

## How to load a geographic raster file into Kartotrak

The imported image can be a screenshot of a map, a digitized map, an aerial photo...

There are three possible configurations depending if the file is georeferenced or not.

### 1. Georeferenced file

The file is georeferenced when it is defined with a little text file or for some formats (i.e. geoTiff). The import task is directly achieved clicking the button  in the Map tool bar.

### 2. Not georeferenced file

Otherwise, in the case of a file which is not georeferenced (a snapshot from Google Maps for example), it is necessary to define the position of the file. In this case, two options are possible:

- Create a text file containing the georeferencement information,
- Geolocalize your image thanks to the interactive tools offered by Kartotrak

The first option requires the creation of a text file from a text editor (Notepad or Word for example) in the same directory as the image file.

Save the file using the same name as the picture file and add a « w » at this end of the extension. For example, the image file « image.jpg » will be associated to the text file « image.jpgw ».

Then, you need to initialize your text file (containing 6 lines).

By default, you can set the following parameters:

- 1 (Line 1: pixel size in the X direction in map units/pixel. This parameter must be positive.)
- 0 (Line 2: rotation term (set it to 0))
- 0 (Line 3: rotation term (set it to 0))
- -1 (Line 4: pixel size in the y\_direction in map units. This parameter must be equal to the opposite of the parameter defined at line 1 (the image is defined from top to bottom))
- 0 (Line 5: X coordinate of the center of the upper left pixel)
- 0 (Line 6: Y coordinate of the center of the upper left pixel)

After the image import (with the button , you need to calculate a scale adjustment by measuring the distance between two notable points on the image in Kartotrak and by comparing it with the real distance (measured on site or on Internet). To reduce imprecisions, consider the longest distance as possible on the image (between the two furthest as possible notable points). Replace the values of the lines 1 and 4 by the ratio between the two distances (do not forget the sign « - » for line 4). Reload the map.

You finally have to calculate the translation vector by taking the X and Y coordinates of a notable point of the image in Kartotrak and on Internet. Replace the values of the lines 5 and 6 by the difference between the coordinates. Reload the map.



The image is now correctly georeferenced.

If a small difference of scale or of coordinates is still visible, it is possible to update the parameters file applying again the two last steps of the process (scale adjustment and translation). You should multiply the old ratio by the new one and/or translate in relation to the existing coordinates.

In the second option, just in a few clicks, you'll be able to fit any image to the scene so that it superimposes accurately a reference map. For that, select the layer corresponding to your image in the layers list. Then, click on the **Start Transformation** icon , different tools related to images transformation are reachable. The image can easily be modified by using the various options: **Move, Resize, Rotate...** During the modifications, the image will appear in transparency, this to facilitate positioning of a known point of the image onto its real location on the background map.



*Transformation tools*

