

SILAS

Acoustic processing software for silt layer determination & subbottom classification

Introduction:

Silas has been developed for users of acoustic systems who need geophysical information and detail from their measurements.

Our customers are hydrographic surveyors, geologists, port authorities, governmental organisations and scientific institutes.

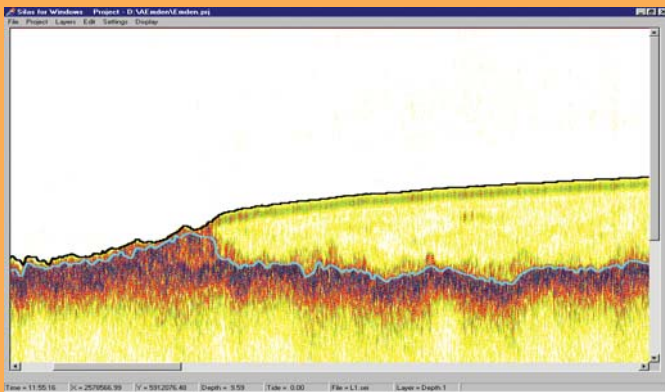
Silas provides information about water depth, silt layers and subbottom characteristics. Besides sediment quantity, layering, the sediment type and sediment characteristics can be determined. Geologists use Silas in combination with profilers, boomers or sparkers, to obtain detailed seismic data for subbottom classification, wreck detection and sand search projects.

Applications:

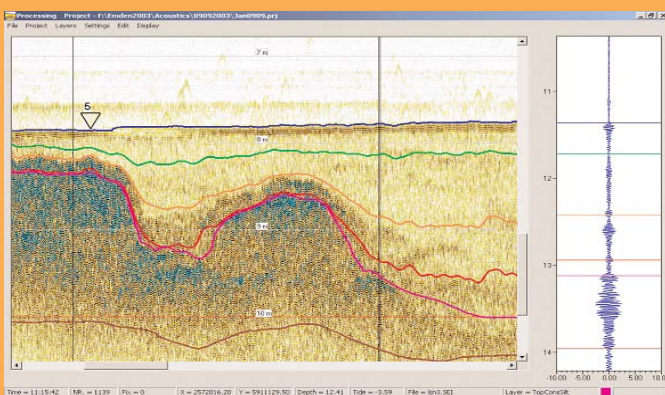
- Determination of the nautical depth in ports and waterways (density, viscosity)
- Determination of (polluted) siltlayers
- Environmental surveys
- Sandsearch projects
- Pipeline / cable route surveys
- Wreck / ammunition detection

Advantages:

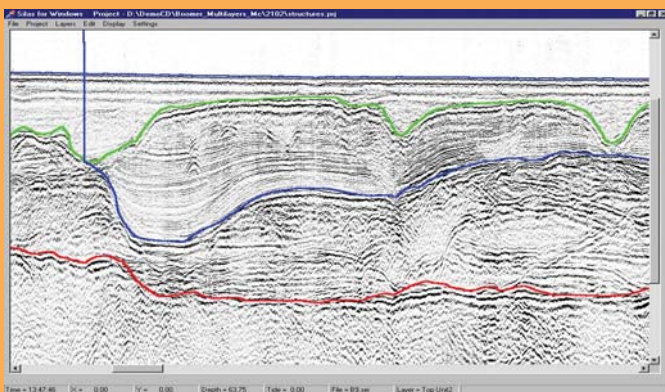
- Used with echosounder, profiler and boomer systems
- Based on Microsoft Windows user interface standards
- Can be connected to any professional survey package: Hydro Pro, Hypack, Qinsy, PDS
- Silas can import absolute density data from the DensiTune to calculate area covering density layers
- Automatic trace functions for subbottomlayers and siltlayers
- Fast data processing, filtering and interpretation



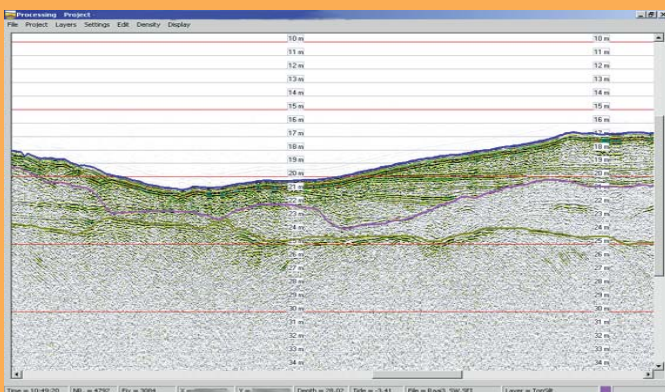
33 kHz echosounder data



33 kHz echosounder data



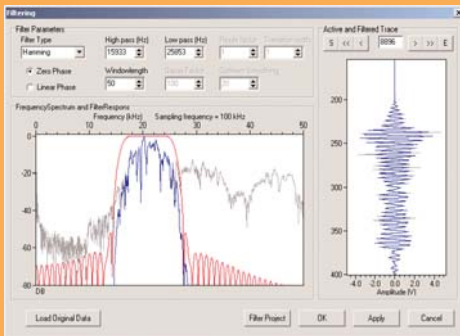
Boomer data



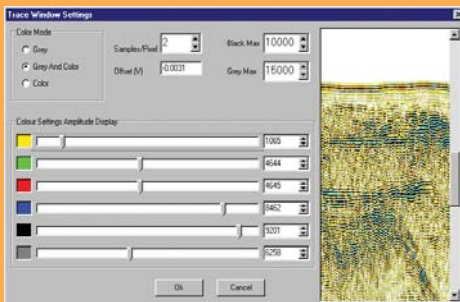
3,5 kHz subbottom profiler data

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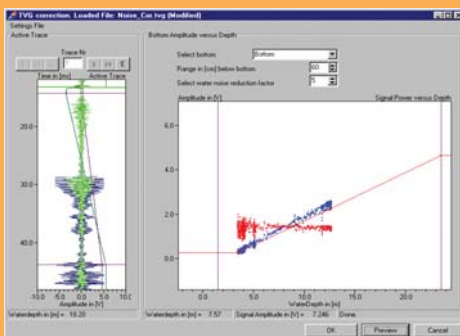
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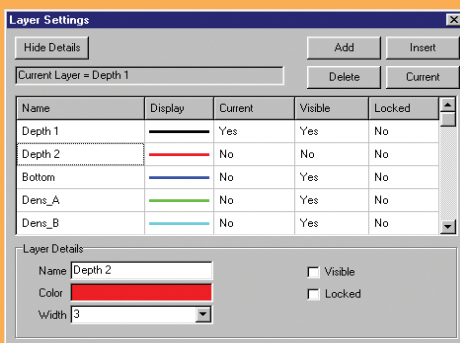
Fourier filtering



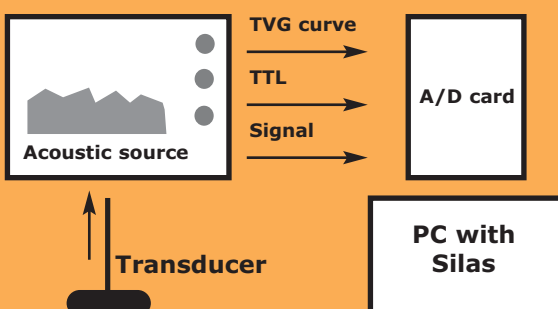
Rapid view control



Accurate TVG correction



Unlimited number of layers



Software features:

A. Data-Acquisition Module:

- A/D conversion, online adjustable
- On-line link with navigation system for synchronisation and position control
- On-line data acquisition control, vertical data density can be determined by user by setting the sampling rate
- On-line monitoring of reflected signal intensity and quality
- On-line heave compensation

B. Data Processing Module:

- Filtering: Gauss, Hamming, Kaiser, Notch, etc.
- Deconvolution, multiple reduction, ringing filter
- Data improvement by TVG correction and amplification
- Import of absolute density data from the DensiTune to calculate area covering density layers
- Export of data to DTM, CAD, ASCII
- Relative impedance display and export of relative impedance to ASCII
- Improvement of signal-noise ratio by stacking
- Feet version for the US market
- Extensive tide correction
- Navigation overview
- Unlimited number of layers
- Theoretical velocity
- Graphics export to HTML, BMP and printer

System requirements:

- Windows 2000, XP
- 16-bit 100kHz, 333kHz or 500 kHz A/D card
- PCMCIA socket (100kHz) or full size PCI slot (333/500 kHz)
- 256 MB RAM recommended
- minimum 800 x 600 pixel resolution



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