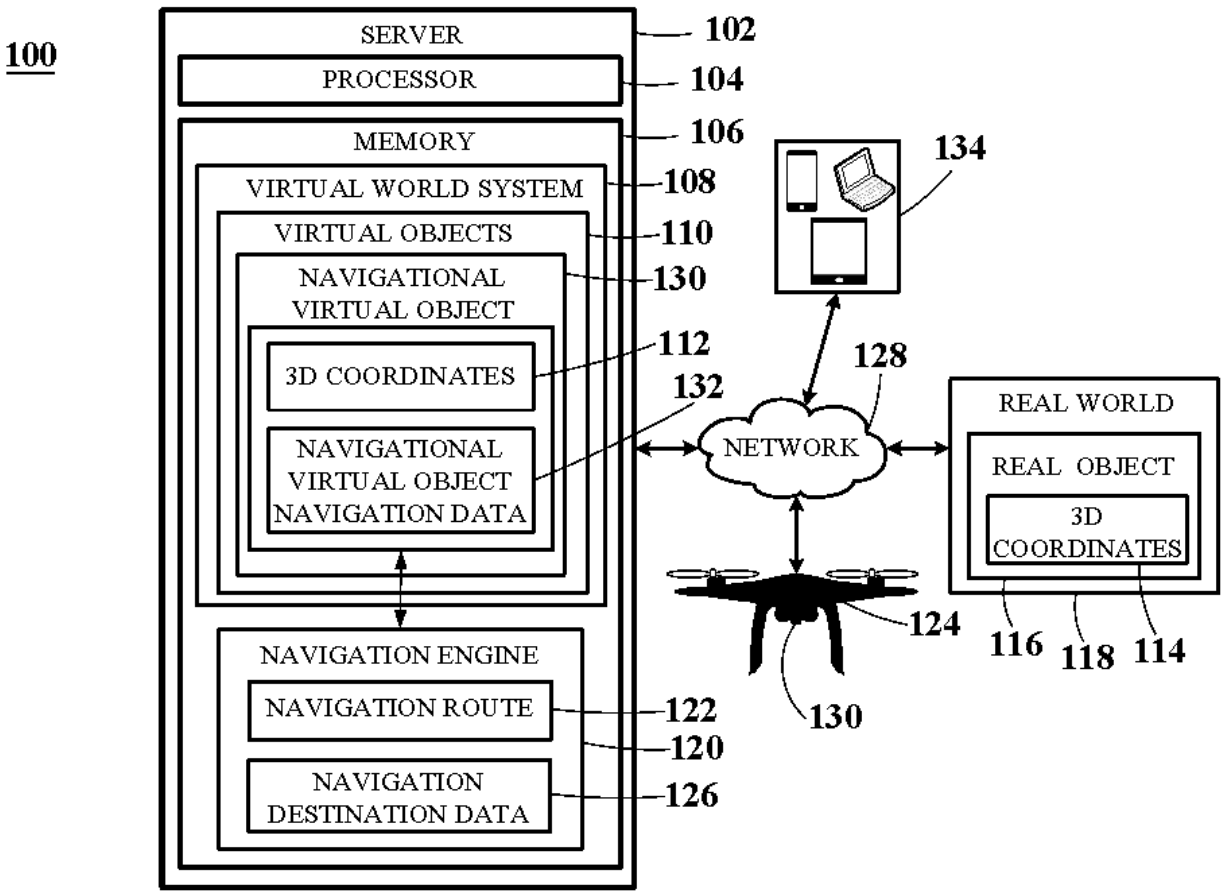

100
SERVER
102
PROCESSOR
104
MEMORY
106
VIRTUAL WORLD SYSTEM
108
VIRTUAL OBJECTS
110
NAVIGATIONAL VIRTUAL OBJECT
130
3D COORDINATES
112
NAVIGATIONAL VIRTUAL OBJECT NAVIGATION DATA
132
NAVIGATION ENGINE
NAVIGATION ROUTE
122
120
NAVIGATION DESTINATION DATA
126
134
128
NETWORK
REAL WORLD
REAL OBJECT
3D COORDINATES
124
116
118
114
130

FIG. 1

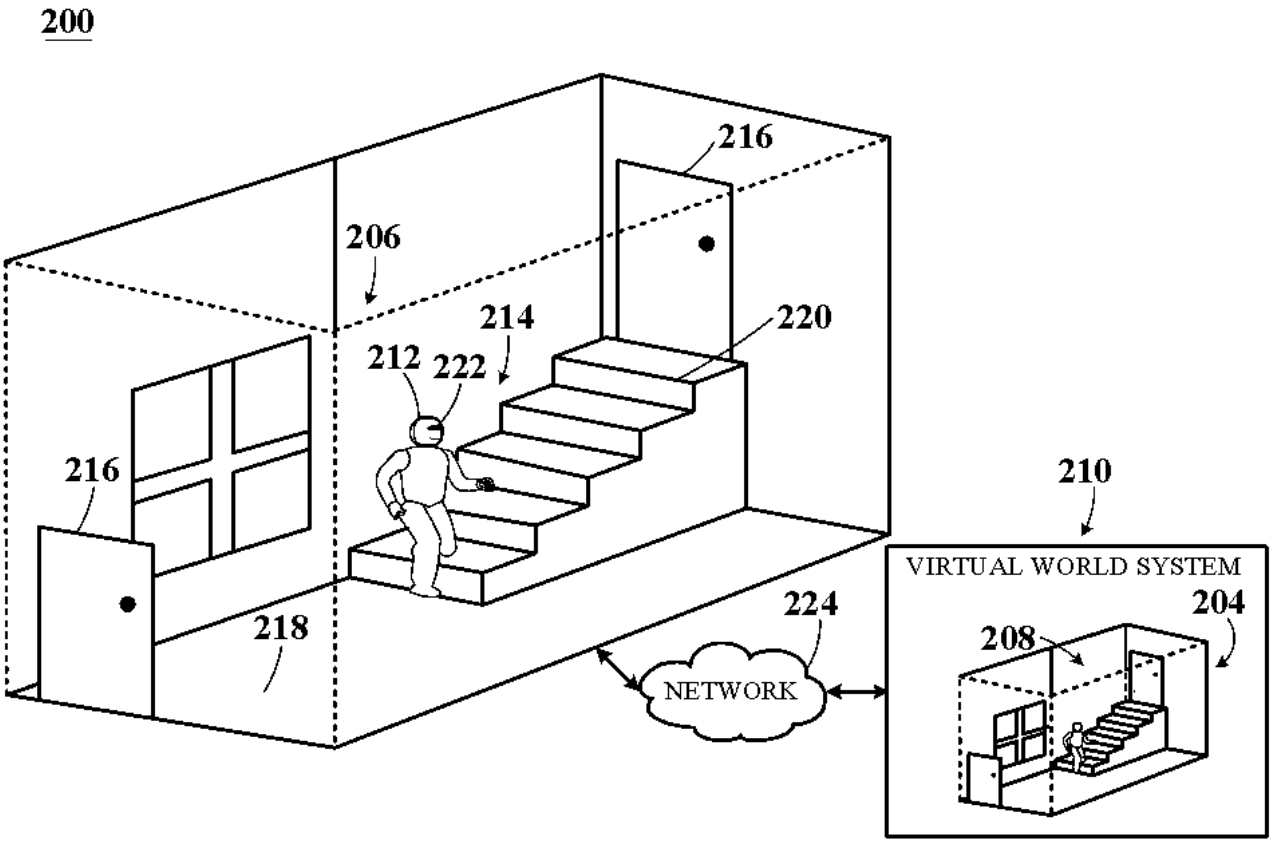

200
216
206
214
220
212
222
216
210
VIRTUAL WORLD SYSTEM
204
208
224
218
NETWORK

FIG. 2

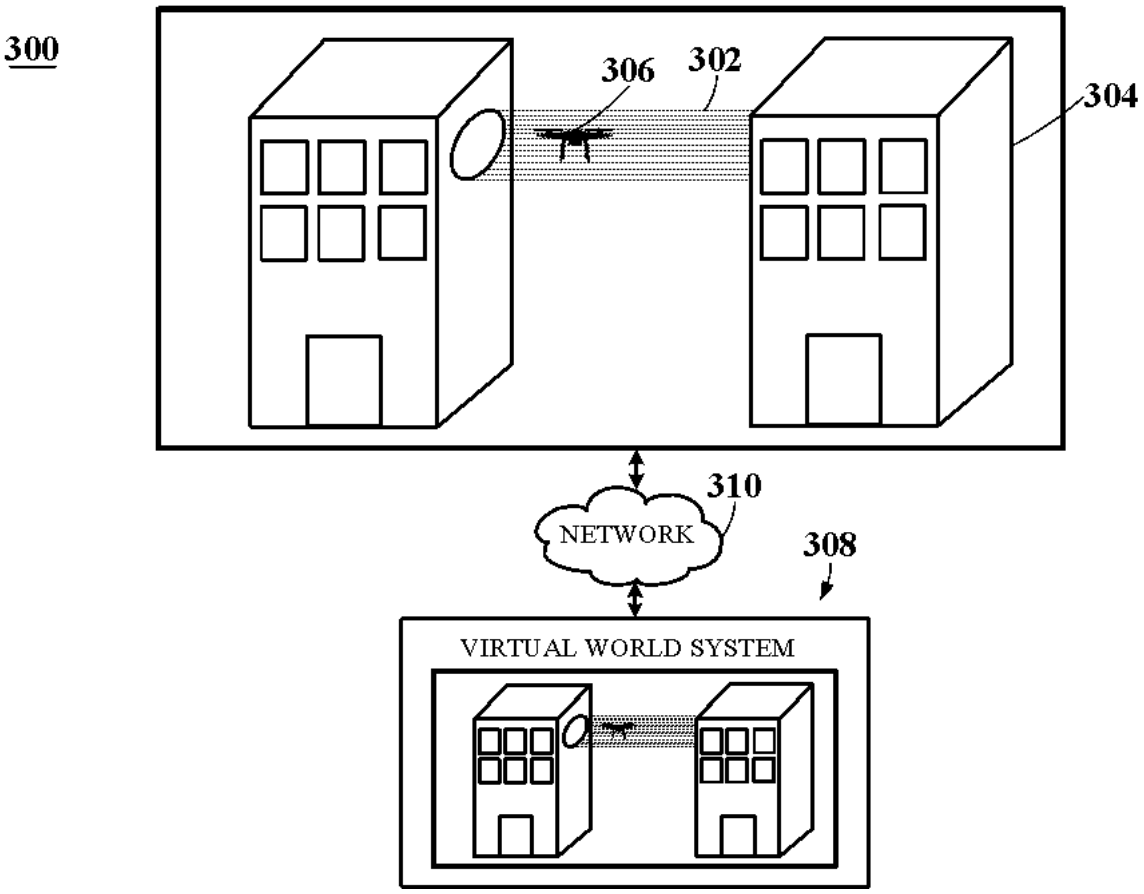


FIG. 3

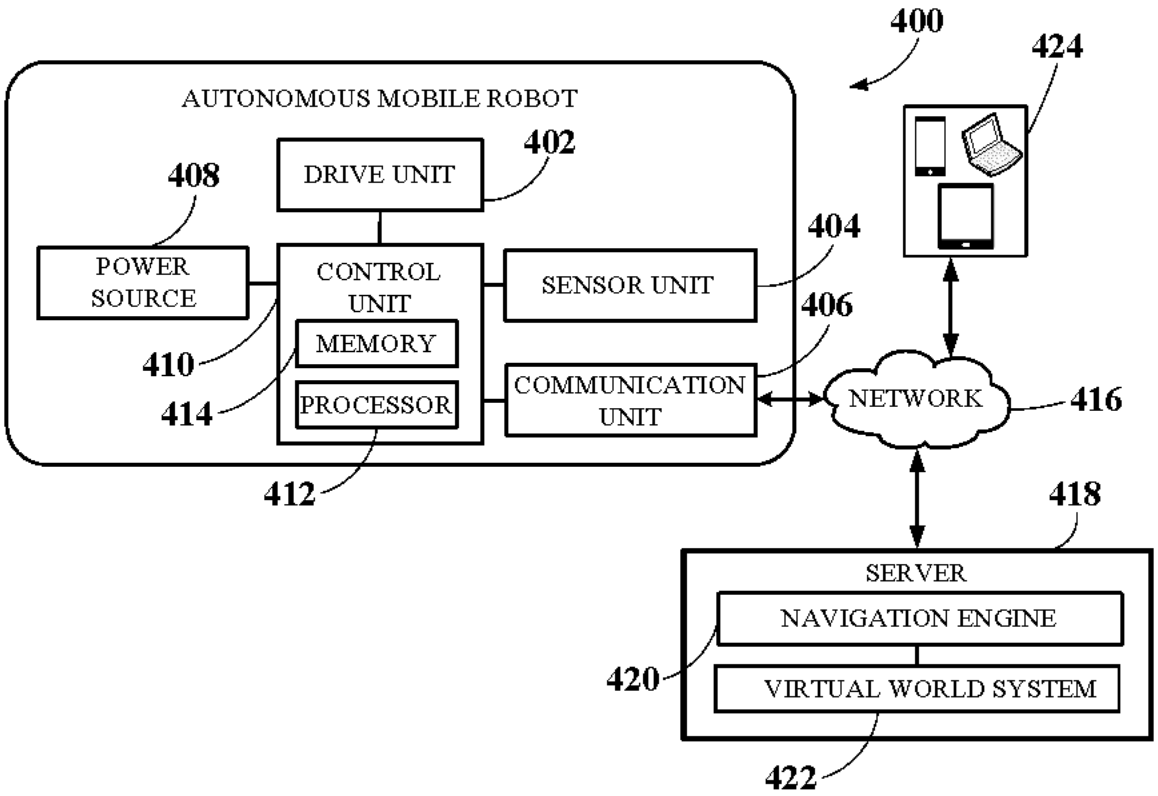

400
424
AUTONOMOUS MOBILE ROBOT
DRIVE UNIT
402
408
POWER SOURCE
CONTROL UNIT
SENSOR UNIT
404
406
410
MEMORY
414
PROCESSOR
COMMUNICATION UNIT
NETWORK
416
412
418
SERVER
NAVIGATION ENGINE
420
VIRTUAL WORLD SYSTEM
422

FIG. 4

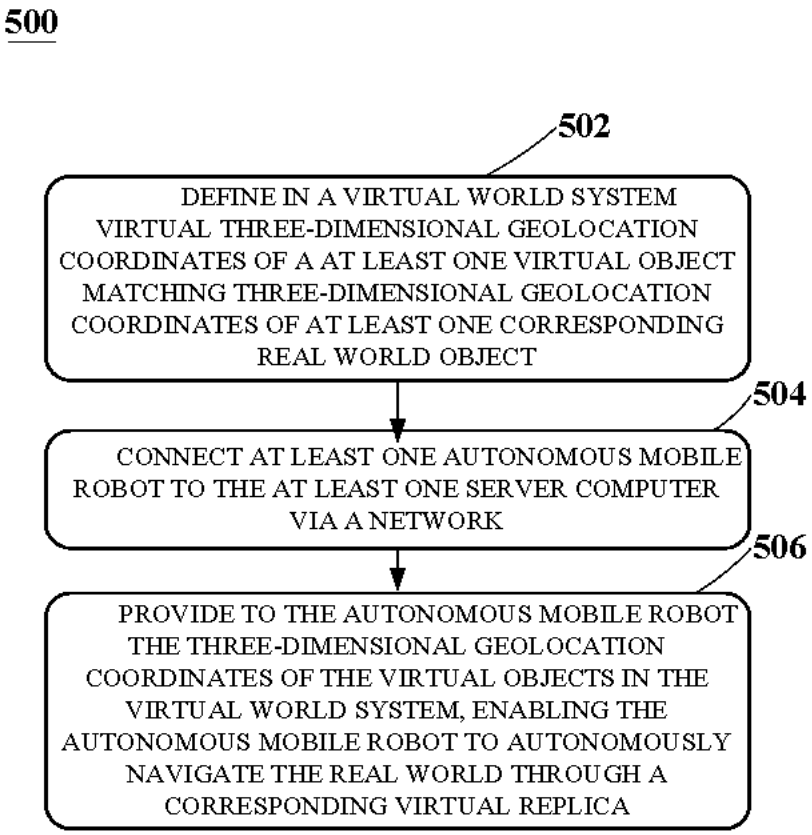

500
502
DEFINE IN A VIRTUAL WORLD SYSTEM VIRTUAL THREE-DIMENSIONAL GEOLOCATION COORDINATES OF A AT LEAST ONE VIRTUAL OBJECT MATCHING THREE-DIMENSIONAL GEOLOCATION COORDINATES OF AT LEAST ONE CORRESPONDING REAL WORLD OBJECT
504
CONNECT AT LEAST ONE AUTONOMOUS MOBILE ROBOT TO THE AT LEAST ONE SERVER COMPUTER VIA A NETWORK
506
PROVIDE TO THE AUTONOMOUS MOBILE ROBOT THE THREE-DIMENSIONAL GEOLOCATION COORDINATES OF THE VIRTUAL OBJECTS IN THE VIRTUAL WORLD SYSTEM, ENABLING THE AUTONOMOUS MOBILE ROBOT TO AUTONOMOUSLY NAVIGATE THE REAL WORLD THROUGH A CORRESPONDING VIRTUAL REPLICA

FIG. 5