

Simulation and Training Bosses (SATB) “Choral” Series

Selected Industrial Views

On the occasion of the I/ITSEC, MT published the First Annual Simulation and Training Bosses (SATB) “Choral” Series that conveys the thoughts and messages of the world’s defence simulation and training leaders.

Matrox

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Simulation Training Solutions Spanning Multiple Displays and Technologies

Advantages to military visualization systems arise even in the lead-up to actual combat. Just look at the educational benefits to be had through simulations and training in general.

Virtual environments have been made an accessible and practical place to prepare for real life on the front line thanks to the latest graphics technologies available today. Multi-display setups, enabled through the use of multi-display adapters, are especially vital here. Triple-display adapter solutions, like the Matrox TripleHead2Go, are ideal because of the resulting degree to which the user’s peripheral vision is increased. The simulated field of view leads to an immersive and effective military training ground for recruits, either alone, in one-on-one, student/teacher training sessions, or in groups.

When conducting simulations, another critical piece to the puzzle is KVM extension technology. Extenders constructively reduce risks of overheating and excess noise. Multi-display setups enabled by triple-display adapters and connected to a Matrox Avio KVM extender – all from a single system – afford training officers the opportunity to evaluate students one-on-one remotely, up to 2km apart, communicate via headset, and even take over the controls at any time, if need be.

In relation to productive group training exercises, video wall controllers can work in conjunction with both KVM extenders and multi-display adapters. One system should serve as the video wall controller, powered by solutions like Matrox Mura MPX Series single-slot, input/output boards, while additional systems can connect to KVM extenders to increase the operational range between each remote, multi-display station and its host system. The end result is a truly collaborative and immersive training environment that emphasizes efficient training practices above all else. Here, the extenders transmit uncompressed digital video in real time from a given multi-display setup for the unhindered evaluation of each student’s performance in high-pressure situations. The video wall meanwhile provides the teacher with a big screen on which to easily assess the performance of each trainee.

A good offense isn’t just limited to a good defence, but preparation as well. With the right combination of multi-display technologies, military visualisation systems deliver the crucial training necessary for combat operations. Wars may be won on the battlefield, but they begin with what is learned in a classroom.

Simulation
Environment.
(Photo: Matrox)



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Fuse Training and Leisure

Performance under pressure is all about making the right decisions faster than you opponent and subsequently act without hesitation to stay ahead in the loop. Recent research documents the gamer generations augmented decision making. First-shooter and flight-sim gamers makes more correct decisions per second, their ability to record and compute visual and auditory information is higher and their brains capability to calculate and evaluate probabilities in warp speed is better. Add an enhanced tactical intuition and a stronger aggression, and you have a well-schooled operative at the age of 16. But when it comes to coping with true stress and anxiety, there is no difference between the recruits of today, and the WW2 generation. Stress arises in the most ancient parts of your brain in response to sensory overload mediated through you nervous system and the five senses. There is no irrational anxiety or fear in the leisure lounge, no cocktail of strong neurotransmitters to tamper with the mind. Training coming operatives to pull through true stress and get ahead in the loop in an efficient and cost effective way demands true simulation starting where the leisure gaming stops. Shift focus from gaming capability and frontal lobe training already achieved at home to sensory centered training facilities and doctrines complementing the existing leisure time training. Hit hard and deep in the primitive parts of the brain at work, at let the leisure activities take care of the fun stuff. At Metrik Simulation we made that shift three years ago with the design of the THE STREET and STRESSLOAD RIOT ARENA, two turnkey facilities 100% dedicated to multivariate sensory stimulation. This year came the STRESSLOAD consultancy service and next in the pipeline is a combined leisure - work training concept called STRESSLOAD Fusion, where leisure time gaming is coordinated with RBT in a true simulation facility matching the tactical and frontal lobe challenges applied in the game scenarios. We strongly believe future generations will welcome and be motivated by this fusion of leisure time virtual reality and professional training in true simulation.

Metrik Simulation ApS designs and builds multipurpose training facilities based on the latest advances in neurobiology, stress research



(Photo: Metrik Simulation)