Semantic Interaction with Music Audio Contents

Keywords

Music Content Analysis and Indexing / Multimedia Information Search and Retrieval / Sound and Music Computing / Signal Analysis and Processing / Digital Libraries / Semantic Descriptors

Overview

Semantic

SIMAC is about software tools to enhance our music enjoyment experience. The term semantic refers to well-defined representations of knowledge about music, which will improve the cooperation between people and computers.

Interaction

SIMAC is about bringing active involvement in the music listening process, it is also about sharing views and music knowledge among music lovers. Interaction means new ways of describing, displaying, explaining, exploiting, discovering, playing and organizing music collections.

Music Audio Contents

SIMAC is about music metadata, about what you can say of a piece of music, on what is hidden in a music file, in a collection of music files, and in the collective knowledge of communities of music lovers. Music Audio Contents can be automatically extracted with the SIMAC tools in order to open up new navigation and retrieval strategies, or in order to get suggestions for discovering potentially interesting (but unknown!) music. SIMAC will make possible to step beyond music information retrieval and move towards the realm of music content discovery.

Goals

SIMAC's main task is the development of prototypes for the automatic generation of semantic metadata from music audio files, and for its exploitation in visualization, retrieval, organization, and recommendation of music collections. One of the key features is the development, testing and use of semantic descriptors. That is, ways to tag music that are close to the user's way of describing its contents. We are going to develop tools, descriptors, and description schemes to be used by music consumers, music distributors, and music creators for empowering different types of music behaviours.

Output

- An ontology of audio music contents for retrieval and recommendation, and proposals for standardization of semantic descriptors
- Prototypes (from mock-ups -July 2004- to intermediate versions -January 2005-, to final versions -January 2006-) for:
  - Automatic and semi-automatic generation of semantic descriptors of music audio contents
  - Music collection organization, visualization, query and retrieval
  - Music recommendation
- A reference website for research on and business about semantic music content description
- An annotated music database for speeding-up research activities
- A downloadable digital music market watch
- A business plan considering open-source software as a key factor
- A final public report

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Project Reference: IST-FP6-507142
IST-2.3.1.7 Semantic-based knowledge systems
Contract Type: Cost-sharing contract
Start Date/End Date: 2004-01-01/ 2006-03-31
Duration: 27 months
Total Budget 2.982.921€
SIMAC is co-funded by the European Commission under the IST Programme (Information Society Technologies), 6th Framework.