ABSTRACT

A method for partitioning a geographic area, including: partitioning the geographic area into geographic units; for each respective geographic unit: determining, a central location of the respective geographic unit; determining, an aggregate demand location of the respective geographic unit based on pick-up locations in the respective geographic unit in a time period; determining, an aggregate supply location of the respective geographic unit based on provider locations when responding to requests having pick-up locations in the respective geographic unit in said time period; for each respective pair of geographic units, determining, among a plurality of the geographic units, a connection strength between the respective pair based on distance metrics between the respective pair, where the distance metrics are determined based on the central locations, the aggregate supply locations, and the aggregate demand locations of the respective pair in said time period; and assigning each respective geographic unit to a respective one of one or more aggregate geographic units based on the determined connection strengths.

FIG. 9