# Route Marker Creation

Release version 1.02 (2007-07-12)

# 1 Generating Marker References

The use of route markers can be a significant aid to scenery creation, enabling environments to be built quickly and accurately. The main use of route markers is to map out the basic framework of a scene e.g. railway lines, roads, rivers, and important places.

There are 2 types of route markers, SERIES and NAMED. Series route markers create a line across the terrain following specified long/lat points. Named route markers create a placed flag on the terrain with an associated name bubble. These named route markers can be jumped to within the editor.

Google Earth can be used to get an overview of the route and to create the marker points which will be imported into the game. It is important to check that *Google Earth* is using the same long/lat format as the game.

To do this go to **Tools > Options > 3D View** and make sure the **degrees** option is selected **–** note the default is **degrees, minutes, seconds.** Once the correct option is selected click **Apply settings.**

To place a marker in Google Earth go to **Add > Placemark.** A flashing marker will appear in the main window alongside a dialogue box. Move the flashing marker to the required position, give it a friendly name in the dialogue box and click on **OK.**

To view the long/lat information for any marker you can right click on the marker icon and choose **Properties**. A dialogue box will appear. Choose the **View** tab and all the location information is listed..

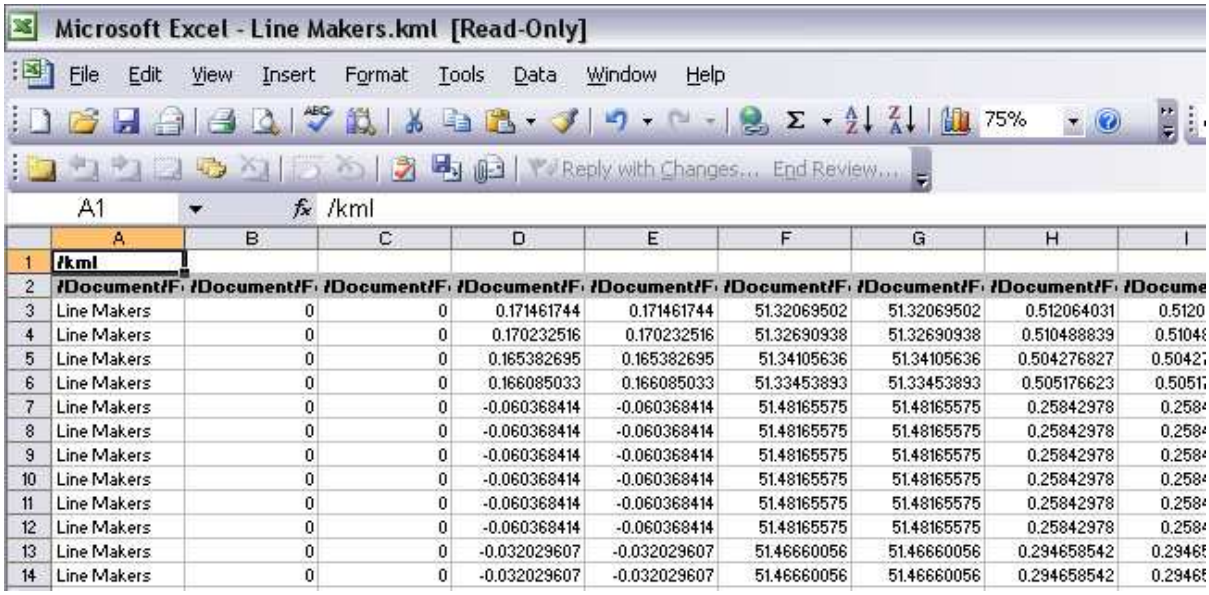
Repeat this process for however many markers you require*. Google Earth will automatically save these markers when you exit the utility.

*Note – to create a Series marker file, you must make sure all the markers are place in sequence. For a Named marker file, this is not important.

# 2 Creating a SERIES Marker File

Once you have placed all the markers in Google Earth following a path, right click on the folder they are located in and select 'Save As'. In the following save window, choose a location to place the file, and in the file type field choose **Kml(*.kml)** format.

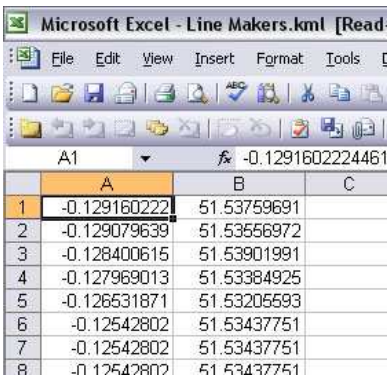
Next, open this file in Microsoft Office Excel or equivalent table package. When prompted, choose 'Open this file as a read-only workbook'. This will present the user with an appropriately formatted table of marker details across columns A to Y.




| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | /kml | | | | | | | | |
| 2 | /Document/F | /Document/F | /Document/F | /Document/F | /Document/F | /Document/F | /Document/F | /Document/F | /Docume |
| 3 | Line Makers | 0 | 0 | 0.171461744 | 0.171461744 | 51.32069502 | 51.32069502 | 0.512064031 | 0.5120 |
| 4 | Line Makers | 0 | 0 | 0.170232516 | 0.170232516 | 51.32690938 | 51.32690938 | 0.510488839 | 0.5104 |
| 5 | Line Makers | 0 | 0 | 0.165382695 | 0.165382695 | 51.34105636 | 51.34105636 | 0.504276827 | 0.5042 |
| 6 | Line Makers | 0 | 0 | 0.166085033 | 0.166085033 | 51.33453893 | 51.33453893 | 0.505176623 | 0.5051 |
| 7 | Line Makers | 0 | 0 | -0.060368414 | -0.060368414 | 51.48165575 | 51.48165575 | 0.25842978 | 0.2584 |
| 8 | Line Makers | 0 | 0 | -0.060368414 | -0.060368414 | 51.48165575 | 51.48165575 | 0.25842978 | 0.2584 |
| 9 | Line Makers | 0 | 0 | -0.060368414 | -0.060368414 | 51.48165575 | 51.48165575 | 0.25842978 | 0.2584 |
| 10 | Line Makers | 0 | 0 | -0.060368414 | -0.060368414 | 51.48165575 | 51.48165575 | 0.25842978 | 0.2584 |
| 11 | Line Makers | 0 | 0 | -0.060368414 | -0.060368414 | 51.48165575 | 51.48165575 | 0.25842978 | 0.2584 |
| 12 | Line Makers | 0 | 0 | -0.060368414 | -0.060368414 | 51.48165575 | 51.48165575 | 0.25842978 | 0.2584 |
| 13 | Line Makers | 0 | 0 | -0.032029607 | -0.032029607 | 51.46660056 | 51.46660056 | 0.294658542 | 0.2946 |
| 14 | Line Makers | 0 | 0 | -0.032029607 | -0.032029607 | 51.46660056 | 51.46660056 | 0.294658542 | 0.2946 |

From this table, we are only interested in columns **H** (latitude) & **J** (longitude). All the rest can be deleted.

IMPORTANT NOTE:
You will need to swap over the data so that longitude values are in Column A and latitude values are in Column B. This is important for Rail Simulator to read the table correctly.




| | A | B | C |
|---|---|---|---|
| 1 | -0.129160222 | 51.53759691 | |
| 2 | -0.129079639 | 51.53556972 | |
| 3 | -0.128400615 | 51.53901991 | |
| 4 | -0.127969013 | 51.53384925 | |
| 5 | -0.126531871 | 51.53205593 | |
| 6 | -0.12542802 | 51.53437751 | |
| 7 | -0.12542802 | 51.53437751 | |
| 8 | -0.12542802 | 51.53437751 | |

Rail Simulator draws a straight line between each long/lat specified in this file so the more coordinates you have the higher quality series marker you will achieve.

To be read by the game select **Save As** in and change the file type to **CSV(*.csv)** and click **save.** Then place this file into your source directory at this location: **…Source\<***provider***>\<***product***>\RouteMarkers**

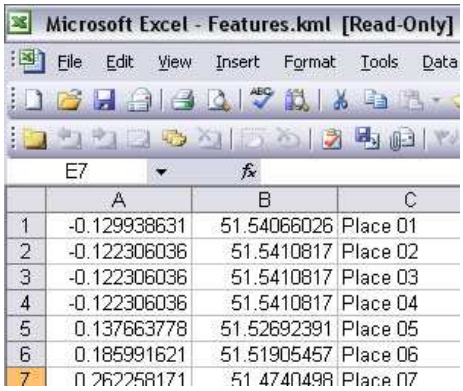
(Replace **Provider** and **Product** with your appropriate names)

# 3 Generating a NAME Marker File

For Named Markers, follow exactly the same process of placing the markers in Google Earth, assigning a name to the marker, saving them out as Kml (*.kml) format and opening the file in Excel of equivalent as a read-only workbook.

Once the table is loaded into Excel, you will once again need to remove unneeded data, however this time we are interested in keeping columns F, H & N. Column N contains all the names of the markers created. These will then appear in Rail Simulator as bubble labels above the markers.

**Remember again that you will need to place longitudinal values in Column A and latitude values in Column B. Marker names need to be located in Column C.**




Rail Simulator draws a flag at each long/lat specified in this file and displays the name next to it.

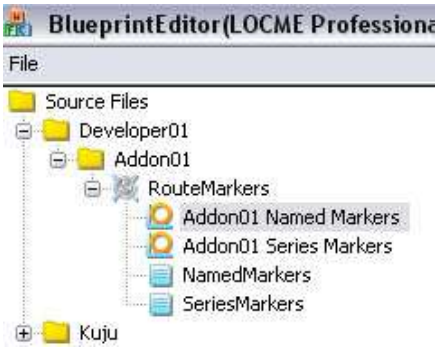
To be read by the game select **Save As** in and change the file type to **CSV(*.csv)** and click **save.** Then place this file into your source directory at this location: **…Source\<***provider***>\<***product***>\RouteMarkers**

(Replace **Provider** and **Product** with your appropriate names)

# 4 Creating Route Marker Blueprints

Load up the Asset Editor, navigate to the Route Markers folder where you will see your CSV marker files created in Excel.

Right click on the Route Markers name and choose the **New Blueprint** option. A box will be displayed. Scroll down the list and select the **GPS Marker Set blueprint** and click OK. The new blueprint will now appear below any pre-existing blueprints. You should rename the blueprint to reflect the name of the route.




Double click on the new blueprint and a dialogue box will be displayed. Enter the following information into the boxes.

**Display name** **:** This is the name displayed in the game.
**Provider** **:** Provider name
**Product** **:** Product name
**Blueprint ID** **:** This is the file location of the flag or marker object you want to use.

In the Named & Series GPS Marker file sections add the name of the relevant CSV file you created

e.g. **RouteMarkers\NamedMarkers.csv** or **RouteMarkers\SeriesMarkers.csv**

You can change the colour of the series maker here too if required, by default its set to black.

# 5 Exporting Markers into Rail Simulator

Now the data has been created in the source folder it needs to be exported for Rail Simulator to include it.

Choose the **export** option at the top of the blueprint. The bottom window and compile and export and if successful a dialogue should display the message **'Successful build'.**

When you have successfully exported the data you will be able to see the route markers in Rail Simulator. They will only appear if you have the GPS option selected in the editor and are in the same part of the world as the Markers.