While some “serious gaming” developers choose to produce emergency simulation software that features lots of artificial intelligence, Dutch company E-Semble has decided to go down the opposite route. It is now keeping its products simple and instructor-led.

Director Steven Lohman explains why.

Going back to basics

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f the group that said ten years ago that they would like a training tool that looks like a Nintendo super intelligent virtual reality game, all of them have come back to us to say that they would now like simpler virtual reality (VR) software. All of these clients have now indicated that they don’t need all the inbuilt artificial intelligence,” says Steven Lohman, director at Delft (Netherlands) based company E-Semble, which develops “serious gaming” systems for emergency services.

“Often, the consequences of decisions made during ‘serious gaming’ are technically too complex. Our clients in over 14 countries have all come across the same problem and that was that their training instructors had trouble comprehending how the system would respond. Therefore oversight of the exercise was being lost.”

Instructors build up an extensive experience and knowledge over the years, which they should always be able to call upon, and Lohman is convinced that utilising this for the training of students is much more valuable than following a pre-set pattern. E-Semble’s software is instructor-led for this reason, leading to a simpler system with greater user-friendliness, more cost-effective, and which requires less training on the instructor’s part. Secondly, the lack of artificial intelligence makes the software more predictable and therefore more reliable.

E-Semble has built a user-friendly-platform with large buttons, straightforward manuals with types of fire that can be set from small to large. The system never decides for itself when things go out of hand – this is all down to the instructor.

The operational and tactical simulator from E-Semble – XVR (ExamVR and ExerciseVR) uses this platform. However, the company develops training for all levels, even up to Government level. But Lohman thinks that VR becomes irrelevant for higher levels, such as for Silver and Gold command, and co-ordination and communications of the ISEE (which is the result of the EU funded project “Interactive Simulation for Emergencies”) simulator, in which people see a screen with icons of vehicles and resources on a map. However, this simulation is linked in with VR images for the lower command levels, being the first people to arrive at an incident for assessment purposes. After they have made their initial assessment; they switch over to the non-VR platform.

E-Semble sticks to its philosophy of keeping the system as simple as possible, so people that are not intimately familiar with the software can handle it with ease, time after time. “We see the future of VR training in that we can provide training tools in which our clients can build their own scenarios independently from a supplier in their own environment. People will not use training software that is too complicated.”

E-Semble has installed the XVR system at Warwickshire FRS (UK) which has moved away from its existing VR system to adopt E-Semble’s more simple and usable solution. Severn Park Fire & Rescue Training Centre in Bristol is also an enthusiastic UK user of the XVR software. Both Warwickshire and Severn Park believe that for the greatest part of its training a simple VR solution will provide the most effective training tool.

Stepping away from the idea that more detail in its software was the future was a difficult decision for E-Semble. “We found it rather challenging to let go of the philosophy to put as much detail as possible into the virtual environment. However, we decided to distance ourselves from creating too much artificial intelligence, and systems that were too complex. We decided to go down the route of creating learning tools, and this has been extremely successful with both our new and old clients.”

E-Semble waited for five years to introduce its system to the UK, but now the FRSs are showing great interest in the company’s developments. A key reason for an FRS to consider XVR is the full flexibility to create scenarios. Combined with the continuous expansion of the library of 3D scenario objects, XVR allows instructors to create an unlimited number of scenarios in the many available 3D training environments. Lohman adds that as most software companies, E-Ssemble also had problems with bugs in the past, and that was another incentive for the company to create simplified software. A comparison can be made with a situation when someone buys a game for a game console, and isn’t able to get past a certain level, because of a bug in the software. After trying to complete the level several times and calling the game publisher to solve the problem the user will give up, and this applies to VR-simulators for the fire service too. This is a great waste of money, thinks Lohman, seeing that until E-Semble’s introduction of XVR (which start at 5,000 euros), simulators cost up to 300,000 euros. “Most training institutes look at the cost per individual student, and the typical price of a several field exercises per student per annum is much higher, and some scenarios are too expensive to be trained in real life full stop. A VR-system can be used as many times per year as wanted, and provides a useful addition for training in the field.”

Lohman adds that largest part of the ROI is when a system can be used for all fire service personnel. “There are more firefighters than commanders. It is obvious that the more people you can train with this the better the ROI there will be. Less complex software with greater flexibility from the instructor ensures that more people in an organisation can receive training.”