



Upcoming Sub-bottom Processing Updates

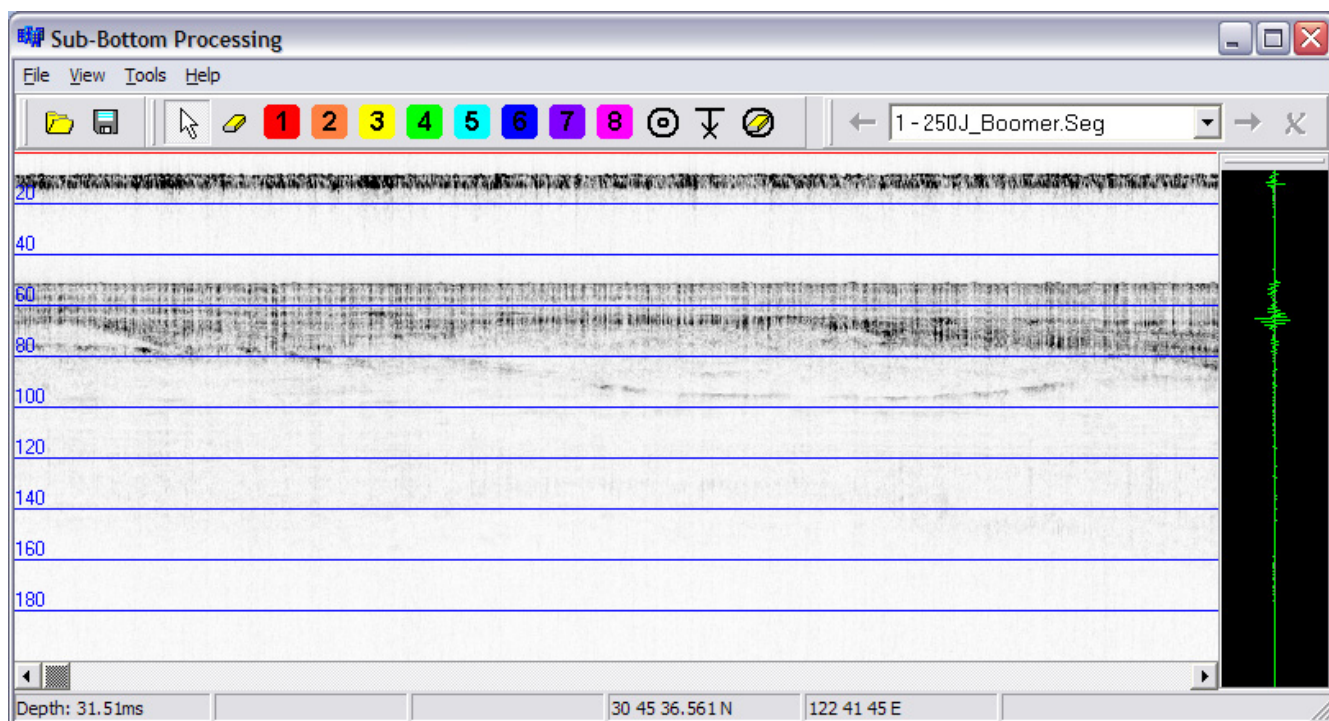
By Dave Maddock

In the last Sounding Better (May 2009), I introduced coming acquisition support for analog sub-bottom systems. In this article I'd like to cover processing the data.

As I mentioned previously, the HYPACK® sub-bottom acquisition and processing routines have been rewritten from the ground up with native SEG/Y support. Of course, SEG/Y is a notoriously 'non-standardized standard' and I've taken a lot of time to make sure our sub-bottom processor (SBD) can cope with SEG/Y data in a variety of flavors.

Those of you familiar with older versions of HYPACK® sub-bottom support for the Innomar and Stratabox systems will recognize the user interface, which has been kept largely the same.

To load data simply select a SEG/Y file or catalog. If the catalog contains RAW files, SBD will find the corresponding SEG/Y in the project's \Raw directory. (Sub-bottom data logged in HYPACK® will always create a pair of data files for each line—a raw file and a seg file.) Any existing reflectors from a prior editing session will also be loaded.



The main toolbar provides eight colored layers for picking reflectors, two tools for marking targets, and eraser tools for each. These tools are the heart of the program and allow you to digitize the sub-bottom layers and save them to edited ALL format for further use with other HYPACK® components. A catalog is created in the \Edit folder for each digitized layer.

FIGURE 1. Sub-bottom Profiler Filter and Gain Controls

The second major piece of SBD is the filtering and gain module, which it shares with the new sub-bottom universal driver (subbot.dll). This module provides both acquisition and processing with flat gain, FFT band pass filtering, and several color palette options.

The '**vertical down-sampling**' option controls how the data is down-sampled for drawing on the screen.

The '**color**' section allows you to choose a unipolar (negative amplitude is zeroed), bipolar (negative amplitude in red, positive in blue), and rectified (absolute value amplitude) viewing mode. You can modify the minimum and maximum extents of the palette if you wish, or let SBD find them and autoscale for you.

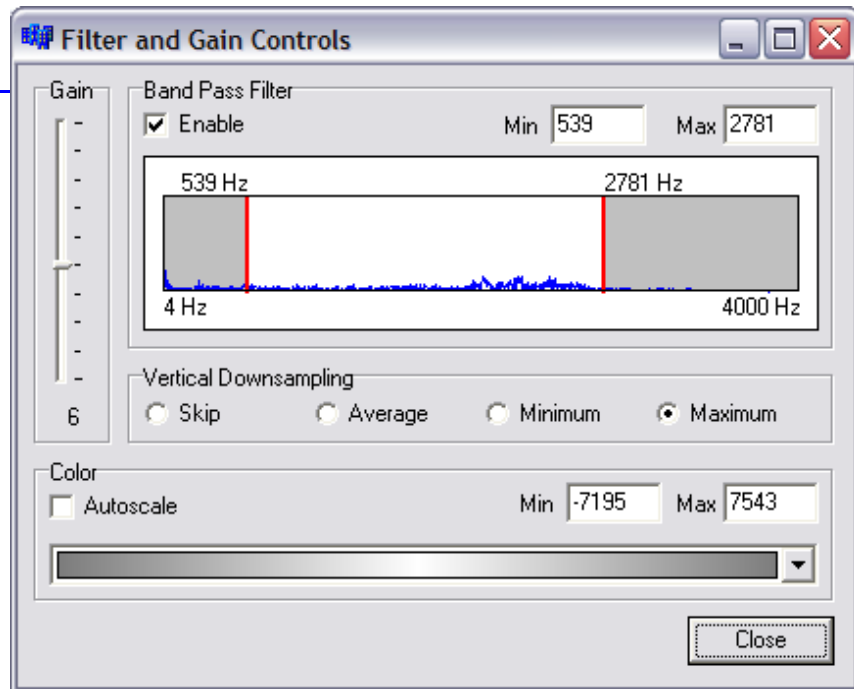
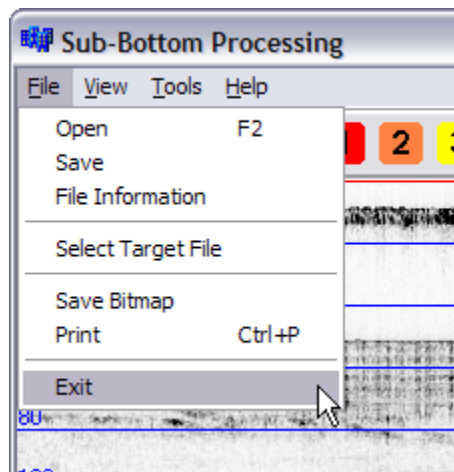


FIGURE 2. Sub-bottom Profiler File Options



From the File menu you can print the data or save it to a bitmap and can also view the SEG/Y text header.

Finally, Cross Sections and Volumes hooks into our new SEG/Y routines and can display the sub-bottom data behind your Edited data for reference while calculating volumes.