

Thesis title

Modeling and Exploitation of Profiles: Semantic Access to Resources

Summary

Resources access is a broader view of information access where resources are not limited to users and documents but can be extended to any kind of persons, things and actions such as : students, thesis, mobile devices, software and so on. Heterogeneity of resources has led to the development of several access methods. These methods rely on the description of resources that we call *profile*, and also on the definition of using rules for those profiles in order to achieve a specific task : information retrieval or filtering, sharing or exchanging information, sending alert messages to inform of a particular situation and so forth.

Profiles and their using rules differ from one application to another. For applications cooperation, there is a real need of a flexible and homogenous framework for the modelling and use of profiles. Our research work aims at providing solutions in those two aspects, thanks to a profile generic model and methods for analysing and matching instances of this model.

The goal of our contribution is to keep flexibility at the modelling level without compromising the matching between profiles described by different languages. For that, we add a semantic dimension to our generic model. The aim is to clarify the meaning of profiles descriptive elements (structure and contents) and to provide applications with means for an automatic deduction of compatible semantics elements between different profiles. Semantics is instantiated with metadata and is not restricted to a pre-defined applicative framework. Semantics should allow interoperability between profiles described by different applications. This semantics should then define rules of profiles interpretation and should set *bridges* or *shared languages* among those profiles. In order to validate our proposals, an assistant tool for profiles construction, visualization and semantic analysis has been implemented. Furthermore, an evaluation of methods for profiles semantic analysis and matching has been carried out.

Keywords: *Profile, Semantic Access, Resources, Generic model, Matching, Interoperability, Metadata.*