

7. APPENDIX 1: XBMF – EXCHANGE BROADCAST BINARY AND METADATA FORMAT

7.1 Purpose:

To create an easily extensible file and metadata format for exchanging broadcasts between various broadcast content management systems

7.2 Methodology:

While various formats for the exchange of audio data and metadata exist, there is no specific format for broadcasts yet. The EBU has proposed a format that is overly large and unwieldy for smaller radio entities. To achieve this easy format, we have decided to use standard technologies in a simple combination.

The Metadata format uses **XML** to flexibly encode all necessary information. The information is modeled to provide all **Dublin Core** Elements, yet elaborate enough to also work in a more complex environment, as the streamonthe fly node network mandates. The xml format is formally defined through a dtd (included in Appendix #) and described in a standards document.

To include binary data -- audio files, as well as images and html/text files containing additional information, the xbmf format uses the established standard tools of **tar** and **gnuzip**, in conjunction with a predefined directory structure.

7.3 Specifications:

7.4 File Format:



XBMF/



Metadata.xml



Audio

🔊 *Multiple audio files*

📁 Files

📄 📄 *Additional Files (Images, textfiles, html, etc.)*

The tarred and gzipped directory is then considered to be an xbmf file. By using these technologies, all of which are readily available as libraries for inclusion into almost all programming environments, the xbmf format is quickly integrateable into existing applications. Specific xbmf creating applications are also easily developed.

7.5 XBMF Meta Data Standard

- The main consideration was to create a specification that could also be used by other vendors and organizations, in order to create and promote a public and general standard.
- Fields that are non-useful for individual participants may be left empty (having taken care of marking them non-required) or be filled with meaningful default values.

7.5.1 Element 1: Title

- **Required:** Yes
- **Repeatable:** No
- **XML lang. qualified:** Yes
- **Definition:** A name given to the resource.
- **Comments:** Typically, a title will be a name by which the resource is formally known.
- The title should be for the general full title without any impromptu encoding of individual dates and episodes
- **Encoding Scheme:** -
- **Variation from DC:** None
- **Variation from EBU:** None

7.5.1.1 Refinement 1.1: **Alternative**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** Yes
- **Definition:** Any form of the title used as a substitute or alternative to the formal title of the resource.
- **Comments:** This qualifier can include title abbreviations as well as well as translations.
- **Encoding Scheme:** -
- **Variation from DC:** None
- **Variation from EBU:** None

7.5.1.2 Refinement 1.2: **Episode title**

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** Yes
- **Definition:** A name given to the resource.
- **Comments:** The episode title is the name by which a specific episode of a series is known. This may be unused, if the broadcasts (e.g. news) are only differentiated by date or sequence number (e.g. Episode 1...)
- **Encoding Scheme:** -
- **Variation from DC:** DC does not have this refinement. Value should be appended to element 1.0 in DC
- **Variation from EBU:** EBU does not have this refinement. value should be appended to element 1.0 in EBU

7.5.1.3 Refinement 1.2: **Episode sequence**

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** Yes

- **Definition:** A name given to the resource.
- **Comments:** The episode sequence is an alphanumerical field to indicate a sortable sequence number e.g. 1, 2 ... or 2002-09-12 in case of broadcasts differentiated by date.
- The sequence number needs only to follow internal rules and should be sortable by alphabetical sorting.
- **Encoding Scheme:** -
- **Variation from DC:** DC does not have this refinement. Value should be appended to element 1.0 in DC
- **Variation from EBU:** EBU does not have this refinement. value should be appended to element 1.0 in EBU

7.5.2 Element 2: **Creator**

- **Required:** Yes
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** An entity primarily responsible for making the content of the resource.
- **Comments:** Examples of a Creator include a person, an organisation, or a service. Typically, the name of a Creator should be used to indicate the entity.
- **We recommend that names be written in the following order:** surname, first name. However, they can also be written according to local practise.
- The difference between Contributor and Creator is sometimes difficult to decide. If in doubt, use contributor. These two fields should be considered equivalent for search purposes.
- **Element Encoding Scheme:** Contact Record
- **Variation from DC:** None (pending encoding scheme).
- **Variation from EBU:** None (pending encoding scheme).

7.5.3 Element 3: **Subject**

- **Required:** Yes
- **Repeatable:** Yes
- **XML lang. qualified:** Yes
- **Definition:** The topic of the content of the resource.
- **Comments:** Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Persons as subjects are also placed here.
- Genre of the content is placed under element Type. Geographical locations and historical periods as subjects are placed under Coverage.
- Subject may or may not be qualified.
- **Encoding Scheme:** dependent on topic list. See Refinement 3.1
- Text
- **Variation from DC:** None
- **Variation from EBU:** None

7.5.3.1 Refinement 3.1: **Subject Encoding Scheme**

- **Required:** Yes
- **Repeatable:** Yes
- **XML lang. qualified:** Yes
- **Definition:** The topic of the content of the resource.
- **Comments:** The subject encoding scheme should be expressed as a text naming the scheme or a URI pointing to a full definition.
- **Encoding Scheme:** text or URI
- **Variation from DC:** DC does not have this refinement
- **Variation from EBU:** EBU does not have this refinement

7.5.4 Element 4: **Description**

- **Required:** Yes

- **Repeatable:** No
- **XML lang. qualified:** Yes
- **Definition:** An account of the content of the resource.
- **Comments:** Description may include but is not limited to: an abstract, a running order, or a free-text account of the content.
- **Encoding Scheme:** -
- **Variation from DC:** None, but refinements (table of contents, abstract) aren't used.
- **Variation from EBU:** None

7.5.5 Element 5: **Publisher**

- **Required:** Yes
- **Repeatable:** No
- **XML lang. qualified:** Yes
- **Definition:** Organisation who originally made the file available to SOMA.
- **Comments:** Text
- **Encoding Scheme:** Contact Record
- **Variation from DC:** None (pending encoding scheme).
- **Variation from EBU:** None (pending encoding scheme).

7.5.6 Element 6: **Contributor**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** An entity responsible for making contributions to the content of the resource.

- **Comments:** Examples of a Contributor include a person, an organisation, or a service. Typically, the name of a Contributor should be used to indicate the entity.
- **We recommend that names be written in the following order:** surname, first name. However, they can also be written according to local practise.
- The difference between Contributor and Creator is sometimes difficult to decide. If in doubt whether an entity is a creator or contributor use the element contributor. These two fields should be considered equivalent for search purposes.
- **Encoding Scheme:** See Creator/Publisher
- **Variation from DC:** None (pending encoding scheme)
- **Variation from EBU:** None (pending encoding scheme)

7.5.7 Element 7: **Date**

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** A date associated with an event in the life cycle of the resource.
- **Comments:** Same value as the Date.Created refinement.
- Approximate dates should be explained in Description element.
- **Encoding Scheme:** DCMI: Period Encoding Scheme [4]
- W3C-Date and Time Format (DTF) [5]
- **Variation from DC:** None
- **Variation from EBU:** None

7.5.7.1 Refinement 7.1: **Created**

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** Date of creation of the content of the resource.

Comments: Approximate dates should be explained in Description element

- **Encoding Scheme:** W3C-Date and Time Format (DTF) [5]
- **DCMI:** Period Encoding Scheme [4]
- **Variation from DC:** None
- **Variation from EBU:** None

7.5.7.2 Refinement 7.2: Available

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** Date (often a range) that the resource will become or did become available.
- **Comments:** -
- **Encoding Scheme:** DCMI: Period Encoding Scheme [4]
- **Variation from DC:** None
- **Variation from EBU:** Not used in EBU

7.5.7.3 Refinement 7.3: Issued

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** Date made available by original publisher. For example, the broadcasting date of a radio programme.
- **Comments:** It is recommended best practise to use the element both for recordings that are "born-digital" and recordings that are digitised.
- **Encoding Scheme:** DCMI: Period Encoding Scheme [4]
- W3C-Date and Time Format (DTF) [5]
- **Variation from DC:** None
- **Variation from EBU:** None

7.5.7.4 Refinement 7.4: **Modified**

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** Date on which the resource or metadata was last changed.
- **Comments:** -
- **Encoding Scheme:** W3C-Date and Time Format (DTF) [5]
- **Variation from DC:** None
- **Variation from EBU:** None

7.5.8 Element 8: **Type**

- **Required:** Yes
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** The nature or genre of the content of the resource.
- **Comments:** To describe the physical or digital manifestation of the resource, use the Format element.
- **Encoding Scheme:** DCMI Type vocabulary [6]
- SOMA Type List (see comments on this element)
- **Variation from DC:** None
- **Variation from EBU:** Not repeatable. EBU uses a greatly extended list of types.

7.5.9 Element 9.0: **Format**

- **Required:** Yes
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** The physical or digital manifestation of the resource.

- **Comments:** Use a record in the Format Encoding to refer to one instance of the audio material
- Thus offline *and* online instances of the same audio material may be referenced.
- **Encoding Scheme:** FORMAT ENCODING (see Appendix2)
- **Controlled vocabulary:** "offline" (or "online", but this is never used).
- **Variation from DC:** More information, DC record to be constructed from constituent elements
- **Variation from EBU:** More information, EBU record to be constructed from constituent elements more compatible with EBU P_META

7.5.10 Element 10: Identifier

- **Required:** Yes
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** An unambiguous reference to the resource within a given context.
- **Comments:** SOMA will use URI of the online resource. If the resource is offline or unavailable, or if it is necessary to log in to some website to gain access to the resource, a unique URI to a relevant web page should be used.
- **Note:** The identifier should be unique within a publisher/archive with no further constraints. Thus a globally unique Identifier is obtained by combining identifier and publisher.
- **Encoding Scheme:** Unique Arbitrary String (may be URI)
- **Variation from DC:** None.
- **Variation from EBU:** None, but not following their stated best practice (to use various ID schemes relating to broadcast material).

7.5.11 Element 11: Source

- **Required:** Yes

- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** A reference to a resource from which the present resource is derived. For example, for a talking book, the ISBN number of the book.
- **Comments:** Not used. Any value in this element will be ignored by the search.
- Where this information is important, consider putting it in Element 4.0 (Description), or in Refinements 13.1 and 13.4 (IsVersionOf / HasVersion and IsFormatOf / HasFormat).
- **Encoding Scheme:** -
- **Variation from DC:** We are not using this element.
- **Variation from EBU:** We are not using this element.

7.5.12 Element 12: **Language**

- **Required:** Yes
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** A language of the intellectual content of the resource.
- **Comments:** Repeated where the complete content of the resource may be understood in several languages. For example, a French film with English subtitles should have two language elements: French and English.
- Each use of the x-lang encoding should be reported to the SOMA group, who will maintain a public list.
- **Encoding Scheme:** ISO-639-2-letter codes [9]
- x-lang encoding, as in RFC 1766 [8], if language is not registered.
- **Variation from DC:** None
- **Variation from EBU:** None.

7.5.13 Element 13: **Relation**

- **Required:** No

- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** A reference to a related resource
- **Comments:** Not used unqualified.
- **Encoding Scheme:** URI
- **Variation from DC:** Not using some refinements: IsRequiredBy, Requires, IsReferencedBy, References.
- **Variation from EBU:** Not using some refinements: IsRequiredBy, Requires, IsReferencedBy, References.

7.5.13.1 Refinement 13.1: **IsVersionOf, HasVersion**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** IsVersionOf: The described resource is a version, edition, or adaptation of the referenced resource. Changes in version imply substantive changes in content rather than differences in format.
- **HasVersion:** The described resource has a version, edition, or adaptation, namely, the referenced resource.
- URI should ideally link to metadata of the related resource, otherwise to the related resource or a page about the related resource.
- **SOMA Comment:** Used for language translations.
- **Encoding Scheme:** URI
- **Variation from DC:** None.
- **Variation from EBU:** None.

7.5.13.2 Refinement 13.2: **IsReplacedBy, Replaces**

- **Required:** No
- **Repeatable:** No (but can have IsReplacedBy and Replaces)
- **XML lang. qualified:** No

- **Definition:** IsReplacedBy: The described resource is supplanted, displaced, or superceded by the referenced resource.
- **Replaces:** The described resource supplants, displaces, or supersedes the referenced resource.
- URI should ideally link to metadata of the related resource, otherwise to the related resource or a page about the related resource.
- **Comments:** Used for redirects
- **Encoding Scheme:** URI
- **Variation from DC:** None.
- **Variation from EBU:** None.

7.5.13.3 Refinement 13.3: **IsPartOf, HasPart**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** IsPartOf: The described resource is a physical or logical part of the referenced resource.
- **HasPart:** The described resource includes the referenced resource either physically or logically.
- URI should ideally link to metadata of the related resource, otherwise to the related resource or a page about the related resource.
- **Comments:** Used for membership in series.
- **Encoding Scheme:** Text or URI.
- **Variation from DC:** Allow text, not just URI.
- **Variation from EBU:** Allow text, not just URI.

7.5.14 Element 14: **Coverage**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** Yes

- **Definition:** The extent or scope of the content of the resource.
- **Comments:** If unqualified, assume the value relates to spatial coverage.
- **Encoding Scheme:** See refinements.
- **Variation from DC:** None.
- **Variation from EBU:** None.

7.5.14.1 Refinement 14.1: **Spatial**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** Yes
- **Definition:** Spatial characteristics of the intellectual content of the resource.
- **Comments:** For example, the geographical origin of folk music is placed here.
- **Encoding Scheme:** Using UN country list with additions (more precision to come).
- **Variation from DC:** None, but not using suggested controlled vocabulary.
- **Variation from EBU:** None, but not using suggested controlled vocabulary.

7.5.14.2 Refinement 14.2: **Temporal**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** Yes
- **Definition:** Time period(s) to which the intellectual content of the resource pertains.
- **Comments:** For example, historical periods discussed in a history programme might be placed here.
- **Encoding Scheme:** DCMI Period encoding scheme [4]
- **Variation from DC:** None.
- **Variation from EBU:** None.

7.5.15 Element 15: **Rights**

- **Required:** Yes
- **Repeatable:** No
- **XML lang. qualified:** Yes
- **Definition:** Information about rights held in and over the resource.
- **Comments:** By "Rights" we here mean the rights to the programme (sound file etc.) as a whole. For rights covering parts of the file (music, poetry etc included in the file) keep these in the institutions locally.
- Here register for instance NRK, BBC or the production company responsible for the programme or the record company that owns the rights to a phonogram.
- Instead of text, you may use a URI to point to a standardized statement of rights.
- If the Rights element is absent, no assumptions can be made about the status of these and other rights with respect to the resource.
- **Encoding Scheme:** Text or URI
- **Variation from DC:** None.
- **Variation from EBU:** None.

7.5.15.1 Refinement 15.1: **RightControlledParts**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** Yes
- **Definition:** Information about material where the creator does not hold the rights (typically music)
- **Comments:** By "RightControlledParts" we mean parts of the audiostream that are not solely owned by the institution or creator. These parts should be identified with time(start&end in seconds into the programme), title,artist and label/publisher

- Instead of text you may point to a URI where the full information is retrievable
- If the Rights element is absent, no assumptions can be made about the status of these and other rights with respect to the resource.
- **Encoding Scheme:**
Text[secondIn:secondsOut:title:artist/author:label/publisher] or URI
- **Variation from DC:** Does not exist in DC
- **Variation from EBU:** Does not exist in EBU

7.5.16 Element 16: **Extended Information**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** Additional data concerning the resource may be used to store proprietary or application or organization specific information
- **Comments:** May be repeated with different schemes. This element should mainly be used to store information that is not universally applicable but should still be exchanged with the resource.
- This element should be stored unchanged (as blob or similar) if the storing application can not use it.
- **Encoding Scheme:** XML Element
- **Variation from DC:** Does not exist in DC
- **Variation from EBU:** Does not exist in EBU but may be used to store information that is required for EBU P_META

7.5.16.1 **Refinement 16.1 Extended Information Scheme**

- **Required:** Yes, if Extended Information is present
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** The encoding scheme for the extended information element

- **Comments:** This is a string that uniquely identifies the scheme of the extended information data.
- **Encoding Scheme:** Text
- **Variation from DC:** Does not exist in DC
- **Variation from EBU:** Does not exist in EBU

7.5.17 APPENDIX 1: PERSON ENCODING

7.5.17.1 Element 1: **LastName, OrganizationName**

- **Required:** Yes
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** Last name (surname/family name) of person.
- If the record is for an organization, the name of the organization in the primary language.
- **Encoding:** Text
- **Variation from DC:** Component of relevant DC element
- **Variation from EBU:** Component of relevant EBU Element

7.5.17.1.1 Refinement 1.1: Alias, OrganizationAlias

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** Alias of a person, or the name by which he/she is also known as.
- **If the record is for an organization, the name of the organization in other languages. Encoding:** [:organization name]
- **Encoding:** Text
- **Variation from DC:** Component of relevant DC element
- **Variation from EBU:** Component of relevant EBU Element

7.5.17.2 Element 2: **FirstName, OrganizationAcronym**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** First name (given name) of person.
- If the record is for an organization, the acronym of the organization if applicable (e.g. BBC)
- **Encoding:** Text
- **Variation from DC:** Component of relevant DC element
- **Variation from EBU:** Component of relevant EBU Element

7.5.17.3 Element 3: **Role**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** Role the creator played in creating the resource. For example: producer, writer or editor.
- **Comments:** The content of the qualifier Role must be taken from a controlled list of authorised roles. The Role Authority List [3] is recommended, but can be extended to cover special local needs.
- **Encoding Scheme:** EBU uses EBU Reference Data Table: Roles in broadcasting [3] (not yet published)
- **Variation from DC:** There is no Creator.Role refinement in DC.
- **Variation from EBU:** None (pending EBU reference data).

7.5.17.4 Element 4: **e-mail**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No

- **Definition:** email contact address. may be a function address (e.g. <office@radiofoo.bar)
- **Variation from DC:** Component of relevant DC element
- **Variation from EBU:** Component of relevant EBU Element
- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** First name (given name) of person.
- If the record is for an organization, the acronym of the organization if applicable (e.g. BBC)
- **Encoding:** Text
- **Variation from DC:** Component of relevant DC element
- **Variation from EBU:** Component of relevant EBU Element

7.5.17.5 Element 5: **Address**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** Postal Address of the organization or person
- **Encoding:** Text in the format accepted for the country; linebreaks encoded by
- **Variation from DC:** Component of relevant DC element
- **Variation from EBU:** Component of relevant EBU Element

7.5.17.6 Element 6: **URI**

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** Yes
- **Definition:** URI of the publishing organisation.

- **NOTE:** supersedes refinement 5.1
- **Comments:** Should be used for linking to the homepage of the partner hosting the file.
- **Encoding Scheme:** URI
- **Variation from DC:** No such refinement in DC.
- **Variation from EBU:** No such refinement in EBU.

7.5.17.7 Element 7: **Logo**

- **Required:** No
- **Repeatable:** No
- **XML lang. qualified:** Yes
- **Definition:** URI of a logo of the Publisher organisation in Element 5
Publisher
- **Comments:** May be used for linking to the homepage of partner hosting the file.
- **Encoding Scheme:** URI
- **Variation from DC:** No such refinement in DC.
- **Variation from EBU:** No such refinement in EBU.

7.5.18 APPENDIX 2: **FORMAT ENCODING**

7.5.18.1 Element 1: **Format**

- **Required:** Yes
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** The physical or digital manifestation of the resource.
- **Comments:** Use Internet Media Type [7] for online resources and same as Format.Medium for offline
- **Encoding Scheme:** Internet Media Type [7] i.e. MIME-Types, e.g. "audio/mpeg, audio/x-aiff, audio/x-vorbis" etc...

- **Controlled vocabulary:** "offline" (or "online", but this is never used).
- **Variation from DC:** None
- **Variation from EBU:** None

7.5.18.2 Element 2: **ResourceLocation**

- **Required:** Yes
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** URI for the audio file. This may be a URI in the form of file://./path/to/file if used in a local filestructure or in a gzip archive
- The URI shall be translated/updated if the metadata is exchanged without the binary
- **Encoding:** URI
- **Variation from DC:** Not in DC (was in DC in version 1.0)
- **Variation from EBU:** Not in EBU

7.5.18.3 Element 3: **Extent**

- **Required:** No
- **Repeatable:** Yes
- **XML lang. qualified:** No
- **Definition:** The size or duration of the resource
- **Comments:** Repeat for indicating extent in seconds and extent in octets (8-bit bytes).
- **Encoding Scheme:** See Notes section of this document for further information.
- **Variation from DC:** None.
- **Variation from EBU:** Duration in seconds (not HHMMSS). Added extent in file size.

7.5.18.4 Element 4: **Medium**

- **Required:** Yes, for offline resources
- **Repeatable:** No
- **XML lang. qualified:** No
- **Definition:** The material or physical carrier of the resource.
- **Comments:** When media is offline, field contains "offline". When media is online, field contains "online".
- **Encoding Scheme:** Controlled vocabulary: "offline" or "online".
- **Variation from DC:** None.
- **Variation from EBU:** None.

7.6 XBMF Metadata DTD:

<!ELEMENT address (#PCDATA | br)* >

<!ELEMENT alternative (#PCDATA) >

<!ELEMENT basetitle (#PCDATA) >

<!ELEMENT br EMPTY >

<!ELEMENT contributor (entity) >

<!ELEMENT creator (entity) >

<!ELEMENT date (#PCDATA | period)* >

<!ATTLIST date type NMTOKEN #REQUIRED >

<!ELEMENT description (#PCDATA) >

<!ELEMENT e-mail (#PCDATA) >

<!ELEMENT end (#PCDATA) >

<!ELEMENT entity (address | e-mail | logo | name | role | uri)* >

<!ATTLIST entity type NMTOKEN #REQUIRED >

<!ELEMENT episodesequence (#PCDATA) >

<!ELEMENT episodetitle (#PCDATA) >

<!ELEMENT extent (#PCDATA) >

<!ELEMENT format (resourcelocation, extent, medium) >

<!ATTLIST format type CDATA #REQUIRED >

<!ELEMENT identifier (#PCDATA) >

<!ELEMENT language (#PCDATA) >

<!ELEMENT logo (#PCDATA) >

<!ELEMENT medium (#PCDATA) >

<!ELEMENT name (#PCDATA) >

<!ATTLIST name type NMTOKEN #REQUIRED >

<!ELEMENT period (start, end) >

<!ATTLIST period name CDATA #REQUIRED >

<!ELEMENT publisher (entity) >

<!ELEMENT resourcelocation (#PCDATA) >

<!ELEMENT rights (#PCDATA) >

<!ELEMENT role (#PCDATA) >

<!ATTLIST role scheme CDATA #REQUIRED >

<!ELEMENT start (#PCDATA) >

<!ELEMENT subject (#PCDATA) >

<!ATTLIST subject scheme CDATA #REQUIRED >

<!ELEMENT title (basetitle, alternative, episodesequence, episodetitle) >

<!ELEMENT type (#PCDATA) >

<!ELEMENT uri (#PCDATA) >

<!ELEMENT Metadata (title, creator, subject+, description, publisher, contributor*, date+, type, identifier, format+, language+, rights) >

<!ATTLIST Metadata version NMTOKEN #REQUIRED >