

Deliverable D15.1MDS1: Analysis of current audiovisual documentation models, Mapping of current standards

DOCUMENT IDENTIFIER PS_WP15_ORF_D15.1_Documentation_Models_v1.6
 DATE 16/3/2005
 ABSTRACT Analysis of the most popular audiovisual and currently used data-schemas within the consortium with the intention to provide support for the decision upon the PrestoSpace-Datamodel. Mapping of the analysed standards
 AUTHOR, COMPANY Christoph Bauer, Florian Rosensprung, Stefan Lajtos (ORF)
 Laurent Boch (RAI)
 Philippe Poncin (INA)
 Conny Herben-Leffring (B&G)
 KEYWORDS Documentation-model, Data-schema, mapping
 RELATED ITEMS D15.2
 NATURE Report
 DISSEMINATION Public

DOCUMENT HISTORY

| Release | Date | Reason of change | Status | Distribution |
|---------|------------|-------------------------------|-----------|--------------|
| 0.1 | 2004-02-29 | First Draft | Living | Confidential |
| 0.2 | 2004-12-13 | Exc.Sum. and Overview altered | Living | Confidential |
| 1.0 | 2005-01-11 | Schema-Descriptions inserted | Living | Confidential |
| 1.1 | 2005-01-24 | Mapping added | Living | Confidential |
| 1.2 | 2005-01-26 | Minor changes | Living | Confidential |
| 1.3 | 2005-01-31 | Rearrangement of chapters | Living | Confidential |
| 1.4 | 2005-02-08 | Changes in Conclusions | Living RC | Confidential |
| 1.5 | 2005-03-16 | IMMIX added | Living | Public |
| 1.6 | 2005-03-16 | Final adjustments | Published | |

| | | |
|----------|--|-----------|
| 1 | Executive Summary | 4 |
| 2 | Overview | 4 |
| 3 | Data Models (Customized/Legacy)..... | 5 |
| 3.1 | RAI-Documentation Model..... | 5 |
| 3.1.1 | Introduction..... | 5 |
| 3.1.1.1 | The documentation process | 6 |
| 3.1.1.2 | The identification scheme | 7 |
| 3.1.1.3 | The “Simple Registry” documentation profile..... | 9 |
| 3.1.1.4 | The descriptive documentation model..... | 9 |
| 3.1.2 | Conclusion..... | 13 |
| 3.1.2.1 | Main entities of RAI-DM..... | 13 |
| 3.1.2.2 | Standards and Exchange | 14 |
| 3.2 | INA – Documentation model..... | 15 |
| 3.2.1 | Introduction and Overview..... | 15 |
| 3.2.1.1 | The documentation process | 16 |
| 3.2.1.2 | The identification scheme | 17 |
| 3.2.1.3 | The descriptive documentation model..... | 19 |
| 3.2.1.4 | Elements..... | 21 |
| 3.2.2 | Conclusion..... | 21 |
| 3.2.2.1 | Main entities of INA-DM:..... | 21 |
| 3.2.2.2 | Standards and exchange..... | 22 |
| 3.3 | FARAO (ORF) | 23 |
| 3.3.1 | Introduction..... | 23 |
| 3.3.1.1 | Elements / Fields | 23 |
| 3.3.2 | Conclusion..... | 25 |
| 3.3.2.1 | FARAO entities..... | 25 |
| 3.3.2.2 | Standards and Exchange | 25 |
| 3.4 | IMMIX (B&G) | 26 |
| 3.4.1 | Introduction..... | 26 |
| 3.4.2 | Working Processes | 26 |
| 3.4.3 | The IMMIX Metadatamodel..... | 27 |
| 3.4.3.1 | Basic Principles | 27 |
| 3.4.3.2 | METADATA – means to meet requirements..... | 27 |
| 3.4.4 | Metadatamodel..... | 28 |
| 3.4.5 | Conclusion..... | 29 |
| 3.4.5.1 | Standards | 29 |
| 3.5 | DR Metadata standard..... | 30 |
| 3.5.1 | Introduction and Overview..... | 30 |
| 3.5.1.1 | The main entity compositions of DR-DM | 30 |
| 3.5.1.2 | The logical data model..... | 31 |
| 3.5.1.3 | Taxonomies and thesaurus | 32 |
| 3.5.1.4 | Elements (Data Dictionary)..... | 32 |
| 3.5.2 | Conclusion..... | 38 |
| 3.5.2.1 | The main entities in DR-DM:..... | 38 |
| 3.5.2.2 | Standards and Exchange | 39 |
| 4 | Data Models (Sample of Standards)..... | 40 |
| 4.1 | Dublin Core | 40 |
| 4.1.1 | Introduction..... | 40 |
| 4.1.2 | Elements..... | 41 |
| 4.1.3 | Conclusion..... | 42 |
| 4.2 | SMEF (BBC) | 43 |
| 4.2.1 | Introduction..... | 43 |

- 4.2.1.1 SMEF-DM Parts (Products) 43
- 4.2.1.2 Elements (entities and attributes) 43
- 4.2.2 Conclusion 54
- 4.2.2.1 The Main Entities of SMEF-DM..... 54
- 4.2.2.2 Standards and Exchange 55
- 4.3 MXF – Metadata-Schema..... 56
- 4.3.1 Introduction and Overview 56
- 4.3.1.1 DMS1 (official and standardized MXF-DM)..... 57
- 4.3.1.2 An example for a non-standardized MXF-DM..... 57
- 4.3.2 Conclusion 60
- 4.4 SMPTE Metadata Dictionary and structure..... 61
- 4.4.1 Introduction 61
- 4.4.2 Conclusion 62
- 4.5 P_META Metadata Exchange Scheme(EBU) 63
- 4.5.1 Introduction and Overview 63
- 4.5.1.1 Attribute List..... 63
- 4.5.2 Conclusion 94
- 4.5.2.1 Main entities in P_META..... 95
- 4.5.2.2 Standards and Exchange 95
- 5 Overall Conclusion..... 96**
- 6 MAPPING..... 97**
- 6.1 Introduction 97
- 6.2 Mapping of entities 97
- 6.3 Mapping of attributes 98
- 6.4 Mapping Entities – Attributes 100
- 7 Links and Resources 101**
- 8 APPENDIX A..... 102**
- 8.1 Detailed Description conceptual model IMMIX pilot system 102
- 8.1.1 UML-diagram of pilot system 103
- 8.1.2 The dimensions Work and Expression..... 104
- 8.1.3 The classes Recording (Opname) and Description..... 107
- 8.1.4 The dimensions Manifestation and Exemplar 113
- 8.2 INA-DM: Description fields..... 117

1 Executive Summary

This deliverable will be a report containing an analysis of representative audiovisual documentation models adopted by the major organisations participating in the project plus a set of standard-models with notable prevalence. Include is an overall mapping of entities and attributes into a common denominator. The focus is on the practical aspects of the different models in reference to the main focus of the overall workgroup as well as on the migration of legacy metadata.

2 Overview

To be able to decide on a documentation-framework (see D15.2) for PrestoSpace it is vital to analyse currently adopted audiovisual documentation models in the face of the main tasks of the future "PrestoSpace-model" as well as legacy documentation models awaiting the task to migrate those legacy metadata into a future PrestoSpace-Data-model:

- Providing a "minimal set" of universally valid descriptors.
- Having customisable structures to meet user common practice and retrieval/exploitation objectives of the different future user-companies
- Being able to accommodate existing standards and practices for the task of migrating legacy metadata as well as
 - Preservation technical Metadata
 - Restoration technical Metadata
 - Workflow Metadata
 - Descriptive Metadata (s.a. D15.3)
 - etc.

The main focus will be on models adopted by members of the PrestoSpace-Consortium; additional models/standards will be analysed if their market-penetration and technical potential is high enough to be considered.

An overall matching of the current adopted and utilized models will lead to a list of entities and a minimal dataset (common denominator), which can be taken as a starting-point for the decisions on a future PrestoSpace-Data-model, to be enhanced with subsets fulfilling the special needs of the PrestoSpace-factories and the workflow within.

3 Data Models (Customized/Legacy)

3.1 RAI-Documentation Model

3.1.1 Introduction

The current RAI¹ documentation model has been defined in order to populate the Rai archives **Multimedia Catalogue**, which is the system providing to the internal users the information about the huge amount of archived programmes.

The system has been in service since 1997, and today the process of documenting with the current model the older programmes is at a very good stage.

The user of Multimedia Catalogue can perform several activities (also depending on his/her user profile):

- Search

Through a single web-based front-end application, the user can search an archived programme within all databases (including legacy ones) either with a simple interface or with a specific one

- Navigation

Once that a single item is selected, the user can explore the documentation layers following the main entity relations.

- Browse Material

The Multimedia Catalogue includes key frames, audio clips and movies in order to represent the described entities and complete their description with a direct inspection of a browsing quality Material

- Get for re-use (if enabled)

The user can select, through the key frames representation, Material segments of which he/she asks to get a higher quality copy for re-use.

The current documentation model clearly depends on the features and the objectives of the Multimedia Catalogue and thus it happens to be quite complex.

This section tries to describe its most important features, by giving a broad synthesis accompanied by a few UML diagrams. Many minor details are omitted and a few characteristics could have been reported slightly imprecisely. The names of entities, attributes, and relations have been translated from Italian language trying to use a terminology already known in the PrestoSpace MAD area, in some cases taken from EBU Tech. 3295.

The first section deals with the documentation process, which is actually part of the ingestion of the catalogue system.

The second section provides information which is specific of the identification issue, which is considered the most important one.

The third section in effect demonstrates this fact by describing the core documentation profile, named "Simple Registry"

The fourth section eventually gives a fairly itemised illustration of the descriptive part of the documentation model.

¹ <http://www.rai.it/>

3.1.1.1 The documentation process

Jobs organisation

The documentation work flow starts with the preparation of jobs to work through, which can be divided into two different cases:

Working currently broadcasted programmes

Working programmes from archives

In both cases there is the assumption that it must be solved the issue of linking Editorial Objects (the programmes, logically) and Material (copies/tapes/location, physically).

In the first case the starting point is the “on air report” which lists the Editorial Objects related to their publication events. The published Material is used for the first link to a physical copy, while links to other Material are derived afterwards.

In the second case the Archive department prepares the jobs list where the Editorial Objects are already linked to the Material copies to be used in the continuation.

Multimedia acquisition

The next step is called “multimedia acquisition”, which consists in the recording Material for the documentation and for the ingestion into the Multimedia Catalogue.

The recorded Material consists of:

- Key frames, one for each scene change detected
- Low quality audio
- Low quality video

If required, such Material is then cut and packaged in order to match Editorial Objects (necessary for 24 hours acquisition from on air channels).

Documentation

The documentation itself is typically done by people belonging to other organizations (working outside Rai) who can use the key-frames segmentation and the low quality movie during their work.

The external organization has to adopt a validation practice in order to guarantee a defined quality level.

Not all programmes are documented as for some of them only the identification is required, considering the availability of key frames and movie, and a **Simple Registry** profile is adopted.

Documentation quality control

When the documentation is complete the work done is checked by professionals within Rai. If the documentation organization is considered reliable, this process is performed on a sample basis otherwise (new organization or got problems) it is done for each item.

Publication on Multimedia Catalogue

The *Simple Registry* profile information is provided to the users as soon as ready, even if the documentation process is not complete.

When the documentation is available with the OK flag from the quality control team, it is added to the to *Simple Registry* information.

3.1.1.2 The identification scheme

The entity which is the object of the identification effort is the **Program**, the main fields of which are:

- Title
- Identifiers (archive number and accounting reference number)
- duration
- Category and genre (organisational classification scheme)

Program instances are related to *Material* - in turn related to the *Storages* - and to the *Publication Events* – dates, times and services.

The Model defines that a *Program Version* (related to the *Program* of which it is version) can be related to a single **Series**, which is a collection of *Program Version* instances with own title and identifiers set.

For the Program there is a **credits list** collecting records with the following information:

- Role (organisational enumeration, pmeta:ROLE_TYPE_NAME), required
- Person, required
- “Qualification” (job title)
- Character name (role played in a fiction, pmeta:ROLE_NAME)

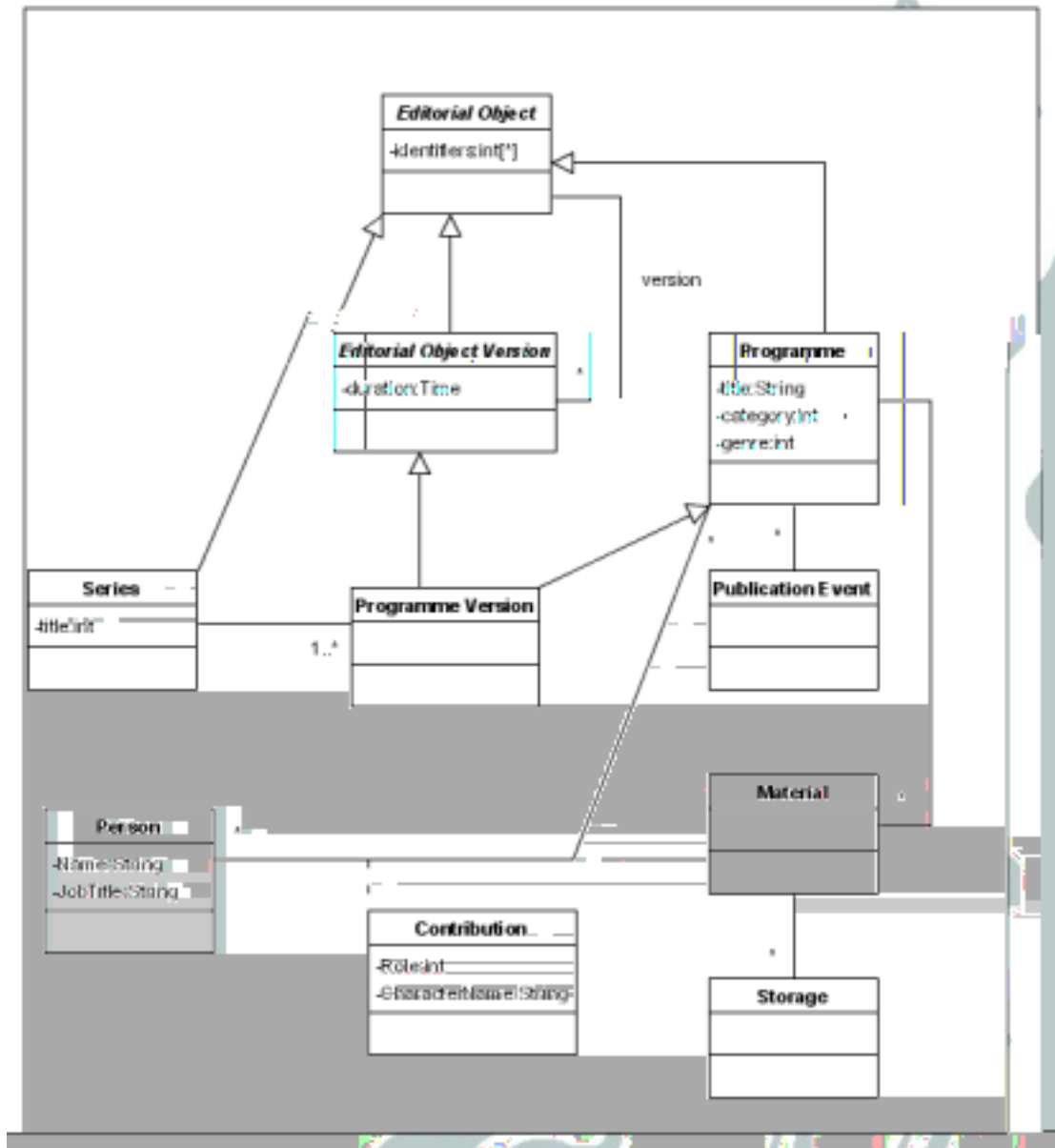


Figure 1 - identification entities

As an example, the Program instance X could have been broadcasted five times, three of which it was X1 version X and episode of Series Y1 and two other times it was X2 again version of X but episode of Series Y2.

Notice that X1 and X2 are not considered editorially equivalent, because they belong to different Series and they may have differences in title, duration and, slightly, in content.

3.1.1.3 The “Simple Registry” documentation profile

This is the minimum documentation profile the concepts of which are valid for all the other more complex profiles too.

It consists basically of the information provided by the **Identification Scheme** and the Shot segmentation.

Shot segmentation

The Editorial Object Version is automatically segmented into **Shots**, which are defined to be a *continuous part of a scene taken from a single point of view*, and can be considered as Editorial Object as well.

For each Shot it is required to know the start position within the Editorial Object of which it is part and its duration.

A key frame has to be available in the Multimedia Catalogue in order to represent a Shot instance.

A simple colour description (BW/Colour) of the Shot is obtained automatically.

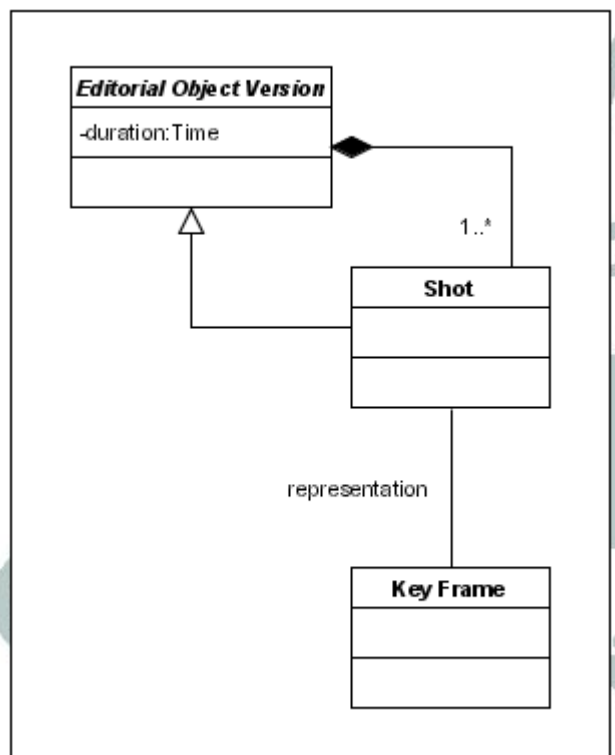


Figure 2 - the Shot segmentation

The Shot becomes the access unit of the Multimedia Catalogue and all the entities identified in the following processes of documentation inherits the results of the Shot segmentation (they can be seen as composed of Shots and they have links to their Shots).

3.1.1.4 The descriptive documentation model

The documentation process applies to the **Program Version** entity, which is discriminated into several specializations according to the most suitable documentation profile.

Generally we can find two different approaches which can be mixed with a variable balance in order to get the desired result:

- **Synthetical documentation**
It tends to collect information which is related to the whole object
- **Analytical documentation**
It tends to identify more precisely the entities to which the pieces of information are related

One of these entities is named **Pointed Out Item**, which is an identified segment of a whatever *Editorial Object Version* and that has been pointed out to give a relevant description. The identification is given by the relative position (start and duration) in the timeline of the object of which it is a segment.

A similar concept is the **Item** which is specifically a part of a *Program Version* and that is further specialized. Besides the *Item* may be related to *Real Life Events* and to a list of **Participants** the records of which are exactly as those of the *Credits list* of the Identification Scheme.

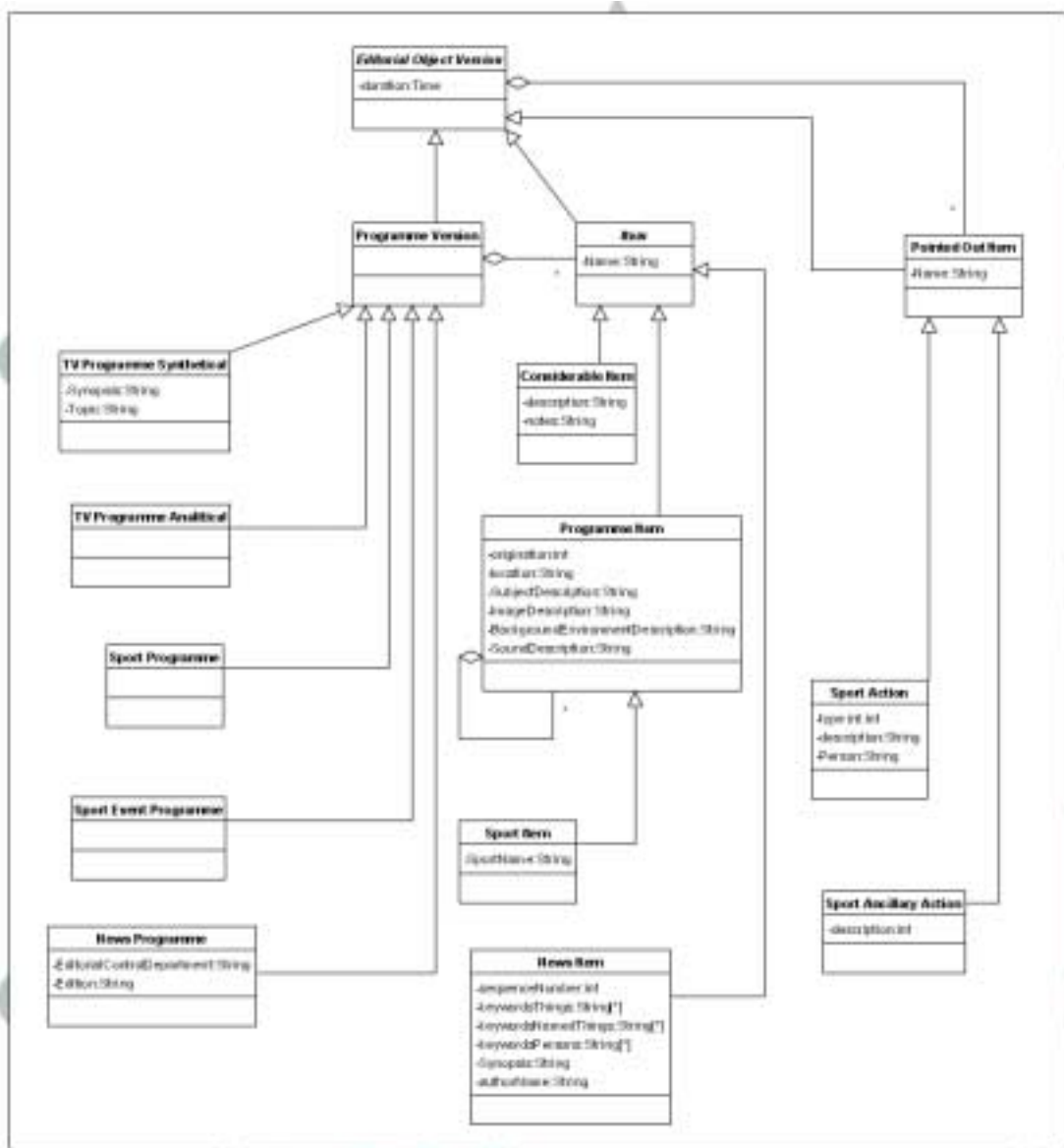


Figure 3 - broad documentation model diagram

The diagrams showed in Figure 3 and 4 provide the basis of the description of several documentation profiles.

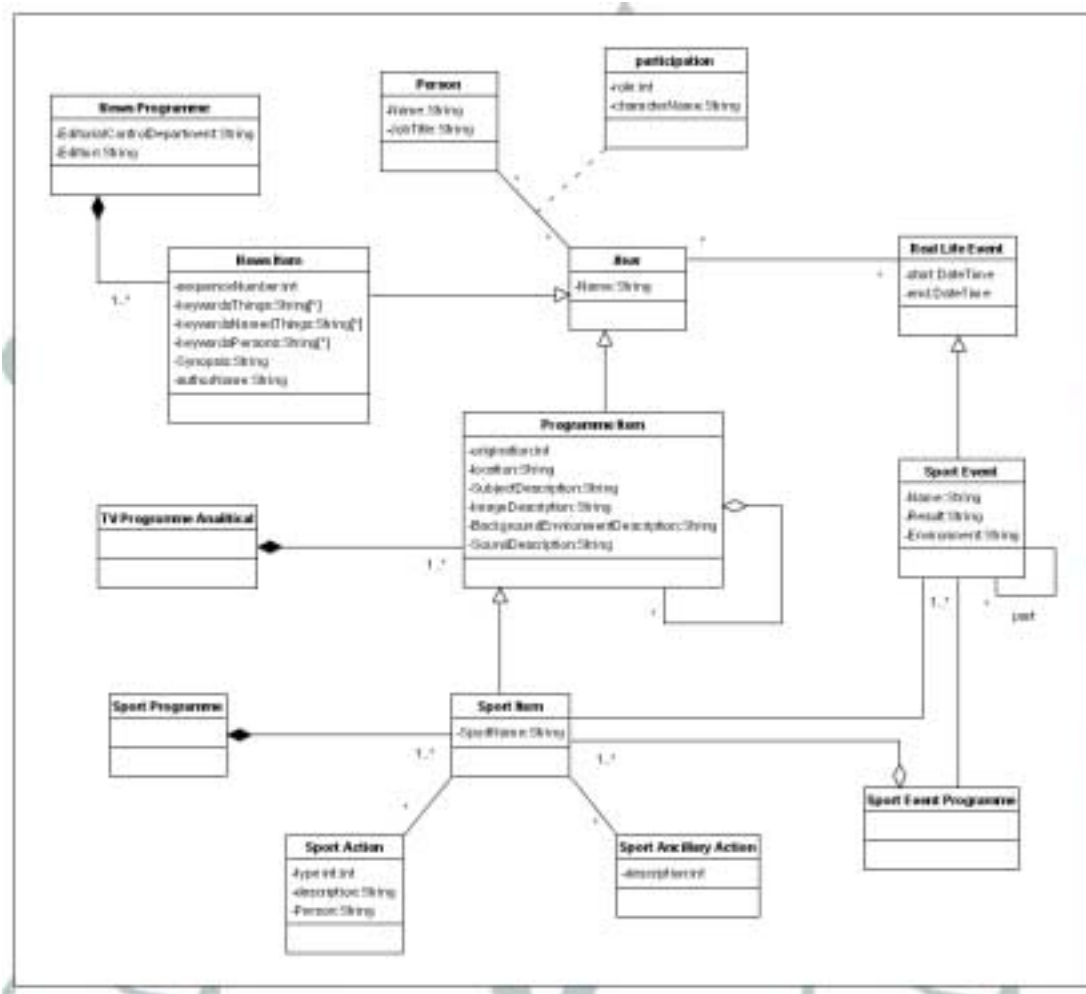


Figure 4 - documentation details

TV Programme Synthetical

This documentation profile has all the features of the *simple registry* one with the following additions:

- A synopsis/description for the whole Program Version instance

- A further classification field “topic/subject” based on an organizational classification scheme

However in some cases it is required that a few **Considerable Items** - which are part of the *Program Version* – have to be identified in order to get a specific description, together with a specific *participants* list and the dates of the possibly related *Real Life Events*.

TV Programme Analytical

This documentation profile differs from the *synthetical* one because it hasn’t any synopsis description for the whole editorial object instance, but it has a complete segmentation into **Program items**.

The default grouping of *Program Items* is the chronological sequence along the editorial timeline, however other kinds of grouping are used according to the subject (items sharing subject) or the program structure (e.g. studio/discussion vs. edited service).

The *Program Item* can be further segmented into *Program Items* in order to provide an increasing specificity to the documentation.

The information fields of the *Program Item* are:

- Name (or title)
- Duration (inherited from *Editorial Object Version*)
- Origination (definition similar to pmeta: ORIENTATION_CODE but different values set)
- Location
- Subject (free text)
- Image description (free text)
- Background/environment description
- Sound description

Furthermore it inherits from *Item* the reference to *Real Life Events* and the specific *participants list*.

Sport Programme

This documentation profile is intended for Programmes dealing specifically with Sport without having the goal of covering a single particular sport event.

The **Sport Program** is completely segmented into **Sport Items**, which are a specialization of *Program Item*.

In particular the *Sport Item* has to indicate the name of the Sport which is the subject of the item and it has to be related to a set of **Sport Events**, considered as in a hierarchy as it follows:

- the sport main container event (e.g. champions league)
- the sport sub container event (e.g. second turn)
- the sport actual event (e.g. match Juventus-Milan)

For the sport actual event it is significant to have:

- the Event result: score of sport event (e.g. 1-0)
- a brief description of the environment

Moreover the *Sport Item* can be related to some *Pointed Out Items* which are part of it and are discriminated between:

- **Sport Action**

The *Sport Action* is an item where a *Person*, briefly identified, performs an action characteristic of the particular sport. The type of action is classified according to an organisational scheme including values such as “goal”, “penalty”, “red card” for football, etc. The action is described textually.

- **Sport Ancillary Action**

The *Sport Ancillary Action* is an item where someone, briefly identified, does something related to the *Sport Item*, but not technically related to the sport practice. Examples are: “a football player interviewed”, “teams listening the hymns”, “viewers and fans showing banners”. The action is described textually.

Sport Event Programme

The main difference from the *Sport Program* documentation is that here the ***Sport Event Program*** is deemed to cover completely a single particular *Sport Event*.

An example of this is the transmission of a Formula One Grand Prix.

The documentation profile uses the *Sport Item*, the *Sport Action* and the *Sport Ancillary Action* entities, where the balance is heavily towards the two *Pointed Out Item* specializations.

As an example the items of a football match could be:

- Interviews before the match
- First half
- Interviews and comments during the break (can include replays)
- Second half
- Interviews and comments after the match

Within all these items, especially the two halves, there can be many *Sport Actions* pointed out and described.

Of course the Real Life Event context is always the same, so it is shared.

News Programme

The News documentation profile is a “legacy” one, compared to those described before, and it is going to be modified in the future.

The ***News Program***, about which there have to be known the organization department having the editorial control and the name of the edition (properly part of the identification scheme), has to be completely segmented into ***News Items***, the names of which constitutes the headlines list of the *News Program*.

The *News Item* has also the following fields:

- a sequence number
- a synopsis description
- dates of Real Life Events (inherited from *Item*)
- author name – equivalent to pmeta: ROLE_TYPE_CODE where value is “Broadcast Journalist” – explicit although inheriting from *Item* also the *participants list*
- Keywords related to “things”
- Keywords related to “named things”
- Keywords related to “persons” – again although inheriting from *Item* the *participants list*

An important known limitation is that a field about the location is missing and in practice this information is typically given as free text within the synopsis.

3.1.2 Conclusion

RAI introduced their DM in 1997, it allows both synthetic and analytical documentation (sub-items can be identified and described).

3.1.2.1 Main entities of RAI-DM

- program
- collection (of programs)

- item (inside a program)

External relations allow e.g. the identification of people with a given role, real-life-events, etc...

The material itself is linked to the program-entity

3.1.2.2 Standards and Exchange

Currently Rai archives are prepared for exporting (and importing) according to EBU Tech. 3295 (P_META), having developed a generic P_META filter application, which implements any configured export mapping from Rai organisational information sources, such as databases, xml files, and web-services, to P_META over XML.

This approach is generally adoptable by any organisation and doesn't rely on any particular feature of the Rai model.

3.2 INA – Documentation model

3.2.1 Introduction and Overview

The current INA² documentation model has been defined in order to populate the Ina archives data base, which is now called the *Totem* system providing to the internal users the information about the huge amount of archived programmes.

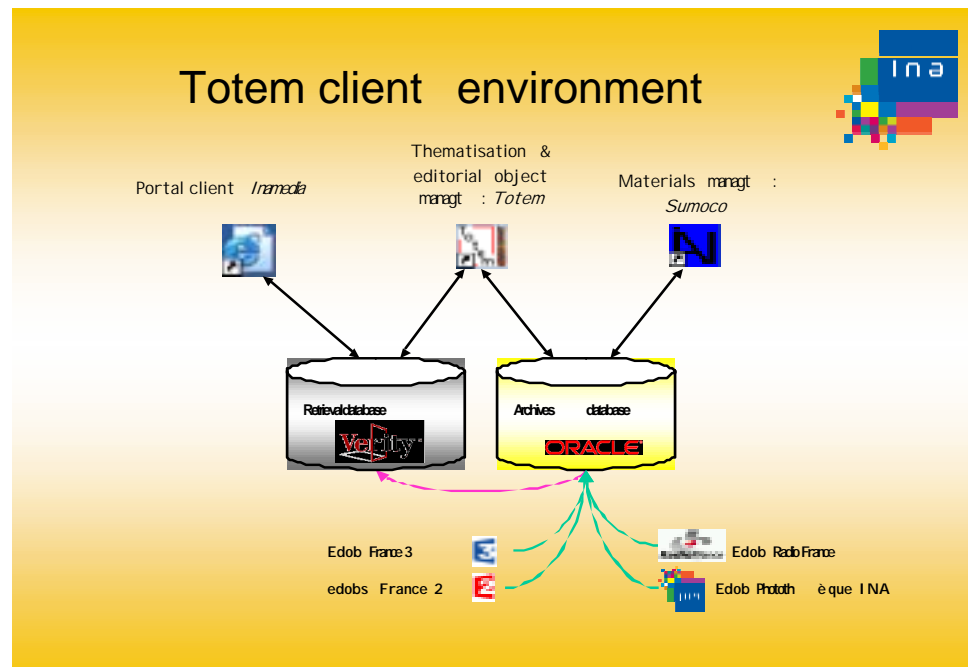
The system has been in service since 2004, and today the process of documenting with the current model the older and the current programmes is at a very good stage. INA's data model does not rely on any metadata standard, it has been defined through an evolving process since 20 years in order to meet professional requirements for managing contents and materials in the audiovisual domain.

The developments during the last years intend to describe new entities (from abstracts to thematic collections), and to increase access and reuse for clients :

- Defining new entities to manage abstracts which are often selected, and to gather thematic collections.
- Providing retrieval and viewing facilities via INAmédia application on the Web.
- Including essence management of MPEG files.

The technical environment has been shared into three parts :

1. An Oracle data base for creation and modification of editorial objects and for management of the different materials.
2. A Verity engine for full text indexing and retrieval.
3. The Totem applications for users either internally to modify Oracle data, or externally for request and access through Verity.



The user of *Totem* can perform several activities (also depending on his/her user profile):

² <http://www.ina.fr/>

- Search

Through a single web-based front-end application, the user can search an archived program within all databases (including legacy ones) either with a simple interface or with a specific one

- Navigation

Once that a single item is selected, the user can explore the documentation layers following the main entity relations.

- Browse Material

The Multimedia Catalogue includes key frames in order to represent the described entities and complete their description with a direct inspection of a browsing quality Material.

- Get for re-use (if enabled)

The user can select, through the key frames representation, Material segments of which he/she asks to get a higher quality copy for re-use.

The current documentation model clearly depends on the features and the objectives of either professional or legal deposit uses and thus it happens to be quite complex.

This document tries to describe its most important features, by giving a broad synthesis accompanied by a few diagrams. The names of entities, attributes, and relations have been translated from French language.

The first section deals with the documentation process, which is actually part of the ingestion of the catalogue system.

The second section provides information which is specific of the identification issue, which is considered the most important one.

The third section eventually gives a fairly itemized illustration of the descriptive part of the documentation model.

3.2.1.1 The documentation process

Jobs organisation

The documentation work flow starts with the preparation of jobs to work through, which can be divided into two different cases:

- Working currently broadcasted programmes
- Working programmes from archives

In both cases there is the assumption that it must be solved the issue of linking Editorial Objects (the programmes, logically) and Material (copies/tapes/location, physically).

In the first case the starting point is the "on air report" which lists the Editorial Objects related to their publication events. The recording of full broadcast programmes is done "on air" directly to MPEG files (both Mpeg2 -8Mbits and Mpeg1 -1,5Mbits). These Materials are used for the first link to a physical media, while links to other Material are derived afterwards when the professional elements are delivered by the broadcasters.

In the second case the Archive department prepares the jobs list where the Editorial Objects are already linked to the Material copies to be used in the continuation (after digitisation of previous analogue materials).

Multimedia acquisition

The next step is using the “Media Index” application which consists in import of programmes segmentation made on Mpeg1 files and for their ingestion into the Documentation database.

The recorded Material consists of:

- Key frames, one for each scene change detected
- List of sequences time codes.

If required, such Material is then cut and packaged in order to match Editorial Objects (necessary for 24 hours acquisition from on air channels).

Documentation

The documentation itself is typically done by Ina’s librarians who can use the key-frames segmentation and the low quality file during their work.

Not all programmes are documented as for some of them only the identification is required, considering the availability of key frames and movie, and a *Cataloguing* profile is adopted.

Documentation can apply on different levels, for a whole programming session, or for a specific program (single or composite) or for programmes items if necessary (e.g. news and documentaries).

Publication on Media Index

The *Media index* profile information is provided to the users as soon as ready, even if the documentation process is not complete.

When the documentation is available with the OK flag from the validation team, it is added to the to *Data base* information.

3.2.1.2 The identification scheme

The entity which is the object of the identification effort is the *Program*, the main fields of which are:

- Title
- Identifiers (archive number and accounting reference number)
- Date of transmission
- Duration
- Production code and Producers
- Authors
- Genre and Form (organisational classification scheme)

The Model defines that a *Program* can be related to a single *Collection*, which is a collection of *Program* instances with own title and identifiers set.

For the Program there is a *Cast list* collecting records with the following information:

- Person, required
- Role, required
- “Qualification” (job title)
- Character name (role played in a fiction)

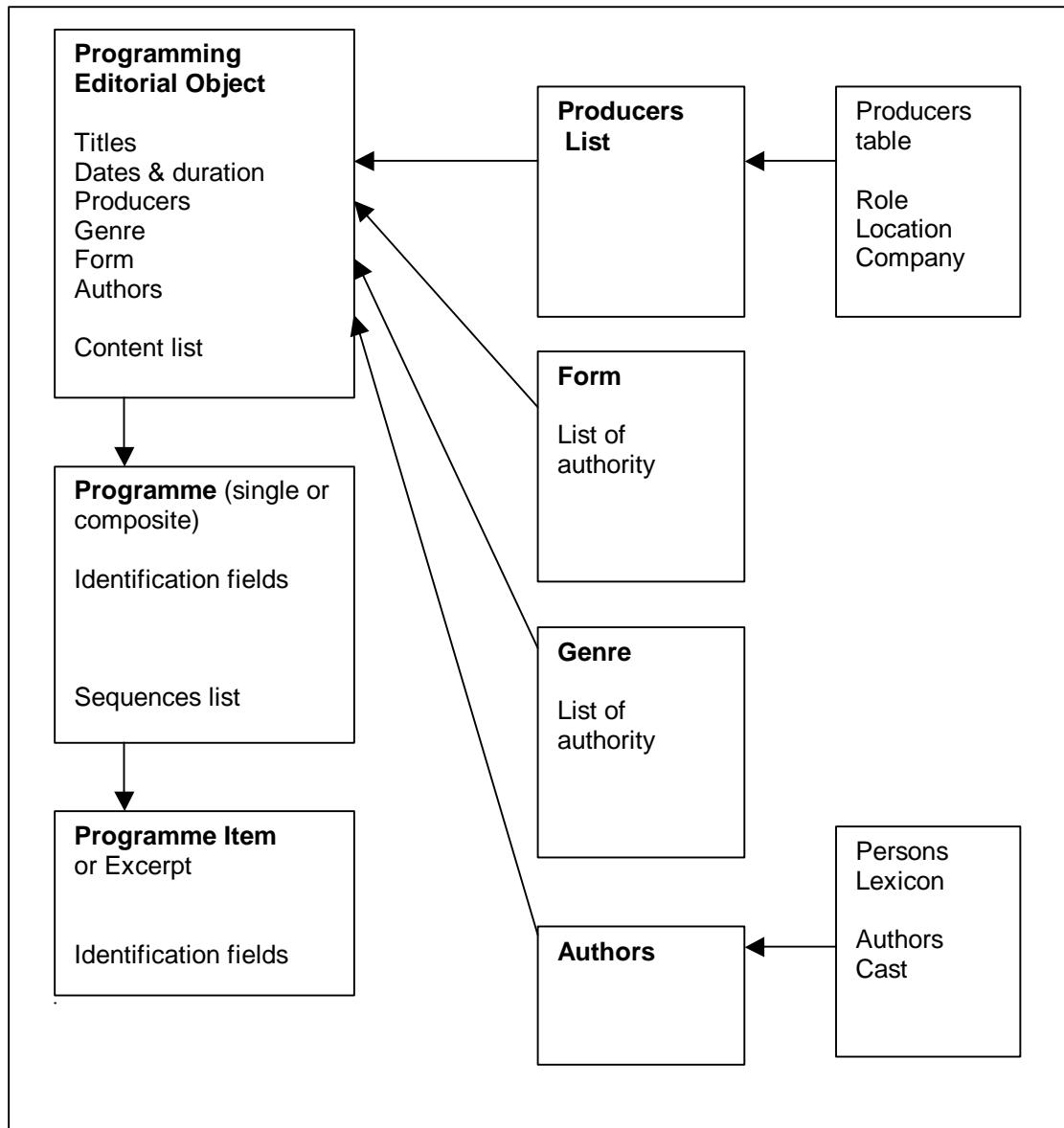


Figure 5 - identification entities

The *Programme* instances are related to professional materials and elements of materials - in turn related to the Storage locations. These are described in another database and the relations are made through a *Link Table* as represented in figure2.

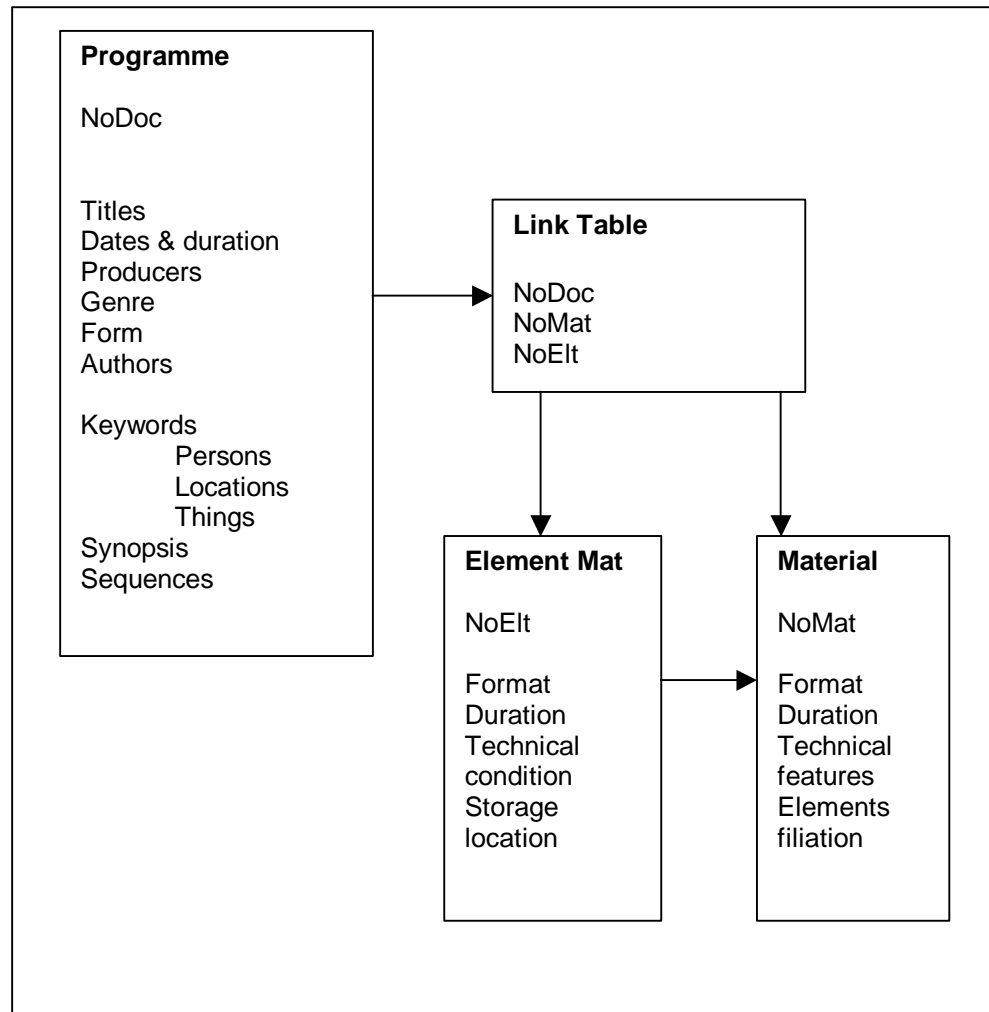


Figure 6 – description of materials

For professional uses the elements are the physical entities that are really moved and will go to the workflow to be processed until final delivery. The material describes the conceptual entity for each kind of material (format and standard) and includes the filiation to all existing elements.

The same architecture is used to link programmes to the MPEG files (both Mpeg2 -8Mbits and Mpeg1 -1,5Mbits). Therefore the viewing file can be directly accessed from the Program instance because they are available on remote disks servers.

For a Program item or excerpt, it is even simpler because the Mpeg file relates only to a single entity and the link is made directly in the item description.

3.2.1.3 The descriptive documentation model

The documentation process applies to the *Program* entity, which is discriminated into several specialisations according to the most suitable documentation profile.

Generally we can find two different approaches which can be mixed with a variable balance in order to get the desired result:

- Synthetical documentation

It tends to collect information which is related to the whole object

- Analytical documentation

It tends to identify more precisely the entities to which the pieces of information are related

One of these entities is named **Program Item**, which is an identified segment of a whatever *Editorial Object* and that has been pointed out to give a relevant description. The identification is given by the relative position (start and duration) in the timeline of the program of which it is a segment.

Besides the *Item* may be related to an action, an event or an interview and to a list of *Participants* the records of which include those of the *Credits list* of the Identification Scheme and other less important participants related to a second Person lexicon (not referenced in the Person Thesaurus).

TV Programme Synthetical

This documentation profile has all the features of the *Identification catalogue* with the following additions:

- A Synopsis/description for the whole Program Version instance
- A further classification using fields for topics, persons, locations based on a Keywords index.

This applies to telefilms, feature series, magazines and variety shows.

TV Programme Analytical

This documentation profile differs from the *synthetical* one because it hasn't any synopsis description for the whole editorial object instance, but it has a complete segmentation into **Program items**.

The default grouping of *Program Items* is the *Content list* of sequence along the editorial timeline, however other kinds of grouping are used according to the subject (items sharing subject) or the program structure (e.g. studio/discussion vs. edited service).

The *Program* description includes an abstract of each sequence and principal descriptors related to them. The *Program Items* include *Secondary Keywords* related to the sequences in order to provide an increasing specificity to the documentation.

The information fields of the *Program Item* are:

- Name (or title)
- Duration (inherited from *Program*)
- Origination and production type
- Person, Location and Topics Keywords
- Summary (free text)
- Shoots description (free text)
- Background/environment description

This applies to commentated reports, documentaries and elaborated studio recordings.

Documentary Programme

The **Documentary Program** is completely segmented into Program *Items*.

In particular the *Documentary Item* has to indicate the precise locations, the date of shooting, the persons involved and the event environment.

The actions are described textually and the purpose is to allow precise retrieval for excerpts reuse in production process.

News Programme

The **News Program**, about which there have to be known the organization department having the editorial control and the name of the edition (properly part of the identification scheme), has to be completely segmented into **News Items**, the names of which constitutes the headlines list of the *News Program*.

The News description finally includes a program entity for the whole editorial object and a Program entity for each News item.

The *News Item* has also the following fields:

- a sequence number
- a synopsis description
- dates of Real Life Events
- author name –where value is "Broadcast Journalist" – but also the whole crew
- Keywords related to "things"
- Keywords related to "locations"
- Keywords related to "persons"

One of the key information is the origin of the sequences to allow rights management and clearance for reuse.

3.2.1.4 Elements

A table of the main elements with their format and content is provided in the Annex.

3.2.2 Conclusion

The INA Documentation model, introduced in 2004, allows both synthetic and analytical documentation (sub-items can be identified and described).

3.2.2.1 Main entities of INA-DM:

- programme (single or composite)
- programme-item (or excerpt)
- programming editorial object

Material and elements of material are described in a separate database and related via a linkable to the programme instances.

External relations are given to lists of producers, second persons lexicon (those not in the person thesaurus), etc.

3.2.2.2 Standards and exchange

INA's data model does not rely on any metadata standard, it is a system directly "grown" out of the professional requirements for managing contents and materials in the audiovisual domain.

For data exchange and system interoperability, INA implemented an export in XML format which gives a standard and structured form for further uses.

3.3 FARAO (ORF)

3.3.1 Introduction

FARAO is the TV-Database-schema used by the Austrian Broadcasting Corporation (ORF)³. Since 1984 this host-based system has been online, so in this paper FARAO is the exponent of the very old and completely specialised schemas. Beneath this quite antique part of FARAO all employees of ORF are able to call up "multimedia-elements" (keyframes) of all news-programs since August 1998.

FARAO started as a simple "storage and material management system" and has been widened very soon to provide synthetical and analytical documentation. There is a subdivision of the 62 elements of FARAO which are "Structural Data", "Content Date", "Rights", "Transmission Data", "Recording Data", "Carrier Data", "Technical Data", "Reference Data", "Acquisition Data", "Loan Data", "Storage Data" and "Other Data". FARAO is strictly index-list-based and works with "controlled vocabulary" in some elements.

3.3.1.1 Elements / Fields

| Field Nr. | Fieldname | Description |
|-----------------|---|---|
| Structural Data | | |
| 1 | Programme Counter | Counter for programmes on carrier |
| 2 | Contribution Counter | Counter for contributions (within programme) on carrier |
| 3 | Record Date Of Creation | |
| Content Date | | |
| 4 | Programme Title | Programme-title and additional information in order to distinguish carriers in list-view. Additional information may be: type of generation (original, duplicate), episode number, aspect ratio, TV-system, production year etc. program-title on the "content-page" may differ from the programme-title on the "carrier-page". |
| 5 | Subtitle | May also contain original and alternative title |
| 6 | Contribution Title | (or chapter-title.) May also contain warning about blocking notes and missing material. |
| 7 | Content (story) | Short summary of content |
| 8 | (Motives) Description (visual content) | Additional rules for segmentation of description into "sequences" in practice, additional vocabulary for standardized aspects (day/night, season, good-shot, clippings of archive material, style of editing, tricks & animation etc.) in use. |
| 9 | Person | Both production staff, authors/creators and persons or ensembles appearing on screen as well as indicator on used photographs |
| 10 | Keywords | Accumulative selection from approx. 60 keywords describing general thematic fields |
| 11 | Geography | real geographical place of action |
| 12 | Timeframe Content | real temporal boundaries of action |
| 13 | Programme Format | Accumulative selection from approx. 80 programme formats, target-groups and genres. |
| 14 | Production Country | for movies |
| 15 | Production Date | for movies |
| 16 | Programme Length | |
| 17 | Contribution Length | |

³ <http://www.orf.at/>

| Rights | | |
|-------------------|----------------------------------|---|
| 18 | Creator | Company responsible for the creation / production according to credits |
| 19 | Basic Rights Qualifier | See summary |
| 20 | Production Number | Internal ID for productions, which may encompass one or several contributions or programmes. Allows to link into the ORFEUS system. |
| 21 | Production Subnumber | Counter for production numbers, which encompass more than one "title". |
| 22 | Rights data Available Flag | |
| 23 | Note of blocking | |
| Transmission Data | | |
| 24 | Date | May also contain flags for "working-material" and "collection tapes" and may represent recording date instead of transmission date. |
| 25 | Channel | |
| 26 | Date | |
| 27 | Channel | |
| Recording Data | | |
| 28 | Tape-ID | |
| 29 | Length on Tape | |
| 30 | Reduced Length | |
| 31 | Timecode Start | of the programme / contribution |
| Carrier Data | | |
| 32 | Tape Format | |
| 33 | Tape Delivery Date | |
| 34 | Tape Length | |
| 35 | Tape Manufacturer | |
| 36 | Tape Specification | |
| 37 | Tape Charge Number | |
| 38 | Subtype | e.g. high-band, low-band |
| Technical Data | | |
| 39 | S/W / Colour | |
| 40 | Roll Counter | Counter if programme is split onto several carriers |
| 41 | Technical Ok Flag | |
| 42 | Parameters Pictures | |
| 43 | Parameters Sound | multiple entries + free text possible |
| 44 | Flag Assign as Transmission Tape | |
| 45 | MAZ-PASS-ID | Allows to link into the MAZ-PASS system |
| Reference Data | | |
| 46 | Department | |
| 47 | Production Number | |
| 48 | Production Subnumber | |
| Acquisition Data | | |
| 49 | Tape of Date of Entry | |
| 50 | Tape Origin | |
| 51 | Tape Date of Notification | |

| | | |
|--------------|------------------------------|---|
| 52 | Tape Transfer Necessary Flag | |
| 53 | Tape Transfer Done Flag | |
| 54 | Tape Responsible Department | |
| Loan Data | | loan-history stays available |
| 55 | On Loan Flag | |
| 56 | Loan-ID | Links into FARA0-loan-module |
| 57 | Secondary Loan Flag | |
| 58 | Secondary Loan -ID | Links into FARA0-loan-module |
| 59 | Number of Loans | |
| Storage Data | | |
| 60 | Storage Number | |
| 61 | Old Storage Number | |
| Other Data | | |
| 62 | Remarks | Remarks include information about related material, copies, rights, blocking notes, special visual quality, availability of digital preview media (keyframes), technical defects etc. |

3.3.2 Conclusion

FARA0 is a very old and strictly “material-oriented” model, the elements are very television-specific and some of them may not be used for common audio-visual-data. Although both synthetical and analytical documentation is possible and done, the implementation is rather coarse and not part of the core-model.

3.3.2.1 FARA0 entities

- Program
- Program item (“contribution”)

Program items are linked to the overlying program only via the carrier/material (Archive-No.); so documentation is always linked to only ONE instance of material. Links to other carriers/ material is only given by a non-standardized “remark”, mostly on the material with coarse synthetical data, pointing to the fully documented item.

3.3.2.2 Standards and Exchange

Since no standards has been taken into account during development of FARA0 (1984) and exchanging data with other systems is not supported or implemented, FARA0 is a “paradigm” for legacy systems and isolated applications.

Summarizing the mapping-experiment of the FARA0-DM showed the future needs in handling old legacy data during import into the PrestoSpace-factories as well as the advantages (simple relations, mostly quick mapping solutions, etc.) and disadvantages (poor access to model-structure and technical documentation alike) of mapping an old (and rather simple) legacy model with a elementary modern one. But the core problem will be the linking of descriptive metadata and ALL related material as this is not supported by the FARA0-model.

3.4 IMMIX (B&G)

3.4.1 Introduction

This chapter gives an outline of the metadata model of the iMMix system, the new information system of the Netherlands Institute for Sound and Vision (Beeld en Geluid), which is still being further developed within the iMMix project programme.

The basis of the iMMix system is the catalogue. The legacy catalogues are unsatisfactory because they have not been designed with a relational structure, which means that new indexing methodologies (the new Metadata model of Beeld en Geluid) could not be implemented in the existing systems.

Much effort has been put into translating the Beeld en Geluid vision on the subject of metadata to computerised solutions. A metadata model and functional model have been developed and in order to make the archive material accessible in the right forward-looking way, a new indexing methodology will be implemented as well as a newly built thesaurus which will support both the catalogue input and search processes.

This iMMix system will in the end support both the back office (acquisition, preservation, and indexing processes) and the front office (lending and customer administration). An inventory module and a rights management module will be added or linked later on as well.

Migration from legacy systems to iMMix will take place in several steps. The basic system initially concentrates on handling the flow of new television material from the Dutch public broadcasters. This material will in future be imported directly from the MAM-system that is being developed as part of the Digital Platform infrastructure (the central facility DDV). This cooperation bond between the Dutch public broadcasters and their umbrella organisation Publieke Omroep, NOB and Beeld en Geluid, is realising in several projects a complete digital workflow for television production, transmission and archiving. This system is expected to be operational this summer. The packages to be exported from this central facility to iMMix will consist of high res files, low res files (MPEG1), keyframes, subtitle files and metadata (technical and descriptive) as XML.

3.4.2 Working Processes

The organisational structure of Beeld en Geluid reflects the aim to achieve a product-oriented and customer-oriented organisation, and is designed around the most important processes within Beeld en Geluid. The two distinct functions, namely the operational archive function and the cultural history function, can also be recognised in the processes. Both primary processes are broken down into acquisition, conservation, indexing, and making (information about) archive materials available to different types of customers.

During the acquisition of the collection, the materials are listed, selected, and sometimes provided with short provisional descriptions.

Conservation includes the repository management for various types of collections, the preservation process, and the duplication of materials for internal reasons or external use.

In the indexing process, the formal description and the description of the content is prepared for the catalogue on the basis of guidelines and indexing techniques.

The reuse and delivery of the Beeld en Geluid collections refers to all forms of service and provision of information to internal and external users; not only broadcast professionals, but also i.e. museums, publishers and the educational field.

The following types of data therefore have a role in the primary Beeld en Geluid operational processes.

- Data concerning the materials (the collections)
- Data concerning people and organisations

- Data for indexing the content, that is, the subject
- Data concerning the use of the materials
- Data about planning, production, and selection
- Data for management
- Data needed for executing transactions

3.4.3 The IMMIX Metadatamodel

3.4.3.1 Basic Principles

The iMMix metadata model is open and flexible and thus can be extended, whenever necessary. Some basic principles were defined on how the entire collection should be structured in the new system:

Write once, read many

Different parts of the collections which belong to one production should be identified as such. The metadata that covers those different parts should only be written once. For example in case of a documentary divided into three programmes it is more efficient to fill in the main title, a summary and some index terms that cover every programme in the documentary in stead of doing so per instance.

Inheritance of metadata

Data that is input at higher description levels must be able to 'flow' automatically to all linked, lower description levels and units.

Functional granularity

(Groups of) metadata should be accessed (catalogued, altered, deleted, retrieved) according to the functionality in the process. This basic principle includes the principle of appropriate access: users should have access to only the (groups of) data that they need for the execution of a specified task.

Unique identification

All distinguishable layers and elements of the descriptions must have a unique identifier.

Extensibility

The metadata model must be arranged to be so open and flexible that it can be extended, whenever necessary, with additional data and working processes. The way that the metadata are structured in iMMix should be applicable to:

- different collections (i.e. museum objects and bibliographic files)
- different media (radio, television, film, music, internet pages, etc.), as well as
- different genres (i.e. documentaries, news programmes and fiction series)
- additional functionality like restoration, preservation and making inventories, rights management and lending
- new forms of distribution and use of audiovisual material (specifically Internet and multimedia presentations and applications).
- different purposes; it must be possible to define specific target groups and make different descriptions for each of those groups (see: Intentions).

3.4.3.2 METADATA – means to meet requirements

To meet these basic requirements, next to the metadata model which defines the way the metadata are to be structured, two other means were developed:

- Formats: these define in which way the fields and metadata are to be presented to the documentalist.
- Intentions: these define which metadata should be available to fulfil the specific information needs of a specific target group. The idea is that a broadcast professional prefers objective annotations and for a visitor of the future Beeld en Geluid Media experience i.e. a more catchy description is needed. Also this principle enables the wish to add domain specific and other additional data to a description.

3.4.4 Metadatamodel

The metadata model defines the way the metadata should be structured. It is roughly divided in four stages: concept, actual realisation, physical embodiment, and carrier. Those four stages represent different layers in the model.

Work: the name of the intellectual and artistic concept or idea which is the foundation of one or more realisations.

Realisation: a realisation is an elaboration of a concept: a specific single or multiple productions. Every realisation has a clear structure and form of content compared to other realisations of the same work. In the case of several productions the realisation contains all data that are valid for the underlying expressions.

Series: a series is a group of expressions, usually decided by the makers or producers. A series has a beginning and an ending.

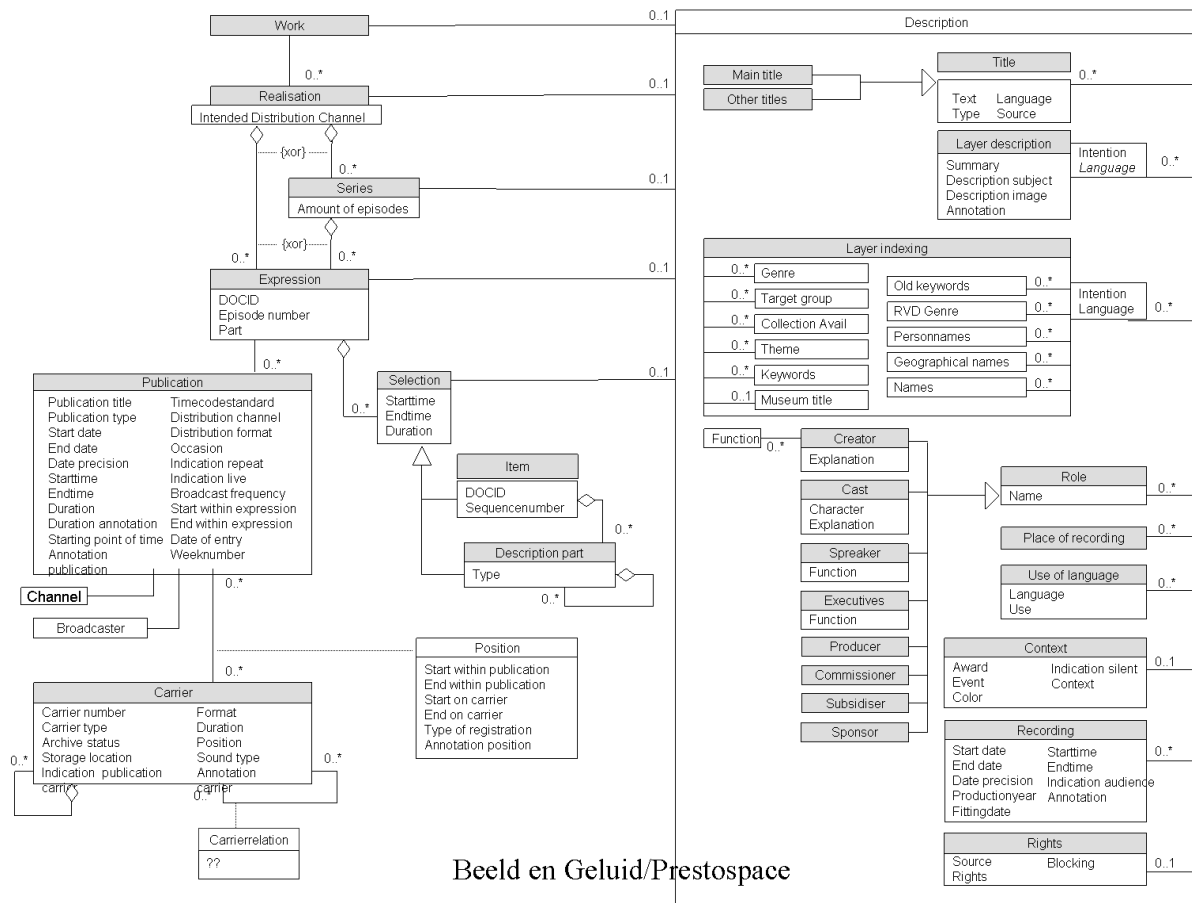
Expression: an expression is a concrete result of a realisation or series. It is the actual production.

Selection: a selection is a part of an expression. For example a news item.

Publication: a publication of an expression; i.e. a television broadcast.

Position: the position of the publication on a carrier.

Carrier: description of a carrier.



Beeld en Geluid/Prestospace

UML Diagram of the iMMix metadata model that actually is implemented.

3.4.5 Conclusion

The Beeld en Geluid new metadata model as it will be introduced in the next months is a very rich and flexible model which allows for elaborated as well as minimal descriptions and can be easily extended.

3.4.5.1 Standards

The principles as described above and the desire to promote compatibility led to the use of standards within iMMix where possible. For the form and content of the relevant metadata references are i.e. Dublin Core, SMPTE and P-Meta. For modelling the metadata the IFLA-model (International Federation of Library Associations) has been the most important reference and for the exchange format this is XML (also AXF).

3.5 DR Metadata standard

3.5.1 Introduction and Overview

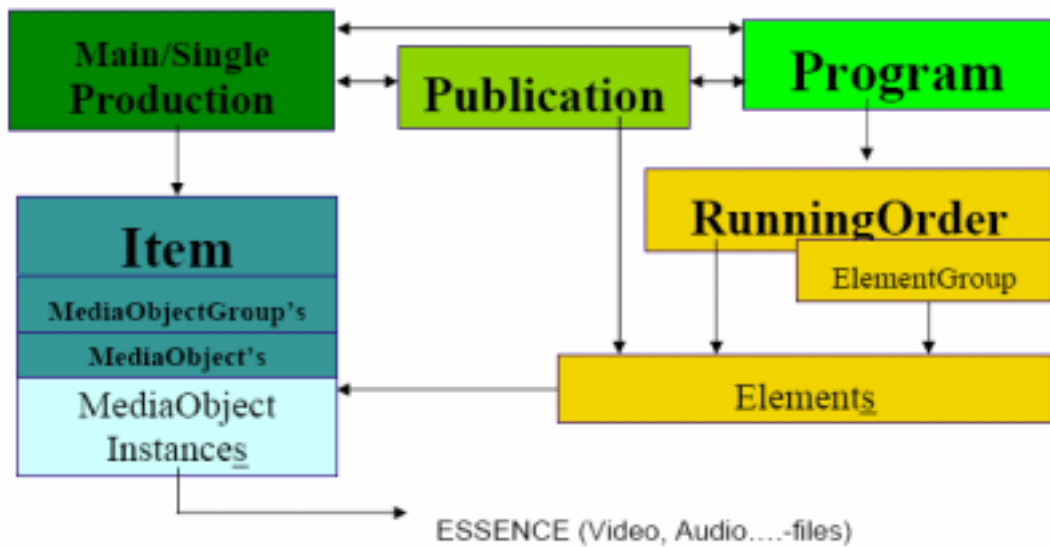
With the implementation of the DR Metadata standard⁴ the DR – Danish Broadcasting Corporation⁵ wants to improve and facilitate production and storage. For the DR it was very important, that all systems work in concert and that the exchange of information will be transparently.

To achieve this DR defined a data model and standards for system-to-system (S2S), business-to-consumer (B2C) and business-to-business (B2B) exchange.

This metadata schema is internal defined for the DRAMS (DR Asset Management System) and it should also have relations to other international standards. DRAMS should be used for archiving and also for production. The DRAMS specification describes multimedia content like productions, items, programs and articles (contributions).

The DR Metadata model consists of entities, attributes and relations. The DR Metadata standard is intended to serve as a framework for DR asset management with a strong focus on core descriptive metadata. The standard is intentionally restricted and does not cover all system- and implementation specific descriptions. The motivation for these restrictions was to enable cost-effective implementations and allow the use of standard products to the highest possible degree.

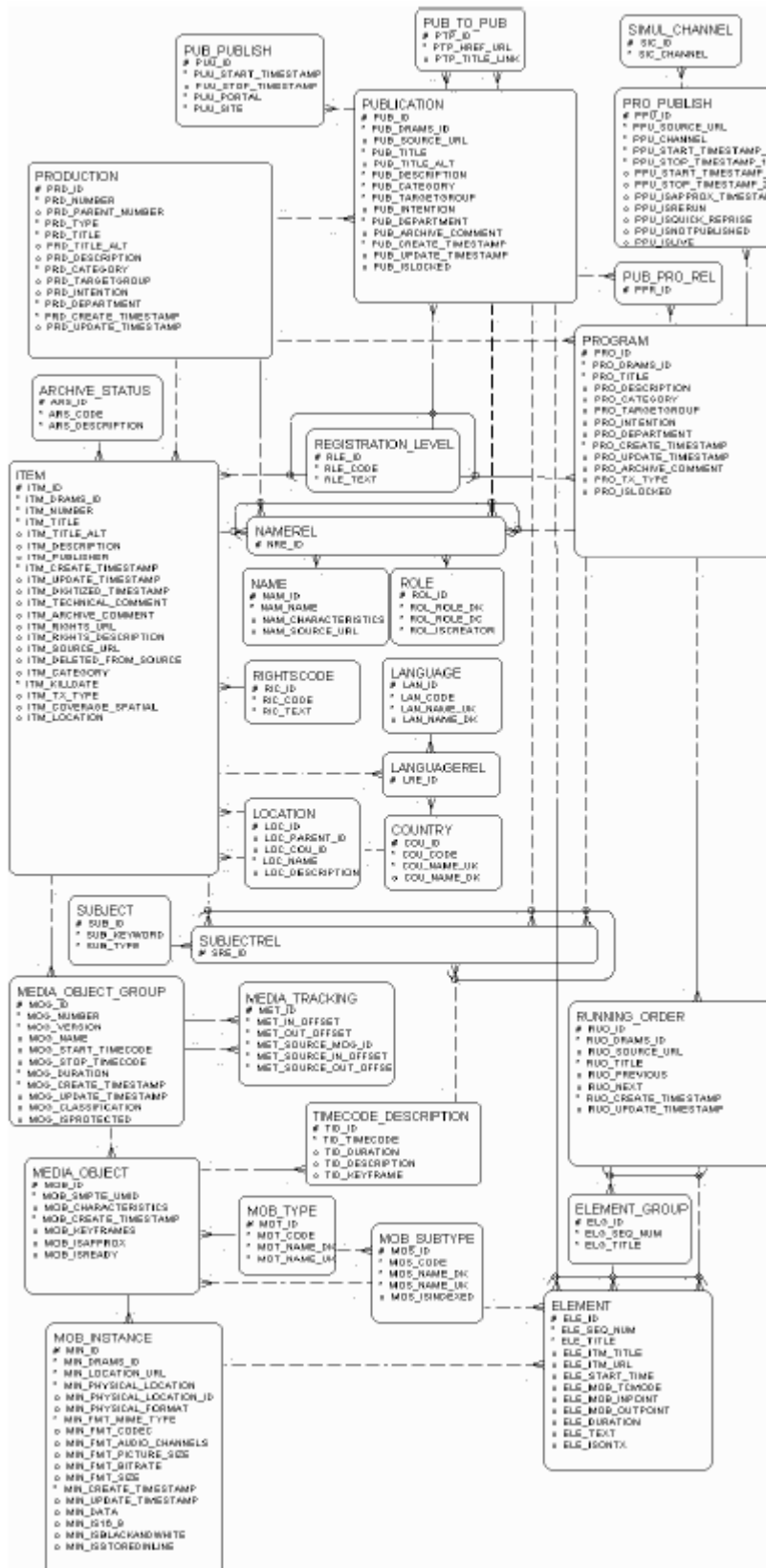
3.5.1.1 The main entity compositions of DR-DM



⁴ <http://www.dr.dk/omdr/pdf/metadata/DR metadata standard ver12 m logo.pdf>

⁵ <http://www.dr.dk/>

3.5.1.2 The logical data model



3.5.1.3 Taxonomies and thesaurus

DR-DM uses these kinds of reference tables:

- based on scheduled configuration update jobs (e.g. channel, department, target-group, etc.)
- based on International standards (e.g. country, language, role)
- based on System administrator and/or user update (e.g. location, publisher, rights-code, etc.)
- based on system provider update (MOB⁶ types)

3.5.1.4 Elements (Data Dictionary)

| Fieldnr. | Fieldname | Description |
|----------|---------------------|--|
| 1 | ARCHIVE_STATUS | The Archive_status entity contains a controlled list of codes and descriptions. |
| 1.1 | ARC_CODE | Code for status. |
| 1.2 | ARC_DESCRIPTION | Description for the meaning of the actual status Code. |
| 2 | COUNTRY (COU) | The Country entity contains a controlled list of international country codes and names in Danish and English. |
| 2.1 | COU_CODE | International country code. |
| 2.2 | COU_NAME_UK | English name for country. |
| 2.3 | COU_NAME_DK | Danish name for country. |
| 3 | ELEMENT (ELE) | An Element is the smallest part of a Running Order. The instance description contains basic properties such as title, item URL and text. |
| 3.1 | ELE_SEQ_NUM | Element Group or Element sequence number. |
| 3.2 | ELE_TITLE | Displayed title for element in running order.DC field |
| 3.3 | ELE_ITM_TITLE | Copy of referenced Item title. DC field |
| 3.4 | ELE_ITM_URL | Reference to an external item. In case the element is imported from a NCS the content could be the MIN_LOCATION_URL. |
| 3.5 | ELE_START_TIME | Estimated start time |
| 3.6 | ELE_MOB_TCMODE | Meaning of time code can be one of W (wall clock) or Z (zero based). |
| 3.6 | ELE_MOB_INPOINT | Time code for in point |
| 3.8 | ELE_MOB_OUTPOINT | Time code for outpoint |
| 3.9 | ELE_DURATION | ELE_DURATION Estimated or exact duration in seconds |
| 3.10 | ELE_TEXT | Text DC field |
| 3.11 | ELE_ISONTX | Flag is set if the element is available on the transmission server. |
| 4 | ELEMENT_GROUP (ELG) | |
| 4.1 | ELG_SEQ_NUM | Element Group or Element sequence number. |

⁶ Media Object

| | | | |
|---|------|-------------------------|--|
| | 4.2 | ELG_TITLE | A common title for several elements. DC field |
| 5 | | ITEM (ITM) | An item is the smallest unit that carries descriptive metadata (including rights). Each item contains zero or more media object groups. |
| | 5.1 | ITM_DRAMS_ID | Unique identifier for a DRAMS item |
| | 5.2 | ITM_NUMBER | Item number. |
| | 5.3 | ITM_TITLE | Primary item title. DC field |
| | 5.4 | ITM_TITLE_ALT | Alternative item title. DC field |
| | 5.5 | ITM_DESCRIPTION | An account of the content of the production. DC field |
| | 5.6 | ITM_PUBLISHER | Foreign Key to Publisher entity. An entity responsible for making the production available DC field |
| | 5.7 | ITM_CREATE_TIMESTAMP | Creation date and time. For imported material the create date refer to the date for formal issuance (e.g. publication) DC field |
| | 5.8 | ITM_UPDATE_TIMESTAMP | Update date and time DC field |
| | 5.9 | ITM_DIGITIZED_TIMESTAMP | Timestamp for when the material was digitized DC field |
| | 5.10 | ITM_TECHNICAL_COMMENT | Technical comments |
| | 5.11 | ITM_ARCHIVE_COMMENT | Archive comments |
| | 5.12 | ITM_RIGHTS_URL | URL pointing to detailed rights information. |
| | 5.13 | ITM_RIGHTS_DESCRIPTION | Should reflect and describe rights restrictions specified in the DR Rights system. DC field |
| | 5.14 | ITM_SOURCE_URL | Unique source identifier for imported Item DC field |
| | 5.15 | ITM_DELETED_FROM_SOURCE | This field indicates that the Item is deleted in the source system. |
| | 5.16 | ITM_CATEGORY | Foreign Key to Category entity. Category for Item. This field is default inherited from PRODUCTION. DC field |
| | 5.17 | ITM_KILLDATE | Date for deletion of item |
| | 5.18 | ITM_TX_TYPE | Foreign Key to TX_type entity. Indicates the usability for Item. |
| | 5.19 | ITM_COVERAGE_SPATIAL | Foreign Key to Location entity. Location for content (Notre Dame, Paris, France) Location for content is picked from the location reference table. Users shall have the option of adding new locations to this structure. DC field |
| | 5.20 | ITM_LOCATION | Foreign Key to Location entity. Location for recording (Studio 4 in DR, Denmark). Location for recording is picked from the location reference table. Users shall have the option of adding new locations to this structure. |
| 6 | | LANGUAGE (LAN) | The Language entity contains a controlled list of international Language codes and names in Danish and English. |
| | 6.1 | LAN_CODE | International language code. DC field. |
| | 6.2 | LAN_NAME_UK | English name for language |
| | 6.3 | LAN_NAME_DK | Danish name for language |
| 7 | | LANGUAGEREL (LRE) | Relations between Language, Country and Item are stored in the Language Relation entity. |
| 8 | | LOCATION (LOC) | The Location entity contains a list of used locations. |
| | 8.1 | LOC_COU_ID | Unique location id. |
| | 8.2 | LOC_NAME | Name for location. |
| | 8.3 | LOC_DESCRIPTION | Description associated to location |

| | | |
|-------|--------------------------|--|
| 9 | MEDIA_OBJECT (MOB) | A Media Object defines a piece of media in terms of media type and relations to zero or more instances. All instances defined by the Media Object should be semantically equivalent. |
| 9.1 | MOB_SMPTE_UMID | Unique material identifier |
| 9.2 | MOB_CHARACTERISTICS | Text describing the content |
| 9.3 | MOB_CREATE_TIMESTAMP | Time for creation or recording. Default MOG_CREATE_TIMESTAMP |
| 9.4 | MOB_ISAPPROX | The create timestamp is approximately |
| 9.5 | MOB_ISREADY | Flag indicating the instance(s) is ready for publication. |
| 9.6 | MOB_KEYFRAMES | A collection of automatic generated images (keyframes) associated to video media objects. |
| 10 | MEDIA_OBJECT_GROUP (MOG) | The Media Object Group is a container for one or more semantically equivalent Media Objects defined in time by start- and stop time code. |
| 10.1 | MOG_NUMBER | Media object group number. |
| 10.2 | MOG_VERSION | Media object group version |
| 10.3 | MOG_NAME | Name for group like Camera 1, or scene 1 |
| 10.4 | MOG_START_TIMECODE | Start time code |
| 10.5 | MOG_STOP_TIMECODE | End time code. |
| 10.6 | MOG_DURATION | Duration |
| 10.7 | MOG_CREATE_TIMESTAMP | Creation time stamp |
| 10.8 | MOG_UPDATE_TIMESTAMP | Update time stamp |
| 10.9 | MOG_CLASSIFICATION | The field can have none or one of the following values - (feed, udsendelseskopi, udsendelseskopi med skilte). The classification is intended to be filled in automatically form the feed scheduling system |
| 10.10 | MOG_ISPROTECTED | Flag indicating that the instance is referenced by an element (program or publication). If this flag is set then it is anticipated that the Item must not be deleted. |
| 11 | MOB_INSTANCE (MIN) | The Mob Instance entity represents a reference to a media object instance. The instance description contains basic properties such as date, location, format, status and format-specific information. |
| 11.1 | MIN_DRAMS_ID | Unique identifier for a DRAMS MOB instance. |
| 11.2 | MIN_LOCATION_URL | Locator for this essence file. This can be a reference to a file in a production area or on a remote server. This may also be used as a system-specific identifier for archive systems or similar. |
| 11.3 | MIN_PHYSICAL_LOCATION | Description of physical location. This attribute is only used when storing essence on physical media such as videotapes or optical discs. |
| 11.4 | MIN_PHYSICAL_LOCATION_ID | ID describing identifier on physical media. This attribute is only used when storing essence on physical media such as videotapes or optical discs (i.e. tape number). |
| 11.5 | MIN_PHYSICAL_FORMAT | Foreign Key to Media format entity. Audio/video format for physical media |
| 11.6 | MIN_FMT_MIME_TYPE | MIME type describing the format (file extension) |
| 11.7 | MIN_FMT_CODEEC | Foreign Key to Media codec entity. Actual coding format. |
| 11.8 | MIN_FMT_AUDIO_CHANNELS | Audio channel format (1,2,4,5.1) |

| | | |
|-------|-----------------------|--|
| 11.8 | MIN_FMT_PICTURE_SIZE | Picture size pixels. |
| 11.9 | MIN_FMT_BITRATE | Average bit rate for this instance in Bytes/s. |
| 11.10 | MIN_FMT_SIZE | Size of referenced file in Bytes |
| 11.11 | MIN_CREATE_TIMESTAMP | Creation time stamp |
| 11.12 | MIN_UPDATE_TIMESTAMP | Update time stamp |
| 11.13 | MIN_DATA | If Text Media Object is supposed to be indexed then data are stored in MIN_DATA |
| 11.14 | MIN_IS16_9 | Flag for 16:9 video |
| 11.15 | MIN_ISBLACKANDWHITE | Flag for black and white video, still and Graphics |
| 11.16 | MIN_ISSTOREDINLINE | Flag telling that text media object is stored in MIN_DATA. |
| 12 | MEDIA_TRACKING (MET) | The Media Tracking entity contains linkage between Media Object Groups. This linkage is used to save inheritance and reference information between Media Object Groups. |
| 12.1 | MED_IN_OFFSET | Offset for start location for the source material within the actual video Media Object. |
| 12.2 | MED_OUT_OFFSET | Offset for stop location for the source material within the actual video Media Object. |
| 12.3 | MED_SOURCE_MOG_ID | Reference to source material |
| 12.4 | MED_SOURCE_IN_OFFSET | Offset for start location within the source material |
| 12.5 | MED_SOURCE_OUT_OFFSET | Offset for stop location within the source material |
| 13 | MOB_SUBTYPE (MOS) | The MOB Subtype contains a controlled list of media subtypes only related to MOB Types Text and Data. |
| 13.1 | MOS_CODE | Short name for Subtype |
| 13.2 | MOS_NAME_DK | Name for subtype in Danish |
| 13.3 | MOS_NAME_UK | Name for subtype in English |
| 13.4 | MOS_ISINDEXED | Flag indicates that the text shall be indexed |
| 14 | MOB_TYPE (MOT) | The MOB Type contains a controlled list of six media types. |
| 14.1 | MOT_CODE | Short name for type: A (Audio), V (Video), S (Still), G (Graphic), D(Data), T (Text) |
| 14.2 | MOT_NAME_UK | Audio, Video, Still, Graphic, Data, Text |
| 14.3 | MOT_NAME_DK | Lyd, Video, Billede, Grafik, Data, Tekst |
| 15 | NAMEREL (NRE) | Relations between Names and Roles are stored in the Name Relation entity. |
| 16 | NAME (NAM) | The Person entity stores basic person information such as name and characteristics. |
| 16.1 | NAM_NAME | Name for person, group, ensemble etch. DC field |
| 16.2 | NAM_CHARACTERISTICS | Characteristics such as current title and salutation. |
| 16.3 | NAM_SOURCE_URL | A reference to an external catalogue system. |
| 17 | PRODUCTION (PRD) | A production may be standalone or related to a main production (parent). A main production defines a group of productions such as a series. The entity description contains basic properties such as DR production number and title. |
| 17.1 | PRD_NUMBER | The DR production number. DC field |

| | | |
|-------|------------------------|---|
| 17.3 | PRD_TYPE | Foreign Key to Production_type entity. Type as TV, Radio, Web..... |
| 17.4 | PRD_TITLE | Primary production title. DC field |
| 17.5 | PRD_TITLE_ALT | Alternate production title. DC field |
| 17.6 | PRD_DESCRIPTION | Description of the production. DC field |
| 17.7 | PRD_CATEGORY | Foreign Key to Category entity. Category for associated programs. DC field |
| 17.8 | PRD_TARGETGROUP | Foreign Key to Targetgroup entity. Subcategory to Category |
| 17.9 | PRD_INTENTION | Foreign Key to Intention entity. Intention for production (teach, entertain...) |
| 17.10 | PRD_DEPARTMENT | Foreign Key to Department entity. Department (descriptive name) |
| 17.11 | PRD_CREATE_TIMESTAMP | Creation timestamp DC field |
| 17.12 | PRD_UPDATE_TIMESTAMP | Update timestamp DC field |
| 18 | PROGRAM (PRO) | Material sequences from productions assembled to one sequence and transmitted as a program. Has metadata such as title, description etc. The Program is guaranteed to represent a single and unique sequence of material (list of Running Orders and Elements). |
| 18.1 | PRO_DRAMS_ID | Unique identifier for a DRAMS program. |
| 18.2 | PRO_TITLE | The program title. DC field |
| 18.3 | PRO_DESCRIPTION | The program description. DC field |
| 18.4 | PRO_CATEGORY | Foreign Key to Category entity. Category for associated programs DC field |
| 18.5 | PRO_TARGETGROUP | Foreign Key to Targetgroup entity. Subcategory to Category |
| 18.6 | PRO_INTENTION | Foreign Key to Intention entity. Intention for production (teach, entertain...) |
| 18.7 | PRO_DEPARTMENT | Foreign Key to Department entity. Department (descriptive name) |
| 18.8 | PRO_CREATE_TIMESTAMP | Creation timestamp DC field |
| 18.9 | PRO_UPDATE_TIMESTAMP | Update timestamp DC field |
| 18.10 | PRO_ARCHIVE_COMMENT | Archive comment |
| 18.11 | PRO_TX_TYPE | Foreign Key to TX_type entity. Indicates the usability for Program. |
| 18.12 | PRO_ISLOCKED | Locked for automatic update |
| 19 | PRO_PUBLISH (PPU) | |
| 19.1 | PPU_SOURCE_URL | Unique source system transmission identifier |
| 19.2 | PPU_CHANNEL | Foreign Key to Channel entity. The broadcast mother channel. |
| 19.3 | PPU_START_TIMESTAMP_1 | Planned date and time for start of transmission DC field |
| 19.4 | PPU_STOP_TIMESTAMP_1 | Planned date and time for end of transmission DC field |
| 19.5 | PPU_START_TIMESTAMP_2 | Date and time for actual start of transmission DC field |
| 19.6 | PPU_STOP_TIMESTAMP_2 | Date and time for actual end of transmission DC field |
| 19.7 | PPU_ISAPPROX_TIMESTAMP | Flag indicates that the start time for transmission is approximately |
| 19.8 | PPU_ISRERUN | Rerun flag |
| 19.9 | PPU_ISQUICK_REPRISE | Quick reprise flag |

| | | | |
|----|-------|--------------------------|---|
| | 19.10 | PPU_ISNOTPUBLISHED | Has not been transmitted flag |
| | 19.11 | PPU_ISLIVE | Is transmitted live flag |
| 20 | | PUB_PRO_REL (PPR) | Relations between Publications and Programs are stored in the pub_pro_rel entity. |
| 21 | | PUB_PUBLISH (PUU) | Publishing log that contains start-, stop timestamp and location. |
| | 21.1 | PUU_START_TIMESTAMP | Timestamp for start of publishing. DC field |
| | 21.2 | PUU_STOP_TIMESTAMP | Timestamp for end of publishing. DC field |
| | 21.3 | PUU_PORTAL | Foreign Key to Portal entity. Name of portal or high-level address for publication. |
| | 21.4 | PUU_SITE | Site name or low-level address for publication |
| 22 | | PUB_TO_PUB (PTP) | Links between Publications extracted from Publications and mapping to PUB_ID's for internal navigation. |
| | 22.1 | PTP_HREF_URL | Original link extracted from Publication. |
| | 22.2 | PTP_TITLE_LINK | Name or description related to link. |
| 23 | | PUBLICATION (PUB) | Material from productions packaged for publishing such as print, web, teletext etc. |
| | 23.1 | PUB_DRAMS_ID | Unique identifier for a DRAMS publication. DC field |
| | 23.2 | PUB_SOURCE_URL | Unique article source system identifier. DC field |
| | 23.3 | PUB_TITLE | Primary article title. DC field |
| | 23.4 | PUB_TITLE_ALT | Alternate article title. DC field |
| | 23.5 | PUB_DESCRIPTION | Description of the publication. DC field |
| | 23.6 | PUB_CATEGORY | Foreign Key to Category entity. Category description. DC field |
| | 23.7 | PUB_TARGETGROUP | Foreign Key to Target group entity. Target group (intended audience). |
| | 23.8 | PUB_INTENTION | Foreign Key to Intention entity. Intention for publication (teach, entertain...) |
| | 23.9 | PUB_DEPARTMENT | Foreign Key to Department entity. Department (descriptive name) |
| | 23.10 | PUB_ARCHIVE_COMMENT | Archive comment |
| | 23.11 | PUB_CREATE_TIMESTAMP | Creation timestamp. |
| | 23.12 | PUB_UPDATE_TIMESTAMP | Modification timestamp. |
| | 23.13 | PUB_ISLOCKED | Locked for automatic update |
| 24 | | REGISTRATION_LEVEL (RLE) | The Registration Level contains a controlled list of registration remarks. |
| | 24.1 | RLE_CODE | Short name for registration level |
| | 24.2 | RLE_TEXT | Text describing the level of registration. |
| 25 | | RIGHTSCODE (RIC) | The RightsCode entity contains a controlled list of DR defined codes and text for rights. |
| | 25.1 | RIC_CODE | Code for rights. |
| | 25.2 | RIC_TEXT | Should reflect rights restrictions specified in the DR Rights system. |
| 26 | | ROLE (ROL) | The role entity is used to describe roles and role codes and relations to persons through Person Relations. |
| | 26.1 | ROL_ROLE_DC | Role identifier. |

| | | | |
|----|------|----------------------------|--|
| | 26.2 | ROL_ROLE_DK | Role name in Danish. |
| | 26.3 | ROL_ISCREATOR | Role only applicable for creator attributes. |
| 27 | | RUNNING_ORDER (RUO) | A Running Order defining a schedule for a Program or a part of a Program and consist of an ordered sequence of Element Groups and/or Elements. Has metadata such as sequence number and title. |
| | 27.1 | RUO_DRAMS_ID | Unique identifier for a DRAMS running order. DC field |
| | 27.2 | RUO_SOURCE_URL | Unique source system identifier for a Running Order. DC field |
| | 27.3 | RUO_TITLE | Title for running order. DC field |
| | 27.4 | RUO_NEXT | Indicates situations where one Running Order is followed by another Running Order. Content is the unique RUO_DRAMS_ID for the next Running Order. |
| | 27.5 | RUO_PREVIOUS | Indicates situations where one Running Order follows another Running Order. Content is the unique RUO_DRAMS_ID for the previous Running Order. |
| 28 | | SIMUL_CHANNEL (SIC) | The Simultaneously Channel entity describes child channels associated to one transmission of a Program. |
| | 28.1 | SIC_CHANNEL | Short name for transmission channel. |
| 29 | | SUBJECT (SUB) | The Subject entity contains flat list of keywords that constitutes a controlled vocabulary. |
| | 29.1 | SUB_KEYWORD | Keywords |
| | 29.2 | SUB_TYPE | Valid keyword types D, T, U D: Keyword is a Danish librarian code (DK5) T: Keyword is part of the thesaurus U: Keyword is not a part of the thesaurus |
| 30 | | SUBJECTREL (SRE) | Relations between Subject and Item, Program, Publication and Keyframe are stored in the Subject Relation entity. |
| 31 | | TIMECODE_DESCRIPTION (TID) | Defines a description primarily related to a video Media Object. The entity description contains basic properties such as time code and maybe an image covering the actual keyframe related to timecode. |
| | 31.1 | TID_TIMECODE | Time code for when in the video the keyframe is captured. |
| | 31.2 | TID_DURATION | Duration for clip |
| | 31.3 | TID_DESCRIPTION | Text describing the clip DC field |
| | 31.4 | TID_KEYFRAME | Actual keyframe (image) |

3.5.2 Conclusion

The DR Metadata model (consisting of entities, attributes and relations) is intended to serve as a framework for DR asset management (with a strong focus on core descriptive metadata.) The internal specifications are for managing material in both the production and archiving domain.

3.5.2.1 The main entities in DR-DM:

- On the "Archive"-side:
 - Main/Single Production
 - Item
 - Media Object Group(s)
 - Media Object (MOB)

- Media Object Instances (MIN)
- On the "Broadcasting/Publishing"-side:
 - Program + Publication
 - Running order
 - Element Group
 - Elements

The connection to the essence is maintained in a single entity, the Media Object Instance (MIN).

3.5.2.2 Standards and Exchange

During development relations to international standards for S2S, B2B and B2C exchange were taken into account (Therefore the mapping-process in chapter 6 showed up the advantages (mostly quick mapping solutions for the core elements) of this approach during development).

For the DR-DM a set of formal specifications and XML-based schemata exists for S2S⁷ and B2B⁸ exchange.

⁷ <http://www.dr.dk/omdr/pdf/metadata/appendix2ver12.pdf>

⁸ <http://www.dr.dk/omdr/pdf/metadata/appendix3ver12.pdf>

4 Data Models (Sample of Standards)

4.1 Dublin Core

4.1.1 Introduction

Dublin Core is presently the most “popular” and discussed metadata standard. The “Dublin Core Initiative” was founded by the Online Computer Library Center (OCLC)⁹ and the National Center for Supercomputing (NCSA)¹⁰ in March 1995. This Initiative always tries to optimize and upgrade the DC.

The Dublin Core Metadata Initiative (DCMI)¹¹ bases upon an international teamwork of members of the following groups: librarians, representatives of public administration and commercial enterprises, computer scientists. Every year workshops take place where the elements of DC are discussed.

First Dublin Core contained 13, later 15 elements. These elements describe DLOs (document-like objects); these can be specified by “qualifiers”. The qualifiers help the user to find DLOs more easily and quickly in the Internet.

According to *Thea Spiridonidou* only a few search engines are able to read and interpret metadata information at the same time. Those engines which manage to do that, take only certain elements of data into account. For example “Alta Vista” and “Infoseek” take only the elements “Keywords” and “Description” in HTML-documents into consideration.

Spiridonidou assumes that “if Dublin Core becomes a common standard, its elements will be recognized automatically by search engines”.

⁹ <http://www.oclc.org>

¹⁰ <http://www.ncsa.uiuc.edu>

¹¹ <http://www.dublincore.org>

4.1.2 Elements

| FieldNr. | Fieldname | Description |
|----------|--------------------------------------|--|
| 1 | Title (DC.TITLE) | A name given to the resource. Typically, Title will be a name by which the resource is formally known. |
| 2 | Creator (DC.CREATOR) | An entity primarily responsible for making the content of the resource. Examples of Creator include a person, an organization, or a service. Typically, the name of a Creator should be used to indicate the entity. |
| 3 | Subject and Keywords (DC.SUBJECT) | A topic of the content of the resource. Typically, Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme. |
| 4 | Description (DC.DESCRPTION) | An account of the content of the resource. Examples of Description include, but are not limited to: an abstract, table of contents, reference to a graphical representation of content or a free-text account of the content. |
| 5 | Publisher (DC.PUBLISHER) | An entity responsible for making the resource available. Examples of Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity. |
| 6 | Contributor (DC.CONTRIBUTORS) | An entity responsible for making contributions to the content of the resource. Examples of Contributor include a person, an organization, or a service. Typically, the name of a Contributor should be used to indicate the entity. |
| 7 | Date (DC.DATE) | A date of an event in the lifecycle of the resource. Typically, Date will be associated with the creation or availability of the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3CDTF] and includes (among others) dates of the form YYYY-MM-DD. |
| 8 | Resource Type (DC.TYPE) | The nature or genre of the content of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary (for example, the DCMI Type Vocabulary [DCT1]). To describe the physical or digital manifestation of the resource, use the FORMAT element. |
| 9 | Format (DC.FORMAT) | The physical or digital manifestation of the resource. Typically, Format may include the media-type or dimensions of the resource. Format may be used to identify the software, hardware, or other equipment needed to display or operate the resource. Examples of dimensions include size and duration. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [MIME] defining computer media formats). |

| | | |
|----|--|---|
| 10 | Resource Identifier (DC.IDENTIFIER) | An unambiguous reference to the resource within a given context. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Formal identification systems include but are not limited to the Uniform Resource Identifier (URI) (including the Uniform Resource Locator (URL)), the Digital Object Identifier (DOI) and the International Standard Book Number (ISBN). |
| 11 | Source (DC.SOURCE) | A Reference to a resource from which the present resource is derived. The present resource may be derived from the Source resource in whole or in part. Recommended best practice is to identify the referenced resource by means of a string or number conforming to a formal identification system. |
| 12 | Language (DC.LANGUAGE) | Language Recommended best practice is to use RFC 3066 [RFC3066] which, in conjunction with ISO639 [ISO639]), defines two- and three-letter primary language tags with optional subtags. Examples include "en" or "eng" for English, "akk" for Akkadian", and "en-GB" for English used in the United Kingdom. |
| 13 | Relation Resources (DC.RELATION) | A reference to a related resource. Recommended best practice is to identify the referenced resource by means of a string or number conforming to a formal identification system. |
| 14 | Coverage (DC.COVERAGE) | The extent or scope of the content of the resource. Typically, Coverage will include spatial location (a place name or geographic coordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [TGN]) and to use, where appropriate, named places or time periods in preference to numeric identifiers such as sets of coordinates or date ranges. |
| 15 | Rights Management (DC.RIGHTS) | Information about rights held in and over the resource. Typically, Rights will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. If the Rights element is absent, no assumptions may be made about any rights held in or over the resource. |

4.1.3 Conclusion

At a first glance Dublin Core seems to contain all most important elements for the needs importing the essential parts of legacy-metadata into PrestoSpace to be managed and treated there. As a "least common denominator" a "simple" schema like DC may be suited to act as a starting point.

But DC is made of a plain list of attributes, it has no structure. The relations between entities can't be expressed and it is e.g. not sufficient to produce analytical documentation, even if each item can contain the DC elements.

The simple "list"-nature of DC and the small number of elements were the main arguments for using this schema as the "red thread" in the mapping process in chapter 6.

4.2 SMEF (BBC)

4.2.1 Introduction

SMEF is recently used by the BBC¹² as „Standard Media Exchange Framework Data Model (SMEF-DM¹³). SMEF was developed by the BBC1 Media Data Group (led by Carol Owens) and is BBCs company Data Model. OpenSMEF, a subset of SMEF, was the part released to the public initially. In the beginning of 2001 OpenSMEF was withdrawn in favour of the SMEF-DM v 1.5

“It is a semantic, logical data model defining the meanings of items of data (attributes), of logical clusters of these items (entities), and of the relationships between the clusters.”¹⁴

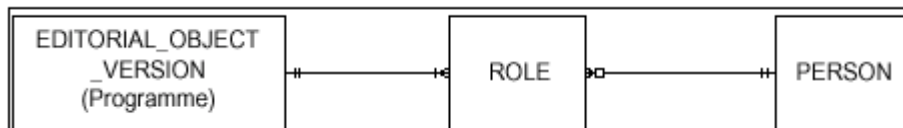
4.2.1.1 SMEF-DM Parts (Products)

The SMEF Data model itself consists (abrasive spoken) of two parts:

- A set of definitions (a Data-Dictionary in which data attributes, and the entities into which they are grouped, are defined (see an example below)

ENTITY: ROLE_TYPE
ENTITY DESCRIPTION: Abbreviation – ROT
 A description of a standardised type of role, responsibility or task undertaken by an organisation or an individual in the development, management or control of material.
ATTRIBUTE: ROT_Title
ATTRIBUTE DESCRIPTION: The title of the type of role. Examples Include: Adaptation By, Book Author, Presenter, Producer, Director, Key Contributor, Production Contact, Material Creator, Cameraman, Vision Mixer, etc

- A set of Entity Relationship Diagrams (ERD) showing the rules for the structural integrity of the data as represented by relationships between the entities (see an example below)



An editorial object is SMEF’s name for something that is a complete programme or item (it can also be a promotion or interstitial). Other names for it could be ‘a work’, episode, etc.

A Media Object is the description of a component of an Editorial Object. It can represent, for example, the audio, video and subtitles. Each Media Object is of a single type, so the video is represented by one Media Object and the subtitles are represented by another.

4.2.1.2 Elements (entities and attributes)

This list shows only the elements and attributes used in OpenSMEF and “FullSMEF” as well. For a full documentation and list please refer to In the original SMEF Architecture it is not foreseen to link (concrete) “Numbers” to the Definitions. But for the mapping-process we assigned fictive numbers (“Nr.”) using the following numeration-rule: Entity.Attribute

¹² <http://www.bbc.co.uk>

¹³ <http://www.bbc.co.uk/guidelines/smf/>

¹⁴ OpenSMEF_v151_Definition_v1.0.pdf by the BBC Media Data Group 28.Feb.2000

| Nr. | Entity | Attribute | Description |
|-----|---------------------|-----------------|---|
| 1 | AUDIO_CLIP | | <p>Abbreviation - AUD</p> <p>The entity represents an editorial description of a discrete sound or a section of continuous sound that is editorially distinct from any other Audio Clip in a way that is defined in the Media Object description. The sound may be in planning to be captured, edited, or transmitted.</p> <p>All individual audio clip objects are monaural. Stereophonic sound, for example, is created by the association of two sound clips.</p> <p>Examples of Audio Clip include sound track, audio description (An audio description is a verbal description of what is happening in a section of a programme which has no dialogue, and is aimed at viewers with challenged vision.), jingle, etc.</p> |
| 1.1 | | AUD_Duration | <p>The duration of play of the audio object. Measured in hours, minutes, seconds, and decimal fractions of a second.</p> <p>This is an optional attribute which is only populated where the duration is not derivable. Duration may be derivable, for example, from the difference between the capture start date/time and the capture end date/time.</p> |
| 2 | AUDIO_CLIP_INSTANCE | | <p>Abbreviation - AUI</p> <p>This entity holds the data which is specific to a given instance of an audio clip media object. The material instance need not have persistence.</p> |
| 2.1 | | AUI_Sample_Rate | Specifies the sample rate of essence data. |
| 3 | BRAND | | <p>Abbreviation - BRA</p> <p>The name applied to a collection of assets with a recognisable collective identity - this could include a series of programmes. The assets could cover programmes, books, videos, characters, magazines, toys, etc.</p> <p>A brand can be defined at a high level as BBC Sport or as a sub-Brand such as Grandstand.</p> |
| 3.1 | | BRA_Title | The title of the Brand. This could be the same as a programme title, or series, or could be a separately created 'umbrella' title. |
| 4 | CONTRACT | | <p>Abbreviation - CON</p> <p>A legally binding agreement with a person and/or organisation typically to provide a schedule of deliverables and / or services within a defined time period.</p> <p>A contract will comprise a number of line items.</p> |
| 4.1 | | CON_Number | The unique identifier allocated to a Contract with a person and/or organisation. |

| | | | |
|-----|--------------------------|------------------------------------|---|
| 5 | EDITORIAL_OBJECT_VERSION | | <p>Abbreviation - EOVS</p> <p>This entity identifies specific versions of a particular Editorial Object Concept. These may be, for example, transmittable versions intended for a particular publication event or market (Examples: "The Human Body", Episode 1 (UK); "The Human Body", Episode 1 (USA); the 28' and the 30' minute version of the same programme; pre and post watershed versions of the same programme)</p> <p>The entity has 2 subtypes, Programme Version and Item Version. One or other will be associated with it depending upon whether the editorial concept is seen as a programme in itself or as an item within a programme.</p> |
| 5.1 | | EOV_Colour_Indicator | An indicator showing whether an Editorial Object Version is editorially deemed to be in Colour. This is, in the main, required for Programme Guide purposes. |
| 5.2 | | EOV_Creation_Date | The date on which the Editorial Object Version was created. |
| 5.3 | | EOV_Duration | The duration of an editorial object version measured in hours, minutes, seconds, and decimal fractions of a second. |
| 5.4 | | EOV_Synopsis_Description | A description of the content of a version of an Editorial Object. Where only a single version of the Editorial Object Concept exists this should be the same as that entity's equivalent description. The attribute includes comments on what distinguishes this version. |
| 5.5 | | EOV_Title | The title of a particular version of an Editorial Object. Different versions of an Editorial Object Concept may have different titles. |
| 6 | EMAIL_ADDRESS | | <p>Abbreviation - EAD</p> <p>Data identifying an electronic mail address for a person, location, or organisation.</p> |
| 6.1 | | EAD_Name | An electronic mail address. |
| 7 | GRAPHIC_TYPE | | <p>GRAPHIC_TYPE Abbreviation - GRT</p> <p>Reference data defining the allowable types of graphic media objects. For example: Aston; Graphic Image; Modified Still.</p> |
| 7.1 | | GRT_Description | Description of the graphic type - e.g.: Aston; modified still; graphic image. |
| 8 | IMAGE_CODING_STANDARD | | <p>Abbreviation - ICS</p> <p>This is the coding information applied to the particular instance of the image media object (shot, still, and graphic).</p> |
| 8.1 | | ICS_Frame_Rate | The rate that images are captured, expressed in frames per second. This, obviously, does not apply to single frame media objects, for example, stills. |
| 8.2 | | ICS_Name | The colloquial name identifying a particular standardised coding scheme. For example: "PAL"; "NTSC"; "SDV"; "HDTV". |
| 8.3 | | ICS_Total_Lines_Per_Frame_Quantity | Specifies the number of lines in a total frame in the video scanning system. (SMPTE Data Dictionary). |

| | | | |
|-----|-------------------|---------------------------------------|--|
| 9 | IMAGE_FORMAT_TYPE | | <p>Abbreviation - IFT</p> <p>Source material for publication can be supplied in a variety of different picture and raster formats. In order to specify this formatting completely, three parameters must be defined:</p> <ol style="list-style-type: none"> 1 Active Image Aspect Ratio 2 Raster Aspect Ratio 3 Protected Aspect Ratio <p>A labelling system has been devised by BBC Post Production which holds the above information as a six character code as follows:</p> <p>Publication Format Code = aabccd where:</p> <p>aa = Active Image Aspect Ratio.</p> <p>b = Display Format. This can be deduced from the other parameters but it is included explicitly in the code for operational convenience.</p> <p>cc = Raster aspect ratio.</p> <p>d = Protected aspect ratio.</p> <p>Examples:</p> <p>12F12C 4:3 image full frame on a 4:3 raster</p> |
| 9.1 | | IFT_Action_Horizontal_Safe_Percentage | <p>When a programme is commissioned in widescreen the aspect ratio in which the programme will be transmitted on an analogue service will also be stipulated. In most cases this will be 14:9 letterbox but in some cases (e.g. sport) 4:3 centre cut-out will be requested. In exceptional cases only is a 16:9 deep letterbox image transmitted on the analogue service.</p> <p>Defining the analogue transmission format allows programme makers shooting in 16:9 to limit key elements of the scene to the section of the frame that will be seen by the viewer. This attribute specifies the percentage of the image which will lie outside the vertical safe area for action (cf. graphics).</p> <p>The percentage is of the total raster and not merely of the shoot to protect area and the figure is for both sides of the screen. Thus, a safe area of 3.5% would mean that 7% of the total horizontal portion of the picture is regarded as unsafe.</p> |

| | | | |
|-----|--|---|---|
| 9.2 | | IFT_Action_Veritical_Safe_Percentage | <p>When a programme is commissioned in widescreen the aspect ratio in which the programme will be transmitted on an analogue service will also be stipulated. In most cases this will be 14:9 letterbox but in some cases (e.g. sport) 4:3 centre cut-out will be requested. In exceptional cases only is a 16:9 deep letterbox image transmitted on the analogue service.</p> <p>Defining the analogue transmission format allows programme makers shooting in 16:9 to limit key elements of the scene to the section of the frame that will be seen by the viewer. This attribute specifies the percentage of the image which will lie outside the vertical safe area for action (cf. graphics).</p> <p>The percentage is of the total raster and not merely of the shoot to protect area and the figure is for both top and bottom of the screen. Thus, a safe area of 3.5% would mean that 7% of the total vertical portion of the picture is regarded as unsafe.</p> |
| 9.3 | | IFT_Active_Image_Aspect_Ratio | <p>Defines the Aspect Ratio of the actual picture (excluding any black edges). Expressed as a quantitative relation between two integers, the values being separated by a colon. Examples are: 4:3; 14:9; 15:9; 16:9.</p> |
| 9.4 | | IFT_Graphics_Horizontal_Safe_Percentage | <p>When a programme is commissioned in widescreen the aspect ratio in which the programme will be transmitted on an analogue service will also be stipulated. In most cases this will be 14:9 letterbox but in some cases (e.g. sport) 4:3 centre cut-out will be requested. In exceptional cases only is a 16:9 deep letterbox image transmitted on the analogue service.</p> <p>Defining the analogue transmission format allows programme makers shooting in 16:9 to limit key elements of the scene to the section of the frame that will be seen by the viewer. This attribute specifies the percentage of the image which will lie outside the vertical safe area for graphics (cf. action).</p> <p>The percentage is of the total raster and not merely of the shoot to protect area and the figure is for both sides of the screen. Thus, a safe area of 3.5% would mean that 7% of the total horizontal portion of the picture is regarded as unsafe.</p> |

| | | | |
|------------|--|---|---|
| <p>9.5</p> | | <p>IFT_Graphics_Veritical_Safe_Percentage</p> | <p>When a programme is commissioned in widescreen the aspect ratio in which the programme will be transmitted on an analogue service will also be stipulated. In most cases this will be 14:9 letterbox but in some cases (e.g. sport) 4:3 centre cut-out will be requested. In exceptional cases only is a 16:9 deep letterbox image transmitted on the analogue service. Defining the analogue transmission format allows programme makers shooting in 16:9 to limit key elements of the scene to the section of the frame that will be seen by the viewer. This attribute specifies the percentage of the image which will lie outside the vertical safe area for graphics (cf. action).</p> <p>The percentage is of the total raster and not merely of the shoot to protect area and the figure is for both top and bottom of the screen. Thus, a safe area of 5% would mean that 10% of the total vertical portion of the picture is regarded as unsafe.</p> |
| <p>9.6</p> | | <p>IFT_Raster_Aspect_Ratio</p> | <p>Defines the Raster Aspect Ratio required to display the picture undistorted.</p> <p>Defines how the picture fits onto the raster, e.g. whether a 16:9 picture is recorded using an entire 4:3 active frame (sometimes called anamorphic), or as a letterbox.</p> <p>Expressed as a quantitative relation between two integers, the values being separated by a colon.</p> <p>Examples are: 4:3; 14:9; 15:9; 16:9.</p> |

| | | | |
|------|--------------|-----------------|---|
| 10 | MEDIA_OBJECT | | <p>Abbreviation - MOB</p> <p>The editorial information about a single content element. The content element may already have been captured and/or transmitted or it may be in planning to be captured and/or transmitted.</p> <p>A Media Object has content in only one medium - audio, video, text, graphic or still.</p> <p>The differing media have been modelled as subtypes containing their own attributes and relationships. A media object may be created as part of a concept, editorial version, or may be created as a stock item (which may relate to a brief).</p> <p>Thus, the media object may be, for example: the edited audio for a programme; the video for an item; audio for a single clip; a single still from a photograph library; a graphic prepared for a programme; text for transmission with a programme (e.g. subtitles).</p> <p>Distinctions are drawn between:</p> <p>A - the media object itself - because this can exist in the planning stages this can be thought of as the idea behind the shot, still, audio clip, &c. For example, a media object could be the idea of a long shot following an actor as he climbs up a hill.</p> <p>B - the action or event which realises the media object - in the case mentioned above, this would actually be the actor climbing the hill</p> <p>C - the capture of the action or event realising the media object - in the above, this is the sensor (here a camera) used to capture the first instance of the actor climbing the hill.</p> |
| 10.1 | | MOB_Description | <p>Description of the Media Object.</p> <p>For an Audio Clip object the description will reflect heard contents. This can include details of interview subject matter and background sound effects.</p> <p>For a Graphic Object the description will reflect pictorial contents. This may include subject and composition.</p> <p>For a Still Object the description will reflect pictorial contents. This may include subject and composition.</p> <p>For a Shot Object the description will reflect a synopsis of pictorial contents and may include details of subject and action. It incorporates standard terminology such as wide shot (WS), long shot (LS), two-shot (2-S), etc.</p> <p>For a Text Object the description will reflect contents of the text and could be a summary or synopsis.</p> |
| 10.2 | | MOB_Title | <p>The title of the media object.</p> |

| | | | |
|------|----------------|---------------------------|---|
| 11 | ORGANISATION | | <p>Abbreviation - ORG</p> <p>The entity represents any recognised grouping of individuals, company or company structure with whom there is an association to carry out tasks or responsibilities for the development, usage or management of media assets.</p> <p>The scope encompasses: an internal organisational unit (e.g. the BBC production department or directorate); a copyright collection body; an independent production company; a grouping of individuals and/or organisations who/which may act together and who should be tracked as such (e.g. one or more named soloists singing or playing with a particular orchestra).</p> |
| 11.1 | | ORG_Name | The name of an organisation. |
| 12 | PERSON | | <p>Abbreviation - PER</p> <p>An individual involved in some manner in the creation, use or management of media assets.</p> |
| 12.1 | | PER_First_Name | The first name of the Person. |
| 12.2 | | PER_Last_Name | The last name (or surname) of the Person. |
| 12.3 | | PER_Middle_Name | The middle name, or initial, of the person. |
| 12.4 | | PER_Salutation_Short_Form | A shortened salutation as applied to a person's name. Examples are Mr.; Miss; Mrs.; Ms; Lord. |
| 12.5 | | PER_Suffix_Name | <p>Qualifications, awards, and/or honours normally appended to the end of a person's name. for example:</p> <p>B.Sc.; M.B.; Ch.B.; M.C.; V.C.; O.M.</p> |
| 13 | POSTAL_ADDRESS | | <p>Abbreviation - PAD</p> <p>Data identifying a postal, address for a person, location, or organisation.</p> |
| 13.1 | | PAD_Country_Name | The country name in the postal address. |
| 13.2 | | PAD_County_State_Name | <p>The county (or, where appropriate, state or district) name in the postal address for the Location.</p> <p>Examples include Berkshire, Idaho, Manitoba, and Queensland</p> |
| 13.3 | | PAD_Line_1_Name | First undefined line in the postal address. May be used, for example, to specify a room number or a box number. |
| 13.4 | | PAD_Line_2_Name | PAD_Line_2_Name Second undefined line in the postal address. May be used, for example, to specify a house number or a building name. |
| 13.5 | | PAD_Line_3_Name | PAD_Line_3_Name Third undefined line in the postal address. May be used, for example, to specify a road name (or number) or an estate name. |
| 13.6 | | PAD_Postal_Code | Delivery location code used by the relevant national postal service(s). For example Post Code (UK), ZIP-Code (USA). |
| 13.7 | | PAD_Town_City_Name | The town or city name in the postal address. |

| | | | |
|------|----------------------------|------------------------|--|
| 14 | PRG_GROUP_LINK_ PRG_VER | | <p>Abbreviation - PGL</p> <p>This entity provides the link to show for any given programme group which programme versions have been included in it, and their episode numbers.</p> |
| 14.1 | | PGL_Sequence_ Count | <p>The sequence number to denote that a programme version must be transmitted or viewed in a particular order within a series or serial. For example, an episode number.</p> |
| 15 | PROGRAMME_ GROUP | | <p>Abbreviation - PGR</p> <p>A grouping of programmes with shared identification and branding linked by common characters, subject matter, style or story. Could be a series, serial or themed grouping. A fiction series (drama or comedy) will have common characters, themes and/or style between episodes, but individual stories.</p> <p>A fictional serial will have a common story running across all episodes, with part being told in each. A factual series may have either individual or shared stories/arguments, such as a history series. A series may be occasional or regular in its transmission pattern - a serial will always have a prescribed transmission pattern and order. A themed group may draw together programme versions based around a campaign or anniversary.</p> <p>To BBC Broadcast this may represent a collection of assets for which transmission rights have been acquired.</p> |
| 15.1 | | PGR_Count | <p>Applies to series and serials only, an incremental number to identify which series this is, where more than one series of programmes has been created.</p> |
| 15.2 | | PGR_Title | <p>The title for this group of programmes, it may be the same as one or all of the programme versions contained within it.</p> <p>In Broadcast terms this will be the name of the asset package.</p> |
| 16 | PROGRAMME_TYPE | | <p>PROGRAMME_TYPE Abbreviation - PRT</p> <p>Programme Type is the category of programme type taken from a standardised list for transmission to the consumer. Commonly used in RDS delivery, DAB delivery and MPEG-2 delivery. Programme types include News, Sport, Traffic Information, Pop, Classical, with further sub-categorisation. Also used for EPGs.</p> <p>An example of this within the BBC is the application of the valid combinations of Editorial Category Levels 1, 2, and 3.</p> |
| 16.1 | | PRT_Title | <p>The title of a specific programme type.</p> |

| | | | |
|------|--------------------|-----------------------|--|
| 17 | PROGRAMME_ VERSION | | <p>Abbreviation - PVE</p> <p>A version of a programme is, or may become a unit of transmission with a title and credits and as such may be individually scheduled for transmission. It may be billed in programme guides with a start time and has a pre-determined (possibly approximate) duration. A general definition is as something a viewer or listener would perceive as a "programme". It may be made up of one, or more, items. It may have a budget attached to it, or the budget may apply to a group of programmes.</p> <p>Programmes can contain other programmes - for example: Thought for the Day can be regarded as a programme within the Today programme as it is editorially independent and has a separate budget.</p> |
| 17.1 | | PVE_Episode_Title | <p>A name given to a particular programme in a group of programmes. For example: a programme in the series 'Panorama' may have an Editorial Object Version Title 'Panorama' and a Programme Version Episode Title 'The BSE Crisis'; a programme in the series 'Dr Who: The Aztecs' may have the Programme Version Episode Title 'Warrior of Death'.</p> |
| 18 | RIGHT | | <p>Abbreviation - RIG</p> <p>An interest, or permission, which is recognised and protected by law. This entity records the detail of each right which has been acquired for exploitation purposes.</p> <p>The details recorded here are not Outlet specific.</p> <p>The right may relate to an outlet e.g. the rights to transmit a specific programme on a specific outlet, though these details are recorded elsewhere.</p> |
| 18.1 | | RIG_Condition_Desc | A description of the conditions which govern or restrict the Right. E.g. -cannot publish a specific media asset during Xmas period. |
| 18.2 | | RIG_End_Date | The end date of the period covered by this Right, i.e. the date to which the rights can be exploited. |
| 18.3 | | RIG_Jurisdiction_Desc | Jurisdiction of law that the Right is covered by. |
| 18.4 | | RIG_Start_Date | The start date of the period covered by this Right. i.e. the date from which the rights can be exploited. |
| 19 | RIGHT_TYPE | | <p>Abbreviation - RTY</p> <p>Describes the type of right, for example the right to broadcast or the right to publish.</p> |
| 19.1 | | RTY_Title | The title of the type of right. |
| 20 | ROLE_TYPE | | <p>Abbreviation – ROT</p> <p>A description of a standardised type of role, responsibility or task undertaken by an organisation or an individual in the development, management or control of material.</p> |
| 20.1 | | ROT_Title | <p>The title of the type of role.</p> <p>Examples Include: Adaptation By, Book Author, Presenter, Producer, Director, Key Contributor, Production Contact, Material Creator, Cameraman, Vision Mixer, etc</p> |

| | | | |
|------|-------------------|-------------------------|--|
| 21 | SHOT | | <p>Abbreviation - SHO</p> <p>The entity provides the editorial description for a continuous section of an image or images that is editorially distinct from any other Shot in a way that is defined in its description. The section may be planned, captured, created from other recorded images or transmitted.</p> <p>It provides the editorial description of how the image or images are composed - e.g. Wide Screen of..., or Close Up of..., or Starts wide on... and tracks/crabs/zooms/to Medium Close Up of...,etc.</p> |
| 21.1 | | SHO_Colour_Indicator | An indicator showing whether the shot is in colour. It is an Editorial Decision whether the shot is deemed to be in colour. |
| 21.2 | | SHO_Duration | <p>The duration of play of a shot. Measured in hours, minutes, seconds, and frames (where appropriate).</p> <p>This is an optional attribute which is only populated where the duration is not derivable. A duration may be derivable, for example, from start and end timecodes and the frame rate.</p> |
| 22 | SHOT_INSTANCE | | <p>SHOT_INSTANCE Abbreviation - SHI</p> <p>This entity holds the data which is specific to a given instance of a shot media object. The material instance need not have persistence.</p> |
| 22.1 | | SHI_File_End_Timecode | Time code of the last frame in the shot instance. |
| 22.2 | | SHI_File_Start_Timecode | Time code of the first frame in the shot instance. |
| 22.3 | | SHI_Sample_Rate | Specifies the sample rate of essence data - this may be implicit in the shot instance storage format. |
| 23 | SOUND_FORMAT_TYPE | | <p>Abbreviation - SFT</p> <p>Defines the type of sound format for an Editorial Object Version and in which it (the Editorial Object Version) may have been commissioned. Examples are: mono; 2 channel stereo; 5 channel surround sound.</p> |
| 23.1 | | SFT_Name | The name of the sound format type e.g. mono, 2 channel stereo, 5 channel surround sound, etc. |
| 24 | STILL | | <p>Abbreviation - STI</p> <p>An editorial description of a natural image (c.f. Graphic) with persistence, but no duration e.g. a photo, or single frame extracted from a shot. The description may apply to a still image that is planned to be taken, captured, edited or transmitted.</p> <p>For a Still Object the description will reflect pictorial contents. This may include subject and composition. The description must carefully distinguish this Still from any similar ones.</p> |
| 24.1 | | STI_Colour_Indicator | An indicator showing whether the still is in colour. It is an Editorial Decision whether the still is deemed to be in colour. |

| | | | |
|------|-----------------------|-----------------------|---|
| 25 | STORAGE_TYPE | | Abbreviation - STT This entity defines the types of storage medium. Examples of storage medium include Betacam SP, D3, DVC Pro, VHS, Server, Compact Disc, HDD Server. |
| 25.1 | | STT_Title | The name by which the storage medium type is known. For example - VHS; ZIP Drive. |
| 26 | SUBJ_REF_CONCEPT_TERM | | Abbreviation - RCT This entity contains the names which are synonymous with a given concept. It is used to provide both a natural language translation for a classification number and to allow searches on classification numbers in language format. |
| 26.1 | | RCT_Concept_Term_Desc | This is a textual value synonymous with a given concept. For example, the concept 4:302.003 (in a particular classification scheme) may be synonymous with both 'MUSEUMS (NATURAL HISTORY)' and with 'NATURAL HISTORY MUSEUMS'. |
| 27 | TELEPHONE_ADDRESS | | TELEPHONE_ADDRESS Abbreviation - TAD A telephone number for a person, location, or organisation. The number may be for a telephone or a facsimile machine - any device which can be addressed across a telecoms network in this fashion. |
| 27.1 | | TAD_Number | A telephone number for a person, location, or organisation. |
| 28 | TERRITORY | | Abbreviation - TER A defined geographical area. Could be a continent, a group of countries or a region within a country. |
| 28.1 | | TER_Title | The title of the territory. |
| 29 | TEXT_TYPE | | Abbreviation - TET Reference data defining the allowable types of text media objects. Examples are Subtitles and Web Text. |
| 29.1 | | TET_Description | Description of the text type. For example - Subtitles; WEB Text. |

4.2.2 Conclusion

SMEF was a very committed and complex attempt towards the “perfect schema”, going far beyond core TV-business but taken into account future goals. It started in an era when the distress-calls for metadata-standards “fulfilling all needs, situations and business” swept over the Media communities worldwide.

The complex structure, relations and composition of SMEF seems to be the main obstacle against a worldwide success and usage of SMEF. Introducing Open-SMEF and its successors was a good attempt to boost the achievement of SMEF.

SMEF-DM is technology agnostic, which ensures wide applicability. It makes use of standard attributes and definitions where possible, e.g. SMPTE, ISO and EBU, and is not in competition with these organisations but seeks co-operation.

4.2.2.1 The Main Entities of SMEF-DM

Here the following main entities should be mentioned, which have been in use in OpenSMEF as well:

- Brand
- Programme Group
- Programme (Editorial Object Programme)
- Programme Item (Editorial Object Item)

Other entities exist e.g. for Distribution-Channels and related issues, Mediatypes, Contracts and other right-issues, and many, many more. The material/essence is linked to the entity "MEDIA_OBJECT_INSTANCE"(MOI).

4.2.2.2 Standards and Exchange

BBC used SMEF for inputs in other international Taskforces like SMPTE, MPEG7 and MPEG21, but also the EBU-Projects P/FTA, P/FRA,P/CHAIN, etc.

Due to the fact that SMEF was not only meant for "BBC-inhouse"-use, the exchange with other parties/systems is part of the system. The big number of entities and relations may be tricky to be handled when data is exchanged with other systems and the extensive use of manual intervention is to be taken into account.

4.3 MXF – Metadata-Schema

4.3.1 Introduction and Overview

The Material Exchange Format, MXF, is a File Format optimized for the interchange of material for the content creation industries. MXF is a wrapper format intended to encapsulate and accurately describe one or more "clips" of Essence. These Essence "clips" may be Pictures, Sound, Data or some combination of all of these. The core requirement for the design and development of MXF was to be able to bundle the essence and an "EDL" in an unambiguous way which was both essence agnostic and metadata aware. In order for an application to do anything, the file must contain data about the essence i.e. Metadata. This particular sort of metadata is called "structural metadata" and allow many applications and devices to process content without knowing a-priori what the content is. The accurate description of the underlying content is one of the key strengths of the MXF format.

Descriptive Metadata standards define optional editorial metadata that enhance the usability of the Essence content of an MXF file. (The MXF Descriptive Metadata plug-in is very simple. Guidelines on its use can be found in the MXF Engineering Guideline SMPTE EG41. General Guidelines for adding Descriptive metadata can be found in the Engineering Guideline for MXF Descriptive Metadata SMPTE EG42.) The MXF-Descriptive-Metadata-sets are based on a Generic universal label; There may be non-MXF schemes which use the MXF Descriptive Metadata plug-in mechanism. These external schemes may have different label and key values to the ones given here. All MXF defined schemes shall be identified with the Universal Label defined below.

| Byte No. | Description | Value (hex) | Meaning |
|----------|------------------------------|-------------|--|
| 1 | Object Identifier | 06h | |
| 2 | Label size | 0Eh | |
| 3 | Designator | 2Bh | ISO, ORG |
| 4 | Designator | 34h | SMPTE |
| 5 | Registry Category Designator | 04h | Labels |
| 6 | Registry Designator: | 01h | Labels |
| 7 | Structure Designator | 01h | Labels |
| 8 | Version Number | 01h | Registry Version |
| 9 | Item Designator | 0Dh | Organizationally Registered |
| 10 | Organization | 01h | AAF Association |
| 11 | Application | 04h | MXF / AAF compatible Descriptive Metadata Labels |
| 12 | Label Version | 01h | Version 1 of the MXF / AAF DM labels |
| 13 | Scheme Kind | xxh | Defined by the scheme specification |
| 14~16 | Reserved | 00h | Reserved for use by each scheme |

An MXF file may contain zero or more Descriptive Metadata (DM) Schemes. These schemes may or may not be MXF DM schemes. A Descriptive Metadata Scheme comprises one or more Descriptive Metadata Frameworks in which each DM Framework has several metadata items and sets grouped together (generally for semantic reasons).

For more information about MXF and the Metadata handling therein please refer to SMPTE S377M¹⁵.

4.3.1.1 DMS1 (official and standardized MXF-DM)

The official SMPTE-standardized Metadata-schema for MXF is DMS1 (S380M¹⁶) (Descriptive Metadata Scheme), published in fall 2004.

In DMS1 three frameworks are defined:

- Production Framework
 - descriptive Metadata containing information about content and identification
- Scene Framework
 - descriptive Metadata containing information about actions, events and places occurring within the content
- Clip Framework
 - descriptive Metadata containing information about the creation of the content (shooting information)

4.3.1.2 An example for a non-standardized MXF-DM

The following DM-schema for MXF (according to the State University of Florida¹⁷) is based upon Dublin Core, but as well derived from the AAF-Data-Model, which is even more complex and targeting multimedia-authoring and post-production. In this paper this DM-schema (elements see below) has been used for the mapping process.

¹⁵ http://www.smppte.org/smppte_store/standards/

¹⁶ http://www.smppte.org/smppte_store/standards/index.cfm?scope=0&CurrentPage=18&stdtype=smppte

¹⁷ <http://palmm.fcla.edu/strucmeta/mxf2mods.htm>

- **Elements**

| FieldNr. | Fieldname | Description |
|----------|----------------|---|
| 1 | dc.Title | A name given to the resource. Typically, Title will be a name by which the resource is formally known. |
| 2 | dc.Creator | An entity primarily responsible for making the content of the resource. Examples of Creator include a person, an organization, or a service. Typically, the name of a Creator should be used to indicate the entity. |
| 3 | dc.Subject | A topic of the content of the resource. Typically, Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme. |
| 4 | dc.Description | An account of the content of the resource. Examples of Description include, but are not limited to: an abstract, table of contents, reference to a graphical representation of content or a free-text account of the content. |
| 5 | dc.Publisher | An entity responsible for making the resource available. Examples of Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity. |
| 6 | dc.Contributor | An entity responsible for making contributions to the content of the resource. Examples of Contributor include a person, an organization, or a service. Typically, the name of a Contributor should be used to indicate the entity. |
| 7 | dc.Date | A date of an event in the lifecycle of the resource. Typically, Date will be associated with the creation or availability of the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3CDTF] and includes (among others) dates of the form YYYY-MM-DD. |
| 8 | dc.Type | The nature or genre of the content of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary (for example, the DCMI Type Vocabulary [DCT1]). To describe the physical or digital manifestation of the resource, use the FORMAT element. |
| 9 | dc.Format | The physical or digital manifestation of the resource. Typically, Format may include the media-type or dimensions of the resource. Format may be used to identify the software, hardware, or other equipment needed to display or operate the resource. Examples of dimensions include size and duration. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [MIME] defining computer media formats). |
| 10 | dc.Identifier | An unambiguous reference to the resource within a given context. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Formal identification systems include but are not limited to the Uniform Resource Identifier (URI) (including the Uniform Resource Locator (URL)), the Digital Object Identifier (DOI) and the International Standard Book Number (ISBN). |
| 11 | dc.Source | A Reference to a resource from which the present resource is derived. The present resource may be derived from the Source resource in whole or in part. Recommended best practice is to identify the referenced resource by means of a string or number conforming to a formal identification system. |

| | | |
|--------------|--------------------------------|--|
| 12 | dc.Language | A language of the intellectual content of the resource. Recommended best practice is to use RFC 3066 [RFC3066] which, in conjunction with ISO639 [ISO639]), defines two- and three-letter primary language tags with optional subtags. Examples include "en" or "eng" for English, "akk" for Akkadian", and "en-GB" for English used in the United Kingdom. |
| 13 | dc.Relation | A reference to a related resource. Recommended best practice is to identify the referenced resource by means of a string or number conforming to a formal identification system. |
| 14 | dc.Coverage | The extent or scope of the content of the resource. Typically, Coverage will include spatial location (a place name or geographic coordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [TGN]) and to use, where appropriate, named places or time periods in preference to numeric identifiers such as sets of coordinates or date ranges. |
| 15 | dc.Rights | Information about rights held in and over the resource. Typically, Rights will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. If the Rights element is absent, no assumptions may be made about any rights held in or over the resource. |
| Qualified DC | | |
| 16 | dc.title.Alternative | Any form of the title used as a substitute or alternative to the formal title of the resource. This qualifier can include Title abbreviations as well as translations. |
| 17 | dc.description.TableOfContents | A list of subunits of the content of the resource. |
| 18 | dc.contributor.role | |
| 19 | dc.format.extent | The size or duration of the resource. |
| 20 | dc.format.medium | The material or physical carrier of the resource. |
| 21 | dc.coverage.temporal | Temporal characteristics of the intellectual content of the resource. |
| 22 | dc.date.created | Date of creation of the resource. |
| 23 | dc.date.issued | Date of formal issuance (e.g., publication) of the resource. |
| 24 | dc.date.modified | Date on which the resource was changed. |
| 25 | dc.relation.hasPartOf | The described resource includes the referenced resource either physically or logically. |
| 26 | dc.relation.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. |
| 27 | dc.relation.hasVersion | The described resource has a version, edition, or adaptation, namely, the referenced resource. |
| 28 | dc.relation.isFormatOf | The described resource is the same intellectual content of the referenced resource, but presented in another format. |
| 29 | dc.relation.hasFormat | The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format. |
| 30 | dc.subject | |
| 31 | dc.description.note | Additional information regarding the thesis or dissertation. Example: acceptance note of the department |

| | | |
|----|------------------------|---|
| 32 | dc.description.release | Description of the version of the work. |
|----|------------------------|---|

4.3.2 Conclusion

The official Data-model for MXF (DMS1) is relatively young, so when the work on this paper started only a short overview was planned to be given as it wasn't official published then. The MXF-format itself could be an important candidate for the transportation-bin for AV-items within PrestoSpace or from/to the customers, so the data-model within this wrapper-format should be taken into consideration as an important input for the PrestoSpace-Metadata-schema. Therefore we started already to analyze DMS1 more deeply and may be ready to provide an annex to this paper, containing more precise information on DMS1 later this year.

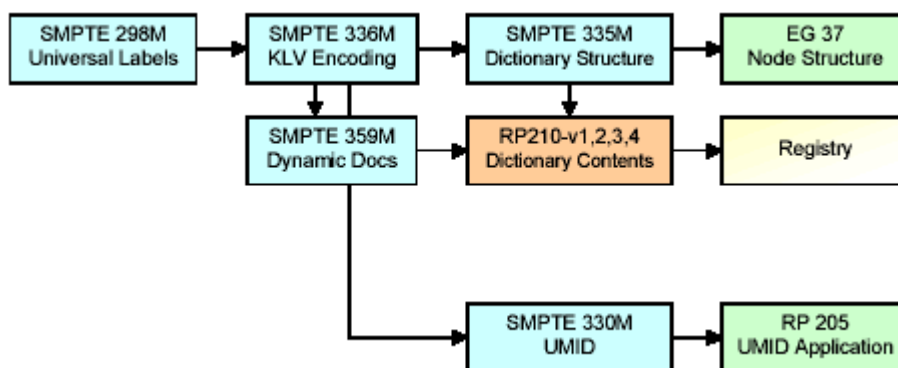
The non-official schema shortly introduced suffers from the same disadvantages as it's source (plain list of attributes, no structure, relations between entities can't be expressed, etc.). It's lack of being standardized is an important disadvantage too. (We used it for the mapping process in chapter 6 just due to the fact that is could be done quick and without special efforts.)

4.4 SMPTE Metadata Dictionary and structure

4.4.1 Introduction

SMPTE has been developing standards for Metadata since before the term was in common use (e.g. SMPTE 12M Timecode). The need for a registry of Metadata was perceived before the inception of the EBU/SMPTE Taskforce, but was put on hold pending the publication of the influential task force report in 1998. Since then, progress towards delivery of the full SMPTE Registry has been deliberate and in 2001 SMPTE Metadata Dictionary structure was officially published as standard. The Metadata Dictionary itself has been updated and revised several times, the latest version is RP210.8¹⁸ from the 10th Aug. 2004.

The following table shows the relations between the different SMPTE-standards when the Metadata Dictionary was published:



“The SMPTE Metadata Dictionary picks up on the work of the EBU-SMPTE Taskforce for Harmonized Standards for the Exchange of Programme Material as Bit streams that completed its Final Report in 1998. The Dictionary provides flexibility in capturing metadata and exchanging it among applications through a standardized hierarchy of Universal Labels for the metadata-elements, grouped in classes. “Metadata Classes” are collections of metadata elements with common characteristics or attributes. Additional Classes are provided for user-defined metadata. The Dictionary also contains information on the required format of metadata values and the allowable range of values. The Dictionary consist of Structure (SMPTE XXXX) and Content (RPXXXX) which must be used together as a pair- neither must be used in isolation. The SMPTE Dictionary was recently awarded during NAB 2000 in Las Vegas.”¹⁹

We do not provide the full information (list of elements) about this metadata-dictionary (SMPTE RP210) because it would boost the volume of this paper way too much. It contains about 1800 elements and therefore would take over 50 pages in this paper.

For more information on the elements please see:

<http://www.smpte-ra.org/mdd/RP210v8-final-040810MC.xls>

The metadata dictionary structure defined in SMPTE 335M²⁰ covers the use of metadata for all types of essence (video, audio, and data in their various forms). The dictionary itself must not be used alone as it’s meant to be the practical part to SMPTE 335M.

¹⁸ <http://www.smpte-ra.org/mdd/rp210-8.pdf>

¹⁹ <http://www.schemas-forum.org/registry/desire/activityreports.php3?field=filename&value=AV-smpte.rdf>

²⁰ http://www.smpte.org/smpte_store/standards/index.cfm?scope=0&stdtype=smpte&CurrentPage=15

4.4.2 Conclusion

As the name states, this is a dictionary, not a schema or standard. So its usefulness can be that of providing standard keys and definitions for attributes to be implemented in planned to be developed schemata and standards. The dictionary is structured in 7 distinct classes:

- Identification
- Administration
- Interpretation
- Parametric
- Process
- Relational
- Spatio-Temporal

Introducing 457 nodes and 1363 leafs the dictionary provides elements for nearly every occasion and need in the A/V-world, acting perfectly as a rich source (“repository”) for every DM-developing taskforce.

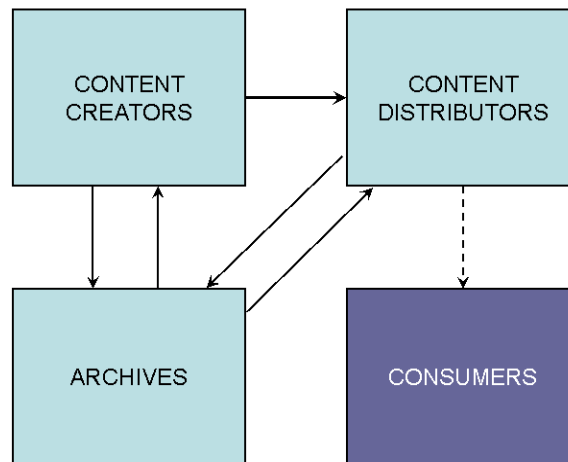
For the mapping-process we used the numeration provided in the SMPTE-list we gave the [link](#) to. Due to the fact that the mapping of the SMPTE-elements was the most controversial and time-consuming, going far beyond the timeframe provided for this paper, we decided to stop the process for the time being (only 1 element, UID, enclosed in mapping, acting as an example) and will proceed in case of exigency later in the project.

The SMPTE Metadata Dictionary is to be taken into account for the process of designation elements for the PS-DM-schema, acting potentially as a tool and “repository” in the definition-process.

4.5 P_META Metadata Exchange Scheme(EBU)

4.5.1 Introduction and Overview

P_Meta (v1.0) was originated 1999 by the EBU²¹ Project Group to create a standardised metadata exchange scheme which offers a way of sharing the meaning of electronic information necessary or useful for the business-to-business exchange of content.. The P_META Scheme is intended for use in a business-to-business scenario where the participating organisations may retain their internal data structures, workflows, and concepts. The P_META process-model:



The P_META Scheme is basically a set of definitions which provide a semantic framework for the information which is typically exchanged along with audio-visual material. It includes the identification of concepts (simple or complex) that are referenced by P_META names and P_META Identifiers.

“As a key principle, the data analysis has been set at the lowest level to identify concepts or subjects which cannot be further divided, thus giving maximum precision in meaning, with maximum flexibility in the use and re-use of basic elements.” The list of main entities of P_Meta, built on the question “What kind of content will be the object of an information exchange?”, contains the following:

- Programme
- Programme Group
- Item / Programme Item
- Media Object (MOB)
- Brand

4.5.1.1 Attribute List

“As the list is in itself unstructured, P_Meta also contains a number of sets (70) that enable the attributes to pass specific types of information by putting them into a specific context. It is also envisaged that groups of P_Meta users will also be able to build additional sets for their

²¹ <http://www.ebu.ch/en/index.php>

own purposes by using a defined notation to combine attributes from the flat list into meaningful sets.”²²

The following list does not contain all attributes in P_Meta because of the great amount of them. For the complete list and deeper information please refer to:

http://www.ebu.ch/en/technical/publications/tech3000_series/tech3295/index.php?display=EN

| CODE | Attribute-Name | Description |
|------|--------------------------|--|
| A1 | ADDRESS_DELIVERY_CODE | <p>Delivery location code used by the relevant national postal service(s). The nature and format of the code varies considerably between different countries. Note that some countries now include a character ahead of their internal postal code to indicate the country. This may be seen in the examples from Germany, Sweden and Norway below.</p> <p>Known aliases: Post Code, ZIP Code,</p> <p>Value Type: External</p> <p>Source of referenced data: National Postal Service of each country.</p> <p>Examples: (country indicated within parenthesis) W1A 1AA (United Kingdom); SE23 3NL (United Kingdom); 10135 (Italy); SE-105 (Sweden); D-80939 (Germany); N-0340 (Norway); 55101 (USA); R3N 1S8 (Canada)</p> |
| A2 | ADDRESS_LINE_NAME | <p>An undefined line in the postal address. This might be a street name, a house name, a house number, a district of a city, etc.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: No. 45; Crowthorn Road; Ocean Boulevard; Rue de Montreal</p> |
| A3 | ADDRESS_TELEPHONE_NUMBER | <p>A telephone number, the precise nature and/or context of which will be defined by the set containing the number.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: 020 8534 1234</p> |
| A4 | ADDRESS_TOWN_CITY_NAME | <p>The town or city in a postal address</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Paris; Glasgow; Minneapolis</p> |
| A9 | AWARD_NAME | <p>The name of an award presented to a person, programme, series, etc. and signifying public approbation, professional achievement, etc.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Silver Rose of Montreaux.</p> |
| A10 | BRAND_TITLE | <p>Title of a Brand, which is a collection of assets with a recognisable collective identity.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: BBC Drama; BBC Sport.</p> |

²² http://www.ebu.ch/CMSimages/en/tec_t3295_tcm6-11463.pdf

| | | |
|-----|-----------------------------|---|
| A11 | SERVICE_NAME | <p>The name of a broadcast service. A broadcast service is a distinctive packaging of published (broadcast) material intended to provide an identifiable continuity to the programming. Identity is usually achieved through a style of presentation, visually by logos, graphics and images and/or aurally by 'jingles' pervading the packaging.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: BBC ONE; BBC Radio Four; Radio Essex; Jazz FM; RAI 1; Österreich-1;</p> |
| A12 | DAI_COMPRESSION_CODE | <p>A controlled code for the type of processing applied to a data object in order to achieve data compression, but also file grouping and data encoding. The abbreviation DAI stands for Data object Instance.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.6 DAI_COMPRESSION_CODE</p> |
| A13 | DAI_COMPRESSION_NAME | <p>A textual name for the type of processing applied to a data object in order to achieve data compression, but also file grouping and data encoding. The abbreviation DAI stands for Data object Instance.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: gzip</p> |
| A14 | CONTRACT_CLAUSE_DESCRIPTION | <p>A description given to a clause within a contract</p> <p>Value Type: Uncontrolled Text</p> |
| A15 | CONTRACT_DATE | <p>The date upon which a contract is made.</p> <p>Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD)</p> <p>Examples: 2002-06-30</p> |
| A18 | CONTRACT_NUMBER | <p>Number assigned to the contract for the transaction by the issuer of the contract for the purposes of identifying the contract.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: LB00313201/1; LB00313236/01</p> |
| A19 | CONTRACT_TYPE_CODE | <p>A controlled code identifying the type of contract.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.5 CONTRACT_TYPE_CODE</p> |
| A20 | CONTRACT_TYPE_NAME | <p>Describes a contract type recognized between people and/or organizations involved in the lifecycle of media-assets</p> <p>Value Type: Uncontrolled Text</p> |
| A21 | COUNTRY_CODE | <p>Internationally agreed code for code for a specified country.</p> <p>Value Type: External</p> <p>Source of referenced data: ISO 3166-1:</p> <p>Examples: fr; gb; hu</p> |
| A22 | COUNTRY_NAME | <p>Name of a country.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: France, Germany, Greece, Italy, Spain, United Kingdom.</p> |

| | | |
|-----|-------------------------|--|
| A23 | CURRENCY_CODE | An internationally agreed code for a currency. Value Type: External Source of referenced data: ISO 4217: Examples: frf; gbp;huf |
| A24 | CURRENCY_NAME | The name of an internationally recognised currency Value Type: Uncontrolled Text Examples: Euro, Pound Sterling, US Dollar |
| A25 | DEVICE_NUMBER | The identifier allocated by an organisation to a device. This is additional to the manufacturer's serial number. Value Type: Uncontrolled Text |
| A26 | DEVICE_TYPE_CODE | A controlled code for a device type. Device types are defined to the level of identifying the technology used by the device without going down to the level of a complete technical specification of an individual device. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.7 DEVICE_TYPE_CODE |
| A27 | DEVICE_TYPE_NAME | The name of the type of device e.g. camera, audio tape machine, digital linear tape, random access memory (RAM), etc. Device types are defined to the level of identifying the technology used by the device without going down to the level of a complete technical specification of an individual device. Value Type: Uncontrolled Text Examples: Audio Mixer, Microphone, Router, Tape Recorder, Minidisk Recorder |
| A28 | ADDRESS_ELECTRONIC_NAME | An electronic mail address. External reference: OpenSMEF Attribute Value Type: Uncontrolled Text Examples: john.jordan@bbc.co.uk |
| A29 | EOV_DURATION | The duration of a particular version of a programme or item, at the frame rate it is intended to be shown at, measured in hours, minutes, seconds, and decimal fractions of a second. This may be derivable from the duration of its constituent media objects. The abbreviation EOV stands for Editorial Object Version. External reference: OpenSMEF Attribute Value Type: Formatted Code according to ISO 8601, with three digits for representing the decimal fractions of a second (hh:mm:ss.sss) Examples: 01:15:30.500 |
| A30 | EVENT_END_DATE | The date (GMT/UTC) at the end of an event specified by the set containing the attribute. Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD) Examples: 2002-06-30 |

| | | |
|-----|--------------------------|--|
| A31 | EVENT_END_ELAPSED_TIME | <p>The elapsed time from the beginning of the programme/item/media object to the end of an event specified by the set containing the attribute.</p> <p>Value Type: Formatted Code according to ISO 8601, with three digits for representing the decimal fractions of a second (hh:mm:ss.sss)</p> <p>Examples: 01:15:30.500</p> |
| A32 | EVENT_END_TIME | <p>The time (GMT/UTC) at the end of an event specified by the set containing the attribute.</p> <p>Value Type: Formatted Code according to ISO 8601, with three digits for representing the decimal fractions of a second (hh:mm:ss.sss)</p> <p>Examples: 23:40:01.500</p> |
| A33 | EVENT_END_TIMECODE | <p>The timecode at the end of an event specified by the set containing the attribute.</p> <p>External reference: Format defined by SMPTE</p> <p>Value Type: Formatted Code</p> |
| A34 | EVENT_START_DATE | <p>The date (GMT/UTC) at the beginning of an event specified by the set containing the attribute.</p> <p>Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD)</p> <p>Examples: 2002-06-30</p> |
| A35 | EVENT_START_ELAPSED_TIME | <p>The elapsed time from the beginning of the programme/item/media object to the beginning of an event specified by the set containing the attribute.</p> <p>Value Type: Formatted Code according to ISO 8601, with three digits for representing the decimal fractions of a second (hh:mm:ss.sss)</p> <p>Examples: 01:15:30.500</p> |
| A36 | EVENT_START_TIME | <p>The time (GMT/UTC) at the beginning of an event specified by the set containing the attribute.</p> <p>Value Type: Formatted Code according to ISO 8601, with three digits for representing the decimal fractions of a second (hh:mm:ss.sss)</p> <p>Examples: 23:40:01.500</p> |
| A37 | EVENT_START_TIMECODE | <p>The timecode at the beginning of an event specified by the set containing the attribute.</p> <p>External reference: Format defined by SMPTE</p> <p>Value Type: Formatted Code</p> |
| A38 | FESTIVAL_NAME | <p>The name of a festival or award ceremony</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Festival de Cannes, The Academy Awards, Mostra del Cinema di Venezia.</p> |
| A40 | GRAPHIC_USAGE_TYPE_CODE | <p>A controlled code for the type of usage to which a graphic is put.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.11 GRAPHIC_USAGE_TYPE_CODE</p> |

| | | |
|-----|---------------------------------|---|
| A41 | PCS_ACTIVE_LINES_PER_FRAME_QTY | <p>The number of lines within the television frame available to carry image information. The abbreviation PCS stands for Picture Coding Scheme.</p> <p>Value Type: Integer</p> |
| A42 | PCS_ACTIVE_SAMPLES_PER_LINE_QTY | <p>The number of samples within the television line available to carry image information. The abbreviation PCS stands for Picture Coding Scheme.</p> <p>Value Type: Integer</p> <p>Examples: 720</p> |
| A43 | PCS_BITS_PER_PIXEL_QUANTITY | <p>Number of bits in each sample describing each pixel component. The abbreviation PCS stands for Picture Coding Scheme.</p> <p>Value Type: Integer</p> |
| A44 | PCS_FRAME_RATE_QUANTITY | <p>The rate at which the material should be shown in order to achieve the intended editorial effect - expressed in frames per second. This does not apply to single frame media objects, for example, stills. The abbreviation PCS stands for Picture Coding Scheme.</p> <p>Value Type: Floating Point</p> <p>Examples: 25</p> |
| A46 | PCS_SAMPLING_HIERARCHY_CODE | <p>A code that specifies the component sampling hierarchy for the video pixel matrix (SMPTE Data Dictionary). The abbreviation PCS stands for Picture Coding Scheme.</p> <p>External reference: SMPTE MDD</p> <p>Known aliases: chroma_format</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.22 PCS_SAMPLING_HIERARCHY_CODE</p> |
| A47 | PCS_SAMPLING_STRUCTURE_CODE | <p>A code that specifies the analogue or digital sampling structure for the video scanning system. For example: Interlaced (SMPTE Data Dictionary). The abbreviation PCS stands for Picture Coding Scheme.</p> <p>External reference: SMPTE MDD</p> <p>Known aliases: interlaced/progressive flag</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.23 PCS_SAMPLING_STRUCTURE_CODE</p> |
| A48 | PCS_TOTAL_LINES_PER_FRAME_QTY | <p>Specifies the number of lines in a total frame in the video scanning system. (SMPTE Data Dictionary). The abbreviation PCS stands for Picture Coding Scheme.</p> <p>External reference: SMPTE MDD</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: 625</p> |

| | | |
|-----|---|--|
| A49 | PCS_TOTAL_SAMPLES_PER_LINE_QTY | <p>Specifies the number of samples in a total line in the video pixel matrix (SMPTE Data Dictionary). The abbreviation PCS stands for Picture Coding Scheme.</p> <p>Value Type: Uncontrolled Text</p> |
| A50 | PFT_ACTION_VERTICAL_SAFE_PERCENTAGE | <p>When a programme is commissioned in widescreen the aspect ratio in which the programme will be transmitted on an analogue service will also be stipulated. In most cases this will be 14:9 letterbox but in some cases (e.g. sport) 4:3 centre cut-out will be requested. In exceptional cases only is a 16:9 deep letterbox image transmitted on the analogue service. Defining the analogue transmission format allows programme makers shooting in 16:9 to limit key elements of the scene to the section of the frame that will be seen by the viewer. This attribute specifies the percentage of the image which will lie outside the vertical safe area for action (cf. graphics). The percentage is of the total raster and not merely of the shoot to protect area and the figure is for both top and bottom of the screen. Thus, a safe area of 3.5% would mean that 7% of the total vertical portion of the picture is regarded as unsafe.</p> <p>The abbreviation PFT stands for Picture Format Type.</p> <p>External reference: OpenSMEF Attribute</p> <p>Value Type: Floating Point</p> <p>Examples: 3.5</p> |
| A51 | PFT_ORIGINAL_FRAMING_ASPECT_RATIO | <p>The aspect ratio of the shot as it is framed for capture and, thus, the aspect ratio at which the image must be displayed to avoid distortion. Expressed as a quantitative relation between two integers, the values being separated by a colon. Examples are: 4:3; 14:9; 15:9; 16:9.</p> <p>The abbreviation PFT stands for Picture Format Type.</p> <p>Known aliases: Capture aspect ratio (SMPTE)</p> <p>Value Type: Formatted Code</p> <p>Examples: 4:3; 16:9</p> |
| A53 | PFT_GRAPHICS_HORIZONTAL_SAFE_PERCENTAGE | <p>When a programme is commissioned in widescreen the aspect ratio in which the programme will be transmitted on an analogue service will also be stipulated. In most cases this will be 14:9 letterbox but in some cases (e.g. sport) 4:3 centre cut-out will be requested. In exceptional cases only is a 16:9 deep letterbox image transmitted on the analogue service. Defining the analogue transmission format allows programme makers shooting in 16:9 to limit key elements of the scene to the section of the frame that will be seen by the viewer. This attribute specifies the percentage of the image which will lie outside the vertical safe area for graphics (cf. action). The percentage is of the total raster and not merely of the shoot to protect area and the figure is for both sides of the screen. Thus, a safe area of 3.5% would mean that 7% of the total horizontal portion of the picture is regarded as unsafe.</p> <p>The abbreviation PFT stands for Picture Format Type.</p> <p>External reference: OpenSMEF Attribute</p> <p>Value Type: Floating Point</p> <p>Examples: 10</p> |

| | | |
|-----|---------------------------------------|---|
| A54 | PFT_GRAPHICS_VERTICAL_SAFE_PERCENTAGE | <p>When a programme is commissioned in widescreen the aspect ratio in which the programme will be transmitted on an analogue service will also be stipulated. In most cases this will be 14:9 letterbox but in some cases (e.g. sport) 4:3 centre cut-out will be requested. In exceptional cases only is a 16:9 deep letterbox image transmitted on the analogue service. Defining the analogue transmission format allows programme makers shooting in 16:9 to limit key elements of the scene to the section of the frame that will be seen by the viewer. This attribute specifies the percentage of the image which will lie outside the vertical safe area for graphics (cf. action). The percentage is of the total raster and not merely of the shoot to protect area and the figure is for both top and bottom of the screen. Thus, a safe area of 5% would mean that 10% of the total vertical portion of the picture is regarded as unsafe.</p> <p>The abbreviation PFT stands for Picture Format Type.</p> <p>External reference: OpenSMEF Attribute</p> <p>Value Type: Floating Point</p> <p>Examples: 5</p> |
| A56 | INDEX_KEYWORD_NAME | <p>Important word or phrase from a title, a document, the material description, or other used as an index to content.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Louis XIII; Economy; Brasil; Health Service; Defence.</p> |
| A59 | ITEM_SUB_TITLE | <p>The sub-title given to an item (constituent editorial part of a programme) by its producer.</p> <p>Value Type: Uncontrolled Text</p> |
| A60 | ITEM_SYNOPSIS_DESCRIPTION | <p>A synopsis of an item (constituent editorial part of a programme).</p> <p>Value Type: Uncontrolled Text</p> |
| A61 | ITEM_TITLE | <p>The title given to an item (constituent editorial part of a programme) by its producer.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Washing machine item; Steve McQueen interview; Verdi Aria.</p> |
| A62 | ITEM_SEQUENCE_NUMBER | <p>An integer indicating where, in the sequence of items forming a programme, a particular item is to be found.</p> <p>Value Type: Integer</p> |
| A65 | LANGUAGE_CODE | <p>Internationally agreed code for a specified language.</p> <p>Value Type: External</p> <p>Source of referenced data: ISO 639 (both version 1 - two letters codes and version 2 three letters codes):</p> <p>Examples: en; ha; gd; fr; eng; ita; deu; fra</p> |
| A66 | LANGUAGE_NAME | <p>The name of a language.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Anglais; American English; Hausa</p> |

| | | |
|-----|------------------------|--|
| A67 | LOCATION_CAPTURE_NAME | <p>The name of the location of the sensor (e.g. camera) used in the production of content.</p> <p>For example, if St Paul's Cathedral was filmed from the top of the BT Tower then the LOCATION_CAPTURE_NAME would be the BT Tower. Not to be confused with the name of the place that the real location is standing in for (see LOCATION_SETTING_NAME).</p> <p>Known aliases: PLACE OF SHOOTING</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: BT Tower, Eiffel Tower, Northern Ireland border near Dundalk.</p> |
| A68 | EDITORIAL_CONTENT_CODE | <p>Classification of a programme, or programme segment, or group of programmes, according to its content or subject. This may also apply to publication services - e.g. a 'sport' channel.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: External</p> <p>Source of referenced data: EBU/Escort:</p> <p>Examples: 3.1.1</p> |
| A69 | EDITORIAL_CONTENT_NAME | <p>Classification of a programme, or programme segment, or group of programmes, according to its content or subject. This may also apply to publication services - e.g. a 'sport' channel.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Daily News; Religious Philosophies; Show Business; Medicine; Erotica.</p> |
| A70 | EDITORIAL_CONTROL_CODE | <p>The extend to which the broadcaster has control of the programme content at the production stage.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/Escort/P_Meta: 9.1.8 EDITORIAL_CONTROL_CODE</p> |
| A71 | EDITORIAL_CONTROL_NAME | <p>The extend to which the broadcaster has control of the programme content at the production stage.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Own Production; Commissioned Production; Co-production; Exchange; Purchase.</p> |
| A72 | EDITORIAL_FORMAT_CODE | <p>Classification of a programme, or programme segment, or group of programmes, according to its formal structure. How is it structured, regardless of the subject with whom it is dealing.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/Escort/P_Meta: 9.1.9 EDITORIAL_FORMAT_CODE</p> |

| | | |
|-----|-----------------------------|---|
| A73 | EDITORIAL_FORMAT_NAME | <p>Classification of a programme, or programme segment, or group of programmes, according to its formal structure. How is it structured, regardless of the subject with whom it is dealing.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Magazine; Reading; Performed Drama.</p> |
| A74 | EDITORIAL_TARGET_GROUP_CODE | <p>Classification of a programme, or programme segment, or group of programmes according to the specific audiences, defined by age, cultural/ethnic background profession, etc, for which it is intended.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/Escort/P_Meta: 9.1.10 EDITORIAL_TARGET_GROUP_CODE</p> |
| A75 | EDITORIAL_TARGET_GROUP_NAME | <p>Classification of a programme, or programme segment, or group of programmes according to the specific audiences, defined by age, cultural/ethnic background profession, etc, for which it is intended.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Young Children; Senior Citizens; Ethnic Groups; Motorists; General Audience.</p> |
| A77 | MOB_SCRIPT_DESCRIPTION | <p>A description of a media object, written before the instantiation of the object. It is therefore, descriptive of the intended object, rather than of an object which exists. The description may be used as directorial instructions during the future capture process. In post-scripted programmes this may not exist. This will use terms appropriate to the type of media object being described (e.g. Shot, Audio). The abbreviation MOB stands for Media Object.</p> <p>Value Type: Uncontrolled Text</p> |
| A78 | MOB_TITLE | <p>The title of a media object which is a single content element (only one medium). The abbreviation MOB stands for Media Object.</p> <p>Value Type: Uncontrolled Text</p> |
| A80 | GRAPHIC_USAGE_TYPE_NAME | <p>A type of usage to which a graphic is put.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: title sequence; graphic overlay</p> |
| A81 | ORG_ACCOUNT_NAME | <p>The name associated with an account held by an organisation (or a person) with a financial institution.</p> <p>The abbreviation ORG stands for ORGanisation.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: BBC WORLDWIDE LTD STERLING ACCOUNT</p> |
| A82 | ORG_ACCOUNT_NUMBER | <p>The identifying number provided by a financial institution for use by an organisation (or a person) in specifying a particular account held with the financial institution.</p> <p>The abbreviation ORG stands for ORGanisation.</p> <p>Value Type: Uncontrolled Text</p> |

| | | |
|-----|------------------------------|--|
| A83 | ORG_NAME | <p>The name of an organisation, that is any grouping of individuals, company or company structure with whom there is an association to carry out tasks or responsibilities for the development, usage or management of media assets. The abbreviation ORG stands for ORGanisation.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: BBC Media Data Group; RAI; SMPTE; World Health Organisation</p> |
| A86 | ADDRESS_COUNTY_STATE_NAME | <p>The county (or, where appropriate, state or district) name in a postal address.</p> <p>External reference: OpenSMEF Attribute - PAD_COUNTY_STATE_NAME</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Examples include Berkshire, Idaho, Manitoba.</p> |
| A87 | PERSON_SALUTATION_SHORT_FORM | <p>A shortened salutation as applied to a person's name.</p> <p>External reference: OpenSMEF Attribute</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Mr.; Miss; Mrs.; Ms; Lord.</p> |
| A88 | PERSON_FIRST_NAME | <p>The first minor name of the person. In the western European tradition this would actually be the person's first name. For example, in the Western European name John Smith Jordan this would be John.</p> <p>You would not expect this name to be the primary determinant of the person's position on an alphabetically ordered list.</p> <p>Known aliases: Christian Name; Given Name</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Richard, Daniel, Laurent, Giorgio</p> |
| A89 | PERSON_LAST_NAME | <p>The person's main name. You would expect this name to be the primary determinant of the person's position on an alphabetically ordered list. In the Western European tradition, and many others, this would be the person's surname or family name. In the name John Smith Jordan the main name is Jordan.</p> <p>This field, however, is also used for names which do not fall into the, typically, western model of first name, middle name(s), and last name.</p> <p>Known aliases: Surname; Family Name</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Jordan, Boch, Teruggi, Carter</p> |
| A90 | PERSON_MIDDLE_NAME | <p>The secondary minor name(s) of the person. For example, in the Western European name John Smith Jordan this would be Smith. You would not expect this name to be the primary determinant of the person's position on an alphabetically ordered list.</p> <p>Value Type: Uncontrolled Text</p> |
| A93 | PERSON_SUFFIX_NAME | <p>Qualifications, awards, and/or honours normally appended to a person's name</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: O.M.</p> |

| | | |
|------|--------------------------|--|
| A94 | PEV_INTENTION_CODE | <p>The publication event (PEV) intention. That is, the classification of a programme, or programme segment, or group of programmes, according to the broadcaster's primary intention in publishing it/them. The abbreviation PEV stands for Publication Event.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/Escort/P_Meta: 9.1.25 PEV_INTENTION_CODE</p> |
| A95 | PEV_INTENTION_NAME | <p>The publication event (PEV) intention. That is, the classification of a programme, or programme segment, or group of programmes, according to the broadcaster's primary intention in publishing it/them. The abbreviation PEV stands for Publication Event.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Pure Entertainment; Infotainment; Involvement.</p> |
| A96 | PGR_EPISODE_QUANTITY | <p>The number of programme episodes in serial or series.</p> <p>The abbreviation PGR stands for Programme Group.</p> <p>Value Type: Uncontrolled Text</p> |
| A97 | PGR_SUB_TITLE | <p>The sub-title for a group of programmes. The abbreviation PGR stands for Programme Group.</p> <p>Value Type: Uncontrolled Text</p> |
| A98 | PGR_SYNOPSIS_DESCRIPTION | <p>A synopsis of a group of programmes.</p> <p>The abbreviation PGR stands for Programme Group.</p> <p>Value Type: Uncontrolled Text</p> |
| A99 | PGR_TITLE | <p>The title for a group of programmes.</p> <p>The abbreviation PGR stands for Programme Group.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Soul of Britain (BBC series); London's Burning (commercial serial); Wildlife on One (BBC strand)</p> |
| A100 | PGR_TX_CYCLE_CODE | <p>The nature of the group of programmes for which this programme was created. This group may be composed solely of the programme itself or it may include other programmes.</p> <p>The abbreviation PGR stands for Programme Group.</p> <p>External reference: EBU Escort 2.4</p> <p>Known aliases: Programme transmission cycle</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/Escort/P_Meta: 9.1.27 PGR_TX_CYCLE_CODE</p> |

| | | |
|------|--------------------------------|---|
| A101 | PGR_TX_CYCLE_NAME | <p>The nature of the group of programmes for which this programme was created. This group may be composed solely of the programme itself or it may include other programmes. The abbreviation PGR stands for Programme Group.</p> <p>External reference: EBU Escort 2.4</p> <p>Known aliases: Programme transmission cycle</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Anthology, Series, Serial, Single production</p> |
| A103 | COLOUR_CODE | <p>A code specifying the editorial colour description for the content being exchanged.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.3 COLOUR_CODE</p> |
| A104 | PROGRAMME_EPISODE_COUNT | <p>The sequence number for an individual programme within a serial or series</p> <p>Value Type: Uncontrolled Text</p> |
| A105 | IDENTIFIER_NUMBER | <p>A unique identifier assigned to the programme group, programme, item, media object, or an instance of one of those by the producing organisation for identification and other purposes. The type of identifier used must also be exchanged.</p> <p>Known aliases: Production Number,</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: LCD1230Nx; ABH521021A</p> |
| A107 | PROGRAMME_SUB_TITLE | <p>The sub-title given to a programme by its producer</p> <p>Value Type: Uncontrolled Text</p> |
| A109 | PROGRAMME_SYNOPSIS_DESCRIPTION | <p>A synopsis of a programme.</p> <p>Value Type: Uncontrolled Text</p> |
| A110 | PROGRAMME_TITLE | <p>The title given to a programme by its producer</p> <p>External reference: EOVS_TITLE</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Tony Bennett: Live at Leeds Castle</p> |
| A114 | PROGRAMME_EPISODE_TITLE | <p>A name given to a particular programme in a group of programmes. For example: a programme in the series 'Panorama' may also have the Programme Title 'Panorama' and an Episode Title 'The BSE Crisis'; a programme in the series 'Dr Who and the Aztecs' may have a Programme Title 'Dr Who' and an Episode Title 'The Warrior of Death'.</p> <p>External reference: OpenSMEF Attribute</p> <p>Value Type: Uncontrolled Text</p> |
| A116 | RIGHT_CONDITION_DESC | <p>A description of the conditions which govern or restrict the Right. For example, a specific media asset cannot be published over the Christmas period.</p> <p>External reference: OpenSMEF Attribute</p> <p>Value Type: Uncontrolled Text</p> |

| | | |
|------|------------------------|--|
| A117 | RIGHT_END_DATE | <p>The end date of the period covered by this Right, i.e. the date to which the rights can be exploited.</p> <p>External reference: OpenSMEF Attribute</p> <p>Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD)</p> <p>Examples: 2002-06-30</p> |
| A118 | RIGHT_START_DATE | <p>The start date of the period covered by this Right, i.e. the date from which the rights can be exploited.</p> <p>External reference: OpenSMEF Attribute</p> <p>Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD)</p> <p>Examples: 2002-06-30</p> |
| A121 | RIGHT_TYPE_CODE | <p>The internationally agreed identifier for the type of right.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.30 RIGHT_TYPE_CODE</p> |
| A122 | RIGHT_TYPE_DESCRIPTION | <p>Describes the type of right, for example the right to broadcast or the right to publish.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: 'hereby grants to the Licensee a non-exclusive licence to incorporate the Selected Material in the Licensee's production ('the Production') and to exploit the Production as it incorporates the Selected Material on the following conditions:'</p> |
| A123 | ROLE_NAME | <p>The name given, where appropriate, to the role played by a contributor in a production.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Lady Bracknell; First Policeman; Ulysses; Mother Courage.</p> |
| A124 | ROLE_TYPE_CODE | <p>The title of the type of role, responsibility, or task undertaken by an organisation or an individual in the development, management or control of material</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.31 ROLE_TYPE_CODE</p> |
| A125 | ROLE_TYPE_NAME | <p>The title of the type of role, responsibility, or task undertaken by an organisation or an individual in the development, management or control of material</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Cameraman; Producer; Chaperone; Animal Trainer; Publicist</p> |
| A131 | SOUND_FORMAT_CODE | <p>A controlled code for a sound format type.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.32 SOUND_FORMAT_CODE</p> |
| A132 | SOUND_FORMAT_NAME | <p>The name of the sound format type e.g. mono, 2 channel stereo, 5 channel surround sound, etc.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Mono; Stereo; 5 Channel surround sound</p> |

| | | |
|------|--------------------------|--|
| A135 | STORAGE_TYPE_CODE | <p>The code given to identify the form of storage used for material. "Form of storage" is a bundled definition which includes all of the elements of specification required to support storage. The attribute value table points to the specification(s) defining everything needed to extract the information from the medium: the physical container (e.g. D3 cassette), the medium (e.g. tape), any significant characteristic of the medium (e.g. metal-particle tape), characteristics of the head-to-tape interface (e.g. head penetration), and track format.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.34 STORAGE_TYPE_CODE</p> |
| A136 | STORAGE_TYPE_NAME | <p>The name given to a form of storage used for material. "Form of storage" is a bundled definition which includes all of the elements of specification required to support storage. The attribute value table points to the specification(s) defining everything needed to extract the information from the medium: the physical container (e.g. D3 cassette), the medium (e.g. tape), any significant characteristic of the medium (e.g. metal-particle tape), characteristics of the head-to-tape interface (e.g. head penetration), and track format.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: DAT; Minidisk; U-MATIC SP; Digital D3.</p> |
| A137 | STORAGE_IDENTIFIER | <p>An identity used by an organisation for a storage medium occurrence, e.g. a tape number</p> <p>Value Type: Uncontrolled Text</p> |
| A141 | TERRITORY_CODE | <p>A controlled code for a Territory. The code may be selected from any of the referenced sources of pre-defined values. ISO 3166-1 provides country codes, ISO 3166-2 country subdivision codes, and EBU/P_Meta provides codes only for a few particular cases.</p> <p>Value Type: External</p> <p>Source of referenced data: ISO 3166-1, ISO 3166-2, EBU/P_Meta:</p> <p>Examples: GB; IT-MI; DE; XW; XE; XX</p> |
| A143 | TET_USAGE_TYPE_NAME | <p>Description of the type of usage for which a text data object text is intended. For example -Sub-titles; WEB Text.</p> <p>Value Type: Uncontrolled Text</p> |
| A146 | PROGRAMME_WORKING_TITLE | <p>The title given to a programme by its producer before the final title is decided. This may be used for reasons of commercial security and resources may be booked to the working title as a way of assuring their availability.</p> <p>External reference: EOVS_WORKING_TITLE</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Production x; Shakespeare 1.</p> |
| A148 | ITEM_SCRIPT_SCENE_NUMBER | <p>The scene number which identifies the position of the scene, in relation to others in the production, within the shooting script.</p> <p>External reference: SMPTE key 01 05 06 00 00 00 00 00</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: 1; 34; 2a; 3c.</p> |

| | | |
|------|------------------------------|---|
| A149 | ITEM_SCRIPT_SCENE_TAKE_COUNT | An incrementing number identifying the particular take of a specified scene within a production. External reference: SMPTE key 01 05 07 00 00 00 00 00 Value Type: Integer Examples: 1; 5; 10; 4. |
| A150 | IDENTIFIER_TYPE_CODE | A code identifying the type of identifier being exchanged. Known aliases: Programme number, Production number Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.12 IDENTIFIER_TYPE_CODE |
| A151 | IDENTIFIER_TYPE_NAME | A text name identifying the type of material identifier being exchanged. Known aliases: Programme number, Production number Value Type: Uncontrolled Text Examples: Organisation ID; ISAN; UPID; UPN; UMID. |
| A152 | PRODUCTION_END_DATE | The date on which the production of the material referred to in the encompassing set or communication was completed. External reference: EBU ESCORT 2.4 Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD) Examples: 2002-06-30 |
| A154 | STORAGE_IDENTIFIER_TYPE_CODE | A code identifying the type of storage identifier being used. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.33 STORAGE_IDENTIFIER_TYPE_CODE |
| A158 | ORIGINATION_CODE | A controlled code identifying the (EBU defined) process sector from which the material was originated. External reference: EBU Escort 2.4 Value Type: Controlled Code Source of referenced data: EBU/Escort/P_Meta: 9.1.20 ORIGINATION_CODE |
| A159 | PERSON_DESCRIPTION | A textual description of a person used, where necessary, to distinguish them from another person of the same name. Value Type: Uncontrolled Text Examples: Member of Scottish Parliament; Dentist; Poet; Historian; American farmer. |
| A160 | ADDRESS_FACSIMILE_NUMBER | A facsimile machine number, the precise nature and/or context of which will be defined by the set containing the number. Value Type: Uncontrolled Text Examples: 020 8534 1234 |
| A162 | RIGHT_TERRITORY_DESCRIPTION | A description of the geographical territory over which the assigned right(s) apply. Value Type: Uncontrolled Text |
| A164 | CURRENCY_AMOUNT | The amount of money in the currency defined by the associated code or name Value Type: Floating Point |

| | | |
|------|------------------------------|--|
| A165 | TET_USAGE_TYPE_CODE | <p>A controlled code of the type of usage for which a text data object is intended. For example - Sub-titles; WEB Text.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.35 TET_USAGE_TYPE_CODE</p> |
| A166 | MOB_TYPE_CODE | <p>This is the type of media object being exchanged: SHOT; GRAPHIC; DATA; STILL; AUDIO. The abbreviation MOB stands for Media Object.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.17 MOB_TYPE_CODE</p> |
| A168 | DEVICE_MODEL_NAME | <p>The model name as applied to a device by the manufacturer and by which the device is known.</p> <p>Value Type: Uncontrolled Text</p> |
| A169 | DEVICE_SERIAL_NUMBER | <p>Serial number applied to a particular instance of a device by its manufacturer.</p> <p>Value Type: Uncontrolled Text</p> |
| A174 | AUC_SAMPLE_RATE | <p>Specifies the rate of sampling used to create the audio clip instance in samples per second. The abbreviation AUC stands for AUdio media object instanCe.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: 44000; 32000.</p> |
| A175 | AUC_BITS_PER_SAMPLE_QUANTITY | <p>The maximum number of significant bits for the value without compression. The abbreviation AUC stands for AUdio media object instanCe.</p> <p>External reference: SMPTE MDD 04 02 03 03 01 00 00 00</p> <p>Known aliases: Audio resolution; Bits per sample</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: 16; 20; 24;</p> |
| A176 | SUBTITLE_FLAG | <p>This indicates whether an item/programme/programme group includes subtitles. The nature of the subtitle (e.g. closed caption or teletext) is communicated as information related to the subtitle text object.</p> <p>Value Type: Boolean</p> |

| | | |
|------|---------------------------------------|---|
| A177 | PFT_ACTION_HORIZONTAL_SAFE_PERCENTAGE | <p>When a programme is commissioned in widescreen the aspect ratio in which the programme will be transmitted on an analogue service will also be stipulated. In most cases this will be 14:9 letterbox but in some cases (e.g. sport) 4:3 centre cut-out will be requested. In exceptional cases only is a 16:9 deep letterbox image transmitted on the analogue service. Defining the analogue transmission format allows programme makers shooting in 16:9 to limit key elements of the scene to the section of the frame that will be seen by the viewer. This attribute specifies the percentage of the image which will lie outside the vertical safe area for action (cf. graphics). The percentage is of the total raster and not merely of the shoot to protect area and the figure is for both left and right sides of the screen. Thus, a safe area of 3.5% would mean that 7% of the total horizontal portion of the picture is regarded as unsafe. The abbreviation PFT stands for Picture Format Type.</p> <p>External reference: OpenSMEF Attribute Value Type: Floating Point Examples: 3.5</p> |
| A178 | AUC_REFERENCE_LEVEL_QUANTITY | <p>The audio level in Dbm for 0VU. The abbreviation AUC stands for AUdio media object instanCe.</p> <p>External reference: SMPTE MDD RP210A 04 02 01 01 03 00 00 00 Value Type: Uncontrolled Text</p> |
| A180 | AUC_BITRATE_QUANTITY | <p>Specifies the bitrate (in bits per second) of the used audio compression scheme. The abbreviation AUC stands for AUdio media object instanCe.</p> <p>External reference: SMPTE MDD 04 02 03 01 02 00 00 00 Known aliases: Audio Average Bitrate; Audio compression bitrate Value Type: Integer</p> |
| A181 | PCS_AVERAGE_BITS_PER_SECOND_QUANTITY | <p>Where required, the average data rate (in bits per second) of the coded shot media object. Used by playback/decoding software to estimate buffer size. The abbreviation PCS stands for Picture Coding Scheme.</p> <p>Value Type: Integer</p> |
| A183 | PCS_FIXED_BITRATE_INDICATOR | <p>A flag indicating whether the coding standard delivers a fixed bitrate to the decoding/playback device. The abbreviation PCS stands for Picture Coding Scheme.</p> <p>Value Type: Boolean</p> |
| A184 | AUC_FIXED_BITRATE_INDICATOR | <p>A flag indicating whether the coding standard delivers a fixed bitrate to the decoding/playback device. 'True' indicates a fixed bitrate. The abbreviation AUC stands for AUdio media object instanCe.</p> <p>Value Type: Boolean</p> |
| A185 | PCS_SAMPLE_RATE | <p>Specifies the rate of luminance sampling in samples per second. The abbreviation PCS stands for Picture Coding Scheme.</p> <p>Value Type: Uncontrolled Text</p> |
| A187 | PROGRAMME_SCRIPT_DESCRIPTION | <p>A text script for a complete programme. This may be a complete production script or it may only contain the spoken text. It differs, therefore, from a media object script which is a description of a single media object in terms applicable to that media object type.</p> <p>Value Type: Uncontrolled Text</p> |

| | | |
|------|---------------------|--|
| A188 | MSI_TITLE | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. This is the full title of the piece of material used as shown on the recording or sheet music (if used). Where only a part of a long work is used, the overall title of the work, followed by the details of the movement(s) used must be given. The abbreviation MSI stands for Music or Speech Item.</p> <p>Known aliases: track Title, Work title</p> <p>Value Type: Uncontrolled Text</p> |
| A189 | MSI_SIDE_COUNT | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. Where appropriate, this is the side number of the recording on which the track used appears. The abbreviation MSI stands for Music or Speech Item.</p> <p>Value Type: Integer</p> |
| A190 | MSI_TRACK_COUNT | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. Where appropriate, this is the track number of the item used. The abbreviation MSI stands for Music or Speech Item.</p> <p>Value Type: Integer</p> <p>Examples: 4, 3, 10.</p> |
| A191 | MSI_LABEL_NAME | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. This is the name of the publication label from which the material used was taken. The abbreviation MSI stands for Music or Speech Item.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: REPRISE; STRANGE FRUIT; TOPIC; UNITED ARTISTS.</p> |
| A192 | MSI_COLLECTION_NAME | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. Where appropriate, this is the name of the published collection (e. g.: CD name; LP name; set name) from which the material used was taken. The abbreviation MSI stands for Music or Speech Item.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Wheels of Fire; Rainmaker; Sinatra Live at the Sands; Live at the Village Vanguard.</p> |
| A193 | MSI_NUMBER | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. This is the main catalogue number for the recording from which the material used was taken. The abbreviation MSI stands for Music or Speech Item.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: 298; 899; 0322; 060.</p> |

| | | |
|------|--|--|
| A194 | MSI_PREFIX_NUMBER | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. This is the alphanumeric prefix to the catalogue number for the recording from which the material used was taken. The abbreviation MSI stands for Music or Speech Item.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: SFRSCD; LC; PY; TSCD.</p> |
| A195 | MSI_SIGNATURE_TUNE_INDICATOR | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. This indicates that the music was used as the signature tune of the item/programme in which it is used. The abbreviation MSI stands for Music or Speech Item.</p> <p>Value Type: Boolean</p> |
| A196 | MSI_TV_BACKGROUND_INDICATOR | <p>This is used with music (live or recorded) and other recorded material (e.g. speech or sound) which is sourced commercially and the use of which must be reported to the appropriate rights bodies. Music used in a television programme is categorised as either BACKGROUND or VISUAL. Background music is music added solely for the benefit of the television audience and, thus, forms no intrinsic part of the programme. VISUAL music forms part of the programme in as much as it appears to be, or is, audible to those taking part in the programme. Examples of visual music include: music sung or played in vision; music which characters in a play can hear, even if it comes from a performer or player not in vision. All actuality music is visual. A value of TRUE would indicate that the music is BACKGROUND music, a value of FALSE indicates VISUAL music. The abbreviation MSI stands for Music or Speech Item.</p> <p>Value Type: Boolean</p> |
| A198 | PGR_WORKING_TITLE | <p>Where appropriate, the working title for a group of programmes. The abbreviation PGR stands for Programme Group.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Wildlife series 2002/3; Costume drama - Christmas 2003;</p> |
| A200 | CONTRACT_LINE_NAME | <p>A free text description for the service or product covered by the contract line.</p> <p>Value Type: Uncontrolled Text</p> |
| A201 | CONTRACT_LINE_NUMBER | <p>An identifier number for the contract line within a contract.</p> <p>Value Type: Uncontrolled Text</p> |
| A202 | CONTRACT_TERMS_OF_BUSINESS_DESCRIPTION | <p>This is a free text definition of the terms of business which apply to a specified contract or transaction, defined and/or specified by the organisation issuing the contract. These will vary from organisation to organisation and, perhaps, within organisations from transaction to transaction.</p> <p>Value Type: Uncontrolled Text</p> |
| A203 | RIGHT_TRANSMISSION_COUNT | <p>The right to transmit specified material a set number of times (specified by the attribute value) as granted in an agreement or contract.</p> <p>Value Type: Formatted Code</p> <p>Examples: 1; 4; 10; Unlimited.</p> |

| | | |
|------|--------------------------------------|--|
| A204 | CONTRACT_PAYMENT_INSTALMENT_COUNT | Where contracts/agreements allow for payment by instalment this attribute identifies the particular instalment in the sequence of payments (e.g. instalment 1, instalment 5, etc.) Value Type: Integer Examples: 1, 4, 6, 23. |
| A205 | CONTRACT_PAYMENT_INSTALMENT_DUE_DATE | Where contracts/agreements allow for payment by instalment this attribute identifies the date by which the particular instalment in the sequence of payments (e.g. instalment 1, instalment 5, etc.) is due. The date is inclusive in that the payment may be made on the date quoted. Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD) Examples: 2002-06-30 |
| A206 | CONTRACT_PAYMENT_INSTALMENT_AMOUNT | Where contracts/agreements allow for payment by instalment this attribute identifies the amount of money due in a specified instalment. Value Type: Formatted Code |
| A207 | LOCATION_SETTING_NAME | The dramatic setting of a piece of content. For example, a play set in Moscow might be shot in Dundee. In this case, although the material was filmed in Dundee the LOCATION_SETTING_NAME would be Moscow. The setting name might include more than just place information. It might, for example, define historical period. In the case above, the setting might have been Moscow, 1930s. The setting might also be completely fictional. An example of this would be a setting of 'Utopia' in a dramatisation of Sir Thomas Moore's book or 'An Outer Circle of Hell' in an adaptation of Dante's "Inferno". Value Type: Uncontrolled Text Examples: Paris 1789; Quantico; Naples, Beppe's Coffee shop |
| A209 | PFT_INTENDED_DISPLAY_ASPECT_RATIO | The aspect ratio of the complete image as intended for display (including any black edges) and, thus, the aspect ratio at which the complete image must be displayed to avoid distortion. Expressed as a quantitative relation between two integers, the values being separated by a colon. Examples are: 4:3 ; 16:9. The abbreviation PFT stands for Picture Format Type. Value Type: Formatted Code Examples: 4:3; 16:9 |
| A210 | PFT_DISPLAY_FORMAT_CODE | Identifies the visual effect of the illuminated portion of the image as displayed within the complete image at the relevant intended display aspect ratio. Effects include: Fullframe, Letterbox, Pillarbox The abbreviation PFT stands for Picture Format Type. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.26 PFT_DISPLAY_FORMAT_CODE |
| A212 | RIGHT_GRANT_OF_RIGHTS_MEDIA_NAME | A textual description of the type of media covered by the rights granted by a contract/agreement. Value Type: Uncontrolled Text Examples: Basic Cable Service; Pay Satellite Service; Theatric Distribution. |

| | | |
|------|--------------------------------------|--|
| A213 | RIGHT_GRANT_OF_RIGHTS_ MEDIA_CODE | A controlled code defining the type of media covered by the rights granted by a contract/agreement. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.29 RIGHT_GRANT_OF_RIGHTS_MEDIA_CODE |
| A214 | LOCATION_ACTION_NAME | The name of the location of the captured (or to be captured) action. For example, if St Paul's Cathedral was filmed from the top of the BT Tower then the LOCATION_ACTION_NAME would be St. Paul's Cathedral. Not to be confused with the name of the place that the real location is standing in for (see LOCATION_SETTING_NAME). Value Type: Uncontrolled Text Examples: BT Tower, Eiffel Tower, Northern Ireland border near Dundalk. |
| A216 | MOB_CAPTURED_DESCRIPTION | A description of a captured media object. This is the description of the shot which would be found on a 'shot list'. In post-scripted programmes this may be the only description of the media object. This will use terms appropriate to the type of media object being described (e.g. Shot, Audio). The abbreviation MOB stands for Media Object. Value Type: Uncontrolled Text |
| A217 | EVENT_LOCAL_END_DATE | The local date at the end of an event specified by the set containing the attribute. Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD) Examples: 2002-06-30 |
| A218 | EVENT_LOCAL_START_DATE | The local date at the beginning of an event specified by the set containing the attribute. Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD) Examples: 2002-06-30 |
| A219 | EVENT_LOCAL_END_TIME | The local time at the end of an event specified by the set containing the attribute. Value Type: Formatted Code according to ISO 8601, with three digits for representing the decimal fractions of a second (hh:mm:ss.sss) Examples: 23:40:01.500 |
| A220 | EVENT_LOCAL_START_TIME | The local time at the beginning of an event specified by the set containing the attribute. Value Type: Formatted Code according to ISO 8601, with three digits for representing the decimal fractions of a second (hh:mm:ss.sss) Examples: 23:40:01.500 |
| A221 | TIME_GMT_OFFSET_COUNT | A signed integer defining the offset, in minutes, between local time and GMT. At 12:00 (noon) GMT an offset of +60 would mean a local time of 13:00 (1 p.m.) an offset of -60 would mean a local time of 11:00 (11 a.m.). Value Type: Integer |
| A222 | FILE_FORMAT_TYPE_NAME | The name of the format of a computer file. Value Type: Uncontrolled Text Examples: MXF; Broadcast Wave; Mpeg Transport Stream; PDF |

| | | |
|------|---------------------------------|---|
| A223 | FILE_BYTES_QUANTITY | The number of bytes of a computer file. Value Type: Unsigned integer Examples: 123456 |
| A224 | FILE_PATH_NAME | The name of the file path to a complete digital media, data, metadata etc file, that will be unique within a file server or a storage medium. External reference: SMPTE MDD Value Type: Uncontrolled Text Examples: /storage_A/PMeta/export/ |
| A225 | ISAN_PROGRAMME_TYPE_CODE | It specifies the programme category according to the International ISAN Agency Value Type: External Source of referenced data: ISAN |
| A226 | PCS_COMPRESSION_NAME | The name of the analogue or digital compression scheme applied to the picture. The abbreviation PCS stands for Picture Coding Scheme Value Type: Uncontrolled Text Examples: Examples include: PAL; NTSC; SECAM; DV; DV-BASED; MPEG; M-JPEG; JPEG. |
| A227 | MATERIAL_RELATIONSHIP_TYPE_CODE | This specifies the type of relationship existing between materials identified in association with this attribute in a superset. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.16 MATERIAL_RELATIONSHIP_TYPE_CODE |
| A245 | SHI_GOOD_SHOT_INDICATOR | A flag, held against the original instance of any shot media object, indicating that the creator suggests this particular take to be that preferred for the purposes for which it was created. The abbreviation SHI stands for SHot media object Instance. Value Type: Boolean |
| A247 | SHO_LOGO_INDICATOR | A flag which indicates that all instances of the specified shot contain an on-screen logo. This only applies to shot media objects. The abbreviation SHO stands for SHOt media object. Value Type: Boolean |
| A249 | REFERENCE_SCHEME_NAME | This is the name of an external (non-P/Meta) reference scheme which may be used to enable communication of information. Value Type: Uncontrolled Text Examples: SMPTE Meta Data Dictionary |
| A250 | REFERENCE_SCHEME_CODE | This is code identifying an external (non-P/Meta) reference scheme which may be used to enable communication of information. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.28 REFERENCE_SCHEME_CODE |

| | | |
|------|--------------------------------|--|
| A251 | REFERENCE_ATTRIBUTE_NAME | <p>This is the name of an attribute as defined by an external (non-P/Meta) reference scheme and which may be used to enable communication of information. The name should be sufficient to identify the attribute unambiguously within the scheme from which it comes.</p> <p>External reference: The scheme identified by the REFERENCE_SCHEME_CODE/NAME value communicated within the same sub-set.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Genre; 04 02 01 01 03 00 00 00 (this being the ID for Audio Reference Level from the SMPTE Meta Data Dictionary)</p> |
| A252 | REFERENCE_ATTRIBUTE_CODE | <p>This is a code identifying an attribute as defined by an external (non-P/Meta) reference scheme and which may be used to enable communication of information. The code value should be sufficient to identify the attribute unambiguously within the scheme from which it comes.</p> <p>Value Type: External</p> <p>Source of referenced data: The scheme identified by the REFERENCE_SCHEME_CODE/NAME value communicated within the same sub-set.</p> <p>Examples: 04 02 01 01 03 00 00 00 (this being the ID for Audio Reference Level from the SMPTE Meta Data Dictionary)</p> |
| A253 | REFERENCE_ATTRIBUTE_VALUE_NAME | <p>This attribute contains the value of an attribute (as opposed to the attribute ID or name) from an external (non-P/Meta) description scheme. The information is exchanged as part of a P/Meta set (e.g. S31 - EXTERNAL_SCHEME_EXCHANGE_SET). It is incumbent on the user of this attribute that they should format the attribute value according to the rules required for that attribute within its definition scheme and, where the attribute within the scheme has values limited to a pre-defined list, ensure that the attribute value is valid.</p> <p>External reference: The scheme identified by the REFERENCE_SCHEME_CODE/NAME value communicated within the same sub-set.</p> <p>Value Type: Uncontrolled Text</p> |
| A254 | ORG_IDENTIFIER | <p>An identifier associated with an organisation. Examples include, individual company registration numbers, individual VAT registration numbers, internal department or branch numbers and so on. The abbreviation ORG stands for ORGANISATION.</p> <p>Value Type: Uncontrolled Text</p> |
| A255 | ORG_IDENTIFIER_TYPE_NAME | <p>The name of a type of identifier applying to an organisation. The abbreviation ORG stands for ORGANISATION.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: British Bank Branch Sort Code</p> |
| A256 | ORG_IDENTIFIER_TYPE_CODE | <p>A code for a type of identifier applying to an organisation. The abbreviation ORG stands for ORGANISATION.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.18 ORG_IDENTIFIER_TYPE_CODE</p> |

| | | |
|------|----------------------------|---|
| A257 | AUC_COMPRESSION_NAME | <p>The name for any compression scheme, noise reduction scheme, or other non-linear processing applied to an audio signal. The abbreviation AUC stands for AUdio media object instanCe.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Examples: MPEG Layer II; Dolby A; IEC pre-emphasis.</p> |
| A258 | AUC_COMPRESSION_CODE | <p>The controlled code identifying any compression scheme, noise reduction scheme, or other non-linear processing applied to an audio signal. The abbreviation AUC stands for AUdio media object instance.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.1 AUC_COMPRESSION_CODE</p> |
| A259 | PCS_COMPRESSION_CODE | <p>The name of the analogue or digital compression scheme applied to the picture. The abbreviation PCS stands for Picture Coding Scheme</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.21 PCS_COMPRESSION_CODE</p> |
| A260 | SET_EXPLANATORY_NOTE_NAME | <p>This attribute is defined for use in EBU/PMETA sets to convey any required explanatory information.</p> <p>Value Type: Uncontrolled Text</p> |
| A261 | PEV_COUNT | <p>This is a number of complete publications of a specified programme group, programme, item, or media object. The exact meaning of the attribute is clarified and circumscribed by the set within which it is used. The abbreviation PEV stands for Publication Event.</p> <p>Value Type: Integer</p> |
| A361 | FILE_FORMAT_TYPE_CODE | <p>A controlled code communicating the format of a computer file. The value shall be a pair "content type"/"content sub-type" registered at IANA, as defined by IETF RFC 2045 and 2046.</p> <p>Value Type: External</p> <p>Source of referenced data: IETF (RFC 2045,2046 and other) and IANA</p> <p>Examples: text/plain; text/rtf; audio/basic; image/jpeg ; image/png; video/mpeg; video/quicktime; application/pdf; application/postscript</p> |
| A362 | INDEX_EXTERNAL_SCHEME_CODE | <p>Where a subject description requires the use of an external (i.e. non-EBU) scheme, and where the descriptive scheme has been previously identified and registered in the EBU P/Meta metadata scheme (attribute values table), this code identifies the descriptive scheme. An example would be the Library of Congress Subject Headings.</p> <p>Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.13 INDEX_EXTERNAL_SCHEME_CODE</p> |

| | | |
|------|---|---|
| A363 | INDEX_EXTERNAL_SCHEME_NAME | <p>A free-text field used where a subject description requires the use of an external (i.e. non-EBU) description scheme. This name identifies the description scheme being used. This is of use where the description scheme has not previously been identified and registered as a code in the EBU P/Meta metadata scheme. An example of this might be an internal scheme in use by one of the partners in the transaction.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Library of Congress Subject Headings.</p> |
| A364 | INDEX_EXTERNAL_SCHEME_TERM_NAME | <p>Where a subject description requires the use of an external (i.e. non-EBU) description scheme this free-text attribute contains the descriptive term taken from the given scheme.</p> <p>Value Type: Uncontrolled Text</p> |
| A365 | INDEX_EXTERNAL_SCHEME_TERM_CODE | <p>Where a subject description requires the use of an external (i.e. non-EBU) description scheme this attribute contains a controlled code, taken from the scheme in use, which represents a descriptive term. Because this is not a P/Meta controlled code (that is, the codes and de-codes are not registered as part of the EBU P/Meta scheme but are controlled by the organisation responsible for the external description scheme) care must be taken by the party originating the information that the attribute value is encoded exactly as required by the external description scheme.</p> <p>Value Type: External</p> <p>Source of referenced data: The organisation responsible for the Index External Scheme as identified with either INDEX_EXTERNAL_SCHEME_CODE or INDEX_EXTERNAL_SCHEME_NAME.</p> |
| A366 | INDEX_EXTERNAL_SCHEME_TERM_SCOPE_DESCRIPTOR | <p>When a descriptive term taken from an external (i.e. non-EBU) description scheme is used this free-text attribute may contain information further defining the scope of the term used.</p> <p>Value Type: Uncontrolled Text</p> |
| A367 | SET_DATA_VALIDITY_DATE | <p>This attribute is defined for use in EBU/PMETA sets to convey the local date on which the information conveyed by the set is deemed to be valid. This is generally used in conjunction with the SET_DATA_VALIDITY_TIME and TIME_GMT_OFFSET_COUNT attributes.</p> <p>Value Type: Formatted Code according to ISO 8601 complete date (YYYY-MM-DD)</p> <p>Examples: 2002-06-30</p> |
| A368 | SET_DATA_VALIDITY_TIME | <p>This attribute is defined for use in EBU/PMETA sets to convey the local time at which the information conveyed by the set is deemed to be valid. This is generally used in conjunction with the SET_DATA_VALIDITY_DATE and TIME_GMT_OFFSET_COUNT attributes.</p> <p>Value Type: Formatted Code according to ISO 8601, with three digits for representing the decimal fractions of a second (hh:mm:ss.sss)</p> <p>Examples: 14:33:59.999</p> |
| A401 | REVIEW_TITLE | <p>The title given to a review by its author.</p> <p>Value Type: Uncontrolled Text</p> |
| A402 | REVIEW_SUB_TITLE | <p>The sub-title given to a review by its author.</p> <p>Value Type: Uncontrolled Text</p> |

| | | |
|------|----------------------------|--|
| A403 | REVIEW_EXCERPT_TEXT | A text selected and extracted from a review. Value Type: Uncontrolled Text |
| A404 | REVIEW_COMPLETE_TEXT | The complete text of a review. Value Type: Uncontrolled Text |
| A405 | REFERENCE_YEAR | The year with which a particular production is generally associated for cataloguing and reference purposes. This may either refer to the year of production or of first publication (or of first publication in a particular version) but is generally synonymous with the year given in the copyright or performance copyright. Note that although some instances of year of reference may be shown in Roman Numerals within copyright statements (e.g. MCMLXXXVII for 1987) that P/Meta will hold the value in Arabic Numerals. Value Type: Formatted Code Examples: 1987; 2002; |
| A406 | LIVE_ACTION_CODE | Indicates whether a production features live action, animation or a mixture of both. This is required for ISAN and V-ISAN registration purposes. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.15 LIVE_ACTION_CODE |
| A407 | LANGUAGE_USAGE_CODE | A code to indicate how a particular language is used in a particular context. Examples might include commentator language, original spoken dialogue, subtitle language, dubbed language and so on. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.14 LANGUAGE_USAGE_CODE |
| A408 | LANGUAGE_USAGE_DESCRIPTION | A free form description of how a particular language is used in a particular context. Examples might include commentator language, original spoken dialogue, subtitle language, dubbed language and so on. Value Type: Uncontrolled Text Examples: Original Spoken Dialogue, Commentator Language, Original Narration. |
| A409 | PEV_LIVE_TRANSMISSION_FLAG | A flag communicating whether a publication event (PEV) is a live transmission or not. Value Type: Boolean |
| A410 | SERVICE_LINEUP_TIME | The time interval, in seconds, which a service, used for instance for a material exchange, is set up and ready before actual material exchange. Value Type: Unsigned integer |
| A411 | SERVICE_HANDOFF_TIME | The time interval, in seconds, which a service, used for instance for a material exchange, is still set up and ready after the end of actual material exchange. Value Type: Unsigned integer |

| | | |
|------|--|---|
| A412 | ADDRESS_WEB_ADDRESS | <p>An address of a resource on the world-wide web in the form of a URL or an http.</p> <p>External reference: Web addresses are formatted according to standards laid down by IETF/RFC</p> <p>Standard 1630</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: http://www.ebu.org.ch/ , http://www.bbc.co.uk/ , http://www.rai.it/ , http://www.ina.fr/</p> |
| A413 | ORG_TYPE_CODE | <p>A codified value which indicates an organisation's type. This is stated in terms of the organisation's constitution. E.g. whether it is an internal unit of another organisation, a limited company, charity, co-operative and so on. The abbreviation ORG stands for ORGanisation.</p> <p>Value Type: Controlled Code</p> <p>Source of referenced data: EBU/P_Meta: 9.1.19 ORG_TYPE_CODE</p> |
| A414 | ORG_TYPE_NAME | <p>The name of a particular type of organisation. The abbreviation ORG stands for ORGanisation.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Limited Company, Partnership, Co-operative, Charity, Internal Division</p> |
| A415 | SIGN_LANGUAGE_CODE | <p>A codified value for a system of sign language.</p> <p>Value Type: External</p> <p>Source of referenced data: SIL/Ethnologue:</p> <p>Examples: ASE; BHO; GSG; ISE</p> |
| A416 | SIGN_LANGUAGE_NAME | <p>The name of a system of sign language.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: British Sign Language, American Sign Language.</p> |
| A417 | SIGN_LANGUAGE_PRIMARY_LANGUAGE_INDICATOR | <p>Indicates whether sign language is the primary language of the content, or whether it has been added later.</p> <p>Value Type: Boolean</p> |
| A418 | SIGN_LANGUAGE_TRANSLATION_INDICATOR | <p>Indicates whether the sign language used is a direct translation of the spoken dialogue of the content or is a commentary or summary of what is going on.</p> <p>Value Type: Boolean</p> |
| A419 | SERVICE_TRANSMISSION_BITRATE_QUANTITY | <p>Specifies the bitrate (in bits per second) allocated to a transmission service, used for instance for a material exchange.</p> <p>Value Type: Unsigned integer</p> |
| A420 | MOB_EXCHANGE_TRACK_IDENTIFIER | <p>An identifier of the track containing the Media Object instance during an exchange. This can be used, when applicable, for exchange by a physical medium (e.g. a Video Tape) as well as by a transmission link. The abbreviation MOB stands for Media Object.</p> <p>Value Type: Uncontrolled Text</p> |
| A421 | RIGHT_SUB_LICENCE_FLAG | <p>Indicates whether the granted right can be granted by the licensee in sub-licence to third parties.</p> <p>Value Type: Boolean</p> |

| | | |
|------|----------------------------|--|
| A422 | RIGHT_EXCLUSIVITY_FLAG | Indicates whether the right is exclusively granted to the licensee. Value Type: Boolean |
| A423 | PMETA_VERSION_NUMBER | An identifier of the version for the P_Meta Definitions used in the communication. The value will be expressed by two integers separated by dot. Value Type: Formatted Code Examples: 1.0 |
| A424 | CONTENT_ALERT_DESCRIPTION | A description that alerts people about content they might not want to see/hear (or they might not want their children to see/hear). Value Type: Uncontrolled Text Examples: "Scenes of explicit sexual behaviour suitable for adults only"; "Occasional use of very strong language"; "Scenes with extreme horror effects"; "Strobing that could impact on those suffering from Photosensitive epilepsy" |
| A425 | CONTENT_ALERT_CODE | A code identifying an alert to people about content they might not want to see/hear (or they might not want their children to see/hear), as defined by a content alert scheme communicated within the same sub-set. Value Type: External Source of referenced data: The scheme identified by the CONTENT_ALERT_SCHEME_CODE/NAME value communicated within the same sub-set. |
| A426 | CONTENT_ALERT_SCHEME_CODE | A code identifying a content alert scheme which defines alerts to people about content they might not want to see/hear (or they might not want their children to see/hear). Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.4 CONTENT_ALERT_SCHEME_CODE |
| A427 | CONTENT_ALERT_SCHEME_NAME | A name identifying a content alert scheme which defines alerts to people about content they might not want to see/hear (or they might not want their children to see/hear). Value Type: Uncontrolled Text Examples: "TVAnytime" |
| A428 | MOB_DURATION | The duration, when applicable, of a Media Object instance, indicated in milliseconds, at either its canonical or intended presentation rate. The abbreviation MOB stands for Media Object. Value Type: Unsigned integer |
| A429 | CLASSIFICATION_SCHEME_CODE | A code identifying a registered classification scheme for audio-visual works. Value Type: Controlled Code Source of referenced data: EBU/P_Meta: 9.1.2 CLASSIFICATION_SCHEME_CODE |
| A430 | CLASSIFICATION_SCHEME_NAME | The name of a classification scheme for audio-visual works. Value Type: Uncontrolled Text Examples: TVAnytime; EBU/Escort; |

| | | |
|------|--------------------------------|---|
| A431 | CLASSIFICATION_DIMENSION_CODE | <p>A code identifying a classification dimension within a multidimensional classification scheme for audio-visual works, according to its specifications.</p> <p>Value Type: External</p> <p>Source of referenced data: The organisation responsible for the classification scheme and identified via either CLASSIFICATION_SCHEME_CODE or CLASSIFICATION_SCHEME_NAME:</p> |
| A432 | CLASSIFICATION_DIMENSION_NAME | <p>The name of a classification dimension within a multidimensional classification scheme for audio-visual works.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Intention; Content; Format; Intended Audience</p> |
| A433 | CLASSIFICATION_TERM_CODE | <p>A code identifying a classification term within a classification scheme for audio-visual works, according to its specifications.</p> <p>Value Type: External</p> <p>Source of referenced data: The organisation responsible for the classification scheme and identified via either CLASSIFICATION_SCHEME_CODE or CLASSIFICATION_SCHEME_NAME:</p> |
| A434 | CLASSIFICATION_TERM_NAME | <p>The name of a classification term within a classification scheme for audio-visual works.</p> <p>External reference: w :</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: Infotainment; Western; Horror; Language Learning;</p> |
| A435 | PEV_AUDIENCE_RATING_PERCENTAGE | <p>The percentage of the TV private household population or sub-population (as estimated from the sample) viewing the PEV across its duration, averaged across the minutes which comprise that period. The abbreviation PEV stands for Publication Event.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Floating Point</p> <p>Examples: 46.3</p> |
| A436 | PEV_AUDIENCE_REACH_PERCENTAGE | <p>The cumulative percentage of the TV private household population or sub-population (as estimated from the sample) viewing the PEV across its duration, cumulated across the minutes which comprise that period. The abbreviation PEV stands for Publication Event.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Floating Point</p> <p>Examples: 61.8</p> |
| A437 | PEV_AUDIENCE_SHARE_PERCENTAGE | <p>The amount of viewing obtained by the PEV expressed as a percentage of all TV viewing across the period of time of the PEV. The abbreviation PEV stands for Publication Event.</p> <p>External reference: EBU Escort 2.4</p> <p>Value Type: Floating Point</p> <p>Examples: 70.0</p> |

A438 PEV_AUDIENCE_SCORE_
RECORDING_TECHNIQUE_CODE

A controlled code for the technique of recording the audience score for PEVs. The abbreviation

PEV stands for Publication Event.

Value Type: Controlled Code

Source of referenced data: EBU/P_Meta: 9.1.24

PEV_AUDIENCE_SCORE_RECORDING_TECHNIQUE_CODE

| | | |
|------|-----------------------------|--|
| A443 | SI_UNIT_OF_MEASURE_NAME | <p>The name of a particular standard unit for the measurement of something (e.g. volume, size, weight, power, resistance, etc.) In P/Meta terms this will normally be for use in a contractual agreement. Usually this will apply to technical parameters. The prefix SI stands for "Système International d'Unités" but is generally referred to in English as the International System of Units.</p> <p>External reference: SI units are standardised and established by the 11th General Conference on Weights and Measures (CGPM, Conférence Générale des Poids et Mesures) in 1960. The CGPM is the international authority that ensures wide dissemination of the SI and modifies the SI as necessary to reflect the latest advances in science and technology.</p> <p>Value Type: Uncontrolled Text</p> <p>Examples: metre; kilogram;</p> |
| A444 | SI_UNIT_OF_MEASURE_QUANTITY | <p>A numeric value representing a particular amount of units specified by the accompanying unit of measure attribute. NB this attribute must be used in conjunction with either</p> <p>SI_UNIT_OF_MEASURE_CODE or SI_UNIT_OF_MEASURE_NAME.</p> <p>Value Type: Formatted Code</p> |
| A445 | ITEM_START_SCRIPT_CUE_TEXT | <p>Text which provides the cue for the start of an item. Typically, this will be spoken dialogue by a performer or presenter, but it could refer to another action such as a stage direction or piece of music which marks the beginning of the item.</p> <p>Value Type: Uncontrolled Text</p> |
| A446 | ITEM_END_SCRIPT_CUE_TEXT | <p>Text which provides the cue for the end of an item. Typically, this will be spoken dialogue by a performer or presenter within the item, but it could refer to another action such as a stage direction or piece of music which marks the end of the item.</p> <p>Value Type: Uncontrolled Text</p> |
| A447 | PGR_ORDERED_FLAG | <p>This indicates whether within the programme group the individual programmes or episodes have to be ordered for giving the correct meaning to the programme group. The abbreviation PGR stands for Programme Group.</p> <p>Value Type: Boolean</p> |

4.5.2 Conclusion

P_Meta makes use of other standards and schemas as well as using successfully the practical experience of the members of the developing body. A large amount of elements had been added to provide a entire description-base for the essence/media used, targeting at the exchange of essence and metadata in a B2B scenario.

As the developing consortium points out, "P_META is designed to be as flexible as possible in implementation while retaining consistency of meaning. - It is not intended for use in databases (!) (although it could be used as a starting point), but is designed to be the "language on the wire" in implementation."²³

Using numerical codes for attributes and standard values, allowing data exchanges to be translated into different languages without corruption, is another advantage of this standard

²³ http://www.ebu.ch/CMSimages/en/tec_t3295_tcm6-11463.pdf

4.5.2.1 Main entities in P_META

The main entities in P_META are:

- Programme
- Programme-Group
- Item (Programme-item)
- Media Object (MOB)
- Brand

4.5.2.2 Standards and Exchange

P_META makes reference to other standards from standardising bodies like ISO, SMPTE, EBU, IEF/T/RFC.

As been pointed out by the group of developers P_META is not meant to be used mainly in Databases but has been designed to act as a "Metadata-Exchange-Standard" supporting the exchange between the different members of EBU and third parties as well.

5 Overall Conclusion

As already mentioned in the Overview-chapter of this document the main purpose of this document changed from a mere survey and short analysis of existing data-models, functioning as a discussion-base for the discussion over a PrestoSpace-Data-model, to a) providing an overview what PrestoSpace has to expect as legacy metadata and which of the existing and analysed standard formats can be acting as candidate for input; b) showing up the features PrestoSpace has to consider when working on the final PrestoSpace schema.

This little survey draw the bow from "simple" listing-models to complex relational models. At this point no appraisal or voting for or against a single approach will be given, as every model or schema has been developed and designed under different requirements and preconditions, sometimes to fulfil special needs and tasks.

Beneath others one thing showed up: the adaptation and matching of data coming from one model (may it be a simple "listing-model", a fully developed relational model, an old legacy model, a newly developed one, etc.) to another model will be a time-consuming, rather expensive and even sometimes unsuccessful process, as explicit and/or satisfactory matching is not always possible. Even when succeeding, notable manual efforts during migration has to be taken into account.

6 MAPPING

6.1 Introduction

The mapping-process was in some points quite controversial and vivid. So the reader of this paper should feel free to add comments and proposals to the mapping done as well as new candidates (Models, schemata, etc) to be mapped too.

The main purposes of this chapter is to act as a discussion-contribution as well as a tool for the decision process for a PS-data-model.

6.2 Mapping of entities

| ENo. | RAI-DM | INA-DM | FARAO | DR-DM | SMEF | P_META | ... |
|------|------------|-------------------------|-------------------------------|-----------------------------|-----------------------------|--------------------|-----|
| 1 | Collection | | | | Programme-Group | Programme-Group | |
| 2 | Program | Programme + Progr. EDOB | Program | Main/Single Production | Programme (EDOB_Programme) | Programme | |
| 3 | Item | Programme Item | Program Item ("Contribution") | Item | Programme Item (EDOB_Item) | Item | |
| 4 | | | | MOB (Media Object) | MOB (Media Object) | MOB (Media Object) | |
| 5 | | | | MIN (Media Object Instance) | MOI (Media Object Instance) | | |
| 6 | | | | | Brand | Brand | |

Entity the essence/material is linked to

6.3 Mapping of attributes

| Field-number | Attributes in Common | Dublin Core | FARAO | P_META (EBU) | (Open) SMEF (BBC) | MXF (non official) | MXF DMS1 | SMPTE | DR Metadata standard |
|--------------|-----------------------------|-------------|-------------------------------------|---|-------------------|--------------------|----------|---|---|
| 1 | <i>Title</i> | 1 | 4 | A59,A61,A99, A107, A110, A114,A146,A198,A401 | 10.2, 15.2,17.1 | 1 | TBC | TBD | 5.3 |
| 2 | <i>Creator</i> | 2 | 18 | A81,A82,A83,A87,A88,A89,A90,A125, A254, A255,A256,A413, A414 | 20,11,12,13 | 2 | TBC | TBD | 16.1 |
| 3 | <i>Subject and Keywords</i> | 3 | 10 | Difficult to define, Coverage could be used here | / | 3 | TBC | TBD | / |
| 4 | <i>Description</i> | 4 | 8 | / | 5.4 | 4 | TBC | TBD | 5.5 |
| 5 | <i>Publisher</i> | 5 | / | A81,A82,A83,A87,A88,A89,A90,A125,A254,A255,A256,A413,A414 | 20,11,12,13 | 5 | TBC | TBD | 5.6 |
| 6 | <i>Contributor</i> | 6 | 9 | A11,A81,A82,A83,A87,A88,A89,A90,A125,A254,A255, A256,A413, A414 | 20,11,12,13 | 6 | TBC | TBD | / |
| 7 | <i>Date</i> | 7 | 24 | A152,A217,A218,A219,A22, A367,A368,A405 | 5.2 | 7 | TBC | TBD | 5.7 |
| 8 | <i>Resource Type</i> | 8 | all fields in TECHNICAL DATA | A12,A13,A226 | 25 | 8 | TBC | TBD | 5.16 |
| 9 | <i>Format</i> | 9 | all fields in CARRIER DATA | A72,A73,A222, A361 | 8,9,23 | 9 | TBC | TBD | 5.11 |
| 10 | <i>Resource Identifier</i> | 10 | 28 | A105 | / | 10 | TBC | 01.01.01.00.00.00.00.00 01.01.02.00.00.00.00.00 01.01.03.00.00.00.00.00 01.01.04.00.00.00.00.00 01.01.0F.00.00.00.00.00 01.01.15.00.00.00.00.00 01.01.15.40.00.00.00.00 01.01.15.40.01.00.00.00 | 5.1 (9.1 / 11.1 / 18.1 / 23.1) ¹ |

| | | | | | | | | | |
|----|------------------------------|----|------------------------------|---|-------------|----|-----|-----|------|
| 11 | Source | 11 | all fields in STORAGE DATA | A223,A224 | / | 11 | TBC | TBD | 5.14 |
| 12 | Language | 12 | / | A21,A22,A65,A66,A141,A407,A415,A416,A417,A418 | / | 12 | TBC | TBD | 6.1 |
| 13 | Relation Resources | 13 | / | / | / | 13 | TBC | TBD | / |
| 14 | Coverage | 14 | 12 | A1,A9,A21,A22,A38,A67,A123,A141,A207,A214 | 21,28 | 14 | TBC | TBD | 5.19 |
| 15 | Rights Management | 15 | all fields in RIGHTS | A14,A15,A18,A19,A20,A116,A117,A118,A119,A120,A121,A122,A162,A200,A201,A202,A203,A204,A205,A206,A212,A421,A422 | 4,18 | 15 | TBC | TBD | 5.13 |
| 16 | Storage History | / | all fields in STORAGE DATA | A135,A136,A137,A154,A158 | / | / | TBC | TBD | 5.9 |
| 17 | Carrier Data | / | all fields of CARRIER DATA | A25,A26,A27,A168,A169,A227 | 25 | 20 | TBC | TBD | 5.11 |
| 18 | Recording Data | / | all fields of RECORDING DATA | A12,A29,A30,A31,A32,A33,A34,A35,A36,A37,A148,A149 | 21,22 | 19 | TBC | TBD | 5.11 |
| 19 | Technical Information | / | all fields of TECHNICAL DATA | A41,A42,A43,A44,A46,A47,A48,A49,A50,A51,A53,A54,A103,A131,A132,A174,A175,A177,A178,A180,A181,A183,A184,A185,A209,A210,A257,A258,A259,A419 | 1,5,8,9,23, | / | TBC | TBD | 5.10 |

6.4 Mapping Entities – Attributes

| ENo | FARAO | DM | SMEF | P_META | |
|------------|---|-----------------|-----------------|--|--|
| 1 | | 18(?), 27(?) | 15 | A198, A447 | |
| 2 | 1, 3-5,16, 20, 21, 28-30, 32- 45, 47-60 | 10(?), 17 | 5(?), 16, 17 | A96-A101, A104, A107, A109, A110, A114, A146, A225 | |
| 3 | 2, 6-15, 17-19, 22-27, 31, 46, 61, 62 | 5 | 21 | A59-A62, A148, A149, A440, A445, A446 | |
| 4 | | 9 | 1, 10 | A77, A78, A166, A188- A196, A216, A245, A247, A420, A428 | |
| 5 | | 11 | 2 | | |
| 6 | | | 3 | A10 | |

7 Links and Resources

<http://www.oclc.org>

<http://www.ncsa.uiuc.edu>

<http://www.dublincore.org>

<http://www.rai.it>

<http://www.ina.fr>

<http://www.orf.at>

<http://www.dr.dk>

<http://www.bbc.co.uk>

<http://palmm.fcla.edu/strucmeta/mxf2mods.htm>

<http://www.smpte.org>

<http://www.smpte-ra.org/mdd/RP210v8-final-040810MC.xls>

<http://www.schemas-forum.org/registry/desire/activityreports.php3?field=filename&value=AV-smpte.rdf>

http://www.ebu.ch/en/technical/publications/tech3000_series/tech3295/index.php?display=EN

<http://www.ebu.ch/en/index.php>

http://www.ebu.ch/CMSimages/en/tec_t3295_tcm6-11463.pdf

<http://www.lookuptables.com>

8 APPENDIX A

8.1 Detailed Description conceptual model IMMIX pilot system

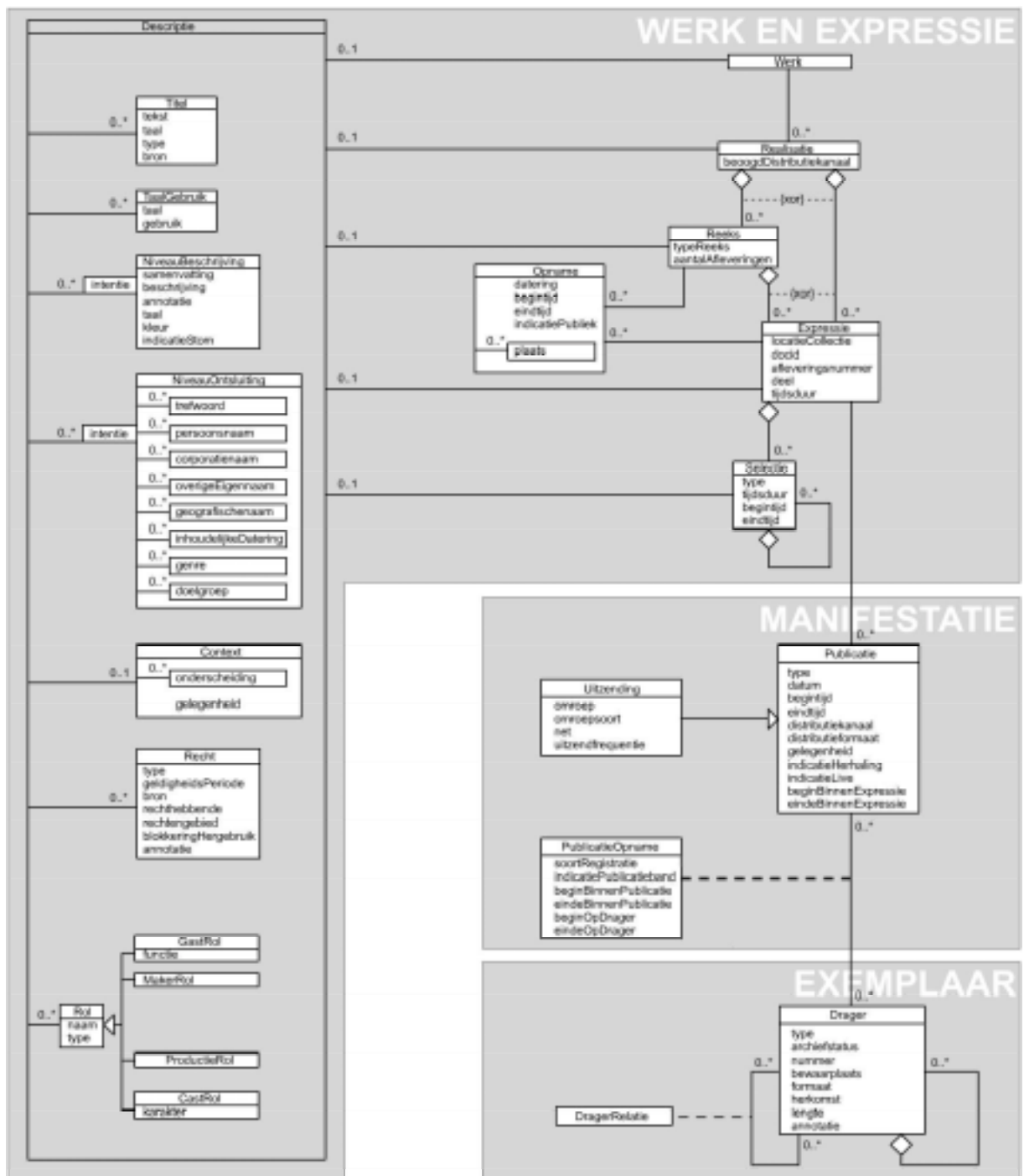
In this chapter a description is given of the conceptual metadata model that was the basis for the iMMix pilot system, the new multimedia catalogue of Beeld en Geluid. It represents the first step towards the model that is actually implemented at this point in time and of which a diagram is given above. The final metadata model (and data model) is still work in progress. For example in the near future the rights metadata and technical metadata will be extended and some minor other improvements are made.

The first paragraph shows the metadata model as a UML diagram; and makes explicit in which way the different dimensions Work, Expression, Manifestation and Exemplar are divided over the model.

In the next paragraphs the UML-diagram is textually explained. Each class has a textual description structured as follows:

- Description: description of the meaning of the class, eventually with examples.
- Relations: enumeration of the relations of this specific class with other classes.
- Attributes: a list of attributes per class. Each attribute is explained shortly and if possible examples are given. For some attributes a list of possible values is given. If there is an * placed in front of an attribute, it means the attribute can be repeated.

8.1.1 UML-diagram of pilot system



8.1.2 The dimensions Work and Expression

Work (Werk)

Description A Work is the intellectual and artistic *concept* (or idea) that is the basis of zero or more Realisations. A Work is the highest level within the hierarchy of metadata. Please notice that it is not an individual programme, but the concept behind it. A work is not something concrete that we can grasp.

Examples are:

- the concept 'Soldaat of Oranje';
- the concept 'In de Vlaamse Pot';
- the concept 'Het NOS Journaal'.

Relations

| | | |
|------------|-----------|---------------------|
| Related to | 0 or 1 | <u>Descriptions</u> |
| Concept of | 0 or more | <u>Realisations</u> |

Attributes -

Realisation

Description A Realisation is a concrete elaboration of a Work. It describes the more general data or parts of which the Realisation consists.

Examples of Realisations of the Work concept 'Soldaat van Oranje';

- the series 'Soldaat van Oranje'
- the movie 'Soldaat van Oranje'

Relations

| | | |
|------------|-----------|--------------------|
| Related to | 0 or 1 | <u>Description</u> |
| Belongs to | exactly 1 | <u>Work</u> |
| Exists of | 0 or more | <u>Series</u> |
| Or of | 0 or more | <u>Expressions</u> |

| | | |
|------------|---|--|
| Attributes | IntendedDistributionchannel (<i>BeoogdDistributiekanaal</i>) | Distribution channel for which the video, film, audio, or text is originally intended (television, radio, internet, and cinema). |
|------------|---|--|

Series (Reeks)

Description A Series is a collection or grouping of Expressions. A season of a drama series is an example of such a Series. Also logically related Expressions can form a Series. 'All episodes of Netwerk, a current affairs programme, broadcasted by the AVRO form together a logical Series. Information that is valid for all Expressions within a Series, can be annotated at this level.

| | | | |
|-----------|-------------|-----------|-----------------------|
| Relations | Related to | 0 of 1 | <u>Description(s)</u> |
| | Related to | | <u>Recording(s)</u> |
| | Part of | 0 or more | <u>Realisation</u> |
| | Consists of | | <u>Expressions</u> |

| | | |
|------------|--|---|
| Attributes | <i>typeSeries (Reeks)</i> | Type of the Series (f.e. a series, group, Series, etc). |
| | <i>AmountOfEpisodes (aantalEpisoden)</i> | Amount of episodes belonging to one Series. |

Expression (Expression)

Description An Expression is the actual 'programme'.

Examples are:

- the movie 'Soldaat van Oranje';
- an episode of the television series 'Soldaat van Oranje';
- episode 10 of the series 'In de Vlaamse Pot';
- the NOS Daily News of Wednesday December 29, 2004;
- a documentary about sharks.

| | | | |
|-----------|------------|--------|-----------------------|
| Relations | Related to | 0 or 1 | <u>Description(s)</u> |
| | Related to | | <u>Recording(s)</u> |
| | Part of | | <u>Realisation</u> |

| | | | |
|------------|--|-----------|---|
| | OR | | |
| | Consists of | 0 or more | <u>Series (Reeks)</u> <u>Selections</u> |
| | Related to | | <u>Publications</u> |
| Attributes | <i>(LocationCollection)</i> <i>LocatieCollectie</i> | | The original Name of the collection of which the original Description, i.c. the Description as in the legacy database, is derived |
| | <i>DocID (docid)</i> | | The original Document ID from the legacy database |
| | <i>Episodenummer (episodenummer)</i> | | Number of the episode, in case the <u>Expression</u> is part of a <u>Series (Reeks)</u> . |
| | <i>Part (deel)</i> | | Ranking number of the programme, in case the programme is described in several parts. Instead of an original Expression mostly the broadcast is described. It is possible for one programme to be broadcast in different parts. To facilitate migration from legacy databases it is possible to describe (using <i>part</i>) several Expressions originally meant to be one and the same Expression. |
| | <i>Duration (tijdsduur)</i> | | Duration in units of time, if possible automatically derived. |

Selection (Selectie)

| | | | |
|-------------|---|-----------|--------------------|
| Description | A <u>Selection</u> is part of an <u>Expression</u> . The Description at the <u>Selection-level gives</u> information about a specific part of the <u>Expression</u> . | | |
| | Examples of a Selection are: | | |
| | <ul style="list-style-type: none"> • the Item of the NOS Daily News of Wednesday 2 January 2002 in which is explained how much money the Dutch have spend on Christmas; • a Shot within a documentary about sharks with a close-up of the skin. | | |
| Relations | Related to | 0 of 1 | <u>Description</u> |
| | Part of | 0 or more | <u>Expression</u> |
| | Consists of | | <u>Selections</u> |

| Attributes | Type | Examples of characterizations for a Selection are: |
|-----------------------------|----------------------------------|---|
| <i>Duration (tijdsduur)</i> | <i>Starting time (begintijd)</i> | <ul style="list-style-type: none"> Item: a closed, edited topic in f.e. a current affairs programme on which something very specific can be annotated; (selection is in this case in fact made by the editor) Shot: a continuous take of one object, event or person about which or whom something specific can be annotated; Sequence: a by the documentalist selected longer fragment of images or sound on which something specific can be annotated. |
| <i>Endtime (e)</i> | | <p>Duration in units of time, if possible automatically derived.</p> <p>Starting point of Expression on which doction starts _____, if possible (ble Related to a)TJ-8.8</p> <p>Point in time within the Expression at which doction ends _____, if possible (ble Related to a)TJ-8.8</p> |

8.1.3 TocOpname) and Description

Recording (Opname)

Description *Recording (Opname)*

Description (Descriptie)

| | | | |
|-------------|---|-----------|--|
| Description | Description clusters all descriptive parts that can be linked to all classes of the dimensions WORK and EXPRESSION (these are: <u>Work</u> , <u>Realisation</u> , <u>Series (Reeks)</u> , <u>Expression</u> and <u>Selection</u>). This class has been created to make the model more comprehensive and has as class in itself no meaning. | | |
| Relations | Related to | exactly 1 | <u>Work (Werk)</u> |
| | or | | <u>Realisation (Realisatie)</u> |
| | or | exactly 1 | <u>Series (Reeks)</u> |
| | or | exactly 1 | <u>Expression (Expressie)</u> |
| | or | | <u>Selection (Selectie)</u> |
| | | 0 or more | |
| | Consists of | 0 or more | <u>Titles</u> |
| | Consists of | 0 or more | <u>UsedLanguage (TaalGebruik)</u> |
| | Consists of | | <u>LayerDescription (NiveauBeschrijving)</u> |
| | Consists of | 0 or 1 | <u>LayerIndexing (NiveauOntsluiting)</u> |
| | CONSISTS OF | 0 or more | <u>Context</u> |
| | Consists of | 0 or more | <u>Rights</u> |
| | Consists of | | Roles |
| Attributes | - | | |

Title (Titel)

| | | |
|-------------|---|------------------------|
| Description | A <u>Title</u> is a given name at a certain level of description. The title consists of the name, the type of title en the origin of the title. | |
| Relations | Part of | <u>Description</u> |
| Attributes | <i>Text</i> | Titletext. |
| | <i>Language (Taal)</i> | Language of the title. |

| | |
|---------------|--|
| <i>type</i> | Type of title. Possible values: <ul style="list-style-type: none"> • <i>Title</i> • <i>Subtitle</i> • <i>Working title</i> • <i>Given title</i> • <i>Other titles</i> • <i>Short Title</i> |
| <i>source</i> | Source of the title |

UsedLanguage (TaalGebruik)

Description UsedLanguage (TaalGebruik) describes the used language.

Relations Part of Description

Attributes *Language (Taal)* Name of the language.
Use (gebruik) The way the language is used.
 Possible values:

- *Dubbing*
- *Subtitling*
- *Original language*
- *Other languages/dialects*
- *Adaptation*

LayerDescription (NiveauDescription)

Description LayerDescription describes the subject of the audiovisual material (the content). NiveauDescription is being identified by means of an *Intention*.
 The *intention* indicates the target group of the Description, f.e. broadcast professional, museum, education, etc.

Relations Identification via *intention*
 Part of Description

Attributes *Summary (samenvatting)* Summary (short Description) of the content OF THE CONTENT (TOPIC)
Description
annotation Additional information on the theme/subject.

| | |
|-------------------------|--|
| <i>Language</i> | The language this LayerDescription (<u>NiveauBeschrijving</u>) is written in. Default value is "Dutch". |
| <i>colour</i> | Use of colour, black/white, tinted, coloured by hand, etc. |
| <i>indicationSilent</i> | Indication if production is a so-called 'silent movie'. |

LayerIndexing

Description LayerIndexing describes the story of the audiovisual material (non-formal description). The attributes in this class are strongly related to the Beeld en Geluid thesaurus.

LayerIndexing is identified via an *Intention*. The *intention* indicates for whom and what the Description is meant, f.e. professionals, museum, education, etc.

| | | |
|-----------|-------------------------------|--------------------|
| Relations | Identification by means of | <i>intention</i> |
| | Part of | <u>Description</u> |
| | * <i>keyword (trefwoord)</i> | Subject. |

| Relations | Part of | <u>Description</u> |
|------------|---------------------------------|---|
| Attributes | * <i>Award (onderscheiding)</i> | Name of an award or prize won by a production |
| | <i>Event (gelegenheid)</i> | Specific Event for which the production is made (Event for broadcasting is annotated at the class <u>Publication</u>). |

Rights (Recht)

Description Rights (Recht) describes the rights for a specific part.

| Relations | Part of | <u>Description</u> |
|------------|--|--|
| Attributes | <i>type</i> | Type of rights, f.e. reuse, broadcast rights, etc |
| | <i>Period (geldigheidsPeriode)</i> | Period in which the rights are valid |
| | <i>Source (bron)</i> | Person, organisation, corporation or company the program is coming from |
| | <i>Rights owner (rechthebbende)</i> | Person, organisation, corporation or company that holds the rights |
| | <i>RightsTerritory (rechtengebied)</i> | Territory for which the rights apply, f.e. The Netherlands, Europe, etc. |
| | <i>Blocking (blokkeringHergebruik)</i> | Information about the reuse of the material |
| | <i>annotation</i> | Additional information on rights |

Role (Rol)

Description A Role describes the role of a person, organisation, corporation or company. There is a distinction in GuestRole, MakerRole, ProductionRole and CastRole.

| Relations | Part of | <u>Description</u> |
|-----------|-------------------|-----------------------|
| | Generalisation of | <u>GuestRole</u> |
| | Generalisation of | <u>MakerRole</u> |
| | Generalisation of | <u>ProductionRole</u> |
| | Generalisation of | <u>CastRole</u> |

| | | |
|------------|-------------|---|
| Attributes | <i>Name</i> | Name of the person, organisation, corporation or company. |
| | <i>type</i> | Type of the role. |

GuestRole (GastRol)

Description A GuestRole is a specific form of a Role: a person, an organisation, corporation or company acts as a guest.

| | | |
|------------|-------------------|--|
| Relations | Specialisation of | <u>Role</u> |
| Attributes | <i>(Name)</i> | |
| | <i>(type)</i> | Possible values: |
| | | <ul style="list-style-type: none"> • Speaker • Performer |
| | <i>Position</i> | The position of the guest. |

ContributorRole (MakerRol)

Description ContributorRole (MakerRol) describes the responsibility for the conceptual, artistic and/or technical realisation of the material

| | | |
|------------|-------------------|---|
| Relations | Specialisation of | <u>Role</u> |
| Attributes | <i>(Name)</i> | |
| | <i>(type)</i> | Possible values: |
| | | <ul style="list-style-type: none"> • Dubbing • Composer • Textual editor • Textwriter • Camera • Director • Comments • Interviewer • Editing • Presentation • Production • Composition • Script • Etc |

ProductionRole (ProductieRol)

Description A Producer is the person, organisation, corporation or company responsible for the production.

Relations Specialisation of Role

Attributes *(Name)*
(type) Possible values:
 • Commissioner
 • Producer
 • Sponsor
 • Subsidiser

CastRole (CastRol)

Description CastRole describes the role of a member of the cast.

Relations Specialisation of Role

Attributes *(Name)* *cast member*
(type) Standard f.e. actor/actrice or member of the cast.
character (karakter) Name of the character or role

8.1.4 The dimensions Manifestation and Exemplar

Publication (Publicatie)

Description An Expression can be ‘published’, by means of publication. The class Publication contains information on the publication of an Expression. A way of Publication is the play-out of a television- or radio program. Other possibilities are publication via the Internet or publication on DVD or CD. An Expression can be published in several parts. Each episode is interpreted as a separate publication (broadcast). In Publication will be indicated which part of the Expression of the programme will be published.

Relations Belongs to Expression
 Related to Carriers
PublicationRecording (PublicatieOpname)
 Generalisation of Broadcast (Uitzending)

| | | |
|------------|--|---|
| Attributes | <i>Type</i> | Type of publication, f.e. broadcast, release, review, etc. |
| | <i>Date</i> | Date of publication. (Or: number of the week, in the case of Polygoon/Profilti-material) |
| | <i>Start time</i> | Point in time the publication started. |
| | <i>Endtime</i> | Point in time the publication ended. |
| | <i>distribution channel</i> | The communication system used for the transfer of the material from transmitter to receiver, f.e. television, radio, cinema, internet, trade. |
| | <i>distribution format</i> | Format of the publication, f.e. PAL, DVB, DAB, widescreen, DVD, CD-ROM, etc. |
| | <i>Event (gelegenheid)</i> | Event in the scope of which the publication takes place. |
| | <i>IndicationRepeat</i> | Indication if the publication is a repeat. |
| | <i>IndicationLive</i> | Indication if the publication was a live event. |
| | <i>beginWithinExpression</i> | Point in time within the <u>Expression</u> at which the <u>Publication starts</u> (f.e. a television program can be broadcast in two parts). |
| | <i>EndWithinExpression(eindeBinnenExpressie)</i> | Point in time within the <u>Expression</u> at which the <u>Publication ends</u> . |

Broadcast (Uitzending)

| | | |
|-------------|--|--|
| Description | A Broadcast is a special form of <u>Publication</u> , f.e. of a television or radio programme. | |
| Relations | Specialisation of | <u>Publication</u> |
| Attributes | <i>Broadcaster (omroep)</i> | The name of the broadcaster or the cooperation of broadcasters responsible for the broadcast. |
| | <i>BroadcastType (omroepsoort)</i> | Description of the type of broadcaster, f.e. national, regional, foreign, local, commercial, public. |
| | <i>Channel (net)</i> | Name of the distribution channel, f.e. Ned 1, Ned 2, Ned 3, Radio 1, Radio 2, etc. |
| | <i>Broadcastfrequency (uitzendfrequentie)</i> | Indication of the frequency with which the <u>Expressions</u> are broadcasted. This is annotated for each <u>Broadcast</u> . |

PublicationRecording(PublicatieOpname)

| | | |
|-------------|--|--|
| Description | <u>PublicationRecording (PublicatieOpname)</u> describes the recording (registration) of a <u>Publication</u> on one or more <u>Carriers (Dragers)</u> | |
| Relations | Relation between and | <u>Publication</u> <u>Carrier</u> |
| Attributes | <i>RegistrationType</i> (soortRegistratie) | PUBLICATION IS RECORDED. |
| | <i>indicationPublicationtape</i> (indicatiePublicatieband) | Indicates if the <u>Carrier (Drager)</u> has been used for the <u>Publication (Publicatie)</u> . |
| | <i>startWithinPublication</i> (beginBinnenPublicatie) | Startingpoint within the <u>Publication</u> of the part that is on the <u>Carrier</u> (one publication can be divided over two or more carriers) |
| | <i>endWithinPublication</i> (eindeBinnenPublicatie) | Endtime within <u>Publication</u> of the part that is on the <u>Carrier</u> . |
| | <i>startOnCarrier</i> (beginOpDrager) | Point in time on the <u>Carrier</u> at which the specific part starts. |
| | <i>endOnCarrier (eindeOpDrager)</i> | Point in time on the <u>Carrier</u> at which the specific part starts. |

Carrier (Drager)

| | | |
|-------------|---|--|
| Description | A <u>Carrier</u> describes a carrier on which one or more (parts of) publications are kept. A <u>Carrier</u> can consist out of different <u>Carriers</u> ; a movie can be divided over several reels of film. It's also possible that there is a relation between two <u>Carriers</u> , which is described by a <u>CarrierRelation</u> . | |
| Relations | Related to | <u>Publications</u> <u>PublicationRecording</u> |
| | Related to | <u>Carriers</u> <u>CarrierRelation</u> |
| | Exists of | <u>Carriers</u> |
| Attributes | <i>Type (type)</i> | Type of carrier, f.e. Digibeta, Ampex, CD, DAT, server, etc. |
| | <i>Archive status (archiefstatus)</i> | Status of the carrier in the archive, f.e. viewing copy, master, deposit exemplar. |
| | <i>Number (nummer)</i> | Identification number of the carrier. |
| | <i>Depository (bewaarplaats)</i> | Physical location of the carrier. |
| | <i>Format (formaat)</i> | Format of the carrier, f.e. 8 mm, MPEG-1, etc. |

| | |
|-------------------------------|---|
| <i>Origin (herkomst)</i> | PERSON, ORGANISATION, CORPORATION OR T HAS OFFERED, GIVEN, DONATED, OR E CARRIER. |
| <i>Length(lengte)</i> | The length or volume of the carrier. |
| <i>Annotation (annotatie)</i> | Additional information about the carrier. |

CarrierRelation/DragerRelatie

| | | |
|-------------|---|---|
| Description | A <u>CarrierRelation</u> describes the relation between two <u>Carriers</u> . | |
| Relations | Relation between and | <u>Carrier</u> <u>Carrier</u> |
| Attributes | ? | Attributes for this class are under development. |

8.2 INA-DM: Description fields

| Fields | Types of fields | Type of index | Thesaurus | Index multifeilds associated | Format and content |
|------------------------------|-----------------|---------------|--------------|------------------------------|--|
| Identification data | | | | | |
| Id notice | text | unique | | | number of the notice |
| Title of document | text | inclusive | Index titles | | Individual Title of the document |
| Title of collection | text | inclusive | Index titles | | Collection Title when each document is independant |
| Title of programming session | text | inclusive | Index titles | | Title of the hourly session |
| Title of series | text | inclusive | Index titles | | Collection Title when documents are following (serial, documentary with several parts...) |
| Date of transmission | text | exact | | | Date of transmission of the program Format dd.mm.yyyy |
| Duration | text | | | | format hhhmss |
| Production type (code) | text | exact | | | Code giving legal feature according to producer or broadcaster |
| Producers | text | exact | | Table of contents | Content : producer role, production location, production company name and year of production |

| | | | | | |
|--|------|-----------|--------------------|-------------------|--|
| Authors (patronymic) | text | inclusive | thesaurus PP PM | Index Keywords | Terms from lexicon (without indexing complement) |
| Genre | text | exact | | List of authority | Typology of the domain covered (information, sport, history, music, technology...) from 1 to 3 terms |
| Form | text | exact | | List of authority | Typology of audiovisual production genre (news, documentary, interview, serial, show...) from 1 to 5 terms |
| Technical data about contents and media | | | | | |
| Principal Descriptors or keywords (index) | text | | thesaurus | Index keywords | Term from thesaurus Used to feature the principal content information. By default the request is done on neighbour terms (sons and synonyms) |
| Secondary Keywords | text | | thesaurus | Index Keywords | Term from thesaurus Used to feature the secondary thematic content information. By default the request is done on neighbour terms (sons and synonyms) |
| Cast (patronymic) | text | inclusive | thesaurus PP PM | Index Keywords | Terms from the lexicon First and second names of presentators, guests, interpreters and technical staff |
| Person Keywords | text | | thesaurus | Index Keywords | Term from thesaurus Used to feature the Person names information. By default the request is done on neighbour terms (sons and synonyms) |

| | | | | | |
|----------------------------|------|-----------|-----------|----------------|---|
| Location Keywords | text | inclusive | thesaurus | Index Keywords | Term from thesaurus Used to feature the Location where the event occurs. By default the request is done on neighbour terms (sons and synonyms) |
| Works | text | inclusive | | Index Texts | In natural language. Interpreters and works. |
| Content list | text | inclusive | | | List of the program elements with title, start hour and duration. |
| Abstract | text | inclusive | | | In natural language. First level of summary synthetic and thematic |
| Synopsis | text | inclusive | | Index Texts | In natural language. Summary of the document |
| Sequences | text | inclusive | | Index Texts | In natural language. List of the sequences or shots which may be reused and shot format. |
| Date of shooting | text | exact | | | Date of shooting or recording |
| Date of retransmission | text | exact | | Index Dates | Date(s) of retransmission of the program |
| Hour of transmission | text | exact | | | format hhmmss |
| Color | text | exact | | | Three values: color, B&W or mixed |
| Material | text | | | | Description of the professional carriers |
| Version short / long | text | exact | | | Code indicating the type of version (VS, VL) |
| Version original / foreign | text | exact | | | Code indicating the type of version (VE, VO) |

| | | | | | |
|--------------------------|------|-----------|-----------|-------------|---|
| Notes | text | inclusive | | | In natural language. Various contents : legal information, awards... |
| Notes on legal issues | text | | | | Notes on INA's property rights |
| Public attendance | text | exact | | | Typology about public attending |
| Public destinataire | text | exact | | | Typology about public target |
| Thesaurus | text | exact | Thesaurus | | Termes des champs auteur, générique et descripteurs hors précisions |
| Type of notice (code) | text | exact | | | Coded value indicating which kind of notice (for a program, principal or abstract, or part of serial) |
| Librarian | text | exact | | | code on 3 characters |
| Date of modification | text | exact | | Index Dates | Date of last modification of the notice Form dd.mm.yyyy |
| Link to principal notice | text | exact | | | Number of the principal notice to make links with its related sub-documents |