



Universal Test and Training System



Interoperability Systems International Hellas S.A.

Universal Test and Training System



The **Universal Test and Training System (UTTS)** has been designed as a product that can be used for testing of a **Tactical Data System (TDS)** and as a trainer for the **TDS Operator**. The **UTTS** has standard features that are germane to both a test and trainer system and system specific capabilities have also been provided to accommodate the unique requirements of both test and trainer system functions.

The **UTTS** provides a comprehensive time synchronized, simulation based capability to test, or train the operators of a **Tactical Data System (TDS)** through simulation of all of that TDS's external interfaces in an interactive environment.

The **UTTS** provides the capability to effect composite team training between cooperating TDS s through the use of the **DIS** or **HLS** simulation protocols.



The **UTTS** consists of the following elements:

A **Scenario Generation/Control Unit (SGCU)** that provides centralized control of the **UTTS** including Scenario Generation prior to the test/training session, Scenario Control during the test/training session, and off-line support tasks such as Data Reduction. The **SGCU** can interoperate within a network of TDS simulators for multi-site test or training via the **DIS** or **HLA** protocols.

One or more **Pilot Stations (PS)** that provide the means for an instructor to cause a simulated track to maneuver in response to an Operator/Trainee's direction.

One or more **Data Link Interface Units (DLIU)** that simulate the technical performance of, and provides human-machine-interfaces for operational interactions of, a TDS participating on a specific data link.

One or more **Data Link Network Interface Units (DLNIU)** that provide the means to combine several DLIUs within the structure and protocols of a data link network (e.g., Link 11/TADIL A or Link 16/TADIL J).

One or more **Sensor Interface Units (SIU)** that provide simulation of the sensor inputs associated with the test/training TDS.

One or more **Weapon Interface Units (WIU)** that provide simulation of the weapons that are directly associated with the test/training TDS.

UTTS Features

- > Scalable by adding or removing elements to/from the simulation network
- > Scenario Generation capabilities that provide for the detailed definition of:
 - Platforms - Air, Surface (maritime), Subsurface, Ground or Space platforms
 - Emitters - IFF/SIF, Comm, Acoustic, Geodetic, ECM or IR
 - Sensors - Radars, Sonars, IFF/SIF, ECM, IR and Acoustic
 - Weapons - Guns, Bombs or Missiles with associated Emitters or Sensors
 - Data Links/Networks – DLIUs and NDLIUs
 - Decoys - Chaff and flares and their associated kinematics
 - Entities - Associate a Platform with Emitters, Sensors, Weapons, Data Links and Decoys
 - Air, Surface, Sub-surface, Space and Land Tracks with Pre-defined Paths/Routes
 - Meteorological and Geographical Conditions:
 - A **Digital Map** for all or part of the Operational Area
 - **Winds** between sea level and 100,000 feet in 10,000-foot increments
 - **Sea State** in twelve levels and applied for the complete Operational Area
 - **Cloud Areas** in 10 nautical mile squares, with associated altitude range (two values), lateral velocity and density (10 levels)
 - **Rain Areas** in 10 nautical mile squares, with associated altitude (one value), lateral velocity and density (10 levels)
- Events
 - Track - Steering (manual or scenario driven), Position, Altitude, Speed, ID or IFF/SIF
 - Weapon Firing
 - Activation/Deactivation of Data Links, Emitters, Sensors and Weapons
 - Conditional – Reaction to a Pre-defined Trigger
 - Malfunctions
- > Scenario Execution
 - Start, Freeze, Resume, Go To (Specific Time), Forward, Fast Forward and Terminate
 - Run-time Ability to Create Tracks, Change Track Data and Edit/Execute Events
 - Initiate, Stop or Re-initiate Data Recording
- > General Interface Units Characteristics
 - Co-located IUs
 - Remote IUs
 - Air, Surface, Subsurface and Ground Reporting Radii
 - ESM Reporting Radius
 - ECM Reporting Radius
 - IU Positional Bias
 - Track Position Reporting Error
- > Data Link Interface Units
 - Link 1, Link 11/TADIL A, Link 11B/TADIL B, Link 14, ATDL-1, IJMS, Link 16/TADIL J
 - Non-standard DLIUs are available or can be created to meet specific needs





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