

HYSCAN Changes for HYPACK® 2008

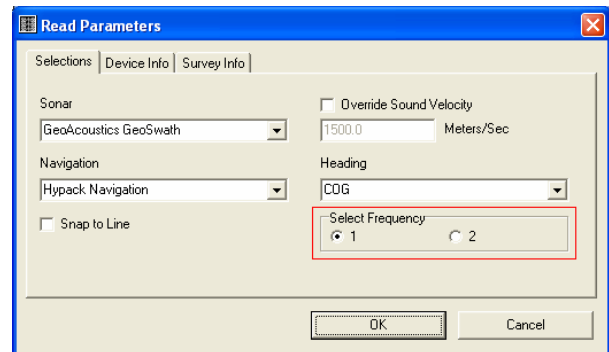
By David Maddock

HYSCAN is a standard HYPACK® program, used for marking targets and generating mosaics from Side Scan Sonar data. HYSCAN has received significant updates for the new release including

- Support for higher resolution and dual frequency side scan (such as the EdgeTech 4200),
- Advanced time varied gain (TVG) options,
- Options for faster targeting and management of target files,
- A new spreadsheet view,
- Many display and usability enhancements.

Dual Frequency Data

New support for logging dual frequency data to HSX in SIDE SCAN SURVEY means the frequency you want to process in HYSCAN is a selectable read parameter. Saved HS2 and LOG files from HYSCAN will be suffixed with “_ss1” and “_ss2” as appropriate.



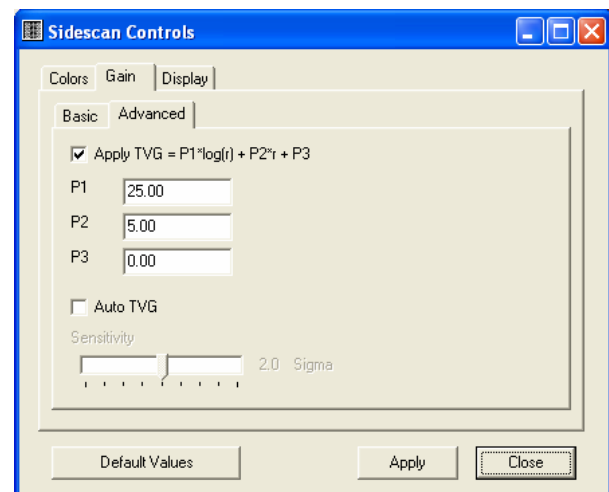
TVG Options

A new tab in the side scan controls provides access to the new TVG options. In the first case, you supply the coefficients to use in the calculation:

$$P1 * \log(r) + P2 * r + P3$$

where 'r' is the range of the sample.

A new Auto TVG option scales the color palette across the amplitude range specified as +/- some multiple of σ from the average amplitude. You simply set the sensitivity multiple (1-10). The bottom-tracking must be correct for Auto TVG to work properly.



Target Management

In Stage 2 (targeting), a new option allows HYSCAN to manage target files for you. It will maintain a target file for each line, as well as an aggregate target file for each date. Targets can now be displayed in the Scan View--colored red if the target is associated with the current line, blue otherwise.

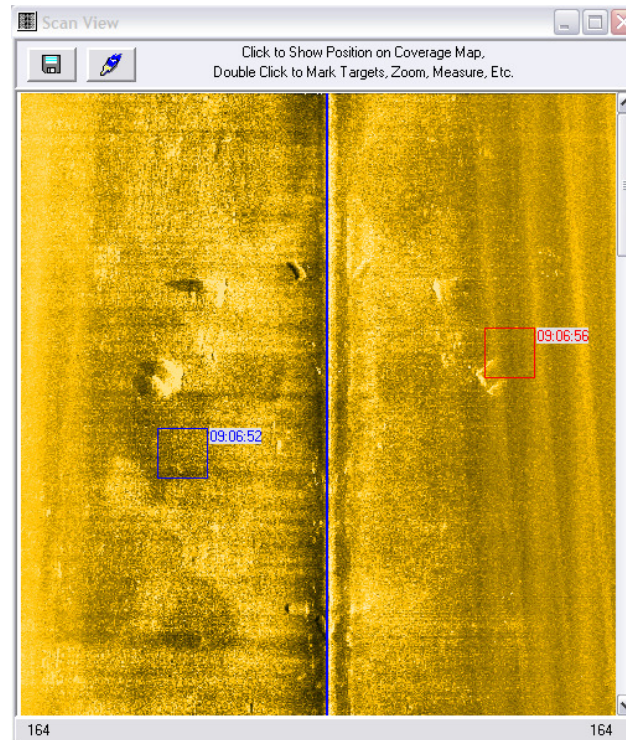
Some target editing can now be done in the Target Viewer. The Name, Survey and Capture File, and Notes fields can be edited, and targets can be ignored (hidden) or deleted. Also, the entire target book (sans any ignored targets) can be exported to a Rich Text file (RTF) for display in MS Word or many other word processors.

The Coverage Map in Stage 2 draws the current line bolded and always on top of the others. Targets are drawn in the same fashion as in the Scan View window. Planned lines, if they exist in the HSX, are also displayed. Finally, a blue polygon denotes the area that is currently shown in the Scan View window.

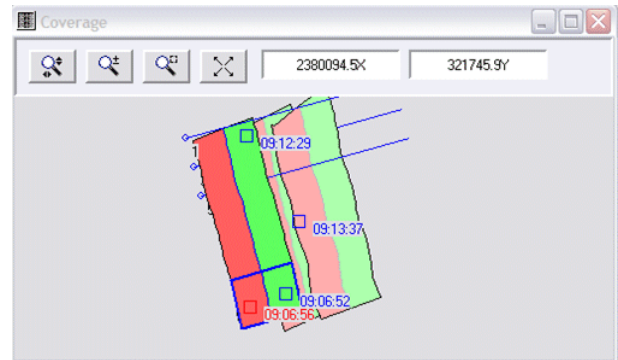
The new Spreadsheet view shows the data series in tabular form with configurable columns, including DBL, DOL, and layback calculations. Layback can be edited for part of the line as well.

Spread Sheet						
Fill Column		Export	Update Layback		Refresh	
Record	Time	Event	X	Y	COG	Layback
1	09:04:54	2371	2380695.0	321679.7	159.8	6
2	09:04:54	2371	2380695.0	321679.7	159.8	6
3	09:04:54	2371	2380695.0	321679.7	159.8	6
4	09:04:54	2371	2380695.0	321679.7	159.8	6
5	09:04:54	2371	2380695.0	321679.7	159.8	6
6	09:04:54	2371	2380695.0	321679.7	159.8	6
7	09:04:54	2371	2380695.0	321679.7	159.8	6
8	09:04:54	2371	2380695.0	321679.7	159.8	7
9	09:04:54	2371	2380695.0	321679.6	159.8	7
10	09:04:54	2371	2380695.0	321679.4	159.8	7

Spreadsheet View



Scan View



Coverage Map