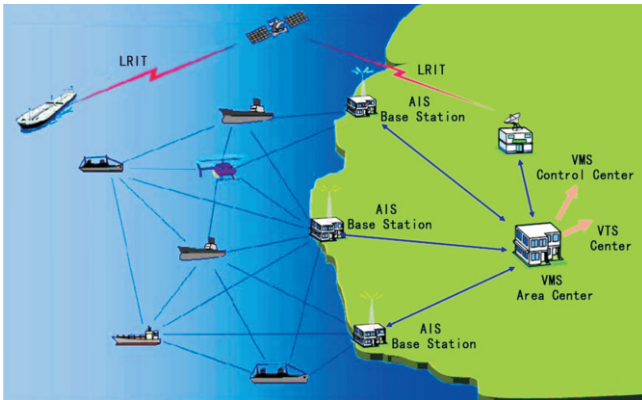


## VMS Description >

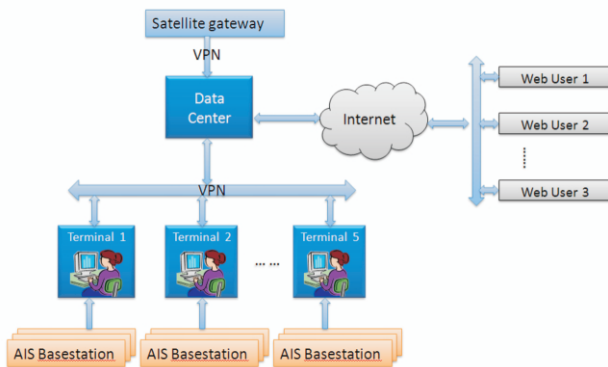
VMS (Vessel Monitor System) is based on AIS series products and ACeS satellite telephone terminals, purposed to establish multi-link communication and monitoring & controlling application platform, and provide overall solutions for ship-to-BS system-to-application platform and assist the user improving capabilities of vessel monitoring.

VMS Application Sketch-map



VMS is composed of a data center and multi monitoring & controlling centers. Offshore is mainly on AIS BS data and deep-sea on satellite data. Offshore vessels send AIS messages both to AIS base stations and data center for processing and storing, then distributed to each monitoring & controlling center for monitoring management. Deep-sea signals are monitored and located via satellite, the data is directly sent to the data center for processing. The user can monitor and control the vessels through the monitoring & controlling centers.

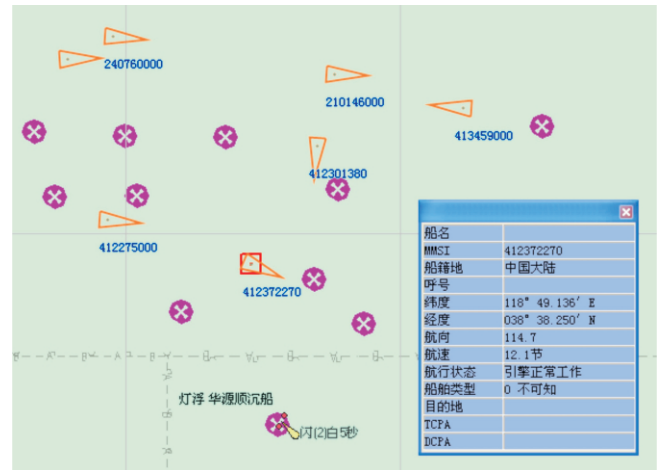
VMS Network Structure



Vessel information from each AIS base station is sent to the data center for processing and storing. Satellite data is directly sent to the data center for processing and storing. After AIS and satellite data is analyzed in the data center, the data would be distributed to each monitoring & controlling center. The data center is connected with Internet via web server; the user can obtain the service by visiting the website.

## VMS Functions >

Vessel display and record



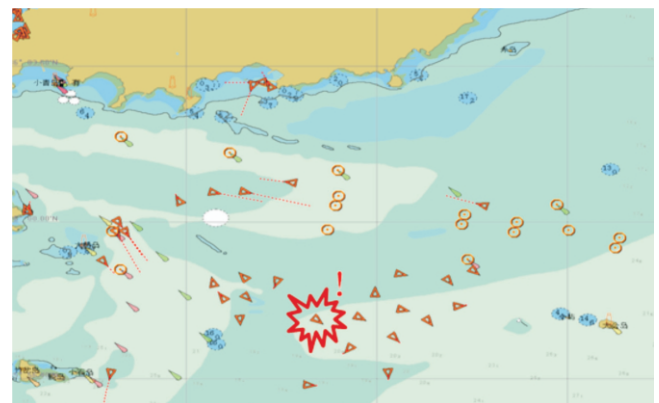
- Electronic chart display
- Vessel information display
- Pathway track and data replay

Channel and district monitoring & controlling



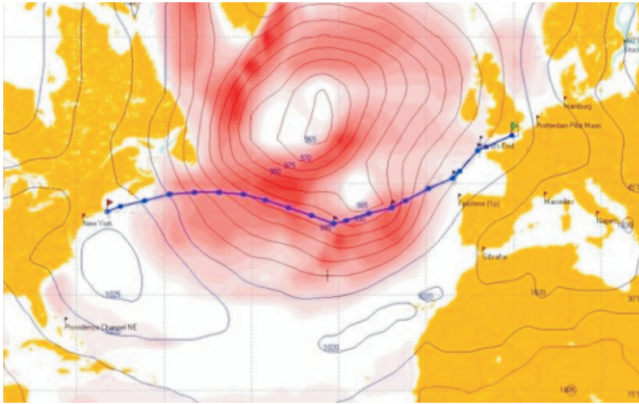
- Channel traffic monitoring and controlling
- District setting and management
- District vessel flow statistics
- District vessel pathway replay

Sea emergency aid



- Real-time display alarm vessel and alarm area
- Automatic alarm information sending to the surrounding vessels
- Telephone contact with distress vessel

Meteorological information publish and management



WEB site



- Typhoon information management
- Meteorological information publishing and precaution
- Fishing management
- Fishing user identification
- Fishing area setting and vessel management

- Provide standard chart display and Google Map display interface.
- User register and log-in
- Vessel inquiry
- User access management
- Port information service
- Arrival information
- Wharf parking and mounting arrangement

### System Allocation >

Place	Equipment	QNTY.	Note
Data center	Database server	2	
	Web server	1	
	Data analysis workstation	1	
	Communication processing workstation	1	
	Monitoring & controlling computer	1	Optional external display
Monitoring & controlling center	Application computer	5	Including vessel display, emergency aid, channel monitoring & controlling, meteorological information publish, fishing management and etc. subsystems
	Big-screen monitoring &controlling display	3	Optional
	Communication processing workstation	1	
	Monitoring & controlling computer	1	
Vessel	AIS CLASS A/CLASS B terminal	1	
	Satellite terminal (Black Box)	1	
	Computer (connected to Internet)	1	Optional

### Equipments >

Ship-borne AIS terminal			
Class A		Class B	
AtoN		SART	
Satellite terminal			
FR190VS Satellite terminal		Black box version	