Patria

Patria SHIFTR

Simulated High Fidelity Training

Through Life Capability

By taking advantage of latest technology in Extended Reality (XR), using **Patria SHIFTR** it is possible to create immersive tactical training scenarios for the whole vehicle crew.

With the Patria SHIFTR training simulator it is possible to

- Practice an individual and group tactical skills of vehicle crews in classroom environment
- Practice communication between the crew and correct courses of action during the mission
- Practice observing the vehicle surroundings, vehicle protection and actions in unexpected hostile encounters
- Practice operating in different weather conditions: daytime, visibility, rain, clouds, etc. or geographical and climatic conditions.
- Create new opportunities for interactive training of combat tactics

Patria SHIFTR is

- Easy to operate,
- Low cost of ownership,
- Modular architecture
- Optional HEAT AI-analytics brings a gamification element and speeds up the learning process by introducing actionable insights and personal score cards for each trainee.
- High quality Varjo XR-4 headsets ensure the best user experience and immersion.
- The synthetic environment is Virtual Battlespace 4 which comes with an extensive content library, supports training at any location on the virtual globe and has the capability for developing geo-specific terrains.

SHIFT from one vehicle configuration to another

- Modular architecture allows training of AMV, ATV and 6x6 crews in all possible vehicle configurations.
- SHIFTR includes training stations for all vehicle crew members, typically Driver, Commander and Gunner.
- The training stations can be used individually or at the same time to enable simultaneous tactical training of the whole crew.
- Any of the training stations can be manned by constructive (AI controlled) crew member, however the voice communication is only possible between human crew members.
- All equipment is on wheels for easy transportation. Computers are installed in a rack cabinet.

Driver's station

Driver's station represents the virtual view of the driver's place as it would be in the real vehicle. Operator is equipped with the latest Varjo XR-4 headset, which enables viewing of real-life objects together with a virtual 3D environment.

All the essential driver's controls are available either as a virtual model or as a real-life object. The essential controls can be interacted either physically or virtually. The XR technology enables using of real components which are then blended with the virtual environment.

Since the training scope of the SHIFTR is in tactical training and crew co-operation, the driving simulation is built using simplified vehicle physics and simplified controls.

Commander's station

Commander's station represents the virtual view of the commander's place as it would be in the real vehicle. Operator is equipped with the latest Varjo XR-4 headset, which enables viewing of real-life objects together with a virtual 3D environment.

All the essential Commander's controls are available either as a virtual model or as a real-life object. The essential controls can be interacted either physically or virtually. The XR technology enables using of real components which are then blended with the virtual environment.

In some vehicle configurations the Commander operates the weapon system. In those cases, the separate Commander and Gunner's stations are replaced by one Gunner-Commander station.

Gunner's station

Gunner's station represents the virtual view of the gunner's place as it would be in the real vehicle. Operator is equipped with the latest Varjo XR-4 headset, which enables viewing of real-life objects together with a virtual 3D environment.

All the essential Gunner's controls are available either as a virtual model or as a real-life object. The essential controls can be interacted either physically or virtually. The XR technology enables using of real components which are then blended with the virtual environment.

Instructor's station

Create and control the training scenarios and provide an overview of the activities of the vehicle crew. The IOS has access to the radio communication network which allows the instructor to act as a group commander or as another friendly unit in the operational area.

After-Action Review (AAR) is available providing the capability to study each action in detail and consider every aspect repeatedly, highlight discussion points, and as a presentation tool to the instructor.

The digital dashboard display is presented both on Instructor's and Driver's station. The instructor can turn malfunction indication lights on or off individually and observe driver's reactions to each malfunction.

All XR-4 headsets are equipped with integrated eye tracking functionality and pointer functionality. This allows the instructor to monitor in real time what each trainee is looking at and point the trainee to right direction if needed. Video feed from the headsets can be recorded and used later as part of the mission debriefing. With the eye tracking recording, it is not subject to debate what was observed and when.

Patria has integrated VRAI's HEAT Analytics as an optional addon for the IOS. HEAT stands for Hazardous Environment Awareness Training. In HEAT, each trainee has a profile which can be used to track & measure progress over time & set training parameters. Instructor and trainees receive AI powered reports & insights via cloud or on-premise based dashboard, which brings a gamification element and speeds up the learning process.

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When if is not an option.

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