

LIVE VIRTUAL CONSTRUCTIVE TRAINING (LVC)

Redefine Interoperability and Integration of LVC





LEADING-EDGE SIMULATION TRAINING

Live Virtual Constructive (LVC) Training supports large-scale distributed exercises with complex training scenarios to achieve enhanced training realism and effectiveness, by augmenting live operational training with virtual man-in-the-loop simulators and constructive simulation assets.

Leveraging Augmented Reality (AR), Virtual Reality (VR) and advanced simulation technologies, our LVC solution recreates high-fidelity battlefield situations previously unavailable for live tactical training.

The combination of Live, Virtual and Constructive elements overcomes the traditional constraints of space and availability of training assets. Through resource optimisation and simulation, LVC training enables significant operating cost savings and improved training outcomes.

APPLICATIONS

A comprehensive and cost-efficient integrated training solution, the LVC simulates multi-faceted mission rehearsals suitable for defence and public security applications:



Defence

- Testing and experimentation to refine doctrines and operating concepts
- Large force employment exercises

Homeland Security

- Counter-terrorism scenarios

Humanitarian & Disaster Relief

- Coordinated disaster aid scenarios

FEATURES

LIVE



We offer realistic training environments while minimising the logistics and resources required for live exercises. Our Augmented Reality Trainers (ART) hone skills in judgement, procedures and accuracy by engaging in live weapons training in the field with virtual targets.

To improve training outcomes, performance is tracked with advanced analytics algorithms. Our instrumentation capabilities provide two-way, real-time positional and system data from the instrumented equipment to the exercise control station, so instructors and commanders can monitor asset deployment, engagement status, and casualty assessment in real-time.

Coupled with interactive information visualisation techniques, the system generates accurate mission statistics for focused action reviews.

KEY COMPONENTS

VIRTUAL



High-fidelity Full Mission Simulators offer accurate emulation of control platforms, realistic operating environments and customisable training scenarios.

Cutting-edge Image Generation technology recreates out-of-window and sensor views for full immersion during training. A rich repository of training scenarios, customisable to suit user requirements, provides a continuum of training functions, ranging from basic platform handling to complex mission scenarios.

CONSTRUCTIVE



Adaptive Computer Generated Forces with built-in artificial intelligence capable of interacting with the terrain and entities, as well as reacting to real-time changes in the synthetic environment, provide realistic feedback on the trainees' actions.

OUR CAPABILITIES



Domain Expertise

With extensive experience in simulation training for varying scale, our training strategists and skilled programmers develop effective and targeted training programmes that cater to your needs.



Content Creation & Development

Backed by a team of digital media specialists, realistic training environments and assets are created using 3D modelling and animation for an immersive training experience.



Integration & Deployment

Live and virtual systems are integrated to enable real-time synchronised training across multiple platforms, while computer-generated forces emulate actual activity in the synthetic environment, offering a complete training solution. Our integration expertise extends to Distributed Interactive Simulation (DIS), High-Level Architecture (HLA) and other third-party distributed network simulation protocol.

TRAINING VALUE



Enhanced Training Effectiveness

Allows for multiple iterations of exercises and after action reviews, for enhanced performance

Resource Optimisation

Integrating Live, Virtual and Constructive assets for simulation-based training overcomes traditional constraints of space and availability of training assets



Cost-efficient

Large-scale training are conducted at significantly lower cost while achieving improved outcomes



Realistic

Offers a safe and immersive virtual training environment, using advanced simulation technologies and impressive augmented and virtual reality



Tailored

Fully customisable to address your current and future training requirements



Scalable

Training individuals and teams in multiple facets such as procedures and weapons familiarisation, the system can be scaled up for large-scale coordinated exercises



Secure

Encrypted system that is compatible with existing tactical combat training systems



Limitless Possibilities

System may be adapted for a wide range of applications

HIGHLIGHTS

- Fully customisable simulation-based training concept for effective and cost-efficient large-scale training exercises
- Integration of live operational training, virtual simulators and constructive simulation assets for a complete solution
- Cutting-edge AR, VR and simulation technologies deliver unparalleled realism and immersion
- Component simulation systems may be built on VT MAK's products - VR-Engage and VR-Forces

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