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Sounding Better!

SBMAX64 Improvements

By Connor MacDonald

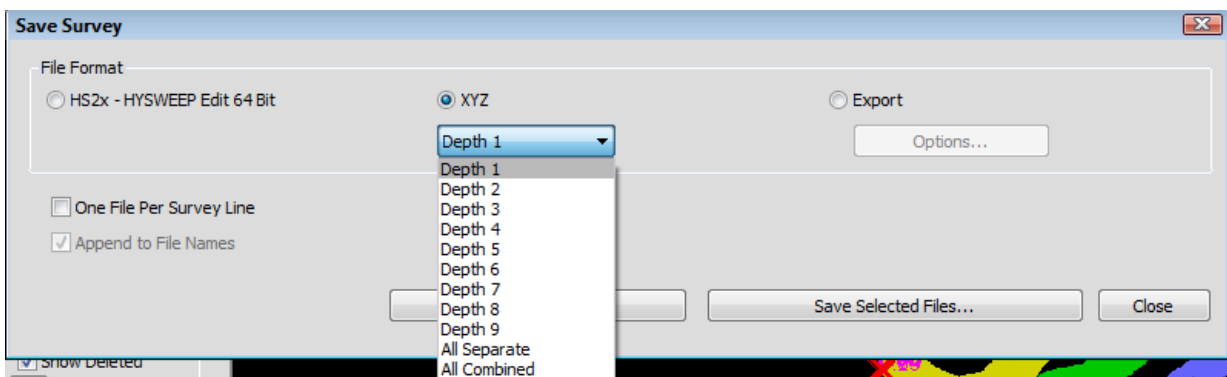
Over the past year, HYPACK has fixed quite a few bugs in our SBMAX64 software. The purpose of this article is to share a general overview of some of the improvements and features that have been made over the past year.

XYZ EXPORT

XYZ files can be saved multiple ways.

Previously, XYZ files combined all beams into one file. That option is still available, but you can also save the soundings from one selected beam at a time, to one file or to separate files per survey line. The option to save all beams separately but in one operation is included as well.

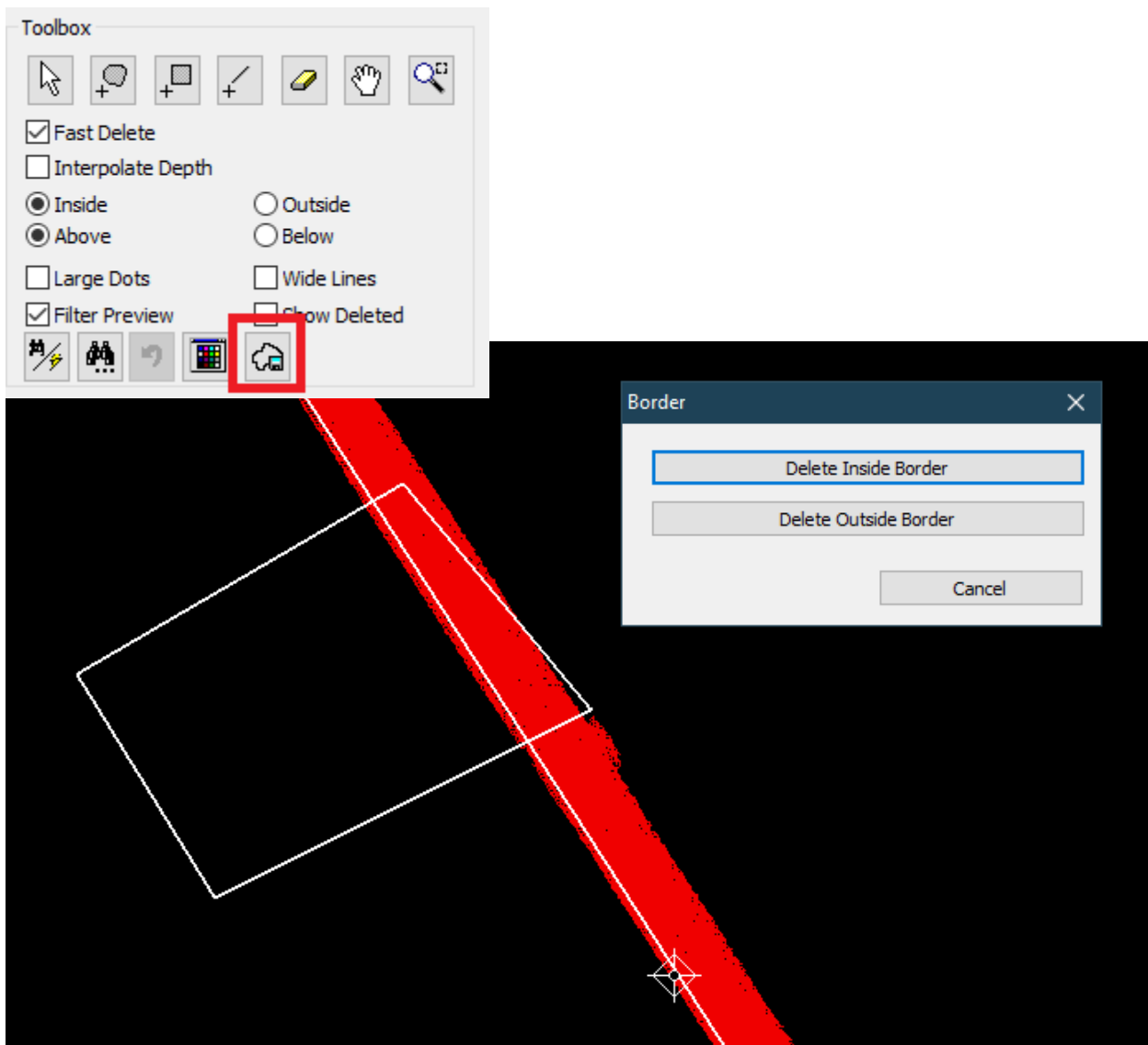
FIGURE 1. XYZ Save Options



BORDER CLIPPING

Clipping with a border file (*.BRD) is now available in SBMAX64. The interface provides a preview of the border file in the display window.

FIGURE 2. Clipping to a Border File



INTERPOLATE DRAFT OPTION

In the Processing tab of the Read Parameters dialog, there is a new Interpolate Draft option. This checkbox decides how SBMAX64 calculates draft values for positions between logged draft records (DFT records). It can linearly interpolate the values between draft records, or use the value of the most recent draft record. This affects editing draft in the spreadsheet.

FIGURE 3. *Interpolate Draft Option*

When editing draft with interpolation on, editing a value will change the interpolations between the edited value and the draft records before and after the edited value.

When editing draft with interpolation off, changing a value will change all values from the chosen time to the next draft record.

In the following example, we begin with draft records of 3 entered at row 174 and row 193.) We enter a value of 6 at 182 and observe the effects of enabling or disabling interpolation.

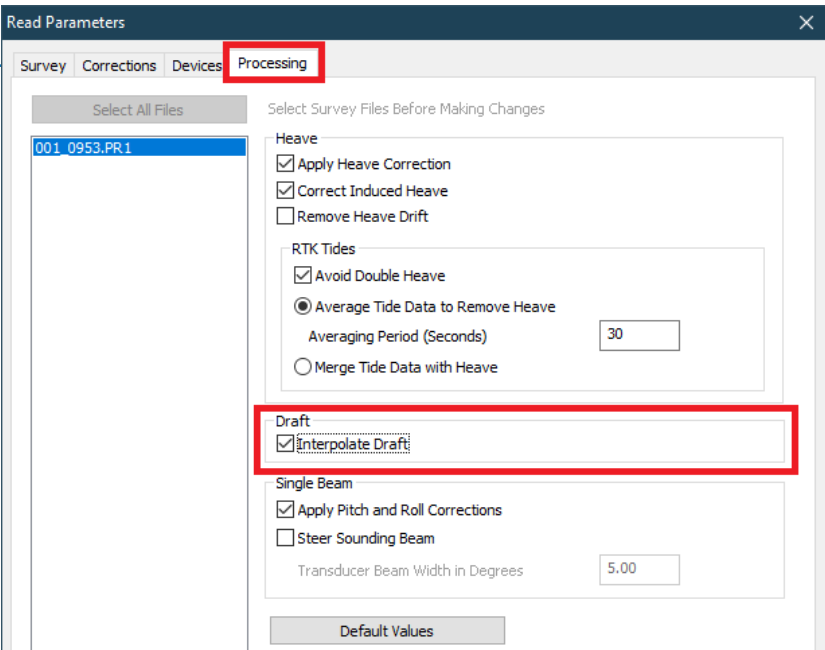
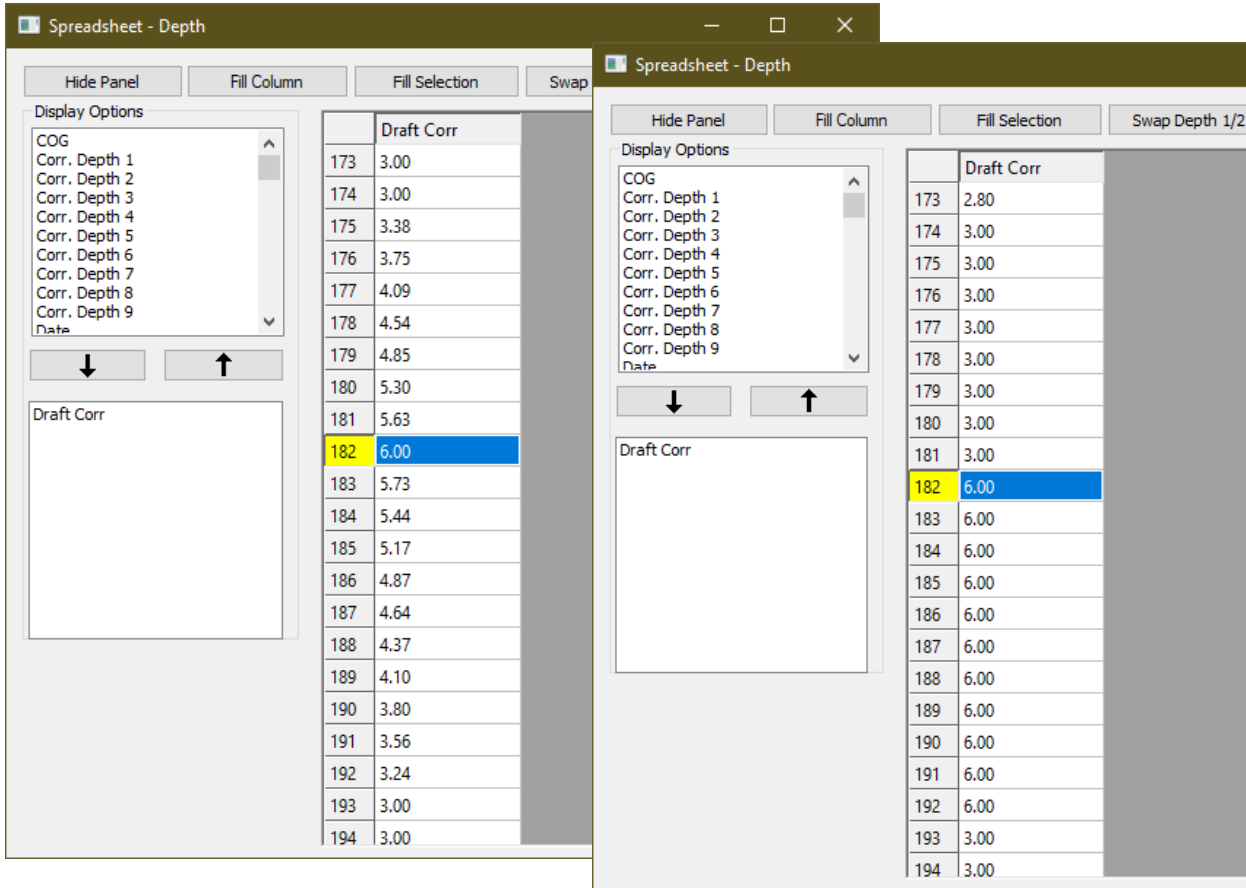


FIGURE 4. *Original Draft Values*

The 'Spreadsheet - Depth' window displays a table of draft correction values. The table has two columns: 'Draft Corr' and 'Date'. The 'Draft Corr' column contains values of 3.00 for rows 173 through 194. Row 182 is highlighted in yellow.

	Draft Corr	Date
173	3.00	
174	3.00	
175	3.00	
176	3.00	
177	3.00	
178	3.00	
179	3.00	
180	3.00	
181	3.00	
182	3.00	
183	3.00	
184	3.00	
185	3.00	
186	3.00	
187	3.00	
188	3.00	
189	3.00	
190	3.00	
191	3.00	
192	3.00	
193	3.00	
194	3.00	

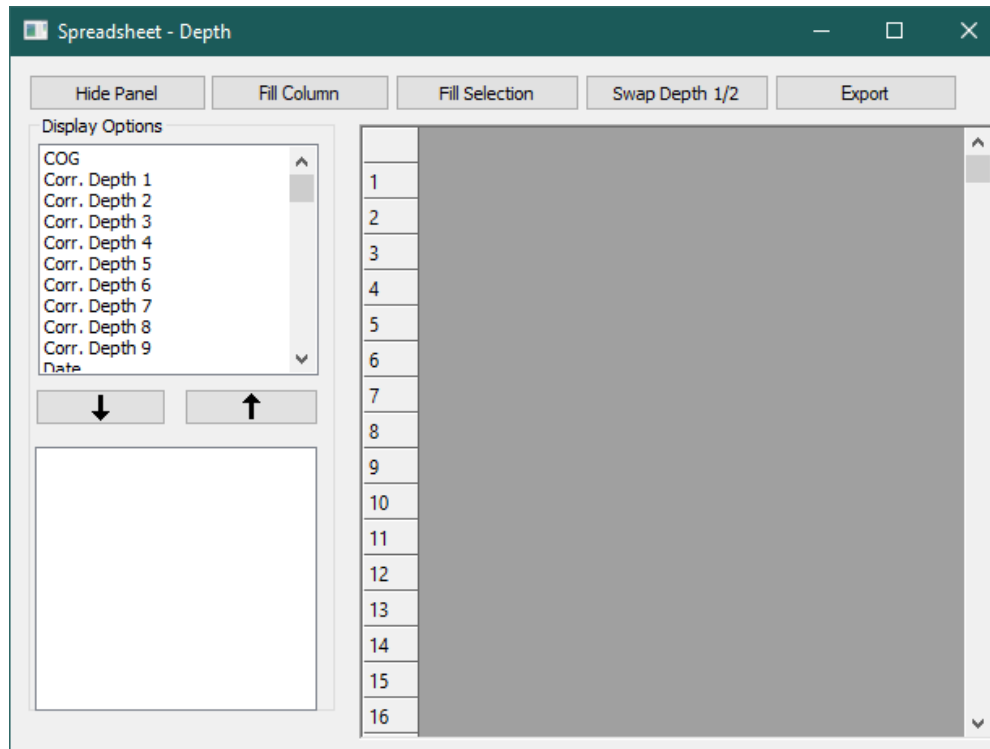
FIGURE 5. Results—Interpolation on (left) and No Interpolation (right)



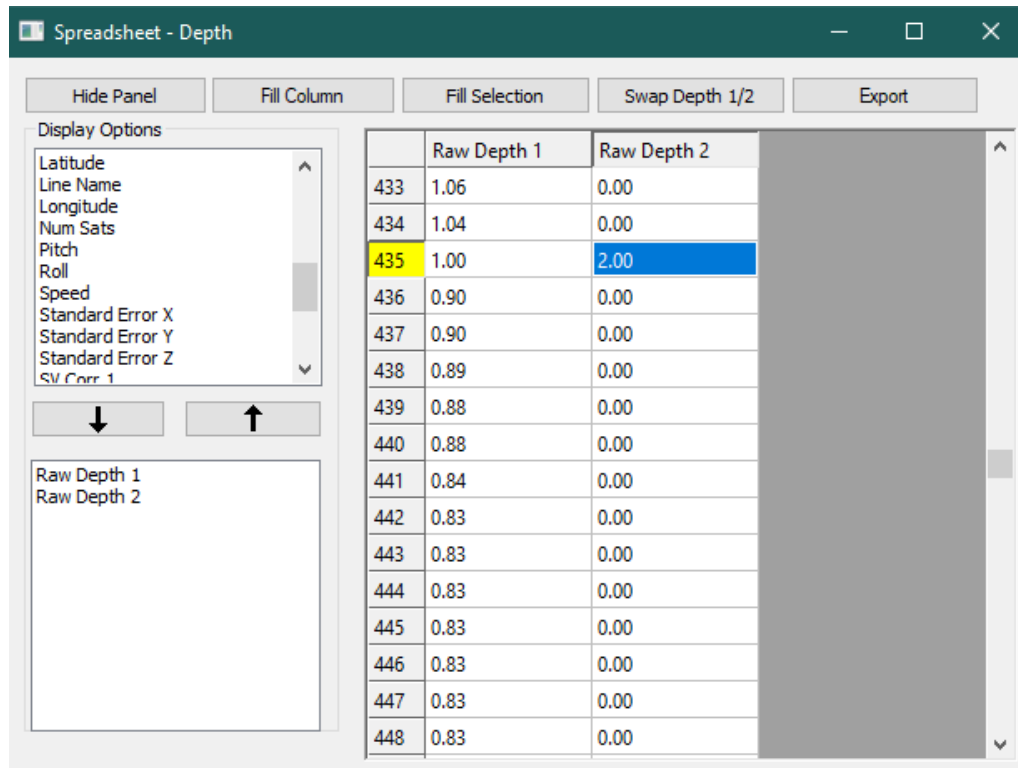
SPREADSHEET

Multiple values that previously did not display data or did not work properly have been fixed, including GPS values (Lat, Lon, Elevation, and Time), Standard Errors, and DOP.

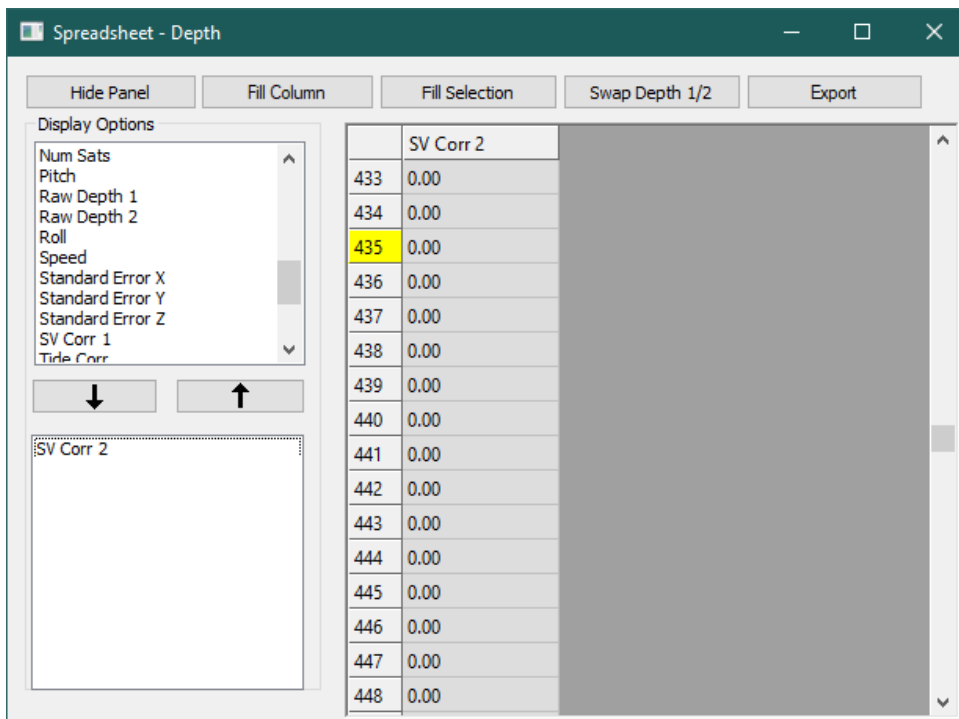
You can now remove all columns from the spreadsheet, helping with column organization.



You can now edit Depth 2 even if you are using a single beam device.



Sound Velocity 2 is an available column.



BUG FIXES

Profile:

- **Smoothing bug fix:** Some files that smoothed properly in depth mode would “unsmooth” in elevation mode, and some files that smoothed properly in elevation mode would “unsmooth” in depth mode.
Smoothing should smooth files properly, regardless of depth or elevation mode choice now.
- **Files with depths of zero:** When moving between the files in a catalog, sometimes files would not load values in the spreadsheet or draw in the profile, but these files would load individually instead of through the LOG file. The issue was found to come up with files that had depths of 0 in the middle of them.
Files with zero, deleted, or invalid depths in the middle of them should still load in SBMAX64 when selected from a LOG file.

Echogram:

- **Handling corrupt binary files:** A warning now appears when a user attempts to load corrupt BIN files. If loading a LOG file, the other BIN files will still attempt to be loaded.
- **HS2x files would not load with their associated BIN files** has been fixed.

Trackline Drawing:

- Tracklines were not drawn for all files in a LOG file is now fixed.

File loading fixes:

- Non-empty files were appearing empty in SBMAX64.
- RAW files with a single WTE (water’s edge) record at the end of the file were improperly loading.