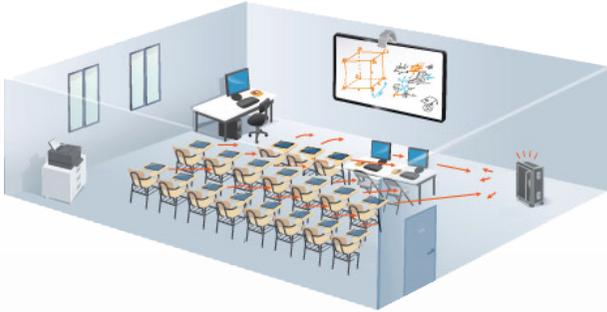


SmartClassroom

Several projects for the classroom of the future



All the documentation about our project can be found on the page «SmartClassroom», in the Projects 2014-2015 page, on the following website :

air.imag.fr

Managment of the room thanks to OpenHab

Display of the courses on an interactive wall

Many other features

Some of them **already developped** by Ensimag students

Prototype available at the FabLab of the Ensimag (digital wall, some objects controlled by OpenHab (lamps...) and a touch table)

SmartClassroom

Moodle authentication system on mobile devices

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Our project

We wanted to develop a system to :

- **identify** a student or a teacher
- **manage the attendance** of the class

Moodle platform integrated to our system to make it usable by French teachers

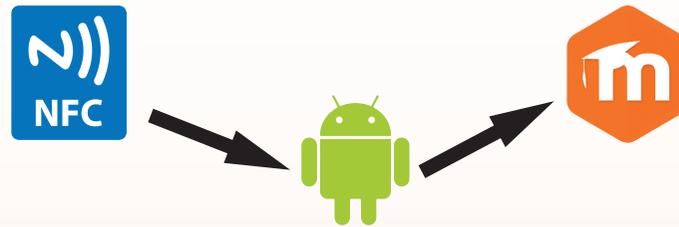
Made-up scenario :

- students and teacher have a **personal tablet**
- **NFC tag** in the student card
- the tablet can **scan the tag** to open the application
- student **announced «present»** to the course

How it works

Use **Near Field Communication (NFC)** to get information stored on the tag in the student card

Data sent to the application and **used as a login and a password** to open the Moodle account associated with the student or the teacher



How to use it

- 1) Scan your NFC tag with your phone or tablet (the application can be closed)
- 2) When the application is opened, scan a second time your tag
- 3) You are now logged in Moodle with your own account and you have been declared «present» to the course.

To go further

The application is working, but many things can be **improved** :

* IP verification

For now, a student can scan his card **at home** and be declared «present» to the course

One solution : **restricting IP addresses** which can have access to the application

* NFC Security

* **Synchronisation with students' schedule**