



New features in the HSX Converter in 2009

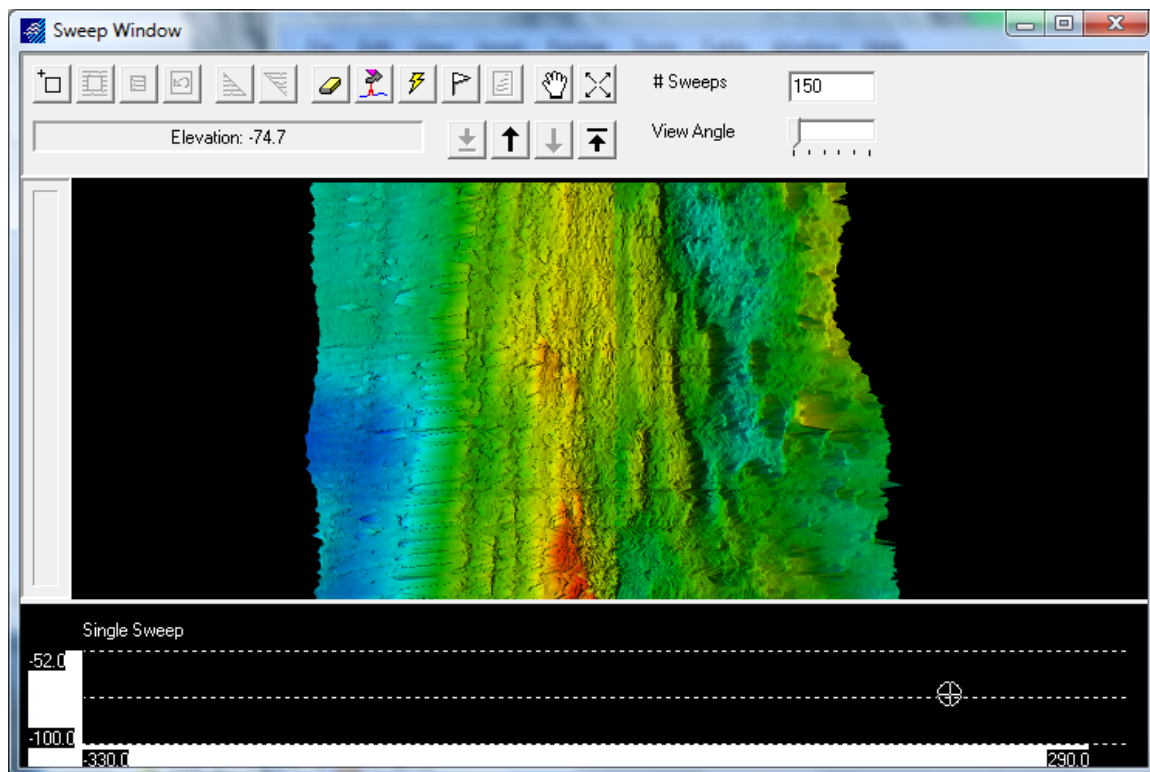
By Harold Orlinsky

The HSX Converter has been enhanced for the latest release. We have added additional format conversions and included tools for working with XTF and HSX files. The program, which can be launched from the Side Scan menu in HYPACK® (Side Scan Data Reformatter) has grown since it's inception a few years ago. Perhaps a name change is in order in the future, as it certainly does more than just convert side scan data files.

In 2009, the program can now convert 10 different file formats to HSX files. The latest addition is the Kongsberg Simrad *.ALL files with data from the EM710, 3000, 3002 and 3002D sonars.

The converter recognizes which type of sonar data is in the ALL file, requiring no special set-up options in the converter. Once converted to HSX format, the data can be brought into MBMAX for processing.

FIGURE 1. A section of the EM3002D file in phase 2 of MBMAX



A few other changes were made to the existing converters:

- The 83p converter will account for a depth sensor for a sonar on board an AUV, and store the value as a draft reading in the HSX file. MBMAX will combine the draft and bathymetry record for a corrected depth.
- The SDF converter added the 3900 and 5000 models. Originally designed just for the Klein3000, these two models of SDF files can be properly converted.
- The JSF converted added options for navigation and layback features.

The converter list will continue to grow. If you have some file format that you wish to have made into HSX files, please let me know. I'll see what I can do about adding it in the future.

XTF UTILITIES OPTION

A new feature in the converter is the XTF tools option. It provides you with data options to perform on an XTF file.

The XTF files containing sidescan data can be brought into the SIDE SCAN MOSAIC module directly. However, there are a few items that you need to know before creating a mosaic:

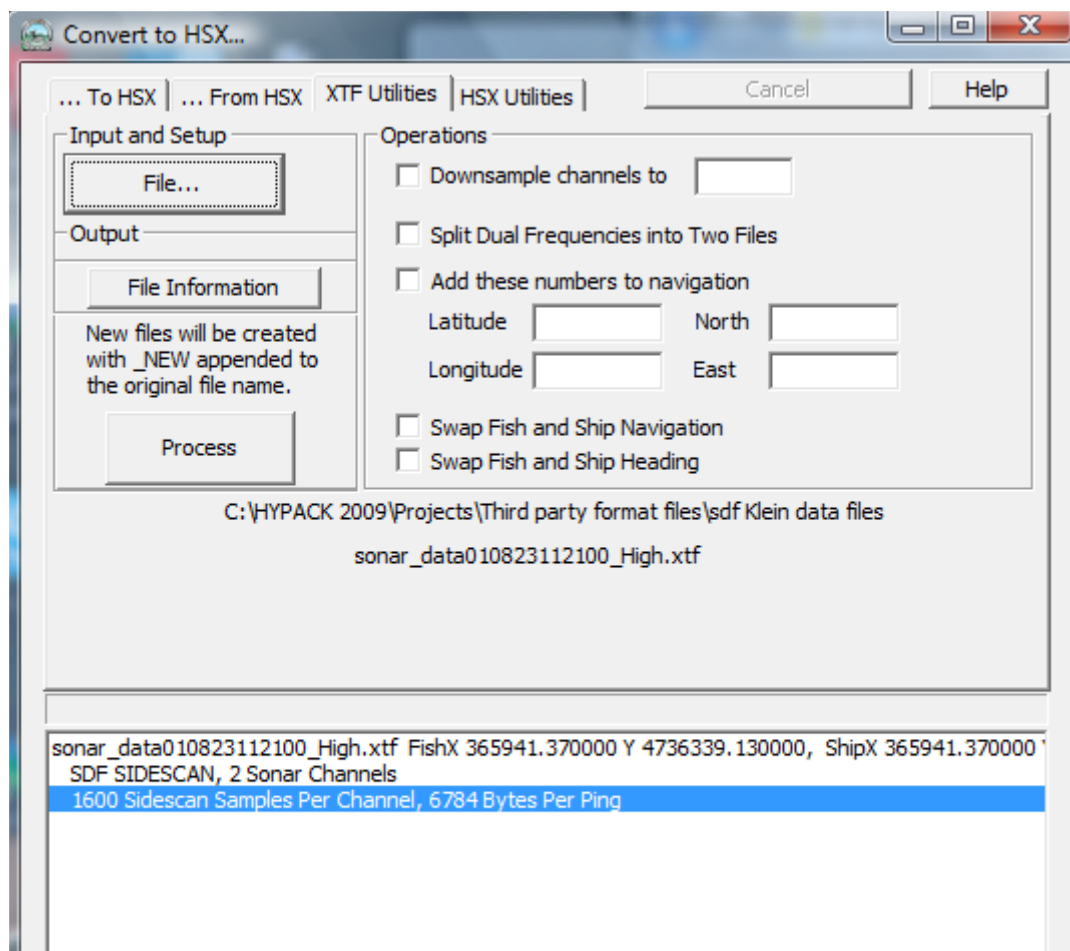
- The position information - the location of the survey to be set in HYPACK® geodesy.
- Whether the XTF file holds one or two frequencies.

The **File Information** will look into the header of the file and read the ship and fish position, and the number of sonar channels stored.

The XTF file can be down-sampled--split into two--if the file holds two frequencies, apply a shift to the navigation, and swap the position and heading fields.

New files will be appended with a '_NEW' extension, leaving the original one intact.

FIGURE 2. *XTF Utilities Options*



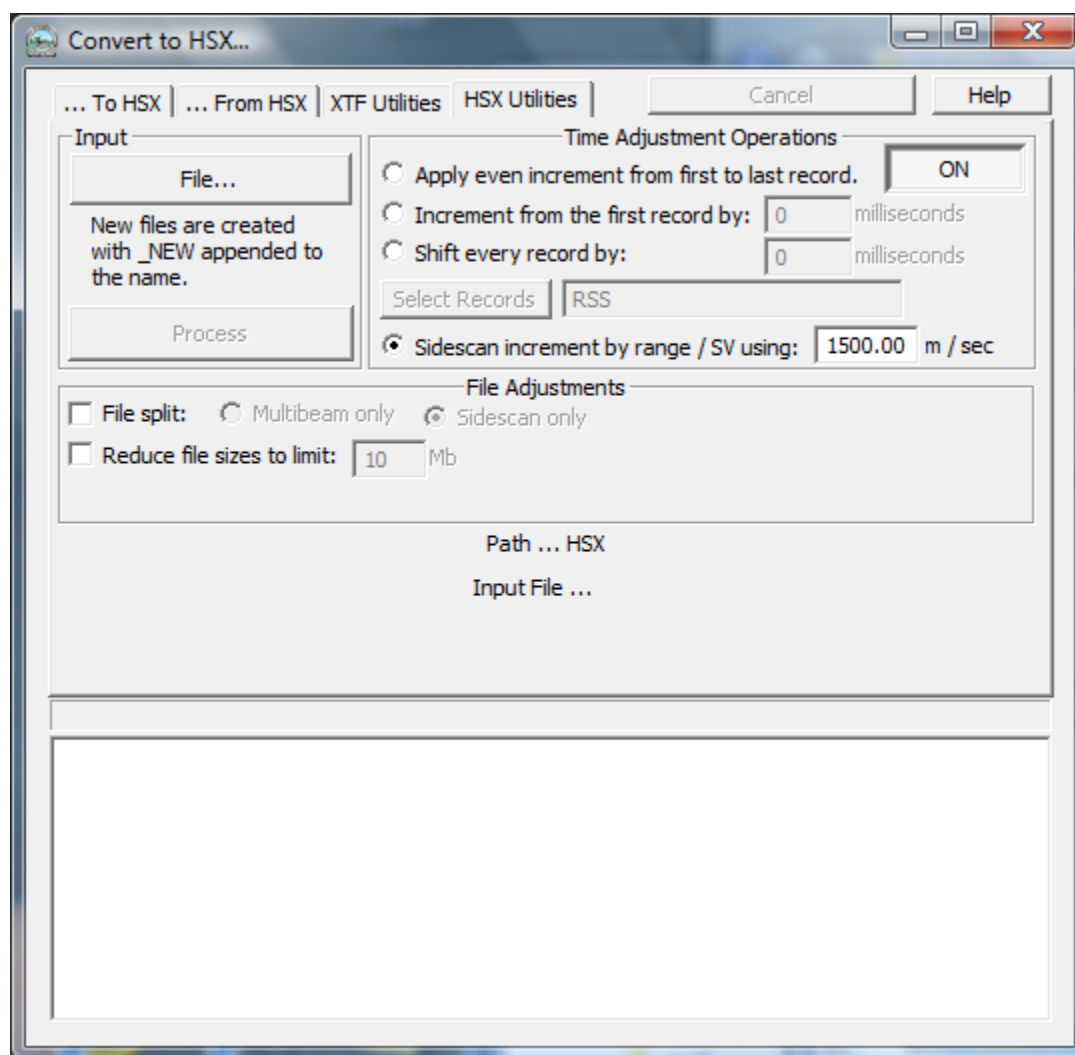
HSX UTILITIES OPTION

One additional HSX Converter feature is a section for working with HSX files. Three main modifications can be performed on these files:

- Time adjustments
- Splitting files
- Reducing files

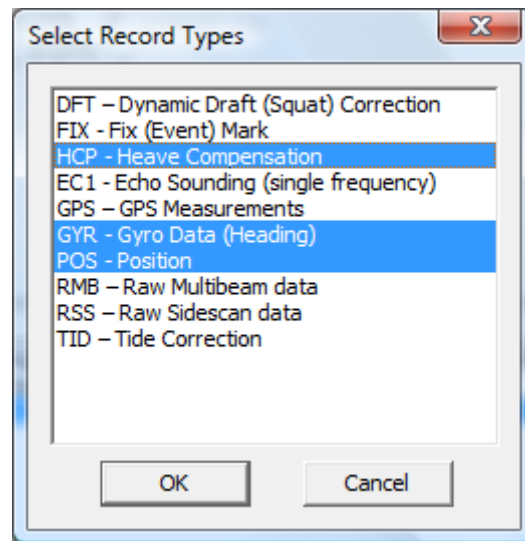
At one point or another, you have come across a data file that needed one of these options. I know I have, and it's nice to have these features all in one place now.

FIGURE 3. HSX Utilities Options



The **time adjustment** allows you to select the fields in the HSX file that need to be adjusted, either shifting from the first record, or applying a constant shift to all records. A small dialog box will allow you to choose the data fields. This feature will adjust the time stamp inside the file pertaining to the data record. The output file will have a _NEW extension added to the file name, leaving the original file intact.

FIGURE 4.



The **File Split** option will take a HSX file containing both multibeam (RMB records) and side scan (RSS records), and create a file with just one data set. All the information from the header is correct and all ancillary information, including position, motion and gyro remains inside the file. The output is a file with a _MB or _SS extension added to the file name.

The **Reduce File Size to Limit** will take any HSX file and reduce it to a user-defined limit. The output of the file name will be with an _1, _2, _3 extension added to the file name.