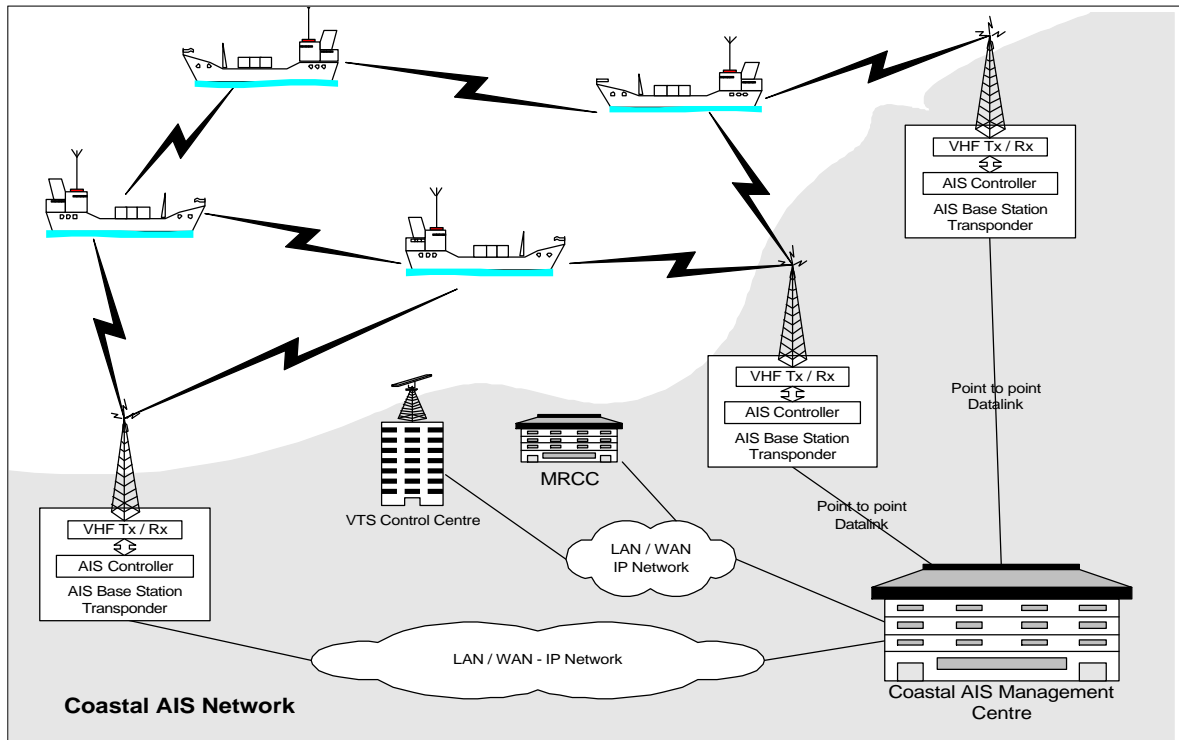


Coast Station Automatic Identification System (AIS)

Among the wide range of SECMAT NT equipment and software dedicated to maritime mobile services, this system manages and supervises the traffic related to the Universal Automatic Identification system (UAIS). It operates in the VHF bandwidth (A1 area).



- Complies with recommendations of ITU, IMO, IEC, and IALA.
- Modular and expandable system.
- Easy integration in existing coastal infrastructures (shared management of C70 with GMDSS system, VTS systems data exchange, etc.)
- International standards interfaces and IP connectivity.
- Client / Server architecture and Objet modelling.
- User friendly man machine interface operating with Windows XP / Windows 2000 Pro.
- Remote handling of maintenance, configuration, and software update.
- Secured and reliable with a permanent monitoring and optional redundancy.

Available Services

- Traffic reception, supervision and archiving.
- Broadcast of DGNSS data, and radar assets.
- Transmission of information request messages. (Optional long-range feature).
- A to N handling (broadcasting).
- Messages and security related messages broadcast.
- Traffic management (reporting rate and slot assignment, area setting, channels managing and FATDMA assignation).
- Traffic database, and post processing

SYSTEM OVERVIEW

AIS (Automatic Identification System) is a modern data radiocommunication system defined by IMO, using VHF data link. It allows self-organised automatic reporting and data exchange between mobiles stations, and / or fixed stations (vessels, SAR aeroplanes, coastal stations, etc.).

The first objective of the system is to improve safety at sea by enhancing actual maritime positioning systems: radar and vocal communications. Each station equipped with a transponder transmits periodically its own position on the VDL (VHF Data Link), and receives the positions of all other stations located within its VHF range. The position information received at a coastal system is processed and can be user friendly displayed by cartographic software applications, and / or specific software applications like coastal VTS or Port VTS, or by an Electronic Chart Display and Information System (ECDIS).

The AIS coastal system allows a wider range of applications related to safety at sea like: meteorological broadcasts, navigation aids message broadcasting, information relaying to improve coverage of a specific area, radar (ARPA) information broadcasting, security messaging, etc.

This system, resulting of the maritime communication technology developed by SECMAT NT, allows as well the management of a stand alone “port station” or regional “shore station”, or a whole nation wide coastal network. It improves navigation security, environmental protection, and law enforcement at sea, by collecting vessels dynamic information (position, speed...), and voyage related information (destination, cargo...) allowing navigation management, and information broadcast to vessels.

In addition, this system is able to handle maritime traffic management on a stand -alone basis, or in co-operation with a radar VTS system.



NETWORK FEATURES

- Multiple AIS shore stations (PSS - Physical Shore Station) and control centres (LSS - Logical Shore Station) interconnection.
- Transparent communication administration.
- Primary and Backup systems handling with automatic monitoring.
- Different data filtering levels to operate with limited network bandwidth at PSS and LSS level.
- IP protocol used on LAN/WAN and Internet connectivity (VPN) with security implementation (IPsec).
- Access and client/user configuration control.
- Regional - National AIS network inter-connection handling.

AIS Data routing	AIS System management	Client applications	Databases
<ul style="list-style-type: none"> • Physical Shore Station (PSS) <p>The Base Station Controller (BSC) equipment monitors and controls the AIS base station transponders fitted in the shore station.</p> <ul style="list-style-type: none"> • Logical Shore Station (LSS) <p>This software module can be located on a workstation connected to the AIS data network. It provides the AIS services to clients (external or internal) through Basic AIS Services (BAS) according to IALA recommendations.</p>	<p>This software module is the main part of the coastal AIS system. It administrates and monitors the system without interference with operations.</p> <ul style="list-style-type: none"> • Configuration manager • AIS system network configuration • Transponder and Base Station Controller (BSC) configuration • Supervision and management 	<ul style="list-style-type: none"> • AIS system interfaces • Basic AIS services • AIS traffic statistics • AIS system events logs • AIS traffic replay 	<ul style="list-style-type: none"> • Messages logs • Vessels logs • AIS VDL messages databases