Simulation Architecture

Link-16 Interfaces

MIDS
All LVT Variants

JTIDS
E-2, E-8 & F-15,
Class 2H & 2M

Platform-D
Platform-J
X.25
1553

JRE Client

JRE Gateway

JDOTS

MIL-STD 3011
Appendix A
or STJ

MIL-STD 3011
Appendix B

**UHF/SHF
SATCOM**

STE

OMNI

MIL-STD 1553
or IP

MIL-STD 3011
Appendix C

**Local Router
TCP, UDP**

SADL

MIL-STD 3011
Appendix C

**CDL
Family**

IMARSAT B

**TTNT
QNT**

HOST SYSTEMS
ADSI / MSCT /CCD
MSCS
TACP-CASS
FAAD/AMDWS
GCCS/C2PC

Interfaces

The Joint Range Extension (JRE) is the warfighter's premier gateway of choice, providing multipoint, interoperable, long-haul communications data exchange. JRE has exceptionally supported the warfighter with a combat-proven BLOS gateway directly facilitating Distributed Mission Operations (DMO) for over five years. Now, JRE is evolving by implementing a simulation and training development tool called Joint Distributed Operational Training System (JDOTS).

JDOTS Capabilities support:

➤ Link-11 and Link-16 Training
- Air & Space Operations Center (AOC) training
- Maritime Operations Center (MOC) training
- Control & Reporting Center (CRC) training
- Aircrew training (C2, Fighter & Bomber)
- Dynamic Targeting/Time Sensitive Targeting

➤ Distributed connectivity for simulation activities

➤ Data Extraction Reduction Guide (DERG) analysis

➤ Interactive simulation capability

L-3 Communications (C2S2) has partnered with Aerosystems International (AeI) to provide an easy to use dynamic simulation tool that promotes flexible data link training. JDOTS is this vision and directly interfaces with JRE to provide combat warriors the ability to train daily as they would fight in combat.

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Approved for public release; distribution is unlimited;
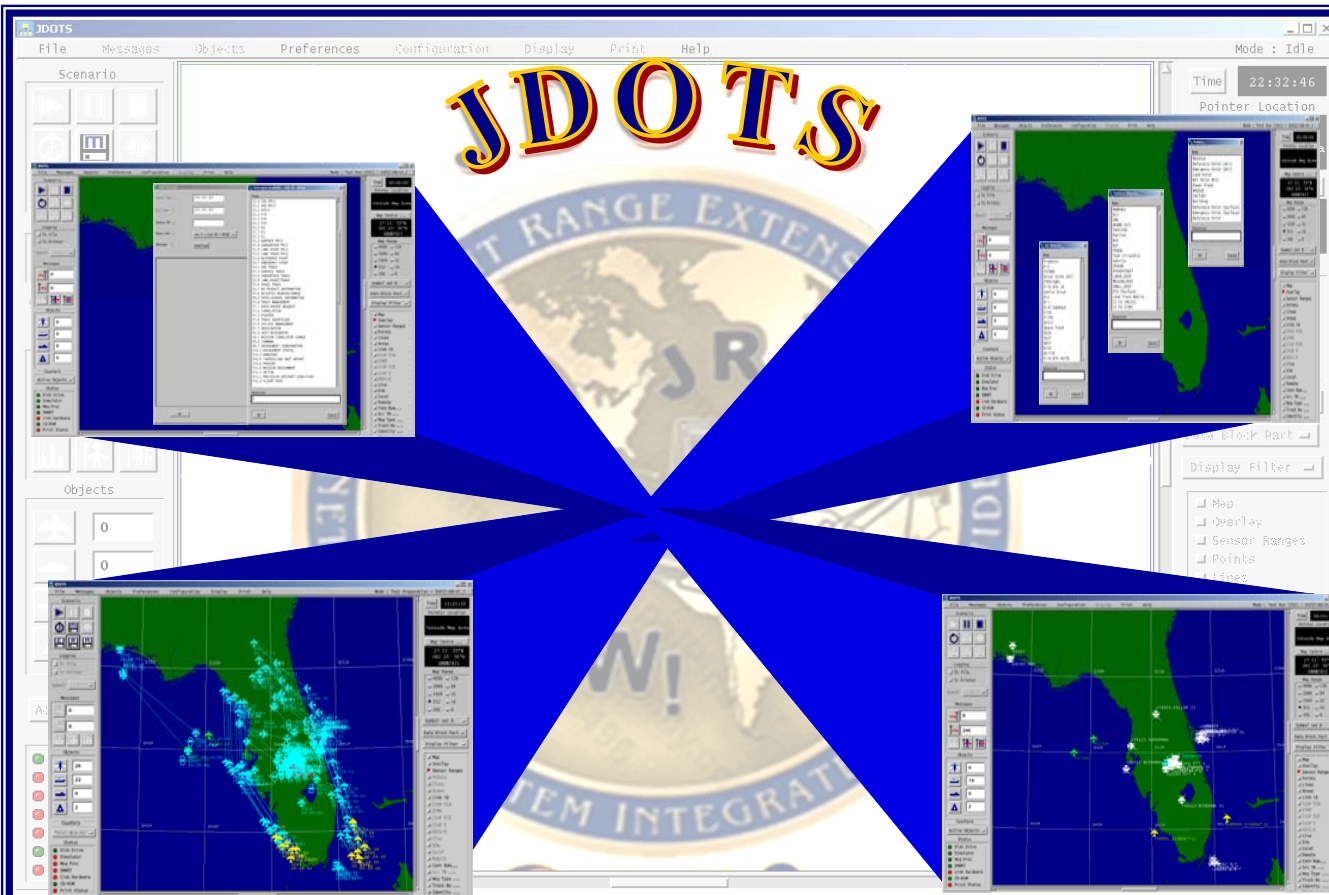*ESD-040003 66ABW-2009-0179*

Joint Distributed Operational Training System
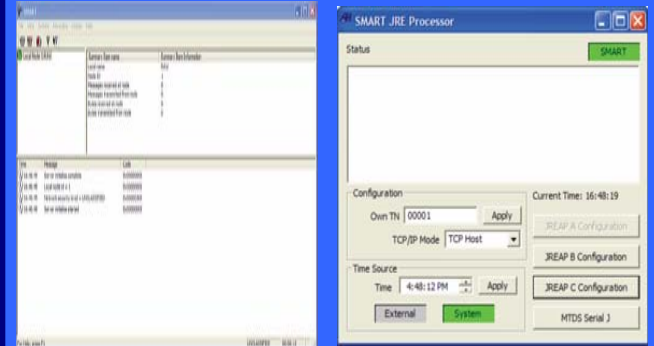
Simulation & Training Tool

Joint Range Extension

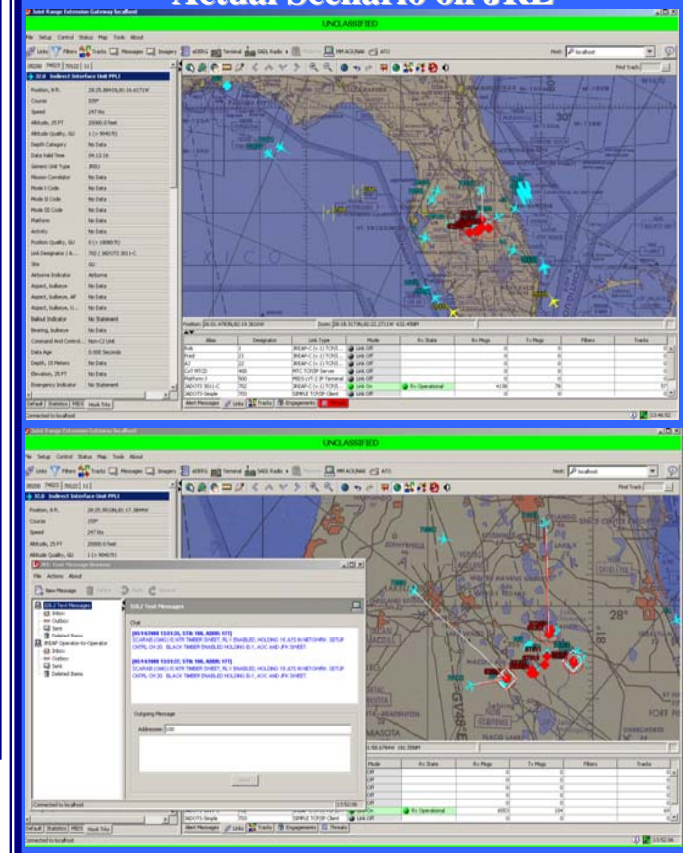## Beyond Line of Sight Link-16 Gateway

JDOTS

SIMPLE Management & Routing Tool
SMART

- **Implements STANAG 5602 Protocol**
  - ✓ Connect to JRE via SIMPLE J
  - ✓ Connect to other JDOTS Nodes

Actual Scenario on JRE

➢ Create complete Link-11 and Link-16 scenarios – connect to JRE – route data to the tactical edge for realistic training
➢ JDOTS databases implement the full message catalog for MIL STDs-6011 & 6016 (B/C)
➢ SIMPLE Management and Routing Protocol (SMART) provides supports realistic two-way connectivity/information exchange
  ▪ JDOTS-to-JDOTS
  ▪ JDOTS-to-JRE
➢ Connect with other JDOTS nodes via SIMPLE protocol for real time white cell interactive modeling/simulation execution
➢ Virtually unlimited amount of connections using SIMPLE protocol, integrating workstations in a distributed environment
➢ Create and modify scenario maps – zoom in or out within a 4096 X 4096 dm square area of operation
➢ Create and modify unique databases containing message defaults and platform definitions using the database editor
➢ Create prescript, timed messages or develop messages "on the fly" interactively producing robust exercise training affects
  ▪ Send/receive receipt compliance (RC) messages – machine receipt/ask operator – perform digital tasking from C2 to cockpit
  ▪ Create/send engagements, Threat Warnings, Sorting, Pairing, Handovers, Electronic Warning, Platform Status and more.
  ▪ Add/delete tracks and modify scenarios during simulation operations – create/send J28.2 free text messages
  ▪ Activate/deactivate simulated units, hook tracks, view engagement/correlation lists and view scenario configuration summary
➢ Draw lines and paste symbols (cities, radar, airfields, etc.) and add labels when developing scenarios
➢ Use picture in picture map feature for enhanced viewing pleasure for scenario generation or replays

JDOTS ★ TRAIN LIKE YOU FIGHT ★ JRE-GW