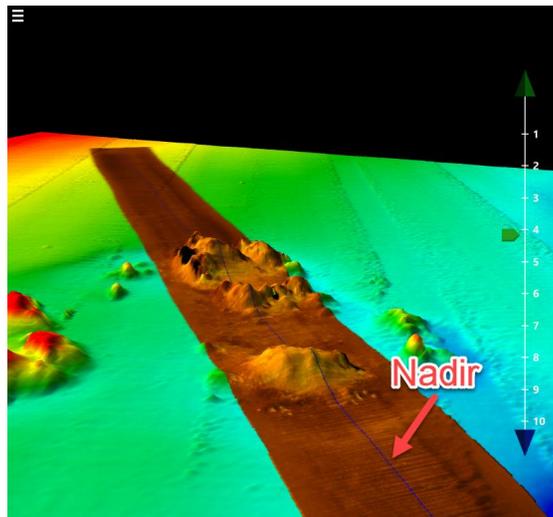


**1. After you applied the filters to that one sidescan line, a couple of stripes appeared in the high relief area in the middle of the screen. What is that from?**

This dataset creates a problem for EGN in that some of the pings go up and over boulders which results in dramatically different seabed depths across the ping. A sidescan file only has 1 depth (the bottom track) for the entire ping. So where you put the bottom track will affect how EGN performs.

It is easier to show in pictures:

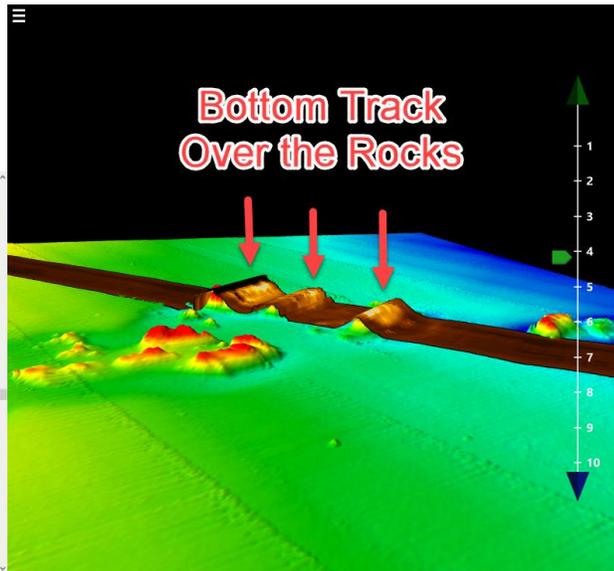
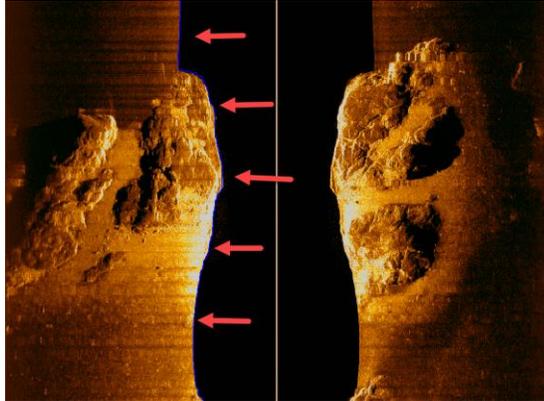
Look at where the nadir line is on this track line I've drapped onto the topography. It goes up and over the topography.



There are many places near the rocks where the nadir line is much shallower than the surrounding sandy areas surrounding the rocks. Yet, because a sidescan file only has 1 depth taken from the bottom track, the whole ping will be at the same depth.

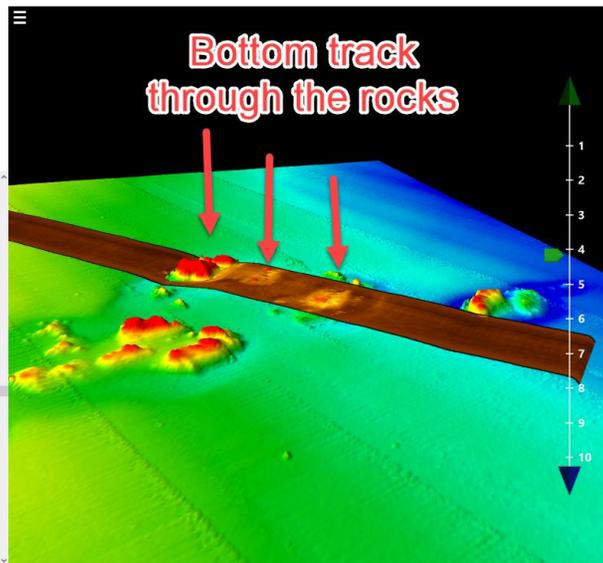
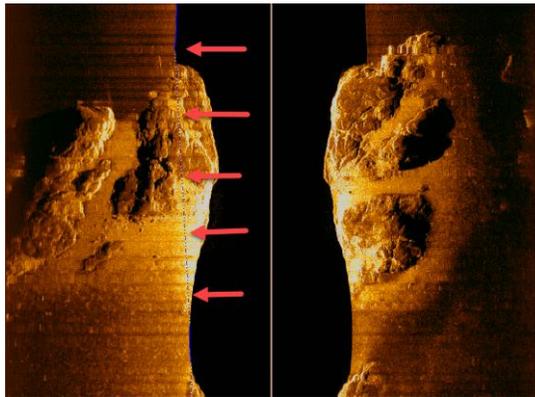
You have two choices:

You can follow the bottom track up and over the boulders. This is what the track line looks like to EGN:



By choosing the tops of the rocks we correctly position the rock tops, but lift the surrounding sandy areas way up off the seabed. EGN sees that most of the high elevations are bright rocks and comes up with a strong negative amplitude correction. When this is applied to the surrounding sandy areas it is much too dark and looks like a dark stripe.

The second option is you can try to put the bottom track where the seafloor would be if the rocks (or a wreck or debris) were absent, like this:



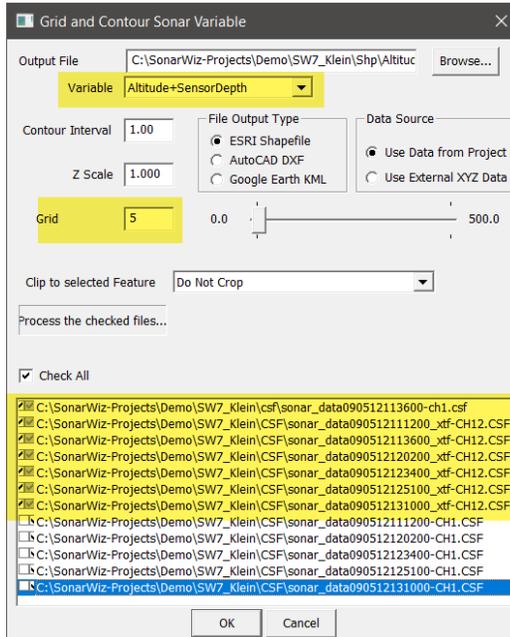
In this case, the surrounding sandy areas are at the correct depth and get correctly compensated so you won't see the stripe. The top of the rocks get over-brightened, however, maybe too much to see details. I think for habitat mapping and making large-scale mosaics this strategy looks much better than having the dark stripes. So I prefer this.

When I originally built the mosaic before the demo, I had set it up using this strategy and built my EGN tables with these edited bottom tracks clipping out the rocks. When I re-imported the line the bottom track whet back to its default place over the tops of the rocks resulting in the stripes.

**2. I'd like to import SSS generated bottom tracked depth data into bathymetric data and then export into GIS. Is this possible relatively painlessly with SW7? Thanks**

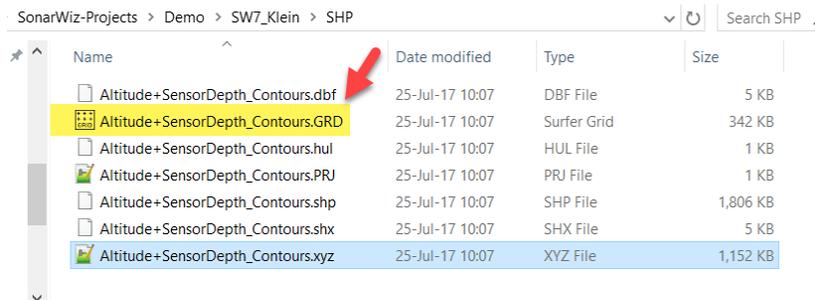
It's not too bad. Note, this only works if your fish has a depth sensor, otherwise you will wind up plotting just altitude above the seabed which isn't what you want.

1. On the **Tools** tab, click the **Grid and Contour** Icon.
2. On the Grid and Contour Sonar Variable, select Variable **Altitude+SensorDept**



3. Select an appropriate **Grid** (cell) size for the across-track distance between your lines, usually something like 5 or 10 meters, for example
4. Optionally, set up the contour interval if you want the contour plot to look nice.
5. Select the lines you want to include in the calculation
6. Click **OK**

This will create a contour plot of the **altitude+sensordepth** variable in all of the CSF files you've selected and load it into your project as a **Map Overlay**. A byproduct of that process is a **Grid** and an **XYZ** file you can load into SonarWiz or take into a GIS. You'll find the grid in your project folder under the SHP directory:



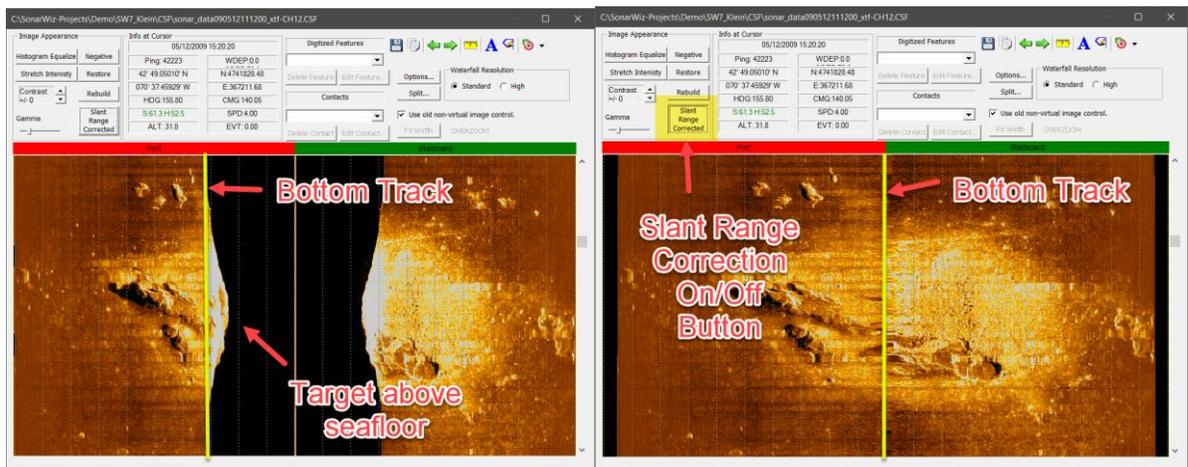
If your GIS can't recognize the grid format we use (Surfer 6 binary) then you can just load the grid into your project and export it as something compatible with your GIS. We can convert it to lots of

different formats directly from SonarWiz.

What happens with important objects that are right in the nadir visible if the user needs to view them while the nadir of the project is smoothed / filtered to look great???

Will this object disappear or is there a way to keep the object in the nadir while still smoothen all other nadirs?

The map view always shows slant-range corrected data. So, if you want to see targets in the water column, you have to open the line in the Digitizing View and turn OFF slant range correction:



Notice that there is a color change at the bottom track line. This is because the signal processing algorithms usually only work on the seafloor pixels (except manual TVG). The data above the seafloor is unmodified.

You can toggle the slant range on or off as you like when you are picking contacts or digitizing targets.

### 3. The process of reading files from sidescan on SonarWiz 7 is also so interesting when reading SBP data too? I mean, is it also an automatic detecting process for amplitude data?

Yes, both sidescan and subbottom amplitude data is stored internally in its native format. That means there is no need to adjust gains when importing either SSS or SBP data.

### 4. Are previous acquisition modules (SSS-SBP) fully compatible with SonarWiz???

All acquisition servers have been updated to be compatible with SonarWiz 7. You will need to download SonarWiz 7 and the compatible SonarWiz 7 server from our support site. This is included with your EMA.

### 5. Is there a way to manually adjust the characterizations?

It's not clear from this question what you want to customize. However, you control the analysis window size, you can select from more than 20 different statistical parameters that you want to include in the characterization, and you can import your own statistical or biological metrics in the

form of a grid which can be included in the characterization process. Finally, you have some control over final filtering and merging of the resulting classes.

**6. Is the seabed characterization tool suitable for boulder picking?**

The characterization tool works best when you have visually distinct acoustic/bathymetric patches. If your targets are proud of the seafloor and exhibit a distinct acoustic signature that can be seen with your own eyes, the characterization tools should be able to pick them out from the background data. But it might take some experimenting to get the best results. This is a tool in your SonarWiz tool box, not a geologist in a box.

**7. Have you thought about integrating geocoder into Sonarwiz to get away from a purely image processing bottom classification?**

Very much so. We have been in discussion with UNH over geocoder off and on for a couple of years. The problem we face is that Geocoder works best with calibrated multibeam and not so well for uncalibrated systems like interferometers and sidescans, which is a big part of our customer base. As a small company, we have to be careful how we invest our engineering time. We feel like our approach, while less flashy than geocoder, offers a practical alternative to our customer base. We would love to have some feedback on seabed characterization this is a tool under active development.

**8. For the polygon output on the classifier, is this available as a shapefile or DXF?**

Yes, just open the settings dialog and select the output format you want.

**9. Are there any changes on the Core tool ? In SW 6 it is still not very user friendly... creating a Core at map window and populating the layers...**

**Are there any changes to the way cores are input in SW7?**

No, the core tool features have not been changed for SW7. Why don't you contact us directly with suggestions for improvement?

**10. What about linear debris export? Is it introduced?**

I'm not sure what this question is about. Can you contact us directly with a longer explanation of what you are looking for?

**11. Is there any automatic picking routines made available for features like pockmarks, boulders, coral, pinnacles, etc?**

We don't have any automatic target picking.

**12. Could you show some output images or some final product I could export?**

Sorry, I didn't see this question during the video to show you. However, you can check out our tutorial videos here:

<https://www.chesapeaketech.com/videos/>

There are many examples of the types of image products you can produce in SonarWiz

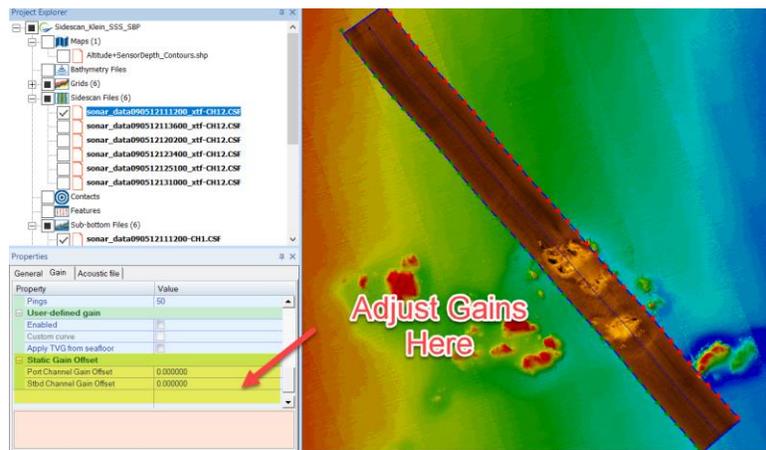
**13. Hi! I'm working with data from EM302 echosounder. We want to buy the bathymetry module, but... how can i import this data and a little introduction to use for backscatter processing???**

Take a look at this video:

<https://www.youtube.com/watch?v=BWgTcB6YOrc&list=PLkS0gDK1Rb3QkzxVMfn5I76EmKXZIRIDE&index=3>

**14. EGN used to be scalable, has this option gone?**

The intensity sliders have been moved out of EGN and are now found in the Gain tab of the sidescan properties window:



That way you can use them even if you aren't using EGN.

**15. How do you process backscatter from multibeam?**

Take a look at this video:

<https://www.youtube.com/watch?v=LTd4FHKSgWg&index=6&list=PLkS0gDK1Rb3Tn0adkKAIOMl5hN5FHMXk>

You can also watch the bathy processing video I linked to above for another, newer example.

**16. Version 7 does not seem to process in the background. When any processing occurs the program jumps to the front each time processing begins on a new line. So I can't work in other programs with processing in the background. Is this expected?**

This sounds like a bug in the user interface (trying to steal mouse focus). Would you please report this through our support channel so we can diagnose and resolve the problem properly?

<http://www.chestech-support.com/ctisupport/login.asp?cp=ChangeReqAdd.asp>

**17. Is it possible to toggle slant range correction of SSS when viewing a mosaic?**

No. Mosacs are always slant-range corrected. You can of course, set the bottom track to zero depth and then you can achieve what you want, but it isn't a toggle.

**18. Whats the download link please?**

<http://www.chestech-support.com/ctisupport/>