Deployable Joint Fires Trainer (DJFT)

The MVRsimulation® next-generation Deployable Joint Fires Trainer (DJFT) supports datalink messaging to execute Link 16 and VMF Digitally Aided Close Air Support (DACAS) in accordance with current joint tactics, techniques, and procedures. The DJFT is fully accredited by the Joint Fire Support Executive Steering Committee (JFS ESC) for Type, 1, 2, and 3 Terminal Attack Control (TAC), Bomb on Coordinate (BOC), Fixed-Wing (FW), Rotary-Wing (RW), Remote Observer (RO), Video Down-Link (VDL), Suppression of Enemy Air Defenses (SEAD), Urban, Forward Air Controller (Airborne) (FAC (A)), Night, IR, and Laser controls.

The internally designed modular plug-and-play system is comprised of two or more stations fully contained within two-man portable welded aluminium cases. Integrated with the Varjo XR-3 mixed-reality headset, the DJFT contains all the hardware required to run dynamic, full-spectrum JTAC/Joint Fires training scenarios, including all computers, MVRsimulation's round-earth terrain server, emulated physical Laser Target Designator and IZLID, and simulated GPS receiver and communication devices.

Scenarios run on Battlespace Simulations' Modern Air Combat Environment (MACE) and MVRsimulation's Virtual Reality Scene Generator (VRSG®). MVRsimulation's Part Task Mission Trainer (PTMT) can join the simulation as an additional role player.

A JTAC trainee's SWAK device showing the ATAK overlay of the VRSG sensor video feed (shown here inside the red box) on the ATAK map from Google satellite imagery.

DACAS capable

MACE supports DACAS as described in JFIRE Appendix E using real world datalink messages to execute both the Link16/SADL message flow and the VMF message flow. Using MACE's built in JREAP-C server or the raw VMF gateway, the DJFT can be integrated with live training scenarios. VRSG's video datalink contains KLV metadata compliant with the STANAG 4609 or MISB 0601 standard, enabling embedded sensor-points-of-interest and host platform track data within the video stream.

JTAC's view inside the XR-3 headset showing XR-3 pass-through of the real-world Observer Station and MVRsimulation's VRSG 3D virtual geospecific terrain of densely populated Hajin, Syria.

Modular, reconfigurable, and transportable

- Self-contained in two-person portable welded aluminium cases. Dimensions: 21" x 21.5" x 33.75" Weight: ~100 lbs.
- Point of need training: anywhere from a classroom, to forward operating bases or a hotel conference room at short notice
- Windows 10-based high-end gaming systems with NVIDIA RTX6000 Ada graphics cards that are designed to be upgraded with technology advancements
- Single-source power control for simple start-up
- Can be run on 100-240 volt power outlets. Power cord can be updated for geospecific outlets
- Stations are networked via dual internal 10-Gigabit Ethernet switches. External network connections also provided.
- Requires no lithium-ion batteries; for air freight transportability
- Requires no Wi-fi or Bluetooth; for use in secure environments

Designed to meet accreditation standards

- 360° FOV throughout the entire mission including during the terminal phase of the control to assess the attack geometry
- Integrated form-fit-function laser target designator for laser accreditation
- Environmental sound and headset radios for communications
- Observer can read and write without needing to remove HMD
- Swappable hard drives for different classification zones
- MACE's datalink capabilities along with VRSG's KLV metadata permit the seamless integration of the DJFT with real world targeting software suites like ATAK/WinTAK and datalink message middleware like BADL, TRAX/ATRAX and FACNAV
- All players communicate via multiple simulated radios

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Observer Station

- Integrated TAA-compliant Varjo XR-3 Focal Edition head mounted display (HMD) with off-line license allows the user to be fully immersed in the virtual world while interacting with the emulated physical SOFLAM and IZLID in the real world
  - Ultra-low latency, dual 12-megapixel video pass-through allows the user to be able to read and write without having to remove the HMD
  - VRSG tracks the observer's head position and pupil location. Eye-track is exported via DIS and can be seen in real-time and saved to a PDU log for after action review (AAR).
  - Provides 360 x 360 FOV displays, enabling a fully immersive training environment to conduct Type 1 controls
- Form-fit-function emulated equipment:
  - PEQ-1B SOFLAM LTD or Type 163
  - IZLID 1000P
  - Other emulated equipment available upon request
- Notional simulated equipment:
  - PRC-117G or PRC-152 radio
  - Advanced GPS Receiver (C-EAGR)

Role Player Station

- Dedicated to controlling fixed-wing, rotary-wing, and RPAS assets in the mission
- Fully interoperable with US Air Force MALET-JSIL Aircrew Trainer (MJAT)
- Trainee is immersed via the Thrustmaster HOTAS
- Control assets with the HOTAS or by using 9 Lines and 5 Lines
- Control targeting pod, enabling video downlink for student to conduct sensor pod talk-ons
- MVRsimulation's fixed-wing Part Task Mission Trainer (PTMT) can join the scenario as an additional aircrew role player (available separately)

Instructor Operator Station

- Provides full dynamic control of the scenario
- Has controls for UAS pod, 9 Lines, 5 Lines and Call For Fire
- Includes a whole-earth terrain server that holds MVRsimulation's round-earth VRSG terrain
  - Includes 2 swappable drive sets to support multiple classification environments
- Control surface-to-surface fires, fixed- and rotary-wing assets
- Record current scenario to play back for after-action review
- Internal DISA-approved networking for interoperability
- Datalink messaging middleware required to complete DACAS missions included upon approval
  - For more information, email sales@mvrsimulation.com

Low-cost commercial system

- Inclusive of all costs: US $485,000
  - Delivered with Observer, Role Player, and Instructor Operator stations (one each) with all software licenses on pallets
  - Shipping charges, on-site setup and two days of training by our software engineer is quoted separately
- DJFT configurations to meet your unit's specific needs can be built by purchasing individual stations at the rates below:
  - Observer Station: US $180,000
  - Role Player Station: US $130,000
  - Instructor Operator Station: US $200,000
- Part Task Mission Trainer (optional role player): US $185,000
  - www.mvrsimulation.com/products/fixed-wing-ptmt.html

Observer Station with SWAK tablet and emulated Type 163.

Role Player Station.

Instructor Operator Station.

Full DJFT system: Role Player, Instructor, and Observer Stations.

Pricing in effect for November 2023. Please send a request for a quote to sales@mvrsimulation.com.