Next Generation Repositories Workshop Report

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The purpose of this workshop was to present the initial results of the Confederation of Open Access Repositories Next Generation Repositories Working Group and get feedback about the technical and functional recommendations.

The extensive international deployment of repository systems in higher education and research institutions, as well as scholarly communities, provides the foundation for a distributed, globally networked infrastructure for scholarly communication. However, repository platforms are still using technologies and protocols designed almost twenty years ago, before the boom of the web and the dominance of Google, social networking, semantic web and ubiquitous mobile devices. This is one of the reasons why repositories have not fully realized their potential and function mainly as passive recipients of the final versions of their users' conventionally published research outputs.

In order to leverage the value of the repository network, we need to equip it with a wider array of roles and functionalities, which can be enabled through new levels of web-centric interoperability. One of COAR's major objectives for 2017-2018 is to identify the core functionalities for the next generation of repositories, as well as the architectures and technologies required to implement them; and to work with the repository community to help adopt these functionalities. We also aim to create a global brand for repositories that establishes repositories as a central place for the daily research and dissemination activities of researchers.

The next generation repository is an active, networked repository; as opposed to a passive, siloed recipient of content. It is resource-centric. Our vision rests on making entities known as resources the focus of services and infrastructure. Distributed resources are accessible and identified unambiguously by URLs, rather than relying on imprecise descriptive metadata to identify entities and the relationships between them.

The workshop presented some of the major new functionalities required to support a vision of repositories as the foundation of the scholarly communication system. The functionalities fall into a number of general areas, but the discussion focused mainly on the first 2 points:

1. Greater exposure of repository resources on the web
2. Social interactions
3. Active/dynamic repositories
4. Preservation

In terms of discovery, the group is looking how to improve discovery of resources in repositories through 3 vertical funding mechanisms:

- Batch – Transferring bulk data
- Navigation – Helping robots to find resources in repositories by means of navigation
- Notification – Enabling robots to subscribe to changes in repositories

In terms of social interactions (across) the global network of repositories, there are four functionalities the working group has identified:

- Annotation
- Commenting/social interaction
- Notification feed
- Recommender systems

There was a very positive response to the vision presented at the workshop by the attendees.

Questions and comments provided an opportunity for the presenters to clarify the objectives of the work, and discuss how the recommendations can be best implemented across the world, since the success of the project will hinge on the widespread adoption of functionalities into repository platforms.

Four communities were identified for targeted communications:

- Repository networks
- Platform providers
- Institution/library/repository community
- The scholarly community (in general)

Other significant discussion included:

This work is very related with some future developments in the open access publication systems. How can we align our vision, learn from each other and work together?

One big selling point for repositories with researchers is that they can really showcasing the usage of open access resources. This could be also emphasized in next generation repository functionalities.