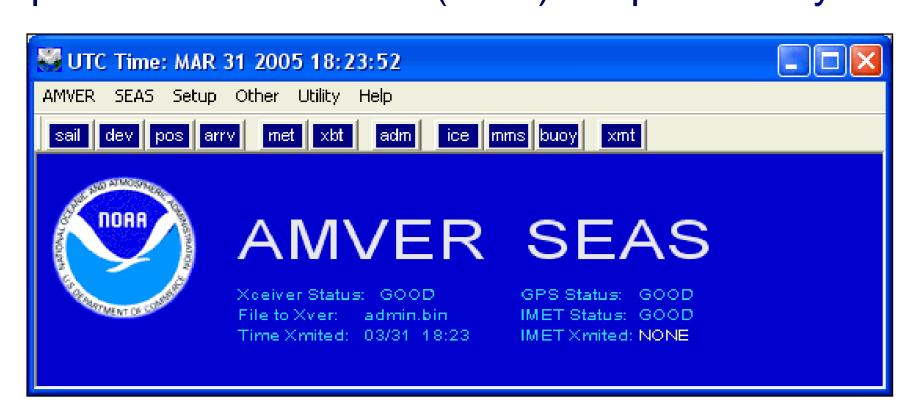


AMVER SEAS 2K

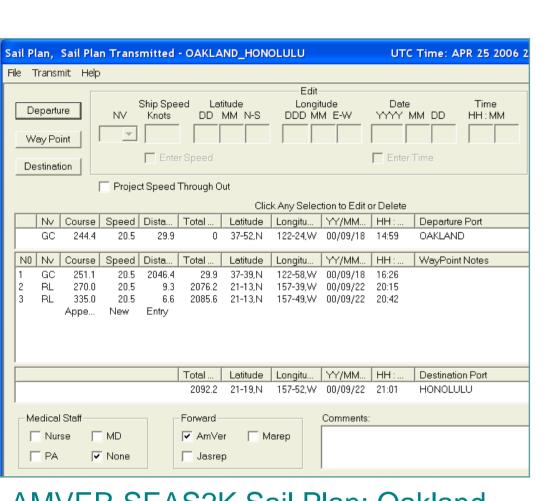
Automated Mutual-Assistance Vessel Rescue System; Ship and Environmental (Data) Acquisition System



AMVER SEAS 2K is a real—time ship and environmental data acquisition and transmission system. The AMVER software creates a series of reports which describe point of departure, route and arrival. These reports, which are transmitted using Standard-C, include ships in a real-time search and rescue database. The SEAS 2K software acquires atmospheric, oceanographic data and transmits the data real-time for addition to scientific and operational databases. SEAS 2K is employed on volunteer observing ships (VOS) and on NOAA, UNOLS, Coast Guard Vessels.

AMVER was developed for the United States Coast Guard and is used by authorities worldwide. This is a voluntary ship reporting system, where the participating ships are identified in the area of distress and the best-suited ship(s) are diverted to respond.

The Coast Guard extracts identification data from the SEAS 2K Meteorological messages. SEAS 2K is installed on 350+ VOS ships and over 200,000 AMVER SEAS MET messages are transmitted per year.



AMVER SEAS2K Sail Plan: Oakland to Honolulu.

All AMVER msg density plot, month of 3/06

SEAS 2K Met msgs from 4/05 to 4/06 the coast of San Francisco



Crew of M/V Cape Nelson and survivors from the Fishing Vessel Abound, that sank 625 miles off the coast of San Francisco

SEAS data is used in a variety of applications by diverse public and private organizations.

MET data is used for model development of forecasts by national centers and among other things, provides data that can help correct existing climatologies.

Atlantic Surface Analysis: Valid 12 UTC 02 5/06 Sources OPC, TPC,

XBT State Composition of the com

SEAS 2K is operating in all the worlds oceans. Developed and tested by NOAA's Atlantic Oceanographic and Meteorological Laboratories and SCRIPPS Institute, the U.S. Weather Service and Woods Hole

Metal Interplaints in the meteorological (MET) reports. Currently installed on 350+ vessels. Implemented 2000



Cloud Dialog from Met Report

- Hand Launching of Expendable Bathythermographs (XBT's). Implemented 2003.
- Integration: AOML and SIO auto-launchers and the Mark 21; WHOI and NOAA AutoIMET; and thermosalinograph. Real-

Time Iridium transmissions. SEAS 2K auto-launcher on all high density cruises in the Atlantic (AOML) and Pacific (SIO and AOML). Implemented 2005

SEAS 2K Computer

controlling XBT

Auto Launcher

TSG installed on the VOS ships Cap Victor in 2006 and Oleander in 2007





SEA Bird TSG and SST sensors

NVExpoeTSG in

SEAS XBT data is transmitted real-time via Standard-C to Silver Spring. It goes though extensive quality control before being distributed to the GTS for scientific other and operational uses Record MCSE WESSERICATION OF THE PROPERTY OF TH

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