Sub-bottom HYPACK Binary Format and SEGY Import Updates

By Sanja Trifone

SBD has undergone two updates. The first update is the new HYPACK® binary format. The second update relates to the import of SEGY data.

Uniform Binary Format for Sub-bottom Data

The SBD program has been revised in order to consolidate all the different sub-bottom profilers into one single HYPACK binary format. Each HYPACK sub-bottom driver, such as Strata and Innomar, have been updated as well, to produce binary data files that have the same universal HYPACK format. This binary format will be a standard for all other sub-bottom drivers produced by HYPACK in the future.

To use the Hypack binary format:

1. Select Hypack as a device type in the setup menu.

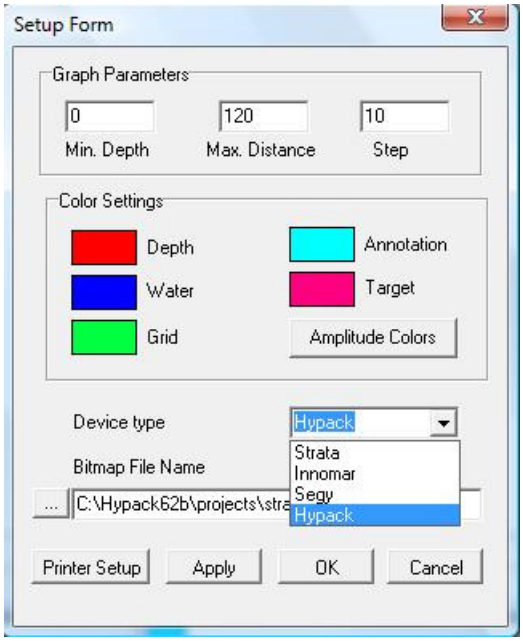

Figure 1: Setup form with Hypack format highlighted in blue.

2. Open a file and select the appropriate options in the device setup.

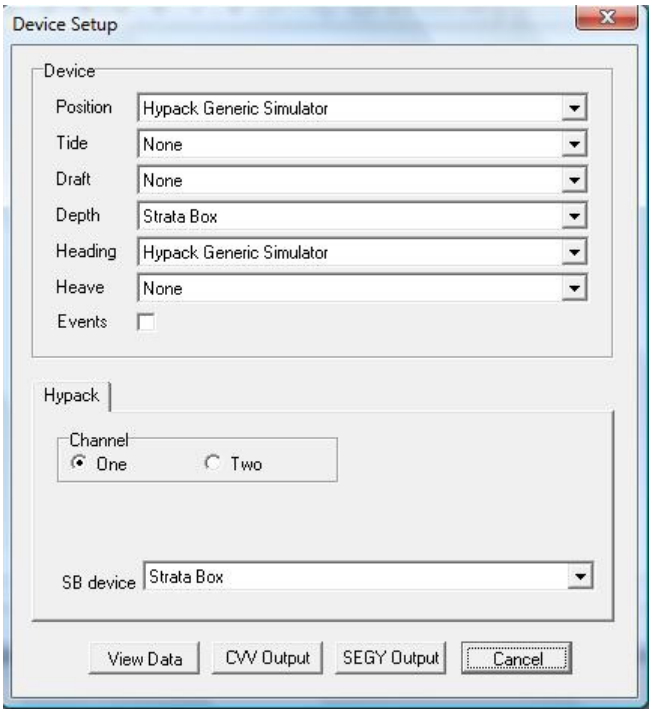

Figure 2: Device Setup for a Strata Sub-bottom Driver using the HYPACK Binary Data File.

Introduction of the new HYPACK binary format will minimize the changes made to SBD in the future, since all the new sub-bottom drivers will follow this format.

Importing SEGY Files in the Sub-bottom Processor

The second change to the Sub-bottom Processor involves the SEGY data format that is a standard for storing seismic data and header information. The Sub-bottom Processor is now not only able to export, but also to import SEGY files.

There are several types of SEGY data files that are supported by the Sub-bottom Processor.

- IBM floating point,
- fixed point (4 bytes),
- fixed point (2 bytes),
- fixed point with gain code (4 bytes)
- IEEE floating point (4 bytes).

The Sub-bottom Processor program was tested with SEGY data from several leaders in the hydrographical-geological industry to verify its capability to import SEGY files. They include:

- Teledyne Benthos**,**
- EdgeTech**,**
- General Acoustics GmbH,
- Innomar,
- Marine GeoSolutions (MGS),

- Inland Waterways Administration of India (IWAI) using Edgetech's DISCOVER software.

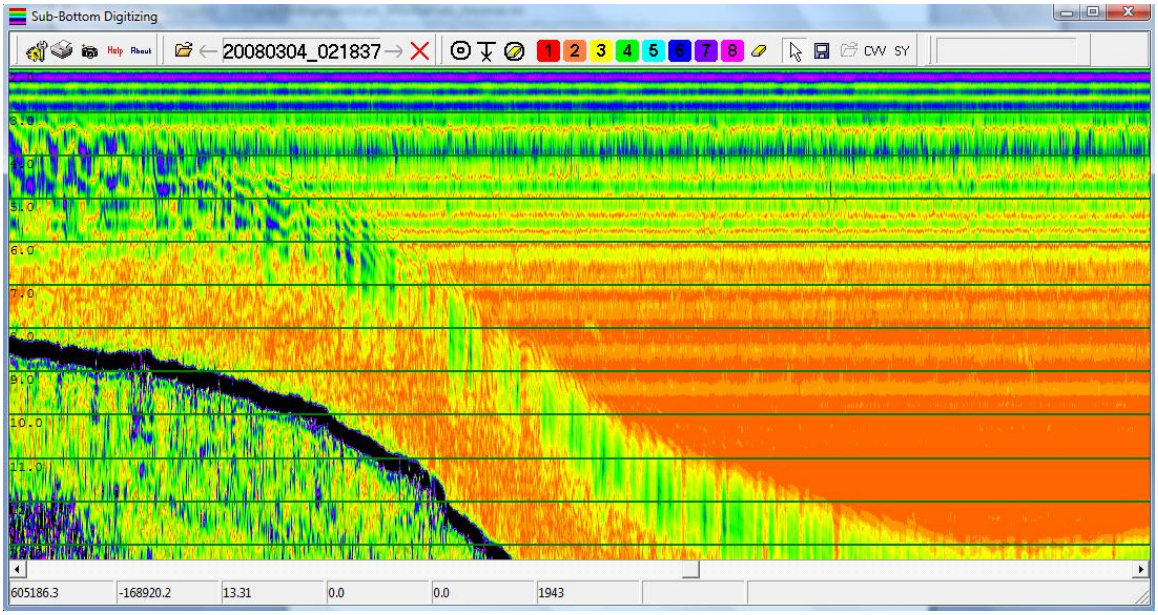

Figure 3: SEGY data collected from Teledyne Benthos

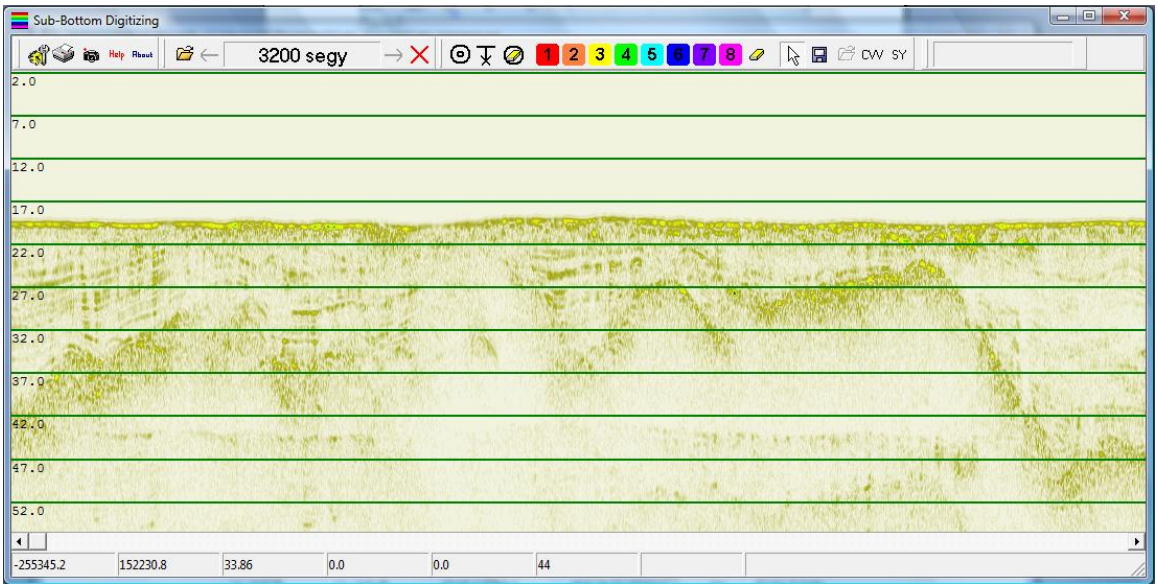

Figure 4: SEGY data collected from EdgeTech

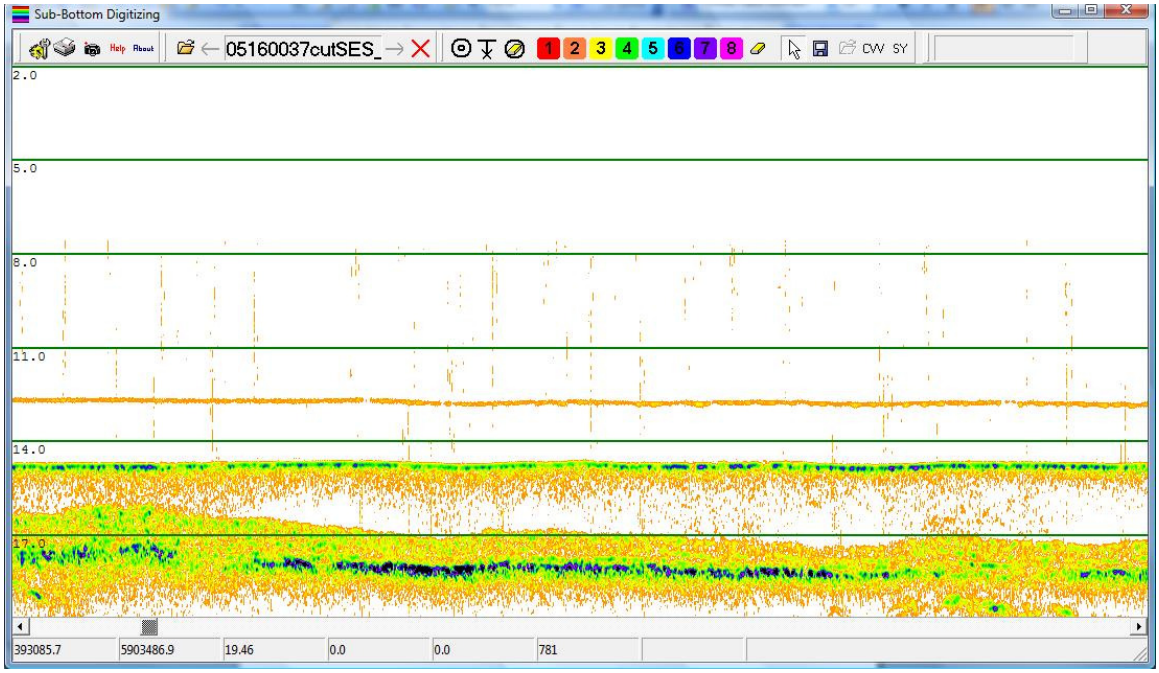

Figure 5: Data Collected from Innomar

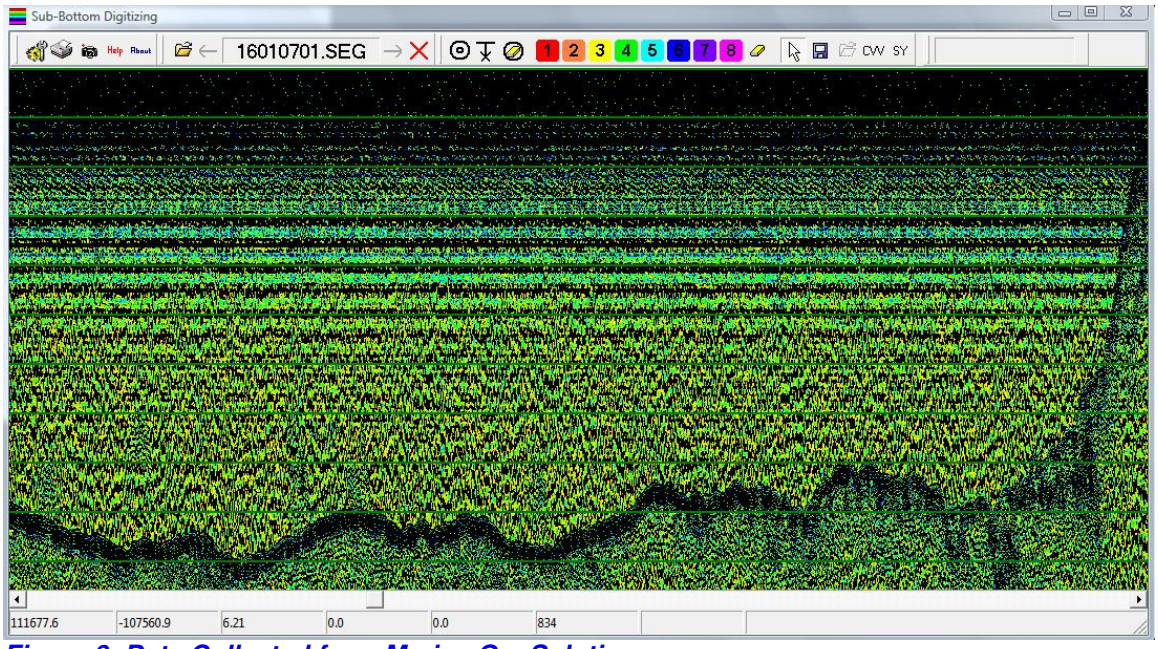

Figure 6: Data Collected from Marine GeoSolutions

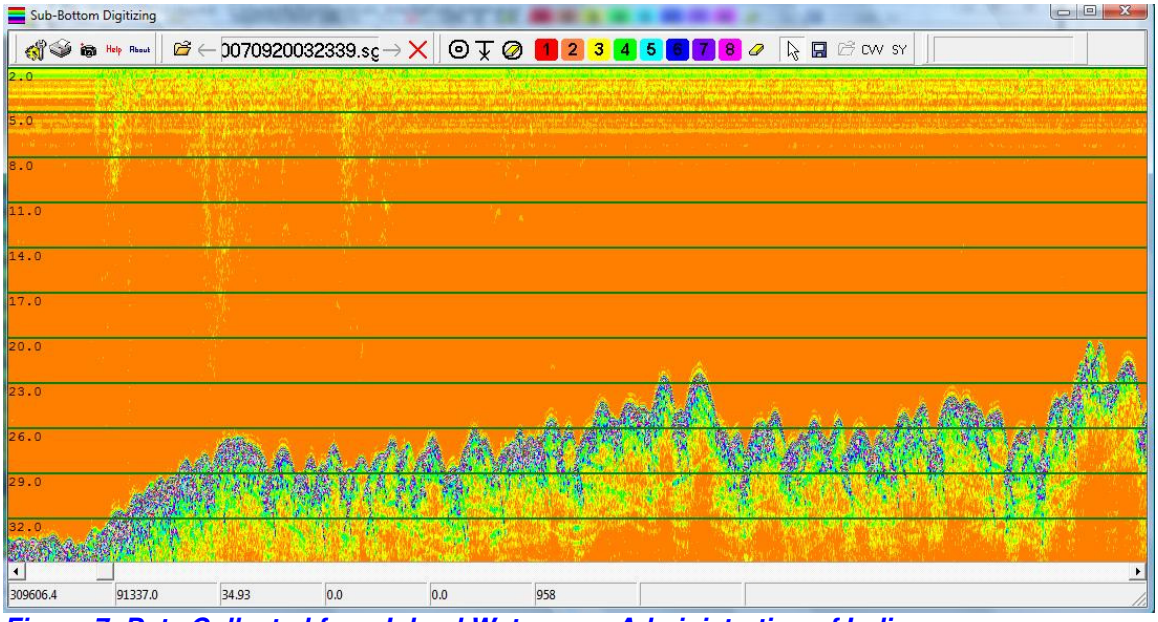

Figure 7: Data Collected from Inland Waterways Administration of India

Another feature available while importing SEGY files is the ability to create a CVV file in the CORE folder that can be opened using the Cross Sections and Volumes program.