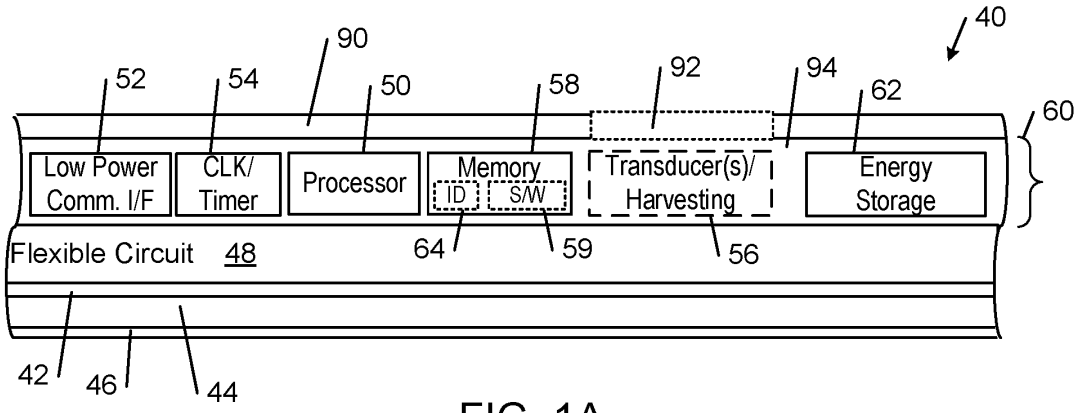

FIG. 1A

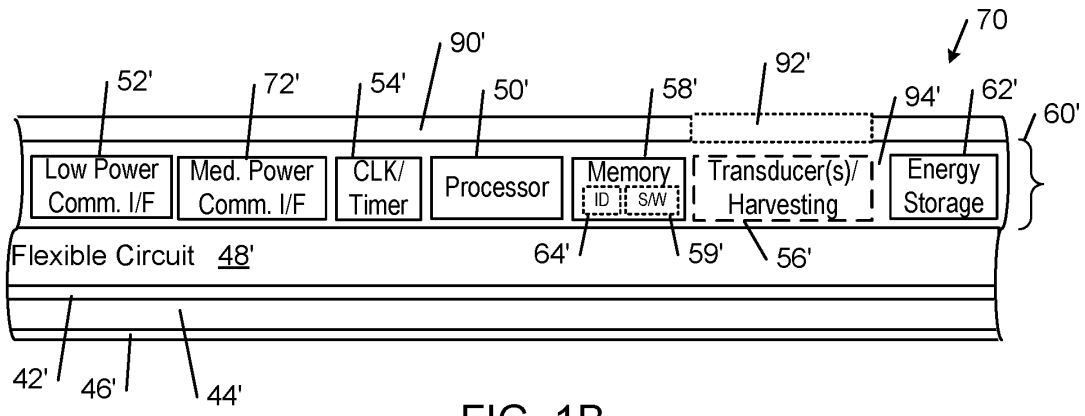

FIG. 1B

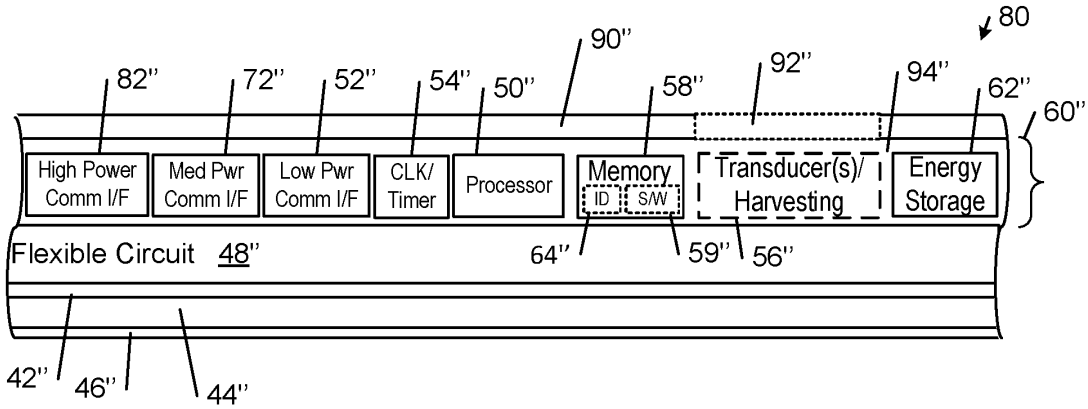

FIG. 1C

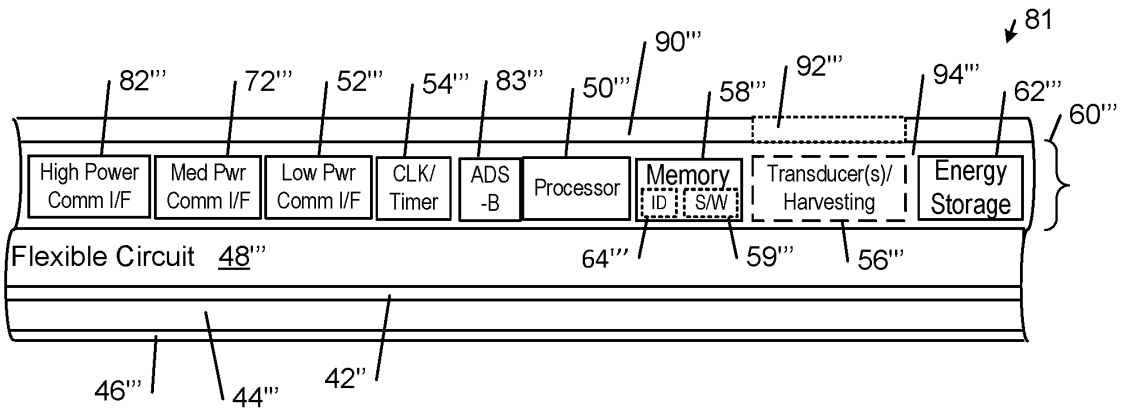
81
82'''
72'''
52'''
54'''
83'''
50'''
90'''
58'''
92'''
94'''
62'''
60'''
High Power Comm I/F
Med Pwr Comm I/F
Low Pwr Comm I/F
CLK/ Timer
ADS -B
Processor
Memory
ID
S/W
Transducer(s)/ Harvesting
Energy Storage
Flexible Circuit 48'''
64'''
59'''
56'''
46'''
44'''
42''

FIG. 1D

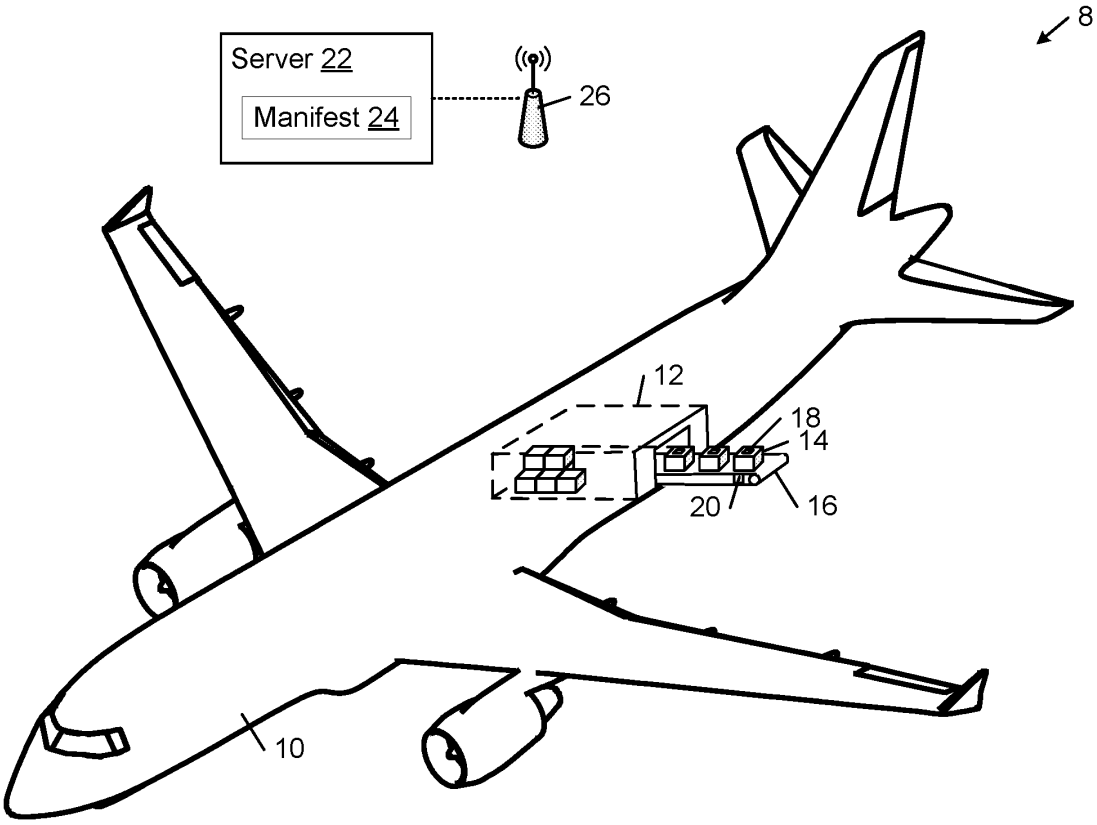

FIG. 2A

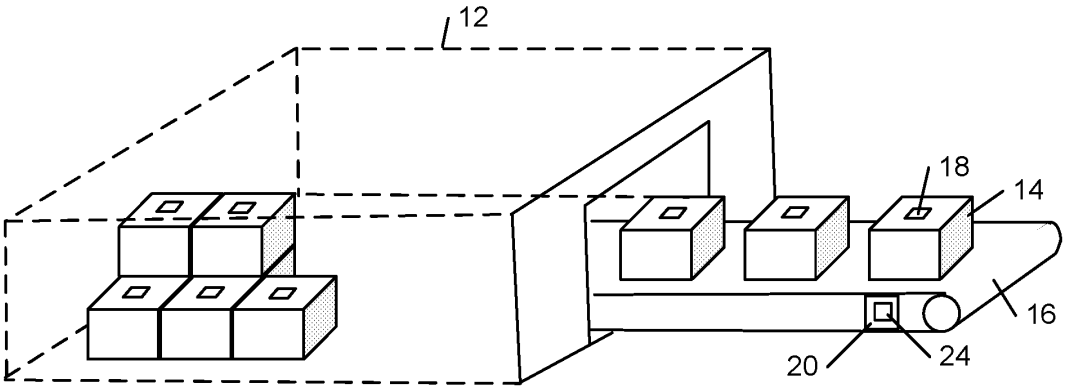

FIG. 2B

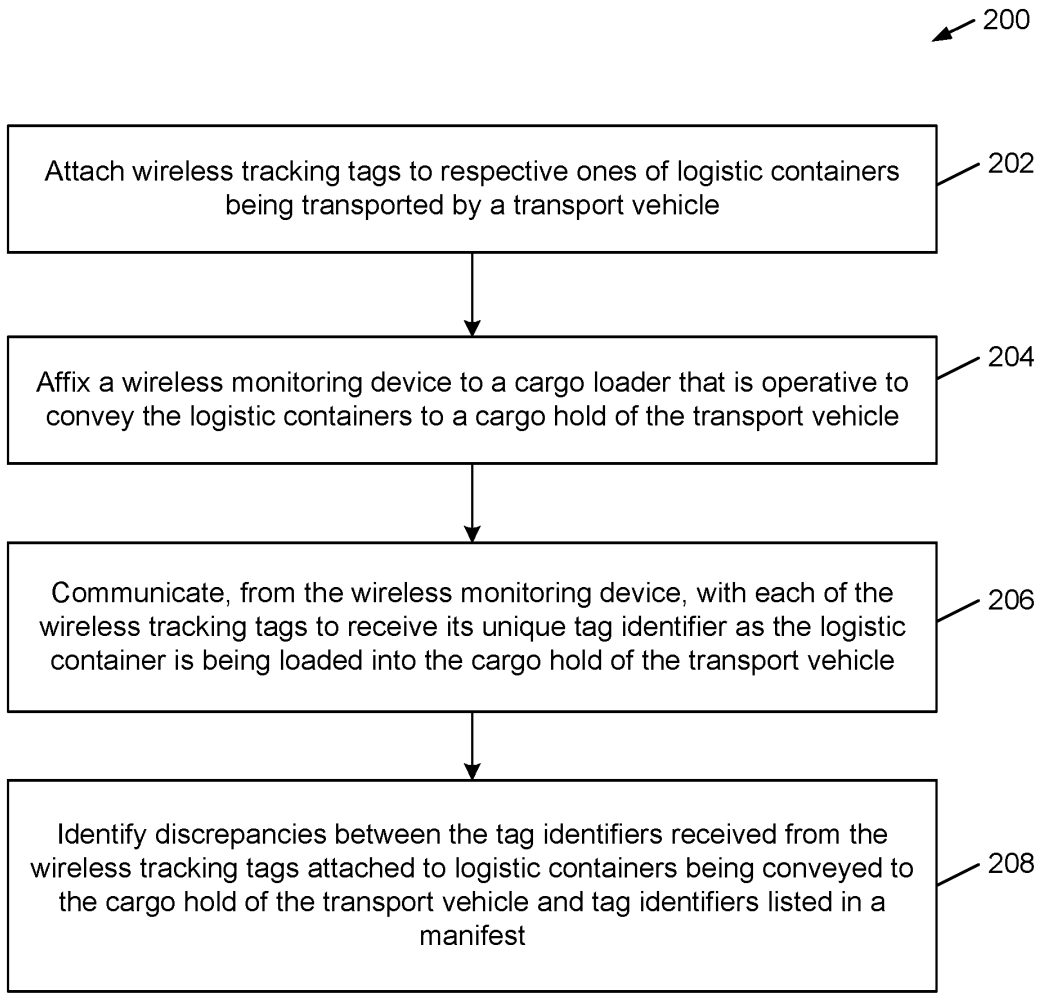
200
Attach wireless tracking tags to respective ones of logistic containers being transported by a transport vehicle
202
Affix a wireless monitoring device to a cargo loader that is operative to convey the logistic containers to a cargo hold of the transport vehicle
204
Communicate, from the wireless monitoring device, with each of the wireless tracking tags to receive its unique tag identifier as the logistic container is being loaded into the cargo hold of the transport vehicle
206
Identify discrepancies between the tag identifiers received from the wireless tracking tags attached to logistic containers being conveyed to the cargo hold of the transport vehicle and tag identifiers listed in a manifest
208

FIG. 3

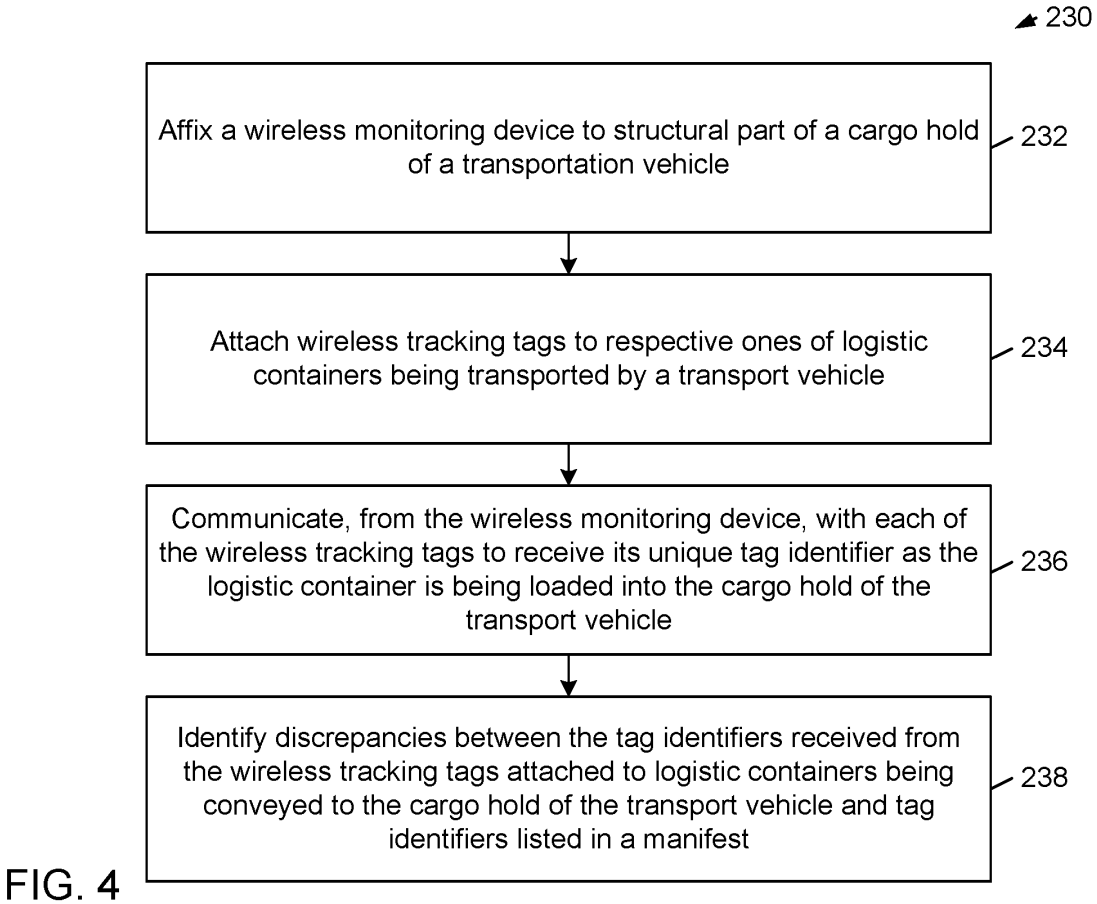
230
Affix a wireless monitoring device to structural part of a cargo hold of a transportation vehicle
232
Attach wireless tracking tags to respective ones of logistic containers being transported by a transport vehicle
234
Communicate, from the wireless monitoring device, with each of the wireless tracking tags to receive its unique tag identifier as the logistic container is being loaded into the cargo hold of the transport vehicle
236
Identify discrepancies between the tag identifiers received from the wireless tracking tags attached to logistic containers being conveyed to the cargo hold of the transport vehicle and tag identifiers listed in a manifest
238

FIG. 4

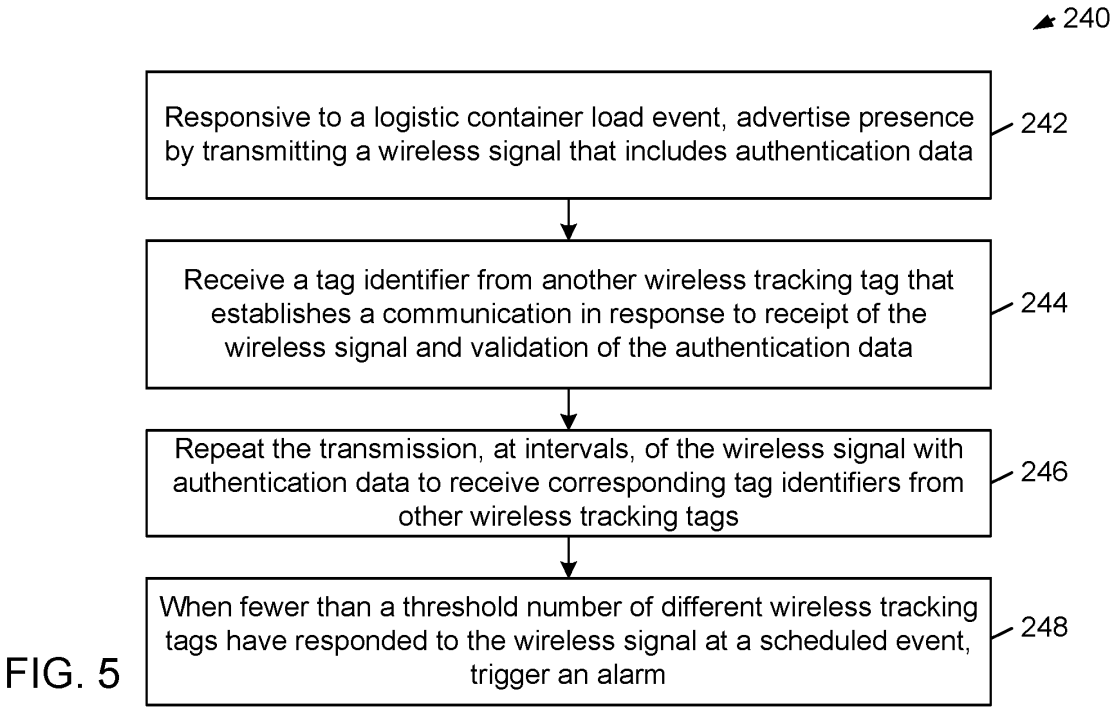
240
Responsive to a logistic container load event, advertise presence by transmitting a wireless signal that includes authentication data
242
Receive a tag identifier from another wireless tracking tag that establishes a communication in response to receipt of the wireless signal and validation of the authentication data
244
Repeat the transmission, at intervals, of the wireless signal with authentication data to receive corresponding tag identifiers from other wireless tracking tags
246
When fewer than a threshold number of different wireless tracking tags have responded to the wireless signal at a scheduled event, trigger an alarm
248

FIG. 5

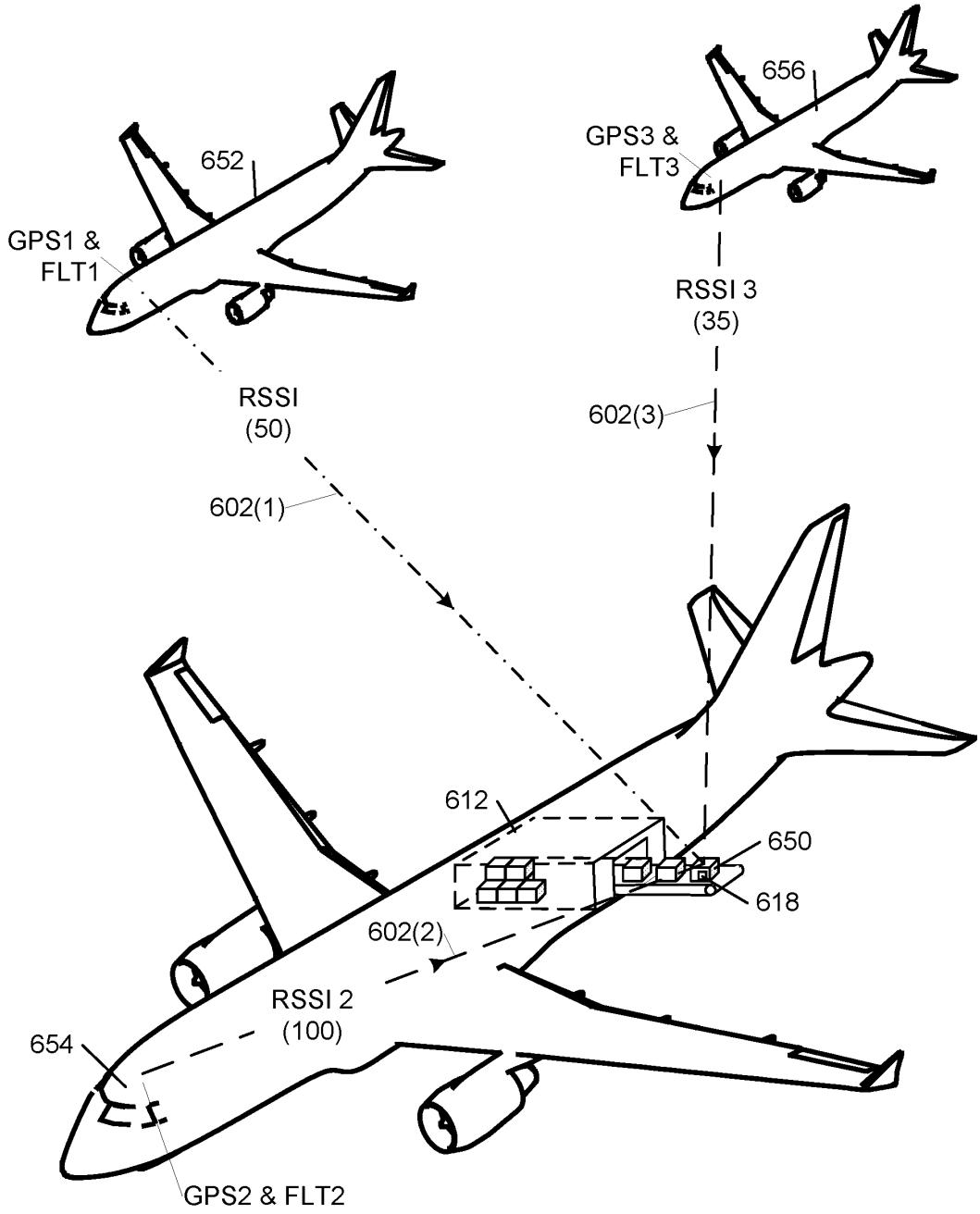
656
GPS3 &
FLT3
652
GPS1 &
FLT1
RSSI 3
(35)
RSSI
(50)
602(3)
602(1)
612
650
618
602(2)
RSSI 2
(100)
654
GPS2 & FLT2

FIG. 6

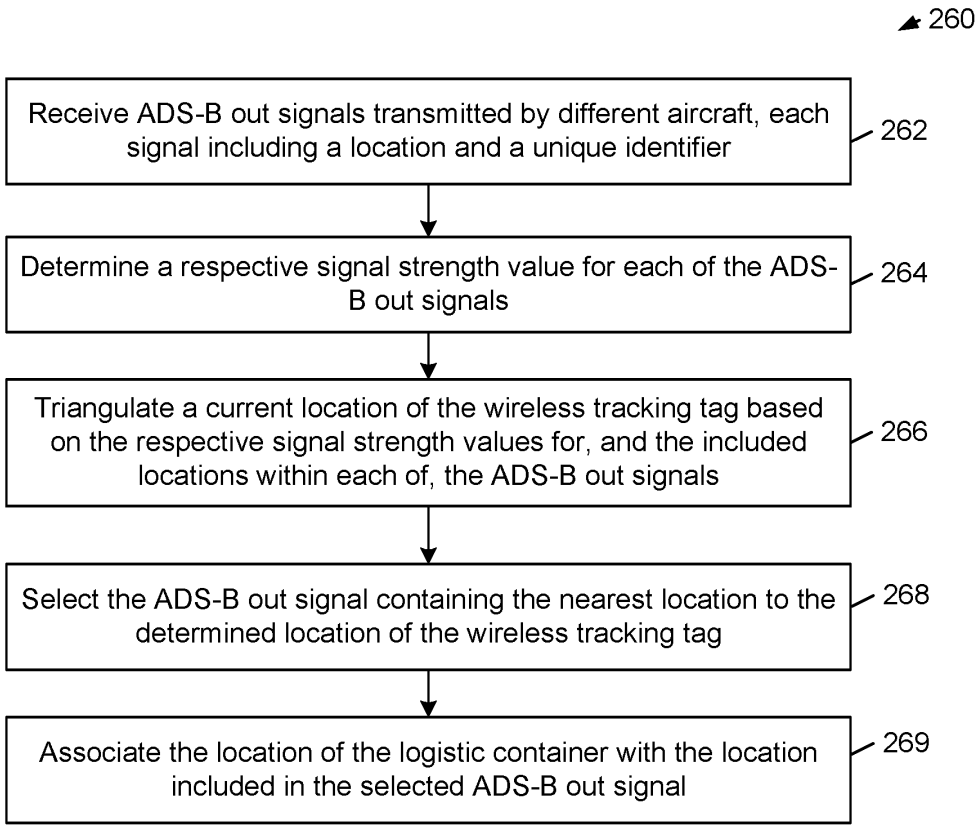
260
Receive ADS-B out signals transmitted by different aircraft, each signal including a location and a unique identifier
262
Determine a respective signal strength value for each of the ADS-B out signals
264
Triangulate a current location of the wireless tracking tag based on the respective signal strength values for, and the included locations within each of, the ADS-B out signals
266
Select the ADS-B out signal containing the nearest location to the determined location of the wireless tracking tag
268
Associate the location of the logistic container with the location included in the selected ADS-B out signal
269

FIG. 7

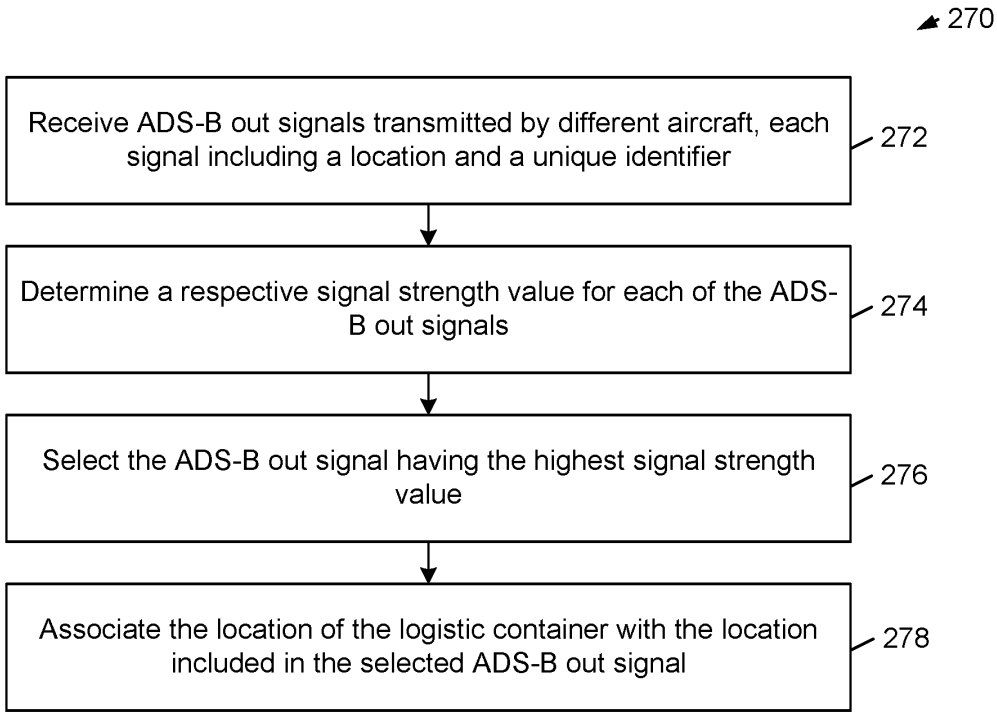
270
Receive ADS-B out signals transmitted by different aircraft, each signal including a location and a unique identifier
272
Determine a respective signal strength value for each of the ADS-B out signals
274
Select the ADS-B out signal having the highest signal strength value
276
Associate the location of the logistic container with the location included in the selected ADS-B out signal
278

FIG. 8

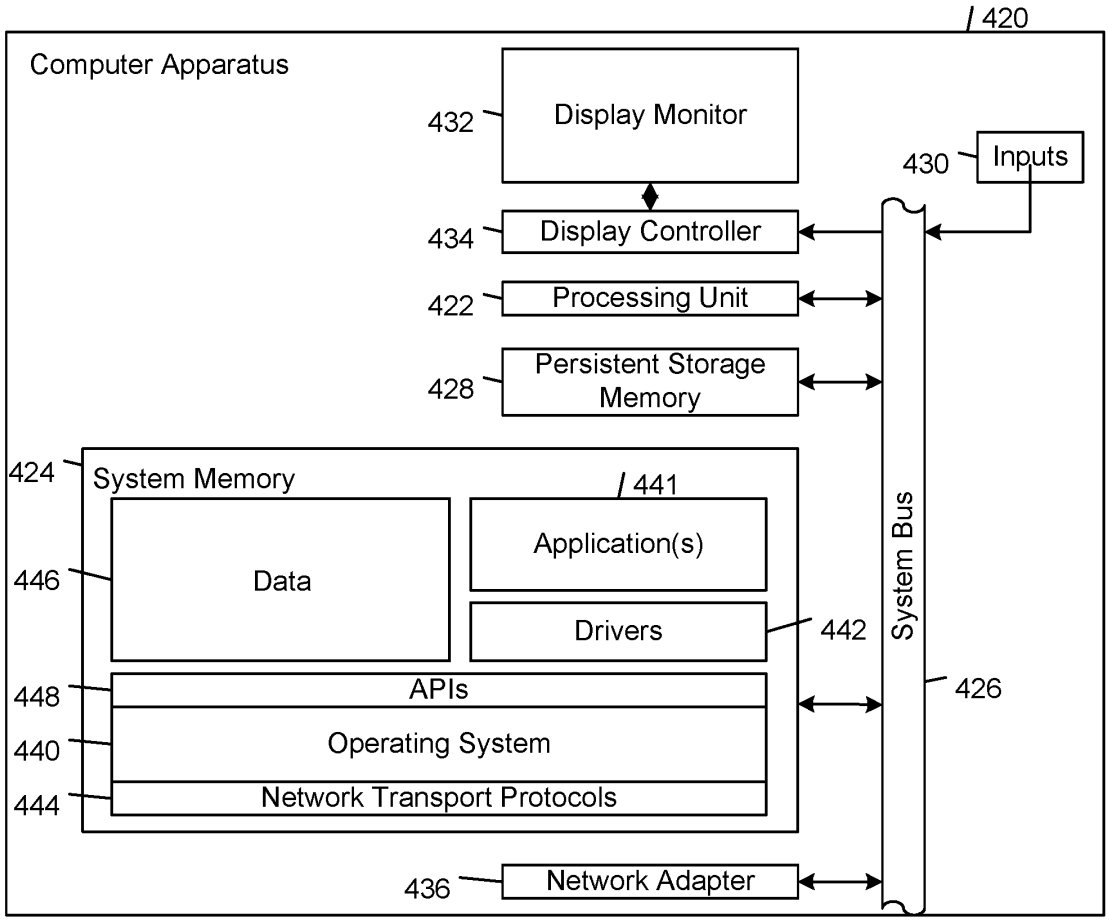
420
Computer Apparatus
432
Display Monitor
430
Inputs
434
Display Controller
422
Processing Unit
428
Persistent Storage Memory
424
System Memory
441
Application(s)
446
Data
Drivers
442
448
APIs
440
Operating System
444
Network Transport Protocols
System Bus
426
436
Network Adapter

FIG. 9