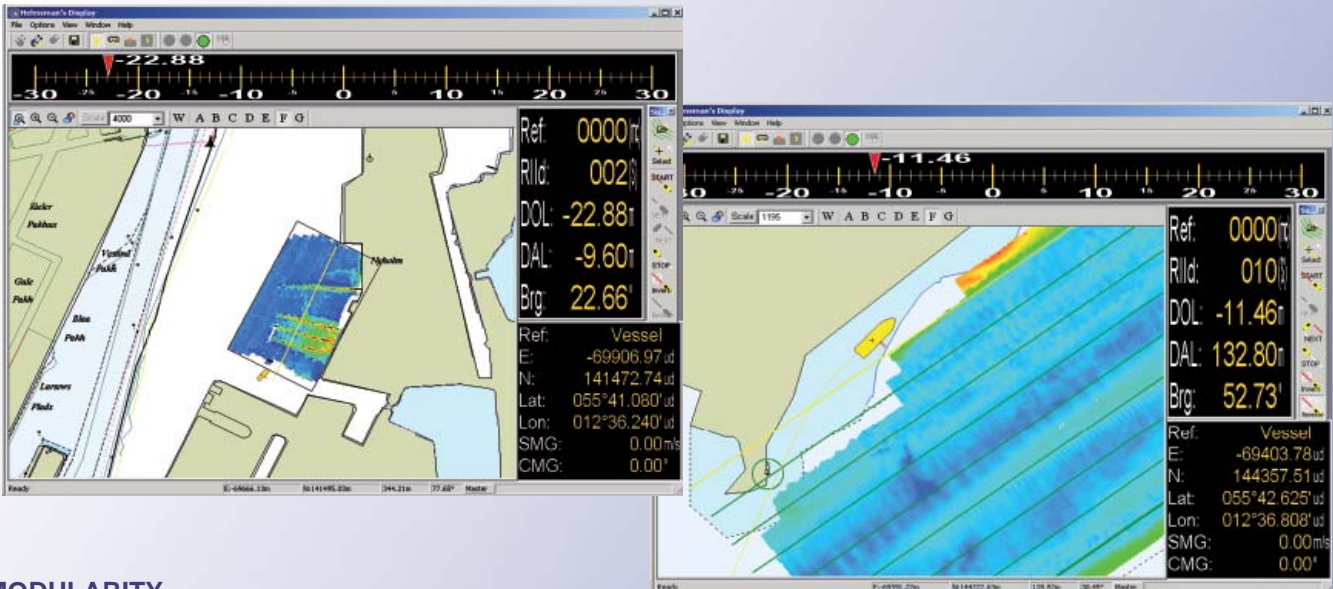


APPLICATIONS

The NaviPac software utilises integrated navigation and data acquisition software suited for all marine navigation and survey applications.



MODULARITY

NaviPac provides complete modularity through use of the multi tasking, multi threading and networking capabilities of the Windows 2000/XP operating system. The software is highly flexible and user configurable and the user interface adhere to the Microsoft Interface Guidelines making it very intuitive and easy to operate.

NAVIGATION SET-UP

The NaviPac set-up module provides easy selection of geodetic parameters, navigation systems, devices, offsets and port settings.

DEVICE I/O DRIVERS

A vast number of field-tested device I/O drivers are provided as standard and generic I/O drivers allow user definition of device I/O drivers. Data is interfaced via RS232, LAN/WLAN or via digital I/O interface. Device I/O drivers for multibeam echosounders, multibeam side scan backscatters, pipe-trackers, scanning and profiling sonars, etc. are provided in the NaviScan software.

TIME SYNCHRONIZATION

Time stamping of sensor data, incoming as well as outgoing, can be done in two ways, either by the internal computer clock or by the PPS output available from most GPS receivers. Using the PPS output data are synchronized relative to the GPS/UTC time frame resulting in an accuracy of a few milliseconds.

DISTRIBUTED TIMETAGGING

Using the special designed TimeBox NaviPac (and NaviScan) utilises distributed time tagging based on one or more Linux based RT collection boxes that handles interfaces and deliver timed data to any LAN connected clients.

SURVEY PLANNING

Survey planning is done by defining the survey area and the survey lines. A variety of methods for creation of survey lines is provided, e.g. by click-and-drag (of mouse/trackball), input of survey line coordinates, offset (parallel) survey lines, cross lines, circles, arcs, barge-lines, star patterns etc. Survey lines can easily be adapted to fit a defined survey area. Creation of templates allows input of other data formats.

DISPLAYS

The Navigation Display graphically presents the real-time absolute and relative positions of selected survey objects and cartographic features. The Helmsman Display provides off-track and along-track information, planned and actual fix locations, in a fully configurable graphic format. Total scenario management is available through the use of job and project files.



ELECTRONIC CHARTS

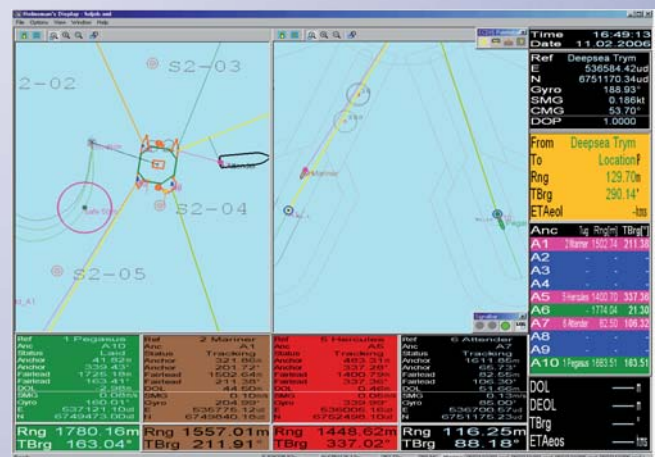
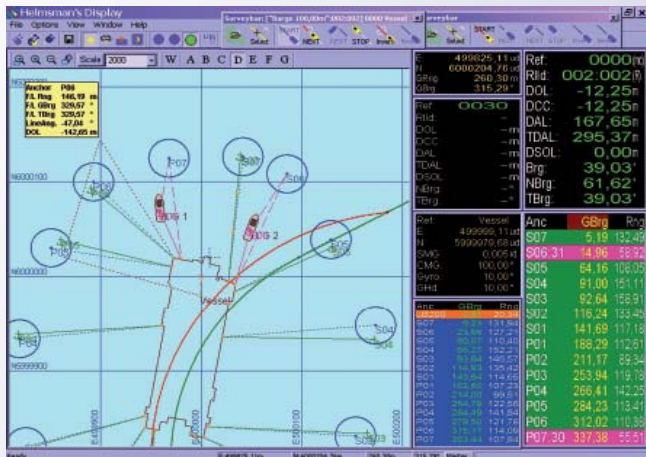
Vessel positions, survey lines (on DXF, DWG and ASCII formats) and objects may be displayed superimposed on E-Map or S57 based electronic chart displays. Coverage of depth information from singlebeam and/or multibeam echosounder as well as DTM's generated on-the-fly can be presented on the Navigation Display through interface with the NaviScan software.

DATA HANDLING

NaviPac provides a systemised way of managing and storing survey data. Records are saved to a project directory allowing you to set up new surveys or to quickly switch to an existing survey. During data logging records can be limited in time or file size defined by the user.

CLIENT/SERVER SYSTEM

NaviPac builds on a client/server solution, which allows execution of all software modules (including a/o Helmsman's display, LogData and several graphical QC displays) on any Personal Computer on the network.



WINDOWS DISPLAYS

Full system flexibility allows designing and configuration of surveys and preferred display settings and layouts. An unlimited number of displays can be opened, one of each type or several of the same type. Displays can be freely distributed to monitors working as slaves or to intelligent workstations for individual windows set-up and interactive use.

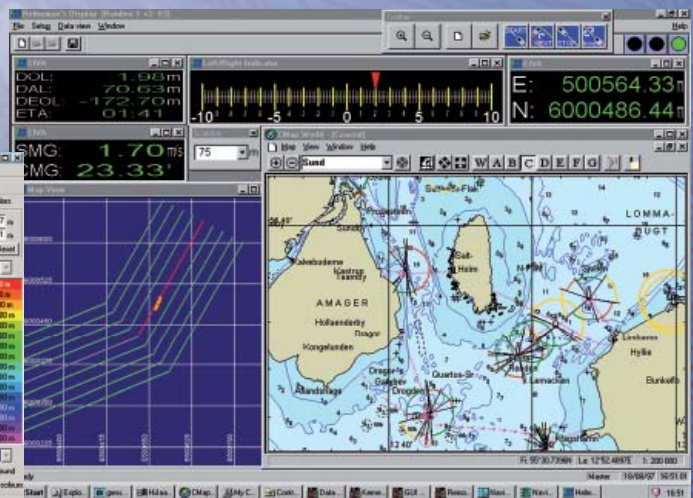
NAVIPAC LITE

Provides an affordable entry-level software package for on-line navigation. NaviPac Lite features same functionality as the NaviPac full version, except that the Lite version is limited in the numbers of device I/O drivers. Additional device I/O drivers can be added for gradual update to a partial or full version of the NaviPac software.

OPTIONAL MODULES

Optional software modules are available for NaviPac comprising a/o:

- Barge/Tug Management System(TMS)
- Rig Moves and Rig Crawl
- Cable and Flexible Pipe Lay
- Template Tracking



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