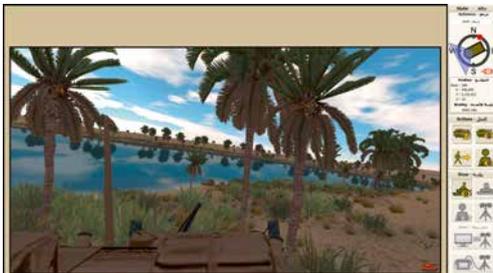
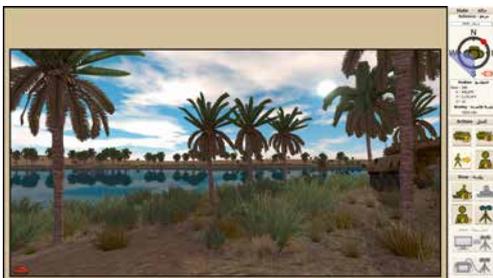


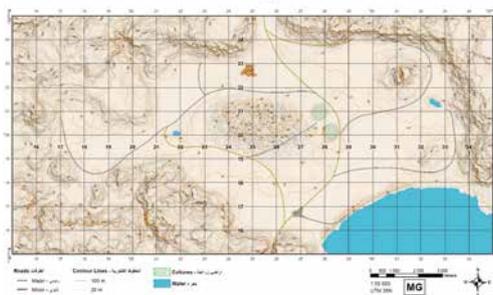
SOTA Artillery and Mortars Fires Observation Simulator



Mounted view



Dismounted view



Maps



Infrared view

Providing training and practice for forward observers. Acquiring, maintaining and improving procedures for the control and application of artillery fires by all-arms artillery observation crews and forward observers.

Environment

Installed in a room, the simulator immerses the trainees in a very realistic battlefield environment with:

- 200 to 300 km² areas representing accurately modelled geo-typical or real terrains (customer's choice) and infinite visibility and weather conditions setup
- Fires and destruction effects
- The creation of a soundscape reproducing the battlefield sounds
- The GUI adapted to the language of the user
- Observation/telemetry and processing shots simulated means reproducing the observers operational equipment
- A CGF (Computer Generated Forces) for tactical simulation and animation of the battlefield (artificial intelligence)

General Configuration

The simulator is composed of:

- Crew stations (up to 6)
- An instructor station
- Collective display (video-projection) and sound reproduction (stereo) devices

Crew station

Each station simulates the operational equipment available to forward observers. All the front panels of the actual equipment involved in the execution of the call for fires are accurately represented.

Crew stations subsystems:

- One “driving” position with visualization/ navigation and control GUI, and a joystick for moves
- One “Fires tactical terminal”
- One multifunction optronic binoculars simulator
- Multilingual GUI and international symbols

“Driving” position:

- Visualization and navigation from the vehicle (“mounted” mode) throughout the terrain selected in the scenario
- Forward observer dismounting from the vehicle and mounting
- Pedestrian visualization and navigation (“dismounted” mode)
- Setup and remote operation of the unattended observation mean
- Mirroring the current view and the multifunction optronic binoculars simulator menus

“Fires tactical terminal” position:

- Messaging with the command /control systems for fires operations
- Transmitting and monitoring of Adjust and Fire for Effect
- Setting of fires in “Grid”, “Polar Coordinates”, “Average Point of Impact”, “New Aim Point” modes ...
- Choice of ammunition(s): fuse or impact explosive, smoke, illuminating, BONUS shells
- Adaptation of the fires to the target (punctual, linear & surface shapes, multiple targets, moving target)
- Display of maps
- Transmitting and receiving free text messages
- Issuing firing reports

Multifunction optronic binoculars:

- Autonomous 360° observation
- Choice of modes (day-night, light intensification, infrared) and fields of view
- Laser ranging, Compass, GPS
- Stadia scale crosshair
- Binoculars setting and control menus



Crew station

Instructor station

Composed of a couple of monitors for simulation management, a monitor for “Fires tactical management” and a monitor for mirroring any of the displays seen by the crews.

The instructor operates the following modes:

- Exercise preparation and scenario edition
- Exercise play and supervision
- Debriefing (After Action Analysis)

In “Exercise preparation” mode, the instructor:

- has a number of available terrains (desert, mountains, urban area etc.)
- selects the weather and visibility conditions (day, night, clear or smog at varying levels, falling rain/snow, wind)
- has a library of entities faithfully represented (armoured vehicles of all types, other vehicles, infantrymen, civilians) with choice of camouflage and camps
- insert entities in scenarios which are associated with routes and behaviours (manually or automatically managed with artificial intelligence)
- sets the starting position and the crew equipment initial conditions
- defines the general firing application conditions
- prepares the messages directing operations

In “Play” mode, the instructor can:

- monitor crews data and follow in real time the operators actions
- spy/mirror any observation performed by an operator
- visualize any part of the battlefield (View independent of the scenario)
- modify the crews equipment status by setting failures
- activate and monitor, in 2D or 3D, the entities inserted in the scenario
- pause and restart the current exercise
- change fires operation to degraded mode
- change the general firing application conditions
- send and receive messages
- move crews anywhere in the terrain (teleportation)
- change the visibility and weather conditions
- reactivate the destroyed targets
- insert new entities with route and behaviour

In “Debriefing” mode, the instructor can perform an After Action Analysis session:

- Play back an exercise on the collective means, at actual or accelerated speed
- Play back with fast forward or rewind on automatic firing markers or manually created and developed during the exercise
- Show to the crews and print:
 - The overall evaluation exercise
 - The individual assessment report of each crew