RepoMMan Project

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User documentation

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The RepoMMan Project

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Introduction to the RepoMMan Project

Here is not the place to provide a full account of the JISC-funded RepoMMan Project that ran from June 2005 to September 2007. Its work is well documented elsewhere.[1] Suffice it here to say that the Project was established to allow a 'user' (a researcher, a teacher, a student, an administrator, a ...) to interact with a repository at their University. When RepoMMan was set up it is probably true to say that the prevailing notion of a digital repository was of a facility to showcase a University's research paper output. At the University of Hull we could see benefit in holding a much wider variety of materials in a repository and, crucially, in making the repository available during the private development of materials that it would eventually make more publicly available. The RepoMMan tool was developed to allow a repository user to interact with a private repository space in order to assist their development of materials and to make straightforward the 'publication' process when the material is complete.

Background: the repository at Hull

Different Universities will establish repositories in different ways and with different structures to meet differing needs. This document relates specifically to using the RepoMMan tool in conjunction with the repository at the University of Hull and it is appropriate to start by outlining how this repository is structured and how it may be able to help you, as a user, develop materials.
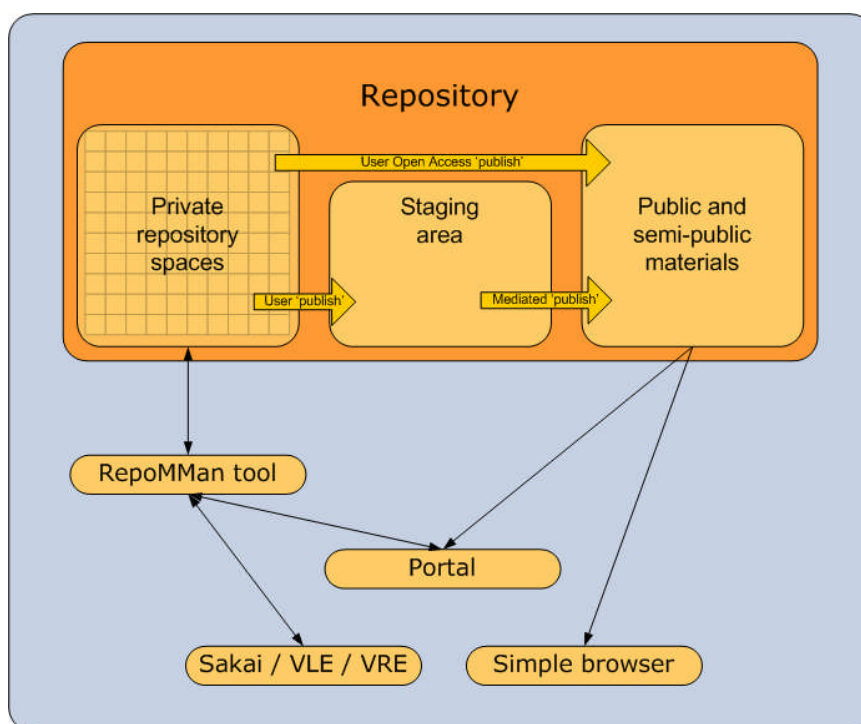
It may help to think of Hull's repository as having three sections. The first provides each user with a private repository space over which they have control. The only people who can see into each private space are the individual user and the repository administrator. In addition, in a future version of the software, the user, as the owner of the space, may specifically allow one or more people to share individual files within it to allow, for instance, collaborative authoring. Users interact with materials in their private space using the RepoMMan tool. The

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[1] http://www.hull.ac.uk/esig/repomman

tool can be launched from within the University portal[2] or from within a University virtual learning or research environment (VLE or VRE).

The second area of the repository facilitates the process of making public finished materials. When the user decides that something should be made more public they copy the file(s) to a staging area which is managed by, and is only accessible to, repository staff. The copy of their work is now 'owned' by the repository and the author cannot alter it in any way; the original, in their private space, is unaffected by this process. Once the materials have been checked, they are moved to the third area of the repository.

The third, and final, area of the repository holds the materials that are available to others. The materials may be fully public or, perhaps for licensing reasons, only available to members of the University (semi-public). Public materials are available to anyone with a web browser, semi-public materials can only be accessed with a browser by logging into the University portal.

With some materials it will be possible, in a future version of the software, for a user to by-pass the intermediate checking stage and copy materials directly to the public repository. This facility exists largely to support the ideals of so-called 'open-access' publishing. Using this method, the author must accept full responsibility for the publishing process.

Why use the private repository space?

When we embarked on the RepoMMan Project, we carried out a number of user-needs interviews to find out how a tool such as we envisaged might be useful to its target audience. At the extremes, some of those we spoke to could see considerable advantage in using the tool, some said that their own work practices were so well developed that they wouldn't need it; there were many views in between. The point is that *all* these views are fine. It is not intended that there should be any mandate in using the RepoMMan tool; on the other hand we do think that it meets a range of the needs expressed to us in those interviews. So, why might you want to use the tool and the repository space it gives access to?

Storage

The amount of storage available to most users on the University network is not currently large and for this reason many staff make little use of it. Instead they prefer to store their materials on a hard drive of some kind, perhaps part of, or attached to, an office computer or to a laptop. Many staff we spoke to found themselves repeatedly moving files from machine to machine to work on and sometimes wondering which was the most up-to-date version. By handling their files in this way they were unable to take advantage of a key facility of the networked storage space: automatic, regular backup.

At the time of writing, there is no forced limit on the amount of storage available to an individual through the repository because of its connection to the new University storage area network (SAN). Providing that a user adheres to the *Conditions for Use*[3] of the space, using it for legitimate University purposes, the repository will endeavour to accommodate needs. The repository is automatically backed up each day.

Access

As noted above, staff identified a need to access their materials from a variety of locations: the office, home, a lecture theatre, a conference, ... If these materials are routinely kept in the repository a user should have access to them through the University portal from anywhere in the world they can access a web browser.

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[2] https://port.hull.ac.uk
[3] This document will be provided by Computer Services in due course

Management

The RepoMMan tool, working with the repository, addresses a number of management needs expressed by users. Each time a file is uploaded to the repository a new version is saved, it does not replace a previous version, thus it is possible for a user to revert to a previous form of the file. Under normal circumstances this process is transparent, the file shown on the screen will be the most recent upload, but previous versions are easily retrieved. Each version of the material is identified by the date and time that it was copied to the repository.

Users expressed the need to be able to share materials they were developing with other people in a limited and strictly controlled manner. This would, for instance, perhaps facilitate co-authoring or peer-comment. Version 1.0 of the RepoMMan tool does not provide this functionality but it is anticipated that it will be included in the next release.

The RepoMMan tool provides a number of background services that are useful when it comes to the time to make materials available to a wider audience. It is at this point that the tool will become useful even to those who choose not to use it during the development of their work. Facilities are available easily to add metadata to an object and to move it into a workflow elsewhere that results in publication.

Preservation

Once in the public-facing area of the repository, materials will be managed at an institutional level and preserved over time. Repositories have been likened to the 'institutional memory' of their host organisation and can alleviate the problems of redundant media and file formats.

Opening the RepoMMan tool

The RepoMMan tool can be opened in two ways: through the University portal or through a University virtual learning or research environment (VLE or VRE).

Portal

To insert the RepoMMan tool into your portal configuration, you need to do the following:

1. Log into the portal.

2. Decide where you wish to locate the RepoMMan tool. We would suggest either the 'My Content' tab or 'My Tab'. Navigate to the appropriate tab.

3. Click on the 'Preferences' link at the top right of your Portal screen.

4. Make sure that the tab selected on the row under "Select a locale" is the tab where you want to locate your RepoMMan tool. If not, select it now.

5. Choose where in the screen layout you want to place the tool and click the 'Add Channel' button at that position.

6. In 'Select a category' choose 'Development' and click 'go'.

7. In the second column select 'RepoMMan' and click 'Submit Query'.

8. If you now go back to the Portal tab where you opted to place the RepoMMan tool it should be there.

Sakai VLE/VRE

Within the Sakai VLE or VRE you will find the RepoMMan tool listed in your available 'portals'.

The reason that the RepoMMan tool can be activated in this way is that, behind the scenes, the portal, VLE or VRE is passing to it your login name and password; these were recorded when you logged in. It is not possible to use the tool unless this information has been provided in some way to ensure privacy and security of access to personally stored content.

Screen layout: what does it all do?

Whatever method you have used to access the RepoMMan tool, you will see a screen that resembles the one shown below:
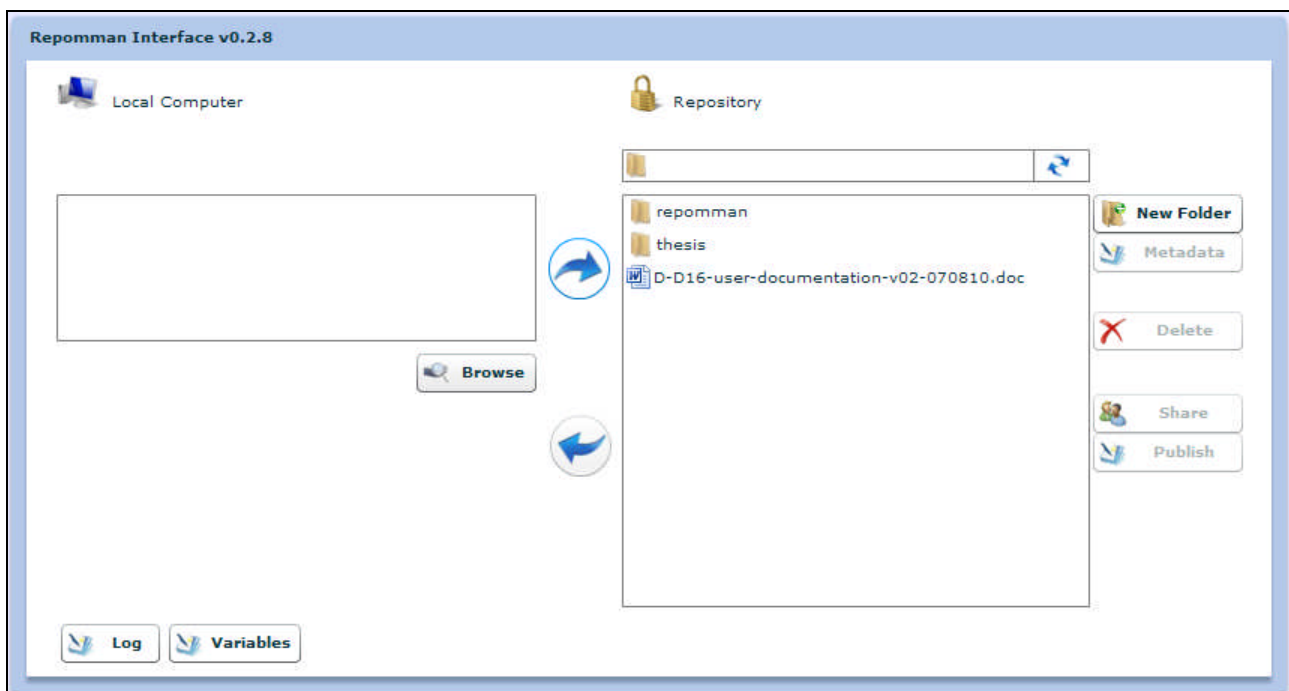
The left-hand area of the screen is labelled 'Local computer' and allows you to interact with the machine that you are working on; the right-hand side of the screen is labelled 'Repository' and enables you to interact with your private area on the University repository. The buttons labelled with blue arrows near the centre of the screen allow you to transfer materials between your local computer and the repository. When you first use the tool, the large box in the right-hand section, showing you stored materials, will be empty. The RepoMMan tool deliberately mimics the way that a number of familiar operations work on your computer; in this way we hope that it will be fairly instinctive to use.

The functions of all the buttons on the screen will be explained in later sections with the exception of those at the bottom left labelled 'Log' and 'Variables'. These will only be needed to assist troubleshooting your problem if you ever have to contact the support team for help.

Saving a file to the repository

To save a file in the repository, it is first necessary to select it on your computer. It is always wise to ensure that the file has been closed before trying to transfer a copy. Click the 'Browse' button on the RepoMMan tool and navigate to your file. Highlight it and click the 'Open' button in the 'Select file' window. The file should now be listed in the box above the 'Browse' button.

(You may be wondering why the box is so big. This is to accommodate a feature that will be available in a later version of the tool.)

The file can now be transferred to the repository by clicking the uppermost of the two blue arrows: the one pointing from the 'Local computer' area of the screen to the 'Repository' area. A progress bar will appear showing you how the transfer is proceeding. (Note that for very small files the upload process may be so fast that you miss seeing the progress bar come and go.) Clearly a larger file will take longer to transfer and the time will depend on the speed of your internet connection. When the transfer process is complete, the 'Repository' area of the screen will briefly turn grey; when it clears, your file should be listed in the repository space. Note that this is a copy of the file, the original is still on your computer. Note also that if the filename on the local computer contained spaces, these will have been removed during the transfer process.

Retrieving a file from the repository

Retrieving a file is essentially the reverse of saving it. Highlight the file in the repository area of the tool and click the lower of the two blue arrows, the one facing from the repository area to the local computer area. A window will pop up titled 'Select location...' Navigate to the area (usually a directory or the desktop) of your computer where you wish to save the file and click the 'Save' button (you may wish to change the filename first).   If a file of the same name already exists in the chosen location, you will be asked whether you wish to overwrite it or not: if you say 'no' you are returned to the 'Select location' window where you can change the filename and/or save the file to a different location. A progress bar will appear as the file downloads. (Note that for very small files the download process may be so fast that you miss seeing the progress bar come and go.)

Deleting files in the repository

A file in the repository is deleted by highlighting it and clicking the 'Delete' button. A dialogue box will appear asking you to confirm or cancel the delete. Deleting an item in this way deletes *all* versions of it. (See the section 'Keeping multiple versions of files'.) It is normal for the 'Delete' button to be 'greyed out' unless a file is selected.

Organising your repository space: folders

In just the same way as your computer allows you to organise your storage into folders, the RepoMMan tool allows you to create a folder structure.

A new folder is created in the currently selected area of the repository by clicking the 'New Folder' button. A dialogue box will appear for you to provide a name for the folder. Type in the name and then click the 'Create' button. The folder will be created and you will be transferred into it. The box above your list of files and folders shows you where, in the structure, you are; if there is no text in the box you are in the highest level folder.

To return to a higher level of folder double-click the word 'Back' at the top of your file list. To move into a folder, double-click the name. (Please note: double-click over the text. Double-clicking the associated icon does not work.)

When you copy a file from your local computer to the repository it is placed in the currently open folder.

Keeping multiple versions of files

If you are working on, say, a document over a period of time and wish to put the latest version into the repository each night, the repository will manage the different versions of the document for you.

The first time a file of a particular name is saved in a folder a new repository object is created. If, subsequently, a file of the same name is saved into the same folder (perhaps at the end of day two, day three etc) the file is saved as a 'version' of the object. The older version(s) are retained. This is achieved inside the repository by giving each file transferred a date- and time-stamp. As a user of the repository you will be unaware of this process. If you choose a 'versioned' file in the repository for copying to your computer it is the latest version that will be transferred. However, it may be that you wish to access an earlier version of the document: this is possible.

In the list of files on the repository, double-click the filename you are interested in. A dialogue box, labelled 'Advanced', will appear listing the various versions of the file held by the repository. For example:
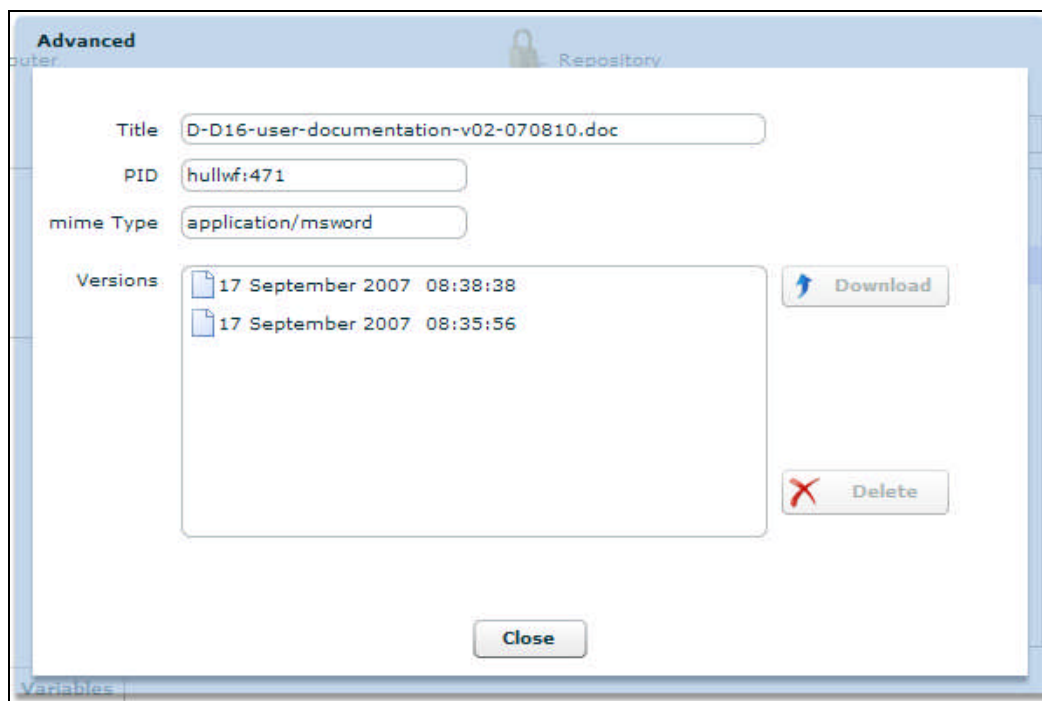
Each version of your file can be selected in the usual way by clicking on it. The 'download' button will download the version to your computer in the usual way, the 'delete' button can be used to delete unwanted versions. Note that you cannot use this screen to delete the 'one and only' version of a file. To delete the 'one and only' version use the 'delete' routine on the main screen.

Sharing 'private' files with others

Version 2.0 of the RepoMMan software will allow a user to share specific files in their repository space with others. This facility is intended to facilitate co-authoring and peer-review amongst other things. The repository software used by the University of Hull does not currently support this feature (as of October 2007), though it is intended for release in the version due out in December 2007. The ability for users to share files will then be added into our software.

Readying files for others to see: metadata

If you are developing materials to share with the wider community there should come a stage when you wish to transfer a copy of your work to Hull's public facing repository. This can be done in a number of ways which are described in the next section. However, if others are going to be able to search the world-wide web to discover your work, the process will be much enhanced by the addition of 'metadata' to your materials. Metadata is the name given to basic information relating to the document (say) that you have produced. At a simple level it might include:

- a title and version number
- the author's name
- the date of the work
- the language of the work
- the publisher of the document
- a proposed citation for the work
- copyright and access rights information
- an abstract, and
- a set of keywords indicating the content of the document

At a more complex level the metadata may include the research project of which the document is an output, the organisation that funded the work, contact information and many other things.

This version of the RepoMMan tool generates a simple set of metadata for the author to check and, if desired, amend. The tool utilises a number of techniques to prevent the author having to fill in a blank form. For instance, basic information about the author can be taken from the Portal environment in which (s)he is working. Technical metadata (for instance file type, image dimensions, ...) can be obtained by analysing the file. A set of keywords can be produced, again by analysing the file, and the same process can try to establish the language of the document. In this way, the tool tries to minimise the amount of work, especially repetitious work, that the author needs to do.

When a file is ready for transfer to the public repository, it should have metadata added to it. Select the file in the listing of files on the repository and click the 'Metadata' button. If this is the first time that metadata has been generated for the file a form will be displayed containing automatically derived metadata. If there is already metadata associated with the file, from previous use of the process, the metadata from the previous session will be displayed. In either case, the author is able to amend the metadata to better reflect the materials and then click the 'Update' button to store it.

Publishing files for others to see

The next version, version 2.0, of the RepoMMan tool will allow you to make your work available through the University repository in one of two ways by clicking the 'Publish' button.

Mediated publishing to the Hull repository

The normal way will submit a copy of your work to a mediator who will check that everything is as it should be and then transfer the work to the repository. Amongst the checks will be to see that the appropriate copyright has been assigned to the work and that the access rights, controlling those who will be able to see the material, have been set correctly. This process should not normally take more than two working days.

Direct publishing for open access: one or more repositories

Open Access publishing requires that an author can make material available without mediation. In doing do (s)he takes responsibility for copyright issues.