

# Joint National Training Capability

## TEST & TRAINING ENABLING ARCHITECTURE

The Joint National Training Capability (JNTC) is a collection of interoperable training sites, nodes and events that synthesizes Combatant Commander and Service training requirements and enables trainers to provide the appropriate joint context. JNTC is a global, information age capability that advances DoD transformation efforts and enables multinational, interagency and intergovernmental training. JNTC uses a mix of live, virtual and constructive (LVC) models and simulations in an integrated network of multiple test and training sites. The NAVAIR Range Department is a prime TENA integrator for JNTC and provides common tools for LVC data distribution.

## ENHANCED GATEWAY OF TENA/HLA

Enhanced Gateway of TENA/HLA (eGOTH) is gateway software allowing interoperability between live Test & Training Enabling Architecture (TENA), virtual and constructive High Level Architecture (HLA), and virtual and constructive Distributed Interactive Simulation (DIS) tracks. This system provides bidirectional flow of information including filtering, control and statistics of the information being exchanged. The software is sustained in a spiral life cycle to provide the most current TENA, HLA and DIS versions and can be used with the latest JNTC Logical Range Object Model (LROM) & TENA Object Models, HLA Federations and DIS Entities.



Gateway of TENA/HLA

## JLROM RESULTS & PLAYBACK

The JNTC Logical Range Object Model (JLROM) Results software suite is comprised of a Linux application that logs TENA-published data to a MySQL database and includes a data replay capability (playback). The software suite provides a web front-end to easily view the data in an organized and consistent manner. JLROM Results is a useful tool for troubleshooting network and application problems during an event, viewing published object statistics, as well as capturing data for analysis. The JLROM Results software suite is included as part of the JNTC Data Archival System (JDAS).

## FOR MORE INFORMATION

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## COMMON DISPLAY SYSTEM

Common Display System (CDS) is the base product for common range display. The CDS product provides a flexible real-time situational awareness and telemetry display/processing capability. CDS has an extensible framework enabling unique plugins to be developed and incorporated quickly and conveniently to accommodate new requirements or functionality not currently found in the applications core.

## TSPI INTERNAL ENTITY REFORMATTER

The TSPI Internal Entity Reformatter (TIER) is the core engine and universal translator for the joint LVC environment that provides simulation/stimulation capabilities between TENA, HLA, DIS and other legacy protocols and architectures. TIER allows:

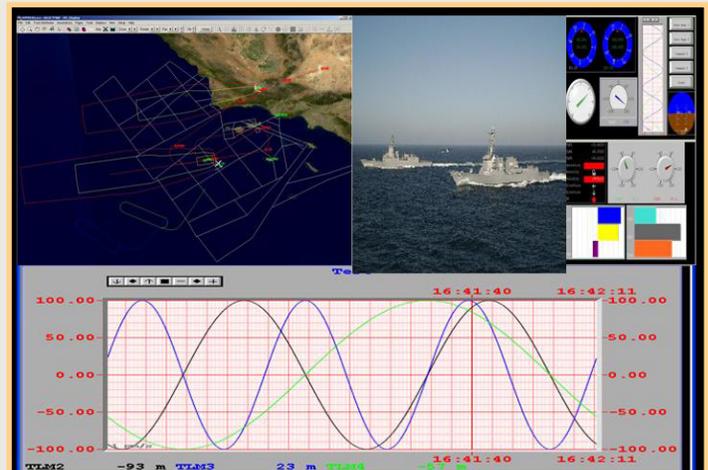
- Interoperability between LVC tracks
- Simulating an exercise prior to rehearsals with realistic TENA traffic
- Geographically translating or rotating live tracks to fit the current scenario
- Filtering, control and statistics for the flow of information being exchanged

### COMMON DISPLAY SYSTEM FEATURES:

- Live ground truth
- Joint range control
- Situational awareness
- 3-D functionality – zoom, pan, rotate, tilt, ribbon trails, 3D models, etc.
- TSPI and telemetry displays – dials, gauges, bar charts, strip charts, alphanumeric displays, etc.
- Windows PC, OpenGL-based application

### PLUG AND PLAY FEATURES:

- Interface to TENA
- Other users can add/modify CDS behavior
- RADS developed by TARIF group using this capability
- LOGIR added modules to support test requirements
- China Lake and Point Mugu adding modules to support real-time operations
- Patuxent River added a module that accepts Range Computation and Control System (RCCS3) data



Common display system