



All About Targets in HYSCAN

By Dave Maddock

In addition to building mosaics, HYSCAN (SIDE SCAN TARGETING AND MOSAICKING) is a powerful tool for investigating and marking targets with side scan imagery. Here is a summary of what you can do with targets in HYSCAN, with a focus on some of newer updates in 2011 and 2012.

HANDLING TGT FILES

By default, HYSCAN works with a single TGT (target) file per edit session. However, HYSCAN also supports a multi-file mode: auto-management. Auto-management will maintain one TGT file for each line and one for each date in the survey. You can turn it on from the "Targets" tab in View Options.

In multi-file mode, HYSCAN remembers the line on which you marked the target. Targets from the currently selected line are drawn in red in the Scan View and Coverage windows; targets from other lines are drawn in blue.

It is also important to note that much of the auxiliary target information available in HYSCAN is stored in an additional file from the TGT files. It is called sstarget.txt in the project folder. When HYSCAN loads or saves a target file, the extra information is stored in this file indexed by target name, so it is very important that you use unique target names to avoid confusing HYSCAN.

DEFAULT NAMING OPTIONS

More powerful options for naming targets were added in 2011 as well. Prior versions simply created a name for new targets based on the date and time during acquisition. Now, you can specify a default name using any combination of a prefix, suffix, and incremental number in addition to the date and time.

TARGET CLASSIFICATION

Also added in HYPACK® 2011 is the Target Classification Database. I wrote a more complete article on this feature in the November 2010 issue of *Sounding Better!*, but I will recap for those of you just joining us.

The Target Classification Database is a database of example target screenshots you can build yourself. When marking a new target, you can press the "?" button to bring up a window to compare your new target to those in the database. Then, you can either add the new target image to the database, or assign a confidence value to the new target based on this information.

TARGET VIEWER IMPROVEMENTS & POSITION ADJUSTMENT

Finally, the Target Viewer screen is getting some attention in 2012. Coming in the service pack, we've added a navigation section to the viewer which lists all your targets by name--much more convenient than the tedious little arrow buttons.

Secondly, the list adds the ability to select multiple targets for further processing with position adjustment. The position adjustment utility is used for "merging" multiple marked targets from the same object into a single adjusted target. These "adjusted" targets are added to the database and saved to a new TGT file. There are three modes: Simple Average, High Confidence, and Known Point.

- **Known Point** simply copies the selected target to the new TGT file.
- **Simple Average** will take the average position of the selected targets for the new merged target.
- **High Confidence**, like Simple Average, will also average the positions, but you select one position in which you have more confidence and it will be weighted more strongly in the average.