Designing AGRIS 2010: Information Linking and Agricultural Research

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1. Background

This poster presents recent work on the redesign of a bibliographic database of research literature (AGRIS) to emphasise the interconnected, relational nature of modern Web metadata. Through exploring the evolving role of databases such as AGRIS, it has become clear that the connectivity patterns amongst the things described in the database (researchers, topics, institutes, places) can be better reflected online through a more explicit representation both in Web metadata and in user-facing Web sites. The distributed nature of the world described by AGRIS naturally fits a "linked data" deployment model, in which AGRIS becomes more than a document discovery portal - it becomes an entry point and map of the entire research landscape around some topic or theme.

Classic bibliographic metadata is often understood in an overly-simplistic fashion: users are seeking some documents from amongst a larger set, they search against a system populated with metadata, which provides a metadata-driven interface through which users find their way to their target documents. With the rise of fulltext search and online availability of more research material, such a role for metadata can appear redundant. When considered instead as a form of modeling that emphasises relationships, connections and links, bibliographic metadata grows in value as the Web grows in connectivity, and can provide researchers with a map of the global research community, linking formal outputs (papers, data) with a wider grey literature (preprints, drafts) and with communication platforms (blogs, forums) that help researchers put formal findings into a wider context.

Such an approach to metadata requires an emphasis on sharing identifiers, names and descriptions of key real-world and abstract objects other than the bibliographic materials themselves: conferences, workshops, research centres, researchers, subject themes, homepages.

None of this is news to the bibliographic professional; such concerns have been at the heart of metadata work for years. What is new today is the presence of tools (standards, software) and community trends (open linked data, open archives, RSS/Atom syndication) that allow the full potential of such link-oriented metadata to be exploited.

2. Methods

In the AGRIS 2010 work, we have been prototyping a redesign for AGRIS that brings these concerns to the core of the system: both in our data modeling, and in the Web presence, AGRIS will emphasise the networked, linked nature of the things it describes. AGRIS has for many years provided a huge database of bibliographic references, such as research papers and thesis, each including metadata such as conferences, researchers, institutions, and keywords from different thesauri as AGROVOC.

3. Results

The new AGRIS portal not only gives the researcher access to this information, but it also provides data services to extend her knowledge, accessing cached Web data such as full text documents and news related to the specific keyword entered in the search box. This latter was

made possible using the Drupal RSS aggregator modules, and creating an RSS channel on Agrifeeds[1], the agricultural news and events aggregator.

4. Conclusions

In our current work we are exploiting this rich dataset to show how every new resource added to AGRIS can provide information about places, people and topics. By doing so, we hope to show how each resource centre participating in the agricultural research Web can also publish information (e.g. blog feeds) that interconnects with the hub of linked data managed through AGRIS.

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[1] http://www.agrifeeds.org/