

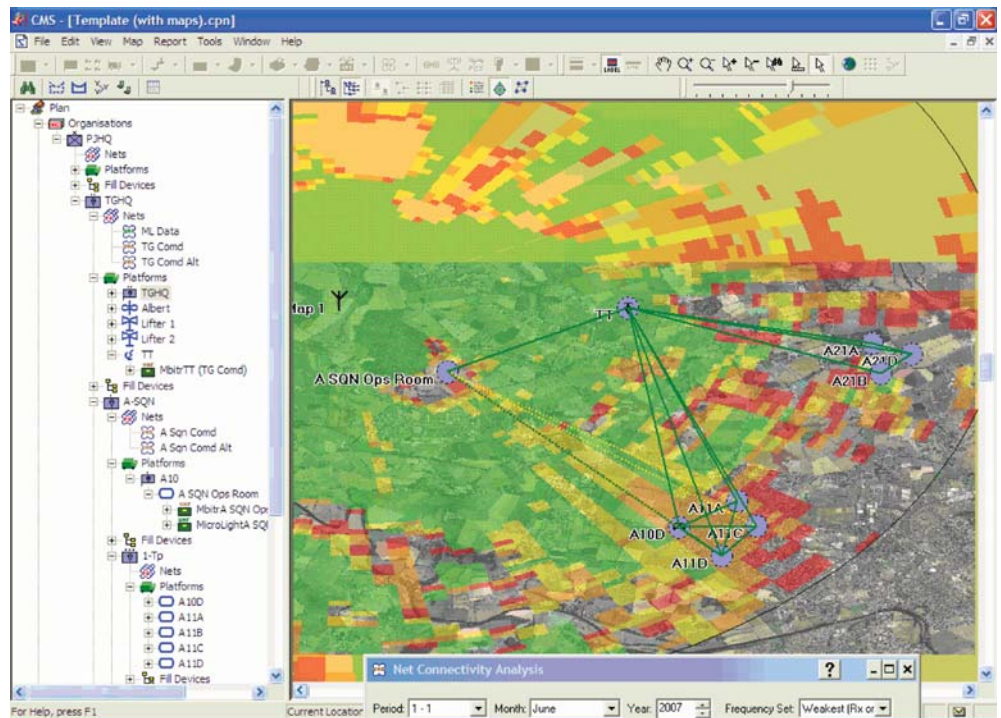
# Theseus The Tactical Network Management System

**Working to become a dependable partner of choice**

BAE Systems Insyte's joint command & information systems solutions give decision makers the information to make mission critical decisions before opponents can react, minimising risk to our forces and creating greater operational effect.

In-service with the British Army and European armed forces, Theseus is a feature rich yet simple to use integrated suite of powerful, network management tools.

A single application links Strike, Fleet and Land, helping to deliver Network Enabled Capability to realise the true potential of any military force.



#### **BENEFITS:**

##### **Simple and intuitive to use**

- Designed specifically for military users, recognising low training burden as a key requirement.

##### **Flexible toolset**

- Compatible with secure digital HF, VHF and UHF radios from major manufacturers
- Hardware “driver” technology allows simple integration of new radio types
- Modular design allows customers to select functionality required
- Theseus architecture easy to upgrade through military/commercial-off-the-shelf (MOTS/COTS) technologies.

##### **Scaleable solution**

- Wide range of operational roles from small tactical mobile units to strategic in theatre joint operations.

##### **Proven track record**

- In-service with the British Army and other European armed forces.

##### **Training solutions**

- Training packages include emulation of managed equipment, allowing classroom training of online monitoring and control functions.

## TOOLSET

### Deployment planning

- ORBAT organisation hierarchy definition using APP6A
- Trunk and Combat Network Radio planning
- Radio propagation and coverage modelling using advanced clutter algorithms
- Rapid Path Profile Analysis
- Radio Coverage maps
- Line of Sight maps
- Highpoint maps.

### Equipment specification

- User customisable platform and equipment library reduces planning time
- Detailed modelling of comms equipment and platforms including:
  - Radio sensitivity
  - Harmonics
  - Intermodulation products
  - Quietened channels
  - Antenna gain
  - Feeder and Coupler loss
  - Port availability
  - Supported applications.

### Cryptographic management

- Automated wizard allows rapid cryptographic key assignment
- Multiple concurrent security domains planning
- Software interface allowing full integration with Key Management Systems.

### Frequency assignment

- Fully automated assignment based on the frequency allocation, with option for manual intervention
- Metaheuristic optimisation algorithms maximise frequency reuse while minimising cosite and farsite interference.

### Waveforms supported include:

- STANAG 4203 (HF Fixed Frequency)
- STANAG 4204 (VHF Fixed Frequency)
- STANAG 4292 (VHF Clear Hail Mode)
- STANAG 4538 (HF 3G ALE)

- Mil-Std-188-144A Appendix A (HF 2G ALE)
- Fast Frequency Hopping
- Band 1, 3 & 4 Trunk networks with variable bandwidth.

### Network planning

- Supports voice and data networks
- Automatic assignment of internet protocol (IP) addresses, subnet addresses and simple network management protocol (SNMP) community names
- Planning of network services, including domain name system (DNS), dynamic host configuration protocol (DHCP) user applications, and messaging.

### Trunk network planning

- Identification of installation locations
- Information exchange requirements and network capacity
- Provision of link redundancy
- Monitoring of link status.

### Fill data generation & distribution

- Automated generation of equipment initialisation data
- Fill dynamically updated upon asset re-tasking.

### Software fill device

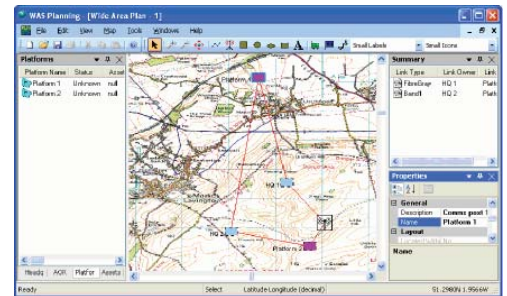
- Distribution of fill data and initialisation of communications equipment
- Enables a Windows Mobile® PDA or Windows XP® Laptop to be used as a fill device.

### Situational awareness

- Real time display of asset locations
- Publishes feeds from attached radio hardware to a common operational picture.

### Wide area network monitoring

- Network topology discovery via SNMP and COTS proprietary interfaces
- Traffic monitoring with historical analysis and user customisable real-time alerts
- Network analysis and diagnosis, including critical link detection.



### Local area network management

- Identification of cabling configuration
- Monitoring and control of all communications equipment within a sub-system
- Automatic alerts for equipment failure or disconnect.

### Asset management

- Individual items or groups of equipment can be assigned to areas of responsibility
- Equipment history and status can be tracked and viewed
- Future equipment availability information.

### Geographical information system functionality

- Industry leading ESRI mapping engine (C/JMTK compatible), supporting a range of formats including VMap, DTED, ESRI Shapefiles, BMP, GeoTIFF, IMG, JPEG and GIF
- Full range of coordinate systems supported.

### Plan validation

- Configurable checkers automatically inform users of human errors in planning processes.

### Reporting

- Comprehensive reporting suite for communications management
- Automatic generation of reports in HTML, XML and MS Word formats.

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