INTERACTIVITY IN LARGE CLASS USING WIRELESS DEVICES

MLEARN 2004 Conference
Teaching in large class
Known problems and possible answers

- Main problems during lectures:
  - Lack of exchanges
  - Rarefaction of feedbacks
  - Low motivation of the students

- What can be improved with wireless solutions:
  - Make large class lecture more interactive
  - Allow teacher to quickly identify students problems
  - Students participation and motivation
Interactivity in large class
Principle
Project context
Mobile campus at Ecole Centrale de Lyon

Services

Pedagogy

DRIM-AP project

Administration
DRIM-AP application
Overview

- **A collaborative web portal**
  - With real-time interaction between teachers and students

- **What for?**
  - Knowledge tests and quick polls
  - Instant feedback from students
  - Students questions and remarks
  - Class monitoring for teacher
  - Presentation tool for slides control
  - Lecture events’ tracking and lecture ‘replay’

- **Complementary tools:**
  - Author tools : i.e. to describe learning activities
  - Data analyze : tests and polls results, graphs and charts for feedback
DRIM-AP application
Technical aspects

- A java / J2EE based software
  - Open source application server
  - Standard based web thin client
  - LDAP connectivity

- Multiple devices support
  - Laptop, Tablet PC, PDA, Smartphone,…
  - XML/XLST to generate the web pages
  - Portlets components to reorganize screens
  - SVG (Scalable Vector Graphics)
  - HTML & WAP support

- Multilingual support
  - Automatic detection of the language defined in the web navigator
DRIM-AP: a collaborative portal for teachers...

- Lecture map and activities
- Live poll
- Independent portlet components
- Slide preview
- Feedback monitoring
- Students questions
DRIM-AP : a collaborative portal

...for students

- View lecture map
- View slides
- Answer to polls
- Take notes
- Write a question
- Give feedback
A collaborative portal with multiple devices support
DRIM-AP : use case example
Polling students during lecture

Développement de logiciels basé sur des processus

Approche Objet, UML et ses formalismes
Origines et buts
Principes
Formalismes UML et quelques éléments d'utilisation
AGL supportant UML
DRIM-AP Project
Evaluation phase

- **Usability needs to be evaluated**
  - Human factors are essential for a successful deployment
  - Teaching must not turn into a reality tv show!
  - Our answer is based on a pragmatic approach

- **Evaluation protocol**
  - Evaluation protocol written with Madeleine Saint-Pierre from UQAM Quebec University
  - Cam recording + screen captures + events tracking

- **Evaluation program in fall 2004**
  - Cognitive overload for teacher
  - Is wireless interactivity suitable for all of teaching domains (i.e. : philosophy) ?
Conclusion

- **Wireless technologies are a mature solution for universities**
  - Implementation of mobile campus
  - Students’ equipment policies (mainly laptops)

- **Perspectives**
  - Evaluation results early 2005
  - Software to be released as a community edition for education
  - Future works planned for uses outside education and training sectors
Thank you