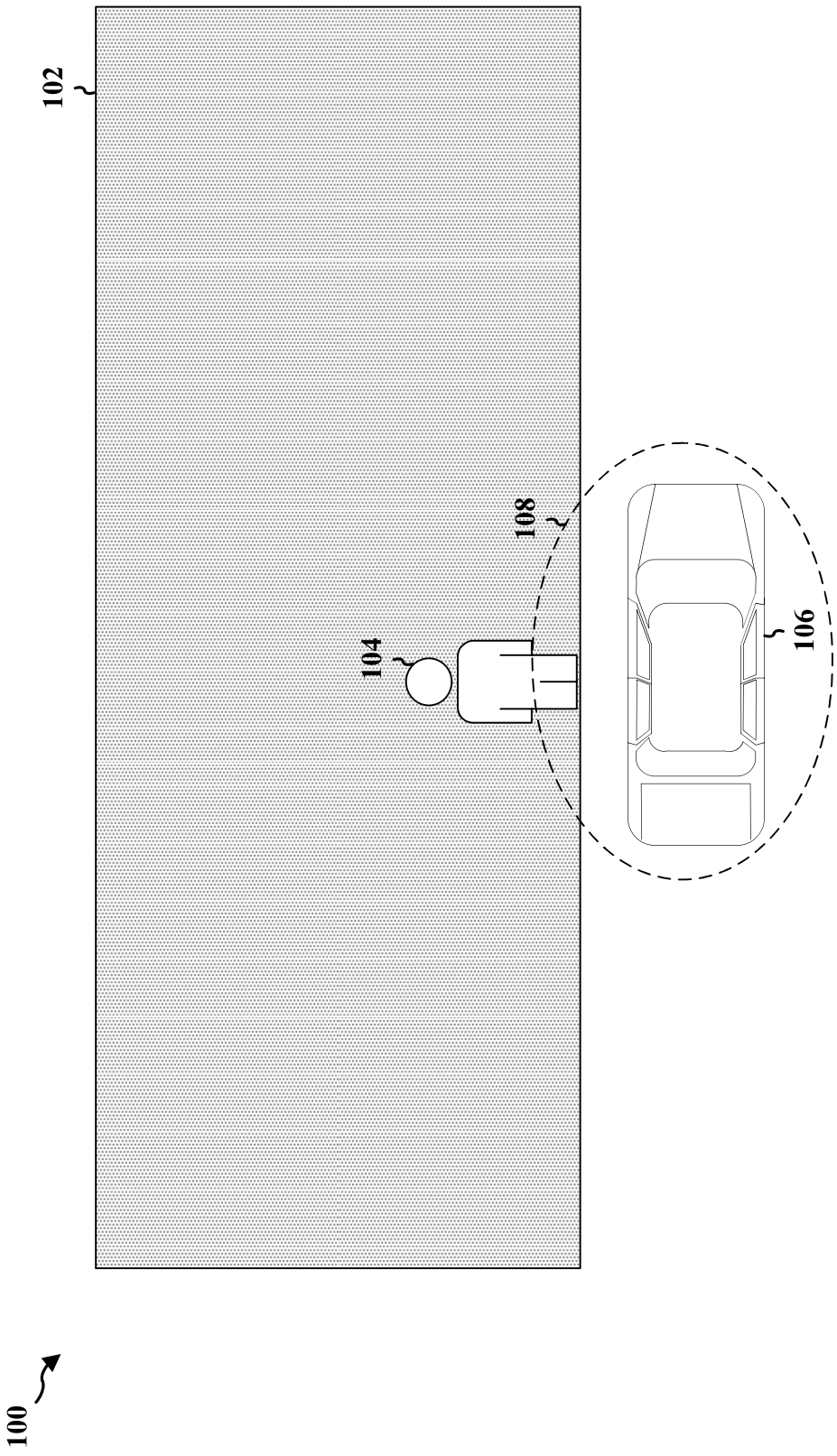


FIG. 1

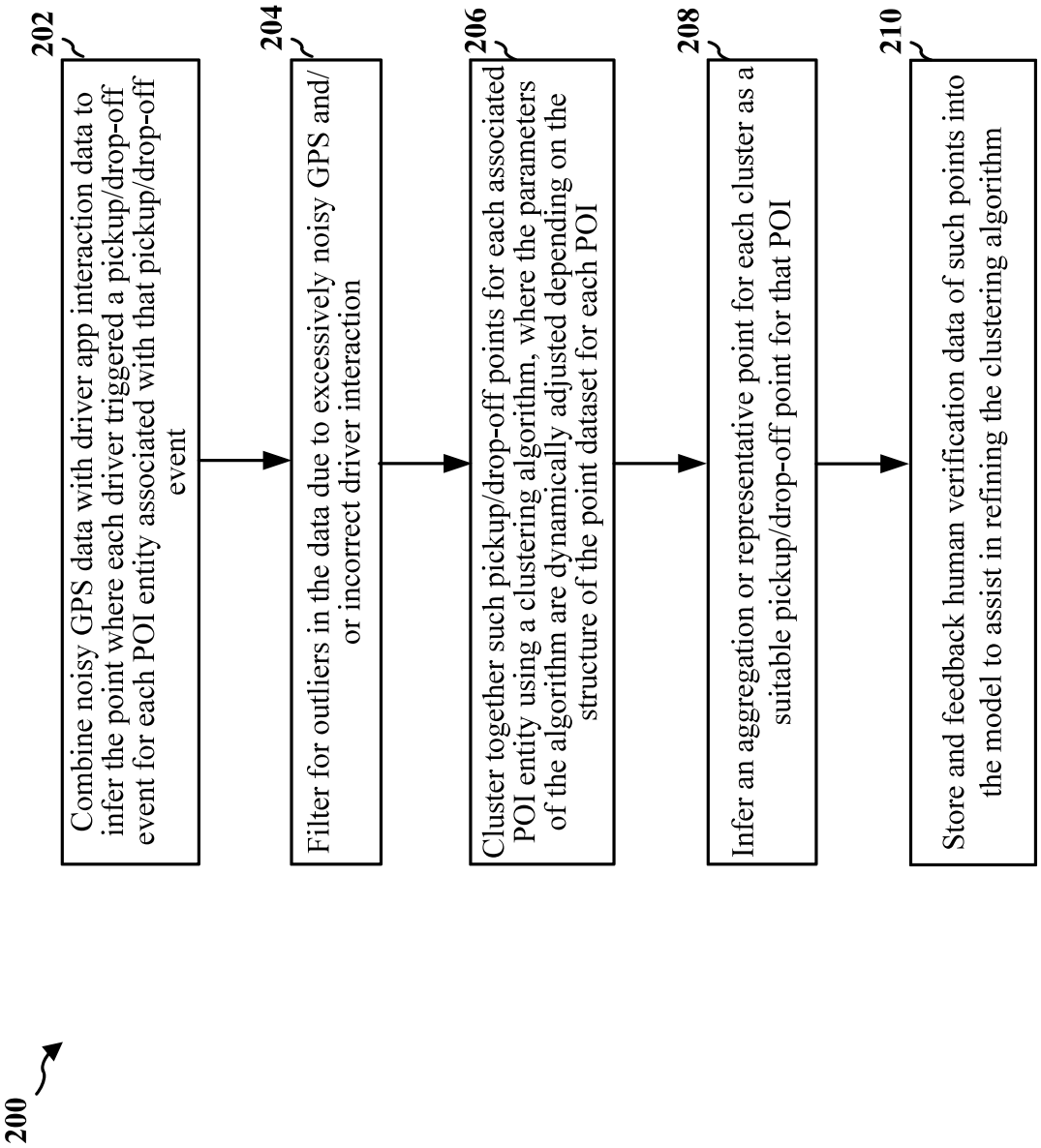

200
202
Combine noisy GPS data with driver app interaction data to infer the point where each driver triggered a pickup/drop-off event for each POI entity associated with that pickup/drop-off event
204
Filter for outliers in the data due to excessively noisy GPS and/or incorrect driver interaction
206
Cluster together such pickup/drop-off points for each associated POI entity using a clustering algorithm, where the parameters of the algorithm are dynamically adjusted depending on the structure of the point dataset for each POI
208
Infer an aggregation or representative point for each cluster as a suitable pickup/drop-off point for that POI
210
Store and feedback human verification data of such points into the model to assist in refining the clustering algorithm

FIG. 2

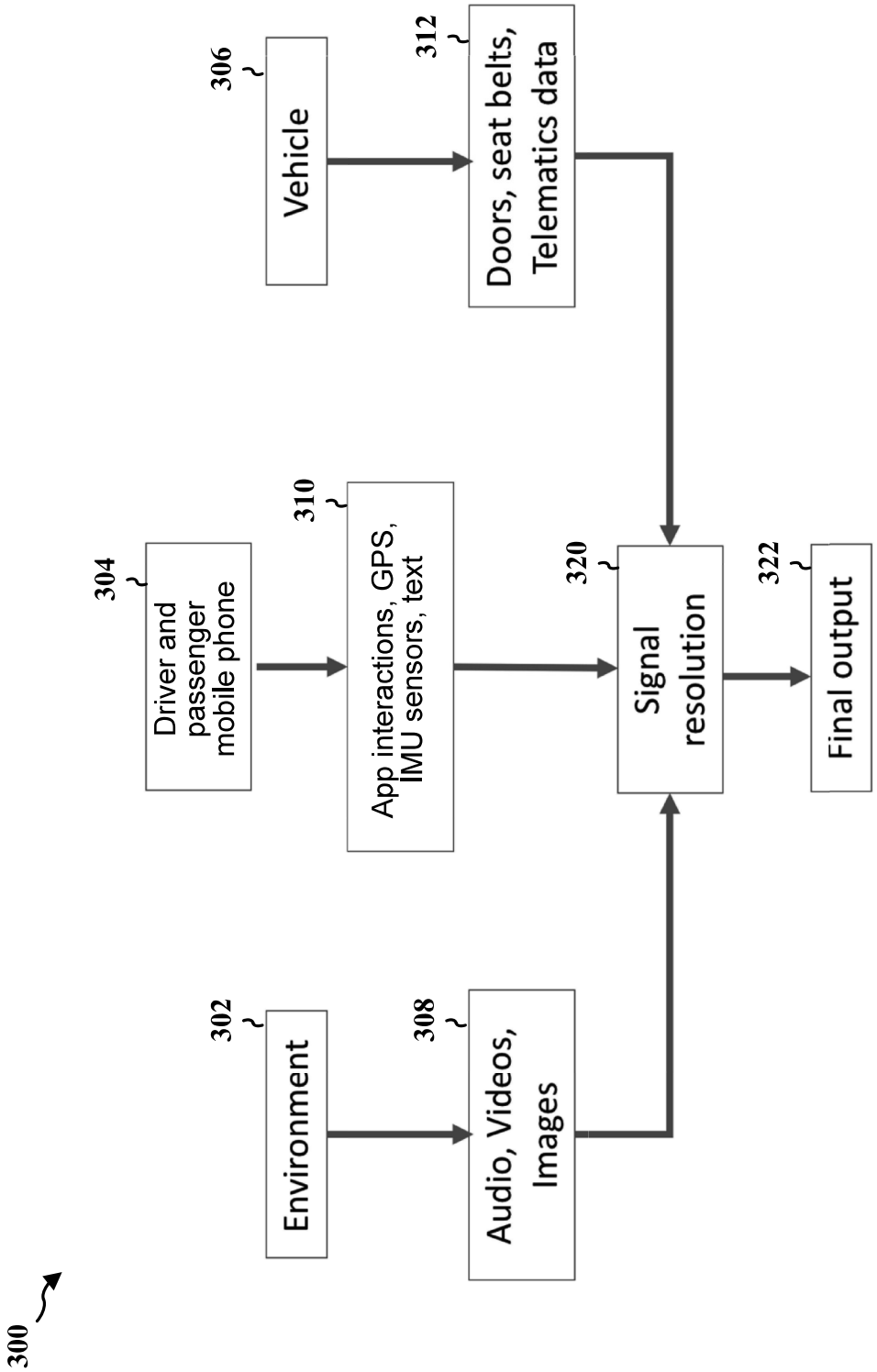

300
302
Environment
308
Audio, Videos, Images
304
Driver and passenger mobile phone
310
App interactions, GPS, IMU sensors, text
306
Vehicle
312
Doors, seat belts, Telematics data
320
Signal resolution
322
Final output

FIG. 3

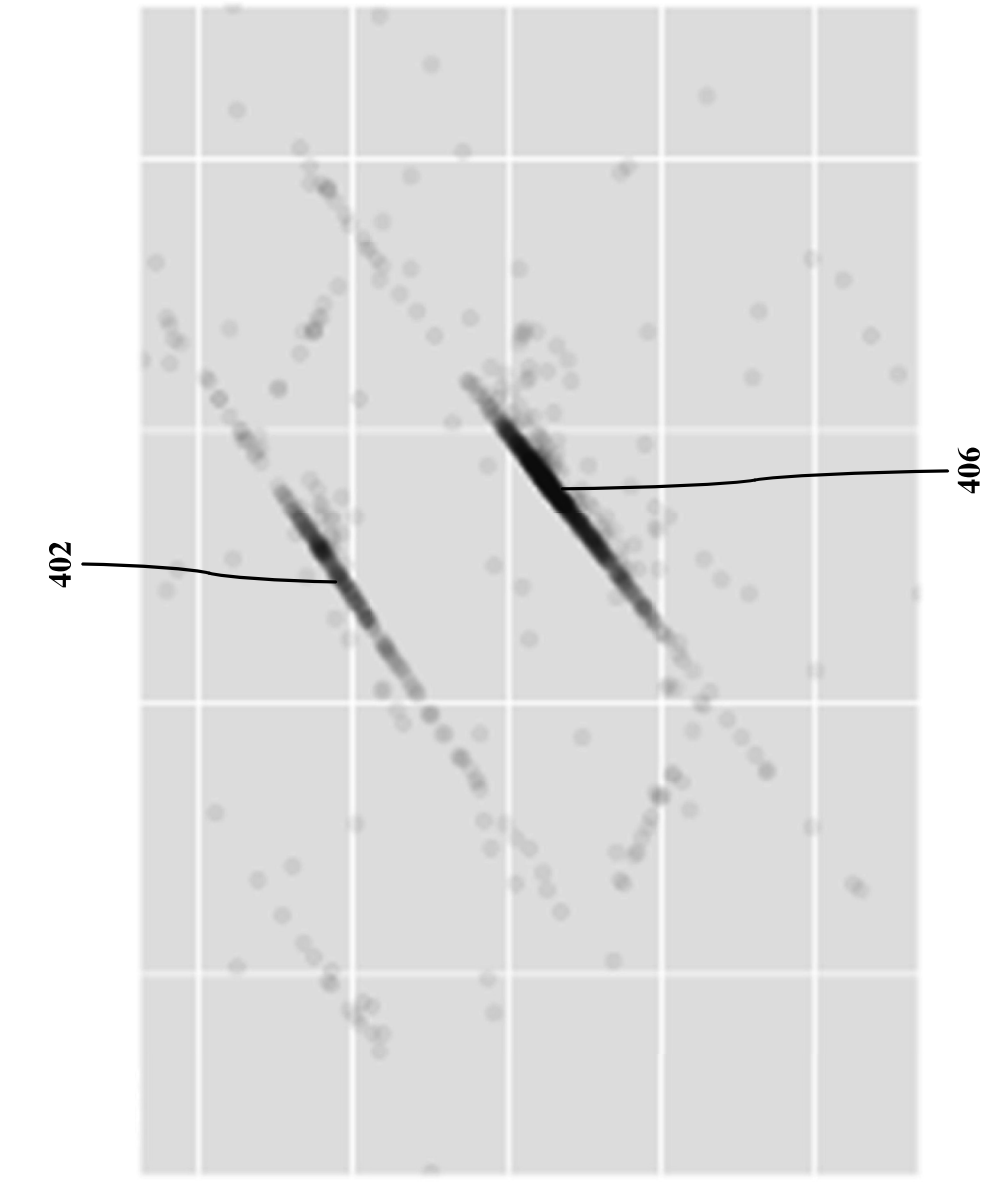


FIG. 4

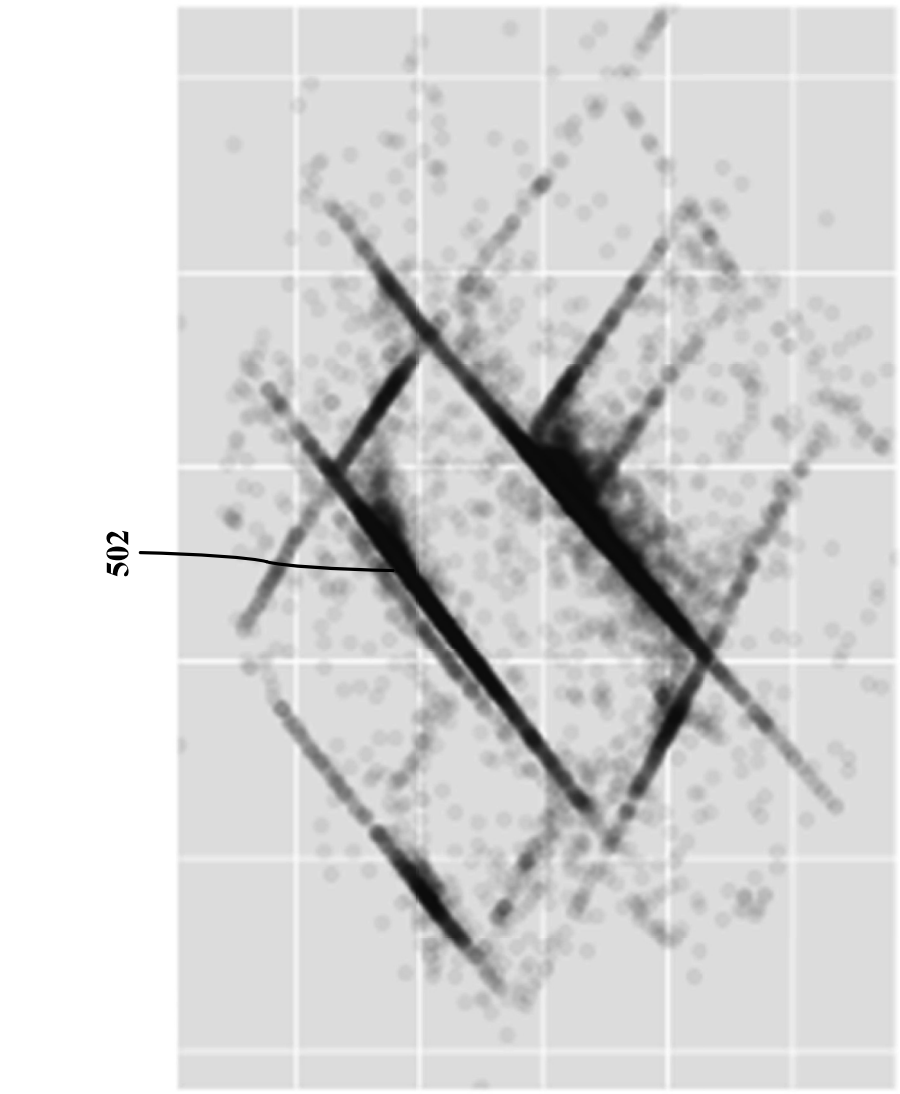


FIG. 5

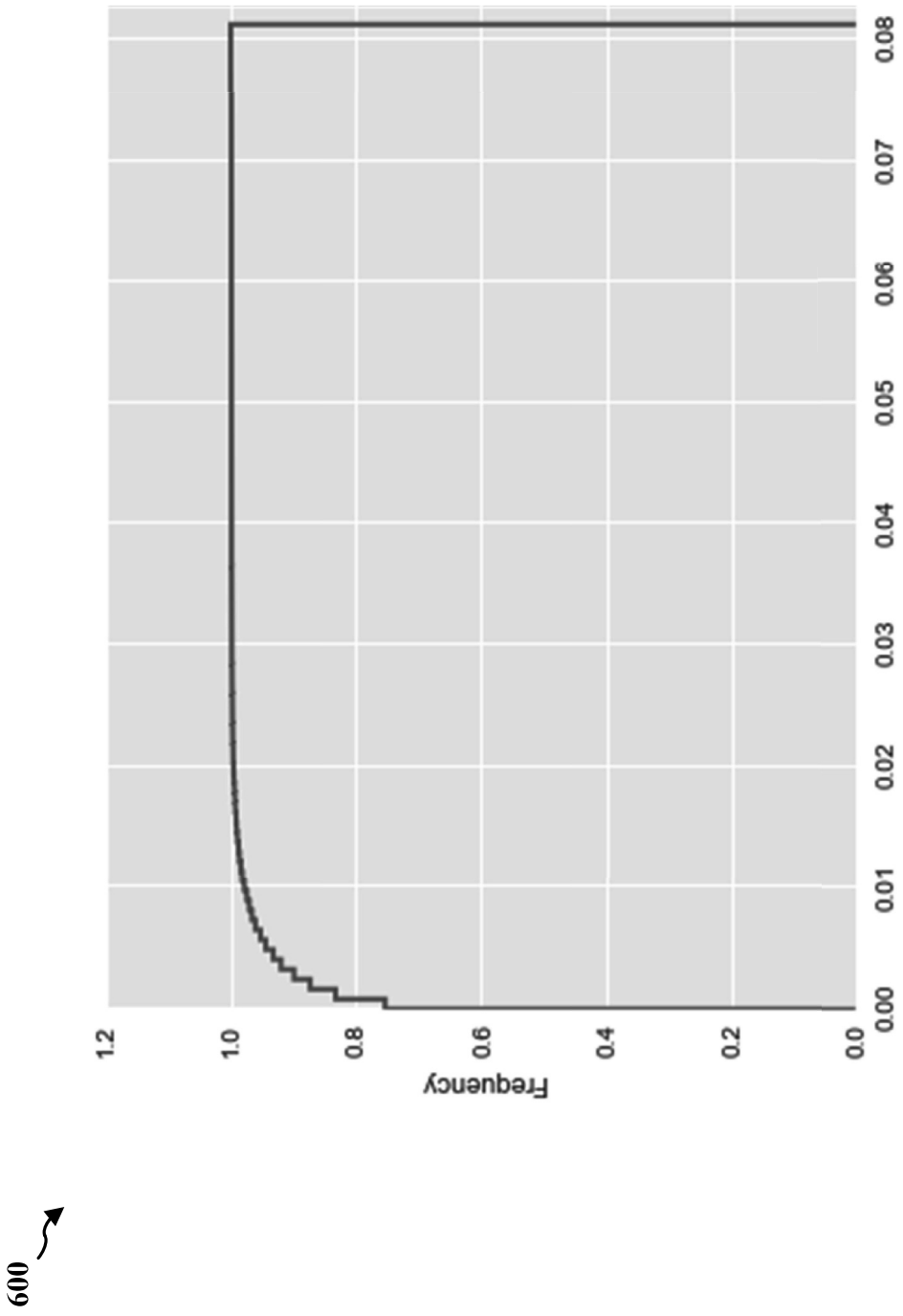
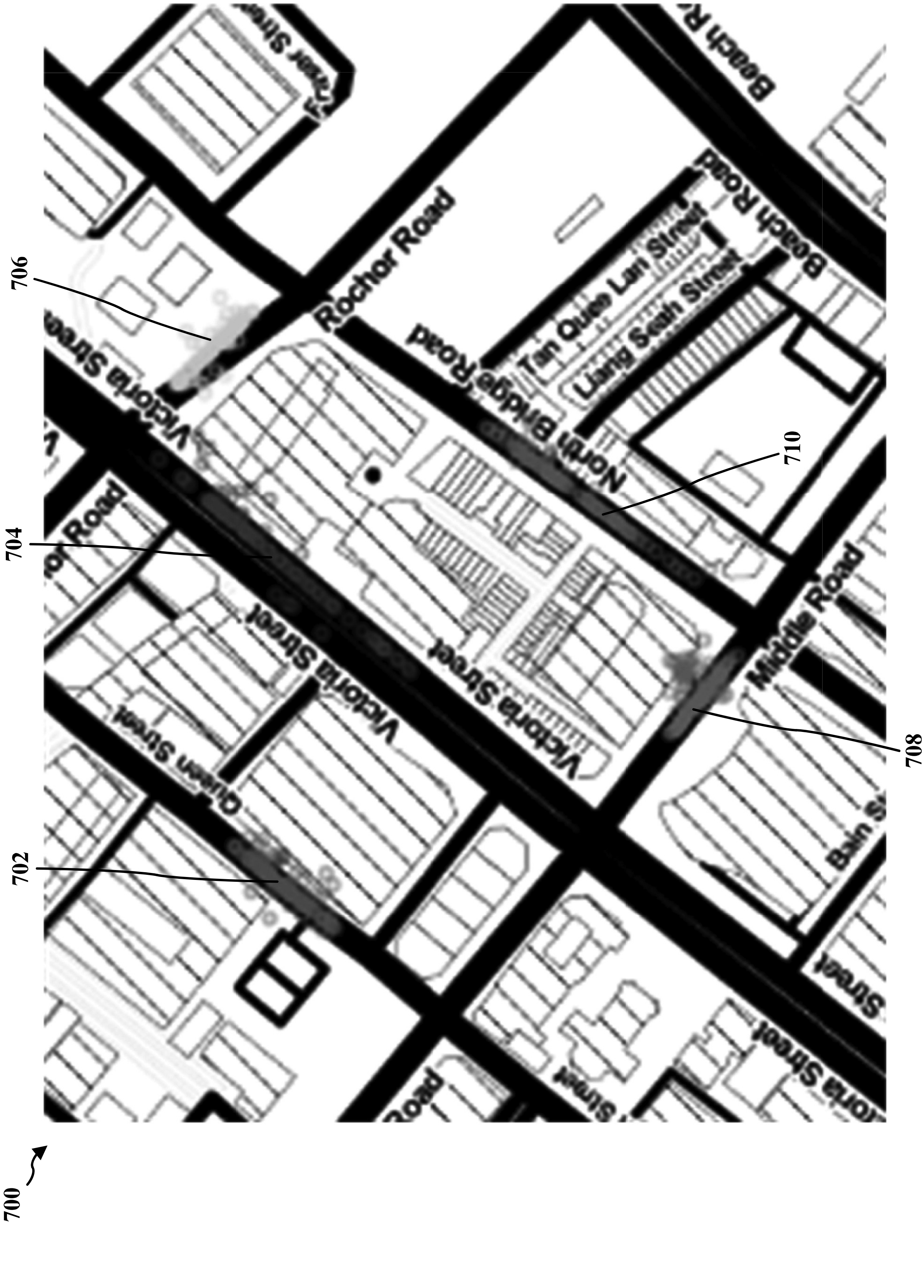

600
Frequency
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08

FIG. 6

FIG. 7


700
702
704
706
708
710
Rochor Road
North Bridge Road
Victoria Street
Queen Street
Middle Road
Beach Road
Tan Quee Lan Street
Liang Seah Street

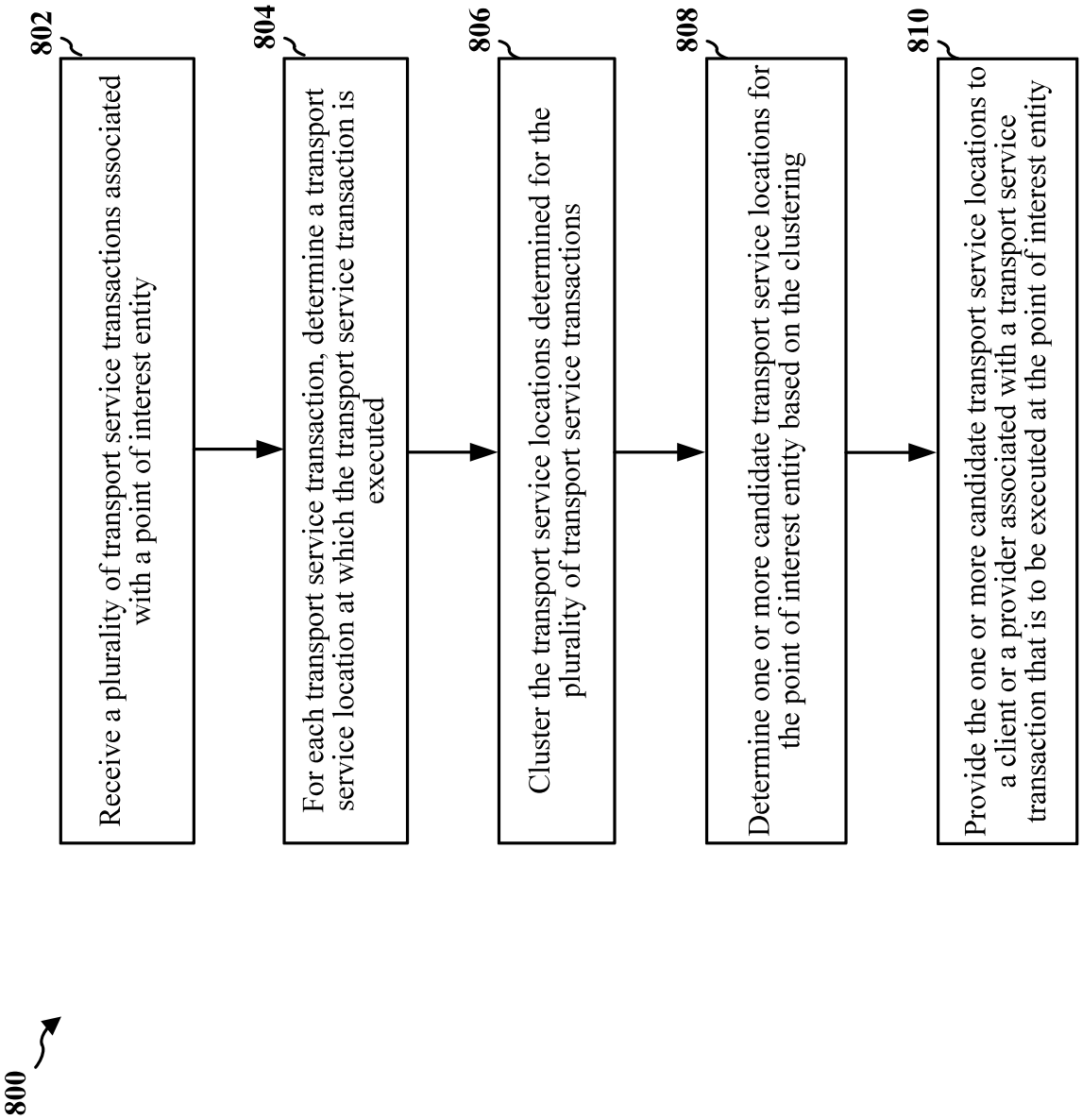

800
802
Receive a plurality of transport service transactions associated with a point of interest entity
804
For each transport service transaction, determine a transport service location at which the transport service transaction is executed
806
Cluster the transport service locations determined for the plurality of transport service transactions
808
Determine one or more candidate transport service locations for the point of interest entity based on the clustering
810
Provide the one or more candidate transport service locations to a client or a provider associated with a transport service transaction that is to be executed at the point of interest entity

FIG. 8

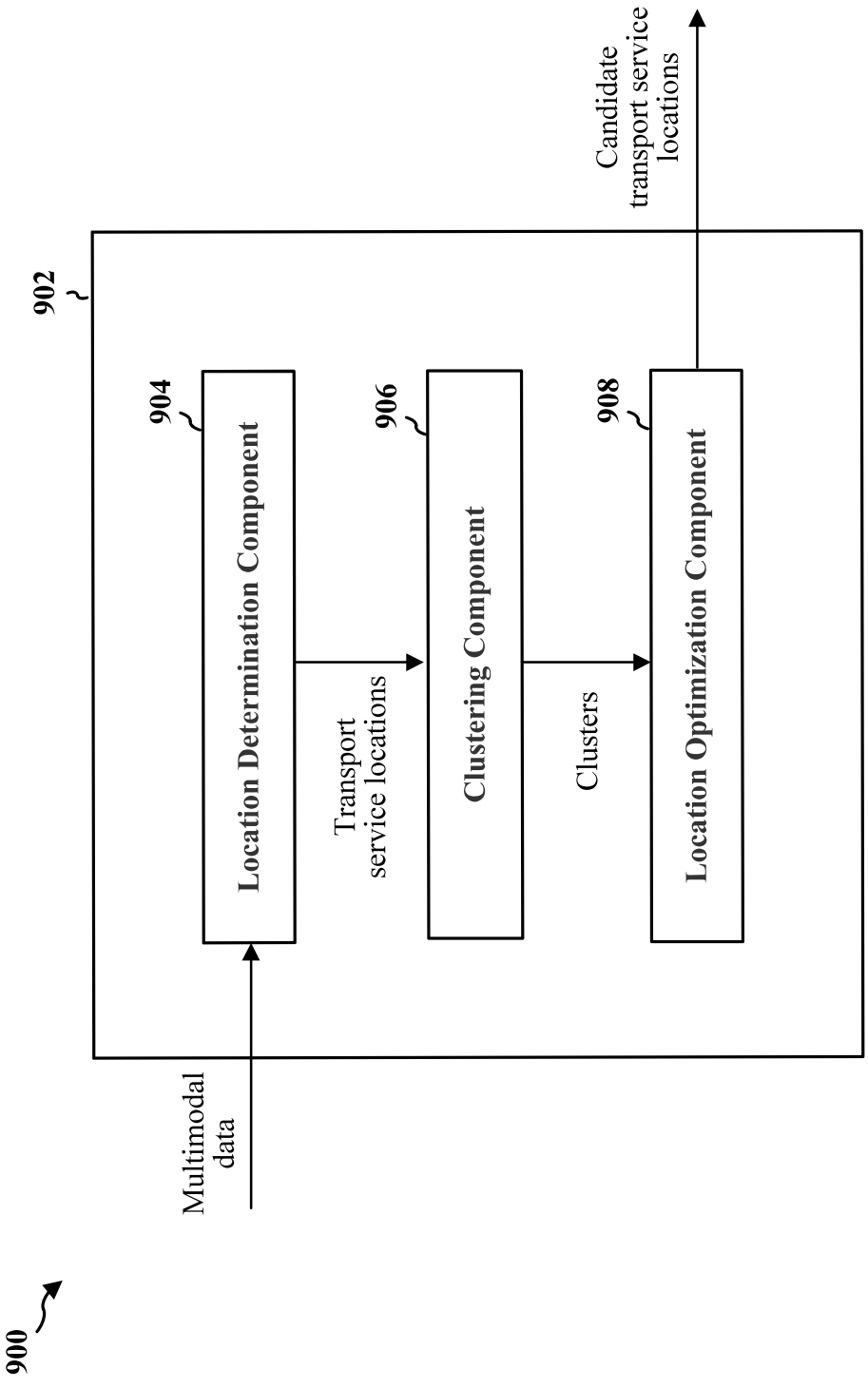

900
902
904
Location Determination Component
906
Clustering Component
908
Location Optimization Component
Multimodal data
Transport service locations
Clusters
Candidate transport service locations

FIG. 9

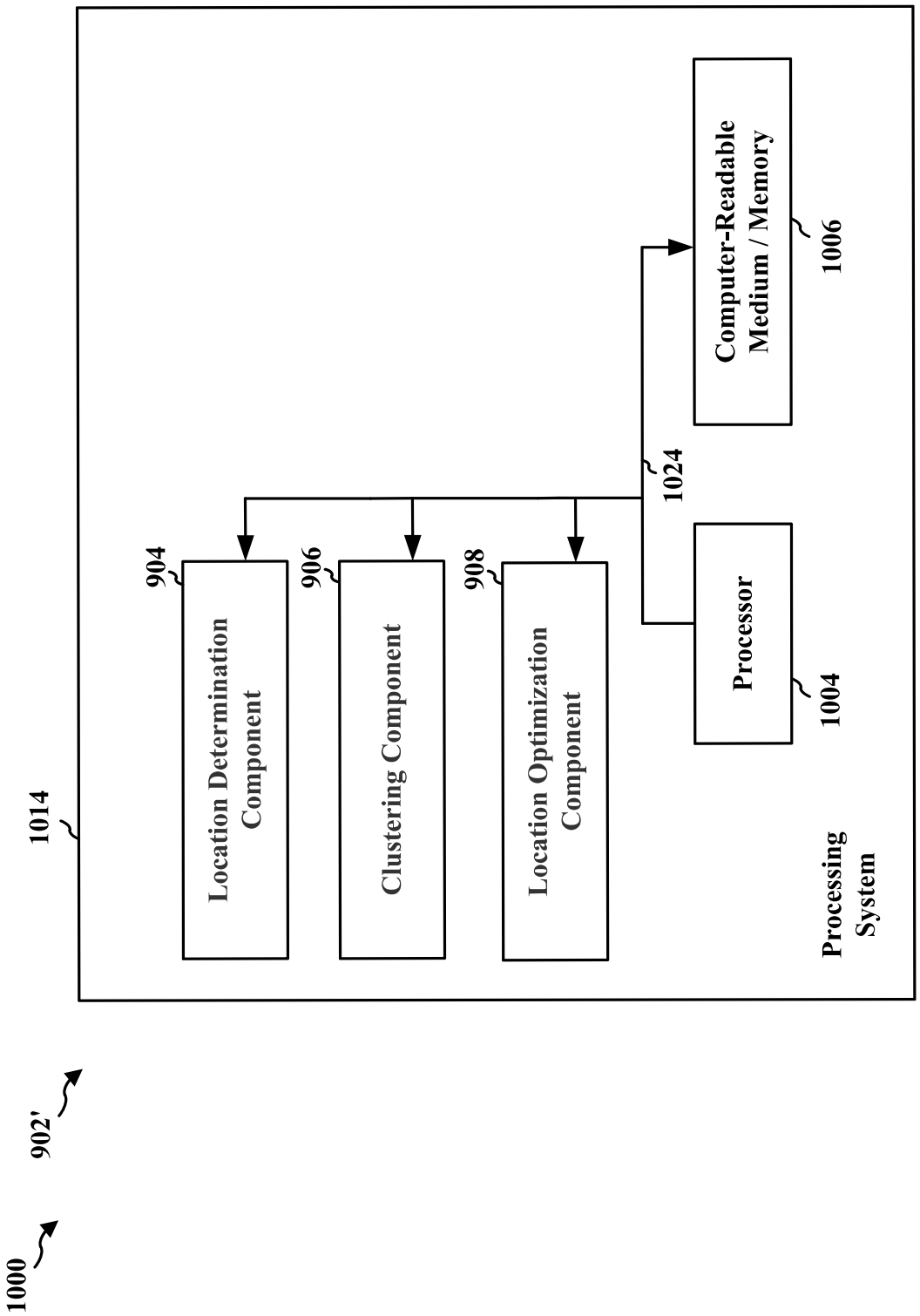

1000
902'
1014
Location Determination Component
904
Clustering Component
906
Location Optimization Component
908
1024
Processor
1004
Computer-Readable Medium / Memory
1006
Processing System

FIG. 10