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Purpose

This document is created as a part of the project "Repository for Research Data at IST Austria". It summarises the mandatory features, which need to be fulfilled to provide an institutional repository as a platform and also a service to the scientists at the institute.

It also includes optional features, which would be of strong benefit for the scientists and would increase the usage of the repository, and hence the visibility of research at IST Austria.

Method

The feature list is based on the outputs from the first[1] and second[2] part of the concept and on testing sessions with scientists from computer science and biology. The list also contains requirements collected during the CKAN workshop[3], where possible aspects of appropriate Research Data Management tool were discussed from different points of view (user, curator, librarian, funder, developer, IT support).

[1] http://repository.ist.ac.at/id/eprint/103
[2] http://repository.ist.ac.at/id/eprint/113
[3] https://orbital.blogs.lincoln.ac.uk/2013/02/27/ckan-for-rdm-workshop/

Mandatory features

HARDWARE

- Provide secure storage of the uploaded research data with regular back-up.
- Provide sufficient storage space for upload of research data produced on IST Austria (approx. 1,3 TB in a month for 19 research groups, see results of survey[4]).

SOFTWARE

- Enable upload and access to the research data[5] (via appropriate metadata) based on research done at IST Austria.
- Enable upload/registry of metadata for data uploaded outside the institutional repository with a permanent link to the uploaded data.
- Enable linking to publisher's versions of related papers, and OA versions of related papers if available.
- Support metadata schema from DataCite[6].
- Support standards: OAI-PHM, SWORD.
- Unique identification e.g. via DOI (Digital Object Identifier).
- Support/create metrics (siteview, downloads).
- Enable versioning of data.
- Enable upload of open and also secure data – rights management.
- On each data set, have contact information in case additional explanation or access to restricted data is wanted.

DESIGN

- Easy-to-Use interface (make the upload intuitive and as easy as possible; evaluation after user testing through "missing negative feedback").
- Default setup (set as many entries on "default" as possible).
- Mapping between suffixes and types of uploaded data.
- Implement clear choice between data licences.
- Implement recommended citation style, which can be copy and pasted.

SUPPORT

- List of subject repositories/suggested subject repositories.
- Guidance documents depending on data type and subject.
- Guideline documents.

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[4] http://repository.ist.ac.at/id/eprint/103
[5] Data formats viz http://repository.ist.ac.at/id/eprint/103
[6] http://schema.datacite.org/meta/kernel-2.0/index.html

Optional features

SOFTWARE

- Support extended metadata schema provided by University of Essex[7].
- Real-time upload – background upload of large files.
- Multiple-batch upload.
- Batch operations for editing metadata and other features.
- Support/create metrics (citations, re-use).
- Metadata properties which suits vocabulary from Re3data[8]
- Support OAI-ORE, OpenAIREplus.

DESIGN

- Enable setup at field/group level – predefined options with default values could be set up and adjusted via the front-end by user or super user.
- Tailored front-end according to results of user beta testing with high usability, this can massively increase the usage of the repository (as option fast evolving CKAN for RDM).

SUPPORT

- Support the whole life of data with Research Data Management.[9] This would significantly improve the impact of the data produced on IST Austria and would support the scientist more in his procedures.
- Training material based on realistic examples (use cases).

[7] http://data-archive.ac.uk/media/375386/rde_eprints_metadataprofile.pdf
[8] http://ebooks.gfz-potsdam.de/pubman/item/escidoc:76875/component/escidoc:76874/re3data_vocabulary_v2-0.pdf
[9] Best practice for researchers: http://www.data-archive.ac.uk/media/2894/managingsharing.pdf