

DELPH v3.0

SEABED MAPPING SOFTWARE SUITE





DELPH

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DELPH SEISMIC, **DELPH SONAR** and **DELPH MAG** are complete software packages with dedicated acquisition, processing and interpretation components. They operate with side-scan sonar systems, seismic systems, sub-bottom profilers, magnetometers and gradiometers. **DELPH** software is a major leap forward in providing geologists, geophysicists and hydrographers with a highly optimized workflow. It offers greater flexibility, a major boost in productivity, and top-level multi-sensor data quality control (QC).



DELPH SEISMIC



DELPH SONAR



DELPH MAG

FEATURES

- Simplified data acquisition software
- Global profile views with zoom and pan
- Batch processing and reporting capabilities
- 3D multi-sensor data integration

BENEFITS

- Robust and safe acquisition of raw data
- Flexible and reactive analysis and interpretation tools
- Optimized workflow for greater productivity
- Survey-scale quality control and interpretation

APPLICATION

- Geophysical exploration • Geotechnical investigation • Structural geology • Cable route survey • Hydrographic survey • Habitat mapping
- Pipeline inspection • Unexploded ordnance survey • Marine archaeology

ABOUT DELPH SOFTWARE SUITE

For more than 25 years, **DELPH** software suite has been extensively used by surveyors and geophysicists around the world, providing leading edge software and hardware solutions.

DELPH acquisition software is a unified data logging solution to safely monitor and record side-scan sonar, seismic and sub-bottom profiler data in a resolutely simplified user interface. It focuses on reliability and online QC.

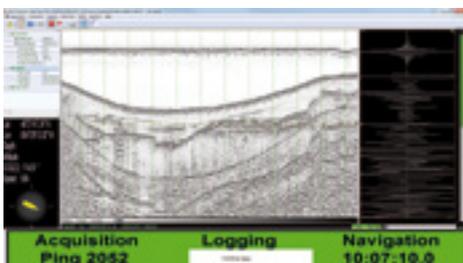
DELPH interpretation software brings a new workflow to geophysical data processing and integration; it has the unique capability of handling vast amounts of data in a short time using batch processing while still providing the finest details. **DELPH** interpretation is the unbeatable solution when processing time is critical. From raw data to final deliverables, all data sonar, sub-bottom, magnetometer, bathymetric and geographical layers integrate in **DELPH** 3D geographic visualization for an advanced QC on a global survey scale. This also ensures the best possible geo-referencing and immediate compatibility with geographical information systems. With scrolling profiles no longer needed, you can directly access complete datasets, always geo-referenced.

DELPH SEISMIC

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DELPH Seismic is the most complete acquisition, processing and interpretation software package designed to provide geologists and geophysicists with easy access to all data collected from high-resolution seismic systems and sub-bottom profilers.



DELPH SEISMIC ACQUISITION

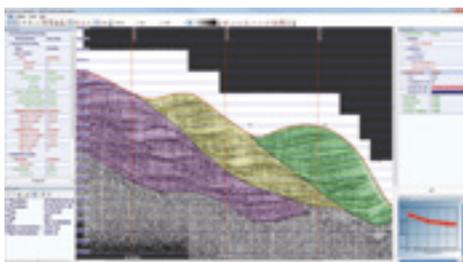
is a robust data logger for high-resolution seismic and sub-bottom profilers. Easy setup and raw data QC functions ensure that optimal data quality is safely recorded.

FEATURES

Analog Acquisition Unit

- 24-bit analog to digital conversion
- 1 to 24 channels
- Ethernet output
- Embedded serial ports

- Digital sub-bottom profilers
- Quality control indicators
- Master/slave acquisition modes
- Easy interfacing to navigation data
- Raw data logging to XTF and SEGY



DELPH SEISMIC INTERPRETATION

is a full-featured processing, interpretation and 3D mapping software package for any type of industry-standard sub-bottom profiler and high-resolution seismic data.

DELPH Seismic interpretation embeds high-level processing and interpretation functions. Its 2D profile view and 3D geographic visualization provide global survey data processing and interpretation QC.

FEATURES

General

- Opened to all SEGY and XTF formats
- Global profile display with zoom and pan

- Cross sections display and browsing
- Batch interpretation and raster export

Processing

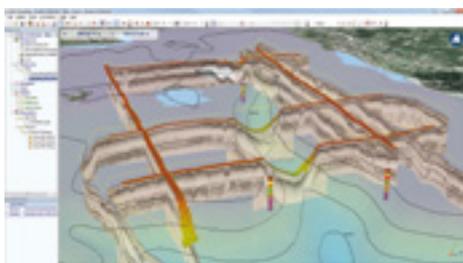
- Extensive data processing library
- Complete vertical data correction
- Processed data available in SEGY
- Batch data processing

Mapping

- 3D geo-referenced interpretation display
- 3D synchronized cursor link
- 2D/3D manual annotations and contouring
- Terrain model generation from reflectors
- Isopach map and contours generation
- Bathymetry modeling from XYZ data
- Navigation and background layers

Interpretation

- Complete data interpretation tools
- Automatic seabed and horizon tracking
- Ground-truthing data integration

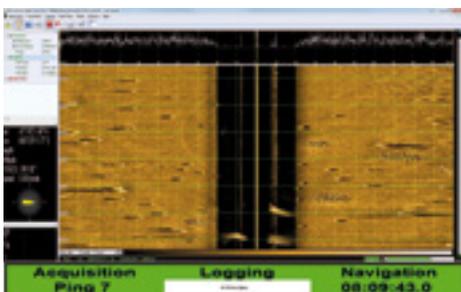


DELPH SONAR

SEABED MAPPING SOFTWARE



DELPH Sonar is a complete acquisition, processing and interpretation software package designed to easily perform accurate and productive side-scan sonar surveys. Providing an optimal QC at any stage and relying on **DELPH** powerful workflow and ease-of-use, side-scan sonar mapping has never been so fast.

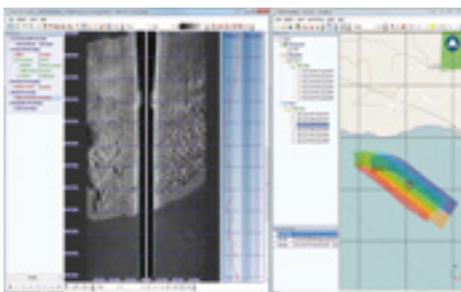


DELPH SONAR ACQUISITION

interfaces to most analog and digital side-scan sonars. With a dedicated interface for each, it provides a unified data logger to record raw data in industry standard XTF format.

FEATURES

- Opened to most digital side-scan sonars
- Driver-based interfacing
- Single and dual frequency support
- Easy interfacing to navigation data
- Quality control indicators
- Raw data logging to XTF format



DELPH SONAR INTERPRETATION

is a dedicated tool for processing, analyzing and mapping any side-scan sonar data. Highly productive, it embeds high-level processing and benefits from DELPH batch processing and mosaicking capabilities. The 2D profile view and 3D geographic visualization provide global QC and fast integration with other data types.

FEATURES

General

- Opened to industry standard XTF formats
- Global profile display with zoom and pan

Processing

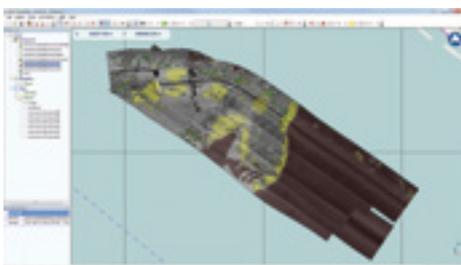
- Complete and fast data processing
- T.V.G. gain calibration on sonar data
- Fine bottom tracking tools
- Batch data processing

Interpretation

- Complete data interpretation tools
- Target picking on the profile or a mosaic
- Contact management and classification
- Batch interpretation reporting

Mapping

- 2D/3D coverage map
- 3D synchronized cursor link
- Batch sonar mosaicking to geo TIFF
- Sonar mosaic comparison tools
- Supervised sonar mosaic classification
- 2D/3D manual annotations and contouring
- Geo-referenced sonar targets
- Contact map generation
- Bathymetry modeling from XYZ data
- Navigation and background layers



DELPH MAG

SEABED MAPPING SOFTWARE



DELPH Mag locator is a unique operational solution for the mapping of buried objects; in a few comprehensive steps, it filters and maps magnetic anomalies. Although requiring no prior expertise in magnetic science, it provides an accurate magnetic anomaly map to locate magnetic sources.

DELPH MAG

STEP 1:

Any magnetometer or gradiometer data can be imported from ASCII records. The data is indexed and the navigation filtered.

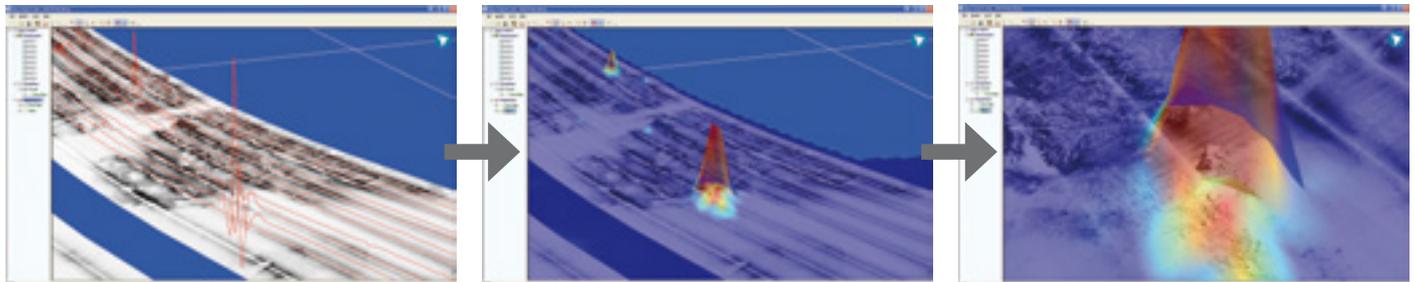
STEP 2:

Due to field variations related to diurnal variations, environmental noise or survey conditions, magnetic data first needs to be filtered, either from a reference station record or using a **DELPH** patented spatial filtering algorithm to preserve local anomalies.

STEP 3:

Magnetic data is modeled into a 3D surface and gridded, thus producing magnetic anomaly maps as well as optional layers representing the analytic signal and reduced to the pole anomalies.

The magnetic maps can be quickly generated and superposed onto side-scan mosaics, seismic and sub-bottom profiles as well as any other cartographic information. With many available display options such as transparency, vertical elevation and offsets, the eye-catching maps bring the focus to potential hazards, UXOs or wrecks. Together with **DELPH Sonar** interpretation, Mag locator will boost the analysis of large scale sonar surveys, particularly when the seabed is covered by boulders and rocky areas.



See also:

ECHOES
SUB-BOTTOM PROFILERS

SAMS
SYNTHETIC APERTURE MAPPING SONAR

More information on www.ixblue.com

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Courtesy of CNRS, Universities of Nice and La Rochelle, France

2014-02-BR-DELPH