

Amarok Nepomuk Integration

Google Summer of Code 2008

Synopsis

I would like to be part in this year Summer of Code working for Amarok in the integration with the Nepomuk "Social Semantic Desktop" and the Strigi desktop searching program. This involves a first step of having a working backend for the collection and then use Strigi to make all the indexation work for Amarok. However, as strigi doesn't have all the required features, Amarok should also be able to index the music and store it in Nepomuk. After this is done, some new features to Amarok can be added using the new tools.

Project

This project main objective is to add a collection backend to Amarok, so that it can read and write all the data Amarok generates from Nepomuk. In this way the information will not only be accessible to Amarok, but to any other program using Nepomuk, like the Dolphin file manager. As development of KDE4 progresses, many more applications would be able to use this information in many innovative ways.

Besides using the information stored in Nepomuk, I intend to focus in using Strigi to do the actual searching for music files. Currently, one has to tell Amarok where to look for the music collection, and it will search within the given directories and look for music. Also, Amarok can keep looking in this directories for new files. This is a functionality already implemented in Strigi, which is fast, uses few resources and indexes files "in a way that is faster without hammering the system" [1] and will be available in most KDE4 desktops.

How can we use Strigi to do this work? There is a Nepomuk backend for Strigi being developed. This, I think, would be the best solution. Strigi indexes all the desktop files, and stores them in Nepomuk. Then Amarok can just query for all the music files stored in the directories specified by the user (to prevent having unwanted audio files in the collection).

Unfortunately, Strigi's capabilities regarding audio files (reading the tags information) are still behind Amarok's, so I will also add the possibility for Amarok to index the music and store it in Nepomuk. However, this is a great opportunity to prepare Amarok 2 for the future, and that's why I think that the integration with Strigi is very important.

This gives a better picture of a music collection shared between apps. Inside Nepomuk, Amarok specific fields can be defined, and can be kept separated from other programs if that is what it's wanted. This fields can contain the user rating and user tags for example.

Also, Amarok query capabilities of the music collection could be extended by using the Nepomuk query language. This is a nice feature that might be done if time permits after having the working backend, all the new ontology, and the correct integration with Strigi in place.

Timeline

Now - mid April:

In this period, I will read further documentation on all related projects and look more at the Amarok source code to get used to it.

mid April - May 26:

Specify goals and get feedback from mentors and Amarok/Nepomuk developers. Start coding the Nepomuk backend.

May 26 - July 6:

Finish the backend. Amarok should be able to index music and store it in Nepomuk by now. Define how all the data will be store in Nepomuk. Start working with Strigi integration. Mid term evaluation.

July 7 - July 20:

Finish Strigi integration.

July 20 - August 11:

Implement new features based on the new code. Mainly advanced query capabilities, that would enable more new, innovative features.

August 18 - September:

Pencils down period. Documentation and bug fixing.

Why me?

I'm a huge fan of the Amarok music player, and have been using it for some years now. And I think it is the best music player available. For some people a music player may not seem that relevant for the adoption of a platform, however, I think that having good media software (music, videos, photos) is crucial for the everyday use of a modern desktop.

Also, I believe that Open Source software can get a much tighter integration between applications than any closed systems. All this new technologies in KDE4 can allow us that integration. That's why I'm so willing to work on the Nepomuk/Amarok integration, I think it's a step in the right direction.

About me

My name is Alberto Lucas Chiesa Vaccaro and I'm 23 years old. I'm a student of electronic engineering, currently doing my undergraduate thesis. This is the final step before getting the much wanted title. This means that I don't have to attend to any more classes, which gives me more time to work on this project. Based on my obligations, I could work 30 hours per week on this.

I'm from Argentina, and I'm living in Buenos Aires. My native language is Spanish, but have been studying English for many years now, so I won't have any issues communicating with my mentors in English. I'm also used to working with the time zone differences. I used to work with the scientific apps team in Gentoo, along with people in Europe and North America, so that won't be a problem either.

About my previous experience with Amarok, KDE, Qt, and C++, I have been learning C++ for a year now. I haven't yet worked with Qt or KDE, however, recently, I've been looking at the Amarok code and getting to know Qt with it.

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[1] <http://strigi.sourceforge.net/>