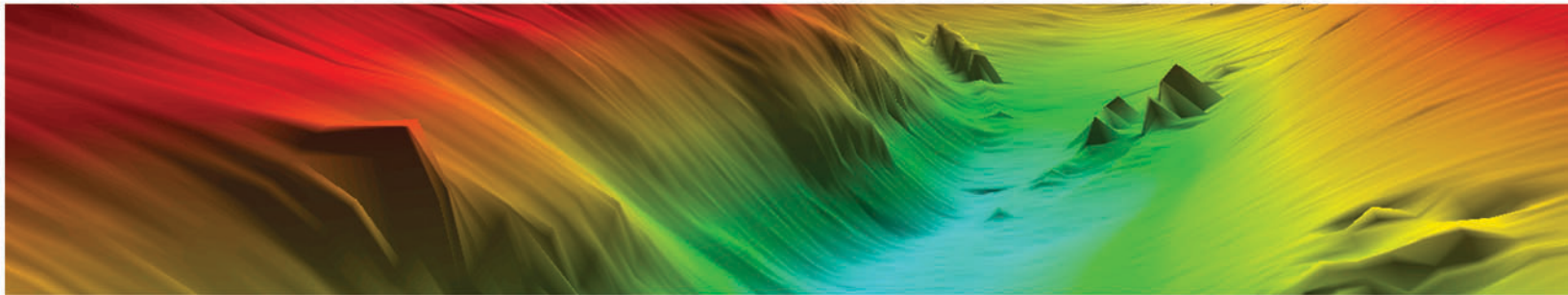


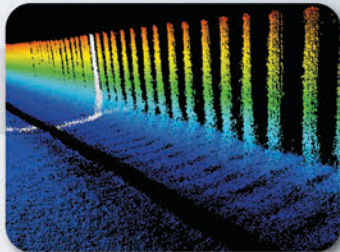


CleanSweep 3

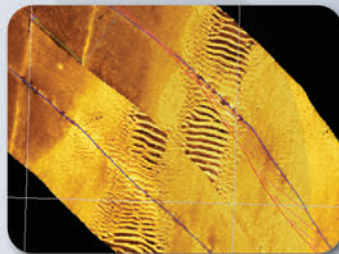
Hydrographic Data Processing Software



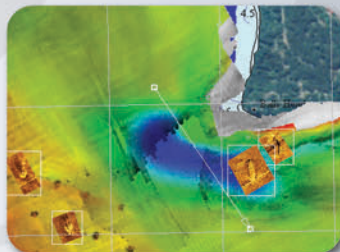
**High-quality sidescan processing for
precise geocoding and targeting**



**Advanced multibeam and
interferometry processing package**

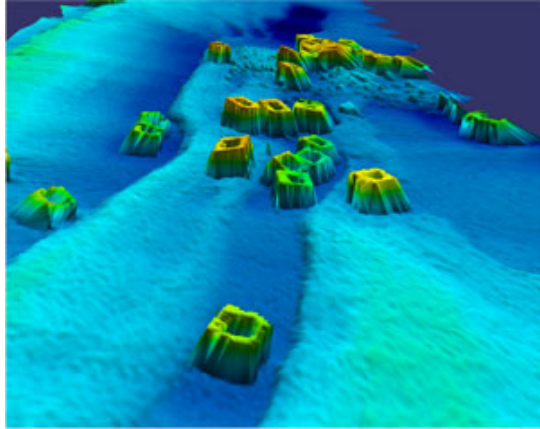


**Feature-based navigation tools
essential for AUV & towed surveys**



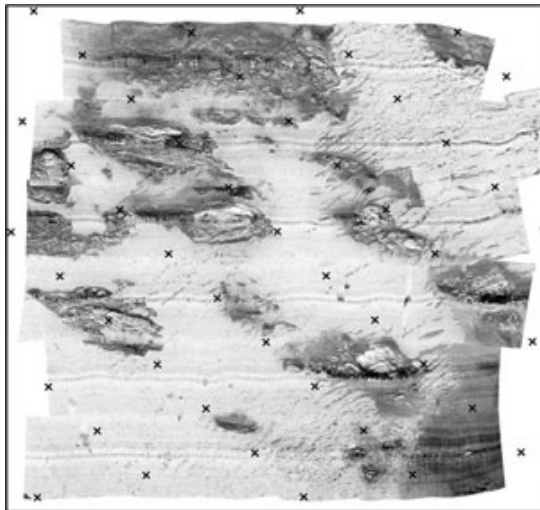
**Interactive GIS- like interface for
intuitive processing and QC**

Software for Hydrographic Data Processing



Data courtesy of Dr. T. Komatsu, Tokyo University Ocean Research Institute

CleanSweep provides a fast, user-friendly environment for processing hydrographic survey data and production of high-quality final products. Data can be imported from a wide variety of sensors including sidescan sonars, multibeam echosounders, laser line scan, and swath interferometric systems.



CleanSweep is an advanced tool for the management, processing, and analysis of

hydrographic survey data. With a wide variety of tools and capabilities, CleanSweep is designed to meet the dynamic needs of the marine surveying community.

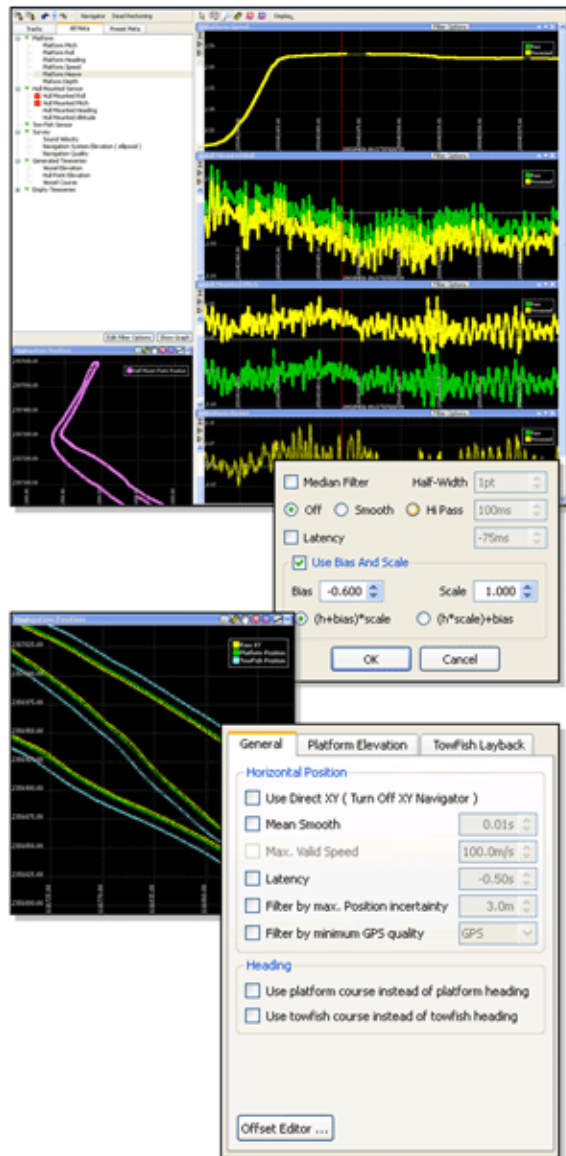
A key feature that differentiates CleanSweep from its competitors is the departure from time consuming, track-to-track interactivity required for processing of survey data. Rather, CleanSweep represents more of a "batch-interactive" processing philosophy, making use of all information in the survey, requiring less effort from the user, while still retaining interactive control over data processing and mosaicking.

- Charting
- Harbor surveys
- Pipeline Inspections
- Cable route surveys
- Environmental and habitat studies
- Mine counter-measure
- Deep-towed & AUV surveys

Features such as track-to-track inheritance of processing parameters, user-defined quality filters, and automated calibration tools eliminate much of the time-consuming elements of data processing. At the same time, CleanSweep provides many advanced processing tools that not only preserve, but enhance the user's control of the data.

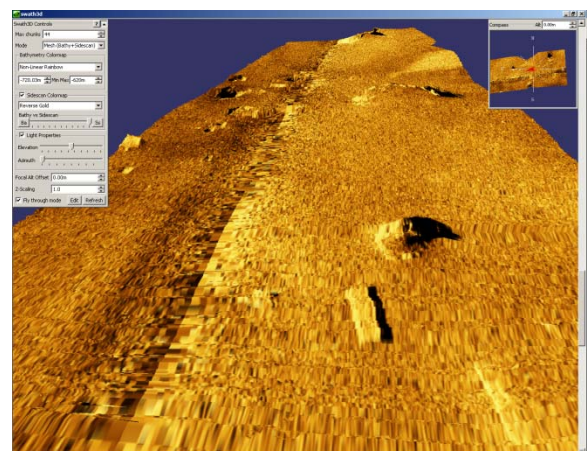
Accurate Positioning

High quality navigation and sensor attitude data are critical to the production of meaningful maps from hydrographic survey data.



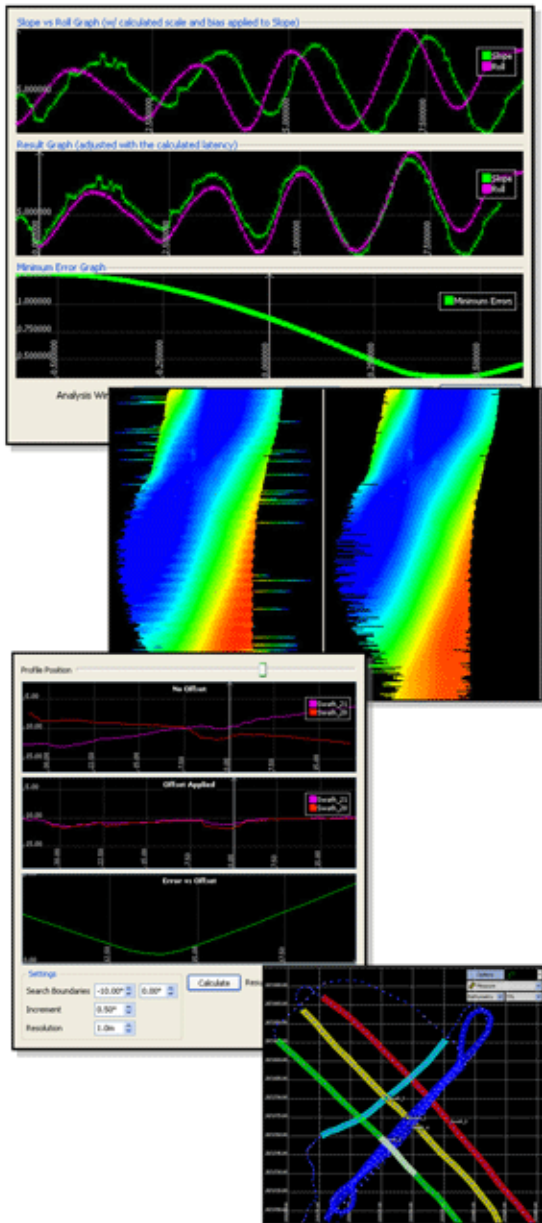
Processing interface gives users full control of all acquired positioning and motion information. The engine allows for re-calculation of sensor and data position given all offsets, biases, raw navigation data, and user input.

- Smoothing and noise filters
- Full control over meta-data including manual editing
- Latency, bias and scale adjustments
- Tow fish heading and layback computations
- USBL processing
- Full import/export capability
- Motion compensation and lever arm computation
- Comprehensive Vertical datum processing (RTK, draft/heave/tide...)
- Feature-based navigation tools for AUV and deep-towed systems



Calibration Made Easy

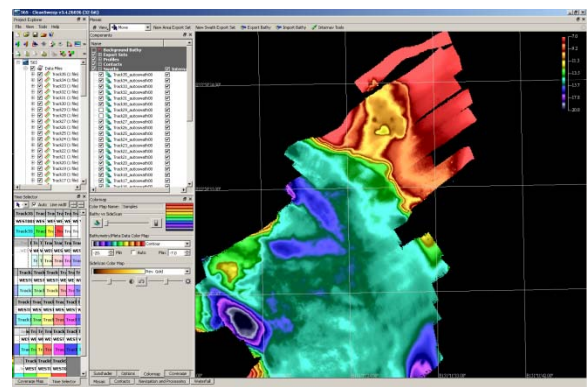
A typical measure of hydrographic data accuracy is the repeatability of measurements under different circumstances.



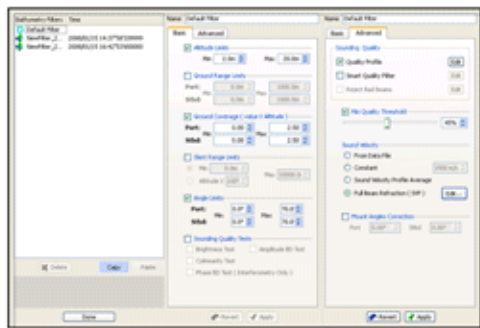
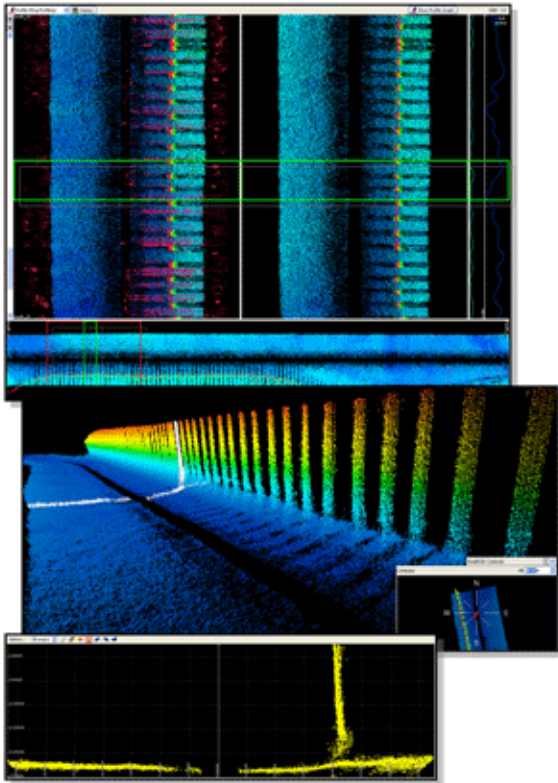
A necessary component of achieving highly accurate survey results is to ensure that the navigation, attitude, and sonar systems are properly tuned. With the release of CleanSweep version 3, OIC has implemented a suite of automated calibration tools designed to provide quick and repeatable results of the standard "Patch Test".

- Latency Calculators
 - Navigation
 - Roll
 - Pitch
 - Heave
- Bias measurement tools:
 - Roll
 - Pitch
 - Heading

These tools help to minimize the time latency and attitude errors inherent in pre-processed data, and ensure the accuracy of final products.

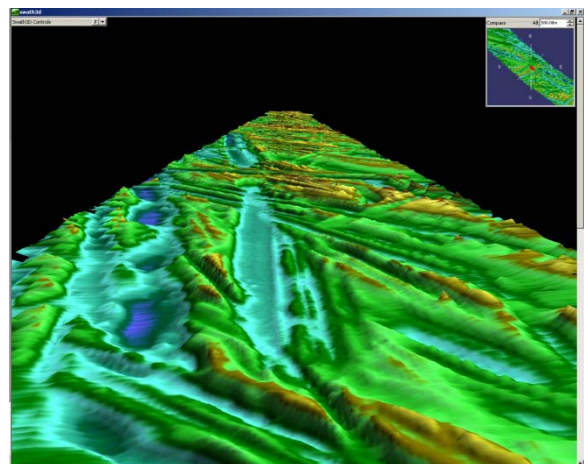


Enhanced Perspective



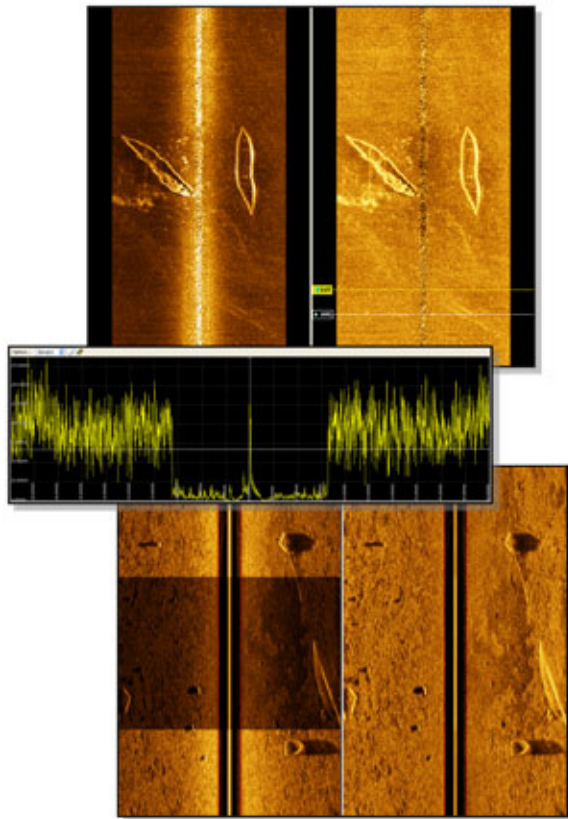
A comprehensive set of bathy processing tools allow users to clean, compare and visualize sounding data simultaneously from multiple perspectives. The ability seamlessly toggle between bathymetry and sidescan datasets gives users full use of available survey information.

- Coupled 2D/3D editing
- Advanced interferometric data processing (thinning, phase correction...)
- Full-motion correction
- Multiple sound velocity profile correction
- Interactive multi-layer map
- Statistical filtering tools
- Biases and offsets calibration



Superior Imagery

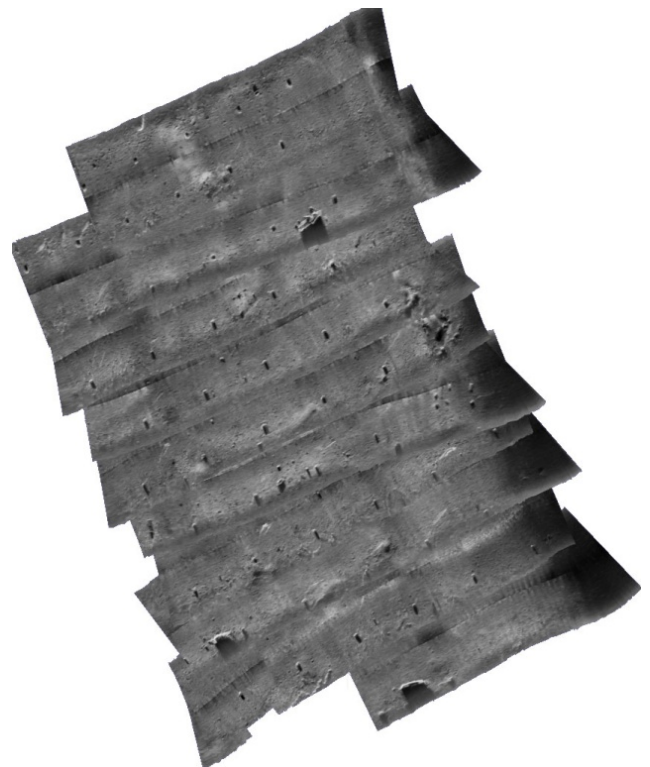
Long considered the software of choice for producing high-quality sidescan sonar data, CleanSweep version 3 builds on this reputation with the implementation of new and improved tools for imagery processing and enhancement.



- High quality raster mosaic creation
- Robust automatic water column suppression tool
- Along-track (beam pattern) correction and amplitude normalization
- Gain changes correction
- Support for all multi-channel, multi-ping sidescan systems
- Contrast enhancement
- Comprehensive manual and automated range cropping

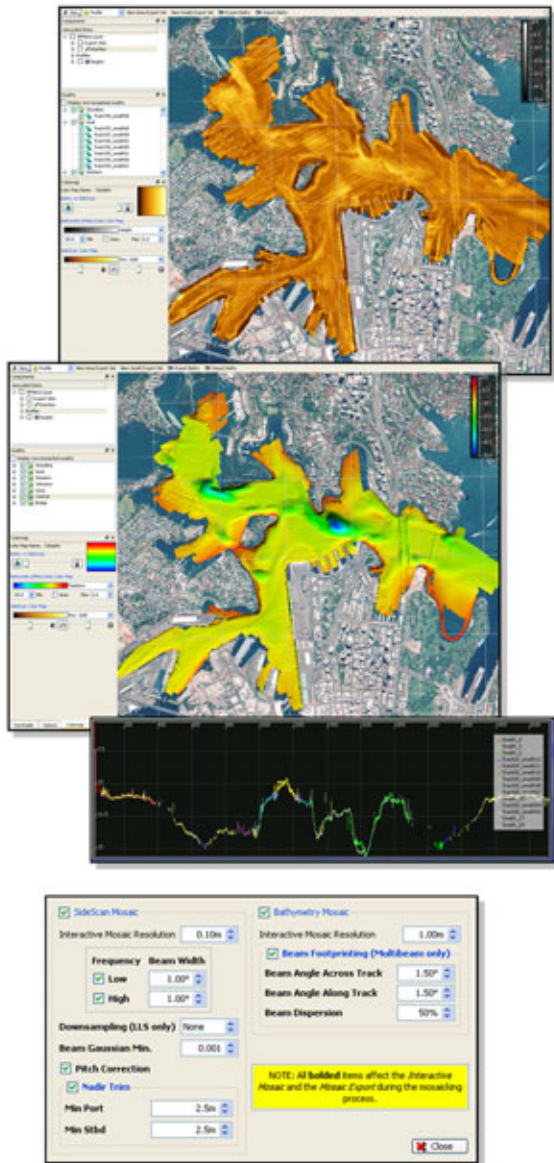


- Point-and-click contact marking of full resolution targets
- User-defined contact classification
- Measurements and description tools
- Contact image is fully geo-coded to provide acute object dimension and orientation
- Automatic reporting tool makes survey reports easy to create
- GeoTIFF, XML and HTML export



Interactive Map Editor

The interactive mosaic GUI within CleanSweep allows users to mosaic data of unlimited size to view spatial relationships and analyze data quality prior to export.

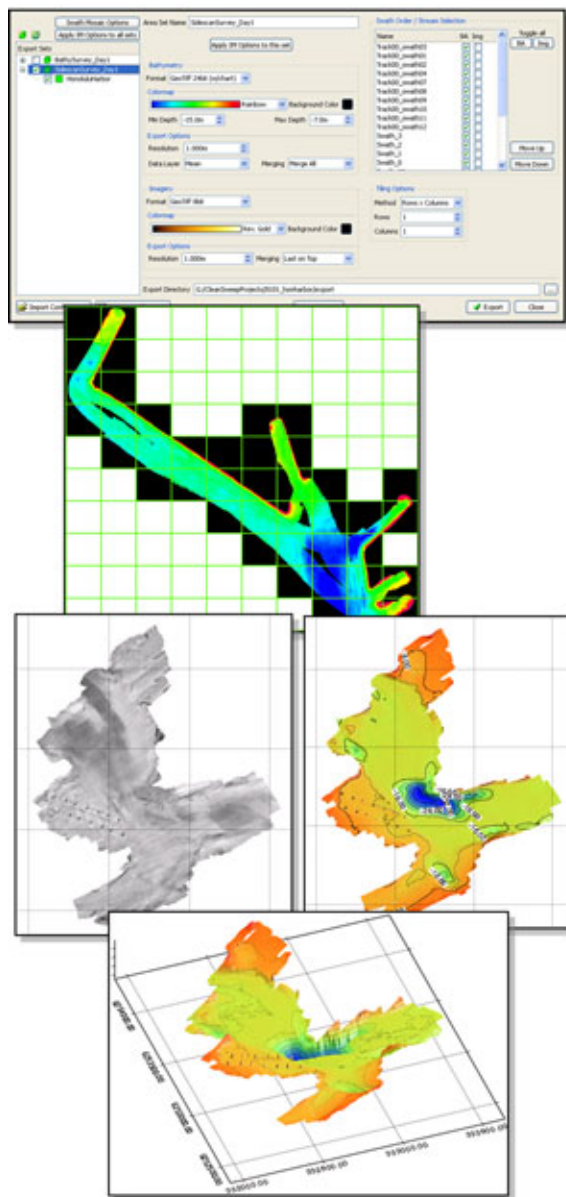


- Bathymetry, imagery and special statistic display
- Swath-by-swath interactive layering means no need to reprocess entire dataset
- Direct link to raw data and meta-data
- Layering, transparency and blending controls
- Profile tool
- Variable resolution support
- Unlimited raster size
- Comprehensive support for raster/vector background charts (S-57, DNC, BSB, GeoTIFF, DXF, ShapeFile, Ascii, NetCDF Grid, VPF...)

In addition to the composition of final products for acquired data, users are able to upload a variety of data types for preliminary analysis purposes. A selection of mosaicking parameters provides complete control of the gridding process.

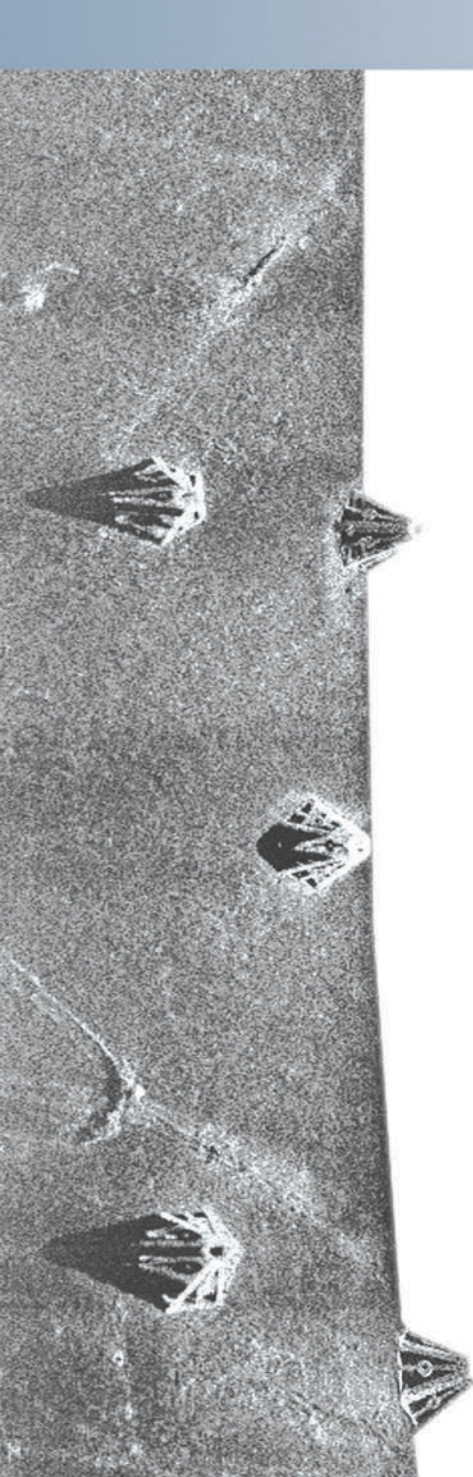
Versatile Charts & Outputs

Upon completion of processing, CleanSweep provides a variety of options for exporting your data. The export assistant will convert gridded bathymetry and sidescan data into raster, grid, and text formats acceptable in most GIS products.



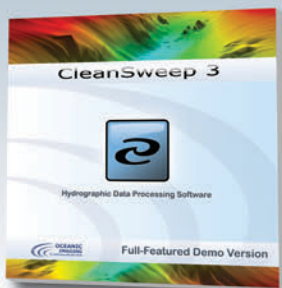
- Exports amplitude, mean elevation, shoal-biased or statistic grids
- Advanced export assistant provides full control over outputs
- Batch processing support
- Export options include GeoTIFF, NetCDF grid, ASCII, ArcGIS and Postscript
- Tiled-output
- Resolution, blending and color maps control
- Parameter export simplifies area-based comparison for repeat surveys

Alternatively, CleanSweep can export printer-ready charts for inclusion in project reports.



CleanSweep version 3 is a complete hydrographic data processing package, providing a suite of tools and capabilities that improve the user's ability to control and enhance their data. Designed to meet the dynamic needs of the marine surveying community, CleanSweep provides a fast, user-friendly environment for processing data from sidescan, multibeam and swath interferometric systems.

Full-Featured Demo Version



Contact OIC to obtain a copy of our full-featured demo version of CleanSweep 3, which will allow you to test all available capabilities. Sample projects include multibeam, sidescan, and interferometry datasets.

info@oicinc.com

www.oicinc.com

A key characteristic that makes CleanSweep a unique processing platform is the departure from time consuming, line-based interactivity typically required for processing survey data. Features such as track-to-track inheritance of processing parameters, user-defined quality filters and automated calibration tools eliminate much of the time-consuming elements of data processing. At the same time, CleanSweep provides many advanced processing tools that not only preserve, but enhance the user's control of the data.



64-bit Version Now Available

Oceanic Imaging Consultants, Inc.

Founded in 1993, OIC provides seafloor mapping software, systems and services to the world's military, government, commercial, and academic markets. With a solid understanding of the requirements of the hydrographic community and an emphasis on providing quality customer support, OIC should be your first stop for all of your seafloor mapping needs.



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