

CREATING SEMANTIC LINKS BETWEEN RESEARCH ARTICLES AND MUSIC ARTISTS

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ABSTRACT

This paper presents the application that we intend to demonstrate. Our project aims at discovering and offering researchers in music and social sciences new information resources by linking music and publishing meta-data. The application gathers meta-data by accessing various web resources, links the data and stores it in a semantic database. The data is presented in a *faceted* manner, allowing the user to navigate the data through an interface, thus making it possible for her to discover new and valuable resources.

1. INTRODUCTION

Research in the study of popular music crosses a variety of disciplines and topic areas, ranging from those in music practice to understanding music within the remit of popular culture, gender studies, medical science and so on. Our research looks to build a database of semantic linking that provides a centralised location for music scholars to access information across many disciplines related to their research. An important element of our research has been to present the data to the user in a way that would allow her to discover new resources as she navigates through it.

2. RELATED WORK

There is much research on linking and visualizing music related semantic data. Some of that effort has been realized in projects such as *Linked Jazz*¹, *Linked Brainz*², *Music Graph*³ and *DBTune*⁴. Several other projects, such as *Linked Music*⁵ as well as the *Live Music Archive Linked Data*⁶ of Page *et al* focus on linking music related meta-data for such tasks as Music Information Retrieval or Music Content Analysis. However, to our knowledge, little or

¹ <http://linkedjazz.org/>

² <http://linkedbrainz.c4dmpresents.org/>

³ <http://musicgraph.com/>

⁴ <http://dbtune.org/>

⁵ <http://www.linkedmusic.org/>

⁶ <http://etree.linkedmusic.org/about/>



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no literature has been written where the proposed outcome is the improvement of linked data concerning the technological data methods used in music research, as well as the linking of different disciplines to music specific research.

3. METHODS

The project has three main concerns: how to *acquire* data, how to *link* data with data and how to *visualize* data. We briefly discuss the first two aspects and demonstrate the visualization by showing the application.

3.1 Data Acquisition

Our main method of gathering data has been to query several services available on the web. Many web resources offer api's and services to query their data.⁷ There are also a limited number of research sites that offer rest services, mainly mendeley⁸ and core⁹.

Web services offer numerous advantages, but also some disadvantages: the fact that the client does not control the scope of queries has forced us to very often gather the information through very many small queries.

3.2 Data Storing

Once we data has been retrieved it was stored in a semantic database, in this case Allegrograph¹⁰. We have made extensive use of the *music ontology*¹¹, as well as the publishing ontology *fabio*¹². We have also created several classes and predicated to link both together, such as:

- isAbout
- isSimilarTo
- isRelatedTo
- isSimilarlyTaggedAs

4. DEMO REQUIREMENTS

Our tool is an online application, hence the only requirement is an internet connection.

⁷ A complete listing of web resources on music can be found at: <http://www.programmableweb.com/category/all/apis?keyword=music>

⁸ <http://apidocs.mendeley.com/home/public-resources>

⁹ <http://core.kmi.open.ac.uk/search>

¹⁰ <http://franz.com/agraph/allegrograph/>

¹¹ <http://musicontology.com/>

¹² <http://www.essepuntato.it/lode/http://purl.org/spat/fabio>

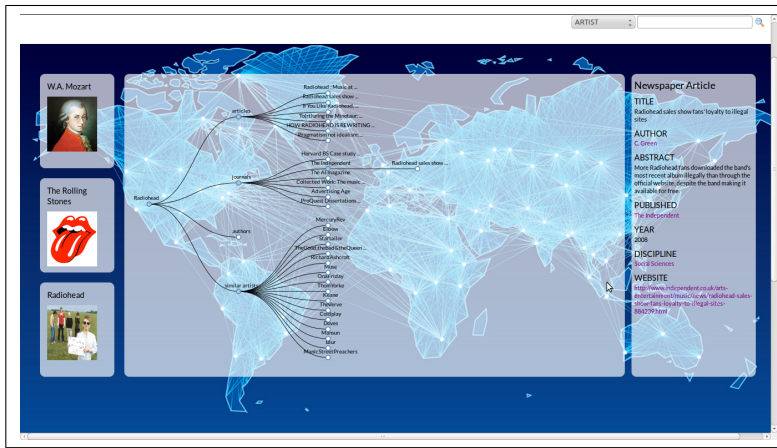


Figure 1. The interface

5. DEMO

We have developed an application (shown in figure ??) that allows music and humanities scholars to navigate data about artists. Through this navigation the researcher can readily access resources such as related journal articles, publications, similar authors, similar journals, etc. The user can also search for keywords related to each artist, or to keywords about the artists. Such searches will create a new tree that will present its own related branches, thus allowing the user to navigate into data that is farther away from her original search. The aim is to offer the scholar new areas of information related to her interests, but whose closeness to the original query might not be immediately apparent.