GRAPPLE: Integrating Adaptive Learning into Learning Management Systems

Current Educational Frameworks
Currently two complementary types of systems: Adaptive Learning Environments (ALE) and Learning Management Systems (LMS)

LMS
- Key features: registration, course enrollment, workflow, content delivery, etc
- Example Systems: Sakai, Claroline, Moodle, Clix, Learn eXact/

ALE
- Key features: guidance (link adaptation), content adaptation, adaptation to arbitrary XML data, etc
- Example Systems: AHA!, KBS-Hyperbook, APeLS, WINDS

GRAPPLE Infrastructure
Broker for cooperation between LMS and ALE
- E.g. to tightly integrate presentation and functionality of LMS and ALE

Functionality of the infrastructure includes
- Single sign on
- Exchanging distributed user information including dealing with issues like privacy and trust

Also possibility to open up to other applications

Specific Focus Areas
UM Services
- Core user model ontology
- Forward and Backward reasoning over user models
- Conflict resolution and dealing with privacy and trust

Authoring Tools
- CAM: Conceptual Adaptation Model
- High level authoring --> Translating to specific Engine rules

Application Areas
- Virtual Reality Learning
- Adaptive Simulation

about us
- 3 year FP7 STREP project: Feb 2008 - Jan 2011
- 15 partners from 9 countries
- budget: 5.3 M€, subsidy 3.85 M€
- coordinator: Eindhoven University of Technology

Paul De Bra, Mykola Pechenizkiy, Kees van der Sluijs, David Smits
Databases and Hypermedia Systems Group — http://www.win.tue.nl/dh — winfys@win.tue.nl