D3A Defence industry team to demonstrate mortar training solution at DSET 2020

D3A Defence, MetaVR, Battlespace Simulations Inc and Minerva Simulation & Training will demonstrate the end-to-end training system at DSET, 10-11 March, 2020

Ashton Gate, Bristol, UK, 9 March, 2020:

An industry team led by D3A Defence will demonstrate a 'bring your own mortar' end-to-end virtual training system concept for mortar operations at DSET on 10-11 March, 2020.

The solution will demonstrate the power of distributed role play in mixed-reality virtual training environments with computer-based training solutions that are easy to use and quick to deploy.

The concept demonstrator will consist of three networked training stations, one for Mortar Fire Controllers (MFC) and/or Forward Observers (FO), one for mortar/artillery Command Post (CP) operators and one for mortar crew, integrated to enable training for mortar operations within a joint training environment.

The mixed-reality MFC station operator will be equipped with in-service hardware representative binoculars and Laser Range Finders (LRFs) and a head-mounted display with visuals provided by MetaVR's Virtual Reality Scene Generator™ (VRSG™). The trainee will be immersed in a 360 degree, mixed-reality virtual world that allows them to interact with the virtual world through VRSG while handling and operating hardware equipment in the real world. The MFC will send fire missions to the CP and mortar crew via emulated radios.

The CP station will represent the mortar or gun line CP enabling the management of fire orders, facilitated by a laptop running Battlespace Simulation Inc's (BSI's) Modern Air Combat Environment (MACE) integrated with VRSG. Together, they will provide real-time ballistic information and replicate effects of fired ordnance accurately within the virtual environment.

The mortar crew station will feature a physically representative mortar fitted with specialist equipment provided by Minerva Simulation & Training. The mortar will be integrated into the virtual environment so that firings are replicated in the virtual environment with accurate falls of shot.

The demonstration scenario will take place in a common virtual world shared by all three operators rendered by VRSG. The high-resolution geospecific 3D terrain built in MetaVR Terrain Tools for Esri ArcGIS is rendered in MetaVR's Metadesic™ format, to enable trainees to conduct challenging exercises within a dense Middle Eastern urban area.

Designed to enable flexible, quick-deploy training capabilities for mortar operations, the solution can be packed and transported in a single two-man portable ruggedized case, with all the equipment

needed to set-up and run training scenarios within minutes. The live mortar system can be fulfilled with any 81mm mortar weapon of the customer's choosing.

Scott Winter, Chief Technology Officer & Head of IRaD, D3A Defence, said: "One of the biggest challenges we currently see in the military training market is the 'Chinese whisper' effect that creates a significant disconnect between military requirements and industry interpretations of system requirements, which often results in personnel training on equipment that does not reflect real-world hardware or operational scenarios.

"Our approach here is to demonstrate that the use of mixed-reality virtual training environments can deliver simple training solutions using off-the-shelf products that are easy to use and do what they need to do to prepare personnel for the battlefield."

Scott Winter will be presenting on the system during Day 2 of the DSET conference, describing the system and its advantages. Demonstrations of the system will be available on the D3A stand (on the ground floor in the sports bar area) throughout the event.

Image caption: The three-station 'bring you own mortar' concept demonstrator will be running throughout DSET 2020, 10-11 March, 2020.

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About D3A Defence

D3A Defence delivers innovation and capabilities that support Global Uniformed Services Personnel so that they can safely, effectively and efficiently undertake their operational duties. For more information, visit: http://www.d3a.co.uk/

About MetaVR

MetaVR, founded in 1997, develops commercial PC-based software for the military simulation and training markets, featuring high-speed 3D visualization content and rapid creation of networked virtual worlds using real-world data. MetaVR's real-time visual systems provide the fidelity of geospecific simulation with game-quality graphics. Users can build (with real-world photographic imagery, elevation data, and feature data) high-fidelity virtual worlds with our terrain generation tools, and render in real time, at 60Hz frame rates, the resulting virtual world with our real-time 3D visualization application, Virtual Reality Scene Generator™. MetaVR systems are used for applications such as UAS/RPA trainers, manned flight simulators, mission planning and rehearsal, joint fires and JTAC simulation training, urban operations training, and emergency response management training. For more information, visit www.metavr.com.

About Minerva

Since 2012 the Minerva partners JCSys Ltd, eXtrac Ltd and Selective Fidelity Simulation Ltd have been delivering a range of innovative, flexible and immersive simulation capabilities that encompass everything from a fully mobile AFV Part Task Trainer (THUNDERBIRD™) to exercise wide Synthetic Wrap solutions. Minerva's most recent project was the delivery of a 3 x CAB MLRS training system to the RSA at Larkhill. Minerva prides itself in supporting its customers with both a flexible and responsive approach. By working as a team of SME companies, under the Minerva banner, Minerva are able to offer innovative, reliable, proven and cost-effective solutions backed up by a wealth of experience. For more information, visit: www.minervasimulation.com/

About BSI

BSI, founded in 2006, provides full-spectrum combat simulation software used by allied nations around the world. BSI's MACE is a physics-based, full spectrum Computer Generated /Semi-Automated Forces (CGF/SAF) application with a large and user-extensible order of battle, capable of many-on-many simulation yet having very high fidelity at the engagement level. MACE can simulate advanced, 5th generation systems including low observable platforms and Active and Passively Electronically Scanned Arrays (AESA and PESA radar) as well as highly contested battlespaces. MACE is used for both mission rehearsal as well as simulation & training in the Air-to-Air, Joint Fires/Close Air Support, UAS/RPA, Special Ops and Electronic Warfare areas. For more information, visit: www.bssim.com/