SonarWiz Quarterly Highlights - 2014 Q4

Revision 1.0,1/21/2015

Chesapeake Technology, Inc.

eMail: support@chesapeaketech.com
Main Web site: http://www.chesapeaketech.com
Support Web site: http://www.chestech-support.com

1605 W. El Camino Real, Suite 100
Mountain View, CA 94040

Tel: 650-967-2045
Fax: 650-450-9300

Table of Contents

1   Most Significant Enhancements

Functional Category	Enhancement Description
General	1. Removal of Vessel Selection from NEW PROJECT dialog. This is now associated with new functions and is a key process change for bathymetry post-processing. 2. SonarWiz auto-sizes time-constant-for-course-smoothing for small file imports.
Sidescan post-processing	3. The new Audit Feature to allow managers to track the amount of time analysts spend on reviewing waterfall sidescan imagery. 4. Support for CONTACT deletion and purging of the deletion list allows much more flexible control over contact naming and re-naming.
Sub-bottom post-processing	5. SonarWiz now has the ability to export CSF-to-SEG files in 32-bit floating-point format. 6. Polarity and control scale of SEG file "heave compensation" data can be changed allowing users with an uncalibrated MRU to accurately heave-compensate their data anyway.
Bathymetry Post-processing	7. The bathymetry processing engine and ray tracer have been significantly optimized. 8. The Patch Test Utility was enhanced to improve its ease of use and reliability. 9. Configuration for bathymetry sensors and all offsets have been consolidated into a single location in the upgraded Vessel Editor. 10. A new tab in SonarWiz supporting swath bathymetry operations was implemented.
Magnetometry post-processing	11. Support for non-down-sampled magnetometer data import allows for review and post-processing of higher resolution data.

2   Categorized SonarWiz 5 Enhancement Detail – 2014 Q4

Consolidated release notes detail for the 2014 Q4 (October, November, December) releases. (Enhancements Only), sorted by functional category.

Summary Table:

Functional Category	Number of Enhancement Items
General enhancements	7
Sidescan post-processing	4
Sub-bottom post-processing	7
Bathymetry post-processing	11
Magnetometry post-processing	3

2.1   General Enhancements affecting all functional categories

1. When user selects the option to Export Tiles Only in the Save Project As GeoImage dialog, the internally used tiles now include the embedded geodesy information, so invidual tiles can be imported and positioned in ArcMAP, for example. (5.08.0001)

2. The SSS & SBP target editors will cause crosshairs to be drawn in the plan view when the mouse is moved within their images. This helps you see in the mosaic (SS) or bottom-track view (SB) the "map view" position of the contact you are editing in detail in the Contact editor. (5.08.0001)

3. The "View Selected Contact in Waterfall" menu item will now open a waterfall window for the CSF file the contact was captured from, if applicable. (5.08.0001)

4. The contact sort dialog now supports sorting by distance from all 4 corners of the bounding box around the current contacts (was SW only before), and by distance from a user-supplied X/Y location. (5.08.0001)

5. Vessel selection was removed from new project creation, since the vessel cannot be added until a new project exists. (5.08.0002)

6. The SonarWiz log file was linked to two locations in the users common app data path. The log file is no longer linked and is only found in one Logs folder location. (5.08.0002)

7. When users imported very small SS or SB files that contain fewer pings than the "Time Constant for Course Smoothing", SonarWiz would reject those files. Now, SonarWiz adjusts the time constant for course smoothing down to the length of the file being imported, if the file contains fewer pings than the smoothing value. (5.08.0002)

*Does not prevent import of files with less than 300 pings now*
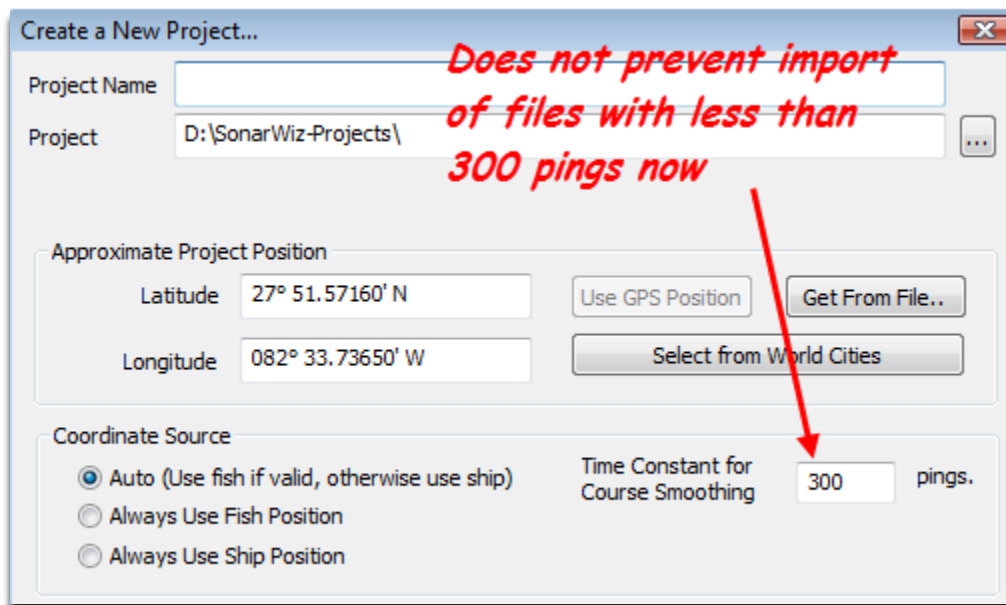
2.2   Sidescan-specific Enhancements

1. Added min/max latitude and longitude to audit report for waterfall viewer. (5.07.0012)

2. There is preliminary support now, for showing contact-based features and features from other CSF files (or from the mosaic) in the sidescan waterfall. (5.08.0001)

3. Mousing over the image in the sidescan bottom tracker now causes a synchronization cursor to be drawn on the plan view. (5.08.0001)

4. Contact preference option to NOT save deleted contacts is now available, as is a new PURGE option when viewing deleted contacts, to remove them permanently. (5.08.0001) This allows users to re-use a contact name, e.g. Contact0044 can be deleted, then reassigned to a different contact. Several users had requested this type of support.

Rev 1.0, 1/14/2015 support@chesapeaketech.com 650-967-2045   Page 6

Doc location:
\\CTI-SERVER1\Shared_Documents\Installs\AAA_ReleaseNotes\2014_Q4_ReleaseNotes\SonarWiz5FullInstall_ReleaseNotes_2014_Q4
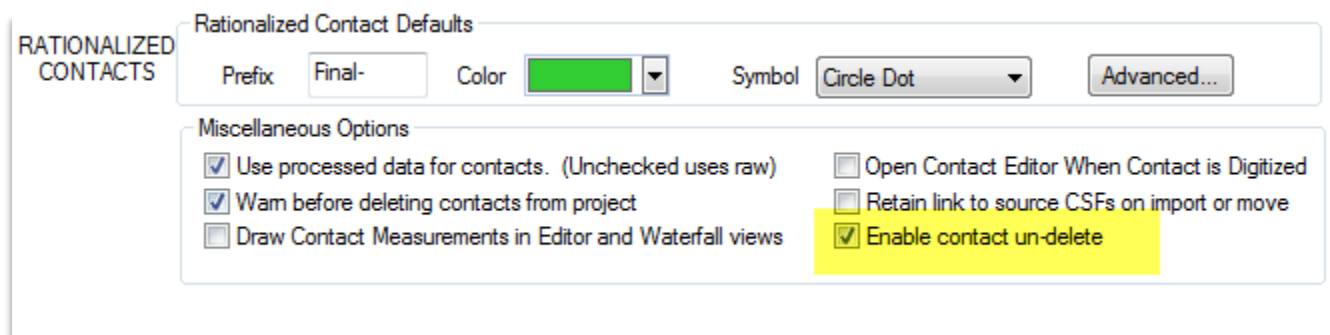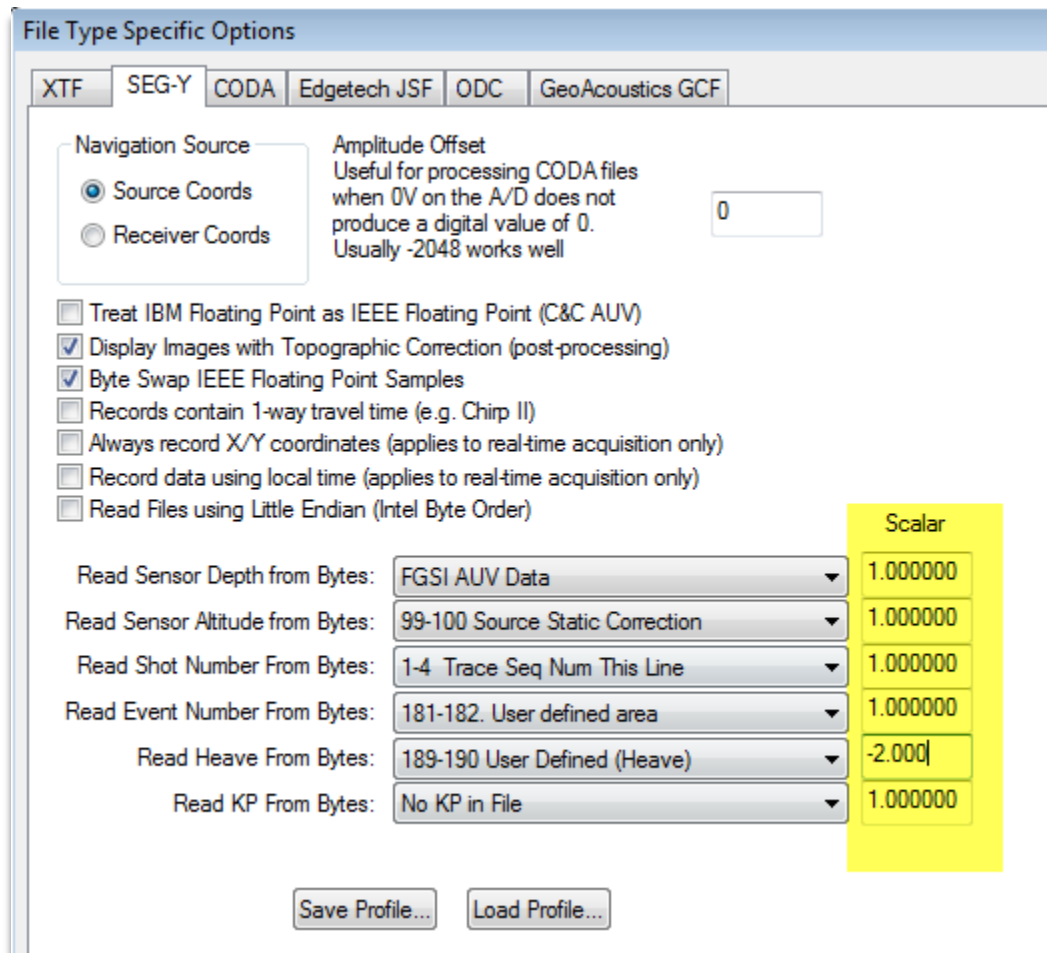
2.3   Sub-bottom-specific Enhancements

1. Added option to SBP reflector exports to add the SBP Datum Alignment offset to exported reflector files like CSV and XYZ text. (5.07.0010)

2. Added an option to the CSF to SEGY converter to generate SEGY in either 16-bit fixed point or 32-bit floating point formats. (5.07.0010)
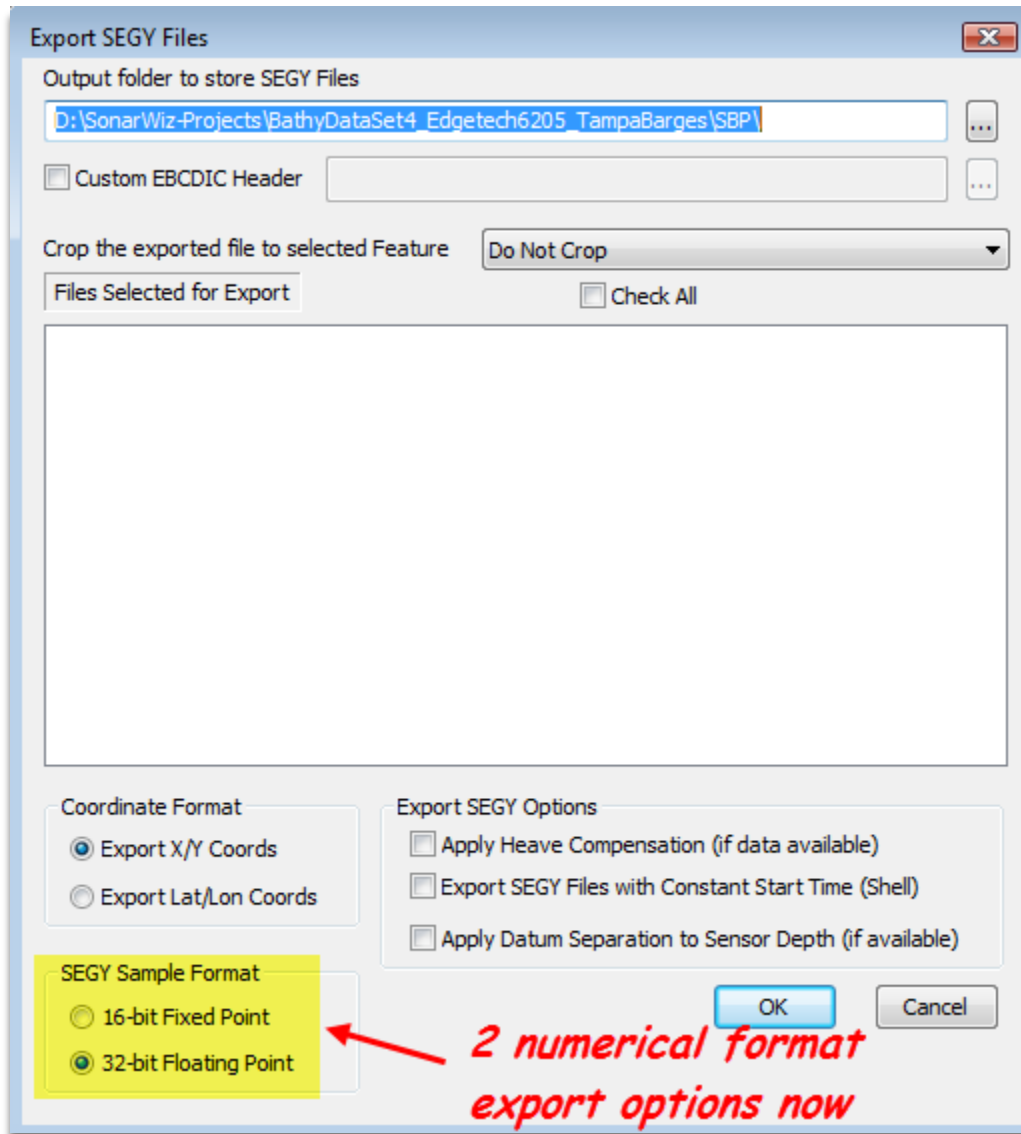
3. Shift + mouse wheel will scroll the SBP digitizer window horizontally now. (5.08.0001)

4. Reflector fragments added via "Add Fragment" or automatically after finishing a reflector, will have the same name as the reflector being copied. (5.08.0001)

Rev 1.0, 1/14/2015 support@chesapeaketech.com 650-967-2045   Page 7

Doc location:
\\CTI-SERVER1\Shared_Documents\Installs\AAA_ReleaseNotes\2014_Q4_ReleaseNotes\SonarWiz5FullInstall_ReleaseNotes_2014_Q4

5. The Post-processing->Export->Export to 3D Viewer for SBP files has been modified to work in a background user-cancellable thread. (5.08.0001)

6. Added new context menu item for SBP files to open the selected files in the 3D viewer, without having to go through the batch export dialog above. This is also a background process than can now be canceled. (5.08.0001)

7. Added SEGY File Specific options to scale selected values during the import process, which, for example, can be used to invert and scale HEAVE COMPENSATION data imported for a SEG file. (5.08.0003)
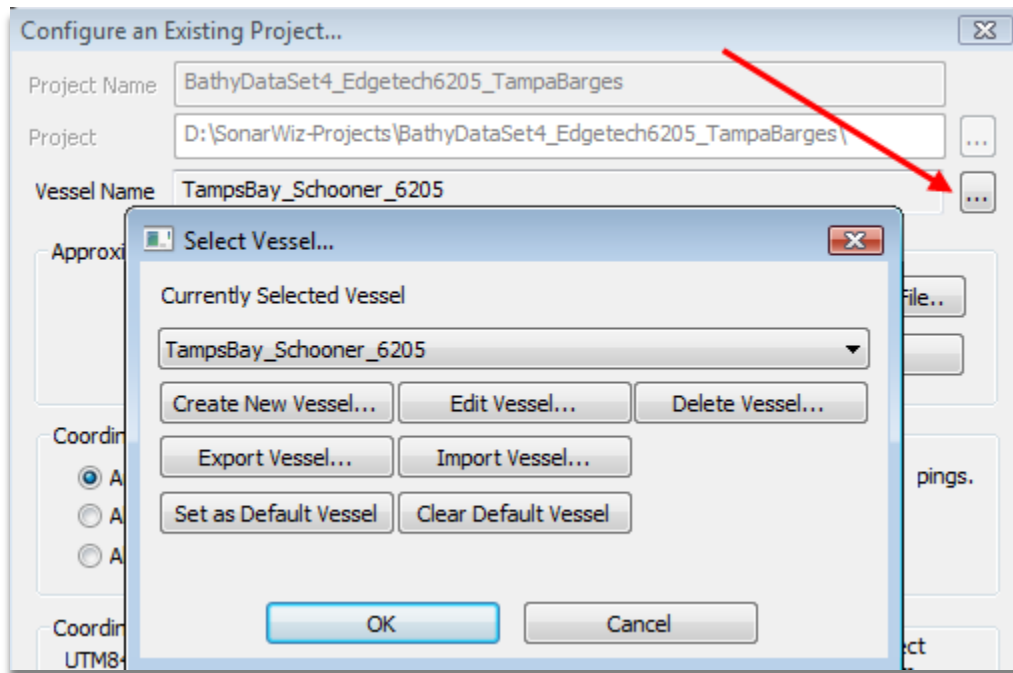

2.4   Bathymetry-specific Enhancements

1. Added ribbon UI category for bathymetry functions. The ribbon is removed for dongles that do not include a bathymetry post-processing license. (5.07.0010)

2. Minor UI tweaks to the new grid branch of the tree control and bathy grid export dialog to allow user control of the graphically selected extents. The grids are also now always stored in the ./Grids folder of the current project. (5.07.0011)

3. Implement shaded relief drawing of bathymetric grids. (5.07.0011)

4. Implement new Bathy XYZ Export dialog to provide users with more control over exported XYZ file format. (5.07.0011)

5. The bathy gridding window (when launched from the "Create..." menu item in the right-click menu for the Grids node of the explorer tree) now defaults to the limits of the plan view and allows for new selections to be made on the plan view (via rectangle selection with the mouse). The limits are also snapped to increments of the chosen cell size. (5.07.0012)

6. Grid files can now be exported in a variety of formats. The "Export..." menu items in the right-click menu for grid files in the explorer tree will launch a window similar to the magnetometer export window. (5.07.0012)

7. Internal design changes to support future enhancements in bathymetry processing made, which may appear as smoother, better rendering of bathy images, even at this time. (5.08.0001)

8. Now notifications on point flagging and operation completion should be sent correctly to SonarWiz, regardless of version. (5.08.0001)

9. Choosing your bathy sensor, e.g. Edgtech 6205, or Geoswath, is now part of Vessel sensor definition, and is no longer chosen in "bathymetry settings" during bathy file import (5.08.0002)

10. New projects will always be created with the "Default Vessel". Users may now set the Default Vessel with any existing vessel so that future new projects will always be created using the Default Vessel. Also, added options to export and import a vessel to an XML file and to set and clear the default vessel used during new project creation. (5.08.0002) This is available either on the main tool-bar VESSEL choice:
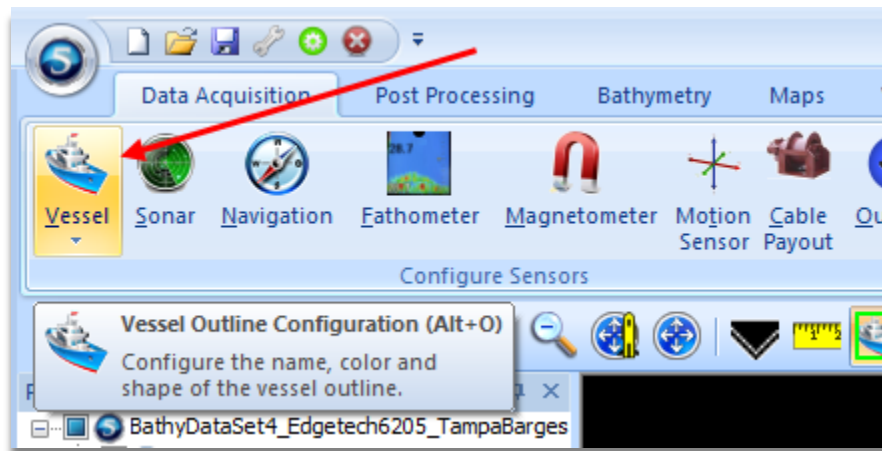
or as part of CONFIGURE EXISTING PROJECT:

11. We added a vessel import function to the Vessel Editor. (5.08.0002)
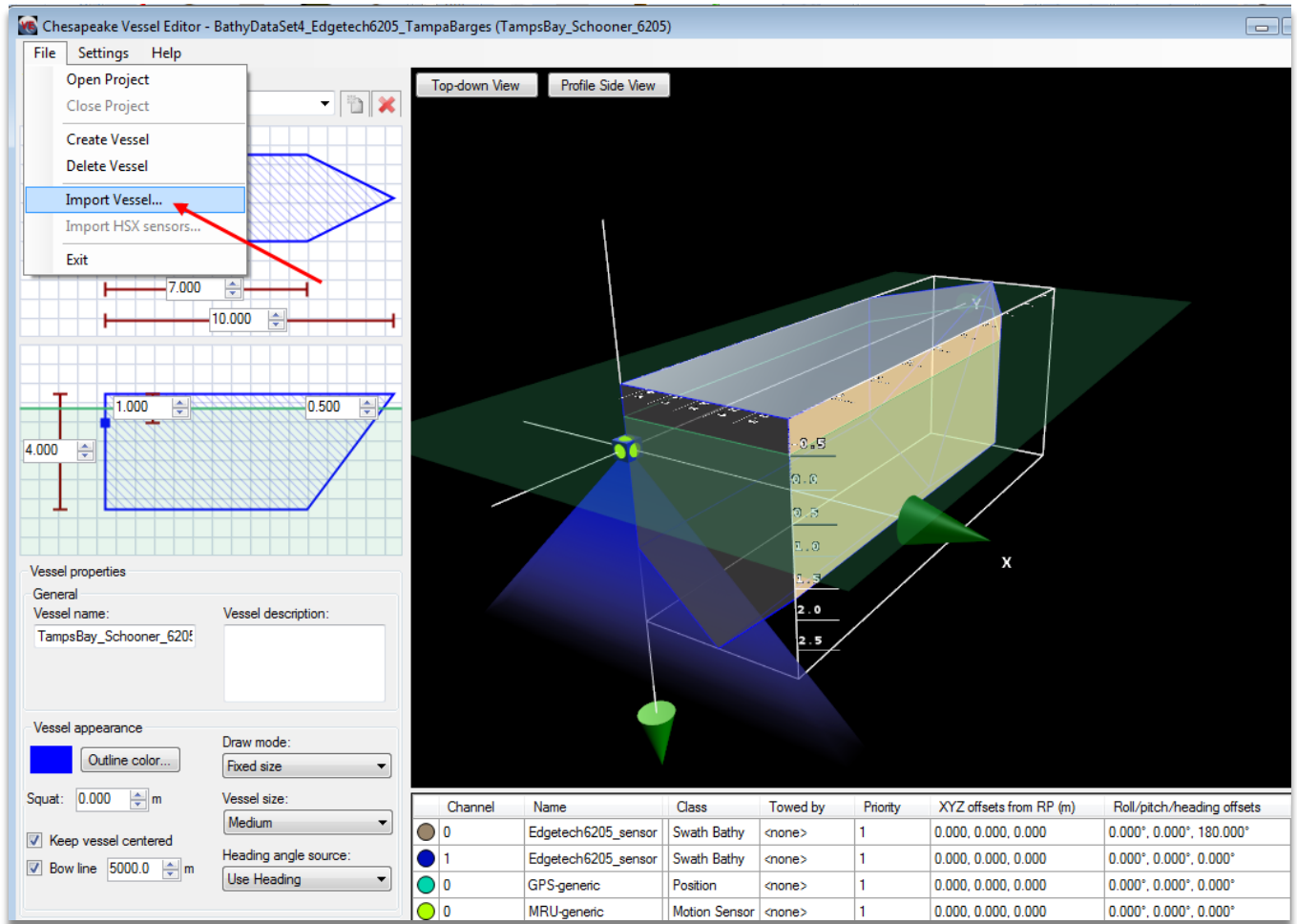
2.5   Magnetometry-specific Enhancements

1. Until this release magnetometer data was always limited to a 1Hz sample rate. This version includes a new magnetometer option that allows the default (1Hz) sampling or no-downsampling. Successive mag samples that have the same position will still be rejected, that is, we do not store duplicates. (5.07.0012)
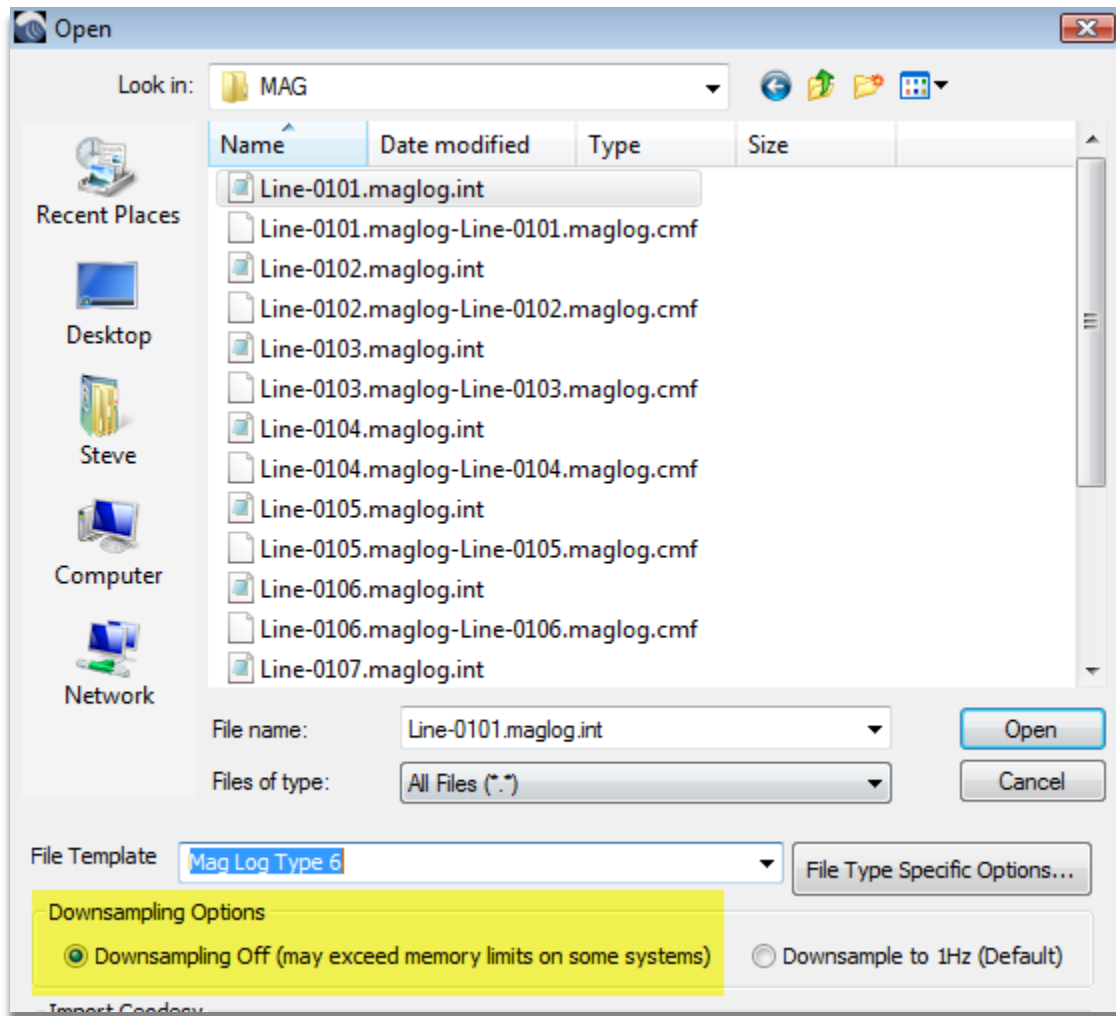
2. Implemented a new magnetometer template for the user 2765 that handles the date correctly. (5.07.0012)

3. The "Fit View to All" command for adjusting the plan view to encompass all project items now considers enabled magnetometer anomalies when determining the area to show. (5.08.0001)