

***Innovation and Knowledge Management towards  
eStudent Information System – iKnow***

***Student Identification and Accounting  
System***

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# Requirements

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- Enable unique identification
- Support RFID and biometric identification
- Enable administration of personal files
- Provide authentication of each user by its home institution
- Provide authorization for university resources and services
- Send accounting reports to university management
- Provide broader solution (applicable within and outside the project framework)
- Be based on open standards (RADIUS, LDAP, ...)

# Benefits

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- Regarding the users, it will enable simple and efficient mechanism for their presence, authentication and authorization for multiple, heterogeneous systems.
- From the point of view of the resource providers, it will simplify the management and the allocation of the resources to the users.
- It will also enable user mobility within and between the universities.
- From the point of view of the educational authorities, there will be a central collection of the shared resources committed to the higher educations (identified by the member institutions and/or services).

# Users

D	User groups	Roles
1]	Student users (STU)	Access various resources using single credentials Be identified for presence at lectures using RFID Authenticate and authorize in home and visiting institutions (mobility)
2]	Faculty staff (FAC)	Access resources using single credentials Authenticate and authorize in home and visiting institutions (mobility)
3]	Faculty administrations (ADM)	Manage the student and staff accounts using standard LDAP schemas Enable and revoke privileges
4]	Resource administrators (RES)	Define access to their resources using standard LDAP schemas
5]	University computing center (UCC)	Maintain and monitor the infrastructure Provide hosting for the AAI services for smaller membering institutions.
6]	Faculty computing center (FCC)	Maintain the users/resource database (LDAP and associated services) Maintain the identities of the users (identity providers)

# Functionalities

Functionality	Description	Objective	User
Establish AAI infrastructure	Establish the necessary infrastructure for supporting the AAI	Make the initial infrastructure	UCC
Maintain AAI infrastructure	Maintain the central point of the infrastructure, LDAP schemas, registry of member institutions, software repository.	Keep the infrastructure operational	UCC
Support the member institutions	Provide support to FCC to establish the identity providers and resource providers	Establish identity and resource providers	UCC, FCC
Manage users identities	Open accounts for students and faculty staff, manage levels of authorization, revoke accounts	Define the single user identity	ADM
Manage resource access	Define access rights for own resources with respect to user roles and responsibilities	Define the access policies	RES
Access student resources	Using single credential, access all the needed resources.	Simplify the access model to resources	STU
Access faculty resources	Using single credential, access all the needed resources.	Simplify the access model to resources	FAC
Presence identification	Using RFID or other means, identify physical presence of students	Presence identification	STU
Staff and students mobility	Access resources in visiting institutions using home identities	Enable roaming access	STU, FAC

# High level architecture

