How To Create A Ground Layout For EuroScope

General idea:

If you decide to create a ground layout for Euroscope, these are usually made by drawing polygons and lines in Google Earth, before converting to a sector file format.

You can use this tool: http://fsmine.dhis.org/euroscope/design/ for the conversion from a KMZ format created by Google Earth.

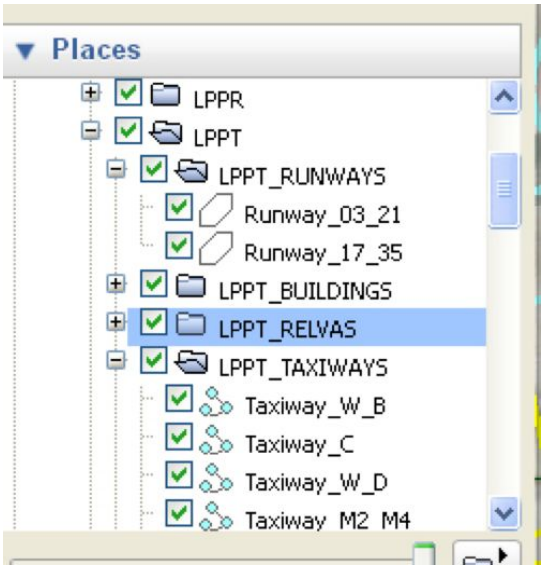
For creating ATZs and some other airspace features SectEd application found here: (https://sites.google.com/site/vatsimtools/) is very useful, however be warned that when loading a sector file into it and then saving it may change the existing formatting, or alternatively this can be done using the '.sline' and '.sline2' commands from within Euroscope (more detail here: http://euroscope.hu/mediawiki/index.php?title=Command_Line_Reference) and then manually merging with the sector file.

If you want to draw lines or polygons or other shapes, you can use this website to convert AIP coordination to EuroScope compatible COORD and then use it in .SCT or .ESE files: https://webtools.kusternet.ch/coordinatesimporter

This document is a small tutorial which explains how to generate your sector layout in Google Earth and then export it to KMZ format in order to be converted by necessary tool into a .SCT file.

1 - Plan your layout

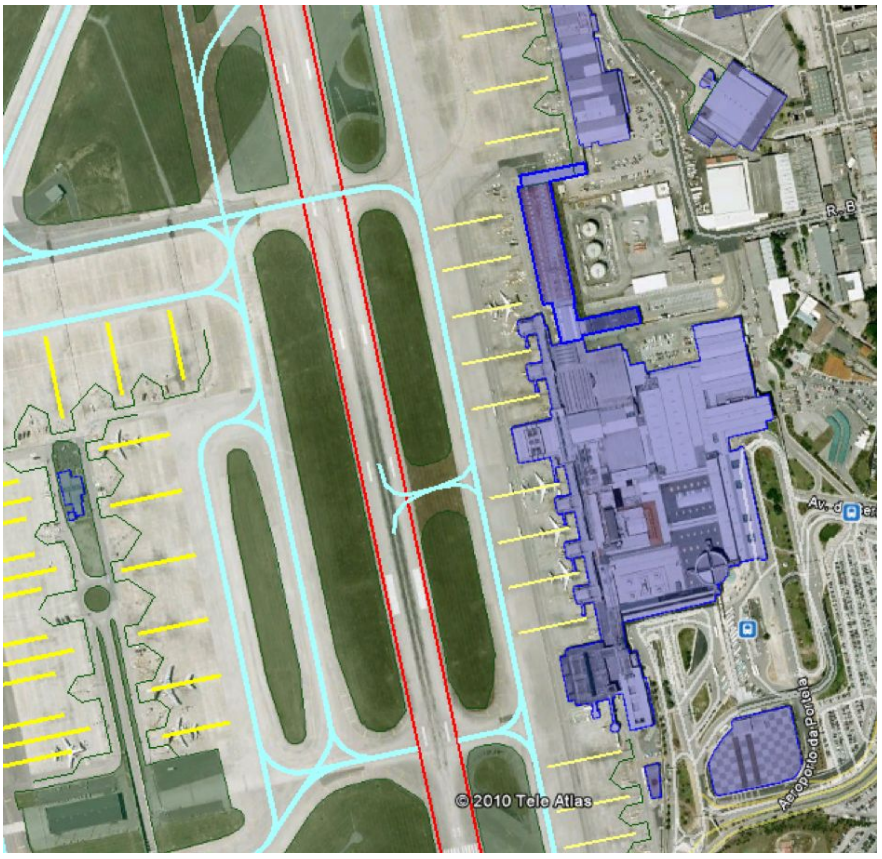
If you're doing a whole FIR, then in Google Earth create a folder for the FIR (example LPPC). Then create subfolders for each airport (example: LPPT, LPFR, LPPR, ...). This is done in the "Places" section on the left side.

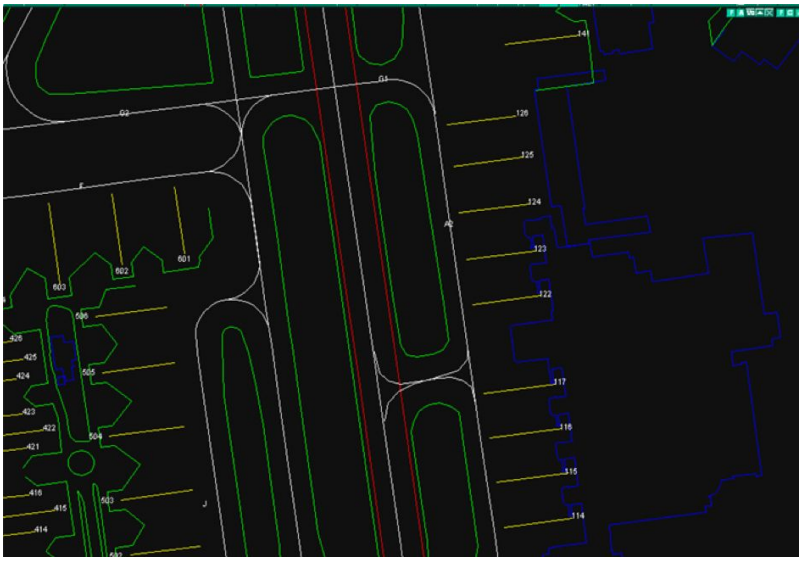


In the image above, you can also see the separation of runways, taxiways, buildings, etc., so that things are grouped together and easier to find. Each element should have a name so that, once again, you can easily find it in the layout in case you need to change it later on.

2 - Draw the layout

Next, start drawing each component and make sure they are in the correct folder. Each object is typically a line, a path or a polygon. The following image is an example:





Buildings are in blue, taxiways in light cyan, stands in yellow, runways in red and grass or land in green. These colors can be changed if you prefer. They will be the ones used in the sector file. Simply draw over the satellite image, zooming in/out according to your needs. In order to make curved areas, draw as many

points as you can, close together. The following example shows stand 604 configurations at LPPT airport. The red arrow shows its location on the map.
It is a line, yellow in color and it has the name Stand604. Naming of the element used to be important since that decided which kind of item it was. Now, this doesn't matter anymore. Simply name it whatever you want and choose the color you want it to be drawn in. Since Nov 12 2010, lines are interpreted as lines to be included in the GEO section of the sector file whereas polygons are to be shown under the REGIONS section.

Should you want different colors for a specific item, prefix it with "@color_". Example:

@red_TaxiwayC1
@yellow_Region_A1

3 - Save to KMZ format
When you've finished with your layout, or want to test it out, save it to KMZ format:
Right-click on the FIR top-level object (the topmost folder) and choose "Save Place As...". Give it a name (example LPPC.kmz).

4 - Upload & Convert
Then use the upload tool to upload it to the server so that it can be processed. After the file is uploaded and after a few seconds of processing, a button will appear enabling you to download the converted sector file. Save the file to disk as "LPPC.sct". You will now have a GEO and/or REGIONS section to be inserted into the sector file you use in EuroScope.

Additional Information and help:
1) Draw the SMR using Google Earth
I generally start by drawing objects in the order that I would like them to be displayed by EuroScope (this doesn't actually matter - just it is nice as Google Earth draws objects on the screen in the order that they are drawn, thus it allows a realistic view of what the SMR will look like in EuroScope).
I also generally use the following folder order (these need to be positioned in the order that you would like the objects to be drawn as EuroScope will draw them with the 'highest' object first and the 'lowest' object last):

- Backgrounds - e.g. the nice blue background seen in many SMRs and the grass aerodrome background).
- Runways
- Taxiways
- Aprons
- Roads
- Buildings
- Surface Markings

After I have finished drawing the SMR I then save it as a KMZ.
2) Convert the KMZ to a SCT
For this I use the tool here - there may be other methods, but this is currently the best tool that I have found.
3) Formatting the sector file
I then use a small application that I made (which is available here (at the bottom called "Sector File Creation Tool V0.5") to convert the output regions from the above tool into the same format as that used within the EGTT sector file and to use the predefined colour definitions at the top of the EGTT sector file,

and then add the colour definitions to the geo data output from the conversion by hand and remove the hyphens the tool prefixes the comments with.

4) Testing the sector file

At this point I generally test the sector file to make sure everything is ok - for this I add a basic "[INFO]" section to the sector file (this can be done just by copying this section from EGTT sector file) and also copying the relevant colour definitions across from the EGTT sector file into the generated file. Then load the sector file and go into "Other SET"->"Display settings" and tick the "Geo" and "Regions" boxes**.**

5) Adding text to the SMR

For this I generally load the SMR in EuroScope then use the ".sline" command (see here for the usage explanation) to select the locations to add the text and then reformat the co-ordinates to the format required for the "Labels" section form (see here for details).

Please note that this is just the methods that I use and there are other ways to do this - for example:

- SectEd - available here. I think this can be used to convert directly from a flight simulator BGL file and for many other uses, albeit it is a little buggy at times.
- AutoCAD - using a procedure similar to that described here.
- There are also probably other methods as well.

We hope to receive your efforts to add more ground layouts to Iran Sector File.