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CORE: Connecting Repositories in the Open Access Domain

This submission reports on the results of the ongoing JISC-funded project CORE (COnnecting REpositories) which aims to facilitate the access and navigation across relevant scientific papers stored in Open Access repositories. This is being achieved by harvesting metadata and full-text content from diverse Open Access repositories, applying text mining techniques to discover semantic relations between the articles and representing and exposing these relations as Linked Data. The information about associations between articles will be made publicly available to enable the emergence of a wide range of applications that can exploit the provided data. Within this project, we will demonstrate the usability of the CORE system on two use-cases: (1) Improving the accessibility of content and the navigation capabilities for digital library users, (2) Enabling more ubiquitous access to digital content through smart phones and tablet devices.

More details:

There are more than 1, 800 quality checked Open Access repositories worldwide [OpenDOAR] storing more than 30 million records. Search engines, such as Google Scholar or Vascoda, do not differentiate between Open Access and subscription-based content. Therefore, the user information needs are only satisfied if the links resulting from scientific searches lead to the full-text versions of articles that are covered by a subscription or follow the Open Access policies. Users searching only for Open Access content have to submit queries to a number of relevant Open Access repositories or to use systems that harvest metadata from multiple sources, such as BASE or OAIster. However, these metasearch systems do not currently provide well-grounded information about semantically related content and do not provide services to digital repositories that would allow them to improve their browsing capabilities.

We present a method for improving the access to content and navigation between semantically related items across Open Access repositories. Our approach is based on the use of automatic link generation algorithms that are applied to discover relations between full-text content. The relationships are represented and published as Linked Data and can be queried using a set of web services. Making information about related resources publicly available in an interoperable format is an essential step in order to allow its exploitation by various third-party applications.

In addition, we demonstrate the usability of the CORE service on two use cases. First, a demonstration client for Open Access repositories is developed to be used by institutions that administer repositories. The client is implemented as a widget that complements standard search services of Open Access repositories by providing dynamic links to semantically similar content stored in other repositories. In the second use case, we support ubiquitous access to information stored across Open Access repositories using mobile technology.

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