Software: serious games in virtual worlds

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Serious games are designed not to entertain, but to teach. Students learn by doing, and games range from simulating medical procedures to promoting peace in Palestine. Now European researchers are developing a platform to make the concept more accessible to businessmen. You cannot replace experience, but maybe you can acquire it faster.

Action learning, learning by doing, is the most effective form of training a company can deploy. Instead of remembering facts or processes, students perform real tasks, employing both the knowledge and the method as they do. It is the difference between reading the manual and building the machine. It is experience over information.

It is very, very effective. It is also costly and time-consuming so, up to now, it has been the preserve of the senior executives in large corporations.

But not for long, perhaps. PRIME is a European project that seeks to make action learning cheaper, more accessible, more flexible and powerful. PRIME researchers are developing a software platform that uses serious game techniques to let users see the impact of their decisions in a virtual environment.

“The aim is for the user to gain experience by experimenting in a risk-free environment,” explains Bjorn Andersen, project coordinator of PRIME.

The platform consists of two elements, a Virtual Business Environment (VBE) and PRIME-Time, a workplace integration module. The VBE is a serious game that consists of a “micro world” where a number of users can interact with the software and between themselves. The platform is an approximation of reality based on a simulation model that controls the macro-economic and micro-economic dimensions of the micro world.

“So a business might decide to launch a new product, or recall an old one, and that will affect many actors, from suppliers to retailers,” remarks Andersen. “It will also affect a number of factors, like transport, inventory and so on.”

The virtual business environment tracks the impact of these changes in real time, so users can see the effect of their actions.

Users gain experience that is transferable to the real world, in a similar manner to flight simulators used by pilots. Airline pilots, for example, train to handle situations they will almost never meet in real life. But if one does occur, they are ready to respond appropriately. “PRIME does the same thing for business,” reveals Andersen.

But VBE is not a decision-support tool per se. The aim is not to achieve realistic simulation, but to provide an alternate reality where experience

is gained.

Ready for PRIME-Time?

The second element, PRIME-Time, is the really clever bit. It integrates the use of PRIME within current work environments, leading to new ways of working.

PRIME offers a scenario for their platforms. For instance, executive Bob is drinking his morning coffee when he gets a lead on a sales contract. He boots up the Virtual Business Environment using his PDA and simulates various offers and their effects on production, inventory, shipping and so on.

He then contacts the client and negotiates a contract informed by his experience with the VBE. They agree on terms, hang up, and Bob continues drinking his coffee. Here, PRIME has become part of the workflow, accelerating the acquisition of experience.

This is not the first serious game for businessmen, but it is unique because it can apply to any business. Even more important it can accommodate multiple players.

“It is not tailored to a specific business, because that gets into simulation, and that’s difficult and needs to be customised,” Andersen notes. “Instead, it is modelled on principles and how the business model works.”

The platform is complete and currently the game is in testing among six end-user partners, though students who pre-tested PRIME said it boosted their educational experience. Right now, the game is quite complex, and difficult to learn, and Andersen believes it would need more development to make it ready for the commercial market. “We didn’t

realise how complex it would be and we used some development tools, like Java, that we wouldn't perhaps use again. It was a tough problem, and still we didn't do everything we would like to have done, such as more complex consumer modelling with demographics."

"We get the end-user evaluations in January and, in the meantime, there are discussions with software companies and training companies about possibly commercialising the product, but how far that will go is difficult to tell," Andersen reveals.

Source: ICT Results

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