



Multimedia Ontologies

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Context

EU Project "Multimedia understanding through Semantic Computation and Learning" (MUSCLE-NoE)
WP 9 "Representation and Communication of Data and Metadata"

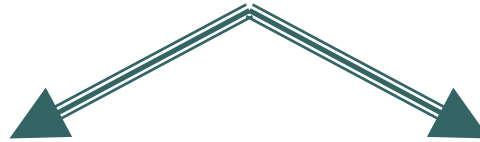
ISTI-RAS Agreement

- To grant interaction between different communities in the NoE (vision, speech, text, ML, etc.)
- To define a strategy for the NoE to develop, maintain and provide an integrated metadata service able to support multiple meta-data standards, multiple users and the management of distributed and heterogeneous data, metadata and methodologies
- To act a facilitator in the communication, exchange and interoperability by advising on common formats, creating exchange interfaces, establishing additional standards where needed and formats for meta-data
- To establish a liaison with Standardization Bodies (W3C,...)
- Automated retrieval of image analysis algorithms;
- Automated construction and combination of algorithms



Goals

Two-Level Ontology Description



Multimedia Object

MPEG-7 Ontology

Multimedia Understanding

Thesaurus





Technologies

- MPEG-7 to describe and relate media features and metadata
- Ontology description languages
 - XML, XMLSchema and RDF to facilitate interoperability and information exchange
 - OWL to describe domain ontologies
 - RuleML/SWRL to define inferencing rules relating media features to semantic terms and augment the ontologies
- Ontology design and evaluation tools
 - Editors (Protégé, OntoEdit, WebOnto, OntoLingua, etc.)
- Techniques for automatic multimedia annotation
- Inference engines (e.g. JESS, mandarax, sesame)