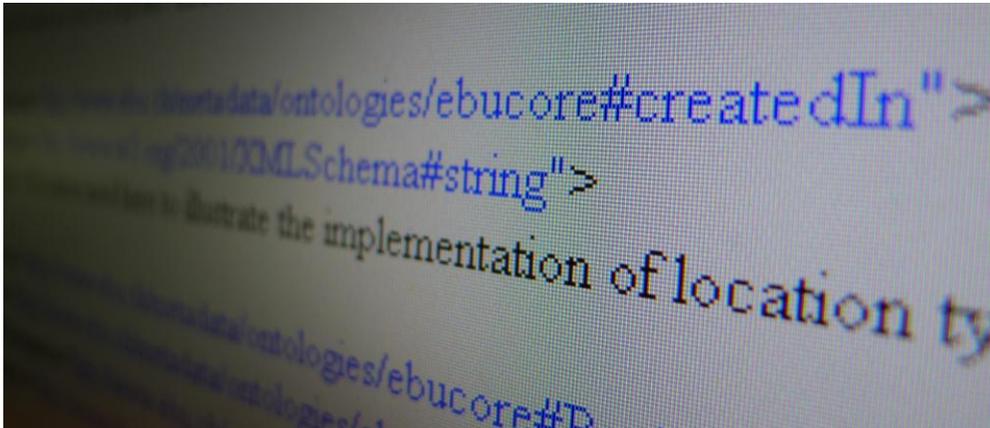


# METADATA & SEMANTIC WEB

Metadata is indispensable for content archives, programme production, distribution and any system designed to electronically search and retrieve the assets you need and want. The EBU is at the forefront of innovation in metadata for media, contributing to and influencing international standardization activities.

## BACKGROUND

The EBU has been active in the domain of metadata for many years, finding considerable success with the EBUCore metadata set. More recently, the focus has been on metadata in the registration of EBUCore metadata (SMPTE), advanced audio object modelling (ITU), and semantic technologies (with W3C and Europeana, the European digital Library). The EBU has published two ontologies: The Class Conceptual Data Model (CCDM) and the EBUCore ontology. Ontologies are the structures, rules and semantic terminology used by metadata systems. In particular, these two ontologies bring production and distribution metadata modelling to a new dimension. The EBU is now working on an ontology that addresses data collected during competition events covered by EUROVISION.



## THE CHALLENGE FOR PUBLIC SERVICE MEDIA

Whenever we store things in a box, the box needs a label on the outside to tell us what it contains. If we have a lot of boxes without labels, we would never find anything. In the world of digital television and radio content, it's metadata that serves as the label on the digital box. Of course television or radio content is itself digital data, so the metadata is the 'data about data'. It's said of systems involving vast amounts of digital content, "if you can't find it – you haven't got it". This is why the importance of metadata systems is growing for broadcasters as the amount of data they deal with grows exponentially.

EBU Members now need to deal with the twin challenges of creating content for multiple devices and platforms and managing the huge amounts of data (including metadata) generated. The key to success

lies in carefully *structuring* and *linking* the data so that it can be shared and reused across the organization and beyond – this is the ‘semantic web’ approach.

Designers of metadata systems, including broadcasters, have to trade off the advantages of comprehensiveness with those of simplicity. Too much complexity may be unnecessary and costly. Too simple a system may not cover what is needed. User-friendliness, easiness, flexibility, adaptability and scalability are more important than richness and comprehensiveness with impossible compliance rules.

A number of metadata systems have been developed over time for digital media content with different ontologies. They have been designed to meet different needs, or have been developed by different people at different times. The EBU has worked to develop a system that encompassed all the needs of its Members and, by extension, the wider media community.

## WHAT IS THE EBU DOING?

EBU metadata specifications, schemas and ontologies are the fruit of well-defined requirements and a well-developed understanding of user needs and developer habits. The EBU's Media Information Management strategic programme (SP-MIM) includes experts from around the world. The golden rule for their work, and the key to the success of EBUCore, is "keep it simple and tailored for media".

EBU metadata work is licensed under Creative Commons "Attribution-NonCommercial-ShareAlike". Users and implementers have the freedom to adapt EBU's schemas and ontologies to address their respective needs. They should mention that the new specification is based on EBU work and should share the work under the same terms. It can be implemented into products for commercial purposes but cannot be traded as a specific commodity.

EBUCore and associated activities are delivering many benefits to Members and the wider industry:

- EBUCore, which is now widely used, will soon incorporate the new EBU model for audio, including audio objects. This will be shared with AES for adoption in the AES60 standard for audio metadata, entirely based on EBUCore.
- EBUCore is used as the solution for metadata aggregation in EUScreen, the European audio-visual archives portal. EUScreen is now a key contributor to Europeana, the European digital library. Two forms of EBUCore are used in this context, the EBUCore XML metadata schema and also the EBUCore RDF ontology.
- The EBU-AMWA FIMS project, specifying an industrial solution for web service (SOA) based production architectures, has adopted EBUCore. The FIMS 1.1 specification uses EBUCore as its core descriptive and technical metadata. FIMS 1.1 is now working on quality control (with the EBU QC group) and soon on automatic metadata extraction in collaboration with the European Project TOSCA-MP.
- EBUCore is being registered in SMPTE under EBU Class 13. It is also the basis of development of the SMPTECore, an activity led by EBU. A MXF player and SDK (software development kit) has been developed in collaboration with Limecraft. It is now available as open source.
- The EBUCore ontology is published by the Linked Open Vocabularies and as open in Web Protégé.

In the domain of semantic web, EBU Members have begun to explore the huge potential held by such models, linking data from different information silos in a flexible and agile way. Applications have included the development of tools for journalists to easily pull together detailed information from a variety of sources, and the automated aggregation of data to enrich broadcaster websites with huge amounts of additional content, for example during major sporting events. The EBU's work on metadata contributes to enabling such systems, and there is a particular focus on sharing knowledge and experience across the membership.

## FIND OUT MORE

General information on EBU metadata activities

[tech.ebu.ch/metadata](http://tech.ebu.ch/metadata)

Download EBUCore

[tech.ebu.ch/publications](http://tech.ebu.ch/publications)

EBU metadata resources

[www.ebu.ch/metadata](http://www.ebu.ch/metadata)