Re-using Media on the Web

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1. INTRODUCTION
This tutorial will address the state of the art in the area of online media analysis, annotation and linking, reflecting that a number of Web-based specifications and technologies are now emerging. When combined, they provide the technical solution for media owners to manage and to re-use their online media at a fragment level. These specifications and technologies form a full online media workflow that supports media fragmentation and re-use, which opens means to derive new value from media to media owners, and new models for media acquisition and use for media consumers. Hence, the awareness of and the ability to use these specifications and technologies will be of great importance to future curators and publishers of online media.

2. TUTORIAL TOPICS AND GOALS
The main topics of the tutorial are: Online video, audio and textual media analysis; Media annotation and semantic description; Multimedia search and retrieval; HTML5-based media fragment playout. This tutorial will approach these topics, which often address media resources as atomic objects, from the viewpoint of media fragment re-use and re-mixing in different domains, and introduce ideas of novel applications of media fragment re-use and re-mixing based on such technologies. Hence we consider the subject of great importance to the online multimedia community to highlight the state of the art in addressing media at the fragment level and the new possibilities media fragment technology can introduce for media owners and consumers.

3. STRUCTURE OF THE TUTORIAL
The first part deals with the problems of media fragment analysis and creation. We will describe approaches to visual, audio and textual media analysis, so as to automatically generate meaningful media fragments out of a media resource. We will further demonstrate the latest results in the areas of video fragmentation, visual concept and event detection, face detection, object re-detection, and on the use of speech recognition and keyword extraction from text for supporting multimedia analysis.

The second part deals with media fragment specification and semantics. Here we will introduce the W3C Media Fragment URI specification. We will highlight how media fragments can be incorporated into known media description schema, with a focus on the W3C Ontology for Media Resources and the Open Annotation Model. We will also discuss extensions to these ontologies that aim to more richly link media fragments to the concepts they represent.

The final part deals with media fragment re-mixing and playout. A number of novel application ideas will be introduced based on the media fragment creation, specification and rights management technologies. One example direction of such applications is semantic search and retrieval, which allows to organize sets of fragments by topical or conceptual relevance. These fragment sets can then be played out in a non-linear fashion to create a new media re-mix.

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1http://www.mediamixer.eu/tutorial/
2http://www.w3.org/TR/media-frags/
3http://www.openannotation.org/spec/core/