



Side Scan - Updates and New features

By Harold Orlinsky

With Dave on vacation this month, I've decided to steal his thunder and let you know about the changes he made to support side scan projects since the HYPACK® 2014 release.

HYSCAN: CHANGES TO RAW DATA (PHASE 1) AND SCAN VIEW (PHASE 2) STAGES

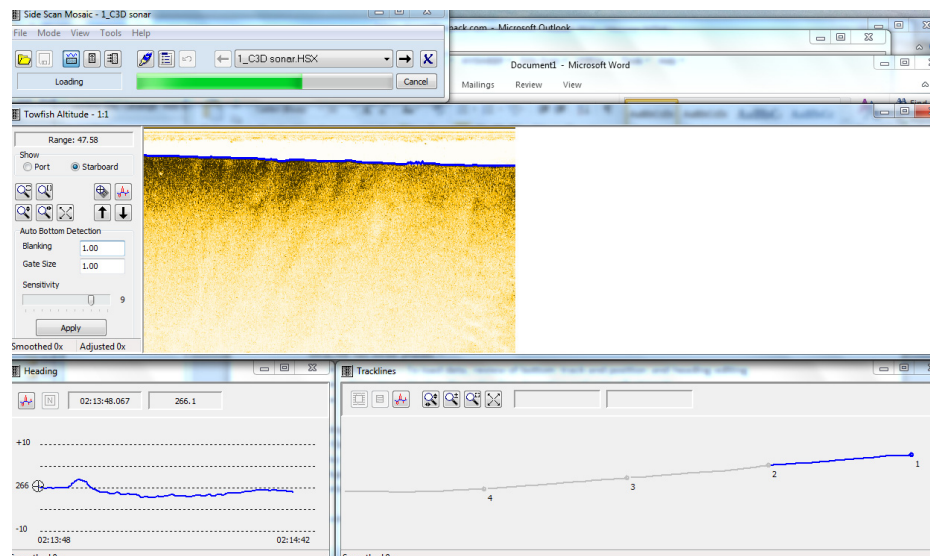
We're seeing more and more folks processing side scan data – whether from side scan systems, interferometry units or the backscatter imagery from multibeam systems. Once inside HYSCAN, the processing techniques and features are similar.

FASTER FILE LOAD TIME

Loading files always seemed to take the most time in HYSCAN. It would not be uncommon for 100 files to take more than 5 minutes just to load.

In the updated program, the file open process is multi-threaded; after the first file has loaded, all of the functions for Phase 1 —bottom track line and heading adjustments — can be done on that file while the others are still loading. There are no additional settings to configure, as this process is automatic.

FIGURE 1. *You can see the files are still loading (green task bar), but editing can take place with the first lines loaded.*

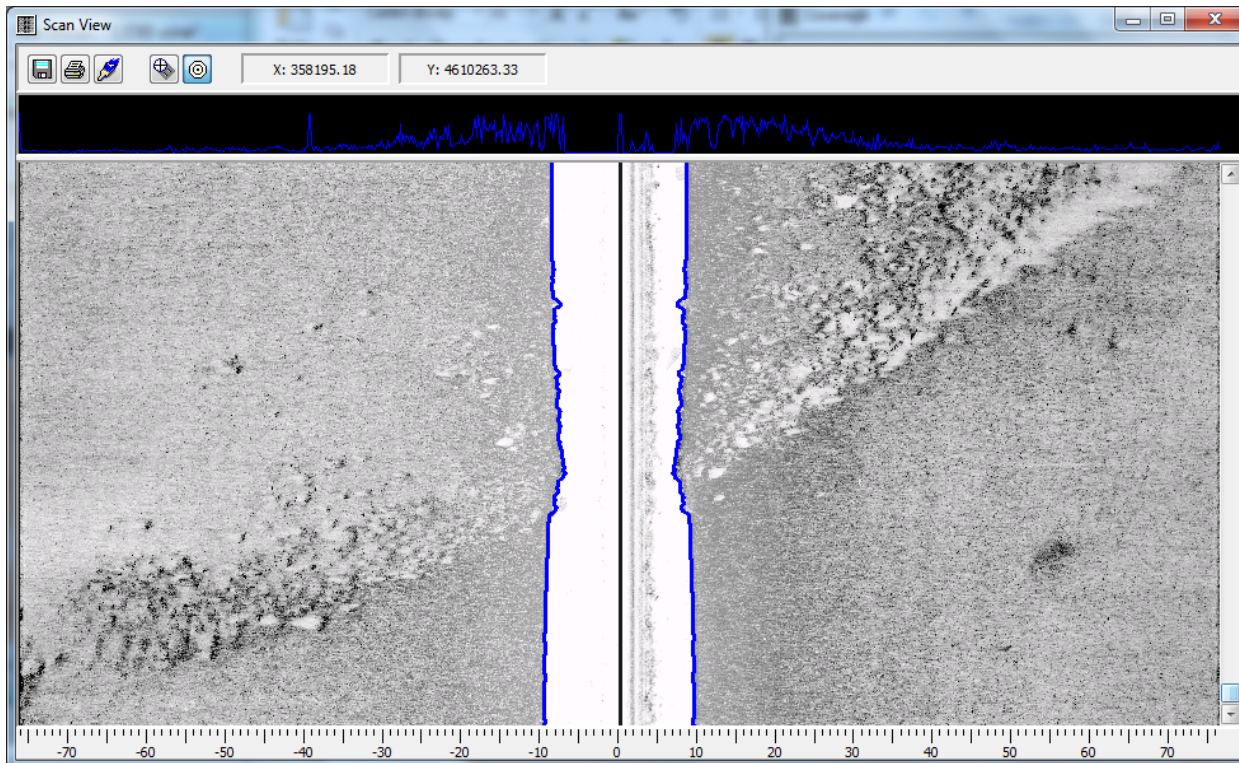


SCAN VIEW INTERFACE CHANGES

In Scan View, there is a new look:

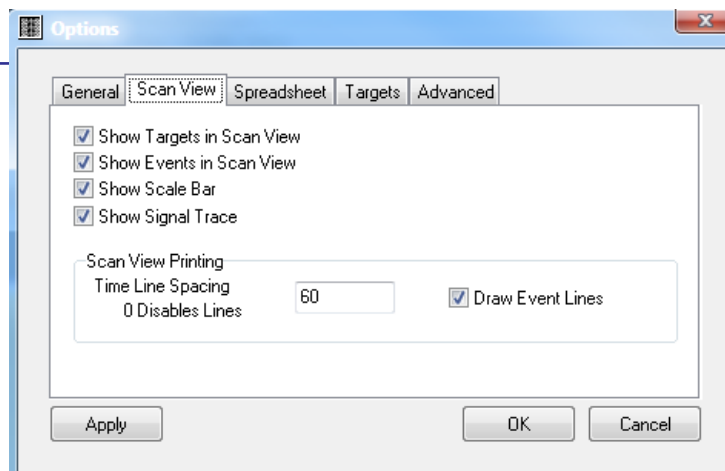
- **Added scale bar** on the bottom for easy across track distance measurements.
- In the **active signal window**, scrolling your cursor across the image shows the signal return of the sonar data, sometimes useful for understanding features on the seafloor.
- **New targeting icon.**

FIGURE 2. Scan View



You can toggle each of these features on and off in the Scan View tab of the View Options dialog (F9).

FIGURE 3. View Options in Scan View



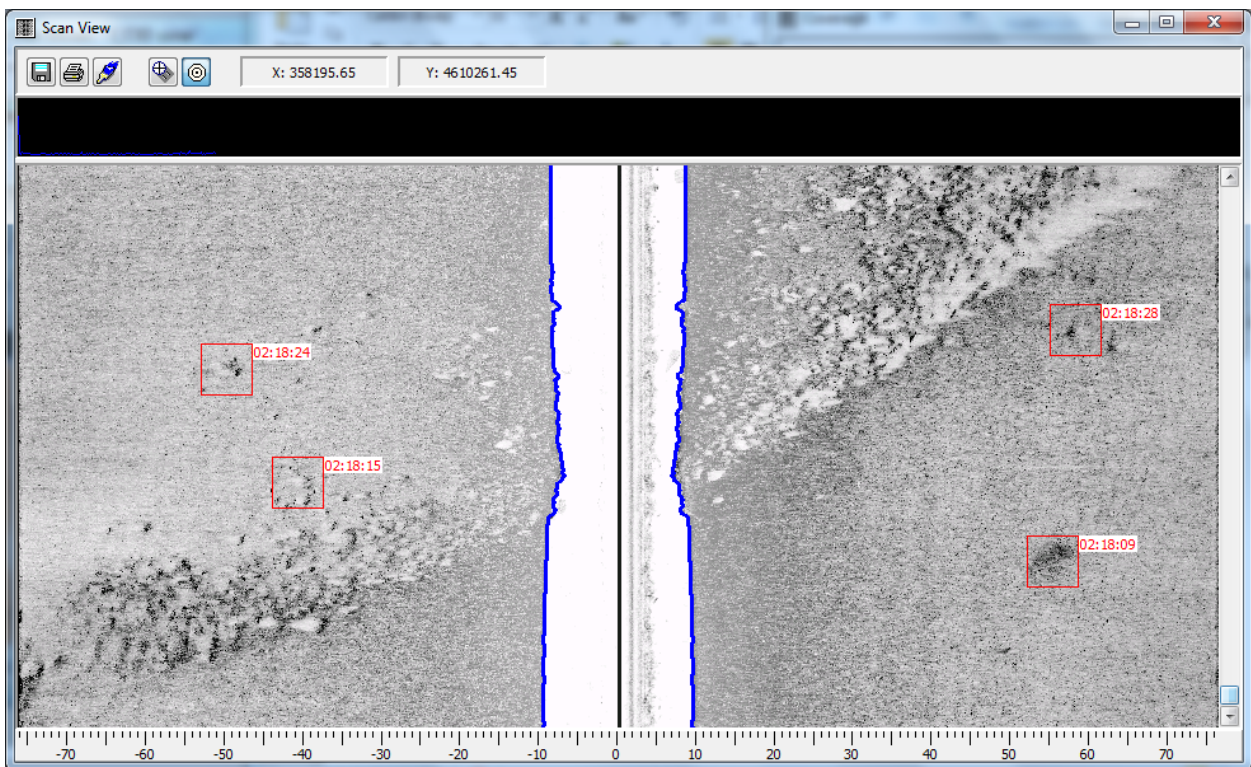
MARKING TARGETS IN SCAN VIEW

The new Quick Mark targeting feature enables you to mark several targets in succession in the Scan View window. No measurements are done or images collected of the objects in the target locations.

1. **In the Scan View tab of the View Options dialog (F9), enable the Show Targets setting.** This setting is optional, but it allows you to see where you have marked targets.
2. **Enable the Quick Mark feature.** Click the Quick Mark target in the Scan View toolbar. 
3. **In the waterfall, click and drag a window around the area to be marked with a target.** A red box is displayed and a target generated at the center of the defined area. You can repeat this step multiple times to mark multiple targets.

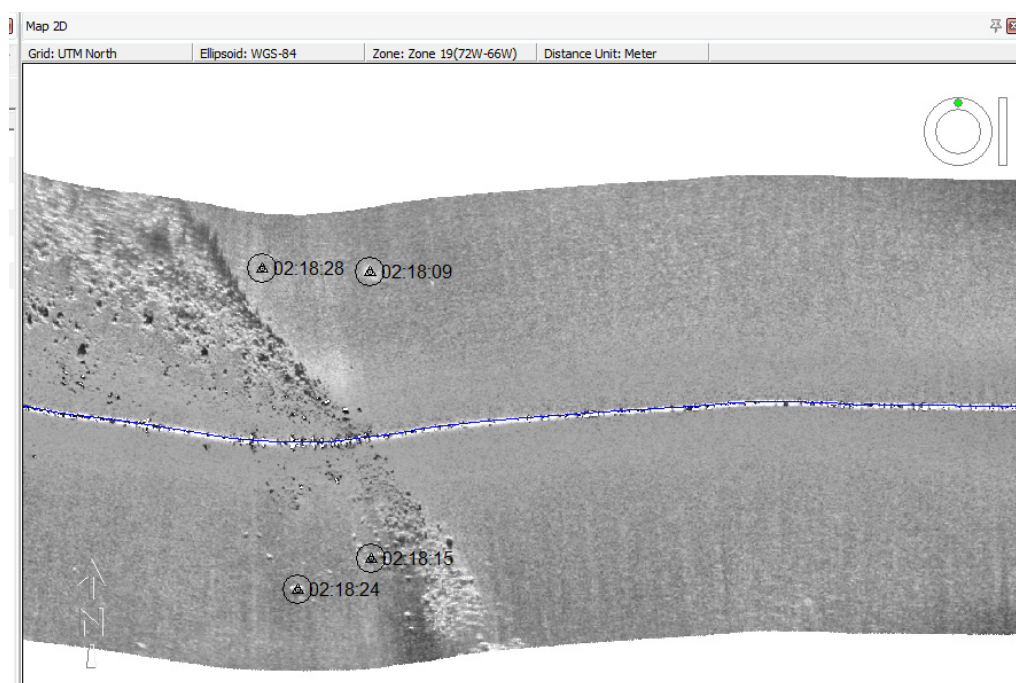
To remove a target, simply right-click in the area inside the box.

FIGURE 4. Marking Targets in Scan View



A target file is saved with the positions. They can be seen in Phase 3 during the mosaicking process, and in the HYPACK® shell.

FIGURE 5. Targets in the HYPACK® Map Window



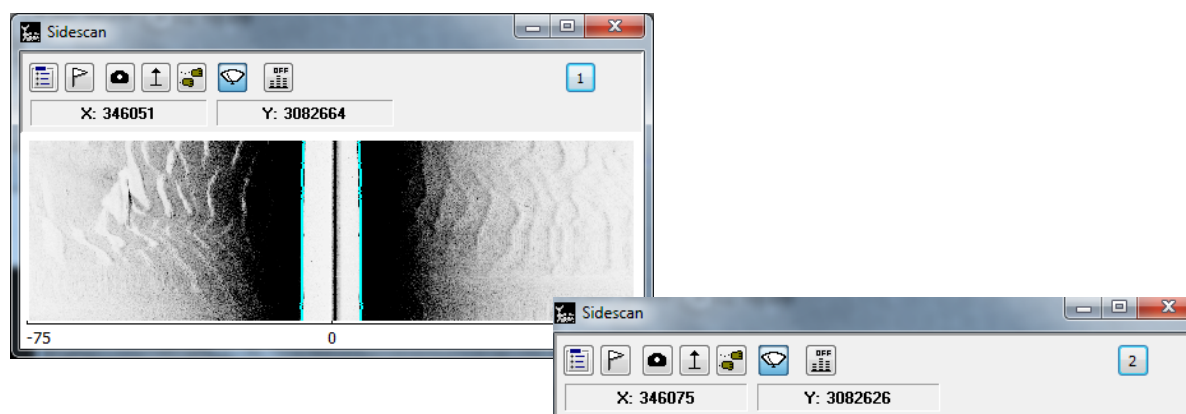
DUAL FREQUENCY DISPLAY IN HYSWEEP®

An adjustment has been made to the HYSWEEP® SURVEY driver to handle dual frequency side scan during data collection.

In the past, this has not been an issue, as any system that did multibeam (or bathymetry) had just a single output for side scan. Now, we're seeing systems that do both bathymetry and dual frequency side scan. We didn't add any new windows in HYSWEEP® SURVEY, but a toggle switch in the Side Scan window allows you to switch between Frequency 1 and 2.

All data is logged in the HSX file, regardless of the display setting in the window.

FIGURE 6. Toggling Between Frequency 1 (left) and 2 (right)



Hope these new features help. Any questions, or comments, please let me know.