A guide to Importing Satellite Imagery into WED from Google Earth

by Nik Barbour

One of the trickier tasks to tackle in Creating Editing scenery for IF, is importing satellite imagery into WED for you to trace over and align various scenery items to.

Unfortunately the task is not as simple as grabbing one plan snapshot and placing it anywhere. Because of screen resolution, and our need to see high detail items like taxi lines and pavement markings, the technique is mostly simply described as follows…

We get a single overlay image, position and stretch it in WED so the runway ends align very precisely to coordinates measured from google earth, and we then place individual hi-res close up screenshots over this overlay image like a jigsaw puzzle to create an accurate, hi-res image to use for scenery editing.

The following is a guide describing step by step how I personally set these up prior to editing a scenery. It concentrates only on placing of image files, and assumes you have some basic knowledge of starting and opening WED scenery files. Please see other tutorials for this assumed knowledge.
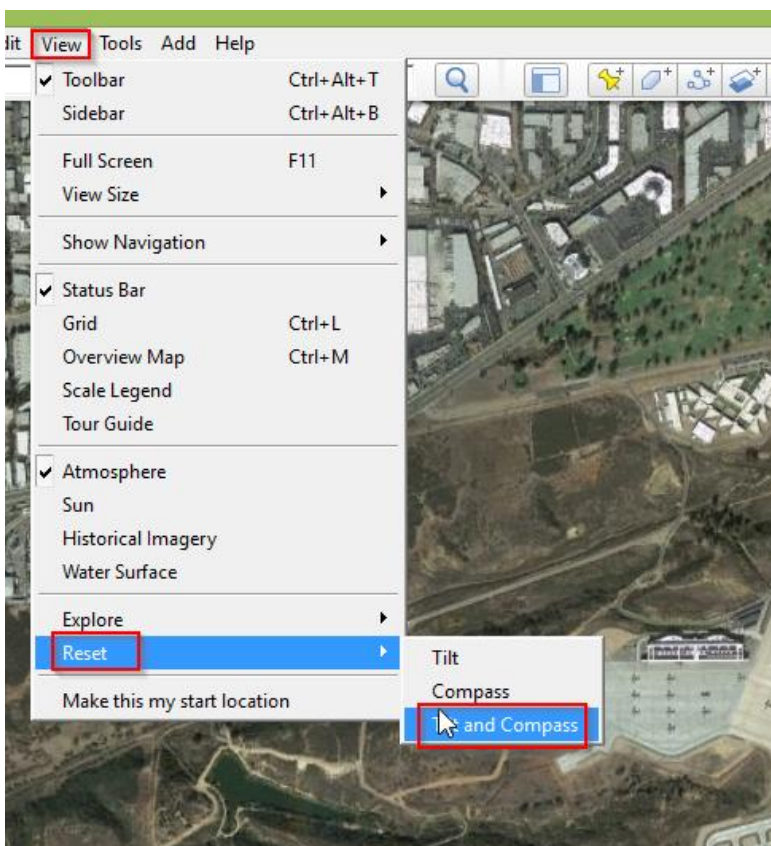
1 start Google Earth

2 Change the following google earth settings under options…
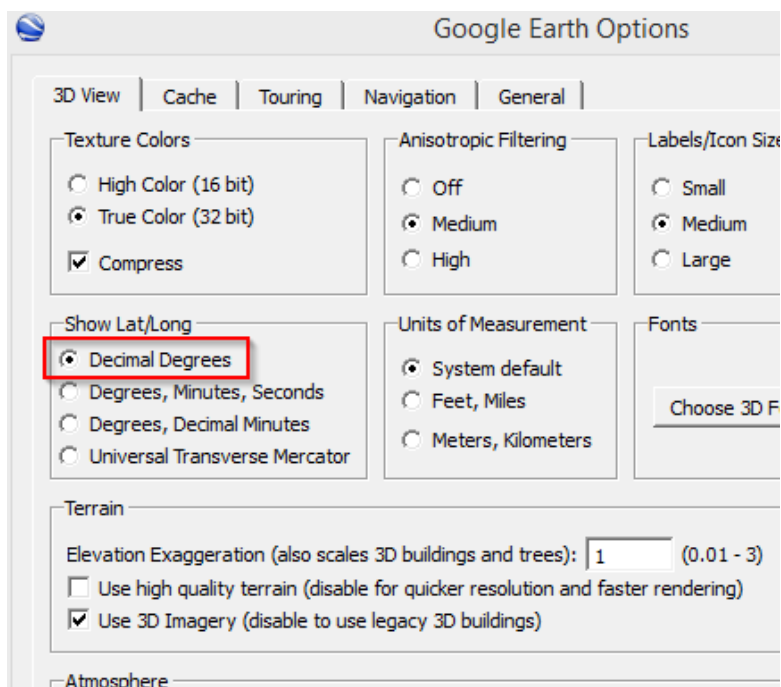
3 If tilt and orientation have been accidentally nudged from flat and compass north, use the following menu options to reset default orientation...

Having a flat, consistently orientated image is critical when inserting imagery into WED, so if accidentally nudged or upset, reset it by above method.

4 Next enter in the search area you airfield/airport eg. KNKX

5 Screengrab yourself a nice full overview image of the airfield, this full image including the boundary, should look similar to…


This image when imported to WED will be used as a master template upon which we will align the the smaller high res jigsaw piece detail imagery.

Save this image somewhere called something similar to KNKX.

6 In Google Earth, zoom in over a runway end

Using the 'show ruler' tool, position the crosshair precisely over the end of the runway, and write down the coordinates on a piece of paper. (see clip below)
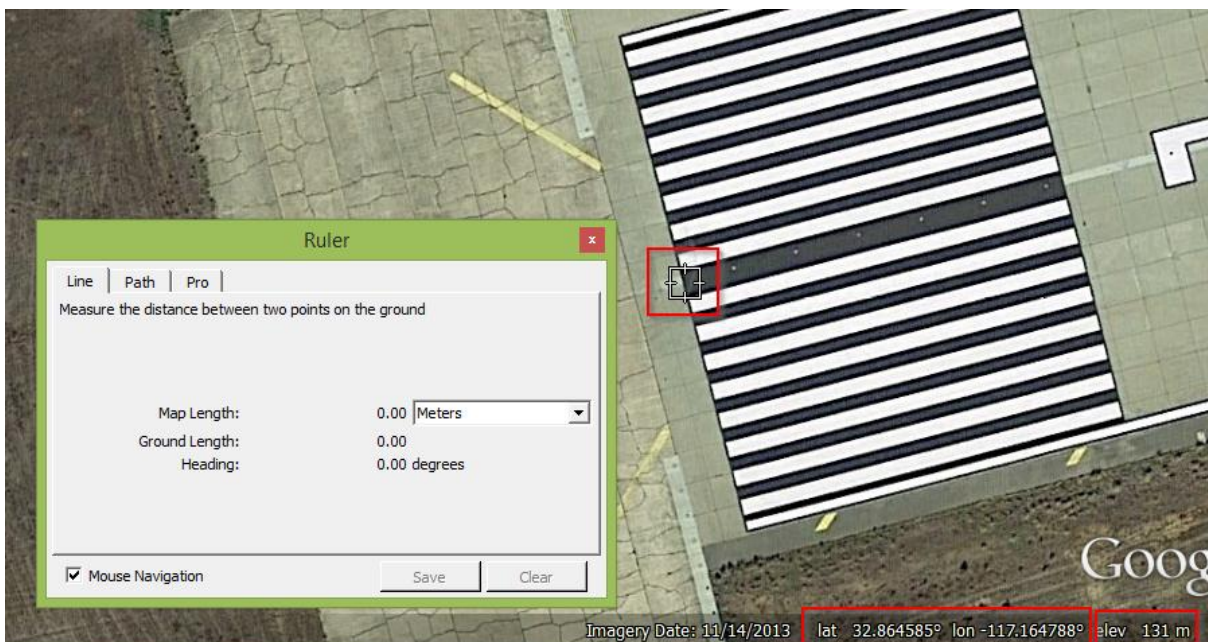
Repeat this for each runway end.

7 In Google Earth again, zoom in on the image until you find a zoom level which allows you to clearly see taxi line markings, but is as zoomed out as can be in order to minimise the number of jigsaw pieces required.

For KNKX a typical hi res jigsaw piece looks similar to…

Notice I can clearly see the taxi lines but it's not too zoomed in so that hundreds of jigsaw pieces would be required to build the imagery jigsaw.

Once zoom level is established, do not change the setting, carefully pan around the airport screen capturing and saving enough jigsaw pieces to build the entire airport.

KNKX took me 18 jigsaw pieces to cover all detailed areas. (see image below)
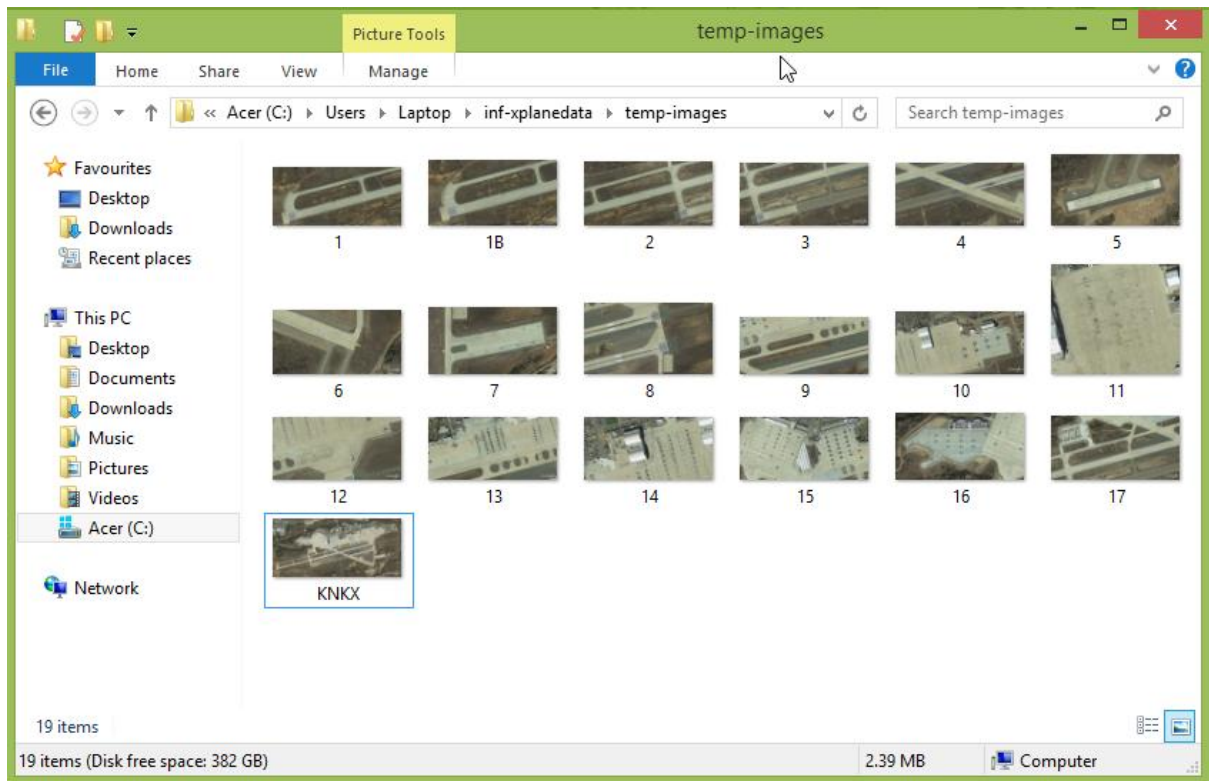
8 Activate the WED (scenery editor)

Having opened or imported your WED file (see other help sections if unclear)

Go to 'File' 'Import Orthophoto'

Place the overlay photo 'KNKX' into your file.

9 next we need to place datum's so we know where to stretch the image to by aligning the runway ends to the cords we measured earlier.

Windsocks are the easiest way to place a coordinate datum.

Place a windsock using the following tool…

Set the coordinates of the windsock to the exact coordinates you measured earlier in Google Earth…
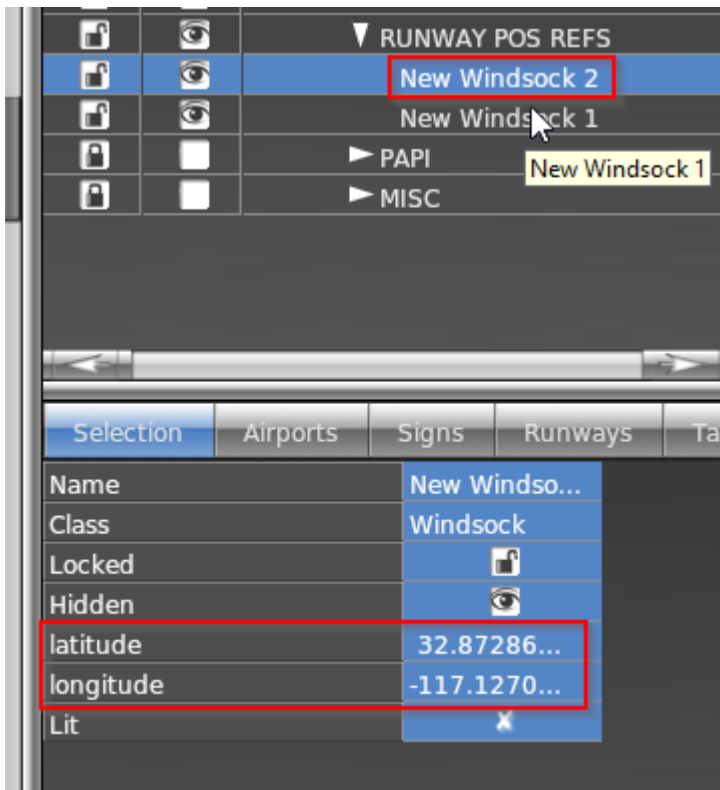
Repeat this for however many runway ends you have.

9 You can now stretch the overlay image until the runway end of the image aligns perfectly with the crosshair of the windsock (see image below)

Imagery can be stretched using either Vertex or Marquee selection methods

WED unfortunately doesn't allow the images to be resized maintaining ratio unfortunately, but if you do figure a way out, I'd love to know it too, so please email.

Once stretched to match the datum coords the overlay image edges must be straight, and the runway ends aligned to the windsock crosshairs.

Once satisfied – lock the image using the padlock icon to stop further movement.

The windsock visibility can be turned off by clicking the eye icon.

10 – Next we are going to place the Hi res jigsaw pieces over the overlay image.

Click 'view' 'pick overlay image' and select a detailed image piece to place.

***Ensure the overlay image is lower in the browser tree than the detail image. Browser tree hierarchy determines the order in which objects are displayed, items on top of another in the browser will be displayed on top of other in the image window, so if overlay image is not below the detailed image, you won't see your detailed pic on top of the overlay pic.

With the detail image selected in the browser tree, the value 'Alpha' can be adjusted. Alpha value controls the transparency of the image being positioned. 1.0 = solid, 0.0 = fully transparent. I normally set mine to 0.5 whilst positioning. Always return the setting to 1.0 after fully positioned.

Adjusting the transparency allows for very precise positioning and alignment. In the image below you can see taxi way alignment was carefully and precisely done.

Once an image is positioned using Vertex or Marquee selection methods, and alpha value has been returned to 1.0, lock the positioned image using the padlock icon.
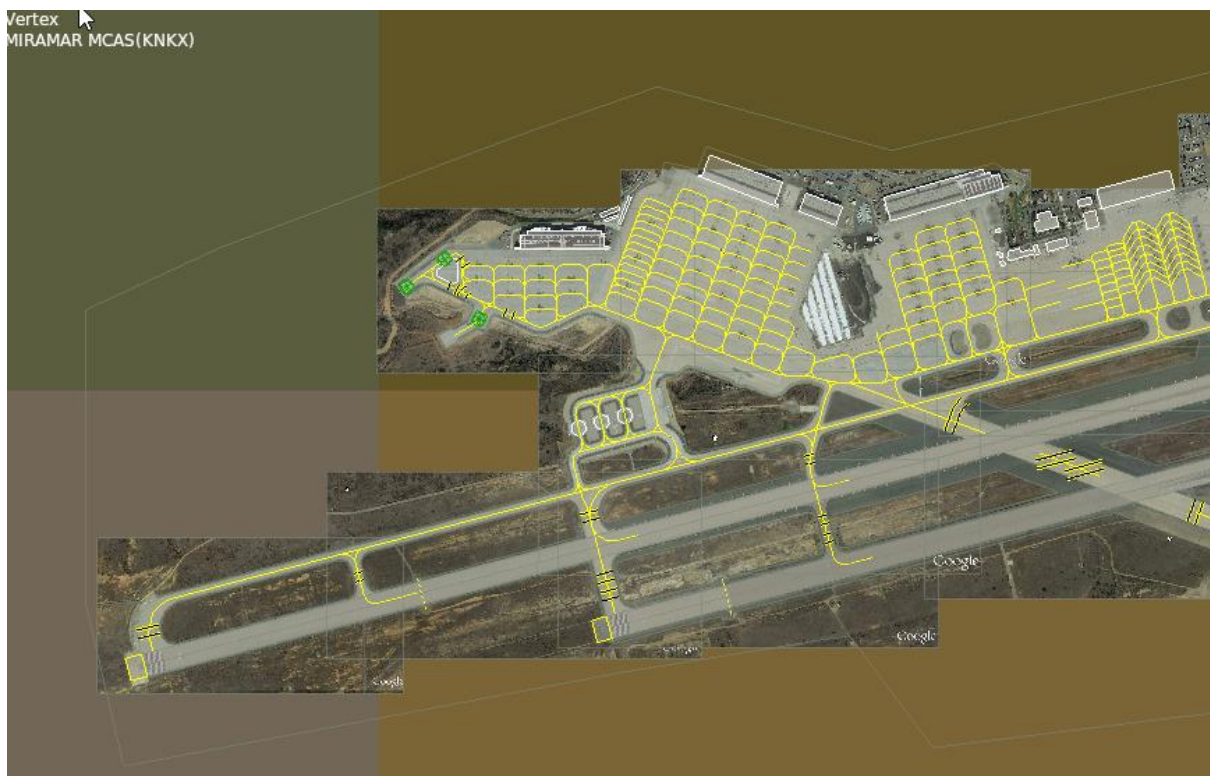
Repeat the above step, for each hi res jigsaw piece.

11- Once all Hi res detail pieces of the jigsaw are placed and locked, the overlay image should be able to be hidden, and the detailed pieces should be perfectly aligned as shown below…

12 The placing of imagery is now complete, and you can start tracing runways, pavements and taxi lines over your imagery.