

Geoconvert Tool: Advanced Features Tutorial

Overview

This tutorial will show you how to work with some advanced techniques; we will seamlessly add an adjacent area and use the '**images_raw**' folder for further editing. **Note:** To keep this tutorial project manageable, we will concentrate on only 4 images.

Tutorial

1. In the below photo you will see the basic situation (coordinates derived from .INF files).

-122.812356948853
48.560836315155



-121.926097869873
48.560836315155



-122.812356948853
48.0814290046692

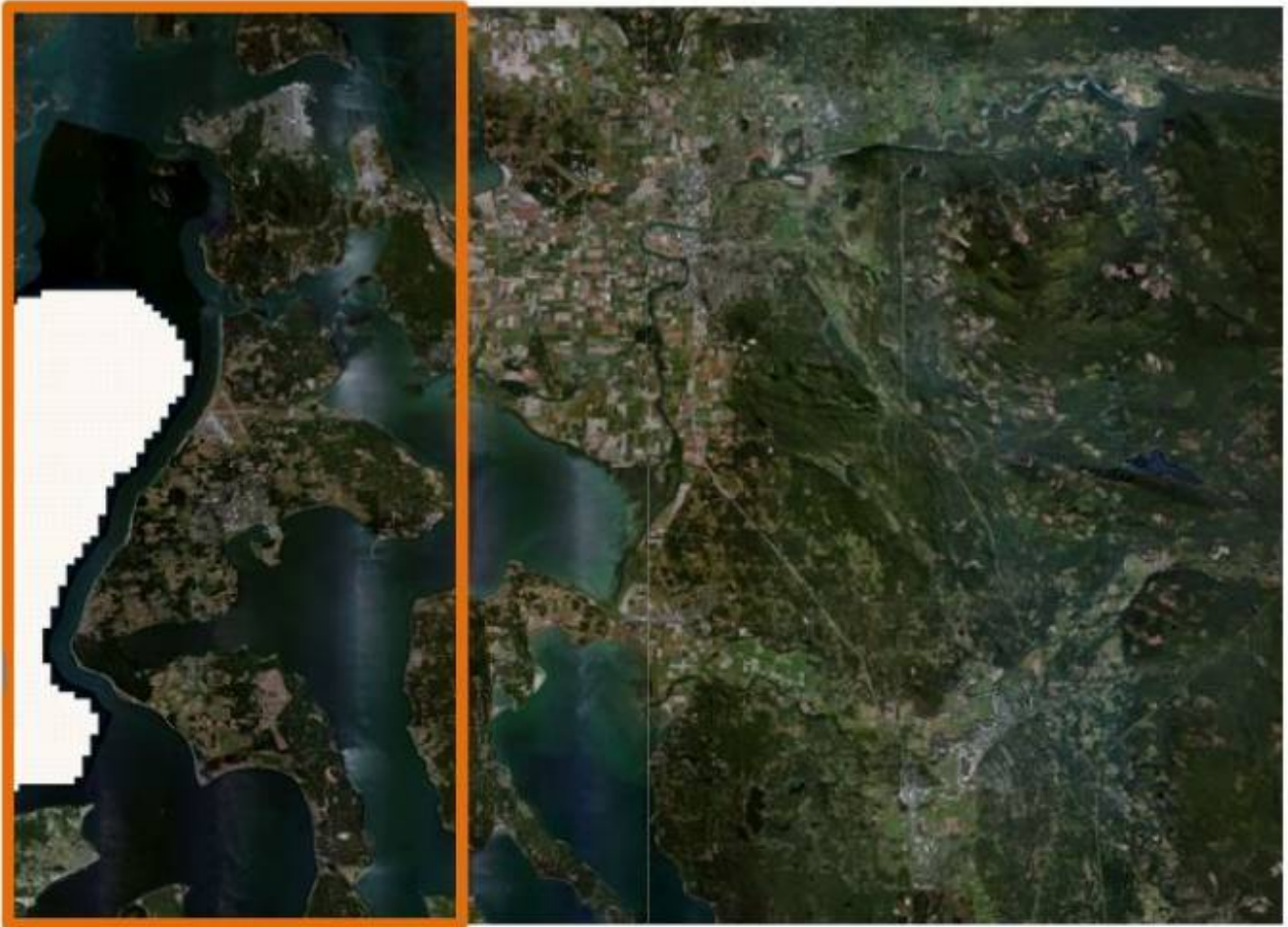


-121.926097869873
48.0814290046692



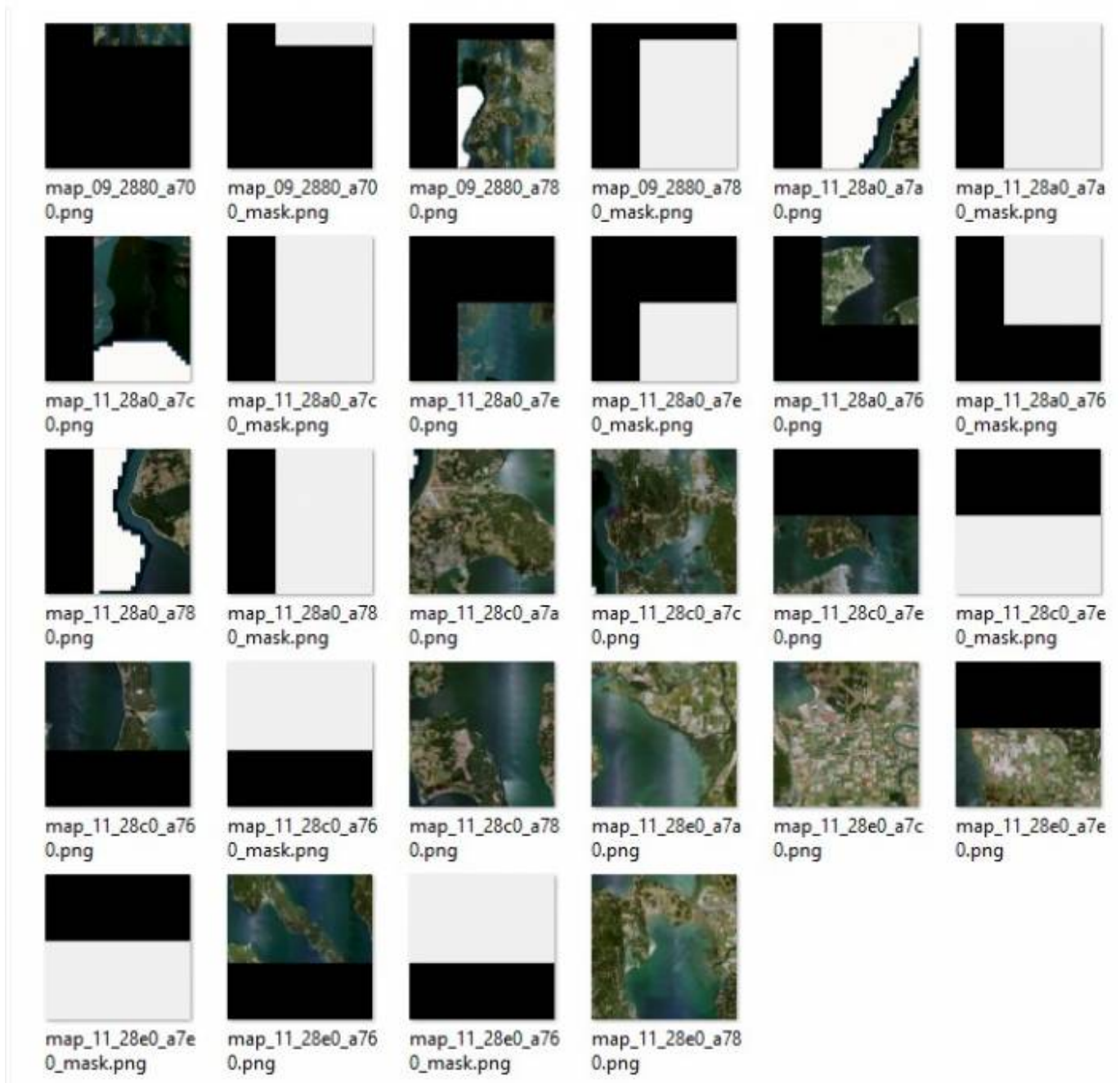
2. Now let us run our first geoconvert. The longitude value will be set to **-122.50**. **Note:** This is completely independent from the image dimensions. Additionally we will activate the **images_raw** option. The folder must exist before conversion.

Lon -122.50



```
1 <[file] [] [Whidbey West]
2   <[tmcolormap_regions] [] []
3     <[bool] [write_raw_files] [true]>
4     <[string8] [folder_destination_raw] [./scenery/images_raw/]>
5     <[bool] [write_ttc_files] [true]>
6     <[string8] [folder_destination_ttc] [./scenery/images/]>
7     <[bool] [do_heightmaps] [false]>
8     <[bool] [always_overwrite] [true]>
9     <[list] [region_list] []
10      <[tmcolormap_region] [element] [0]
11        <[uint32] [level] [9]>
12        <[vector2_float64] [lonlat_min] [-122.812356 48.560836]>
13        <[vector2_float64] [lonlat_max] [-122.500000 48.081429]>
14      >
15      <[tmcolormap_region] [element] [0]
16        <[uint32] [level] [11]>
17        <[vector2_float64] [lonlat_min] [-122.812356 48.560836]>
18        <[vector2_float64] [lonlat_max] [-122.500000 48.081429]>
19      >
20    >
21  >
22 >
```

- This is the content of **images_raw** folder after the first conversion.



As you can see, the level 9 consists only of 2 tiles. Since our images do not cover the Aerofly level 9 tiles completely, there are masks for the tiles. There are no masks at the right side along longitude **-122.50**. The images folder contains the same content just in the generic Aerofly file format **.TTC**.

- Save both folders to a secure place, so we do not overwrite them accidentally.

3. Now let's run the second geoconvert. The longitude border is again **-122.50**.

Lon -122.50



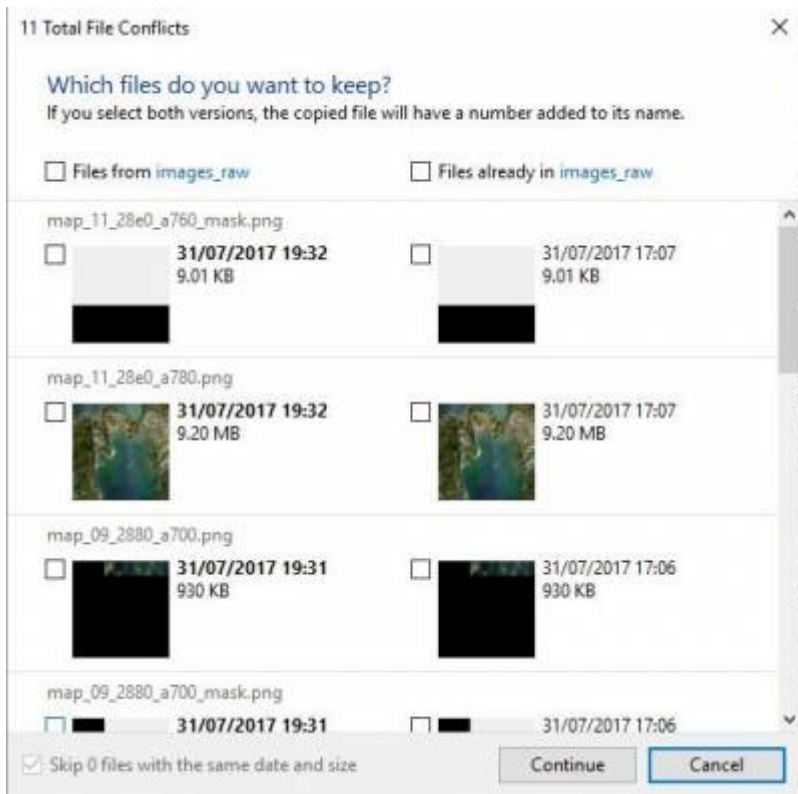
```
1 <[file] [] [Whidbey East]
2   <[tmcolormap_regions] [] []
3     <[bool] [write_raw_files] [true] >
4     <[string8] [folder_destination_raw] [./scenery/images_raw/] >
5     <[bool] [write_ttc_files] [true] >
6     <[string8] [folder_destination_ttc] [./scenery/images/] >
7     <[bool] [do_heightmaps] [false] >
8     <[bool] [always_overwrite] [true] >
9     <[list] [region_list] []
10      <[tmcolormap_region] [element] [0]
11        <[uint32] [level] [9] >
12        <[vector2_float64] [lonlat_min] [-122.500000 48.560836] >
13        <[vector2_float64] [lonlat_max] [-121.926097 48.081429] >
14      >
15      <[tmcolormap_region] [element] [0]
16        <[uint32] [level] [11] >
17        <[vector2_float64] [lonlat_min] [-122.500000 48.560836] >
18        <[vector2_float64] [lonlat_max] [-121.926097 48.081429] >
19      >
20    >
21  >
22 >
```

- This is the content of **images_raw** after the second conversion.



4. Now let's copy this content into the folder of our first conversion. We will start with the

images_raw content and get a message that duplicate files exist.



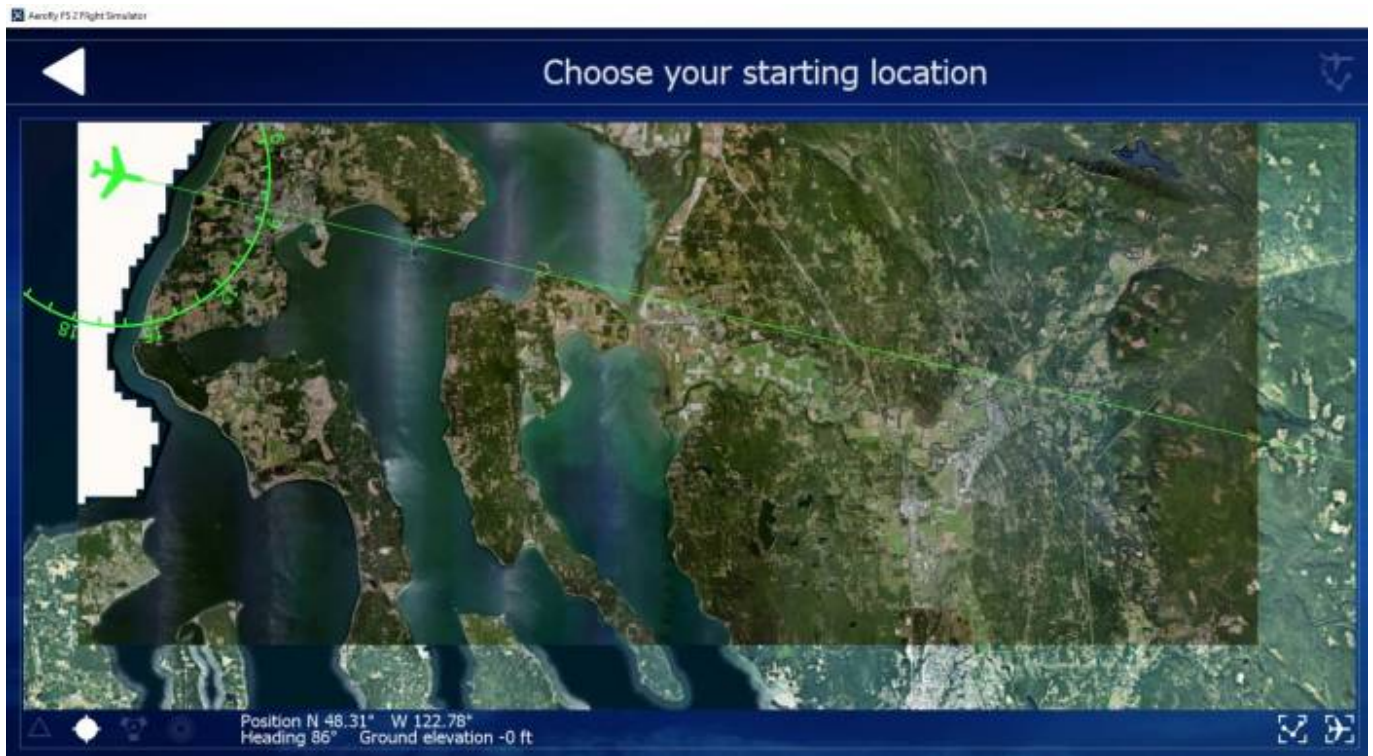
Since we are able to view the **.PNG** files, we can compare them. In this case all **11** files are identical. We overwrite them and repeat the copy process for the images folder as well.

Summary:

- Use even coordinates for the designated border of adjacent areas. I even use full degrees or at least a half degree as in our example. This may match the Aerofly tiles mosaic.
- Activate the **images_raw** option to create **.PNG** tiles for comparison.
- Combine the final content into a single folder to avoid duplicate tiles and masks in different sub folders.

Results in Aerofly

5. From within Aerofly FS2, select the location menu and move to the NW corner of the USA. You will see the coverage of our four images, and you will not see the boundary of our 2 conversions.



Note: You have noticed that the sea surface is missing in the left part of our images You can use the alpha blending technique to eliminate this by following the [Alpha Blending Tutorial](#). This should be done **before** running the geoconvert tool.

TMC File: Frames Explained

In this example we will show the comparison of **exact frame**, **outer frame**, and **inner frame** in the **TMC** file.

- For this example we used 4 images with 1 foot resolution from USGS. This is the situation:



Exact frame: [lonlat_min] [-122.682662 48.374731]>
[lonlat_max] [-122.622196 48.334063]>

Outer frame: [lonlat_min] [-122.70 48.39]>
[lonlat_max] [-122.62 48.33]>

Inner frame: [lonlat_min] [-122.68 48.37]>
[lonlat_max] [-122.63 48.34]>

- The results of the **exact frame** and the **outer frame** are identical. This means that geoconvert creates Aerofly tiles only there, where an image exists.
- There are no tiles created and then blacked out due to missing imagery. As a result, you can use a rounded **outer frame** for your convenience.
- The **inner frame** created even the same number of tiles.
- The differences in our frame sizes were too small, so the same number of Aerofly tiles have been created in all 3 cases.

But, watch the frame border on the right side (east side):



Our image ends after about half the tile and a mask for the right part has been created. We can avoid this mask by having 'enough' imagery outside of our frame. Then the tile would have been filled completely by the imagery. So if you plan to do adjacent areas, a massive overlap of imagery is recommended.

Attention: Lower levels of aerofly tiles cover a large area. In our example a single level 9 tile covers about 52nm E-W x 39nm N-S (Whidbey area). If you convert a tiny area, it may fill only a small fraction of this tile. If you convert an adjacent tiny area, it may fill another fraction of this tile.

Solution: Do not convert low levels for very small areas or use a massive overlap of your aerial imagery.

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