

KNOWeSCAPE related research at the SEMAG research group

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This short paper succinctly describes the KNOWeSCAPE related research currently being done at the SEMAG research group of the University of Minho (UMinho) and its environmental context.

The Software Engineering Management Group (SEMAG)¹ is a research group operating at the Algoritmi research centre at UMinho. SEMAG is devoted to the advance of the state-of-the-art of software-based information systems, both on the engineering and management aspects of the following research tracks:

- modeling approaches for analysis and design;
- business and location-enhanced database systems;
- metadata and ontologies for the semantic Web;
- process and project management life-cycles.

The KNOWeSCAPE related research falls on the track "metadata and ontologies for the semantic web", although the collaboration with other tracks or other Algoritmi research groups has generated interesting contributions.

Contextual projects

There are two main contextual projects that can be of interest to KNOWeSCAPE. The first, RepositóriUM², is the UMinho institutional repository and is run by its documentation services. Elements from SEMAG were involved in the RepositóriUM since its creation and during its first years of existence. RepositóriUM was the first institutional repository in the Portuguese speaking world, which earned it a leading role in a universe of eight (8) countries and 200 million speakers. RepositóriUM is also well known in the Open Access community where its manager also has a leading role.

The second project is DeGóis³, which is funded by FCT⁴, the Portuguese main funding agency. DeGóis is an adaptation to the Portuguese reality of the Brazilian Lattes system. DeGóis and Lattes are online platforms for storing information for Curricula Vitae (CVs). DeGóis and RepositóriUM are integrated through an API that notifies deGóis whenever an

¹ <http://algoritmi.uminho.pt/research-teams/semag/>

² <http://repositorium.sdum.uminho.pt>

³ <http://www.degois.pt>

⁴ <http://www.fct.mctes.pt>

item is stored in RepositóriUM, saving time to researchers and helping to keep information coherent between both systems. DeGóis, although interoperable with the Brazilian Lattes, is not interoperable neither with other Current Research Information Systems (CRIS) nor with other systems/services that support scholarly communication activities (e.g., publishers databases, reference databases or scientometric services). It is also not interoperable with research institutions information systems.

Current projects

At the present time we have three (3) doctoral students and several MSc and undergrad students working in the following distinct but related projects:

- Me4DCAP – A method for developing Dublin Core Application Profiles (DCAP). The first version of Me4DCAP will be released in the Spring of 2014. The method is being developed under a PhD project using the Design Science Research (DSR) methodology and it is currently on its last phase (validation). There are MSc and undergrad students working in this project as well and there is collaboration with other SEMAG research tracks.
- SWAN – Acronym for Semantic Web at ANACOM (the Portuguese National Authority on Communications)⁵. The SWAN project is currently not funded, but some work is being performed by MSc and undergrad students. We are currently defining and encoding in SKOS the ANACOM's controlled vocabularies and their relationships. This work has as a basis the list of terms that ANACOM uses for indexing the publications made available on its website.
- (no name yet) - A PhD project that seeks to investigate the information needs of scholars in economics when they do scientific-related searches. This project is beginning and will end with the definition of a DCAP for digital repositories on economics. It will also, as a side effect, contribute to evaluate and give feedback for the Me4DCAP method. There are MSc and undergrad students working in this project as well. There is a possible collaboration with other research groups at UMinho.
- (no name yet) – A PhD project still on its beginning. It will focus its attention on knowledge maps and it is closely related to KNOWeSCAPE. We intend to build on information provided by DeGóis and create knowledge maps that can be used by researchers, research institutions and agencies. For that, we will need to find or develop specific controlled vocabularies and ontologies and appropriate tools that relate them with DeGóis. We will also need to investigate the information needs of our research and funding institutions and find a way to translate them into meaningful and useful knowledge maps. MSc and undergrad students will be working in this project as well.

⁵ <http://www.anacom.pt>

Future work

We are currently defining a plan to make use of Algoritmi transversal competencies in order to improve deGóis functionalities and its user experience, particularly:

- making it interoperable with other CRIS, the RepositóriUM (so that when some kinds of records are added to deGóis, repositóriUM gets notified) and other systems/services that support the scholarly communication process;
- integrating it with the institutions' information systems;
- adding social networks functionalities;
- adding services, such as science indicators and maps, specifically targeted to some of its stakeholders: the researchers, the institutions, the funding agencies and the companies.