

Tutorial: How to create a GeneRally track?

Written by Petri Kannisto (20th July 2008)

For additional stuff and information:

KANNISTO.com: <http://www.kannisto.com/>

The official GR forum: <http://forum.rscnet.org/forumdisplay.php?f=199>

This document is long, but it contains a lot of images, so please don't be scared. :)

The steps of a track creating process

There are generally 5 steps:

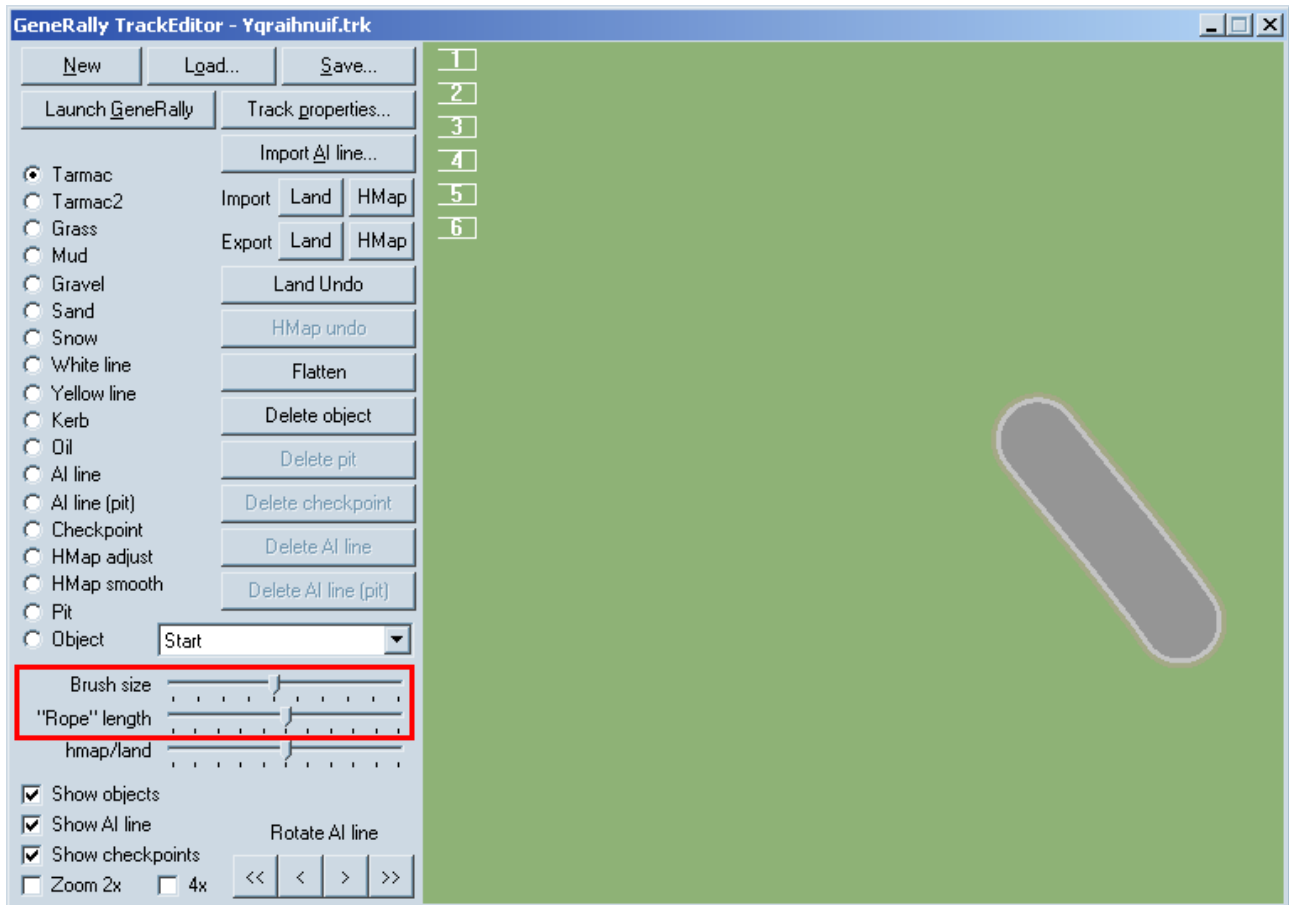
1. Draw the profile (land).
2. Draw the height map (HMap).
3. Place the objects (i.e. scenery) on the track.
4. Draw the AI line.
5. **If you are not satisfied, repeat some of the steps above until the track is good enough.**

On every step, remember these things:

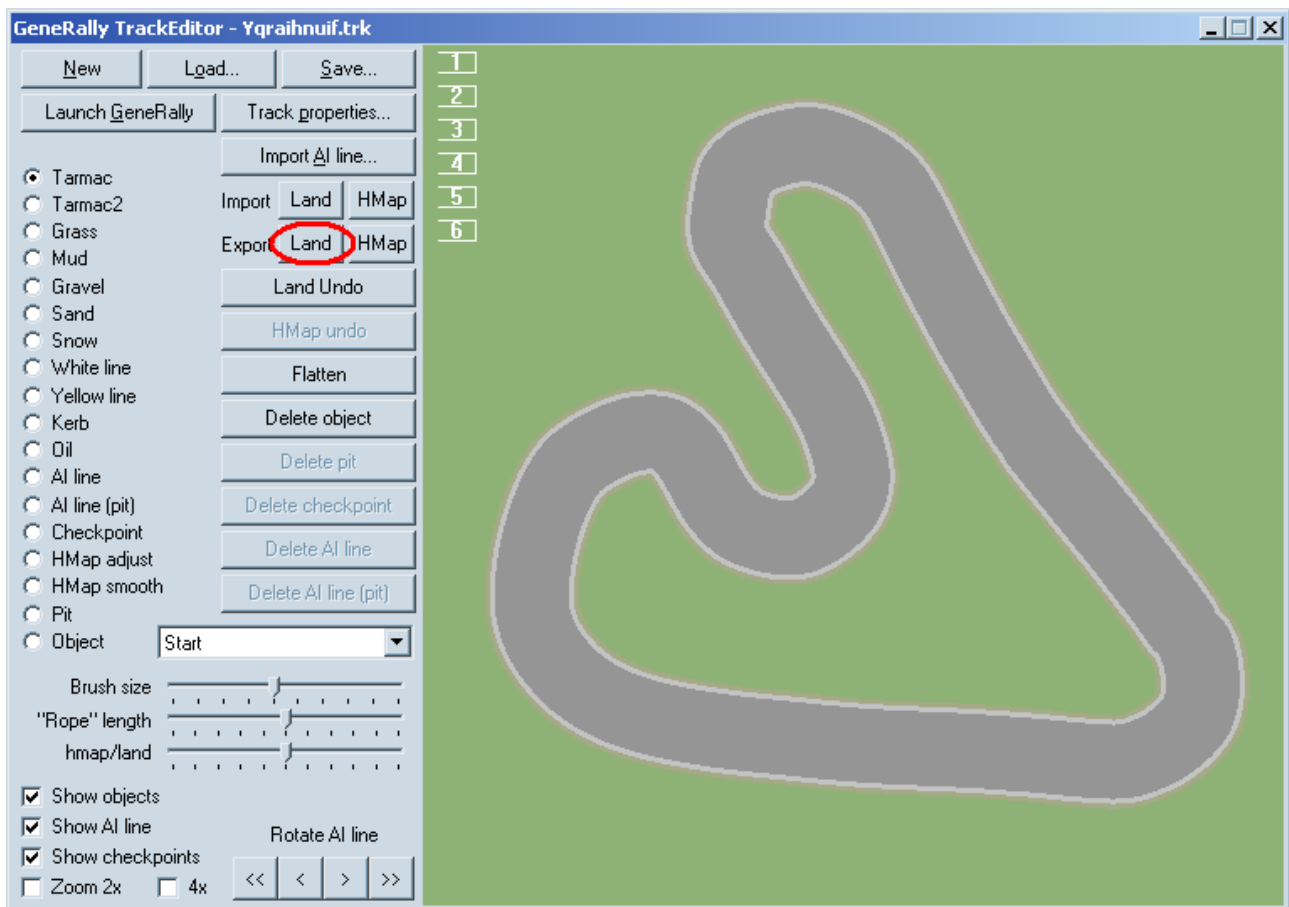
1. Test the track after you have made any changes. **Test, test, test.** This is the only way to make sure that the changes are reasonable. Use the **Launch GeneRally** button to quickly launch the game and to drive some laps on the track.
2. If you are not sure if the changes you make are good, save the track file with a different name. Then, you will have a backup file. If the changes are not good, it is easy to select the old file and continue with it.
3. Be patient. Creating a good track will take hours, or even days.
4. *Es ist noch kein Meister vom Himmel gefallen*, as Germans say. It requires a huge amount of work to learn to create good tracks.

1. Drawing the profile

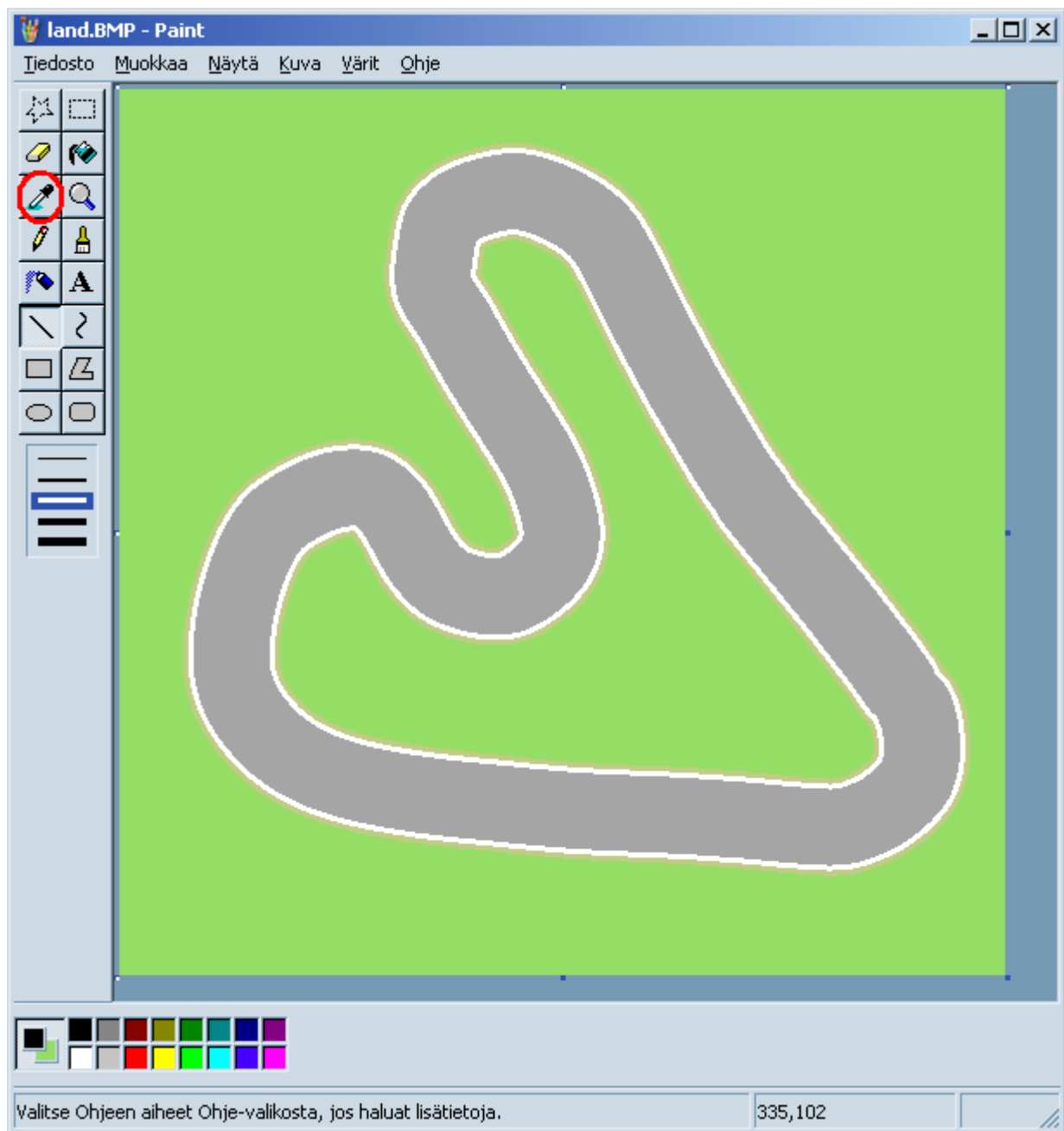
At first, we'll select the **brush size** we want. **Rope** tool is handy, as it will make it easier to draw smooth straights and curves.



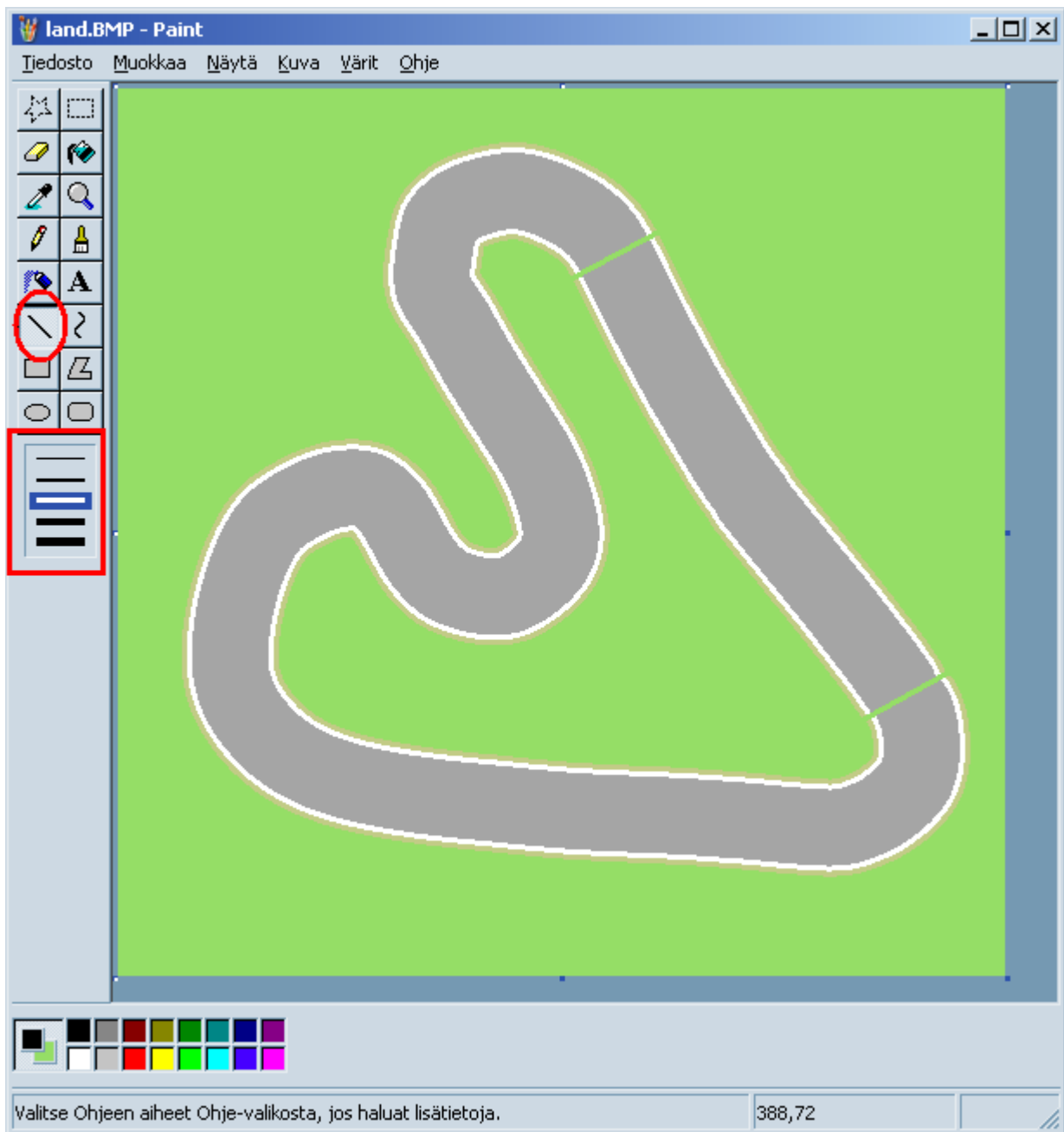
Now, there's a raw version of the profile. Let's edit it a little in MS Paint to make it look better. We'll use the **Export land** function to save the profile to a BMP file.



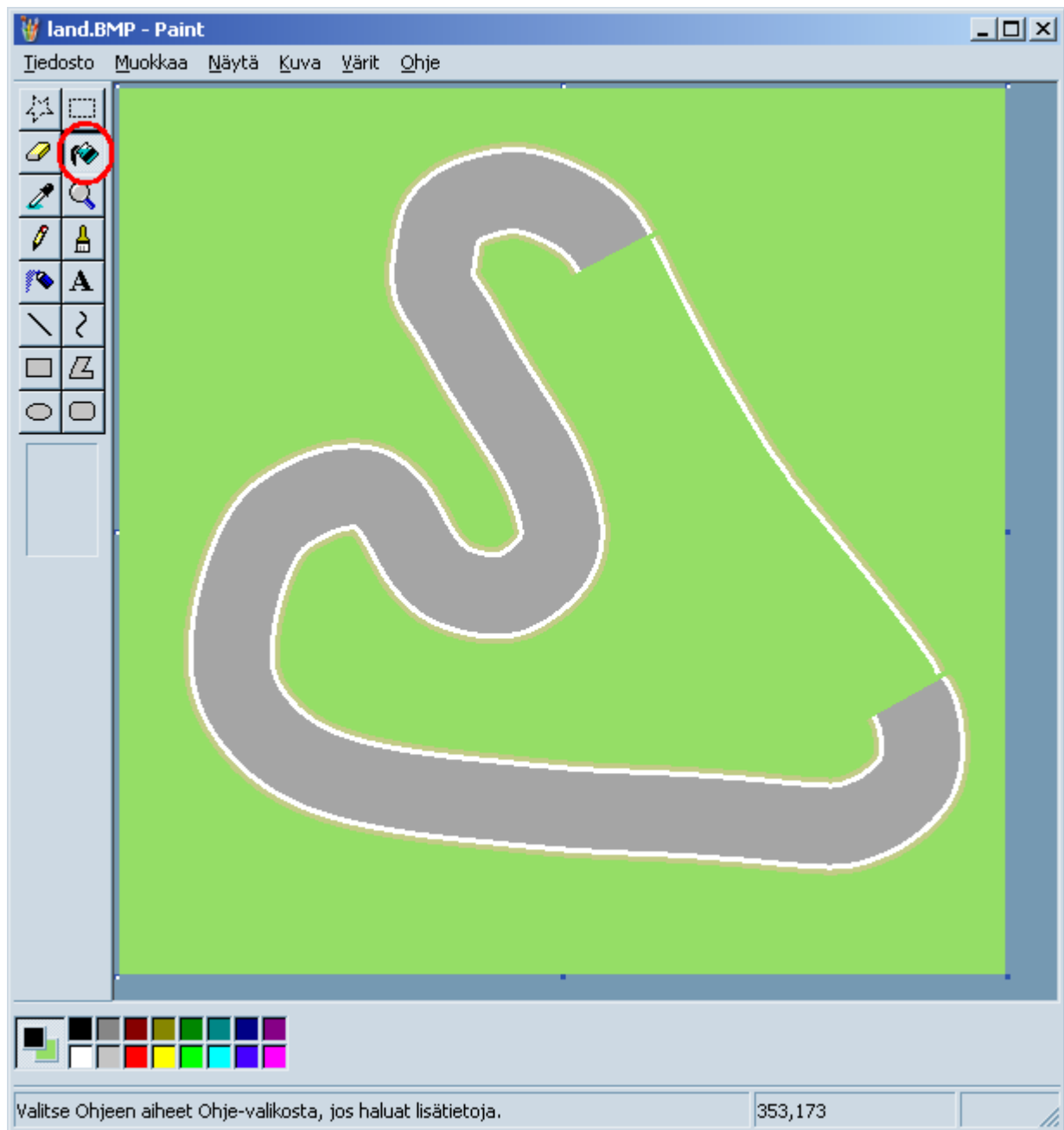
We'll open the file in Paint. OK, that one straight doesn't look like a straight. Let's redraw it. We'll use the **pipette tool** to select the color of the grass. When the pipette is active, a color on the image can be selected by simply clicking any spot on the image view. If we click on the grass, it will select the color of the grass. Handy, isn't it?



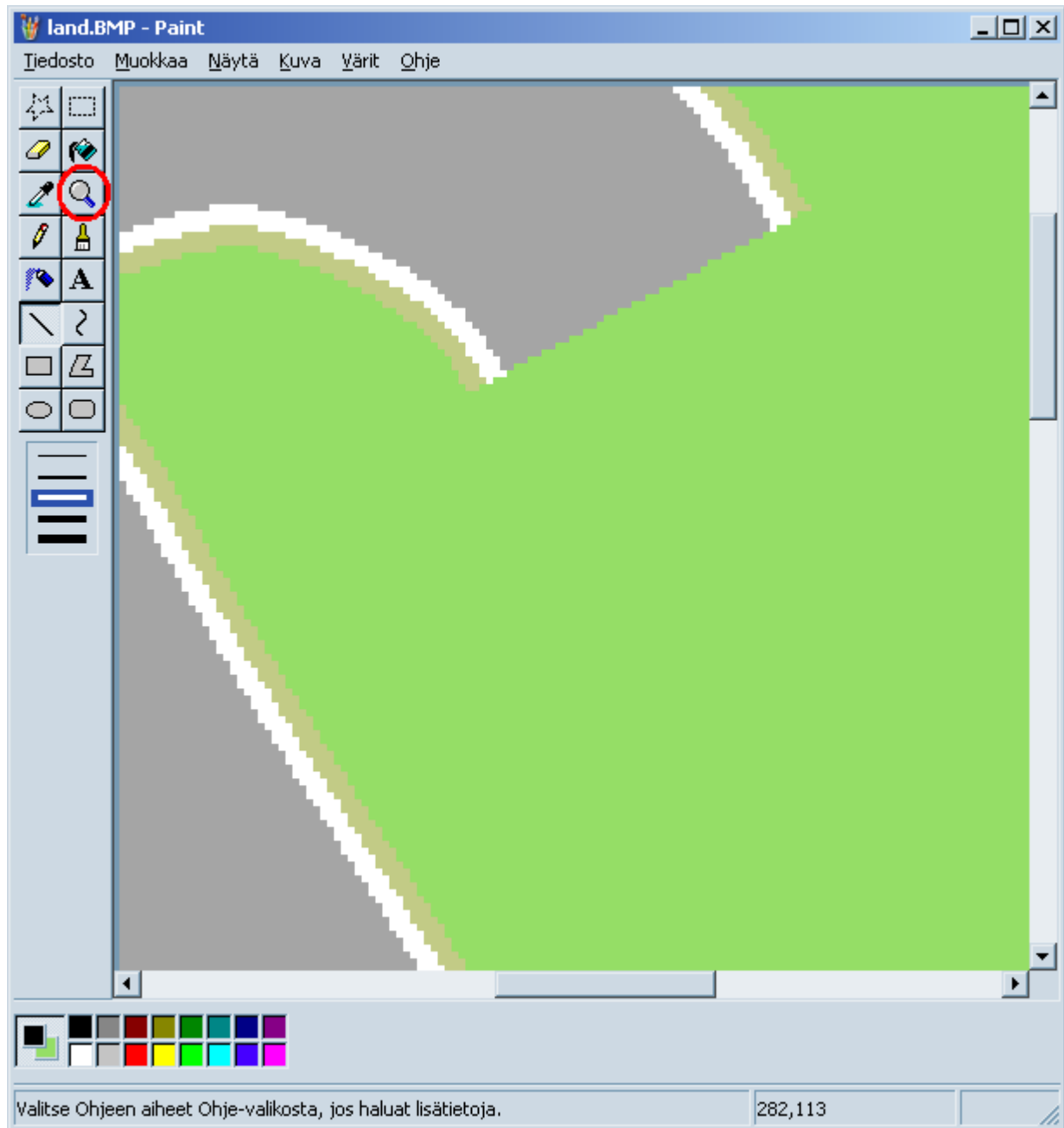
We'll select the **line tool** and select a thick line, as it will fit our purposes better than a thin line. Now, we'll draw two grass lines over the track.



Now that we have drawn those grass lines, it is easy to use the **fill** tool to get rid of that straight by filling it.

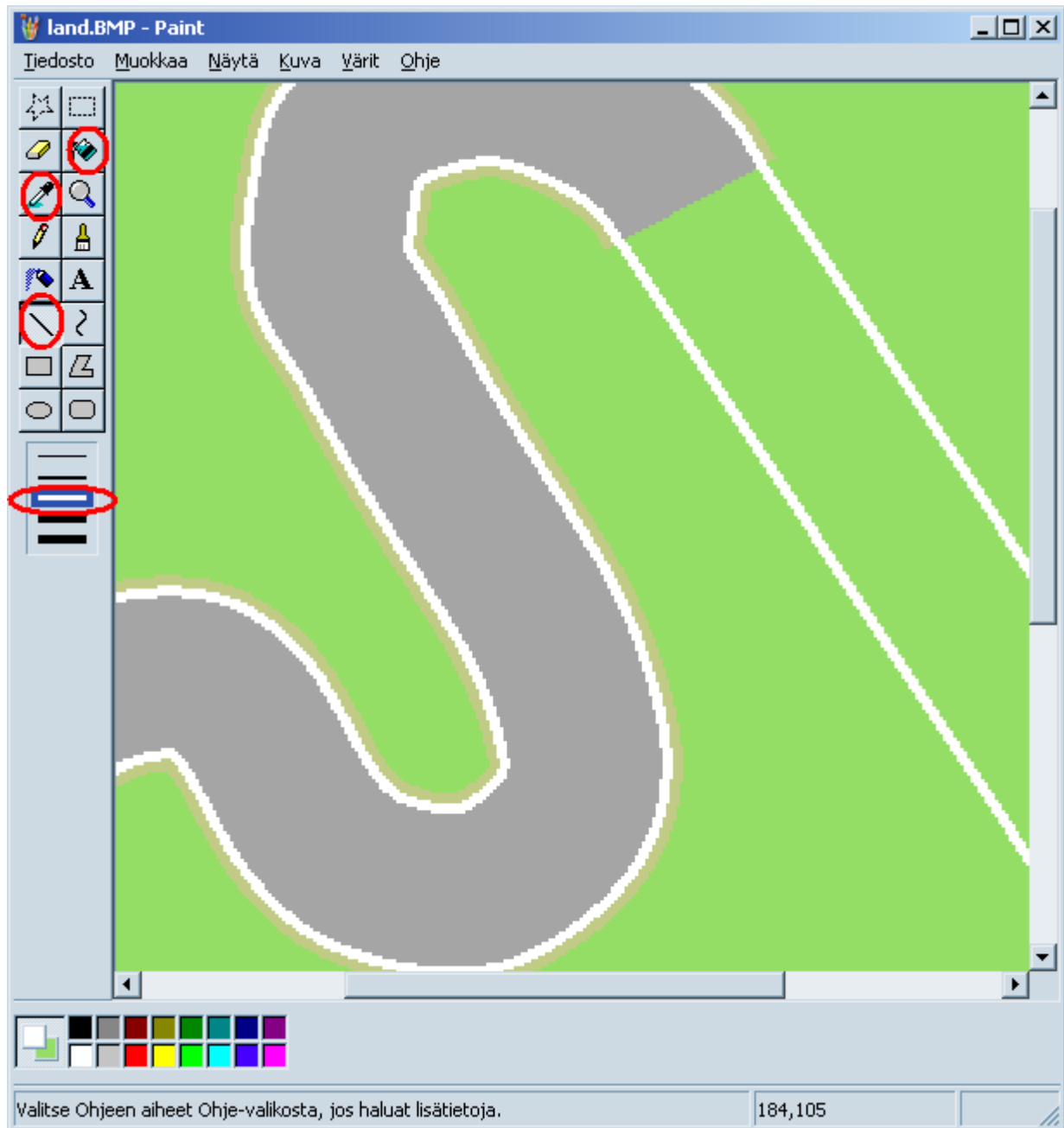


Now, there is no straight any more here. Let's redraw the straight. We will use the **magnifying glass** tool get more accuracy. Then we'll select the **line tool** again and redraw the straight.

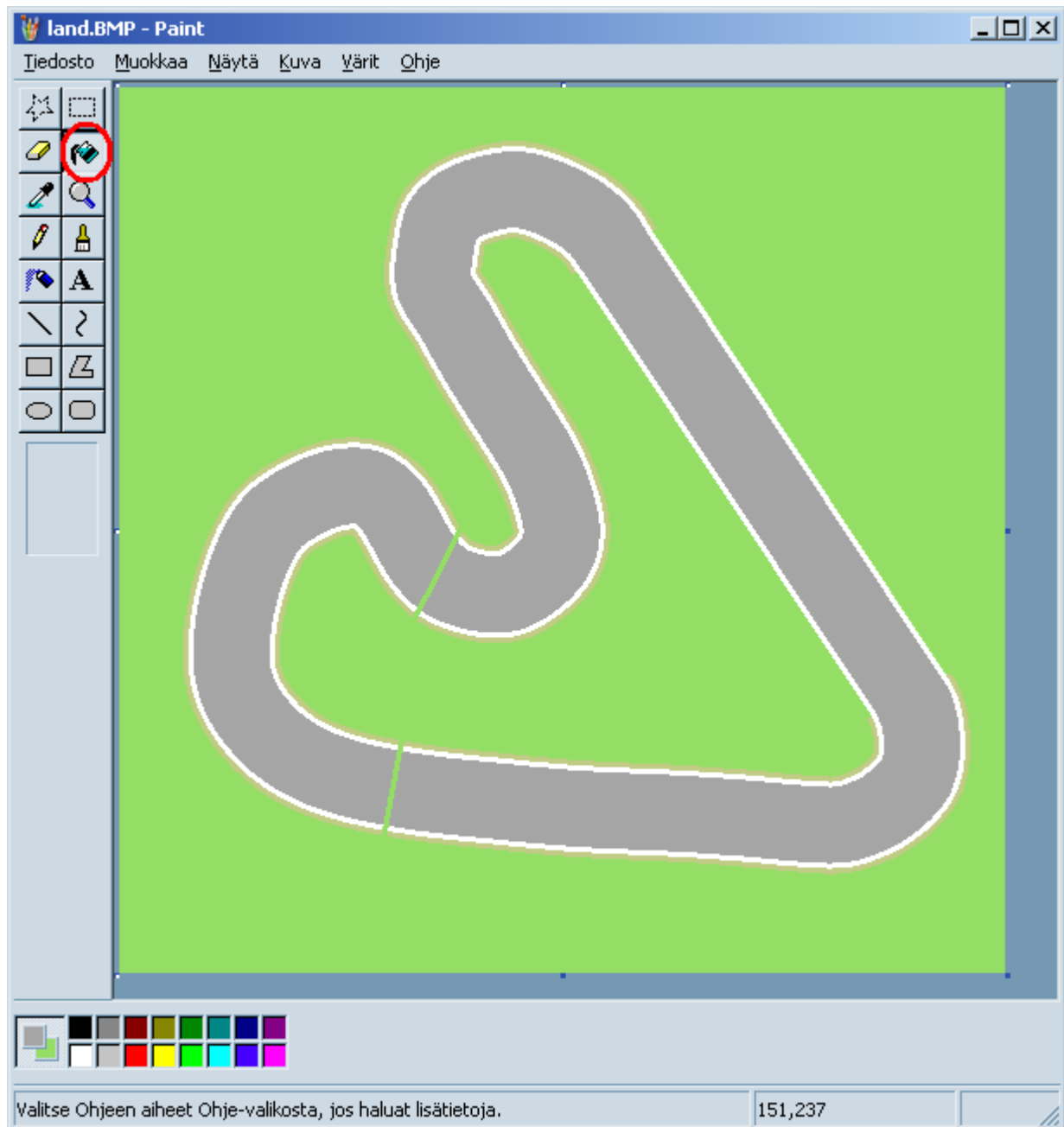


The easiest way is to draw the white line first. Please note that the third thickest line has the same thickness as the white line generated by GR editor.

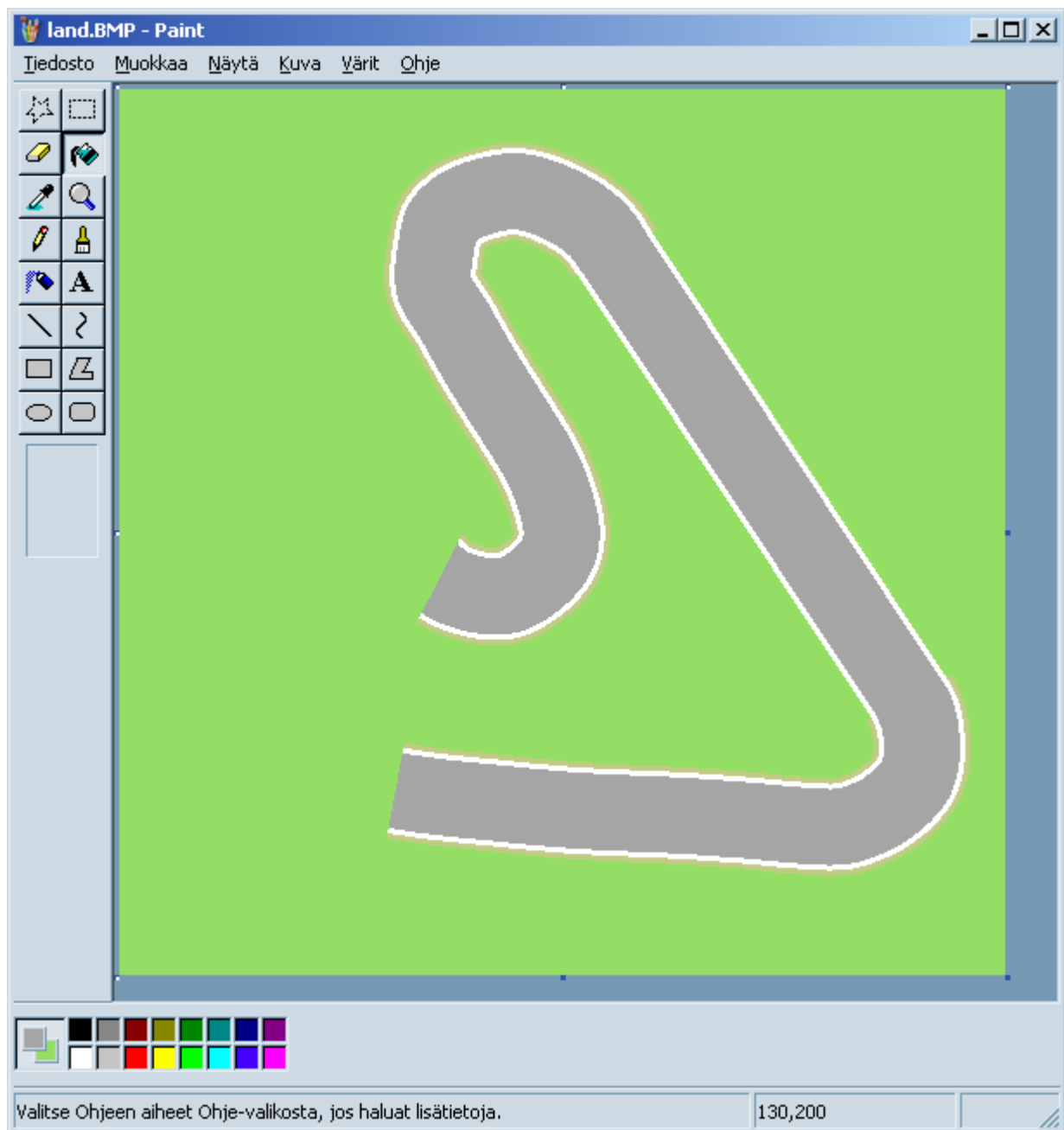
After that, it is easy to just **fill** the center area with the tarmac color. It is easy to select the tarmac color with the **pipette tool**.



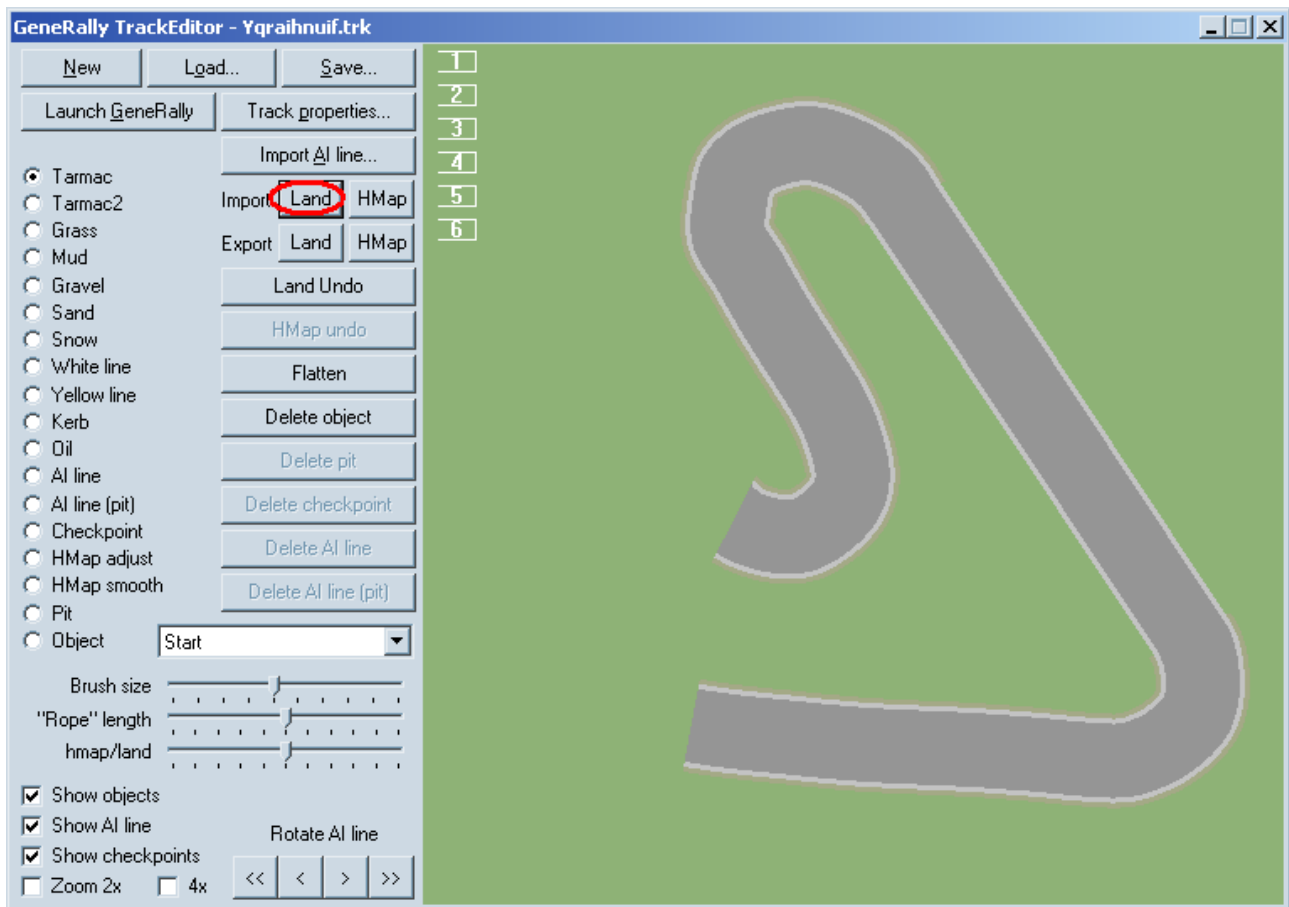
Now that straight is ready, and it looks better. Well, that curve on the left feels boring. Thus, we will cut it away as we did to the straight. We'll repeat the same steps as with the straight, except that curve will be redrawn in GR track editor.



OK, now that curve is away. Let's save the file.

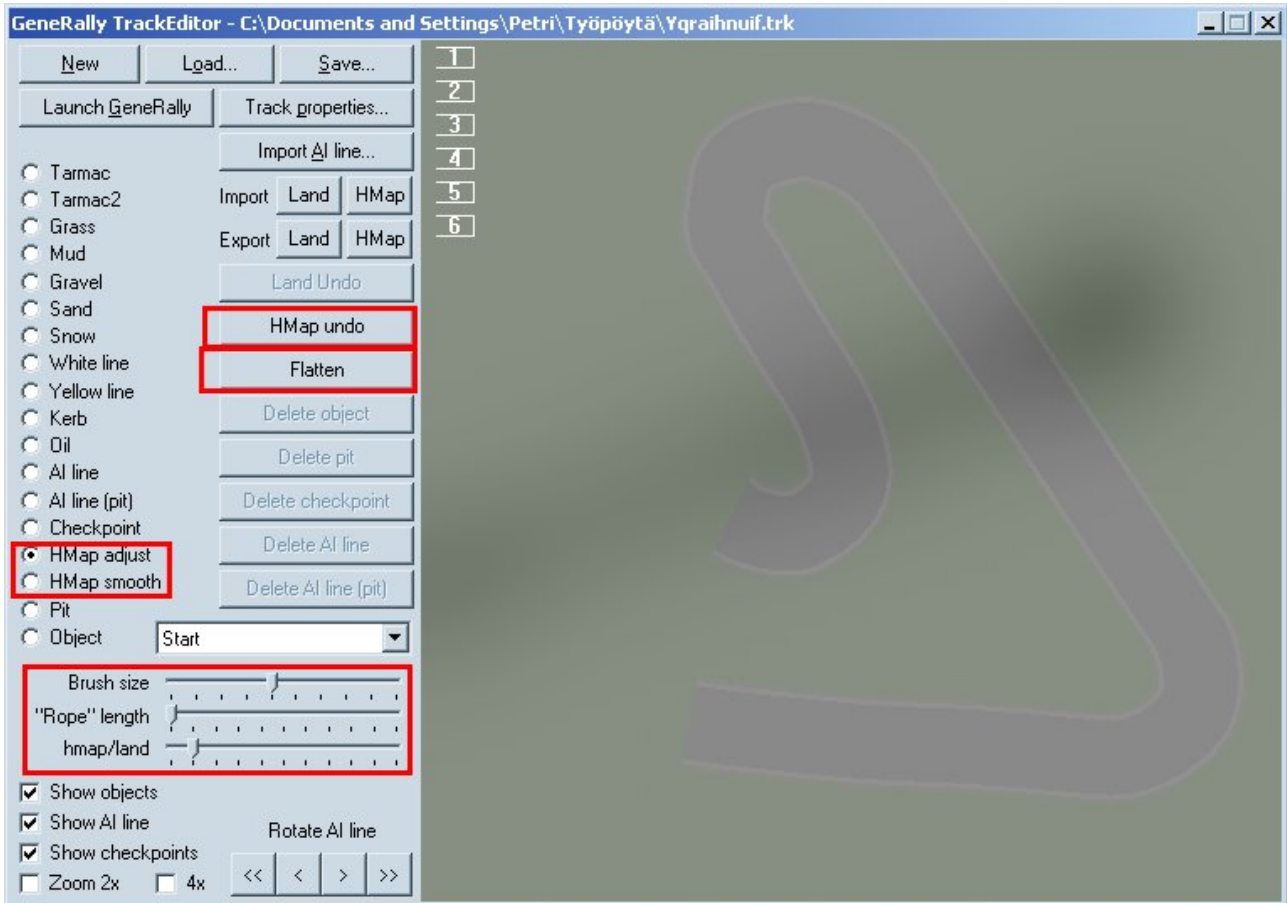


OK, let's return to the editor. We'll use the **Import land** function to load the modified profile to the editor. Now, the curve can be redrawn. We'll continue doing these steps until we are satisfied with the profile. Please remember: **test, test, test** the track profile.



2. Drawing the height map

Height map is not as important as land, but it will also affect the characteristics of the track. If the profile of the track is good enough, a completely smooth Hmap is OK.



- Use **Hmap adjust** tool to adjust the Hmap.
- Use **Hmap smooth** tool to make a place smoother. It is often necessary to drag Hmap smooth along the racing line, as it would otherwise be too bumpy.
- Please note that **Brush size** and **Rope length** affect the effective area of **Hmap adjust** and **Hmap smooth**. However, I don't usually use **Rope** tool when I edit Hmaps.
- If you find it hard to see how your Hmap is, use the **hmap/land** tool to change the view. With this function, you can accent either Hmap or land.
- You can use **Hmap undo** function to undo changes.
- If you think your Hmap just sucks, you can flatten the ground by pressing the **Flatten** button.
- **Test, test, test.** After every change.

3. Placing the objects

Three hints:

1. Use your imagination.
2. A high number of objects is usually better than a low number.
3. Avoid "hard" objects (concrete wall, concrete post, house, office block etc.) in places where there is a danger of hitting the object during races.

4. Drawing the AI line

There are actually no hints I could give for this step. You have to just work until the AI line is good enough. This is probably the most difficult step, but the more you make tracks, the better you will be. I usually try to make AI drivers use the same AI line than I, as I consider it the best line.

Test, test, test. And one more test.