Shaping the future of data sharing with EUON

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The newly launched European Ontology Network (EUON) will be holding *its first ever workshop on 25 September 2014* as part of *the EUDAT 3rd Conference in Amsterdam, The Netherlands* . iSGTW *speaks to EUON co-chairs James Malone and Yann Le Franc to find out more about the network…*

What is EUON?

JM: EUON is an attempt to try to bring together people in the European Community who are working with semantics, ontologies, terminologies, schemas, and so on. We really want to share experience and expertise and help form collaborations and partnerships. EUON is very much meant to be a networking activity.

YLF: EUON isn't restricted to any particular research domain; it's there for anyone working with the semantic web. We will hold our first workshop in September and we are now also in the process of planning other things too, such as a 'virtual coffee break' via Google+.
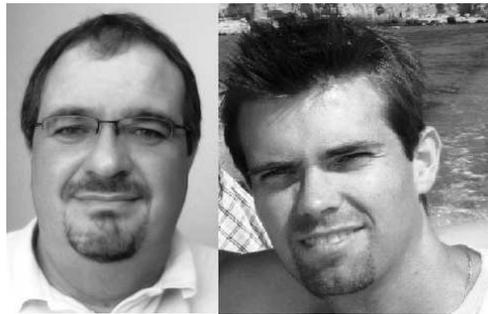
Yann le Franc (left) is an independent scientist based in Paris, France, and James Malone (right) is a lead ontologist at the European Bioinformatics Institute (EMBL-EBI).

How was EUON established?

JM: Peter Wittenberg, EUDAT scientific advisor, invited us both to take part in an EUDAT working group on semantic annotation in Barcelona, Spain, in 2013. We discussed approaches across the EU in terms of how semantics are used and developed in different domains. It became apparent during the meeting that there are clear similarities across research disciplines, as well as unique challenges that need to be tackled. I'm also involved in the UK Ontology Network and it seemed like a natural progression to do something similar at a European level.

YLF: What's interesting about EUON is that we've all come from different domains and we now realize just how little we know about the work other researchers do in their specific field. Both James and I come from a biomedical background, so we really didn't know about, say, art or linguistics. We learned lots about their applications of semantics and discovered completely new tools. It's great that we can now all learn from one another through EUON.

Why is EUON an integral part of EUDAT?

JM: EUDAT has a general goal to design, implement, and offer common data services and infrastructure. An important aspect when considering common data infrastructures is about semantics — what does the data actually mean? EUON shares the goal of describing these semantics in formal and shared ways, enabling community-wide understanding of data in a manner that is meaningful to the user and to a computerized infrastructure.

What are the main challenges faced by researchers working in ontology and semantics today?

YLF: In my view, the main challenge whenever you're building an ontology is to achieve consensus in the community about the terminology, definitions, and models you have chosen to describe the data. It's important to educate scientists so that they properly understand what an ontology actually is and why semantics is useful. You can build an ontology, but if no one actually uses it to annotate the data it's useless.

JM: I think Yann's right there. When you're developing ontologies of any sort, it can be very challenging to get agreement on terminology and descriptions. Clearly, ontologies should reflect the state-of-the-art in a particular domain, but the state-of-the-art often necessitates disagreement between different groups of researchers. There is a perception that one ought to somehow aspire to make an ontology a flawless reflection of the consensus in a given community, but sometimes groups within a community may contradict one another. As such, it's important to develop mechanisms to reflect where such disagreement occurs.

Another challenge, of course, is obtaining funding to support this work. Semantics is often perceived as being in the background, along with things like data curation. It's clearly very important, worthy work, but it can easily be overlooked by funding bodies.

Why is it important that these challenges are overcome?

YLF: Well, I work in the field of neuroscience: Here, we're trying to understand how the brain works and we have people in our community gathering data of all sorts of different types from all sorts of different scales. To really understand the brain, we need to put all of this data together, which means it needs to be well structured. Semantic technologies are one efficient way of doing this.

JM: As we as a society generate ever more data, it's important that we are able to exploit and understand the data as fully as possible. Clearly there's a role for semantics in ensuring that one can integrate datasets, search across them, and analyze them properly. All of this is particularly important for topics that involve research from across a range of domains, such as personalized medicine or climate change for instance.

Finally, what are the aims for your workshop on 25 September?

JM: We want to give members of the network the chance to make connections with one another. There will also be a number of demos and things as well, but they're really just a way of giving people a broad introduction to the sorts of things that are going on in different domains. For me, it is very much about the networking: we want people to come together and start collaborating.

YLF: People can come to the workshop with their problems and share them with the community. Then we can all share our experience and expertise and hopefully come up with some solutions. We hope that the workshop will really kick-start EUON.

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