# Delph Subsea Positioning Software

LBL Array Planning module

Delph Subsea Positioning is an intuitive and dynamic software used for the preparation, the operation and the post-processing of iXblue subsea positioning products.

The LBL Array Planning module is dedicated to the preparation of LBL jobs. The software analyses acoustic propagation by taking into account the Digital Terrain Model and the Sound Velocity Profile. It produces real time visibility map for LBL acoustic transponders and transceivers.
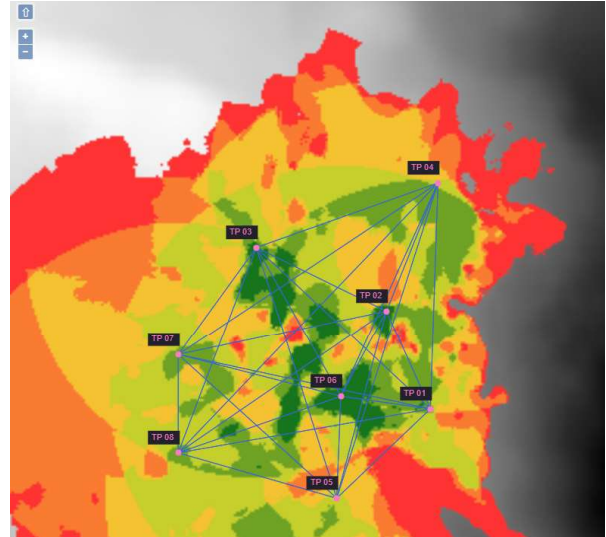
FEATURES

· Manage Sound Velocity profile
· Display DTM
· Drag and drop transponders
· Display visibility map
· Display acoustic line of sight between transponders
· Automatic report generation

BENEFITS

· Easy and intuitive
· Real time computation
· Does not require any acoustic knowledge
· Cost effective

CHARACTERISTICS

· Supported platform: Win10 x64
· Processor: Intel Core i5 2 Ghz
· Memory: 4 Gb

SOUND VELOCITY PROFILE

· Edit a Sound Velocity from a data base
  (selection of location and date)
· Import a Sound Velocity profile from a file (field selection tool)
· Optimisation algorithm
· Different models for conversion of CTD to SV
· Export file

VISIBILITY MAP

· Import of a Digital Terrain Model
· Import of a Sound Velocity profile
· Import of a field layout
· Import of structures
· Creation or import transponder list
· Flying mode: constant depth or altitude
· Selection of transponder height
· Acoustic line of sight between transponders
· Automatic report with transponders positions, depth and line of sight between transponders

INPUT FILE FORMAT

· .xyz or .tif (geotiff) for DTM
· .txt for SV
· DXF for field layout

COMPATIBILITY

· Ramses
· Canopus transponder

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Delph Subsea Positioning Software

Operations module

Delph Subsea Positioning is an intuitive and dynamic software used for the preparation, the operation and the post-processing of iXblue subsea positioning products.

The operations module runs state-of-the-art algorithms for the calibration of LBL array and produces automatic calibration reports.
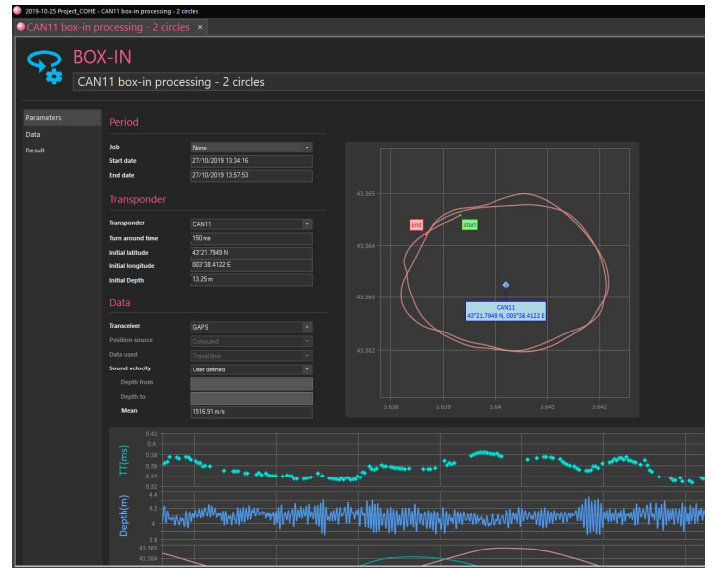
FEATURES

- Manage projects
- Interface to iXblue transceivers
- Configure iXblue transceivers
- Collect data from transceivers (boxin)
- Collect data from transponders (mutual calibration)
- Monitor data and watch status
- Filter data
- Run LBL calibration algorithms
- Display calibration results
- Produce calibration reports

BENEFITS

- Easy and intuitive
- Does not require any acoustic knowledge
- Full LBL calibration tools

CHARACTERISTICS

- Supported platform: Win10 x64
- Processor: Intel Core i5 2 Ghz
- Memory: 4 Gb

COMPATIBILITY

- Ramses
- Gaps
- Canopus transponder

BOX-IN RESULTS

INFORMATION

Name	Date
CAN11 box-in processing - 2 circles	20/11/2019 22:10:31

DATA USED

Start	End
27/10/2019 13:34:16	27/10/2019 13:57:53

Position source	Data type	#Acoustic
computed	travel-time	196

SETTINGS

Transceiver	Value	Transponder	Value
Type	gaps-iv	Type	canopus-mf
Name	GAPS	Name	CAN11
Serial number		Serial number	
Average sound velocity	1516.91 m/s	Turn around time	150 ms

RESULT

Transponder Box-In	Latitude	Longitude	Depth
Initial	43°21.7949 N	003°38.4122 E	13.25 m
Calculated	43°21.795802 N	3°38.413079 E	13.668 m
Initial - Calculated	1.671 m	1.188 m	0.418024 m
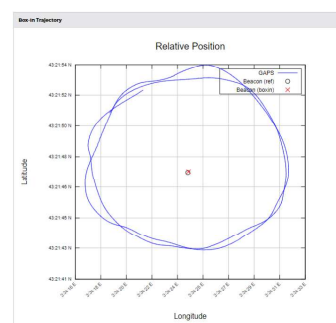
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Delph INS

Post-Processing software for iXblue's INS-based navigation

Delph INS is the post-processing and batch productivity tool for the iXblue's INS subsea product range (Phins Subsea, Rovins, Rovins Nano and the Phins Compact Series).

In real-time, it helps you closely monitor your navigation systems (iXblue's and third-party sensors). In post-processing, along with all its previous features, the new version now allows you get the most of a day's work with various enhancement tools like INS/DVL post-mission calibration or QA/QC reports generation.

Not only do you have the insurance that you obtain the best from your navigation, but you also get the ability to fix any problem encountered during the survey.
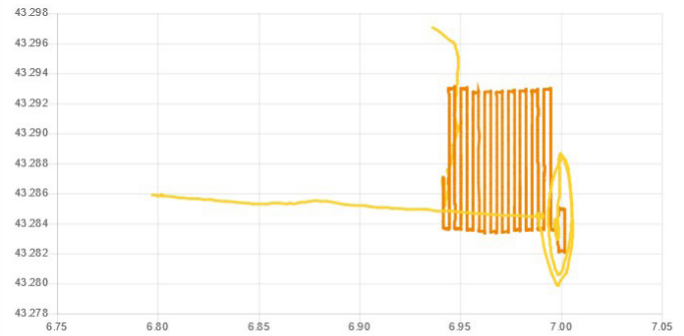

Delph INS will:

- Allow you to post-process your data with custom INS settings
- Integrate data from external sensors that could not be connected to the INS during the survey or provided by a third-party processing tool
- Enhance the quality of the data using dedicated algorithms
- Help you evaluate different positioning scenarios
- Generate QA/QC report for real-time and post-processing navigation
- Allow you to conduct INS/DVL calibration offline and fine tune the results

Available in several versions specifically designed for subsea applications such as ROV, AUV and tow fish applications, Delph INS offers powerful data editing and processing functions together with data export capabilities.

MAIN FEATURES

- QA/QC reports generation (new)
- INS/DVL post-mission calibration (new)
- Customizable map projections (new)
- Automatically computed UTM projections (new)
- 2D plan view (new)
- Specific "Out-of-straightness" data smoothing option (new)
- Export INS configuration (new)
- Forward/backward data processing, edit/modify data, add/remove aiding sensors
- Powerful export tools
- Intuitive and user-friendly man machine interface (MMI)
- Several versions tailored to various market applications

BENEFITS

- Easy and intuitive navigation improvements
- Smooth post-processing integration of your other navigation sensors (GPS, USBL, LBL, DVL, pressure and others)
- Quick and easy integration in processing workflow
- Does not require in-depth INS knowledge
- Cost effective and scalable solution for all applications

REQUIREMENTS / COMPATIBILITY

Minimum workstation configuration	Microsoft Windows XP SP2, Vista, Windows 7, Windows 10 Intel Core i5 – 2 GHz – 4 Gb RAM
Input file formats	Phins Post-processing protocol | Industry standard protocols (GPS, USBL, LBL, DVL, etc)
Output file formats	Industry standard file format (KML, ESRI Shapefile, GML) Plain text file | Specific file format on request

MAIN FEATURES

INS/DVL calibration

Allows you to make an offline DVL calibration

QA/QC report generation

In one click, during or after the mission, generate a full report about the navigation quality and sensors use:

· Report can be generated in real-time and in postprocessing mode
· Quickly get access to a full overview of your mission's quality
· Get a focused report on specific points: USBL, LBL, DVL

2D plan view

· Easily display vehicle trajectory within Delph INS GUI
· Synchronise time view and plan view for an easier analysis
· Spatial References may be changed
· Distance Travelled by the vehicle
· Position WGS84 or projected

INS configuration

Easy access to the different INS setups throughout changes

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