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SeisImager/SW
Surface Wave Analysis Software

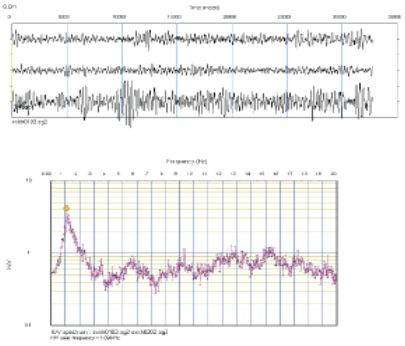
Surface waves are easy to record and loaded with information about the subsurface. With SeisImager/SW, data processing is simple, putting the answers you seek at your fingertips.

SeisImager/SW includes both active source and passive source (microtremor) data analysis capability. The higher frequency data from a sledgehammer source that travels through shallower depths can be combined with lower frequency data from microtremors that travel through greater depths. The combination of results provides one high-resolution plot of S-wave velocity (Vs) over all depths sampled. The data processing is easy and straight-forward with a wizard that walks you through the steps using default parameters that are suitable for most cases, but are fully user-adjustable as needed.

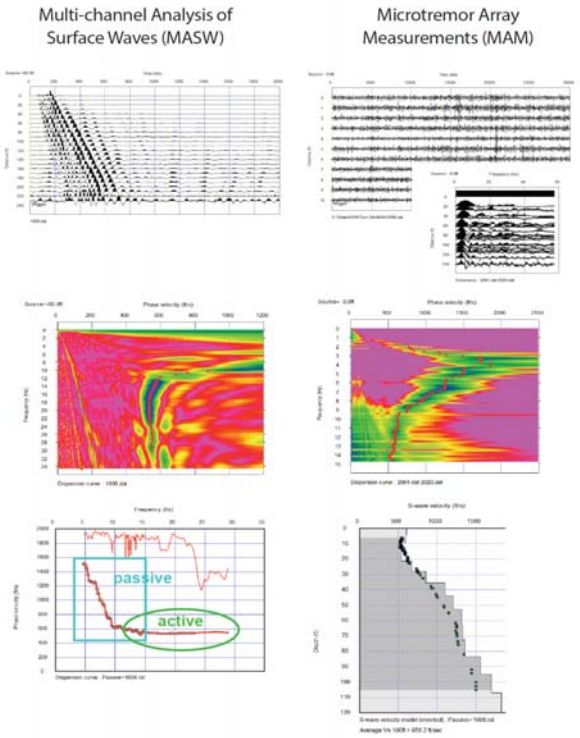
For deeper investigations as great as 1 km, microtremors can be recorded for longer periods (10+ minutes) with the Geometrics Atom Passive Seismic System and 2 Hz geophones. Common Time Blocks (CTBs) of microtremors are then processed with SeisImager/SW using the new extended Spatial Autocorrelation (SPAC) capability.

SeisImager/SW can also be used to determine peak frequencies from 3-component microtremor data using the H/V spectrum analysis functions.

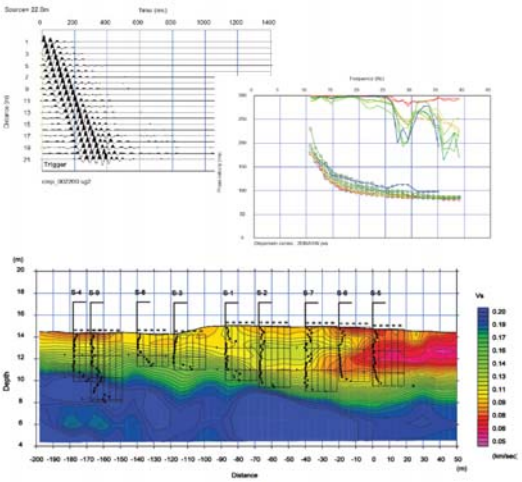
In addition to the main processing flows, SeisImager/SW allows the user to build Vs models and examine the effects of velocity variations. Borehole data such as P-wave velocities and blow counts (N-values) can also be correlated.



Collect 3-component data for H/V spectrum analysis



Collect one active source record and 20 passive source records to calculate a 1D V_S curve



Collect a series of MASW records to calculate a 2D V_S cross-section

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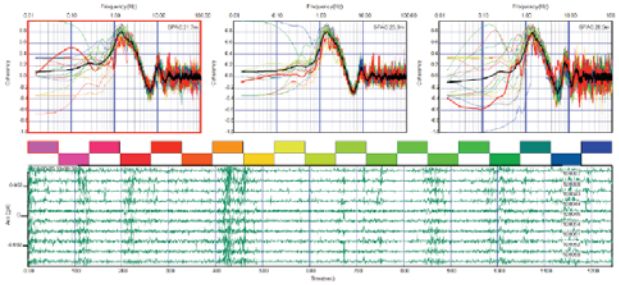
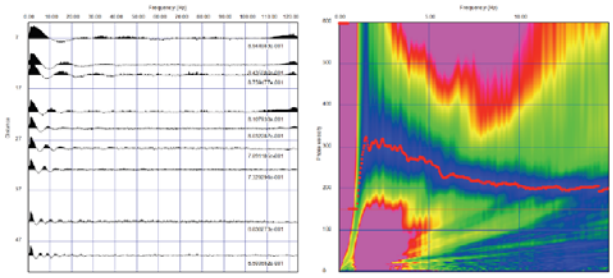
Features & Benefits :

- Calculates phase velocity and automatically picks dispersion curve.
- Performs inversion to iteratively seek 1D Vs curve or 2D Vs cross-section.
- Allows active and passive source dispersion curves to be combined for a high-resolution result over all depths sampled.
- Flexible geometry options suit a wide range of site configurations and conditions.
- Handles a range of microtremor data record lengths for investigations to depths as great as 1km.
- Analyses are based on robust methods: frequency domain tau-p and CMP cross-correlation for Multi-channel Analysis of Surface Waves (MASW); Spatial Autocorrelation (SPAC) for Microtremor Array Measurements (MAM).
- Includes editing and QC functions, and velocity modeling.
- No fees for support, maintenance, or upgrades.

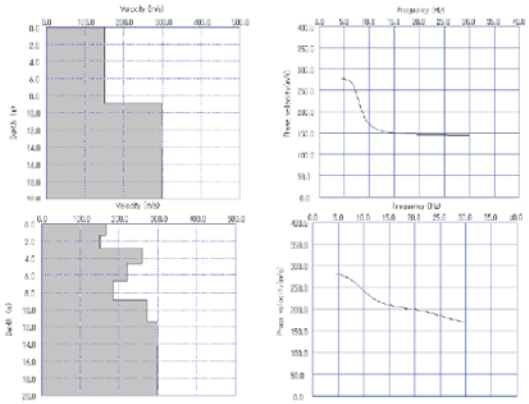




Using extended SPAC, calculate phase velocity for 10+ minutes of microtremor data

Applications :

- Vs 30/Vs100 site classification.
- Foundation engineering.
- Microzonation studies.
- Void detection.
- In-fill and landfill investigation.
- Stratigraphic and lithologic studies.
- Deeper surveys of geologic structure.



Create synthetic V_s models and dispersion curves to examine the effects of velocity variations.

SeisImager/SW Software Packages for Windows:

- **Demonstration version:** May be launched 15 times, capable of 1D Multi-channel Analysis of Surface Waves (MASW).
- **1D version:** Capable of 1D MASW, 1D Microtremor Array Measurements (MAM), and H/V Spectrum Analysis.
- **2D version:** In addition to 1D version, capable of 2D MASW.
- **Plus version:** In addition to 2D version, capable of extended Spatial Autocorrelation (SPAC) of Common Time Block (CTBs).
- **Pro version:** In addition to Plus version, capable of higher mode analysis and H/V inversion.
- **Rental version:** Runs for 40, 75, or 250 hours.

Specifications subject to change without notice. SeisImager/SW-v2 (1018)

MINERAL EXPLORATION | WATER EXPLORATION | ENVIRONMENTAL ENGINEERING INVESTIGATIONS | GEOTECHNICAL ENGINEERING | INDUSTRIAL UTILITY LOCATING & CONCRETE | ARCHAEOLOGY AGRICULTURE & MORE

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