

SALERO - SEMANTIC AUDIOVISUAL ENTERTAINMENT REUSABLE OBJECTS

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Abstract

The Integrated Project SALERO aims to advance the state of the art in digital media to the point where it becomes possible to create audiovisual content for cross-platform delivery using intelligent content tools, with greater quality at lower cost, to provide audiences with more engaging entertainment and information at home or on the move. SALERO will build on and extend research in media technologies, web semantics and context based image retrieval, to reverse the trend toward ever-increasing cost of creating media.

1 Vision & Objectives

SALERO's overall vision is to define and develop 'intelligent content' for media production, consisting of multimedia objects with context-aware behaviour for self-adaptive use and delivery across different platforms. 'Intelligent Content' should enable the creation and re-use of complex, compelling media by artists who need to know little of the technical aspects of how the tools that they use actually work.

Complete realisation of SALERO's vision is a long-term goal. This gives rise to three overarching R&D objectives:

- Address characters, objects, sounds, language sets and behaviours,
- Research into methodologies for creating and finding intelligent content,
- Develop toolsets to create, manage, edit, retrieve and deliver content objects.

2 Main innovations

2.1 Intelligent content creation

The first goal is to obtain a better understanding of the relations between media types, genres, workflows and styles as a pre-requisite to the adaptation and transfer of content elements across productions and platforms. To this end, metadata, media semantics and ontologies need to be analysed, researched and developed that define the parameters

necessary for the creation and manipulation of semantically aware media objects of various types. Practical methods of context-based information retrieval will be researched that simplify the location and retrieval of characters, sounds, images, movements or behaviours from very large datasets and media storage systems. Improved methods and tools for language processing and speech synthesis, as a means of supporting the generation of multilingual media content, need to be developed.

2.2 Toolsets, demonstration & training

Software toolkits, software systems, plug-ins and interfaces will be developed that allow the control of appearances, sounds, semantic behaviour and properties of intelligent content objects for media production and post-production, and can be used in conjunction with existing industry programs. They will be validated and evaluated through a series of experimental productions, based on scenarios defined by artists and creative media professionals.

Results will be promoted by a broad initiative, developing demonstration test beds and training structures for professionals and researchers, as well as by addressing the relevant standardisation bodies.

3 Related Work

A number of research groups are dealing with ontology based description of multimedia items often by applying reasoning to low level features extracted, e.g. [1], [4]. Use of ontology languages for media annotation has been investigated in [5], [3]. Semantic video analysis for adaptive content delivery is investigated e.g. in [1].

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