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1 ImageToSEGY Usage Techniques

This document is designed to supplement the ImageToSEGY User Guide and help beginners develop the skills to get top-notch images from their first conversion session. Several simple-to-manage issues are covered, along with resolution techniques for getting a new user on the right track straight away.

1.1 Image Pre-Processing with IrFanView

The free image-processing utility IrFanView has been extremely helpful in our demo image-transformation work. We use it to:

1. Reduce file sizes when large input image files might exceed the memory capacity of the PC
2. Rotate images which are best-viewed as a horizontal strip, rather than vertical;
3. Cropping off image sections which you do not wish to transform
4. Transform input images files into a type which is acceptable to ImageToSEGY
5. Bypass permissions issues on LZW compressed files

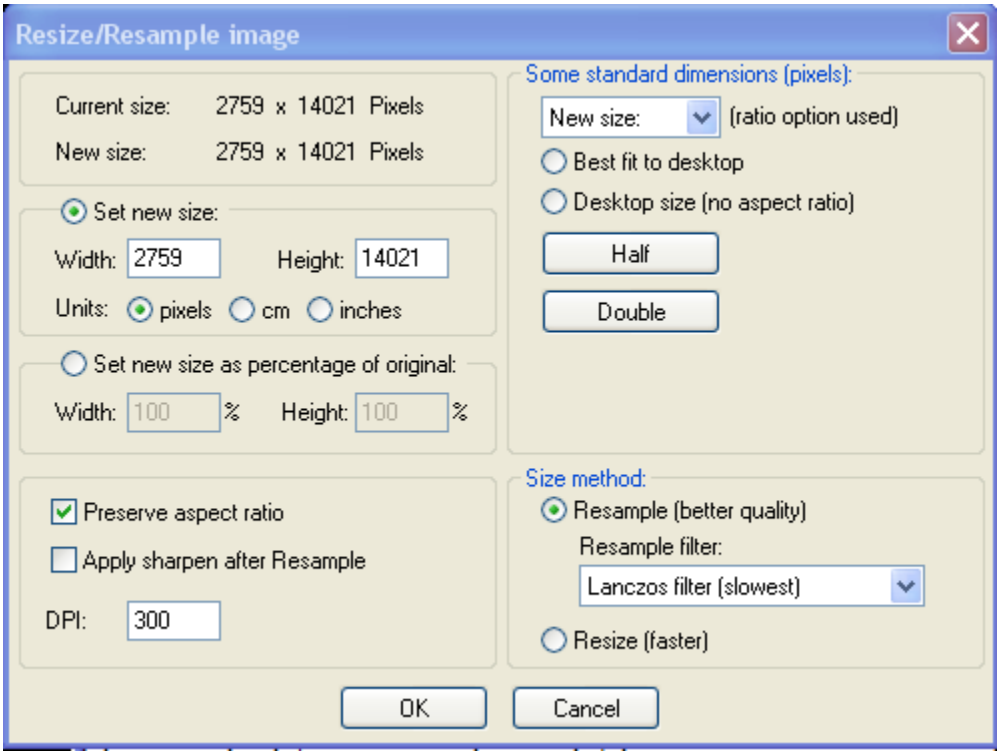
The utility may be downloaded from: http://www.irfanview.com and will be used in the examples that follow.

1.2 Large Files Issue

An extremely large file can exceed the memory capacity of the PC on which ImageToSEGY is running. It pays to reduce the file size. There's an inherent file expansion in going, say from a JPG to SEGY. For example, a black/white image in JPG might be represented by 2 bits per pixel and this expands to 16-bits per pixel (1:8 expansion ratio) into SEG, so your 1MB image may expand to 8MB in SEG format.

Without knowing your PC memory capacity, suffice it to say it can be exceeded, and ImageToSEGY may not work on a huge file. Here's how to reduce the file size and retain a good image.

Using IrfanView, read in your source image. Next, from the top menu-bar, select Image->Resize/Resample. Here's the drop-down dialog you'll get next:



So to keep the aspect ratio, select PRESERVE ASPECT RATIO and then specify a different value for the width or height (units are pixels). For example, in this file, we selected 768 for the width, and IrfanView then computed a corresponding width.

Then save the file with a new name and you are ready for the next issue.

1.3 Rotated / Uncropped Images Issues

ImageToSEGY likes to have wide horizontal files, rather than tall vertically-oriented files. If your input image needs to be rotated, you can either do it in IrfanView first, or do it in ImageToSEGY later, Either way you want to do it is fine. Here is advice about doing it each way

1.3.1 Rotating and Cropping an Image in IrfanView

1. Read in the image with File->Open

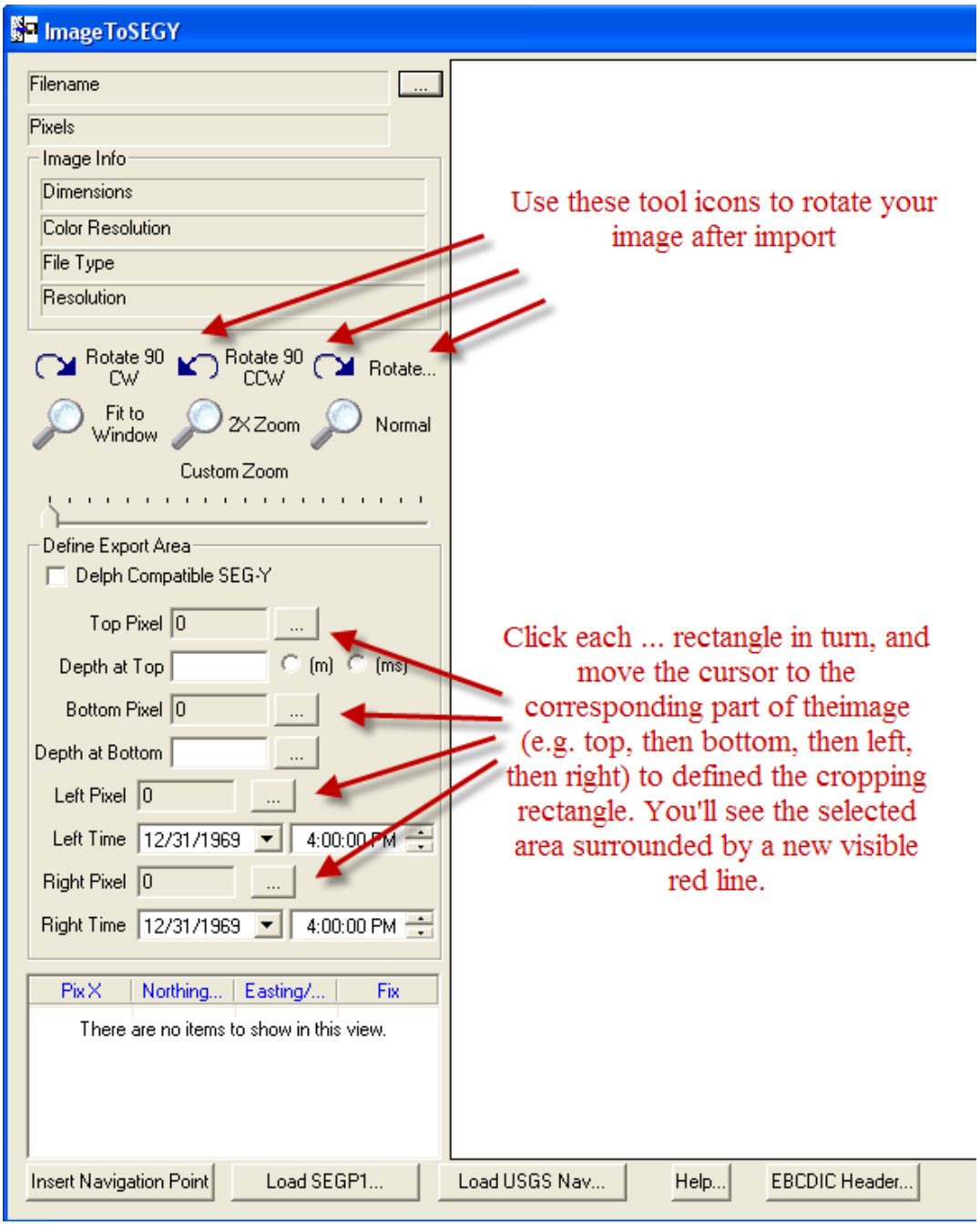
2. Select Image->Rotate L (left) or Image Rotate R (right)
3. Save the file

To crop:

1. Click the upper-left area of the image, then drag the mousse and cursor to the lower-left, and a thin rectangle forms around the selected area. Type CTRL-Y and the selected area is extracted and becomes the new cropped area.
2. Save your result.

1.3.2 Rotating and Cropping an Image in ImageToSEGY

If you need to rotate & crop the image after it has been imported in ImageToSEGY, just select any of the image-processing tool icons as shown below:



1.4 File Type Issues

ImageToSEGY can only import a limited number of file types. We have used IrfanView time and again to transform some unusual file type like XTF, into a standard JPG or TIF or PNG format and save the file, so that it may be imported into ImageToSEGY. If you have any import issue and it might be a file-type issue, just try importing it into the more versatile IrfanView, then saving it as an industry-standard image format, before importing into ImageToSEGY.

Some LZW compression files require a license that we do not support. If you open your image in one of the free viewing packages (e.g. Irfanview) and re-save in a non-compressed RIF format then the image should open successfully in ImageToSEGY.

1.5 Auto-import of the TXT Nav-info File

ImageToSEGY looks in the same directory as the TIF/BMP/JPG file for a corresponding TXT file of the same name. Here's an example:

```
m_nBottomPixel=1329
m_nLeftPixel=208
m_nRightPixel=1865
m_nTopPixel=547
m_strBottomDepth=1500
m_strTopDepth=0
m_nDepthUnits=0
m_ctLeftDate=2010,8,2,16,22,16
m_ctRightDate=2010,8,2,16,58,44
m_bDelphCompatible=0
NAV_CLICK_POINT=327,494,-36638.000000000000,8894572.000000000000,0,100
NAV_CLICK_POINT=705,491,-32181.000000000000,8900333.000000000000,0,500
NAV_CLICK_POINT=1178,495,-26628.000000000000,8907509.000000000000,0,1000
NAV_CLICK_POINT=1841,497,-18835.000000000000,8917583.000000000000,0,1700
```

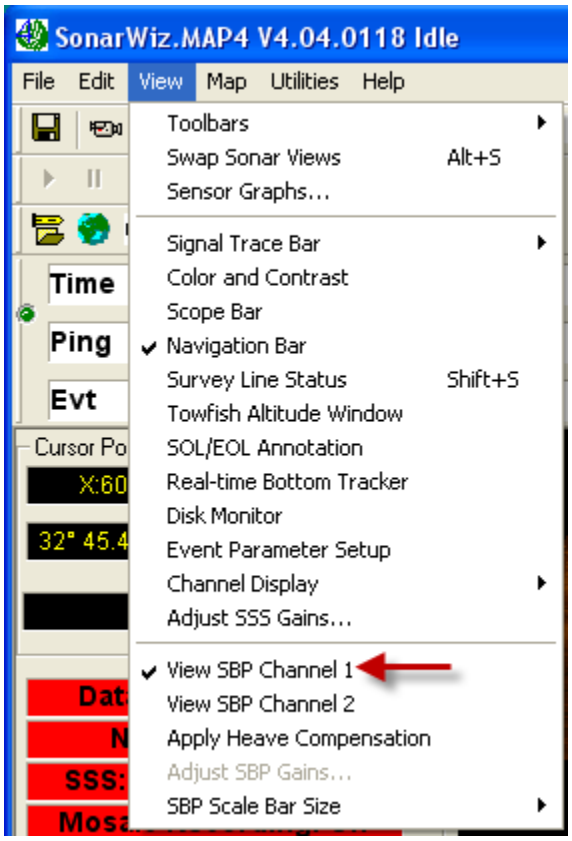
This input file will populate the fields of the ImageToSEGY options automatically and is very helpful for repeat-runs on similar files.

1.6 Viewing the Resulting SEG File

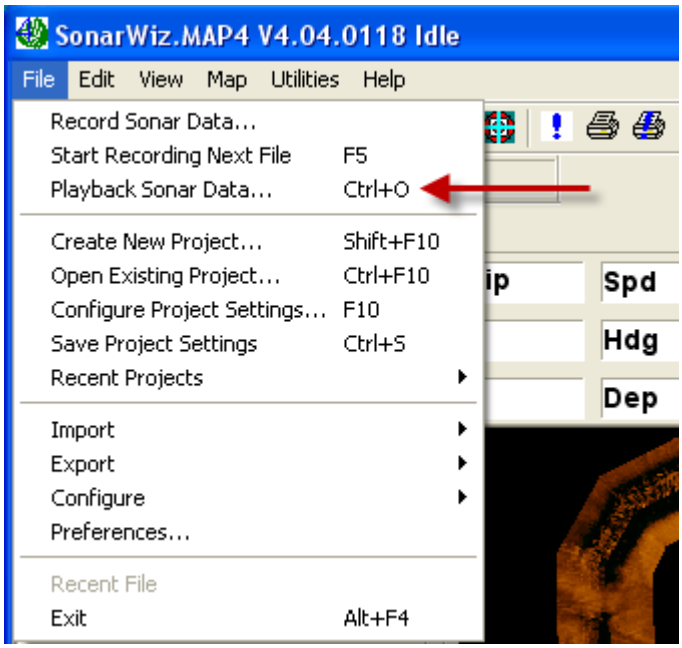
ImageToSEGY transforms your input image file into and out SEG file with the extension SEG, and this file needs to be viewed to verify the transform quality. We have two ways of doing that.

SonarWiz can read and display SEG files. This Chesapeake Technology, Inc. product is handy if you have a license for it, and the viewing process would be as follows. For SonarWizMap4, do the following:

1. Start the application and select View->View SBP Channel 1 (see below)



2. Select File->Playback Sonar Data (see below)



3. The file then plays back and displays on the right-side of the main map view area.

The second SEG file viewing option if the free utility SeiSee which is available from the Russian web-site http://www.dmng.ru/seisview/ as a 4.8 MB self-extracting archive file at no cost. Current version is 2.15.4 (8/2010).