

# MetaVR Expands Capabilities in Detail and Coverage

MetaVR is demonstrating a range of expanded visual simulation capabilities in their display area (Booth 1331) at I/ITSEC 2006.

Although the company's home office is officially located in Brookline, Massachusetts, Torsten Berger, a software developer at the company describes the operation as 'a virtual company' where employees work together from their homes scattered across the USA and Canada.

The company manufactures software and turnkey PC-based systems that provide the fidelity of geospecific simulation with game quality graphics. MetaVR's software products are used for multiple service applications, ranging from military operations in urban terrain unmanned aerial vehicles.

Berger said that one of the company's expanded simulation capabilities being demonstrated at this year's event involves expanded character animation support.

"That's something we have added since last year," he explains. "Most of the time the human animation would be for urban terrain, close quarters fighting, or crowd simulations. You could use it to train how to clear a house or deal with terrorists. The application really depends on the customer and what they want to be able to do."

"But generally our military customers want to be able to see more people," he adds. "Because a lot of the training that they do now is, in fact, dealing with crowds: hostile crowds, hungry crowds, or

crowds that they just might encounter on a patrol somewhere."

Berger says that customers have always asked for some level of human animation and that in the past the company has fielded a third party product to meet that requirement. "But that product didn't scale as far as the customers wanted," he says. "They wanted hundreds or thousands of characters. And now we're able to support one hundred or a thousand characters simultaneously visible and continuously animated."

Once the human animation technology is brought into the company's rendering system, Berger says that it is just a matter of instantiating that capability within each database. "So we can put people into any building or any terrain that we already have," he notes.

He adds, "In general the military simulation standard has a format that supports human characters: how they are moving or what the state of their weapon is — whether it is deployed or ready or firing. And we've integrated all of that with matching animations. So if the network traffic from someone playing in your simulation somewhere else comes across saying, 'I am running with my rifle at the ready,' then we will render a character running with their rifle at the ready. And if that switch changes to 'deployed,' he will automatically take his weapon down and run with it in the safe position. And there's another bit you can set for crouching so then they'll go about three feet lower."

Berger acknowledges that much of the recent customer emphasis has driven the company to expand its focus on "much higher resolution/smaller area simulations, more like building by building, very high detail, up close and personal types of scenarios that previously was not necessary."

"But at the same time we also support very much higher up aerial like the aerial refueling demo running on the side of our display," he adds. "That's something that doesn't need buildings or little trees in the model but rather a large expanse of terrain coverage. So we've expanded in both directions: more detail when it's necessary and more area coverage when it's necessary."




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## Polhemus Extended Range Tracking

Polhemus, an industry leader in 6 Degree-of-Freedom (6DOF) motion capture, tracking and digitizing technologies, has completed a working prototype of the LATUS (Large Area Tracking Untethered System) XRT (Extended Range Tracking). This has the capability to track hundreds of soldiers over a village-size military operations in urban terrain facility constructed of metal shipping containers.

Visitors to Polhemus at Booth 2269 will be able to examine the Liberty LATUS system which is used by customers within DOD and industry and discuss with Polhemus President and CEO Al Rodgers the benefits of the new LATUS XRT technology. An almost limitless number of independent battery-powered Position Location Tags (PLTs) can be used within the scalable magnetic tracking architecture. Each PLT, which weighs about three oz., incorporates the electronics necessary to compute position/location to an accuracy better than 0.5 meters and the wireless links which transmit the data directly to the command and control centre.