



## **Authenticated Networked Guided Environment for Learning**

### **What is the User Manager?**

The User Manager (UM) controls (or interfaces with externally managed) information about the end user.

### **What tasks will it perform?**

The problems of multiple passwords to access resources within UK HE are well known: the typical student must enter a password to get into the university system, another to get into the VLE, and then remember multiple passwords to enter the various different resources used by a course. Although these security measures are perfectly understandable, a system whereby the access privileges of a user are passed from system to system without disturbing the user after the initial authentication (the single sign-on) would greatly enhance the learning experience.

The ANGEL User Manager allows users to log in to the system, provides authentication of the user and delivers authorisation details to the user thereby allowing them the rights to access the appropriate resources.

The ANGEL User Manager is intended as an institutional solution to authentication and authorisation. It supports a variety of local protocols, which will include LDAP, SQL, X.509 certificate validation, SMB, ATHENS, IPX, HTTP htaccess and UNIX passwd. This gives institutions the freedom to choose a preferred authentication system, or use different authentication services to query

different directories of user information. This means that users can be issued with one set of authentication credentials, and these can be used to access a variety of systems such as the Library patron information system, the institutional VLE / MLE, course portals and initial network log-on.

### **How does it work?**

A user enters through an interface of choice (VLE, portal etc.) and submits a username and password (or alternative credential such as a certificate) in the usual fashion. A message containing this information is sent to the User Manager. The UM knows about a variety of databases that hold information about the user and checks each in turn, looking for information that connects to the credential submitted.

Each database is connected to a directory service containing information about the list of groups that the user belongs to. From these directories, a list of groups for the user is formed. For more information about rights groups, see TECHNICAL BRIEFING ONE: THE ANGEL APPROACH TO AUTHENTICATION AND AUTHORISATION.

When a user attempts to access a resource, the information about his rights groups is checked against the rights groups identified in the Resource Manager for that resource. the user is directed in the appropriate direction, depending on which group is matched, . This may be to the resource itself, to an ILL request, or to alternative suggestions.



## INFORMATION SHEET THREE THE ANGEL USER MANAGER

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### Relationship to JISC developments.

As part of the development of the Information Environment, the JISC faces the problem of creating a national authentication and authorisation service that is maintainable across UK HE and FE, but that allows for flexibility and institutional control. A solution using X.509 certificates has been proposed. This system would allow institutions to continue managing electronic identities for members, but would require the certificate created for each user to be signed by a national JISC service.

RedIris, which uses cookies to authenticate and Shibboleth, an American Internet2 development based on the use of certificates.

- ◆ Working with JISC to establish best-practise scenarios for managing electronic identities within the UK educational sector. This includes the development of a proposed namespace schema for the UK educational community, and analysis of current resource licensing issues.

The ANGEL project is supporting these developments by:

- ◆ Offering an open source standards-based framework in the form of the ANGEL User Manager that will support a variety of authentication and authorisation procedures including LDAP, SQL, X.509 certificate validation, SMB, ATHENS, IPX, HTTP htaccess and UNIX passwd files.
- ◆ Testing two of the major authentication schemes available: PAPI - a European development from

### How can I implement the User Manager?

The open source code and supporting documentation for the User 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](http://www.angel.ac.uk)