Introduction to Joint Tactical Information Distribution System / Multifunctional Information Distribution System (JTIDS/MIDS) Link 16

Duration - 2½ days

Lesson 1   **Introduction to JTIDS / MIDS Link 16**
- Data Link prior to MIDS Link 16
- The Requirement for a new TDL
- Definitions – JTIDS / MIDS / IJMS / Link 16

Lesson 2   **JTIDS / MIDS Architecture**
- Time Division Multiple Access
- Time Slots
- Recurrence Rate
- Time Slot Allocation

Lesson 3   **Time Slot Structure**
- Time Slot Structure
- JTIDS / MIDS Frequencies & Waveform
- Message Packing
- Message Structure & Numbering
- Access Modes

Lesson 4   **JTIDS / MIDS Networks**
- Nets and Networks
- Network Participation Groups (NPGs)
- Network Structures
- Demonstration of Link 16 Network

Lesson 5   **Signal Processing**
- Encryption
- Secure Data Unit
- Communications Modes
- Error Correction
- Cyclic Code Shift Keying
- Continuous Phase Shift Modulation

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Lesson 6   **Relay**

- Types of Relay
- Relay Status
- Relay Functions & Techniques

Lesson 7   **JTIDS / MIDS Hardware**

- Class 1 Terminal
- Class 2 Terminals
- MIDS Low Volume Terminal (LVT)
- Fighter Data Link (FDL)
- AN / URC-138
- Joint Tactical Radio System (JTRS)
- Future Terminal Enhancements

Lesson 8   **Relative Navigation (RelNav)**

- Geodetic and Relative Grid
- Positional Quality
- The RelNav Process

Lesson 9   **JTIDS / MIDS Synchronisation**

- External Time Reference Network (ETRN) and System Time Reference Network (STRN)
- Time Quality
- Joining a Network
- Active and Passive Synchronisation

Lesson 10   **JTIDS / MIDS Interoperability**

- Levels of Interoperability
- Advancing Interoperability
- Multi-Link Operations
- Identifying Problems

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Lesson 11   **JTIDS / MIDS Surveillance Data Exchange and Track Management**
- Data Environments & Elements
- Data Exchange Functions
- Data Management Protocols

Lesson 12   **Weapons Management**
- Weapons Coordination & Management
- Control
- NPG Usage
- C^2 / Non-C^2 Exchange
- Uplink and Backlink
- Receipt Compliance
- Non-C^2 use of the Surveillance Picture

Lesson 13   **Frequency Clearance Agreements**
- Time Slot Duty Factor
- Interference Protection Factor
- Typical Restrictions

Lesson 14   **Network Design**
- The 11 Stages of Producing a Network
- Time Slot Map Creation
- Demonstration of Link 16 Network

Lesson 15   **Network Management**
- Network Planning
- Network Design
- Pre-Mission Planning
- Initialisation & Operations
- Operational Network Management
- Data Recording and Analysis