

AllThatSounds - Associative Semantic Retrieval of Audio Files

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Demand and supply of digitally archived audio data, e.g. for media production purposes, has increased largely over the last few years and has reached an unmanageable amount. As most digital sound libraries limit the categorization of audio data to verbal taxonomies, the process of retrieving suitable sounds often becomes a time-consuming and cumbersome part of media producers' work. The research project All That Sounds attempts to improve this search procedure by providing associative, semantic classifications of the audio material stored in a database. To achieve this objective, sound files are annotated with appropriate metadata according to a customized systematic categorization scheme. Furthermore, supplementary data is collected by the evaluation of existing categorizations by a user community, as well as extracting features from the audio files using signal processing methods. Artificial intelligence methods enable the calculation of similarity distance measures between all the sound files in the database, thus providing the basis for a highly efficient search algorithm which allows the user to browse the database by accessing each sound's most similar counterparts. The project's result is a tool for organizing sound databases with focus on an optimized search component, which means to guide users to appropriate sounds for their sound track of media productions.