

TRAINING & SIMULATION SPECIAL

From Rotterdam-based specialists, VSTEP, IFJ has learned that realistic and effective training doesn't have to be difficult, dangerous or costly. In fact, it's virtually trouble-free.



Virtually perfect

Industrial fire crews operating in high-risk environments rely on their training to operate effectively and save lives. "It is precisely in these environments that the US military faced this dilemma and found the solution in virtual reality simulations," Harry Klootwijk, senior instructor for Nutec Rotterdam B.V. told IFJ.

"Rapid advances in computer gaming technology, have given rise to a new generation of realistic non-entertainment applications. These "serious games" as they are called, focus on delivering better ways of learning that allow people to experience life-like situations while interacting with the simulation," Mr Klootwijk says.

As with computer games, the software runs on a standard PC. A realistic three dimensional (3D) model of the actual working environment forms the basis for providing a virtual experience for trainees. The 3D environment can be an exact replica of a vessel, oil rig, industrial plant, tunnel, train, or any other area.

"Within the virtual environment, incidents are simulated including any element of a real incident, such as fire, smoke, panic or casualties. The trainee experiences these incidents as if he were actually there and must respond to the situation as he would in real life. Using the mouse or joystick, he is free to move around, make decisions, communicate with others and take appropriate action. The trainee is directly confronted with the consequences of his decisions," explains Mr Klootwijk.

Recently, the International Maritime Organisation approved the world's first virtual reality maritime fire fighting training developed by Nutec. "This new generation of training allows trainees to experience realistic incident scenarios that we could not easily recreate at our training institutes. In combination with practical training, trainees are better prepared to deal with actual incidents" says Mr Klootwijk.

"Nutec, a market leader in training maritime and offshore crews, was one of the first to adopt this new technology. Nutec partnered with VSTEP to develop its new generation of virtual reality training programmes called SkillSafe(tm), combining onboard virtual reality training with institutional training," he confirms.

The first course of the SkillSafe(tm) programme, STCW Advanced Fire Fighting for Seafarers, received IMO/STCW-95 certification from the Netherlands Shipping Inspectorate.

"This course is the world's first virtual reality training with STCW certification. Crews complete the first part of the course on board of their vessel, using state-of-the-art e-learning methods and 'virtual reality' training scenarios. The practical part of the course can subsequently be done at any of Nutec's 14 training centres around the world. Ship owners benefit from a 50% reduction in practical training time onshore, and individual seafarers benefit from personalised competency development," concludes Mr Klootwijk.

More information? Visit: www.vstep.nl

[Above] Helicopter crash: one of the industrial emergency scenarios available from VSTEP/NUTEC.

[Right] In the VSTEP program you decide where and how to deploy your resources, you must interact with all kinds of distractions during the mission. The virtual-reality training program places you at the centre of the scene.

