Spectral

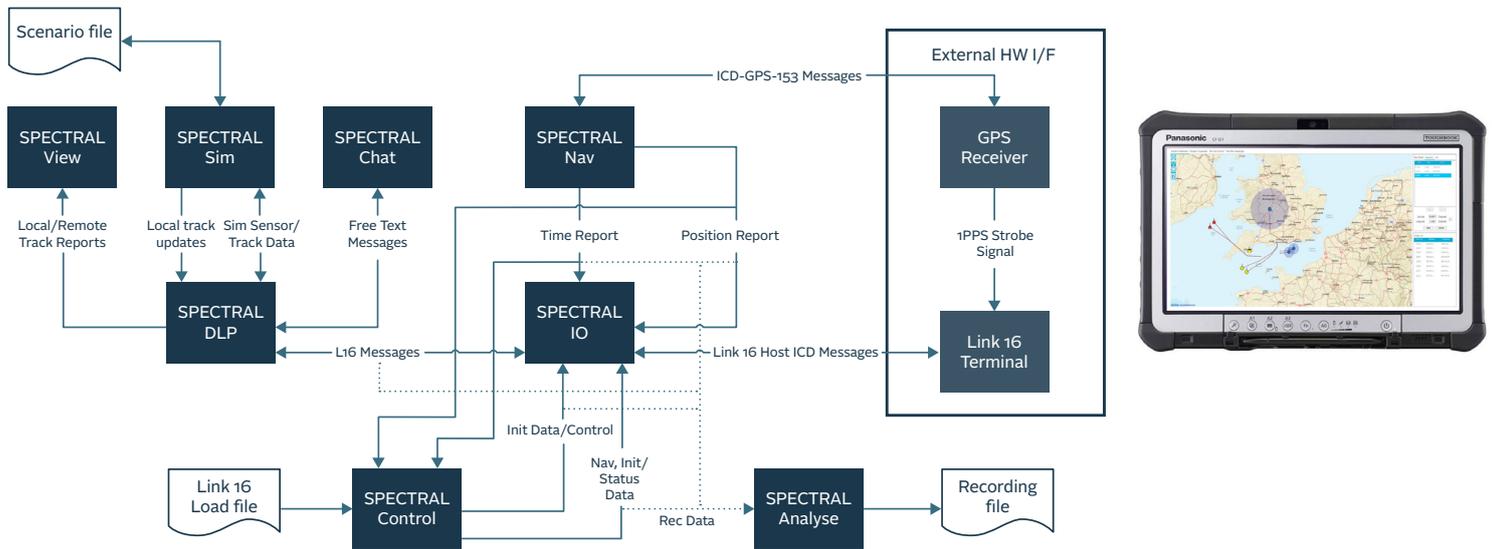**TACTICAL DATA LINK APPLICATION SUITE**

Meta
MISSION DATA

Spectral Application Suite

Spectral is a suite of Tactical Data Link (TDL) software applications that provide an affordable, flexible multi-domain Link 16 capability. The applications can be supplied as standalone products or grouped to provide a tailored, integrated solution. In all scenarios, **Spectral** runs on Commercial Off-The-Shelf (COTS) Windows-based PCs and hand-held devices; other operating systems, such as Linux, are also supported.

Spectral is capable of satisfying the most demanding Link 16 requirements typical of large, multi-sensor platforms such as Maritime Patrol Aircraft. However, the modularity of **Spectral**, combined with non-specialist hardware, presents opportunities to deliver Link 16 connectivity to end users that were previously prevented from joining the network due to size, weight, power and cost constraints. In the examples below, **Spectral** can be hosted on COTS mission computers, laptops or tablets; message sets can be defined and the modern HMI can be optimised for different screen sizes and resolutions.

- Smaller air platforms (such as DA42 and KA200)
- Land vehicles and installations
- Vessels (such as offshore patrol vessels and fast attack crafts)
- Dismounted personnel

These platforms are ideal candidates for a low cost, lightweight and mobile Link 16-based situational awareness solution which can receive, and contribute to, the Common Operational Picture with airborne and other assets. When operating outside of line-of-sight, Link 16 beyond-line-of-sight connectivity via Joint Range Extension Application Protocol (JREAP) may be required - **Spectral** delivers against all of these requirements.

One of the key **Spectral** applications is **Spectral IO** which acts as the Link 16 terminal host system. Uniquely, it can translate between legacy and 'Crypto Modernised' Link 16 terminal interfaces to solve the problem of expensive and time-consuming changes to host and combat systems when introducing the new 'modernised' terminals.

Spectral SIM is a TDL simulation application which allows simulated TDL tracks and data to be released to the TDL network to enhance training in live, virtual and constructive scenarios.

Both **Spectral IO** and **Spectral SIM** are available as standalone products or as part of an integrated solution.

Exploiting Agile software methodology, **Spectral** is resilient against 'stove-piping' and provides the ability to harness new technology and integrate with third party sensors and mission systems.
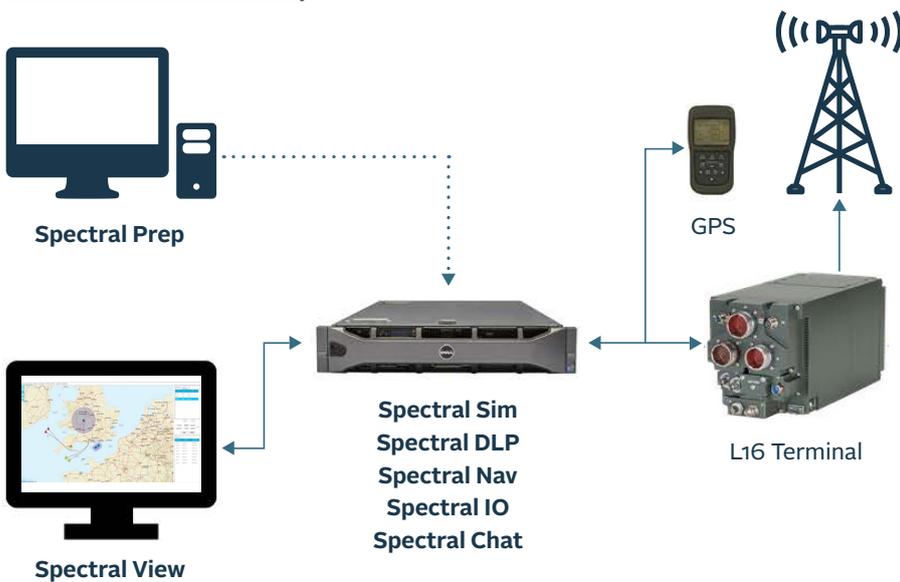
Spectral

TACTICAL DATA LINK APPLICATION SUITE

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SPECTRAL INTEGRATED INTO A LINK 16 SYSTEM

Spectral Prep

Spectral View

Spectral Sim
Spectral DLP
Spectral Nav
Spectral IO
Spectral Chat

GPS

L16 Terminal

SPECTRAL INCLUDES THE FOLLOWING APPLICATIONS:

Spectral IO - Link 16 Terminal Translator

Spectral View - Situational Awareness HMI and processor

Spectral SIM - Scenario Generator

Spectral Chat - Free Text Messaging Module

Spectral Nav - GPS Navigation module

Spectral DLP - Datalink processor and track database

Spectral Analyse - Data recording and playback module

Spectral Control - Link 16 Terminal controller

Spectral Prep - Link 16 Initialisation Data Preparation Facility

HERITAGE

Spectral is developed by Meta Mission Data's (MMD) TDL team who have extensive operational and systems engineering experience across all elements of MIDS/Link 16 TDL systems. MMD's TDL expertise is recognised internationally: MMD has architected the UK MOD's technical approach to its Link 16 Modernisation programme, and has delivered TDL products and services to over 10 other nations.

COMPLIANCE

All variances of **Spectral** are compliant with the associated industry standards. These include: MIL-STD 6016F, NATO ATDLP 5.16 (formerly STANAG 5516), ATDLP 1.75 (formerly STANAG 4175), MIL-STD-3011 and ATDLP 5.18. (formerly STANAG 5518).

END-TO-END SOLUTION

MMD can provide a complete end-to-end TDL solution: from the initial requirements capture and scoping phase; provision of the TDL terminals and ancillaries; through to platform installation, certification and commissioning (with the support of third parties where required).

MMD's TDL solutions are fully assured via our in-house capabilities. Our TDL Test and Readiness service (**Kilter**) guarantees compliance with the relevant TDL interoperability technical and operational standards. Similarly, our Mission Assurance Cyber Enabler (MACE) methodology assures information security and mission data integrity.

MMD also offers a full suite of training options as well as operational, logistic and through-life support including obsolescence management and technology roadmap.

To support the operational delivery of the capability, MMD has additional software tools for automating network planning (**TacPlan**) and the process of producing and validating tasking messages (**TacSig**).

FOR MORE INFORMATION ON SPECTRAL AND OUR OTHER TDL OFFERINGS, PLEASE CONTACT:

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