



Authenticated Networked Guided Environment for Learning

What is the Resource Manager?

The Resource Manager (RM) is one of three applications that form the core ANGEL middleware structure. Its primary role is to control metadata about information resources.

What tasks will it perform?

The Resource Manager holds information about resources in one central location (database). Every time a course instructor adds a resource to the course pages within a VLE, the Resource Manager can learn about the resource, and help maintain it. The RM can also help manage and display content in alternative interfaces such as institutional web pages and portals.

Resources used by instructors within UK HE generally fall into the following categories:

Hard copy material - books, journals, pamphlets and other such materials that can be searched and referenced within the library catalogue.

External electronic resources - e-journals, bibliographic databases, specialist recommended web services, and general web sites.

Internal electronic resources - e-copies of exam papers, theses, and dissertations produced through digitisation schemes within institutions.

'Directed', course specific material - lecture notes, slides, videos etc.

Many of these resources are handled, very efficiently, by HE libraries within the library catalogues, but the continuing diversity of available resources makes this task more complex. Solutions to this problem of resource management are being offered from all angles (VLE vendors, MLE solutions,

library management systems, content management systems). In practise, the different users of different systems within a University want to be able to access this information through their interface of choice. The Angel Resource Manager looks to solve both of the problems highlighted: providing a place to describe material not typically catalogued by the library (a single article within a journal, a powerpoint slide for course EC101), and enabling this central manager to interoperate with a variety of different interfaces.

The Resource Manager also addresses access management issues by offering appropriate copy solutions. In addition to metadata about the resources themselves, the RM also includes metadata about the access management of a resource (including both rules and technical means of accessing a resource). This allows a library to direct different users to different resources depending on which groups they belong to. This would allow an institution to permit postgraduates to be guided to an ILL form for unavailable material, but direct undergraduates to discuss alternative sources with their tutor. It would also allow individual departments to buy e-access to a resource for only their students without having to worry about restricted access terminals or complex password systems to make sure this is achieved.

Additional benefits of the Resource Manager include the ability to gain detailed statistical information about the resources held, and access to the resources by various groups. This central summary of resource access means that users no longer have to attempt to match-up different statistical data from different vendors in different formats in order to swiftly analyse resource use.



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How does it work?

The following scenarios are examples of how the Resource Manager might offer benefits to a user:

“A **tutor** is building / maintaining a course within a VLE. He wishes to add a new link to an external web site. He goes to the ‘add website’ function, gives the link a name, pastes the URL into the correct box and submits.

Currently, this function merely presents the link in the folder chosen by the tutor in the required format. If the link changes, it is up to the individual tutor to notice and update the information. This work would then have to be duplicated by every tutor that has added this resource to a course.

A VLE course with an Angel Resource Manager behind it could do more. When the tutor hits submit, the RM is consulted. If the resource is a known resource (a journal article, a Resource Discovery Network (rdn) resource, a frequently used website), the RM will post a ‘persistent’ URL to the tutor’s course, instead of the URL submitted. This means that any changes to the URL only need to be made in one place (within the RM), all other references to this URL will be automatically updated.”

“A **student** logs into a VLE in order to access his course material. He authenticates

himself with user name and password. He goes to the course links, and click on a link to an external resource. This resource is supplied by an external vendor that allows Athens authentication.

Normally, the student would now be required to enter an Athens user name and password to access this resource, but because the initial authentication was passed through the Angel User Manager the user does not need to send personal information to the resource in order to log on.

Instead, information about the ‘rights groups’ to which they belong is sent to the RM/resource. As long as the resource allows access to one of the groups to which the user belongs they are granted access to the resource.”

How can I implement the Resource Manager?

The open source code and supporting documentation for the Resource Manager will be available from the ANGEL website:

[<www.angel.ac.uk/inside/>](http://www.angel.ac.uk/inside/)

Users of ANGEL applications are further supported by the jiscmail list:

[<angel-insiders@jiscmail.ac.uk>](mailto:angel-insiders@jiscmail.ac.uk)

www.angel.ac.uk