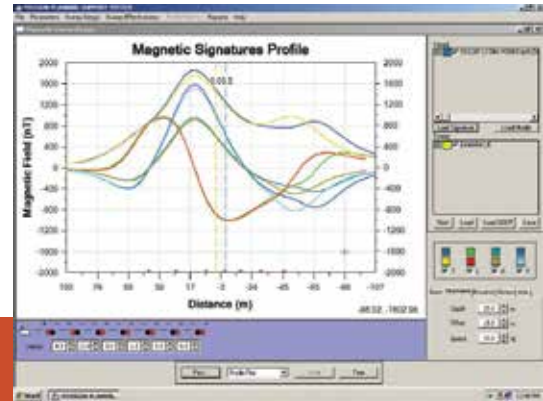


➤ The Mission Planning Support System (MPSS) is a Windows XP based software used to support AMAS multi influence sweeps.



THALES AUSTRALIA

AMAS MISSION PLANNING SUPPORT SYSTEM (MPSS)

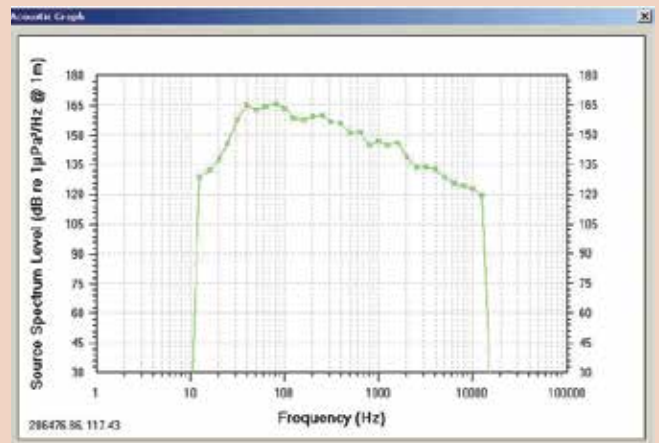
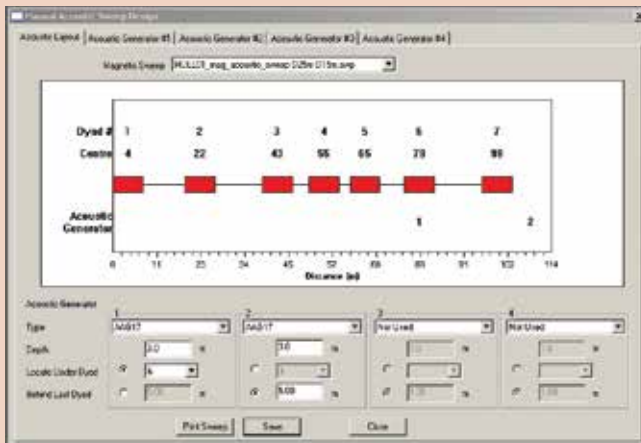
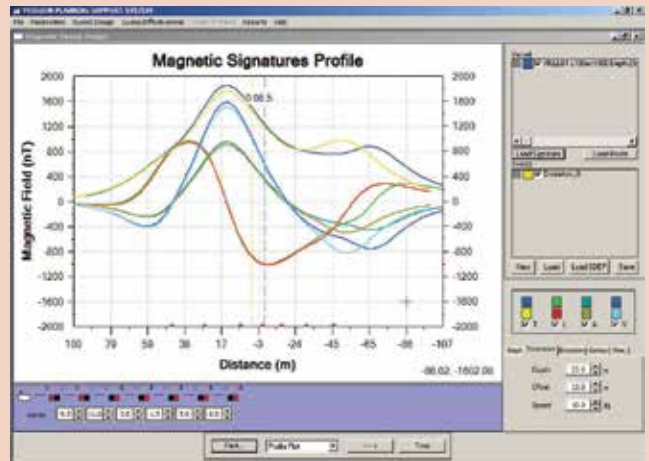


THE SWEEP DESIGN

The Sweep Design software will accept ship signature data from magnetic ranging and automatically determine the sweep configuration that best matches the ship signature.

As well as providing the number of Dyads, their polarity and separation, the resultant magnetic signature profile plot is also provided.

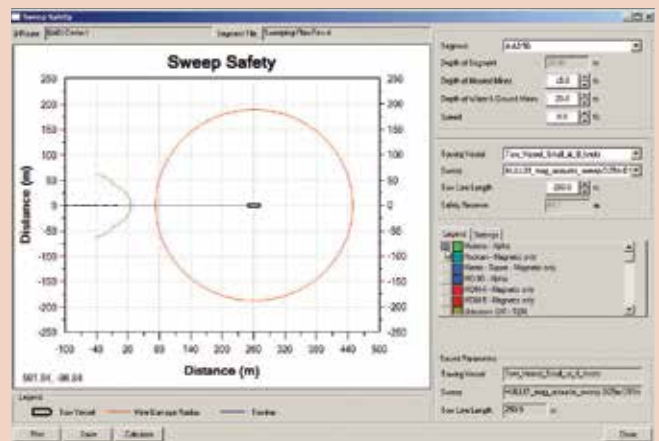
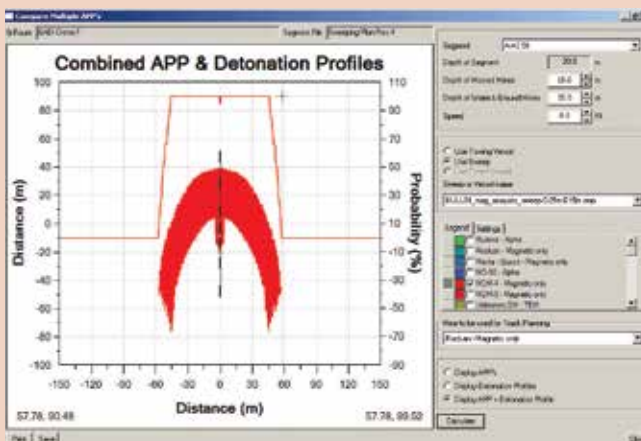
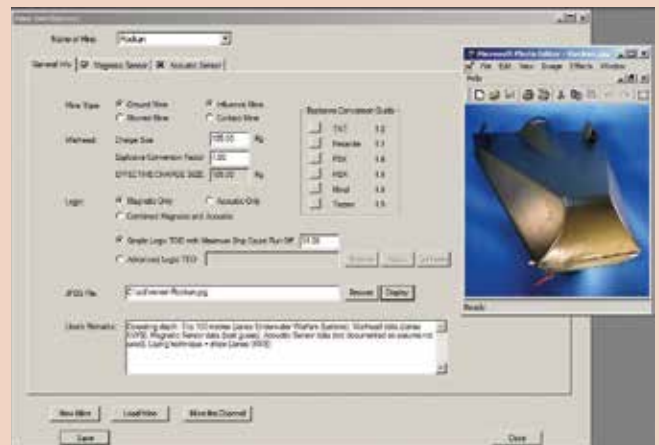
Additionally, there is the capability to manually design and manipulate sweep configurations and add acoustic generators to model magnetic/acoustic sweep.



SWEEP EFFECTIVENESS

The Sweep Effectiveness software models various mine logic and sensor interactions with the magnetic and acoustic signature of a sweep, ship or tow vessel, providing as an output, Actuation Probability Profiles for the particular sweep, ship or tow vessel against the nominated threat mine.

The module also provides Detonation Profiles for each threat mine calculated for a sweep, tow vessel or target vessel and allows the optimum length of tow rope to be selected





THALES AUSTRALIA

AMAS MISSION PLANNING SUPPORT SYSTEM

(MPSS)

MPSS

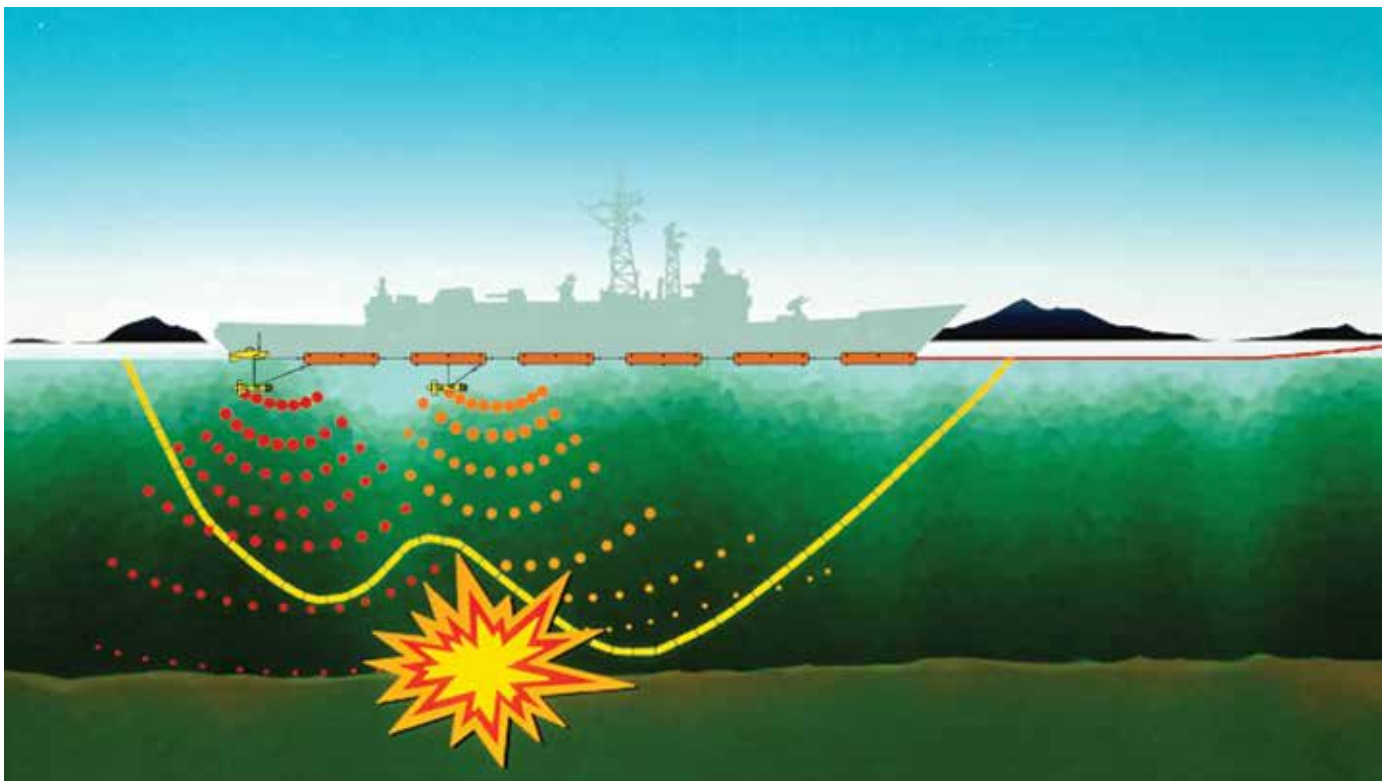
The Mission Planning Support System (MPSS) software incorporates integrated sweep design, sweep effectiveness and mission planning software supplied on a laptop computer and was developed to maximise the effective use of the capabilities of the AMAS Sweeps. The software is underpinned by algorithms validated by the Australian Defence Science and Technology Organisation (DSTO).

The system enables an operator to design the appropriate sweep using magnetic and acoustic modelling tools, to meet the minesweeping mission objective and establish the effectiveness of the sweep against designated mine sensors and logic.

The system is also integrated with a GIS capable of displaying HCRF and S57/S63 vector charts and has a full suite of MCM operation planning tools.

The MPSS planning steps include:

- Select the operations area and create Q-routes (using MPSS-GIS)
- Enter a ship's parameters (including its magnetic and acoustic signatures)
- Design a sweep (including its magnetic and acoustic signatures)
- Define the mine threat and add mines to the channel
- Calculate Actuation Probability Profile (APP) and detonation profiles for magnetic, acoustic and combined magnetic/acoustic mines
- Calculate safe towline length
- Calculate track plan and run sequence
- Mission assessment of the swept area (using MPSS-GIS).

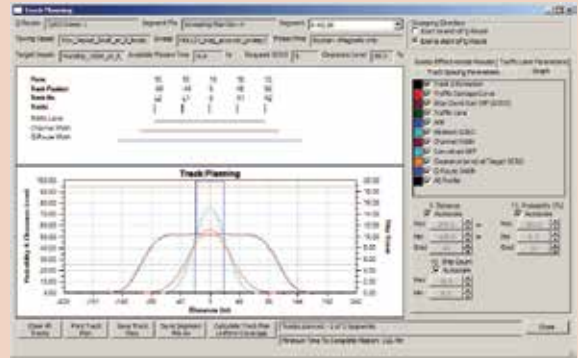


TRACK PLANNING

The Track Planning software provides for the development of optimal minesweeping mission profiles for the selected Dyad Influence sweep, based on operator input of mission parameters and constraints.

It encompasses calculation of channel parameters, track planning, level of effort constraints and ship count coverage profiles, based on the output of the sweep effectiveness module.

This module interfaces with the MPSS-GIS software.

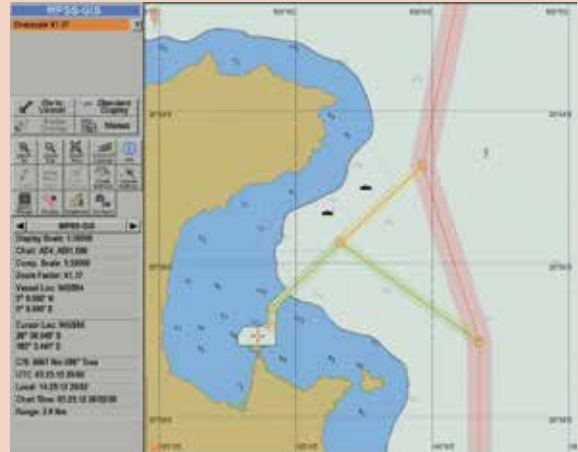


MPSS - GIS

The MPSS-GIS software provides the ability to plan a mission visually on HCRF and/or S57/S63 electronic nautical charts.

Multiple Q-routes with associated segmentation and track plans can be created using the user-friendly planning tools and colour coded in accordance with NATO conventions.

The files created can be read by the MPSS software.



MISSION ASSESSMENT

The MPSS-GIS software accepts post mission assessment data from the Sweep Tracker Monitor System (STMS). This DGPS based tracking system provides the MCM Commander with accurate sweep positional information throughout the mission, allowing for easy identification of 'holidays' and assessment of clearance and ship count run off.

The quality of the GPS data and status of the Advanced Acoustic Generator/Infrasonic Advanced Acoustic Generator recorded throughout the mission can be viewed.

