
A·L·I·C·E

Adaptive Learning via Intuitive/Interactive
Collaborative and Emotional systems

ALICE

ADAPTIVE LEARNING VIA INTUITIVE/INTERACTIVE, COLLABORATIVE AND EMOTIONAL SYSTEMS

www.aliceproject.eu

Project number

257639

Call (part) identifier

FP7-ICT-2009-5

Funding scheme

Collaborative Project



*ALICE is an Integrated Project in the ICT area co-funded by the European Commission
under EU Seventh Framework Programme for Research and Technological Development (FP7).*



Problem Statement

- Engaging learners has become one of the most significant problems faced by e-learning developers
- The lack of engagement can be attributed to several issues:
 - Interaction (in many cases the only interaction available is to click on the “next” button to step through the material presented)
 - Challenge (unchallenging learning material fails to stimulate learners, making the experience unattractive and discouraging progression)
 - Empowerment (the learner expects to be in control of the learning experience while in a supportive, collaborative and simulative environment)
 - Social Identity (current e-learning systems tend to isolate learners from their peers inhibiting the learning achieved through social interaction)



Objectives

- To build an innovative adaptive environment for e-learning
- To combine personalization, collaboration and simulation aspects within an affective/emotional based approach
- To contribute to the overcoming of the limitations of current e-learning systems and content
- The proposed environment:
 - will be interactive, challenging and context aware
 - will enable learners' demand of empowerment, social identity, and authentic learning experience



Research Themes

- To do that ALICE will perform research on the following themes:
 - **Adaptive e-Learning**
to provide learning experiences customized on specific learner needs and preferences also starting from requests made in natural language and dealing with different contexts and complex learning resources
 - **Simulation and Serious Games**
to enhance the learning experience with highly interactive simulations like Virtual Scientific Experiment and Serious Games
 - **Storytelling**
to introduce interactive didactic elements, oriented to a student-centred teaching approach able to involve emotionally, provide guidance and make reflection easier



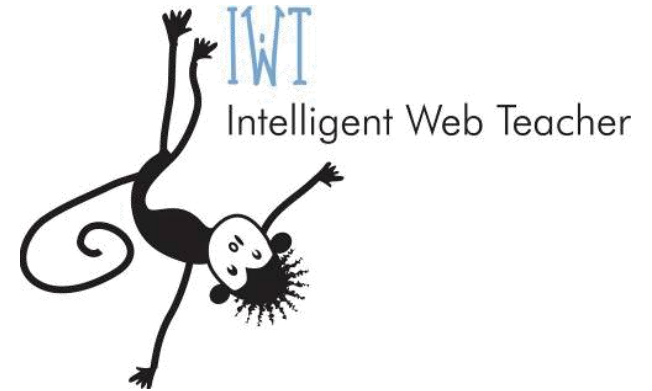
Research Themes

- To do that ALICE will perform research on the following themes:
 - **Affective and Emotional Approaches**
to stimulate attention and motivation during learning activities by discovering the emotional-affective feeling of a learner and building personalised support
 - **Collaborative Learning**
to increase the learning efficacy in developing specific skills (e.g. communication, problem solving, decision making, etc.) also when collaboration is difficult by reusing the knowledge elicited during collaborative learning activities
 - **New Forms of Assessment**
to evaluate learner performances while interacting with complex didactic components (e.g. simulation, serious games, collaboration, storytelling, etc.)



The Starting Point

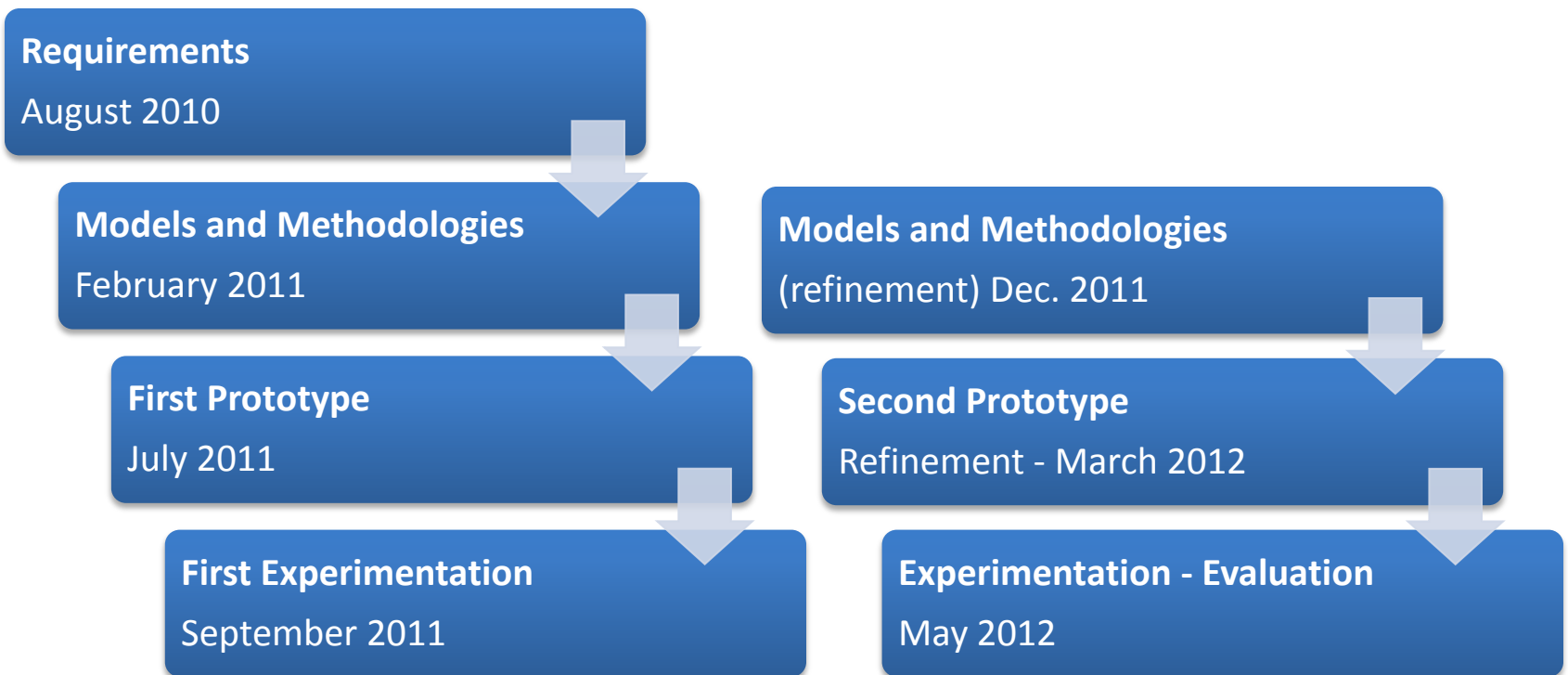
- ALICE defined models and methodologies will be used as a basis to develop prototype software components
- Such components will be integrated IWT (Intelligent Web Teacher)
 - IWT is a complete e-learning and knowledge management platform
 - IWT can deliver personalized courses which take into account learner previous knowledge and preferences allowing each learner to learn only required concepts through the most feasible learning resources
 - The IWT architecture is modular enough to allow the deployment of solutions capable to cover application scenarios of different complexity and for different domains by composing service building blocks



- Science Teaching at University
 - Teaching of scientific topics (e.g. mathematics and physics)
 - The experimentation will be done by UOC and TUG
- Emergency and civil defence training in secondary schools
 - Training students of secondary schools about actions and procedures to be performed in case of emergency (e.g. the behaviour to take at a personal and collective level when the treat of a big risk shows up)
 - The experimentation will be made in secondary schools connected with MOMA that already adopts IWT



- From June 2010 to May 2012 – two cycles



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Partners



Centre for Research in Pure and Applied Mathematics
(ITALY – Coordinator)

Graz University of Technology, Institute of Information
Systems Computer (AUSTRIA)



Coventry University, Serious Games Institute (UK)

The Open University of Catalonia (SPAIN)



MoMA S.p.A. (ITALY)



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Thanks for Your Attention

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