Major changes in AMVERSEAS V 9.2 compared to the previous version

AMVERSEAS system wide

- Fixing the delay issue of AMVERSEAS in Windows 7 for a standard user moving all data bases to C:\Users\Public\Documents\AMVERSEAS_V9\DataBases during the installation process.

SEAS Console: Interface application to manage the AMVERSEAS programs' activities.

- New SEASmap.exe
- Terminating cleanly XBT Data Recorder from SEAS Console.

SEAS Transceiver Interface: Real-time application which combines reception of GPS data and transmission of collected data via several devices.

- Fully integration of IridiumFTP program into SEAS Transceiver Interface. This will replace the Thrane & Thrane transmission using Iridium which decreases the transmission costs. The IridiumFTP program is a minimal FTP program that performs binary uploads via a TCP/IP connection. Aside from a regular Ethernet connection, the program can use the Windows RAS dialer to establish a dialup connection. If a disconnection occurs in the middle of an upload, the program can resume where it left off the next time it connects.
- Using separate threads which handle serial port communication to improve the application's performance.
- New GUI layout.
- New interface between SEAS Transceiver Interface and IridiumFTPer program via socket. This expands the system installation possibilities (e.g. you can use a computer for transmission, and AMVERSEAS computer to show, and manage settings, and data).

SEAS XBT Data Recorder: Real-time application which obtains information on the temperature structure of the ocean to depths of up to 2000 meters.

- Adding the capability to connect up to four auto launchers, increasing the number of automatic shooter from 8 to 32 requiring minimum rider effort.
- Showing the information for the current device driver [Main menu>Setup>Instrumentation].
- Storaging the generated profiles in a temporary directory. Every 5 minutes a thread looks at this directory and if it finds a predefined number of .bin files then the thread compresses the files, and moves the .zip file to the transmission queue directory to be transmitted using the FTPer program. All this is transparent to the user. To define the number of profiles to be zipped go to Main menu > Setup > Transmission.
- Including climatology to help the ship rider to determine when the profile is bad. During the launch, the XBT application should show the temperature profile with overlaid climatology.
- Cruise Report Generator integration in AMVERSEAS. This self-developed application allows users to create automatically a cruise report by choosing the information generated during a cruise making the rider's job easier.

- Adding auto launcher and MK21 serial number to make easer to identify possible hardware problem during a specific transect.
- Adding alarms "Probe's serial number missing", "Call Sign invalid", "Maximum number of drops achieved".
- Adding utility to convert the JJVV message from bin format to ndc format [Main menu>Files >Convert JJVV bin to NDC format].
- Adding time-out by reading AOML auto launcher command's response.
- Incorporating Sippican MK21 Ethernet DAQ data acquisition system.
- New utility which compresses all AMVERSEAS configuration, and generated data into C:\Users\Public\Public Documents\AMVERSEAS_V9\XbtCruiseDataYYYYMMDDHHMMSS.zip file. This option makes easier the data acquisition to be sent to AOML creating a standard avoiding human errors. Main menu > Utilities > Compress cruise data.
- Adding option "Convert Raw data to SEAS binary".
- The operator can choose to display or not Climatology and Bathymetry.
- "Auto launcher setup" dialog includes the probes resistance.
- "Add drop note" dialog includes messages that the operator routinely write in. Also a button "Do not transmit" was included.
- Adding option to only check one tube.
- Including an adjustable alarm to alert rider that there are N XBT's left in the launcher.
- Including Distance Drop Plan. The distance drop plan is a more natural and less confusing method of setting up a drop plan. A distance drop plan is a direct implementation of what current cruise plans instruct the rider to do. This will reduce rider confusion and minimize interaction with AMVERSEAS at all hours.
- Support previous .bin file formats to File > Convert SEAS binary to JJVV format, File > Convert SEAS binary to ASCII, File > Convert SEAS binary to NDC format.

SEAS TSG Data Recorder: Real-time application to collect thermosalinograph data.

- None

Meteorological Observations

SEAS Met Observations Logger: Manual component that provides accurate meteorological and oceanographic data in real time from ships at sea.
SEAS AutoIMET Data Logger: Real-time application to produce automatically high quality marine weather observations. It connects to a Remote Computer System using sockets to retrieve a data stream containing the measured weather parameters.

SEAS Met Observation Logger

- None

SEAS AutoIMET Data Logger

- Implementing the option to retrieve measured values via serial port, Main menu > Setup > Data source.
- Using separate threads which handle serial port communication to improve the application's performance.

AMVER Reporter: Submits four types of reports used by the U.S. Coast Guard to update their data base for search and rescue operations.

- None

SEAS PC-Watchdog: to monitor the proper operation of the AMVERSEAS components. It is designed to keep the applications running continuously.

- None

High quality documentation

- **How_to_generate_a_cruise_report.pdf.** This document is a guide to use the Cruise Report Generator in AMVERSEAS.
- **Using_XverXface.pdf.** This document is an installation guide if you want to transmit data with Thrane and Thrane satellite network.