



## Benefits

Rapid analysis and report generation  
Save significant time and cost  
Minimize laborious manual interpretation  
Easily create deliverable reports of findings

## Automatic Seabed Classification to Further Enhance Geophysical Survey Tasks

**Our latest advancement for the geophysical industry, Seabed Classification is integrated within our industry proven Survey Engine to provide automated seabed classification. This module uses artificial intelligence (AI) based methods to detect and classify seabeds in both type and geographic extent from sidescan sonar data. The extent boundaries are instantly visible to the user for validation and QC and can then be exported for use in chart and map generation, direct import to the users chosen GIS platform, or for further processing in Survey Engine.**

The boundary generation process automatically creates nodes in a way that avoids any gaps between adjacent seabed types which is vital for contiguous segmentation and reporting. Our software also displays closed boundary areas as coloured polygons helping to identify and distinguish these seabed types, particularly useful to visualize those areas completely surrounded by other seabed types.

With this new fully automated Seabed Classification software, our users can now save valuable interpretation and reporting time when generating charts or maps in support of their geophysical survey projects. Ideal geophysical survey applications include site and geohazard investigation in support of pipelay, jacket and riser installation or subsea cable laying operations. For example, ripples in the seabed that alert operators to strong and potentially dangerous currents, can now be more quickly and more repeatably identified for better decision making.

Environmental applications will greatly benefit from the automated classification over large area surveys of differing and varied seabed types.

### Features

#### Automatic Seabed Classification

quick and accurate identification of seabed types on SSS data.

#### Editable output polygons

identified seabeds areas are written as Survey Engine interpretation types and can be edited and customised.

#### Generation of reports in multiple formats

including ASCII Test Format, HTML, Microsoft Excel Worksheet, and XML.

#### Tiled input images from mosaic

large mosaic areas are automatically tiled for analysis on the software making the process scalable.

#### No data subsampling compromises

view your data at the full acquisition resolution and beyond for enhanced feature interpretation.

#### Supports very large projects

import many thousands of line kilometers into a single project.

#### 6 Different seabed types

the beta version initially includes six types: low amplitude sediment, high amplitude sediment, mixed sediment, ripples, bedrock and boulder fields.

#### Mosaic survey line transparency

full support for full and partial survey line transparency within the mosaic to produce superior quality mosaics.

#### Improved mosaic navigation performance

with the use of an increased number of zoom layers that improve the overall performance of navigation.

#### Large choice of output formats

extremely high resolution mosaic images can be exported in GEOTIFF format and interpretation exported in GIS, CAD, Excel, or ASCII.

#### Support for Seabed Survey Data Model (SSDM)

from data file through to GIS in a seamless transition.

#### Coloured GIS visualization of areas

semi-transparent polygons enclosing seabed areas are coloured over the mosaic for easy identification.

#### GIS Overview

shows the track of every line in the survey.

#### User configurable interpretation types

with ability to share between projects.

### Inputs

|                      |  |
|----------------------|--|
| Survey Data          | CodaOctopus (.cod); Extended Triton Format (.xtf); EdgeTech (.jsf); Sonar Equipment Services (.ses); Seismic data in SEG-Y and above formats (with Seismic+ option). |
| GIS Overlay Images   | Tagged Image File Format (.tif, .tiff); AutoCad® DXF™ (.dxf).  |
| Corrected Navigation | CodaOctopus Corrected Navigation Format (.cnv)   |
| GIS Objects          | Any file in any format can be imported and launched in their own viewer  |

### Outputs

|                        |  |
|------------------------|--|
| Image Output           | Tagged Image File Format (.tif)  |
| Vector Output          | AutoCad® DXF™ (.dxf)   |
| Report Output Features | Microsoft® Excel Worksheet (.xls); ASCII text (.txt, .csv); Extensible Markup (.xml); Webpage format (.html) |

### System Requirements

|                | Minimum  | Recommended   |
|----------------|--|---|
| Processor      | Quad Core -2.0 GHz or faster. 64 bit supported | Quad Core - 2.0 GHz or faster. 64 bit supported                 |
| Memory         | 8 GB   | 16 GB or more   |
| Hard Disk      | 2 GB disk free                                 | 5 GB disk free  |
| Display        | Single Display 1920x1080                       | Dual Display 1920x1080  |
| OS             | Windows 10. 64 bit supported                   | Windows 10. 64 bit supported                                    |
| USB Port       | 1x USB port for security key                   | 1x USB port for security key                                    |
| Graphics Card* | NVIDIA GTX1050 Ti (4 GB Minimum)               | NVIDIA GTX1060 Ti (4 GB Minimum)<br>(Install latest GPU driver) |

\*Only NVIDIA graphics cards are supported

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