

# MANIFEST

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## „On the Reusability of Multimedia Objects“

Doctoral Thesis

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### Keywords

Semantic Web, Multimedia, Web Services, Object-Oriented, OWL, RDF(S), RDF, MPEG-7

### Abstract

This thesis explores relevant issues concerning the reusability of multimedia entities in the context of the Semantic Web. The key question is: What is reusability with respect to multimedia entities and how can it be achieved? After a sound analysis of the State-of-the-Art-handling of media items like still images, video footage, audio files as well as compound multimedia entities as SMIL-instances [1] in terms of semantics an Object-Oriented-Multimedia-Model is introduced.

The basic assumption inhere is, that having the (meta)data structure available through a layered MPEG-7/OWL description and offering access to such objects through Web Services, the resulting Multimedia Objects enable reusability on a broad scale. In a number of Use Cases, including scientific (EU-funded) projects as SALERO [2] and NM2 [3], practical domains as multimedia content in mobile computing, a Web 2.0 [4] example application (flickr.com) as well as the uprising Semantic Media Wiki [5], the usage of Multimedia Objects is elaborated in detail and consequently compared to the proposed reference OO-Multimedia-Model laid out earlier in the thesis. The lessons learned are then presented and possible future directions based on the proposed OO-Multimedia-Model are described, including an outlook in the context of Semantic Web vocabularies with the application domain of multimedia items ranging from proposed formal models as WSMO [6] to social driven efforts as Folksonomies [7].

[1] <http://www.w3.org/TR/REC-smil/>

[2] <http://www.salero.info/>

[3] <http://www.ist-nm2.org/>

[4] <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>

[5] [http://meta.wikimedia.org/wiki/Semantic\\_MediaWiki](http://meta.wikimedia.org/wiki/Semantic_MediaWiki)

[6] <http://www.wsmo.org/>

[7] <http://en.wikipedia.org/wiki/Folksonomy>