CLAIMS

1. A method for generating map data comprising:

acquiring road usage information recorded by one or more vehicles, the road usage information specifying which parts of a geographical area have been used for driving the one or more vehicles;

acquiring a satellite image of the geographical area;

forming a road usage image of the geographical area which has pixels, each pixel corresponding to a respective part of the geographical area, such each pixel has a pixel value indicating whether the part of the geographical area, to which the pixel corresponds, is specified by the road usage information to have been used for driving the one or more vehicles; and

generating the map data using the road usage image and the satellite image.

2. The method of claim 1, further comprising: converting the road usage information into the road usage image.

3. The method of claim 2, wherein the converting the road usage information into the road usage image comprises:

determining a covered space of each road usage image pixel as a region;

retrieving the road usage information falling within the region;

determining a value for each road usage image pixel as one if there is at least one road usage information falling within the region covered by the pixel, and as zero if there is no road usage information falling within the region covered by the pixel; and

rendering the road usage image in a form of a binary image based on the determined value.

4. The method of any one of claims 1 to 3, wherein the forming the road usage image comprises: assigning a first pixel value of two predetermined pixel values to a pixel if the pixel corresponds to a part of the geographic area which is specified by the road usage information to have been used for driving the one or more vehicles and assigning a second pixel value of two predetermined pixel values to a pixel if the pixel corresponds to a part of

the geographic area which is not specified by the road usage information to have been used for driving the one or more vehicles.

5. The method of any one of claims 1 to 4, wherein the road usage information is positioning system traces of vehicles.

6. The method of claim 5, wherein the acquiring the road usage information comprises: acquiring the positioning system traces of vehicles of a transport service.

7. The method of any one of claims 1 to 6, wherein the generating the map data comprises: feeding the road usage image and the satellite image to a neural network.

8. The method of claim 7, wherein the neural network includes a GAN (generative adversarial network).

9. The method of claim 8, further comprising: outputting the generated map data in a form of a map image, via a GAN-based Image Translation using the GAN.

10. The method of any one of claims 1 to 9, further comprising: navigating one or more vehicles by the generated map data.

11. The method of any one of claims 1 to 10, further comprising: transmitting the generated map data to a vehicle and controlling the vehicle using the generated map data.

12. A server computer comprising a radio interface, a memory interface and a processing unit configured to perform the method of any one of claims 1 to 11.

13. A computer program element comprising program instructions, which, when executed by one or more processors, cause the one or more processors to perform the method of any one of claims 1 to 11.

14. A computer-readable medium comprising program instructions, which, when executed by one or more processors, cause the one or more processors to perform the method of any one of claims 1 to 11.