

Geocap 6.0 Release Notes

About this release

The 6.0 release is the first complete Seafloor release in Geocap. In addition it contains a substantial upgrade to the **GIS & Database** part of Geocap.



The first official version of Geocap 6 is Geocap 6.0.2.

This is also the first release with the new documentation. The new documentation can be found both online and in PDF versions, making it easier for you to find what you are looking for. See **Help > User Guide** and **Help > Reference Manual**. Open the bookmarks in Adobe reader to navigate the documentation.

Note that Geocap 6 will create a new **geocaprc-6** folder, possibly located a place like this:

C:/Users/Harald/geocaprc-6

Initially this folder is blank. If you want, you may copy your color tables or your shared commands etc. across from your **geocaprc-5**, but you may as well import the commands or color tables again.

Also - if you have any *User Scripts* that you want to transfer to Geocap 6, you must put them into the **userscript** folder under **geocaprc-6**.

Note that the projects will not be upgraded in any way by opening them in Geocap 6, so it is possible to open a project in Geocap 6.x and then return to Geocap 5.x with the project.

For any questions - contact us on support@geocap.no . Please also help us improving Geocap by suggesting improved functionality and to report any bugs you find. Also to support@geocap.no

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Updates

Changelog

Documentation

- The documentation has been completely rewritten and is now included as searchable PDF's. Access these PDF's from **Help > User Guide** and **Help > Reference Manual**.
- The documentation can also be found online on www.geocap.no/doc. The online version also includes tutorials and articles.

Seafloor

The version 5.0 contained some general functionality for processing XYZ data, while 6.0 has more more tools for processing both XYZ, multibeam and single beam data. See the [User Guide](#) for more details.

Seafloor Main Menu

- The menu is redesigned from version 5.0. The layout of the buttons is changed, and more commands are available.
- A Help button is available from the top of the menu.

Seafloor export commands

- The contour in **Export Chart data** moved to a new command **Export Contours**.
- The surface export can also export surfaces as hill shade, in a georeferenced GeoTiff.
- The Export Contours command also exports contour areas, also as S-57 format.

Multibeam Sonar data

Seafloor 6.0 has implemented the processing of multibeam sonar data. The multibeam functionality support a multitude of formats like Simrad (Kongsberg Maritime), Reson, Elac, Seabeam, Atlas etc. The list of formats contains also formats like unb, gsf, MB system, xtf etc.

Functionality:

- CUBE
- Direct gridding
- Depth processing
- Navigation processing
- 2D editor and display for navigation, gyro, pitch, roll, heave, tide and sound velocity
- Replace navigation, gyro, pitch, roll, heave, tide and sound velocity
- 3D editor for multibeam swath data

Single Beam data

Seafloor 6.0 has tools for processing single beam data. The import supports ASCII formats containing north, east, depth and date/time.

Functionality:

- Direct gridding
- Depth processing
- Position filtering and smoothing
- Tide Correction
- 2D editor and table view of data

Other new functionality in Seafloor version 6.0

- New Merge Surfaces command
- New Points Classification command
- New command to remove chart data
- New cross section window tool
- Level of details (LOD) display for points data

Improvements

- Test on number of charts when creating chart series in the Create and Modify Chart command
- New action to remove empty charts from project in the Create and Modify Chart command
- New Miscellaneous tab in the Create and Modify Chart command
- Set Weighted Average as default gridding method in the Seafloor Gridding commands

GIS & Databases

This release contains significant improvements for handling geospatial files and databases.

- **Oracle Spatial.** You can now create Oracle connections directly in the project. Raster and vector data can be imported into Oracle Spatial. The data can be visualized and examined using spatial queries, including area calculation and coordinate system transformation.
- Geospatial files. Vector based GIS files (shapefiles , CVS etc) are now first-class objects in the project, retaining original geometric structure and spatial reference. The data can be visualized and examined using the attribute editor. Perform geometric functions like union and intersection in addition to spatial filtering.
- **ArcSDE.** Create connections to ArcSDE in the project. Examine the attribute data, visualize, and perform SQL queries.
- A SQL wizard makes it easy to create queries against spatial files and Oracle.
- GIS data resident in Oracle or in local file can be exported to shapefiles, CSV, KML , or SQLite.
- Support for filled triangles in the Display Simple features command.

Shelf

- It is now possible to visualize lines from the project in the **FOS Analysis Panel**. Use the browse icon above the **Plot item** table in the analysis panel to browse lines from the project.
- **Area calculator.** The projection selection is now disabled when calculating area in datasets default projection. Use check box to apply

- another projection for area calculation.
- Improved In-panel help on **Generate Outer Limit**.
- (Available from 6.0.3): Possible to set the distance circle in **Generate Outer Limit** to values other than 60M.

GIM

- The GIM functionality is now accessed from the main pull-down menu in Geocap.
- Several improvements has been made to the GIM interpretation system.

The Project

- It is now possible to update a **Camera** position by right clicking it and selecting **Assign view** .

The Toolbox

- Operation modes is removed.

User Interface

- The 2D and 3D icons on the toolbar has been replaced with icons saying **2D** and **3D**. Note that you may still set the **Isometric View** from **View > Perspective**.
- Workflows are now opened from **File > Open > Workflow** or **File > Recent Workflows**.
- The exaggeration in Z-direction (Z-scale) can now be seen in the lower right corner of Geocap.
- The **File and Windows** icons are now hidden from the toolbar by default. These can be un-hidden by going to **View > File and Windows** .
- Commands on the toolbar are now enabled/disabled based on the selected dataset in the Project.
- Removed from toolbar: **Display Cells of Active Data** and **Display Point Values of Active Data**.
- **Camera flight tour** is now removed from the **Tools** pulldown menu. The best way to produce a flight is to add cameras to a Generic folder.
- Some panels/dialogs have been reduced in size to better fit screen resolutions lower then 1280x1024.

Visualization

- New display command for points: LOD points.
- New image overlay support for the LOD grid command.
- It is now possible to run the same command on the same dataset in two different windows, enabling you to compare how different command settings effect your dataset.
- Keyboard shortcut **o** for toggling on/off color legend for the latest map operation.

Seismic

- Xi now renamed to **Seismic Interpretation**. (Found under the Tools pulldown menu).
- New option in SEG-Y Export 2D/3D: write samples on IBM floating point format.
- Honor IBMfloat toggle also when sample format code says IEEE.
- Geodetic properties is now set on import for 2D seismic.
- Seismic Interpretation panel handles changes (Rename, Delete) to current IHorizon in the Project.
- Pick-groups for IHorizons can now be renamed. (Only to existing seismic line names)
- Seismic Wiggle command in pop-up menu by default.
- Command **Seismic Wiggle Display** now handles Seismic 2D Lines with local origo.
- New **Extract Navigation** functionality for Seismic Line and Seismic Data folder.

Plotting

- Main panel rearranged.
- When creating postscript plots, objects of type Simple Features Layer in the project will be exported to postscript in a way that retains any knowledge of inner polygons, resulting in highly efficient postscript code.
- Multi select on files.
- Multi select on layers.
- Folder level selection.
- Data base connection selection.
- White (or any color) background inside (gray)frame/margins.
- Simplified Geo-Axes plotting.
- New display outline option.
- Postscript contours are now default closed polygons.
- Enhanced support for polygon fill.

- Enhanced support for shape file fill.
- Implemented a basic template functionality, Store/Import.
- Automatic opening of relevant projects.
- Improved startup and version control of plotting system.
- Added more display-functionality and line types.
- Preliminary (Beta) implementation of pattern fill on shape files and closed polygons.
- Automatic conversion through Ghostview/Ghostscript to various density image formats (jpg, png, pdf, tiff, bmp).
- New shape-file functionality/DB functionality + Shape file fill in PostScript.
- Improvements of PostScript filtering to combine internal polygons to reduce filesizes and improve output quality.

Scripting

- A new command *openurl* makes it easy to open local files or remote url's using the operation system default applications. See the documentation for details.
- New commands for simple features management *sfdatasource* and *sflayer* allows for programmatic manipulation of GIS data in the project. See the documentation for details.
- The grid sample routine (*zap*) now handle edges and singularities better.

Other

- **Geo-referencing** of images now supports an arbitrary number of reference points.
- Screen resolution dependent size of Import ASCII (Column) dialog.
- Updated help text in **Calculate length of lines**.
- Correcting velocity cube using well data has more options for well formats.
- Display selected cube layers are updated with control of contours lines and increment.
- New command: **Deviation velocity cube and wells** for displaying cube layers and values of well data at cube plane crossing.
- Increased resolution in **Edit Points and Lines** command. An additional help text provide information how to delete points in a dense point set.
- Color tables are sorted alphabetically.

Bug fixes

- Several improvements has been made to the **FOS Analysis panel** to make it more stable.
- Some adjustments has been made to the **Workflow**.
- The **Seismic Wiggle Display** command has been improved.

Known issues

- *Tools > Options > Project > Sorting algorithm* is not working properly, so do not use this until the issue is fixed.
- Projects with 3D seismic cubes may have very slow response time in Geocap 6.0.2. Will be fixed in next release.