Enhanced Reality in Manikin-Based Simulation & in eLearning

by Fernando Salvetti – Logosnet (LKN)
e-REAL - which stands for Enhanced Reality Lab - is a solution like no other, at the forefront by design, developed since 2011 in order to evolve from the old CAVE environments (too rigid, difficult to be managed and expensive) to an easy, user-centered and cost-effective solution. It is so simple that two buttons are enough to manage it all.

With both portable and permanent fixtures available, the e-REAL lab encompasses users in an entirely interactive and immersive ecosystem. Advanced medical simulation reaches its best thanks to interactive 3D holographic visualization.

Using a number of tools, e-REAL enables not only face-to-face training, but also e-learning and remote communication.
**Layout**

- The e-REAL server embedded within your simulation room, so transformed in an immersive and interactive setting
- 3 ultra short-throw projectors on the ceiling
- 1 stereo sound-bar on the top of a wall
- 3 walls made interactive - and 2 walls made writable - by proximity devices allowing a direct interaction by touching the contents
- An immersive scenario packed with key medical imagery projected on the walls
- Issues to be analyzed and questions to be answered, projected both on the walls and on the learners’ smartphones
- An easy to use videoconferencing system (key-note speech, synchronous e-learning, telemedicine, etc.)
- A tracking system to record all the answers provided by the learners
- An assessment tool to evaluate the learners’ achievements
Immersive and interactive setting:
- Multimedia case study projected on the walls (audio and video)
- 3D interactive bespoke contents
Interactive medical imagery surrounding the medical tools and the dummy.
Ultra short-throw projectors & proximity devices making «touchable» and writable the walls

Virtual interactive tools

Virtual mentor focusing on key-topics and issues related to the learners' performance on the dummy
Case study within an immersive scenario: an eye-catching and engaging environment, developed by visual storytelling techniques.
Therapeutic decisions to be taken (recorded by the system)

Repository to be opened by the flick of the hands
Closing of the simulation session:
Debriefing, Q&A, Assessment & Review phases
Holograms

3D display and interactive stylus

Mobile learning
Dummy’s internal physiopathology visualization

Role playings & serious games

Interactive infographics
Interactive anatomical tables

eLearning & clinical simulation

Hi-fi virtual simulators
Blended learning and mixed reality solutions

Augmented reality glasses

Training of the internal trainers on advanced simulation
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