

FOAFMap: Web2.0 meets the Semantic Web

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Abstract. FOAFMap - <http://foafmap.net> - is an online service providing geolocation with a FOAF and Google Maps mashup, as a mix of both Semantic Web and Web 2.0 technologies.

1 Motivations

Web 2.0 geolocation services such as Frappr!¹ allow users to create, or subscribe to, groups and related maps.

FOAFMap's idea is to provide an equivalent service using decentralized profile and data management, thanks to Semantic Web principles and FOAF[1] vocabulary. Thus, people manage themselves their data while the tool just reads, understands and displays it in an appropriate way.

2 Overview and Implementation

FOAFMap users don't need to register, but just have to provide a FOAF file URL, which could point to either a personal profile or a group document.

After identifying the document type (personal profile or group), the service retrieves people referenced in the file. For each people found, the script parses his personal FOAF file - if any - and extracts geolocation information that he may have provided with Geo Vocabulary². Then, it displays these people on a Google Map, with other personal information: name, weblog or email, and even a resized picture if available on the profile.

As parsing the profile and retrieving files can be really long when there is a lot of people referenced in it, FOAFMap allows users to cache the created map in its filesystem, so that it can then be displayed faster.

Since tagging became a common practice in Web2.0 services, FOAMap also allows people to tag their maps, but once again, tags are not created locally but extracted from FOAF files. Actually, the retrieved tags are `foaf:interest` properties of the user or group mentioned in the file. Tags are identified with their URL, and FOAFMap provides a way to see aliases of the same tag, as anyone can provide the title he wants using `dc:title`. Like most of the tools using folksonomies, FOAFMap allows people to see who shares common tags,

¹ <http://frappr.com>

² <http://w3.org/2003/01/geo>

so that you can find people with the same interests as you³. It also provides an RSS 1.0 feed of the latest created and updated maps.

FOAFMap's source code strongly depends on PHOAF⁴, a PHP5 API based on RAP[2] providing a set of classes and methods for easy information extraction from FOAF files without any knowledge of FOAF and RDF. FOAFMap and PHOAF handle FOAF and RELATIONSHIP[3] vocabularies to identify relations between people - RAP inference engine is used so that relations can be retrieved either they are defined by `foaf:knows` or `rel:xxx`. Finally, FOAFMap also uses MySQL to store some data as users and tags, and runs on LAMP.

3 Conclusion and Future Work

FOAFMap certainly won't evolve a lot in the future, as the goal was mainly to develop a basic prototype that could show connections between Semantic Web and user-oriented model of Web 2.0. Yet, I hope that such services can help end-users to see what FOAF and Semantic Web can bring us.



Fig. 1. My personal FOAF profile towards FOAFMap

References

1. Brickley, D., Miller, L.: FOAF Vocabulary Specification. *Technical report, FOAF Project*, 2003. <http://xmlns.com/foaf/0.1>
2. Oldakowski, R., Bizer R., Westphal D.: RAP: RDF API for PHP. In *Scripting for the Semantic Web*, May 2005.
3. David, I., Vitiello, E.: RELATIONSHIP: A vocabulary for describing relationships between people <http://vocab.org/relationship/>

³ <http://foafmap.net/tag/3>

⁴ <http://gna.org/projects/phoaf>