



# Hidden Utilities in HYPACK®

By Ivan Izaak

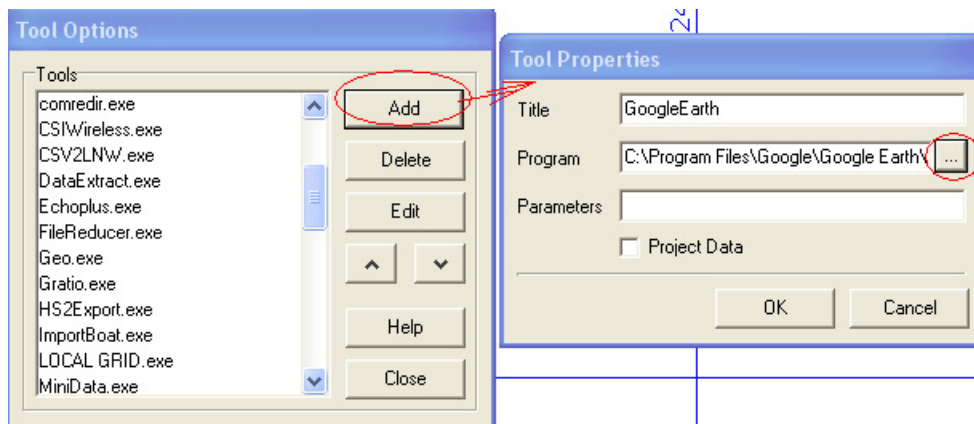
In the main HYPACK® shell there are a lot of useful programs under the UTILITIES menu, but there are even more of them that do not appear there. Several additional utilities are stored in the `\HYPACK\Install\Folde\SUPPORT\UTILITIES` folder.

## *STARTING PROGRAMS FROM THE HYPACK® SHELL*

To enable them in the main HYPACK® Shell, you may use Tools menu. In this menu, you can add any program you need. For example, I have PAINT and MS WORD there.

1. **Select TOOLS-SETUP** and the Tools Options dialog will appear.
2. **Click [Add]** and the Tool Properties will appear.
3. **Click [...]** and navigate to the program you want to start from the Tools menu.

*FIGURE 1. Adding a program to the TOOLS menu.*



4. **Under 'Title', name the selected program** as it will appear in the HYPACK® Tools menu.
5. **Click [OK]** to return to the Tool Options dialog.
6. **Arrange the order of the programs.** (optional)
  - a. Select one of the items.
  - b. Use the Up and Down Arrows to move it up or down in the list .
7. **Repeat the process for each additional program.**
8. **Click [Close]** to close Tool Options.

## *HYPACK® SUPPORT UTILITIES*

Now let's see which hidden utilities we have in HYPACK®.

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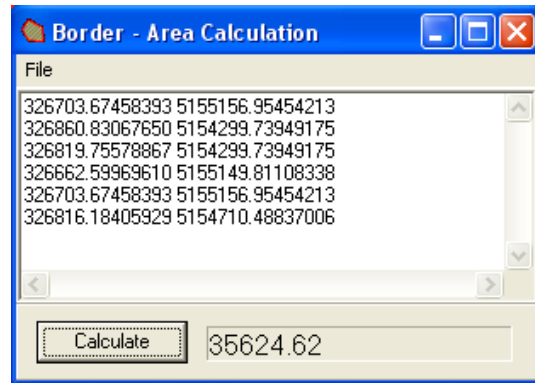
## ASHTECH.EXE

This utility can be used to reset the Ashtech BR2G receiver.

## BRDAREA.EXE

A small but handy utility to calculate an area surrounded by a border file.

*FIGURE 2. Brdarea Utility*

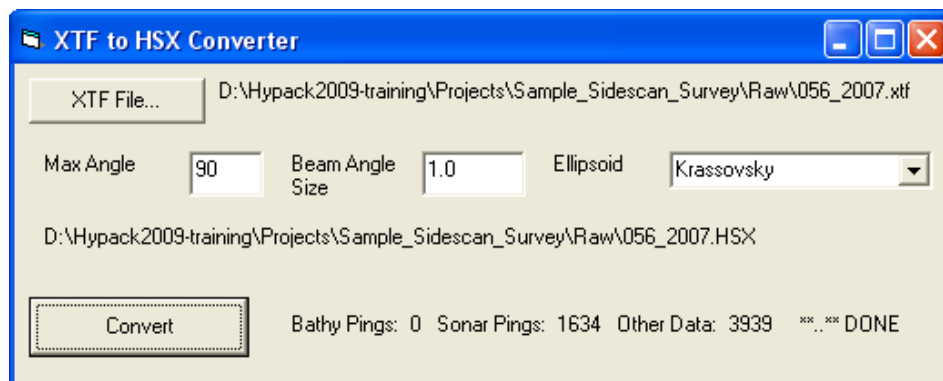


1. Go to FILE – OPEN and select the BRD file.
2. Click [Calculate] to get the area in distance units of your project.

## C3DToHSX.EXE

You can convert an XTF raw C3D data into Hysweep® raw HSX data file. The program will convert the data to HSX file with the original name into the same directory as XTF file.

*FIGURE 3. C3DToHSX Utility*



1. Click [XTF File] and browse to the XTF file directory.
2. Set all the parameters and click [Convert].

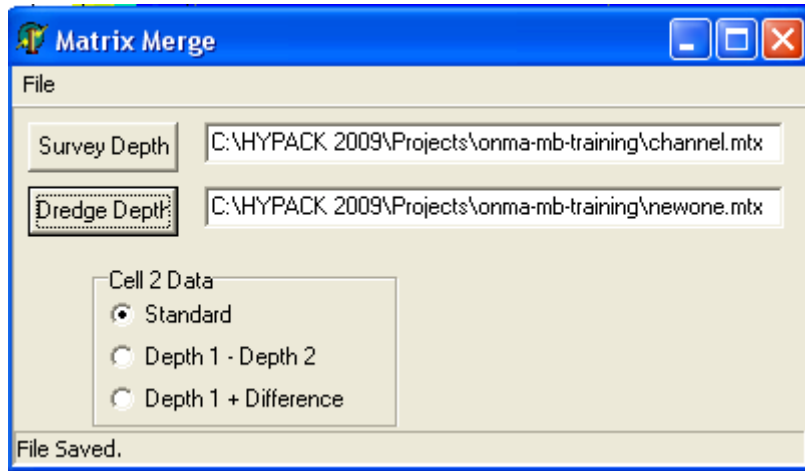
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## CMATRIX.EXE

Merge two matrices into one dredging matrix (a matrix with two depths in every cell). You can tell the program what value to use as a second depth in a cell (Cell2 Data).

*FIGURE 4. Matrix Merge Utility*



1. Click [**S**urvey **D**ePTH] to open a matrix with survey data.
2. Click [**D**redge **D**ePTH] to open the second matrix (with dredge data).
3. Set which data to save as a second cell value.
  - **Standard** – dredge depth
  - **Depth 1 – Depth 2** – difference between survey and dredge depths
  - **Depth 1 + Difference** – sum of survey and dredge depths
4. Select FILE – MERGE and name the new merged matrix file.

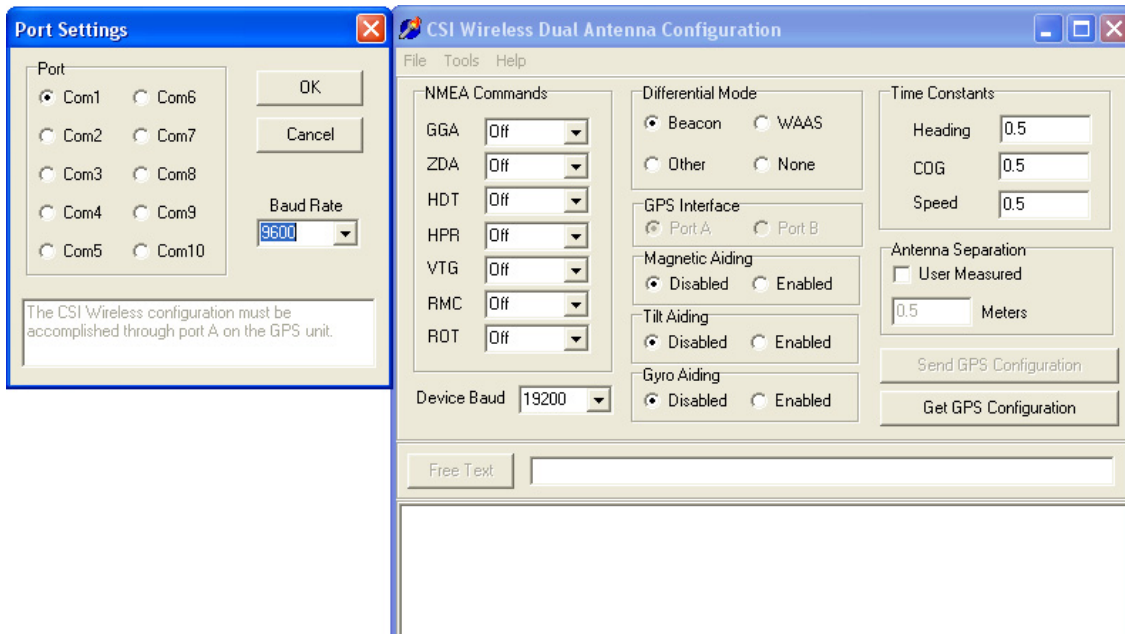
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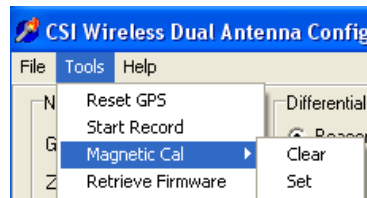
## CSIWIRELESS.EXE

Utility to configure CSI Wireless dual antenna GPS receiver.

**FIGURE 5.** CSIWireless Utility



1. Click FILE – CONNECT to set serial port settings.
2. Set NMEA strings you'd like to receive from the unit and other options.
3. Click [**Send GPS Configuration**] to send configuration parameters to the unit.
4. Click [**Get GPS Configuration**] to receive current configuration parameters from the unit.
5. Under TOOLS menu you can reset the unit, start recording etc.

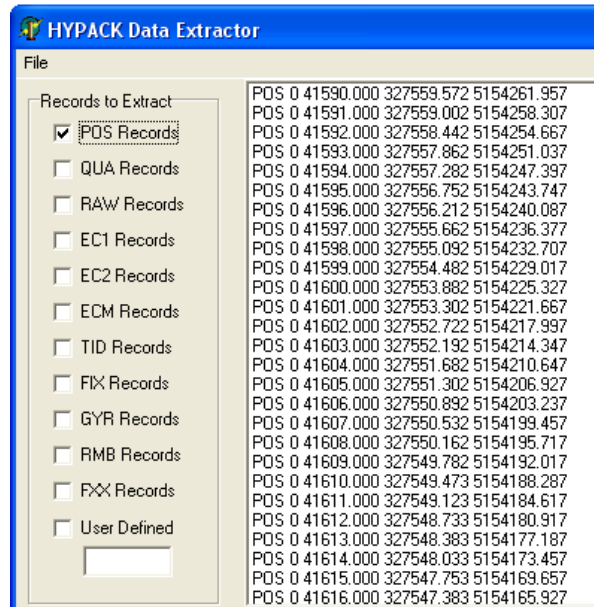


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## DATAEXTRACT.EXE

This program can be used to extract some data strings from the raw data files and save extracted data into an ASCII file. You read data from a log file, an individual RAW or an HSX file.

**FIGURE 6.** Data Extract Utility



1. Check appropriate strings you'd like to extract.
2. Go to FILE – OPEN and open raw data file(s). Program will start the extraction. You should see extracted strings in the main program window.
3. Go to FILE – SAVE and give the name of the TXT file with the extracted data.

## ECHOPLUS.EXE

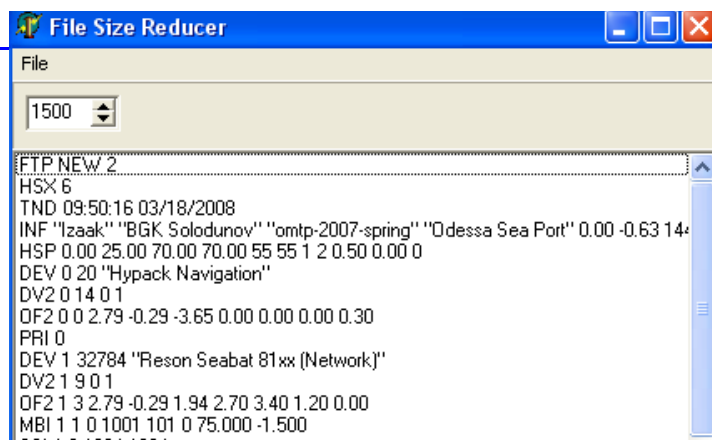
This program could be used to process the Roxann Echoplus data. Now we have the Seabed ID program instead of this one.

## FILEREDUCER.EXE

It can split individual raw data file (RAW or HSX) into set of smaller files.

**FIGURE 7.** File Reducer

1. Set the desired output file size in Kb. (The default value is 1500 Kb.)
2. Select FILE – OPEN and select a file you want to split and click [Open]. The program will start splitting initial file according to the specified size.



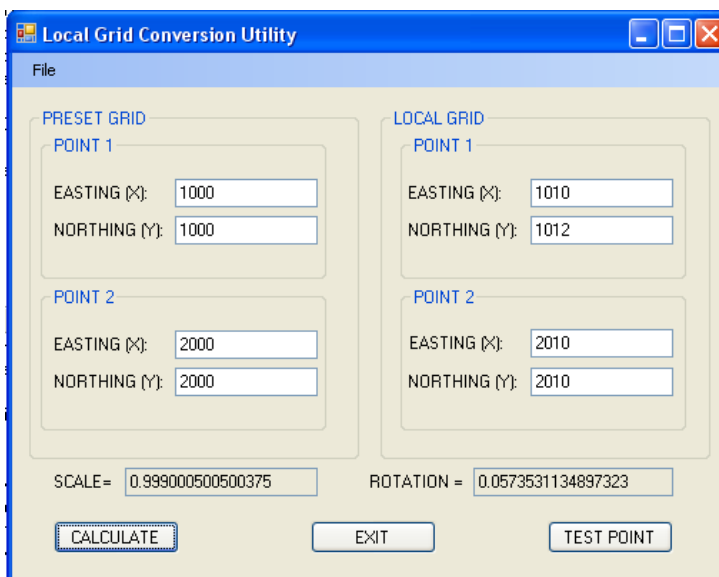
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The utility adds a header (as in Figure 7) to every output file and names these files by adding a numeric prefix to the original file name. For example, if the original file name was 0P100.HSX, the program will create 0P100.log file with 1\_0P100.HSX, 2\_0P100.HSX etc separate raw data files.

## LOCAL GRID.EXE

You can enter grid coordinates of two points on your local grid and on a preset grid and calculate Scale and Rotation between two grids.

*FIGURE 8. Local Grid Utility*

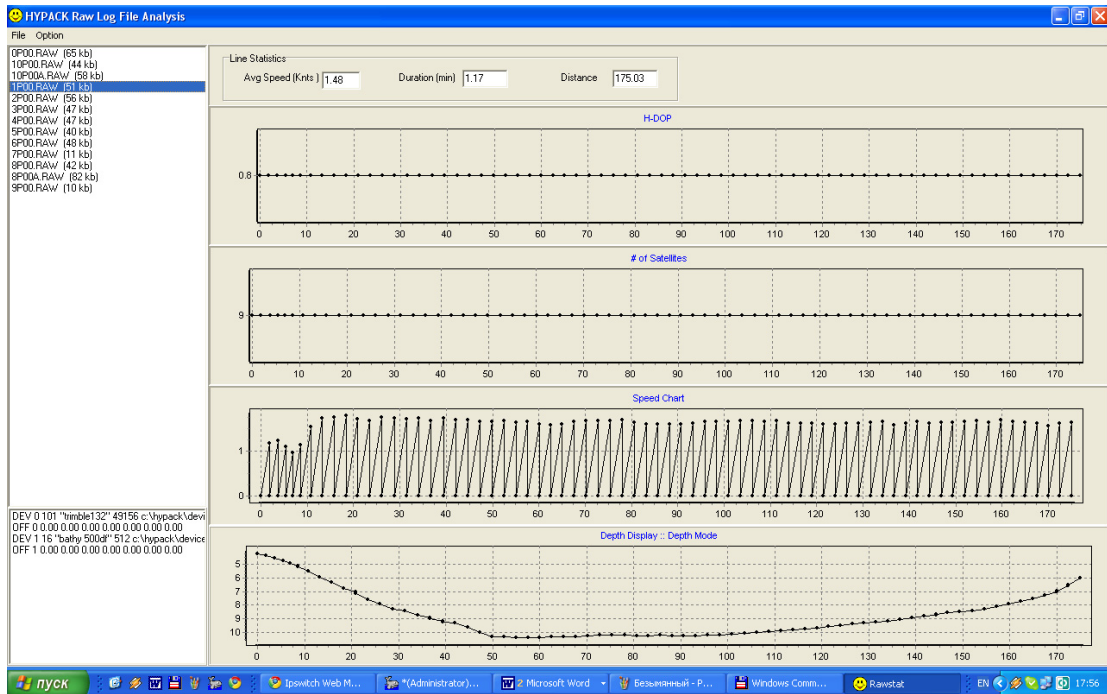


## RAWSTAT.EXE

You can see HDOP, # of Satellites, Speed Chart and Depth statistics each graphed for your data file. In addition, the dialog displays some line statistics, like average speed, duration and the overall length of the surveyed line, selected in the list to the left.

Load raw log file with singlebeam data by selecting FILE-OPEN menu.

**FIGURE 9. RawStat Utility**



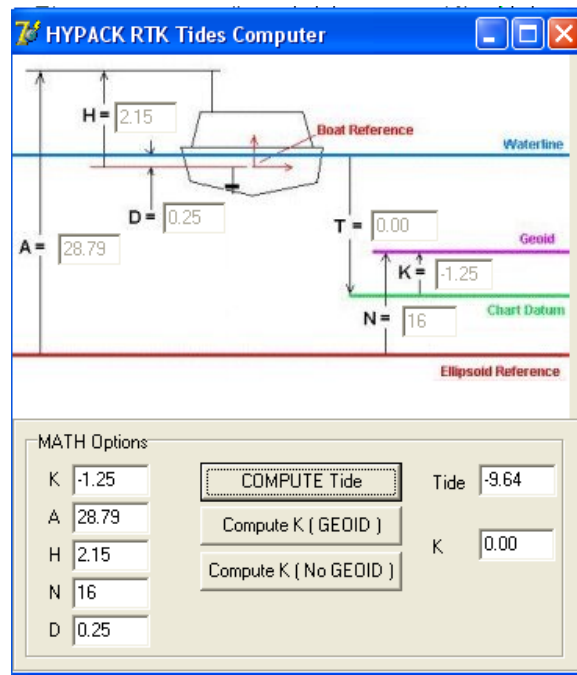
## RTK2TIDE.EXE

Use this program to extract TID records from the RAW files and save resulting tide data into TDX file which can be loaded in MANUAL TIDES program.

## RTKMATH.EXE

Use this program to verify if the RTK parameters are correct. Enter A, H, N, D and T values to calculate K or K, A, H, N and D to calculate T.

FIGURE 10. RTK Math Utility



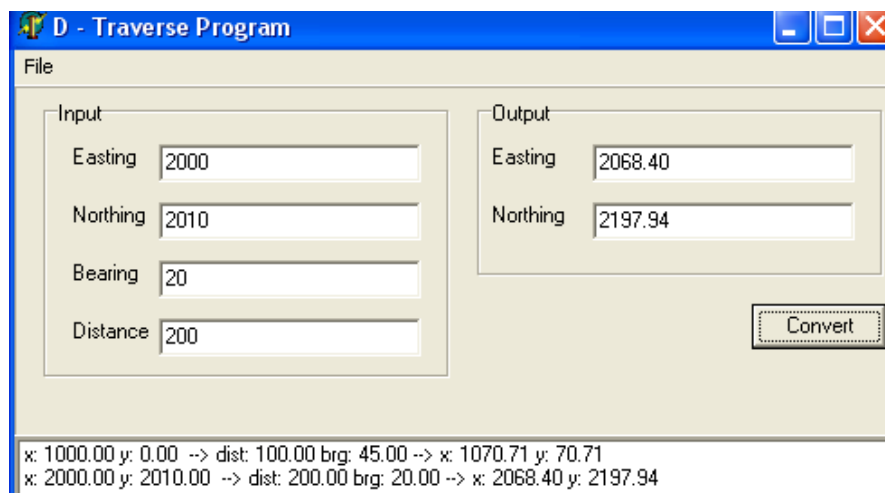
## SEA8101.EXE

A controller for the SeaBat8101 multibeam echosounder.

## TRAVERSE2.EXE

A small and handy traverse calculator. Just input grid coordinates of the first point and also bearing and distance to the second point and receive grid coordinates of the second point.

FIGURE 11. Traverse2



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## XYZ2TGT2.EXE

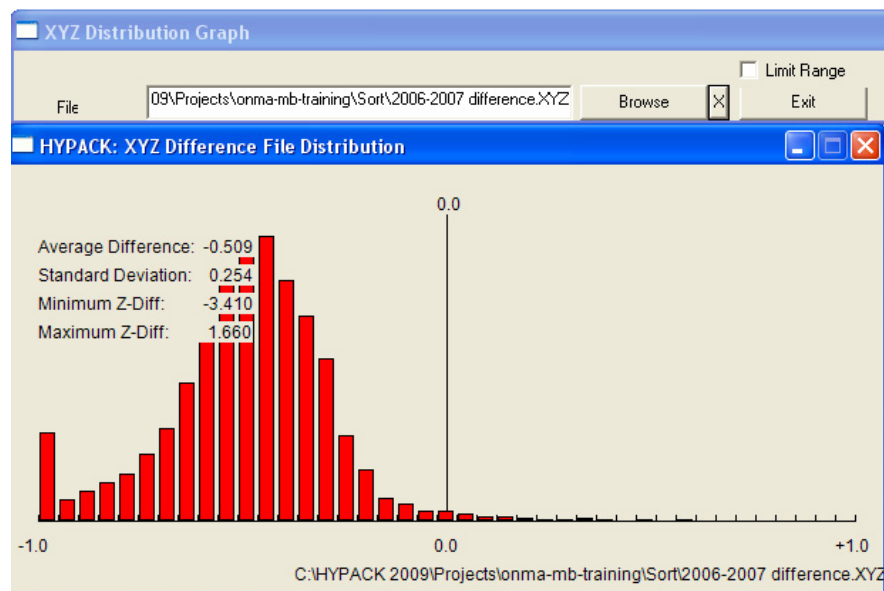
A small program to convert an XYZ file into the Target file (\*.tgt).

## XYZ DISTRIBUTION.EXE

This program will show you distribution of the soundings in an XYZ file.

You may have two data files over the same area. Load these data into TIN MODEL and export the differences in XYZ file. Then load this file into XYZ Distribution program to see distribution graph as well as the statistics about this data.

**FIGURE 12.** XYZ Distribution Utility



## XYZSELECT.EXE

You can open an XYZ file and filter out soundings outside Min and Max limits.

1. Set Minimum Z and Maximum Z filters
2. Open an XYZ file.
3. Save the resulting XYZ file.

## XYZUTIL.EXE

With this program you can shift all of the data in an XYZ file in three directions. This is quite useful if you have processed the data and then decided to apply a different Chart Datum level – then you'd shift the points with the new tide correction value – the program will just add a new value to all the data.

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**FIGURE 13.** XYZ Utility

1. Open an XYZ file from FILE – OPEN menu.
2. Set adjustment value(s) in the corresponding fields.
3. Select CONVERT – XYZ SHIFT. The program will open a SAVE dialog.
4. Save the new XYZ file with shifted data.

