ImREAL

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Immersive Reflective Experience-based Adaptive Learning

From 2010-10-01 to 2013-09-30

Project details

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<th>Total cost:</th>
<th>Topic(s):</th>
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<td>EUR 4 189 183</td>
<td>ICT-2009.4.2 - Technology-Enhanced Learning</td>
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<td>EU contribution:</td>
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Immersive simulated environments for experiential learning are growing in popularity and will play a key role in tomorrow's technologies for adult training. The major challenge is to **effectively align the learning experience in the virtual environment with the 'real-world' context and 'day-to-day' job practice**.

ImREAL provides a new class of cost effective adaptive systems adjusted to adult learners' needs:

- pioneering a new psychologically and instructionally sound technological approach to **seamlessly link the simulated learning experience and 'real-world' job-related experiences**;

- developing a novel conceptual framework - **augmented simulated experiential learning** - where innovative adaptive services extend virtual environments by making a connection with the 'real-world'; and,

- delivering **a new open framework of intelligent services** which can be plugged into virtual environments to enhance self-regulated learning.

The ImREAL framework exploits and significantly extends advances in distributed architectures, context modelling, dialogic systems, semantic web, and ontological reasoning, and follows pedagogical models of adult self-regulated learning to deliver:

- **an evolving model of 'real-world' job activities**, linked to storytelling and semantic content augmentation;

- **an extended model of the learner and context**, aligning experiences in the simulated environment and the 'real-world'; and,

- **affective meta-cognitive scaffolding** to motivate and engage learners and promote self-reflection, self-evaluation and self-awareness.

In order to validate the conceptual framework, and examine the instructional value of the new technological solutions, ImREAL will implement an adaptive services demonstrator which will be trialled in a representative domain with high societal and economical importance:

**Interpersonal Communication focusing on Multi-cultural Awareness.**
User trials will examine how ImREAL improves the learners’ and trainers’ experiences. Specifically, learners can improve their interpersonal skills and abilities in order to set learning strategies and goals, while trainers can become aware of ‘real-world’ job practice and training needs.

Objective

The popularity of immersive simulated environments for experiential learning is growing; they will be part of tomorrow’s learning technologies in the key area of adult training. The major challenge is to effectively align the learning experience in the simulated environment with the real world context and day-to-day job practice. ImREAL provides a new class of cost effective adaptive systems adjusted to adult learners’ needs: pioneering a new psycho-pedagogically sound technological approach to seamlessly link the simulated learning experience and real-world job-related experiences; developing a novel conceptual framework -augmented simulated experiential learning- enabling adaptive services to augment simulated learning by leveraging the connection with the real world; delivering a new open framework of intelligent services which can be plugged in to simulated environments to enhance self-regulated learning.

The ImREAL framework exploits and significantly extends advances in distributed architectures, context modelling, dialogic systems, semantic web, and ontological reasoning, and follows pedagogical models of adult self-regulated learning to deliver: evolving model of real world job activities, linked to storytelling and semantic content augmentation; extended model of the learner and context, aligning experiences in the simulated environment and the real-world; affective meta-cognitive scaffolding to motivate and engage learners and promote self reflection, self evaluation and self awareness.

Framework validation will be in the high-impact domain of interpersonal communication with multi-cultural awareness, linked to key skills increasingly required in organisations & businesses. User trials will examine how ImREAL augments learners’ and trainers' experiences by improving the learners’ interpersonal skills and abilities to set learning strategies and goals, and by enhancing trainers' awareness of real job practice & training needs.

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