Ciência sem fronteiras at University of Leipzig

Chair of Business Information Systems

July 11, 2013

Project Description

- **Project name**: ART-e-FACT

- **Website**: http://artefact.uni-leipzig.de/en/start.html

- **Keywords**: music meta data, semantic web, data standards, music industry, RDF

- **Target audience**: **M.Sc.** in Software Engineering, Business Information Systems or any related subject

The commercialisation of cultural goods in the digital world is realized without defined processes and their implementation in applications or interfaces. Many of the participants on the music market are small or even micro-sized enterprises. They are not able to initiate process definitions and implementations for a sector wide information and knowledge management on their own. This is considered to be a major challenge in the market. Hence, the demand for a management of continuous media artifacts is high because of the high number of market participants. This is further supported by the amount of not allocated compensations to authors per year.

The project addresses these problems by enabling a management of artifacts and the data flow between the market participants based on modern technologies. Artifacts can be the traded entities, for example, a song title. These artifacts contain information which is important for attribution, inventory management or commercialisation and marketing. This information is also called meta data. Part of the research project is to identify all the relevant artifacts which could be small single items but necessary for the process. For instance, the artist could act independently from the song while producing artist photos or CDs.

From single and isolated applications and analogous administration we create a digital and integrated solution. On short-term, an efficient inventory management
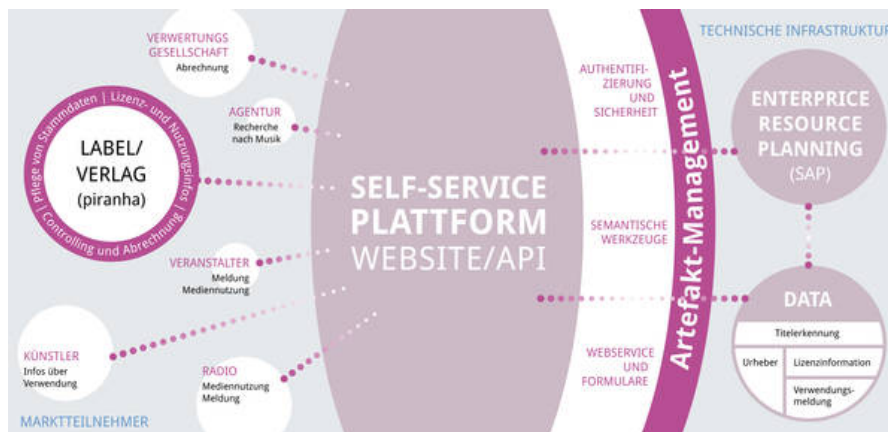
solution for a specialized market will be created. On the long run, integrated applications can be developped which match the special needs of the creative industry. As a consequence, the complex and rapidly changing global market will be controllable. Thereby the future potential of the independent music and creativity industry can be maintained.

Topics

Topic 1 - Efficient update of triple stores

Over the last years, a large number of RDF datasets have been made available over the Web. Integrated versions of these datasets are being utilized in several multimedia companies such as the BBC or Globo. Still, deciding on when to load updated datasets into triple stores remains a tedious problem. Goal of this work is the automatic evaluation of datasets for the sake of updating triples stores. For this aim, pattern-based compression and summarization algorithms with error guarantees for detecting graph differences are to be devised. Moreover, the effect of errors on data integration schemes is to be analyzed. Finally, the results of the analysis are to be integrated into the iRDF framework.

Supervisor

Dr. Axel Ngonga
http://aksw.org/AxelNgonga

Prof. Dr. Ing. habil. Klaus-Peter Fähnrich
http://bis.informatik.uni-leipzig.de/en/KlausPeterFaehnrich

Application

- **Good** to **excellent** English skills

- No German language skills necessary, though it would be an advantage (training will be provided in Germany)

- **CV**

- **letter of motivation** (3 pages)

- your **bachelor** and **master thesis**

- link to any (open-source) **projects** (including any mailing lists) you have been active on. (possibly via an aggregator service such as http://masterbranch.com/)

- **list of publications** (either scientific or otherwise, e.g. software documentation, blog posts)

Contact

Web page: http://bis.informatik.uni-leipzig.de/csf
Ronny Gey
gey@informatik.uni-leipzig.de
http://bis.informatik.uni-leipzig.de/RonnyGey