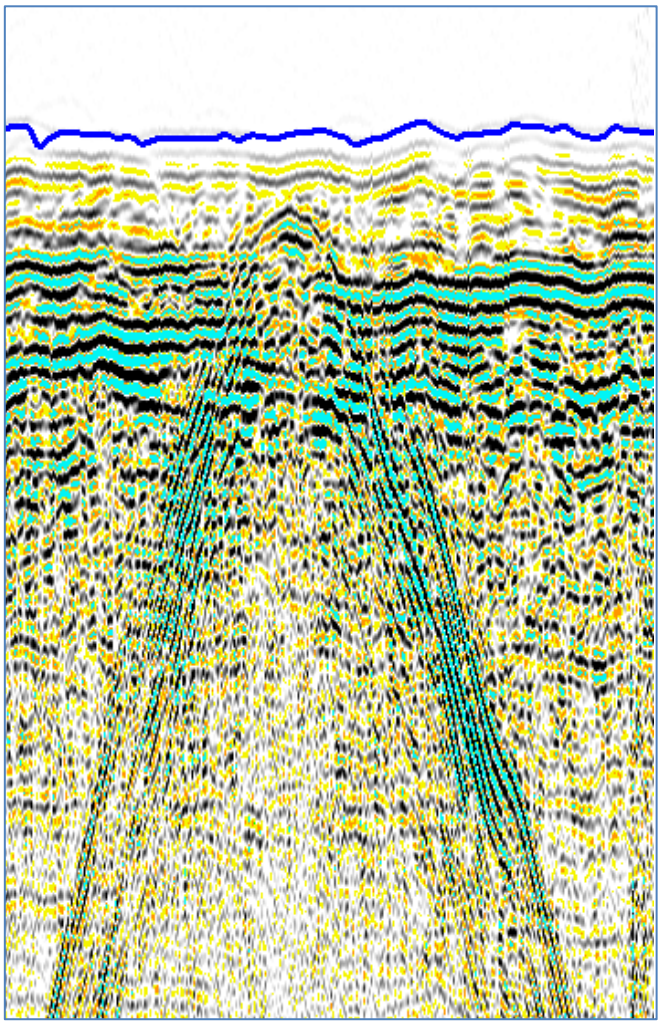
EBP-15 Cable Detection System

Data acquisition and processing system for sub-bottom detection of cables and pipelines

The STEMA EBP-15 cable detection system is a seismic system, which is able to detect linear objects as (power)cables and pipelines .

It is a passive system which does not require any physical connections to the cable, assuring full operational functionality of the cable during detection.



Cable detection with the STEMA EBP-15 Cable Tracking System.

The EBP-15 cable detection system consist of the following components:

- **Transducer array:**
  The signal source consists of 2 transducers which will be used in a dedicated frequency setup (3-8 kHz), configuration and geometry which optimal for cable detection.
- **Transceiver & STEMA USB AD Card**:
  The transceiver actually generates and sends the seismic signal to the transducer array. The STEMA USB AD Card receives the amplified seismic signal from the transceiver and transfers it in a high resolution digital form to the seismic acquisition PC or laptop.
- **STEMA Silas Software:**
  This high resolution seismic package consist of Silas acquisition software and Silas processing software with a specifically designed cable/pipe line detection module.

Key Benefits:

- ✓ **Optimized and dedicated configuration of sound source**
- ✓ **Possibility to combine with all known as laid data of cable**
- ✓ **Integration of multibeam, SSS, magnetometer and GPR data within the same software (SILAS) possible.**
- ✓ **Cross sections of cable**
- ✓ **Automated contact recognition with quality factors**
- ✓ **Integrated data enable recognition of base of old trench cable was laid**

The STEMA EBP-15 Cable Tracking System can be interfaced both with professional survey software packages (Qinsy, Hypack, PDS2000 a.o.) and with several types of motion sensors

The contacts when that are registered by the EBP – 15 translates this via the Ultra High resolution processing software SILAS in a display of a clear hyperbola, this hyperbola is read by the software to be the probable top edge of an object, SILAS recognizes these contact points and presents the user with a marking of the object.as can be seen on the right.

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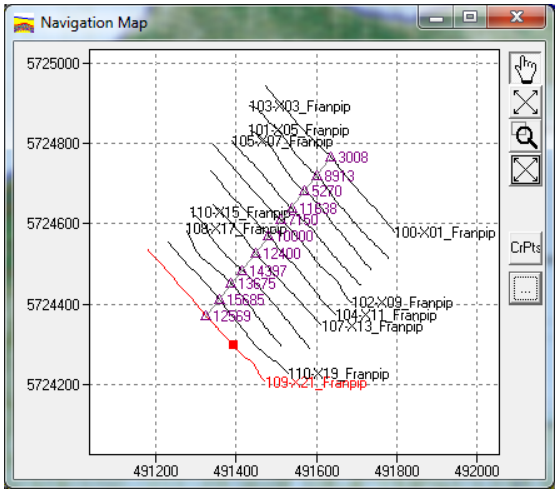
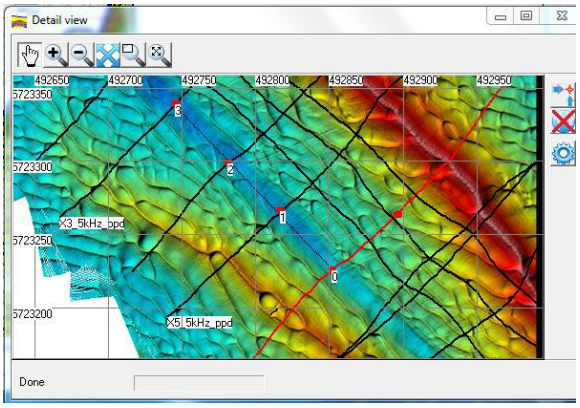


Navigation view with tracklines and contacts.



Plan view with track lines, contacts and multibeam data.

The STEMA Silas Cable Processing package enhances the high resolution data acquired from the EBP-15 system by integrated processing techniques and applies an automated contact recognition technique.

The contact recognition consists of the automated determination of two parameters

- Semblance of apex of hyperbola (top of contact).
- Power of hyperbola.

These parameters are quality figures which also enable a more objective classification of detected contacts. Plan view with track lines, contacts and multi-beam data.

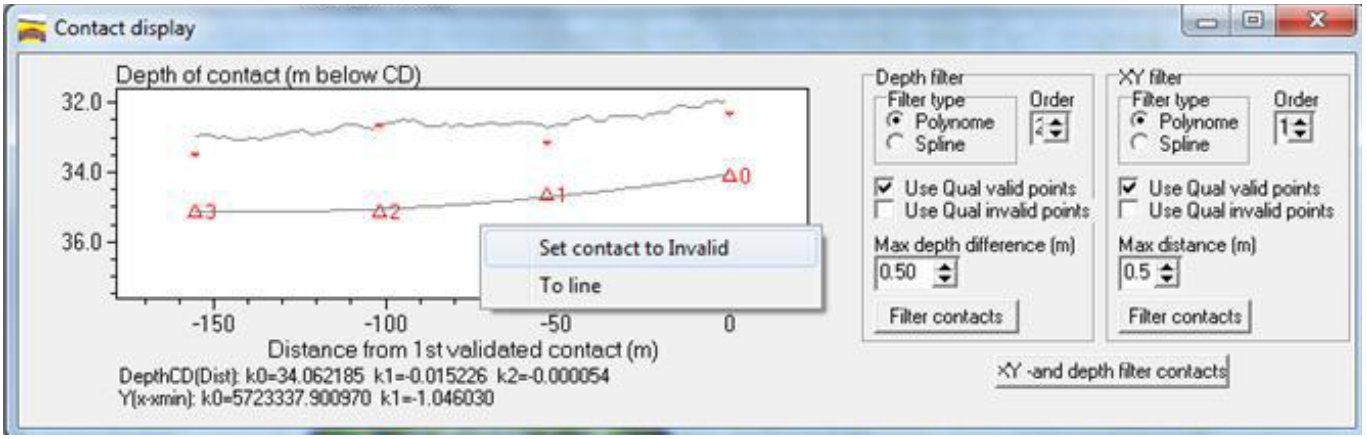
The contact data and its parameters can be managed and inspected in several displays:

- Plan view with Geotifs
- Contact display from
- Navigation Vie

The STEMA Silas Cable Processing package can be interfaced with DXF-files and contacts from other data sources such as:

- Multibeam
- SSS,
- Magnetometer
- GPR

This integration permits the user to present a full cable passport, with multiple data sources to illustrate the exact cable lay.



Silas contact display form

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