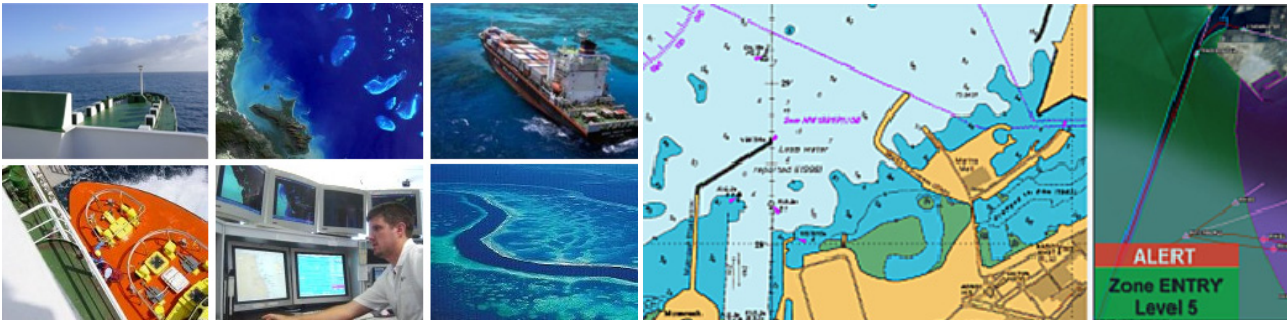


L-3 Nautronix

Reef VTS

MARITIME SITUATIONAL AWARENESS



L-3 Nautronix is at the forefront of Vessel Tracking Systems and Universal Automatic Identification Systems technology in Australia.

OVERVIEW

L-3 Nautronix develops sophisticated solutions for the Defence and marine environments. The company specialises in underwater detection, through-water communications, navigation, target and sensor monitoring and GIS.

Reef VTS (Vessel Tracking System) is a solution for vessel monitoring in both the near and offshore environments. The system provides situational awareness with real time tracking of targets and the display of target attributes.

The Traffic Information Module (TIM) is the vessel traffic monitoring and data management heart of the Great Barrier Reef and Torres Strait Ship Reporting System (REEFREP), developed for Maritime Safety Queensland and AMSA by L-3 Nautronix.

REEFREP is designed to enhance the safety of shipping operations and to protect the delicate marine environment of the region. The system has been in continual operation since 1997 and has recently been designated a Coastal VTS by the IMO.

The Target Modeling, Analysis and Communication System (TMACS) is L-3 Nautronix's commercially available VTS system that draws on a cross section of L-3 Nautronix core technologies to provide a tool to effectively display, analyse and manage target information for a variety of purposes.

The system is easily deployed on standard computer hardware. When combined with an AIS Base Station it provides a low cost VTS solution that can be scaled to a solution that supports multiple users at multiple locations managing information from multiple target sensors of various types.



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MARITIME SITUATIONAL AWARENESS

VESSEL TRAFFIC SYSTEM (VTS)

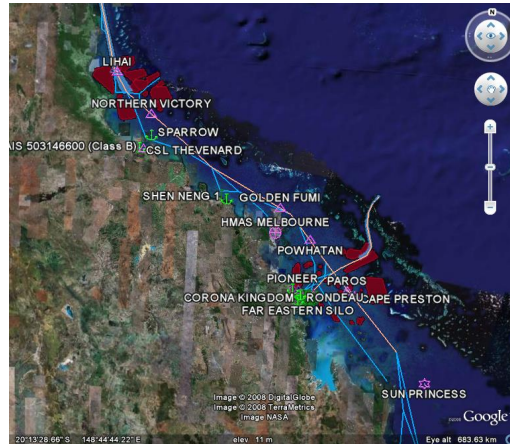
The Traffic Information Module (TIM) application consists of a multi-user database for recording ship movements in the SRS area (ships supply REEFREP reports via VHF) and a graphical display which is a comprehensive, dynamic surface picture of ship activity off the Queensland coast overlaid on a raster backdrop of official RAN charts. The graphics system also combines radar tracks in three strategic areas and other identification/position (SatC/AIS) data.

The TIM is a client/server technology using the Oracle RDBMS and HSA's graphical (ECS) display software

The TIM provides the focal point of the numerous integrated systems which form the SRS.

As well as the database and graphical display capability described above the TIM features:

- Numerous warning mechanisms to assist in safe and legal navigation
- Predictions of other ships a reporting ship will encounter and dissemination of maritime safety information
- An interface to the AMSA's Rescue Coordination Centre (AUSREP system)
- Remote access by authorised users to the graphical surface view of the SRS area



Reef VTS

L-3 Nautronix

Perth Office:
108 Marine Terrace
Fremantle
Western Australia, 6160
Australia
Tel: +61 8 9431 0000
Fax: +61 8 9430 5901
www.L-3Com.com/Nautronix
info.nautronix@L-3Com.com

Sydney Office:
Level 1,
121 Walker Street,
North Sydney
New South Wales, 2060
Australia
Tel: +61 2 9957 3549
Fax: +61 2 9959 3594



Nautronix