

SeaTrac



Vessel Tracking ♦ Monitoring ♦ Messaging

SEATRAC

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The SeaTrac Solution

GEOSat Solutions' SeaTrac provides vessel owners with added security of tracking vessel location, monitoring on-board systems and real-time text messaging while aboard the vessel or hundreds of miles away.

In partnership with Cabit Systems of Toronto, Canada and through its own expertise in satellite technology and the marine industry, GEOSat Solutions, Inc. has developed a tracking and monitoring system designed specifically for pleasure and commercial vessels.

A boat owner, commercial operator or charter fleet manager, can track the vessel's position and monitor the status of on-board systems, remotely through an Internet connection. In addition, from on-board the vessel, the operator can open, modify and close Float Plans, report Problems, Weather, Accidents, Emergencies and even send text messages by means of a small, hand-held device using SeaTrac's Palm OS based software.



The PDT-100 is the satellite transceiver, antenna and 12-channel GPS. It has no moving parts.



With the SeaTrac's OS software, the vessel operator can file, modify or cancel a 'float plan' filed with the home office or monitoring company.

Acu-Trac™ sensors to monitor bilge levels, AC and DC voltage, tank levels, alarms and other selected systems aboard the vessel. The unit stores data inputs and sends encrypted reports via satellite or wireless data network to a land-based monitoring center in the form of packet data transmissions. Condition reports are sent automatically from the boat at predetermined intervals. The vessel operator can also transmit specific reports of mechanical problems, emergency conditions or updated text messages using the SeaTrac Palm PDA.

Reliable Wireless and Satellite Coverage

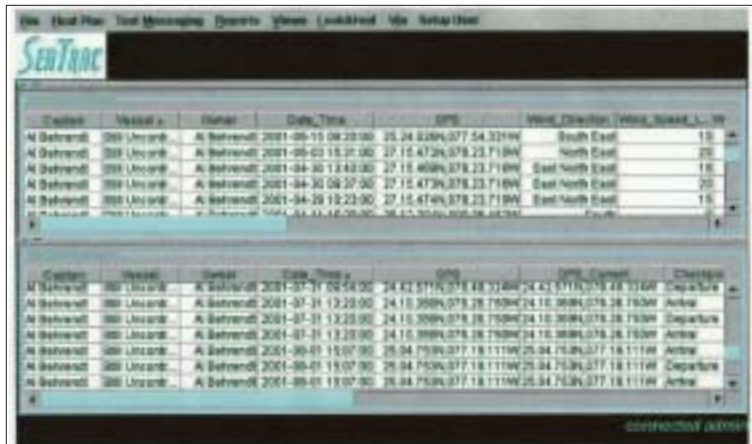
Depending on the geographic use of the vessel, SeaTrac utilizes a small, inexpensive and high-performance RF transceiver that supports wide-area wireless data networks or a mobile satellite terminal supporting the TMI Communications Network (MSAT-1). Both terminals contain an embedded 12-channel GPS receiver. The terminal interfaces with on-board local



Built-in links with nautical charts powered by MarinePlanner.com™ provide pinpoint location of the vessel at each SeaTrac manual or pre-programmed transmission. To track the vessel's movements, the unit can be 'polled' by the monitoring service - an important feature when searching for missing or stolen vessels

"A ship in harbor is safe, but that is not what ships are built for."

John A. Shedd



Vessel	Lat	Long	Altitude	Speed	Heading	Course	Depth	Temperature	Pressure	RPM	Engine Hours	Oil Pressure	Temp
A. Behrendt	38.1	-122.1	10	10	10	10	10	10	10	10	10	10	10
A. Behrendt	38.1	-122.1	10	10	10	10	10	10	10	10	10	10	10
A. Behrendt	38.1	-122.1	10	10	10	10	10	10	10	10	10	10	10
A. Behrendt	38.1	-122.1	10	10	10	10	10	10	10	10	10	10	10
A. Behrendt	38.1	-122.1	10	10	10	10	10	10	10	10	10	10	10

The password protected *Seatraconline.com* web site gathers all the data from the vessel and provides a historic profile of the vessel's voyage and the on-board condition of selected systems.

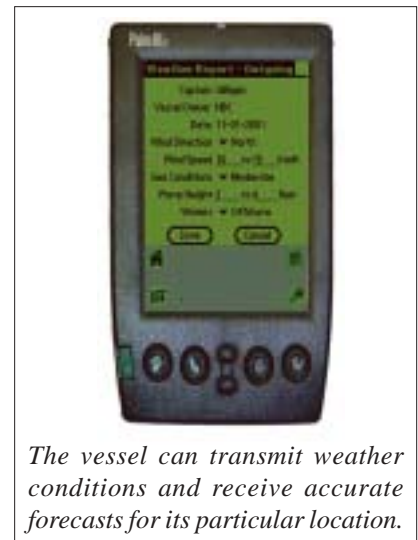
Automatic Notification

SeaTrac can reduce theft, insurance claims and even lower insurance premiums by acting as an around-the-clock security system. For a low annual subscription fee, a private firm can provide 24/7 monitoring services. The user and the monitoring center, through a special Internet site (with password control), can access encrypted reports from the vessel. At a glance, the subscriber can see the vessel's latest position on a nautical chart powered by *MarinePlanner.com™* and can view the status of on-board systems on a graphic display screen. Notification is

automatically sent to the subscriber whenever an alarm condition exists and a predetermined response organization is notified. When alerted by an alarm or unauthorized movement, the boat's whereabouts can be tracked and relayed to the appropriate law enforcement agencies.

File a Float Plan, Report Problems and More

With SeaTrac activated, a vessel's owner can file a 'float plan' with the monitoring organization using the SeaTrac Palm. The SeaTrac monitoring organization automatically tracks the vessel's location and notes any deviations from the float plan. In addition, SeaTrac's Palm allows two-way messaging during the voyage. This is a particularly convenient feature for reporting problems or requesting commercial assistance when out of normal radio range. The SeaTrac Palm has an 'Emergency' screen, which can be activated at any time to send a distress message to the monitoring center to report a fire, sinking, critical illness or collision.



The vessel can transmit weather conditions and receive accurate forecasts for its particular location.



SeaTrac's cradle holds the Palm securely during transmission and reception yet allows easy removal for remote data entry. Backup units are inexpensive and readily available.

SeaTrac's monitoring system can even scrutinize engines and mechanical devices on the vessel. For example, in addition to fluid levels, SeaTrac's sensors can monitor engine hours, oil pressure, temperature and rpm's. Using the SeaTrac Palm's messaging capabilities, the monitoring company can notify the vessel's operator when to change oil and can indicate the closest service facility to the boat's location. Charter operators and management companies can be certain that the chartered vessel is being operated within specified speeds and temperatures as well as insuring that geographic cruising limits are not exceeded.

Coverage Where It's Needed

For the continental U.S. and Canadian inland waters, SeaTrac uses RIM modems to access wide-area wireless data networks. For broader geographic coverage, SeaTrac utilizes spot beams from the geosynchronous MSAT-1 satellite which covers all of North and Central America, including coastal waters out to more than 200 nautical miles. The SeaTrac service area includes the entire Gulf of Mexico, the Caribbean basin and Northern South America.

The SeaTrac Advantage

GEOSat Solutions' SeaTrac has undergone five years of development and testing. The SeaTrac's Palm OS software was written specifically for marine applications and extensively tested across the US and Canada and throughout the Caribbean on the TMI Communications Network.



SeaTrac hosted on the Palm PDA (Personal Digital Assistant) adds a new dimension and functionality to every vessel's wheelhouse or cockpit. The SeaTrac application doesn't even take a lot of memory space on the Palm. With SeaTrac, you can still take advantage of all the tools and applications that are standard on your Palm; Address Book, Memo Pad, Date Book, Calculator and the HotSync data backup to your computer desktop. SeaTrac's portability allows the vessel operator to pre-plan the voyage at home or in the office entering important contact information and the 'float plan' into the Palm. When aboard the vessel, the float plan is filed with the monitoring company using a simple 'SEND' command on the Palm touch pad.

SeaTrac's reliable, real-time encrypted messaging and delivery acknowledgments give the vessel operator a two-way link to shore-based services. This is particularly important when problems or emergencies arise. With the vessel's location known, the messaging feature is also very convenient for receiving accurate weather forecasts for the vessel's present location.

For the very latest information on SeaTrac visit: www.geosatsolutions.com/SeaTrac.htm



GEOSAT SOLUTIONS

Innovation Through the Integration of Satellite Technologies

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