
Registration Authority	DCMI
Content guideline/scheme	One of Amber, Tin, Brass, Wood Steel Metal (bell), Tin (plated), Copper, Iron (wrought), Boxwood, Mahogany, Brass (cast), Lead, Bronze, Maple, Ivory, Iron, Glass
Comment	This is a qualifier to the DC element Format. This maps onto Description Material in the MODES database This also maps to Technique in VRA Core
Obligation	Mandatory
Data Type	String



Maximum Occurrence	Unbounded
Language	English
Example/s	Clay
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.2.14 Dimensions

Element Name	Dimensions
Identifier	<a href="http://purl.org/dc/terms/extent">http://purl.org/dc/terms/extent</a>
Definition	Measurements associated with the three dimensions of the object: height, width, depth
Registration Authority	DCMI
Content guideline/scheme	This maps onto Description Measurements in the MODES database.  The dimensions should be given in the order height, width, and depth delimited by the x symbol. Use dimensional units appropriate to the cultural object
Comment	This is a qualifier to the DC element Format
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	100 x 120 x 20
Generated by	User
General Purpose	Display
Specific Purposes	Data exchanges

### 3.2.15 Coverage Spatial

Element Name	Coverage Spatial
Identifier	<a href="http://purl.org/dc/terms/spatial">http://purl.org/dc/terms/spatial</a>
Definition	The geographical location in which an object was created (from REACH)
Registration Authority	DCMI
Content guideline/scheme	This maps to Production Place on the MODES database  This maps onto Origin in REACH

	Coverage spatial should be entered in textual form where its location should be delimited by commas.
Comment	This is a qualifier to DC Coverage
Obligation	Optional
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	Fishbourne, East Sussex, UK
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.2.16 Components

Element Name	Components
Identifier	<a href="http://www.arco-web.org/schemas/amico/components">http://www.arco-web.org/schemas/amico/components</a>
Definition	The description of any parts/pieces of the work of art (AMICO)
Registration Authority	AMICO
Content guideline/scheme	One components element and a list of child elements
Comment	This component should be used when the physical artefact consists more than one components. It consists of several "Component" sub-elements.
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	The lid of the box
Generated by	User
General Purpose	Display
Specific Purposes	Data exchange

### 3.2.17 Rights

Element Name	Rights
Identifier	<a href="http://purl.org/dc/elements/1.1/rights">http://purl.org/dc/elements/1.1/rights</a>
Definition	Information about rights held in and over the cultural artefact
Registration Authority	DCMI

Content guideline/scheme	This would contain either a free-text rights management statement for the artefact or a URI reference to such a statement
Comment	This would normally be a standard description of Cultural Object rights, or a link (URI) to a statement stored locally. A general statement could be assigned by the ARCO project.
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	All rights are held by the Victoria and Albert Museum
Generated by	User
General Purpose	Display
Specific Purposes	Data exchange

### 3.2.18 Owner

Element Name	Owner
Identifier	<a href="http://www.arco-web.org/schemas/amico/owner">http://www.arco-web.org/schemas/amico/owner</a>
Definition	The name of the institution or individual who owns the artefact
Registration Authority	AMICO
Content guideline/scheme	<p>Organisation names: organisation names should be entered in direct order, the larger organisation first.</p> <p>Personal names: the preferred form would provide last name first, on general library indexing principles.</p>
Comment	None
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	VAM, Photographic Unit Smith, John
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.3 Acquired Object Metadata

In this section, the structure of AMS metadata associated with Acquired Objects is described.

#### 3.3.1 Identifier

Element Name	Identifier
Identifier	<a href="http://purl.org/dc/elements/1.1/identifier">http://purl.org/dc/elements/1.1/identifier</a>
Definition	A unique identifier assigned to a particular digital representation of the Cultural Object
Registration Authority	DCMI
Content guideline/scheme	This will be a prefix assigned to the museum plus the CO_ID generated by the database
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	VAM000003001, PAST000004005
Generated by	System
General Purpose	Internal use
Specific Purposes	Data exchange

#### 3.3.2 Name

Element Name	Name
Identifier	<a href="http://purl.org/dc/elements/1.1/title">http://purl.org/dc/elements/1.1/title</a>
Definition	The name of the acquired object, or digital manifestation of an artefact
Registration Authority	DCMI
Content guideline/scheme	This should be a name appropriate to a particular digital representation of the Cultural Object and should distinguish it from other representations or manifestations
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Vase without hole
Generated by	User/System
General Purpose	Search, Display

Specific Purposes	Data exchange
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### 3.3.3 Publisher

Element Name	Publisher
Identifier	<a href="http://purl.org/dc/elements/1.1/publisher">http://purl.org/dc/elements/1.1/publisher</a>
Definition	An entity responsible for making the resource available or accessible to others
Registration Authority	DCMI
Content guideline/scheme	<p>Organisation names: organisation names should be entered in direct order, the larger organisation first.</p> <p>Personal names: the preferred form would provide last name first, on general library indexing principles.</p>
Comment	This could be the museum itself, or the person/organisation responsible for the creation of the digital manifestation of the Cultural Object
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	ARCO Project Consortium    VAM, Photographic Unit    Smith, John
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.3.4 Creator

Element Name	Creator
Identifier	<a href="http://purl.org/dc/elements/1.1/creator">http://purl.org/dc/elements/1.1/creator</a>
Definition	An entity primarily responsible for the creation of the digital manifestation of the artefact
Registration Authority	DCMI
Content guideline/scheme	The values will be constrained to the list of registered and privileged ARCO users. The preferred form would provide last name first, on general library indexing principles
Comment	None
Obligation	Mandatory
Data Type	String

Maximum Occurrence	1
Language	English
Example/s	Smith, John
Generated by	System
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.3.5 Contributor

Element Name	Contributor
Identifier	<a href="http://purl.org/dc/elements/1.1/contributor">http://purl.org/dc/elements/1.1/contributor</a>
Definition	An entity contributing to the creation of the digital manifestation of the Cultural Object
Registration Authority	DCMI
Content guideline/scheme	Personal names: the preferred form would provide last name first, on general library indexing principles  Organisation names: organisation names should be entered in direct order, the larger organisation first
Comment	None
Obligation	Optional
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	Victoria and Albert Museum, Photographic Unit
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.3.6 Date Created

Element Name	Date Created
Identifier	<a href="http://purl.org/dc/terms/created">http://purl.org/dc/terms/created</a>
Definition	Date of creation of the Acquired or Refined Object
Registration Authority	DCMI
Content guideline/scheme	W3C-DTF: W3C Encoding rules for dates and times - a profile based on ISO 8601  Chosen format: YYYY-MM-DDThh:mm:ssTZD

Comment	None
Obligation	Mandatory
Data Type	W3C-DTF
Maximum Occurrence	1
Language	English
Example/s	1997-07-16T19:20:30+01:00
Generated by	System
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.3.7 Description

Element Name	Description
Identifier	<a href="http://purl.org/dc/elements/1.1/description">http://purl.org/dc/elements/1.1/description</a>
Definition	A short description characterising the digital representation of the artefact
Registration Authority	DCMI
Content guideline/scheme	This should be a free text description of the acquired object. It should contain as much information as possible, as it will be the main information that will be used by the end-user to judge its suitability for retrieval. It should not assume too much expertise on behalf of the user, but should describe things as specifically as possible.
Comment	If the Acquired Object has been enhanced in any way, this should also be indicated in this description.
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	None
Generated by	User/System
General Purpose	Search, Display
Specific Purposes	Data Exchange

### 3.3.8 Rights

Element Name	Rights
Identifier	<a href="http://purl.org/dc/elements/1.1/rights">http://purl.org/dc/elements/1.1/rights</a>
Definition	Information about rights held in and over the Acquired Object

Registration Authority	DCMI
Content guideline/scheme	This would contain either a free-text rights management statement for the AO or a URI reference to such a statement
Comment	This would normally be a standard description of AO rights, e.g. "All rights are held by the ARCO Consortium" or a link (URI) to a statement stored locally. A general statement could be assigned by the ARCO project.
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	<a href="http://www.nhm.ac.uk/generic/copy.html">http://www.nhm.ac.uk/generic/copy.html</a>
Generated by	User
General Purpose	Display
Specific Purposes	Data exchange

### 3.3.9 Format

Element Name	Format
Identifier	<a href="http://purl.org/dc/elements/1.1/format">http://purl.org/dc/elements/1.1/format</a>
Definition	The format of an Acquired or Refined Object
Registration Authority	DCMI
Content guideline/scheme	Choose a MIME type from: <a href="http://www.isi.edu/in-notes/iana/assignments/media-types/media-types">http://www.isi.edu/in-notes/iana/assignments/media-types/media-types</a>
Comment	Will be automatically generated by the ARCO system based on the associated Media Objects.
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	(model/vrml, application/autodesk-3ds-script, image/tiff, model/vrml, text/html)
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange



**3.3.10 Format Extent**

Element Name	Format Extent
Identifier	<a href="http://purl.org/dc/terms/extent">http://purl.org/dc/terms/extent</a>
Definition	The digital size of the Acquired or Refined Object
Registration Authority	DCMI
Content guideline/scheme	This will be specified in bytes (B), kilobytes (KB=1024B) or megabytes (MB=1024KB)
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	12 KB
Generated by	System
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.4 Refined Object Metadata

In this section, the structure of AMS metadata associated with Refined Objects is described.

The RO AMS for the second prototype of the ARCO system is the same as AO AMS with addition of one element.

#### 3.4.1 Refines

Element Name	Refines
Identifier	<a href="http://www.arco-web.org/schemas/arco/refines">http://www.arco-web.org/schemas/arco/refines</a>
Definition	The ordered list of identifiers (AO/Identifier, RO/Identifier) of Cultural Objects on the refinement path.
Registration Authority	ARCO
Content guideline/scheme	It can be either anAO-Identifieror a RO-Identifier
Comment	Generated automatically by the system
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	(VAM00000123, VAM00000124)
Generated by	System
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.5 Media Object Metadata

In this section, the structure of AMS metadata associated with all Media Objects is described.

#### 3.5.1 Name

Element Name	Name
Identifier	<a href="http://purl.org/dc/elements/1.1/title">http://purl.org/dc/elements/1.1/title</a>
Definition	A name given to the Media Object
Registration Authority	DCMI
Content guideline/scheme	This should be a name appropriate to a particular digital representation of the Cultural Object and should distinguish it from other representations or manifestations
Comment	Entered by user to database, generated by system in metadata
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	My vase
Generated by	User/System
General Purpose	Search, Display
Specific Purposes	Data exchange

#### 3.5.2 Type

Element Name	Type
Identifier	<a href="http://purl.org/dc/elements/1.1/type">http://purl.org/dc/elements/1.1/type</a>
Definition	The type of a Media Object
Registration Authority	DCMI
Content guideline/scheme	None
Comment	May be a list of mime-types for complex Media Object Types.
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	None
Generated by	System
General Purpose	Search, Display

Specific Purposes	Data exchange
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### 3.5.3 Subject

Element Name	Subject
Identifier	<a href="http://purl.org/dc/elements/1.1/subject">http://purl.org/dc/elements/1.1/subject</a>
Definition	Keywords which identify the subjects of the contents of the media object
Registration Authority	DCMI
Content guideline/scheme	This maps to Keywords in the VAM Photographic Catalogue. Keywords where the first letter is capital and they are delimited by comma.
Comment	None
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	None
Generated by	User
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.5.4 Description

Element Name	Description
Identifier	<a href="http://purl.org/dc/elements/1.1/description">http://purl.org/dc/elements/1.1/description</a>
Definition	A short description characterising the subject content of the media object
Registration Authority	DCMI
Content guideline/scheme	This should be a free text description. It should not assume too much expertise on behalf of the user, but should describe things as specifically as possible  This maps onto Description in the VAM Photographic Catalogue
Comment	None
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English

Example/s	None
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

### 3.5.5 Date Created

Element Name	Date Created
Identifier	<a href="http://purl.org/dc/terms/created">http://purl.org/dc/terms/created</a>
Definition	Date of creation of the media object
Registration Authority	DCMI
Content guideline/scheme	W3C-DTF: W3C Encoding rules for dates and times - a profile based on ISO 8601  Chosen format: YYYY-MM-DDThh:mm:ssTZD
Comment	This maps onto Photo Date in the VAM Photographic Catalogue.
Obligation	Mandatory
Data Type	W3C-DTF
Maximum Occurrence	1
Language	English
Example/s	1997-07-16T19:20:30+01:00
Generated by	System
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.5.6 Creator

Element Name	Creator
Identifier	<a href="http://purl.org/dc/elements/1.1/creator">http://purl.org/dc/elements/1.1/creator</a>
Definition	An entity primarily responsible for the creation of the media object
Registration Authority	DCMI
Content guideline/scheme	This maps to Photographer in the VAM Photographic Catalogue  The values will be constrained to the list of registered and privileged ARCO users.  The preferred form would provide last name first, on general library indexing principles

Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Smith, John
Generated by	System
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.5.7 Format Extent

Element Name	Format Extent
Identifier	<a href="http://purl.org/dc/terms/extent">http://purl.org/dc/terms/extent</a>
Definition	The size of the media object
Registration Authority	DCMI
Content guideline/scheme	This should be specified in bytes (B), kilobytes (KB) or megabytes (MB)  This maps onto Photo Dimensions on the VAM Photographic Catalogue
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	1 KB
Generated by	System
General Purpose	Search, Display
Specific Purposes	Data exchange

### 3.5.8 Rights

Element Name	Rights
Identifier	<a href="http://purl.org/dc/elements/1.1/rights">http://purl.org/dc/elements/1.1/rights</a>
Definition	Information about rights held in and over the digital manifestation
Registration Authority	DCMI

Content guideline/scheme	This would contain either a free-text rights management statement for the artefact or a URI reference to such a statement.  This maps onto Photo copyright in the VAM Photographic Catalogue
Comment	This would normally be a standard description of Cultural Object rights, or a link (URI) to a statement stored locally. A general statement could be assigned by the ARCO project.
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	All rights are held by the Victoria and Albert Museum
Generated by	User
General Purpose	Display
Specific Purposes	Data exchange

### 3.6 Media Type Specific Metadata

#### 3.6.1 Simple Image Metadata

The following metadata concern the Simple Image media object only.

##### 3.6.1.1 Technique

Element Name	Technique
Identifier	<a href="http://www.arco-web.org/schemas/arco/technique">http://www.arco-web.org/schemas/arco/technique</a>
Definition	The technique used to acquire a digital manifestation of the Cultural Object
Registration Authority	ARCO Consortium
Content guideline/scheme	This should be one item from predefined dictionary. Digital photography, Scanning, Manual Painting
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	Digital photography
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

##### 3.6.1.2 Image Size

Element Name	Image Size
Identifier	<a href="http://www.arco-web.org/schemas/arco/size">http://www.arco-web.org/schemas/arco/size</a>
Definition	Image width and height in pixels
Registration Authority	ARCO Consortium
Content guideline/scheme	The value of the elements should be of the form pixelsxpixels
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	548x689



Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.1.3 Resolution

Element Name	Resolution
Identifier	<a href="http://www.arco-web.org/schemas/arco/resolution">http://www.arco-web.org/schemas/arco/resolution</a>
Definition	Image resolution in dpi
Registration Authority	ARCO Consortium
Content guideline/scheme	None
Comment	None
Obligation	Mandatory
Data Type	Integer
Maximum Occurrence	1
Language	English
Example/s	300
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.1.4 Compression method

Element Name	Compression method
Identifier	<a href="http://www.arco-web.org/schemas/arco/compression-method">http://www.arco-web.org/schemas/arco/compression-method</a>
Definition	Compression method used to create this image file
Registration Authority	ARCO Consortium
Content guideline/scheme	One item from predefined dictionary raw, jpeg, gif
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Jpeg
Generated by	System
General Purpose	Search

Specific Purposes	Data exchange
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### 3.6.1.5 Compression factor

Element Name	Compression factor
Identifier	<a href="http://www.arco-web.org/schemas/arco/compression-factor">http://www.arco-web.org/schemas/arco/compression-factor</a>
Definition	Compression algorithm strength factor
Registration Authority	ARCO Consortium
Content guideline/scheme	One item from predefined dictionary None, High, Medium, Low
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Medium
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.1.6 Colour depth

Element Name	Colour Depth
Identifier	<a href="http://www.arco-web.org/schemas/arco/colour-depth">http://www.arco-web.org/schemas/arco/colour-depth</a>
Definition	Number of bits that represents single colour point
Registration Authority	ARCO Consortium
Content guideline/scheme	None
Comment	None
Obligation	Mandatory
Data Type	Integer
Maximum Occurrence	1
Language	English
Example/s	32
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.2 Description Metadata

The following metadata concern the descriptions media object only

#### 3.6.2.1 Technique

Element Name	Technique
Identifier	<a href="http://www.arco-web.org/schemas/arco/technique">http://www.arco-web.org/schemas/arco/technique</a>
Definition	The technique used to acquire a digital manifestation of the Cultural Object
Registration Authority	ARCO Consortium
Content guideline/scheme	This should be one item from predefined dictionary. Typing in an editing tool, OCR
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	OCR
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.2.2 Length

Element Name	Length
Identifier	<a href="http://www.arco-web.org/schemas/arco/length">http://www.arco-web.org/schemas/arco/length</a>
Definition	Text length in chars
Registration Authority	ARCO Consortium
Content guideline/scheme	Number of chars in description text
Comment	None
Obligation	Mandatory
Data Type	Long
Maximum Occurrence	1
Language	English
Example/s	2596
Generated by	System
General Purpose	Search

Specific Purposes	Data exchange
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### 3.6.2.3 Character set

Element Name	Character set
Identifier	<a href="http://www.arco-web.org/schemas/arco/character-set">http://www.arco-web.org/schemas/arco/character-set</a>
Definition	Character set used in description text
Registration Authority	ARCO Consortium
Content guideline/scheme	One Identifier of character set from the directory defined in <a href="http://www.iana.org/assignments/character-sets">http://www.iana.org/assignments/character-sets</a>
Comment	ARCO will define a set of identifiers, a dictionary
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	ISO-8859-2
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.3 3D Studio MAX Project Metadata

The following metadata concern the 3D Studio Max Project media object only.

#### 3.6.3.1 Technique

Element Name	Technique
Identifier	<a href="http://www.arco-web.org/schemas/arco/technique">http://www.arco-web.org/schemas/arco/technique</a>
Definition	The technique used to acquire a digital manifestation of the Cultural Object
Registration Authority	ARCO Consortium
Content guideline/scheme	This should be one item from predefined dictionary. Manual Modelling, Image based modelling
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English

Example/s	Image based modelling
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.3.2 Software version

Element Name	Software version
Identifier	<a href="http://www.arco-web.org/schemas/arco/software-version">http://www.arco-web.org/schemas/arco/software-version</a>
Definition	Version of 3D Studio MAX software used to save this file
Registration Authority	ARCO Consortium
Content guideline/scheme	This should be one from predefined dictionary. 3.0, 4.0, 4.2, 5.0  Also it should be able to accept any future version of the software.
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	5.0
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.3.3 Required extensions

Element Name	Required extensions
Identifier	<a href="http://www.arco-web.org/schemas/arco/required-extensions">http://www.arco-web.org/schemas/arco/required-extensions</a>
Definition	Extensions and plug-ins needed to properly open and display this file
Registration Authority	ARCO Consortium
Content guideline/scheme	Names of needed extensions separated by comma
Comment	None
Obligation	Optional
Data Type	String
Maximum Occurrence	Unbounded

Language	English
Example/s	Brick, BlurFire, ARCO plug-in
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.4 VRML Model Metadata

The following metadata concern the VRML model media object only.

#### 3.6.4.1 Technique

Element Name	Technique
Identifier	<a href="http://www.arco-web.org/schemas/arco/technique">http://www.arco-web.org/schemas/arco/technique</a>
Definition	The technique used to acquire a digital manifestation of the Cultural Object
Registration Authority	ARCO Consortium
Content guideline/scheme	This should be one item from predefined dictionary. Image based Modelling, Manual Modelling, 3ds max export
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	Manual Modelling
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.4.2 VRML version

Element Name	VRML version
Identifier	<a href="http://www.arco-web.org/schemas/arco/vrml-version">http://www.arco-web.org/schemas/arco/vrml-version</a>
Definition	Version of VRML language used by the model
Registration Authority	ARCO Consortium
Content guideline/scheme	This should be one item from predefined dictionary. 1.0, 2.0, 97, 200x, X3D
Comment	Can be retrieved from the file header
Obligation	Mandatory

Data Type	String
Maximum Occurrence	1
Language	English
Example/s	97
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.4.3 Number of Textures

Element Name	Number of Textures
Identifier	<a href="http://www.arco-web.org/schemas/arco/textures">http://www.arco-web.org/schemas/arco/textures</a>
Definition	Number of textures used by this VRML model
Registration Authority	ARCO Consortium
Content guideline/scheme	None
Comment	None
Obligation	Mandatory
Data Type	Integer
Maximum Occurrence	1
Language	English
Example/s	147
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.4.4 Composite

Element Name	Composite
Identifier	<a href="http://www.arco-web.org/schemas/arco/composite">http://www.arco-web.org/schemas/arco/composite</a>
Definition	Indicates whether the model is composed of more than one VRML file
Registration Authority	ARCO Consortium
Content guideline/scheme	TRUE, FALSE
Comment	Composite models use Inline nodes
Obligation	Mandatory
Data Type	Boolean
Maximum Occurrence	1

Language	English
Example/s	TRUE
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.4.5 Animated

Element Name	Animated
Identifier	<a href="http://www.arco-web.org/schemas/arco/animated">http://www.arco-web.org/schemas/arco/animated</a>
Definition	Indicates whether the model contains animated elements
Registration Authority	ARCO Consortium
Content guideline/scheme	TRUE, FALSE
Comment	Animated models use TimeSensor nodes
Obligation	Mandatory
Data Type	Boolean
Maximum Occurrence	1
Language	English
Example/s	TRUE
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.5 Panorama Image Metadata

The following metadata concern the panorama image media object only.

##### 3.6.5.1 Technique

Element Name	Technique
Identifier	<a href="http://www.arco-web.org/schemas/arco/technique">http://www.arco-web.org/schemas/arco/technique</a>
Definition	The technique used to acquire a digital manifestation of the Cultural Object
Registration Authority	ARCO Consortium
Content guideline/scheme	This should be one item from predefined dictionary. Human image processing, Automated image processing
Comment	None
Obligation	Mandatory



Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	Automated image processing
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.5.2 Number of images

Element Name	Number of images
Identifier	<a href="http://www.arco-web.org/schemas/arco/number-images">http://www.arco-web.org/schemas/arco/number-images</a>
Definition	Number of images included in this panorama view
Registration Authority	ARCO Consortium
Content guideline/scheme	None
Comment	None
Obligation	Mandatory
Data Type	Integer
Maximum Occurrence	1
Language	English
Example/s	19
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.5.3 Step angle

Element Name	Step angle
Identifier	<a href="http://www.arco-web.org/schemas/arco/step-angle">http://www.arco-web.org/schemas/arco/step-angle</a>
Definition	Step angle between images
Registration Authority	ARCO Consortium
Content guideline/scheme	Positive and negative values can be used. It is assumed that the rotation axis points in the image-up direction.
Comment	None
Obligation	Mandatory
Data Type	Float
Maximum Occurrence	1

Language	English
Example/s	3.0
Generated by	User/System
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.6 Multiresolution Image

The following metadata concern the Multiresolution Image media object only.

#### 3.6.6.1 Technique

Element Name	Technique
Identifier	<a href="http://www.arco-web.org/schemas/arco/multiresolution">http://www.arco-web.org/schemas/arco/multiresolution</a>
Definition	The technique used to acquire a digital manifestation of the Cultural Object
Registration Authority	ARCO Consortium
Content guideline/scheme	This should be one item from predefined dictionary. Human image processing, Automated image processing. ACMA wizard
Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	ACMA wizard
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

#### 3.6.6.2 Resolutions

Element Name	Resolutions
Identifier	<a href="http://www.arco-web.org/schemas/arco/resolutions">http://www.arco-web.org/schemas/arco/resolutions</a>
Definition	Available image sizes (width x height in pixels)
Registration Authority	ARCO Consortium
Content guideline/scheme	Comma separated list of available resolutions

Comment	None
Obligation	Mandatory
Data Type	String
Maximum Occurrence	Unbounded
Language	English
Example/s	640x480, 800x600, 1024x768
Generated by	System
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.6.3 Software

Element Name	Software
Identifier	<a href="http://www.arco-web.org/schemas/arco/software">http://www.arco-web.org/schemas/arco/software</a>
Definition	Software used for generating the MR image
Registration Authority	ARCO Consortium
Content guideline/scheme	Application name
Comment	None
Obligation	Optional
Data Type	String
Maximum Occurrence	1
Language	English
Example/s	Adobe Photoshop
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

### 3.6.6.4 Algorithm

Element Name	Algorithm
Identifier	<a href="http://www.arco-web.org/schemas/arco/algorithm">http://www.arco-web.org/schemas/arco/algorithm</a>
Definition	Algorithm used for rescaling original image
Registration Authority	ARCO Consortium
Content guideline/scheme	Algorithm name
Comment	None
Obligation	Optional
Data Type	String

Maximum Occurrence	1
Language	English
Example/s	Area averaging
Generated by	User
General Purpose	Search
Specific Purposes	Data exchange

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