GlobalMusic2One - Accessing diverse world music archives using a hybrid approach between Web 2.0 techniques and adaptive music information retrieval

Holger Grossmann, Jakob Abesser, Hanna Lukashevich, Fraunhofer Institute for Digital Media Technology (IDMT), Ilmenau, Germany

Stimulated by the ever-growing availability and size of digital music collections, music similarity has been identified as an increasingly important means to aid convenient exploration of large music catalogues. For well known mainstream music, tons of user generated browsing traces, reviews, play-lists and recommendations are available from different media sources and online communities. In contrast, global music content often referred to as world-music, can hardly be promoted in common means due to its large musical and cultural variety. The limited scope of a single listener causes the need for automatic means for music information retrieval enabling the intuitive access towards new and unknown music content. GlobalMusic2one is a two-year ongoing German research project aiming at developing a new generation of hybrid search engines including new methods of music information retrieval (MIR) and Web 2.0 technologies. It aims at reaching a better quality in the automated recommendation and online marketing of world music collections. Music recordings will be automatically analysed by self-learning software, which incorporates rhythm, melody and other characteristics. This allows an efficient and exact filing of new content into existing collections. The user may create new categories and classification concepts to allow the system to flexibly adapt to new musical forms of expression and regional contexts. These categories can, for example, be regional sub-genres which are defined through exemplary songs or song snippets. A prototypical work flow consisting of semantic indexing, user interaction, model adaptation as well as search and recommendation functions will be implemented and afterwards evaluated with global music content by user groups. The main idea of the project is to use folksonomies as training basis for dynamical adaptation and to refine the content-based models for music indexing. Universal models and core technologies of content-based music retrieval will provide a flexible and modular tool box. The self-learning MIR framework will then be continuously expanded with precise content-based descriptors. These are defined by specifications and exemplary training data from user groups. This framework will provide main test and research functionalities for future global artist marketing portals. Combining the knowledge of music content of artists and labels from around the world with scientific concepts and hybrid metadata will enhance the prospects of global music marketing.