ARMS

Link 16 Amalgamated Remote Management System

ARMS collects data from multiple remote terminals representing the tactical picture as seen at each location, analyzes it for discrepancies and anomalies and presents the information in user-configurable graphical displays.

PRODUCT DESCRIPTION

The job of the Link 16 Network Manager is to plan, manage, modify and troubleshoot a tactical data link network distributed over a wide geographical area and often locked onto GPS time. Existing systems employ a single viewpoint solution, but L3Harris has a distributed approach called the Amalgamated Remote Management System (ARMS) that provides a multi viewpoint solution to network management.

ARMS connects over an IP-based Wide Area Network to multiple remote terminals, including JTIDS, MIDS-LVT, MIDS JTRS, STT and BATS. It obtains the tactical picture as seen at each location, accepting all transmissions and receptions as well as status from each terminal. From this information, it creates a multi-terminal database that is analyzed for discrepancies and anomalies. A delayed synchronization capability on a single terminal is not required. For example, to detect unauthorized time slot reuse, the network nodes themselves perform this function for any units within sight of more than one ground station.

ARMS can be further enhanced with the FLEXOR feature. FLEXOR is the ARMS capability that originates J-series network management messages to allow the ARMS operator to interactively control Link 16 relay platforms, allocate capacity amongst active platforms and disable transmission capability of individual platforms when required by frequency usage restrictions.

Together, ARMS and FLEXOR provide a powerful dynamic Link 16 network management system.


Works with All Vendors' Link 16 Terminals

KEY FEATURES

> Enables distributed data collection by implementing a multi-homed monitoring system

> Allows coordinated network analysis from multiple viewpoints

> Provides a synthesized analysis of the network architecture

> Plug-n-Play capability—changes to the existing system of terminals are not necessary

> Works with all MIDS-LVT, MIDS JTRS, STT and BATS; designed for CMN and CCR

> Capable of directly hosting more than 30 terminals simultaneously

> Operates in parallel with existing C2 systems with zero footprint integration

> Provides up-to-date, system-wide status with drill-down capability of terminal BIT for fault isolation

> Real-time Frequency Clearance Agreement (FCA) compliance monitoring

> C2 Adjunct capability provides a single, consolidated tactical feed for all hosted ground radios

> Functions as an anomaly-event-driven, operator-alert-based interface to facilitate expeditious detection and correction of network problems

> The FLEXOR feature supports dynamic (over-the-air) network management

L3Harris.com
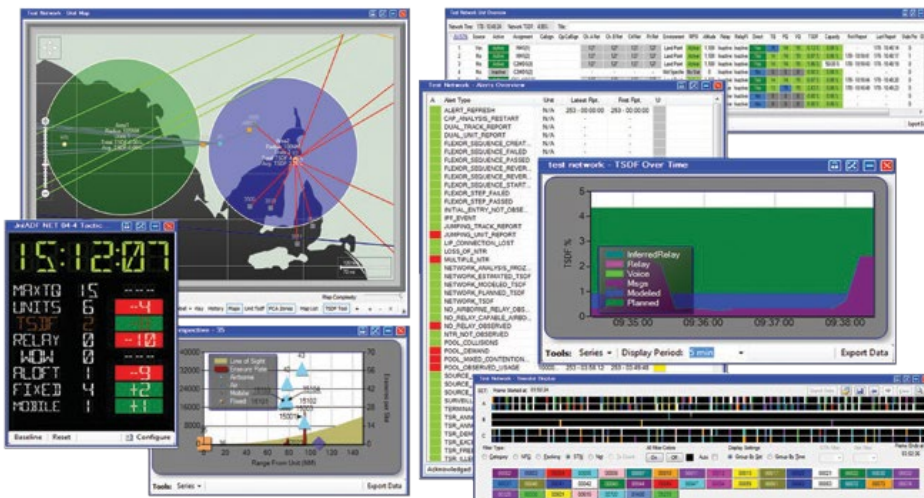
FLEXOR SEQUENCE PROCESS

The following graphic shows an over the air sequence in process. The sequence step status is updated upon completion, either successful or failure, of each step. An entire sequence is only marked as complete if all of the steps are completed successfully.
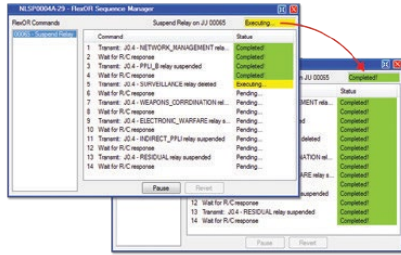

BRAIN VIEWER

The BRAIN (Browser Ready Accessible Insider Knowledge) is a tool that ARMS uses to clearly define and explain what alerts mean to the end user, as well as view data that is event driven within the network. BRAIN also serves as a data repository, providing the operator a method to define what these alerts and events mean to the end user in real time.


ENABLES SEAMLESS RADIO INTEGRATION

The LVT(1) Interface Ethernet Repeater is the newest addition to the ARMS Software Suite and simplifies host Ethernet connections from ANY Windows operating system.
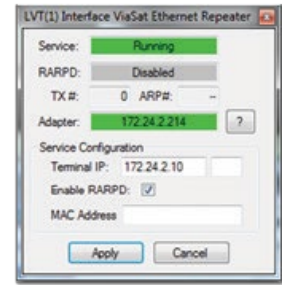

SELECTED ALERT LAUNCHES BRAIN

ARMS alert and event drill-down capability includes online access to the ARMS knowledge base, BRAIN, which can be customized for local operations.
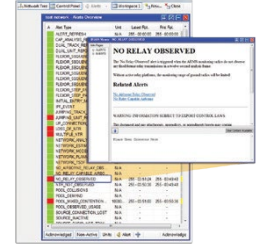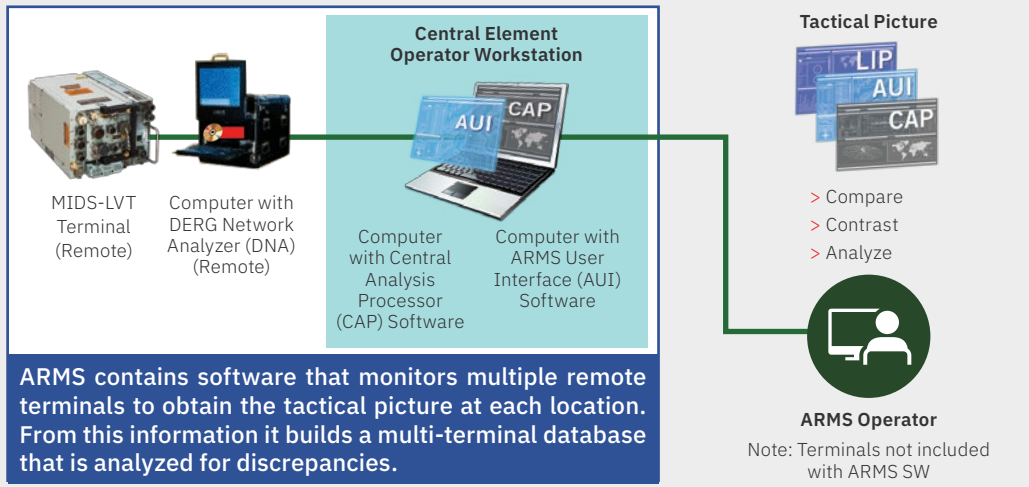
UNIT PERSPECTIVE

The new "Unit Perspective" chart provides the network manager an easy to understand presentation of how each radio perceives the active network. At a glance, the network manager can synthesize how the network is connected to see beyond the tactical messaging.
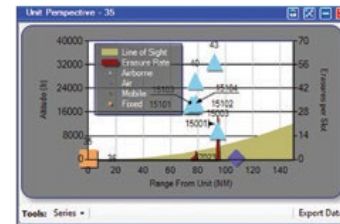
SOFTWARE ARCHITECTURE

ARMS is built with three functional architectural pieces:

> Centralized Analysis Process (CAP)

> ARMS User Interface (AUI)

> DERG Network Analyzer (DNA)

Central Element Operator Workstation

MIDS-LVT Terminal (Remote)

Computer with DERG Network Analyzer (DNA) (Remote)

Computer with Central Analysis Processor (CAP) Software

Computer with ARMS User Interface (AUI) Software

Tactical Picture

> Compare
> Contrast
> Analyze

ARMS Operator

Note: Terminals not included with ARMS SW

ARMS contains software that monitors multiple remote terminals to obtain the tactical picture at each location. From this information it builds a multi-terminal database that is analyzed for discrepancies.

PART DESCRIPTIONS

> ARMS master control and two terminals at remote site
> ARMS annual software update subscription
> ARMS FLEXOR feature

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

L3HARRIS®
FAST. FORWARD.

1025 W. NASA Boulevard
Melbourne, FL 32919
t 833 537 6837
CSW.Products@L3Harris.com