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(54) **BACKEND SYSTEM FOR ROUTE PLANNING OF AUTONOMOUS VEHICLES**

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(58) **Field of Classification Search**
None
See application file for complete search history.

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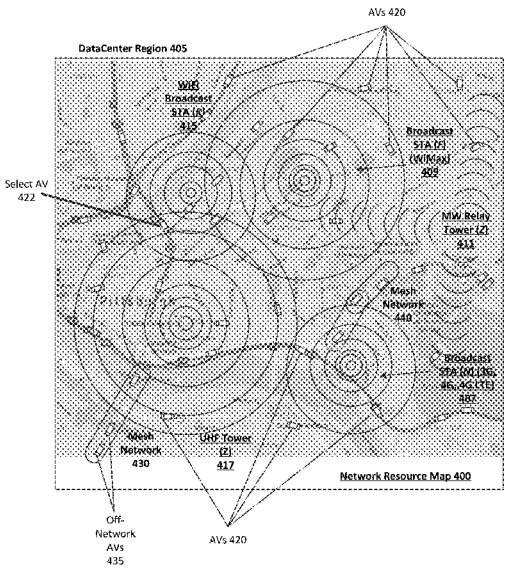
(57) **ABSTRACT**

A backend system can store a network resource map that indicates network coverages areas for a plurality of base stations over a given region. The system can receive a pick-up request from a requesting user seeking transportation from a pick-up location to a destination, and instruct an automated vehicle (AV) to service the pick-up request. The system can further determine a plurality of possible routes from the pick-up location to the destination, and perform an optimization operation to determine an optimal route by utilizing the network resource map. The system can then transmit route data for the optimal route to the selected AV.

17 Claims, 15 Drawing Sheets