

**METHOD, DATA PROCESSING APPARATUS AND COMPUTER PROGRAM
PRODUCT FOR GENERATING MAP DATA**

ABSTRACT

Aspects concern a method for generating map data, the method including: generating of a plurality of cells of a real space area, each cell representing a two-dimensional sub-space of the real space area, wherein each of the cells comprise at least one global positioning system (GPS) point, and wherein the real space area comprises a road network; determining a number of GPS points for each cell of the plurality of cells; determining a road network based on the numbers of GPS points using a Smoothed Particle Hydrodynamics (SPH) analysis, wherein the cells of the plurality of cells are particles of the SPH analysis and the number of GPS points per cell of the plurality of cells are a scalar of each cell of the plurality of cells in the SPH analysis; and comparing the road network determined using the SPH analysis with the road network of the real space area.

FIG. 4