FEDNAV NAVIGATING COMPLEXITY
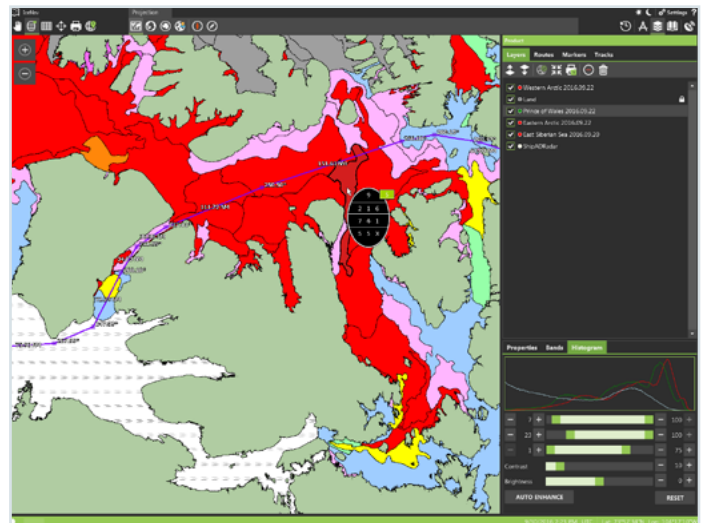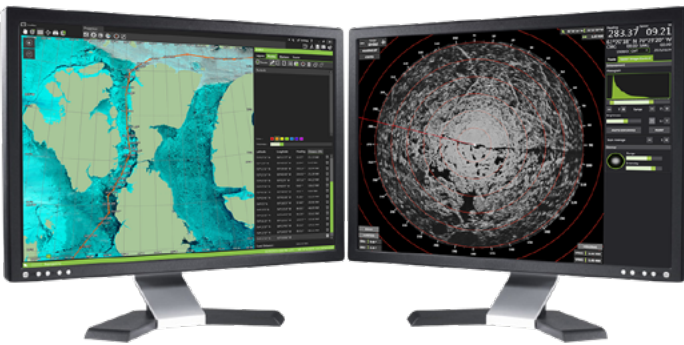
AT THE FOREFRONT OF ICE NAVIGATION TECHNOLOGY

UMIAK I
ST. JOHN'S

•ICE NAV

IceNav™ is a shipboard navigation system used by vessels operating in ice-covered waters worldwide. Developed and distributed by the Fednav Ice Services, IceNav is a complete ice navigation system featuring an intuitive interface that allows the reception, display, manipulation, and sharing of ice information products and provides an enhanced marine radar image for better ice detection.

FEATURES

- Satellite image display and manipulation
- Route planning
- Multilayer map interface
- Enhanced ice radar compatible with most marine X-band radars
- Radar tracking of ice features
- Ship track and radar data logging for playback and analysis of ice dynamics
- A timeline tool for efficient data management
- NMEA 0183 connection to DGPS, gyrocompass and/or AIS
- Support for most geographic product formats and cartographic projections
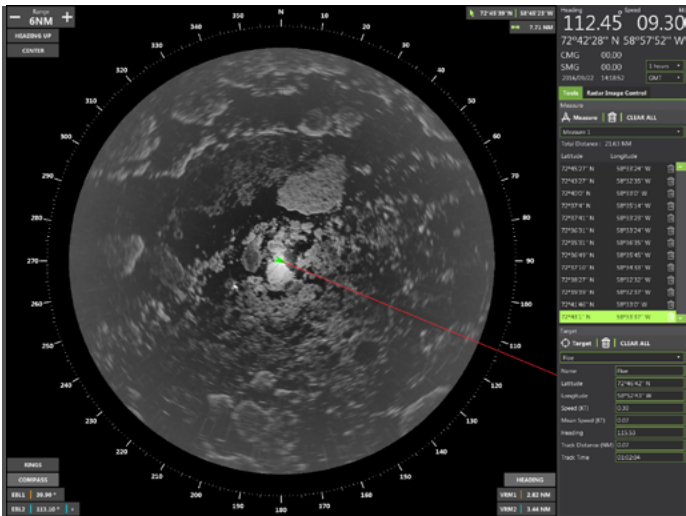- A robust communication system

ICE CHARTS IN ICENAV

IceNav supports several ice chart formats
- Raster, a georeferenced or non-georeferenced image file
- SIGRID-3, the World Meteorological Organization standard ice chart format, available from most national ice services
- Canadian Ice Service E00 and shapefiles
- ICEggs field charts

IceNav includes several features
- An Egg Code display tool
- A function to calculate the AIRSS ice numeral and the POLARIS risk index outcome based on ship's ice class
- Automatic ice routing message generation
- Four classifications are available for the display of vector ice charts: concentration, stage of development and accessibility based on AIRSS and POLARIS

ICE RADAR FOR SAFER NAVIGATION

IceNav's radar acquisition hardware connects to the vessel's X-band radar to provide an enhanced image for better ice detection.

Other functions include:

- Target tracking
- Measurement tools
- Multiple image enhancements

ONBOARD INSTALLATION

IceNav can be installed on a newbuild or retrofitted to an existing vessel. The footprint of the IceNav system is limited to two monitors, a PC workstation, an uninterruptible power supply (optional), a keyboard, and a ball mouse. The ice radar connects to the ship's X-band radar, eliminating the need to install an additional antenna. Standard NMEA 0183 connections are used for the vessel's GPS, gyrocompass, and AIS hook-ups. IceNav is network enabled, allowing for connections to printers, shared drives, and the ship's satellite communication system.

MULTI-VESSEL PLATFORM FOR SHARING INFORMATION

A fleet of vessels equipped with IceNav can share information both within that fleet and with shore-based fleet operators. Routes, tracks, markers, radar feeds as well as charts and satellite images can be exchanged between users directly within IceNav. By having access to the current ice radar feed of other vessels, navigators can assess the ice conditions other ships are concurrently facing. The ability to share routes, markers, and annotations facilitate the coordination of joint operations in challenging ice-infested environment. By amalgamating data from several vessels operating in proximity, IceNav users have a broader view of the prevailing ice conditions.

A MARINER-APPROVED SOLUTION

With IceNav, mariners can perform strategic route planning and tactical navigation in ice-infested waters. The latest ice information products can be downloaded regularly in order to plan an itinerary according to anticipated ice conditions. The optimized radar image then allows the crew to adjust their route as they navigate through the ice floes and open water leads.

IceNav can also be used as a shore-based planning tool. Through its intuitive user interface, IceNav is a powerful tool capable of assessing the feasibility of shipping routes based on current or historical ice conditions. It can also be used in hindcast for voyage analysis, thanks to the radar playback and large database into which ice charts and satellite imagery can be stored.

TESTIMONIALS

"The features of this modern system is a great aid to ice navigation."

– Captain Mark Normore, Master of the *Umiak I*

"The radar history playback function proved to be an essential tool to predict ice movement and plan the right timing to make an attempt into a very challenging ice zone. Also, the automated Ice Regime Routing Message, paired with an ice chart, allows for efficient route planning through the ice and saves significant time on a daily basis."

–Captain Michael Stokes, Master of the *Arctic*

CUSTOMIZED SOLUTIONS CAN BE OFFERED BASED ON YOUR REQUIREMENTS

Fednav Ice Services offers customized solutions based on your requirements:

- Complete system with map and radar interface
- Shipboard portable version
- Shore-based version with map interface only
- Ice information service
- Support for users
- On-site or online training

CONTACT US FOR A QUOTE AND WE WILL HELP YOU EVALUATE YOUR ICENAV NEEDS

E icenav@fednav.com
T 514.878.6500

FEDNAV

www.icenav.com