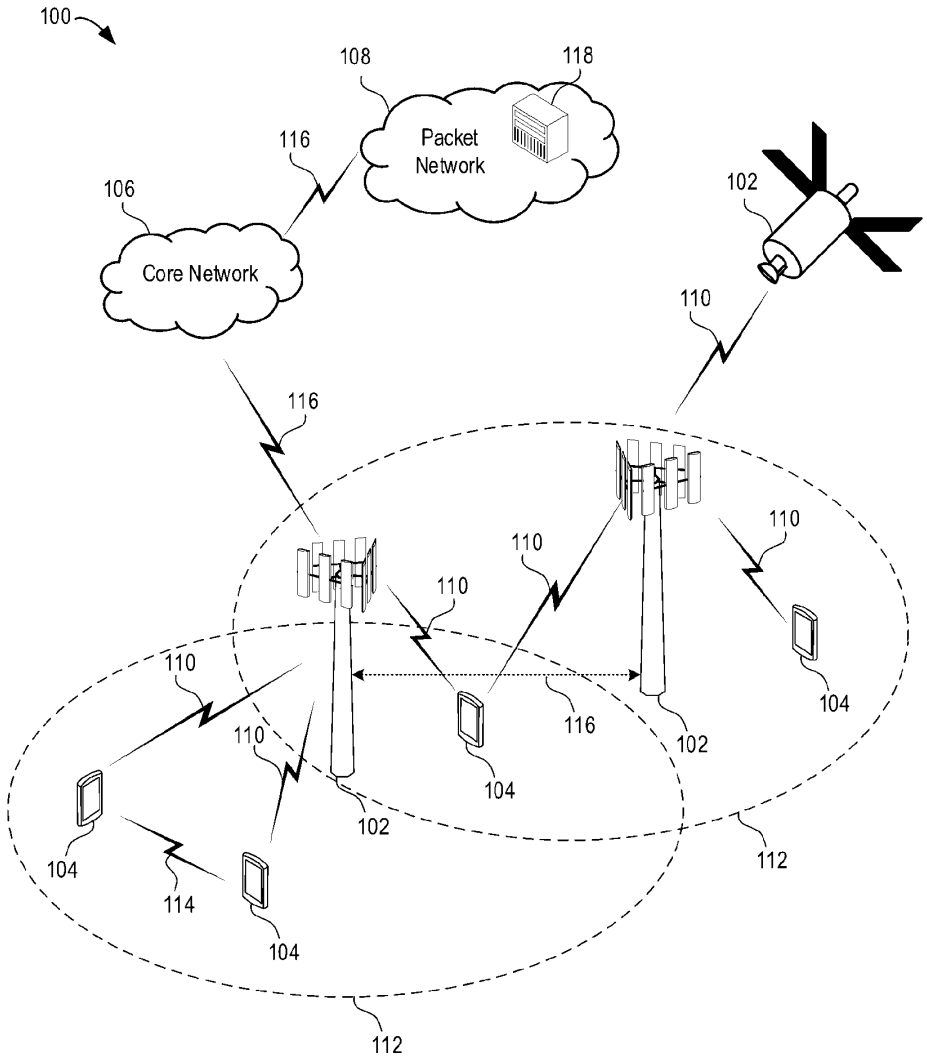

100
108
118
Packet Network
116
106
Core Network
102
110
116
110
110
110
110
116
102
104
104
110
110
102
104
114
104
112
112

FIG. 1

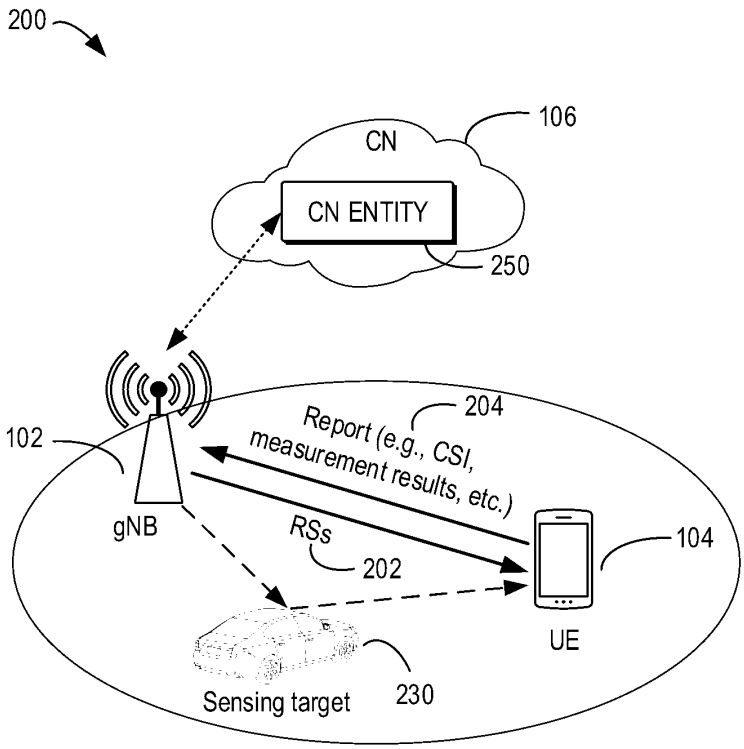

200
106
CN
CN ENTITY
250
204
Report (e.g., CSI, measurement results, etc.)
102
gNB
RSs
202
104
UE
Sensing target
230

FIG. 2A

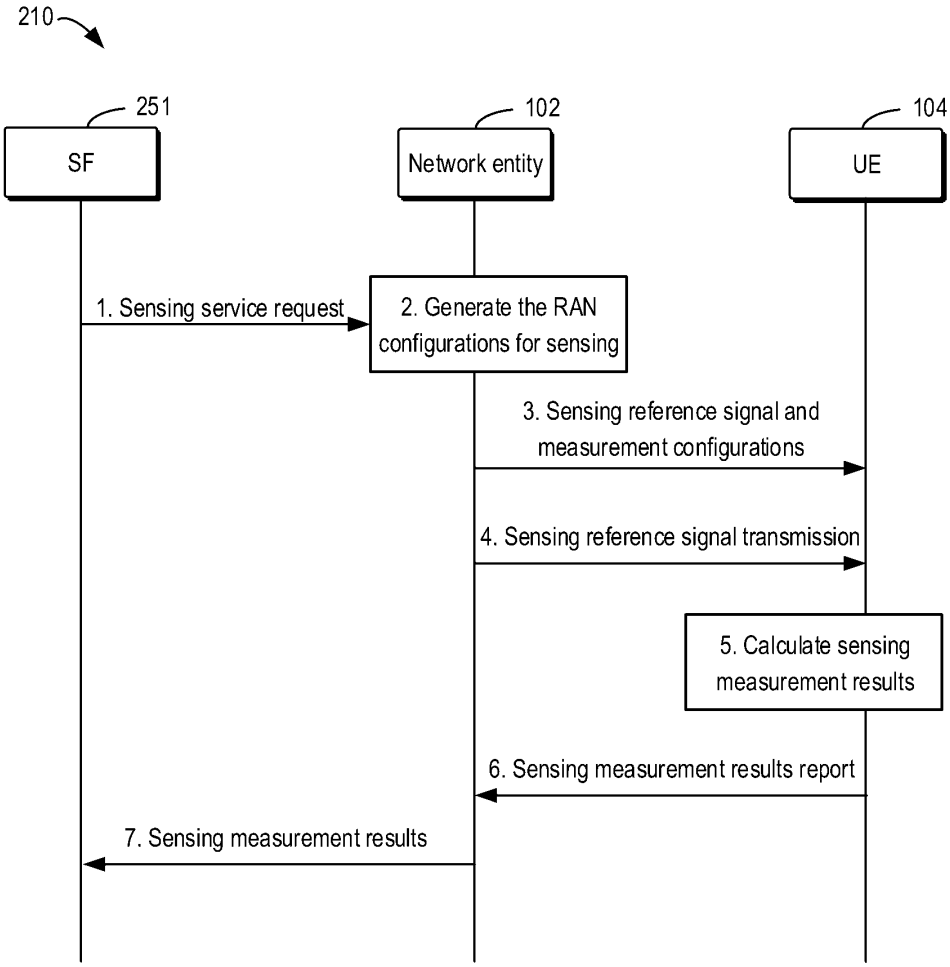

210
251
SF
102
Network entity
104
UE
1. Sensing service request
2. Generate the RAN configurations for sensing
3. Sensing reference signal and measurement configurations
4. Sensing reference signal transmission
5. Calculate sensing measurement results
6. Sensing measurement results report
7. Sensing measurement results

FIG. 2B

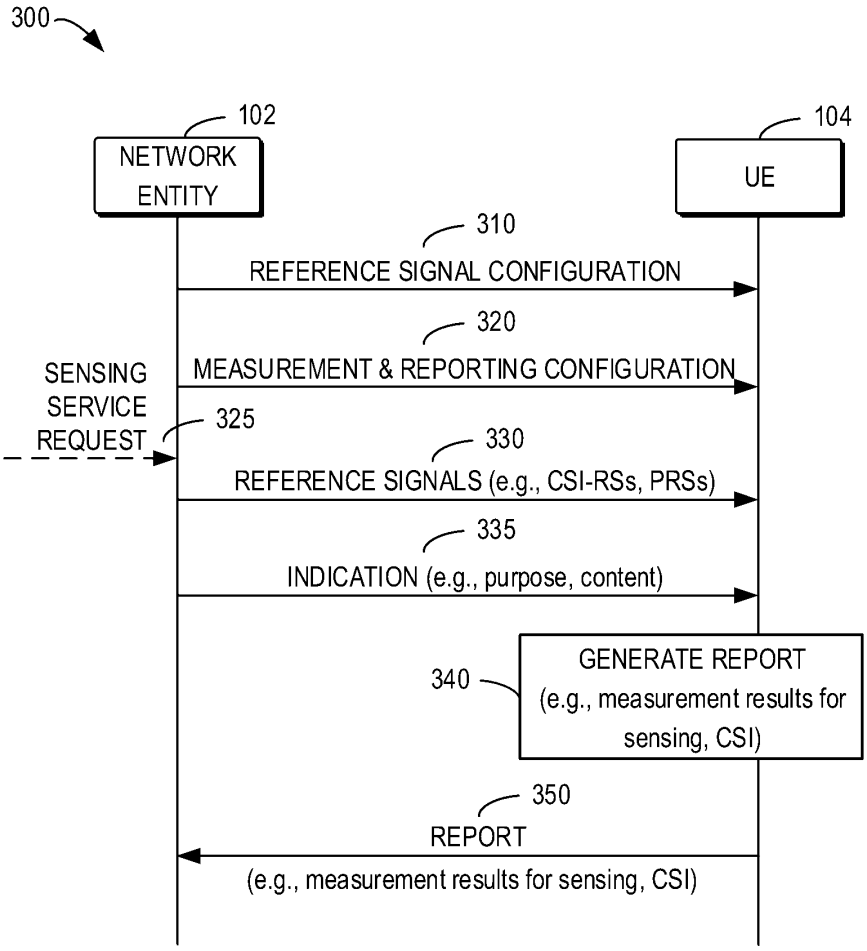

300
102
NETWORK ENTITY
104
UE
310
REFERENCE SIGNAL CONFIGURATION
320
SENSING SERVICE REQUEST
MEASUREMENT & REPORTING CONFIGURATION
325
330
REFERENCE SIGNALS (e.g., CSI-RSs, PRSs)
335
INDICATION (e.g., purpose, content)
340
GENERATE REPORT (e.g., measurement results for sensing, CSI)
350
REPORT
(e.g., measurement results for sensing, CSI)

FIG. 3

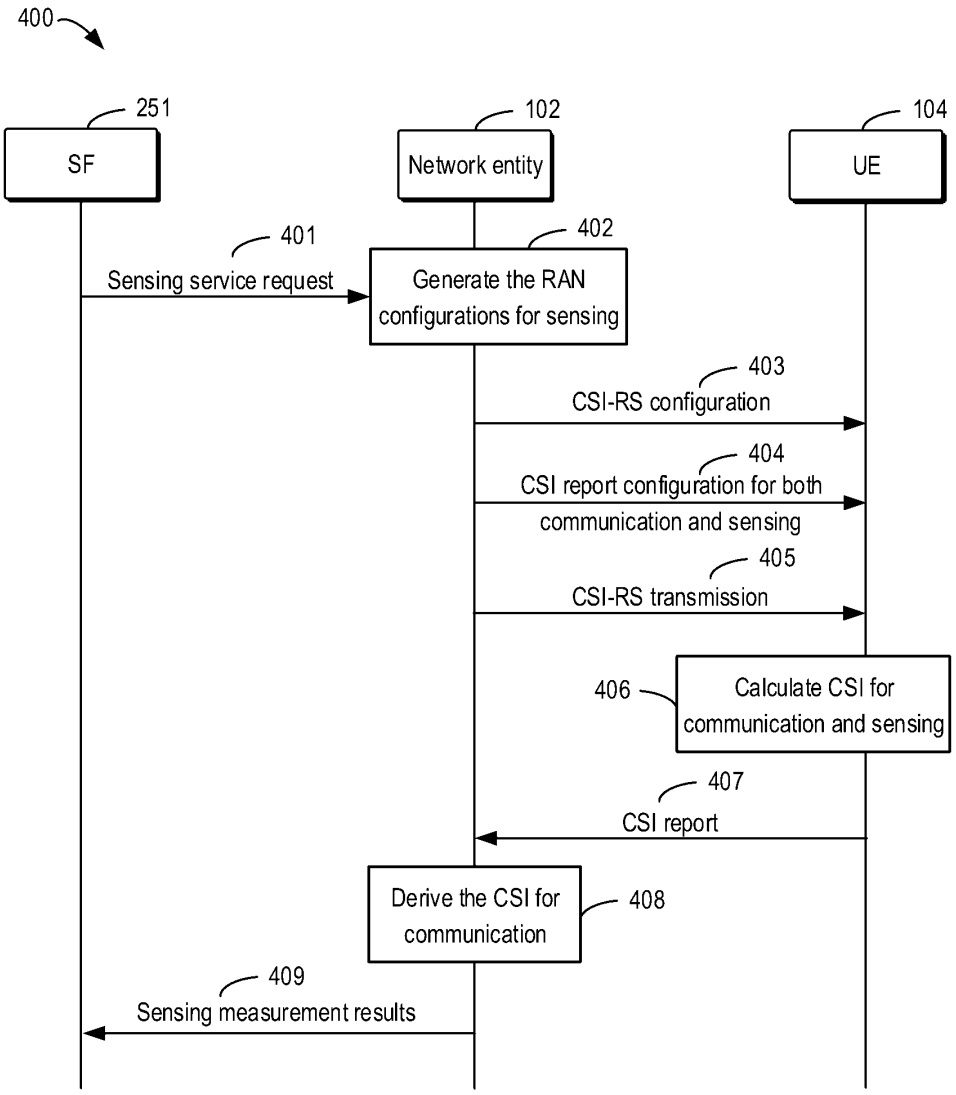

400
251
SF
102
Network entity
104
UE
401
Sensing service request
402
Generate the RAN configurations for sensing
403
CSI-RS configuration
404
CSI report configuration for both communication and sensing
405
CSI-RS transmission
406
Calculate CSI for communication and sensing
407
CSI report
Derive the CSI for communication
408
409
Sensing measurement results

FIG. 4A

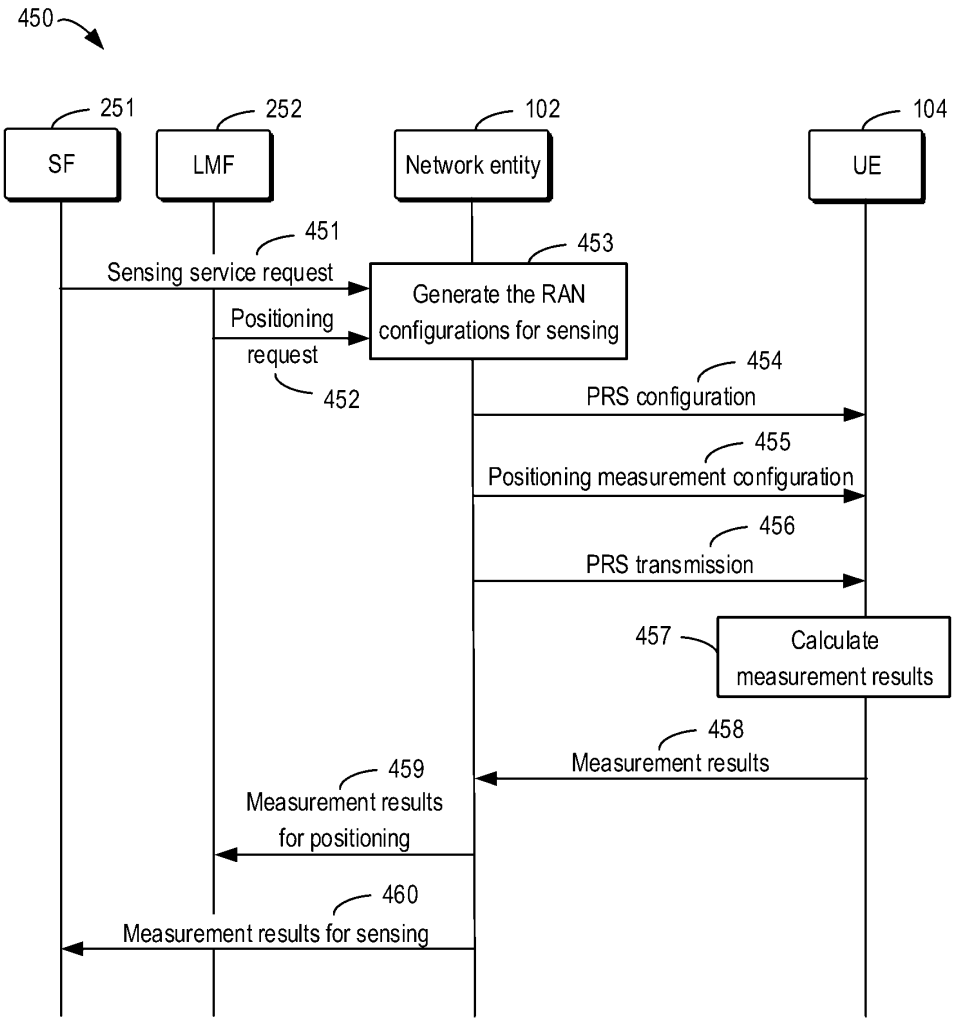

450
251
SF
252
LMF
102
Network entity
104
UE
451
Sensing service request
453
Generate the RAN configurations for sensing
Positioning request
452
454
PRS configuration
455
Positioning measurement configuration
456
PRS transmission
457
Calculate measurement results
458
Measurement results
459
Measurement results for positioning
460
Measurement results for sensing

FIG. 4B

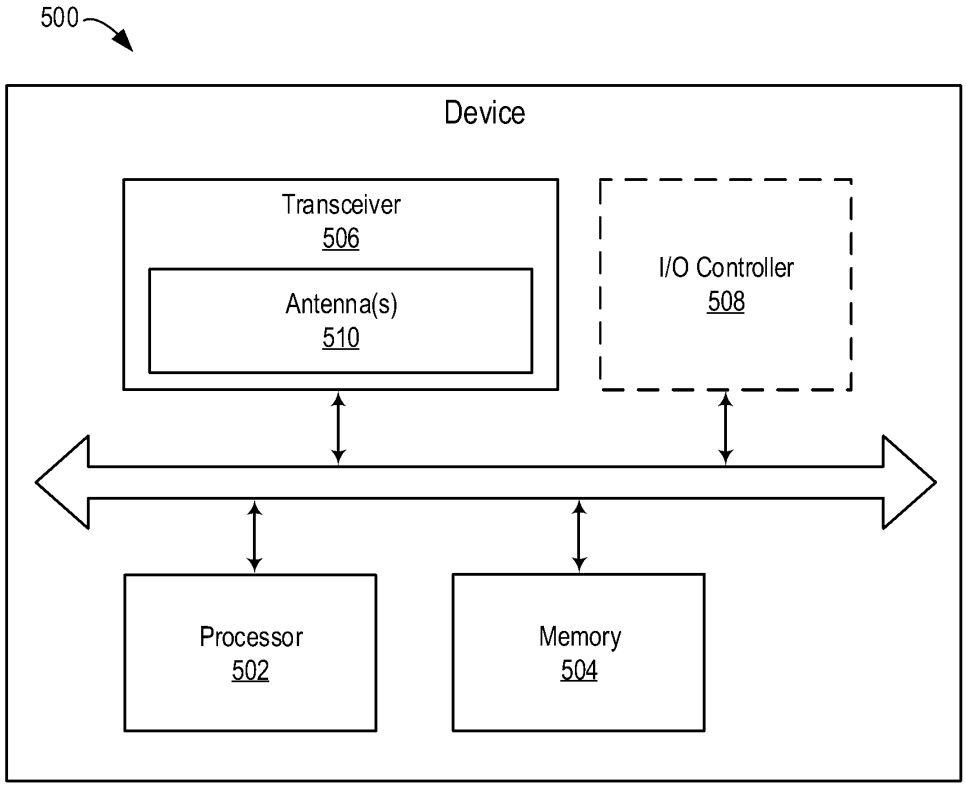

500
Device
Transceiver
506
Antenna(s)
510
I/O Controller
508
Processor
502
Memory
504

FIG. 5

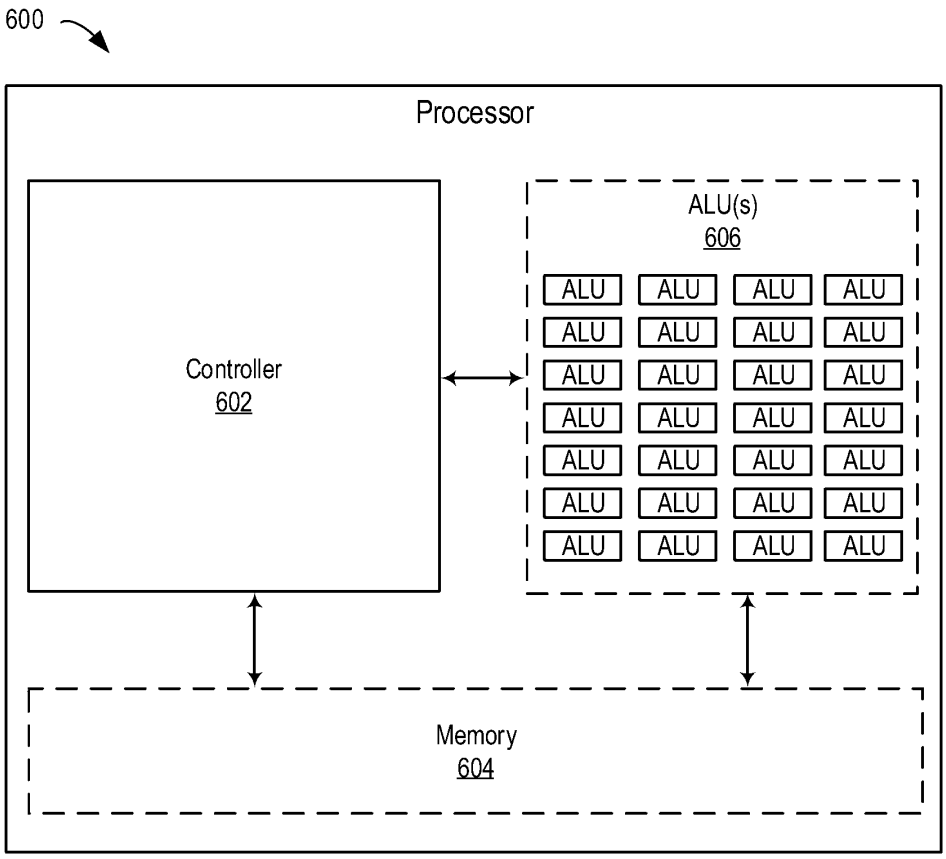


FIG. 6

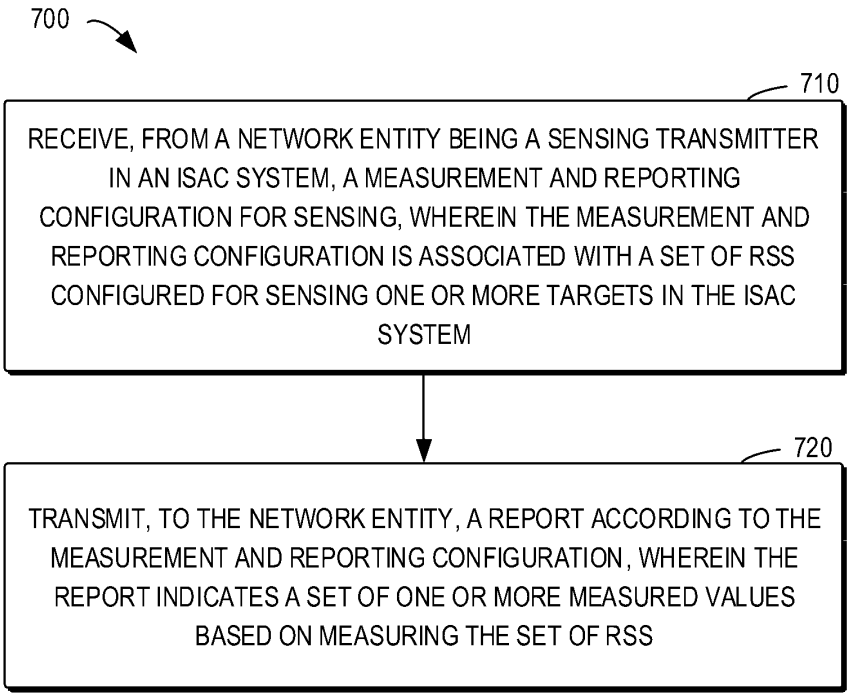

700
710
RECEIVE, FROM A NETWORK ENTITY BEING A SENSING TRANSMITTER IN AN ISAC SYSTEM, A MEASUREMENT AND REPORTING CONFIGURATION FOR SENSING, WHEREIN THE MEASUREMENT AND REPORTING CONFIGURATION IS ASSOCIATED WITH A SET OF RSS CONFIGURED FOR SENSING ONE OR MORE TARGETS IN THE ISAC SYSTEM
720
TRANSMIT, TO THE NETWORK ENTITY, A REPORT ACCORDING TO THE MEASUREMENT AND REPORTING CONFIGURATION, WHEREIN THE REPORT INDICATES A SET OF ONE OR MORE MEASURED VALUES BASED ON MEASURING THE SET OF RSS

FIG. 7

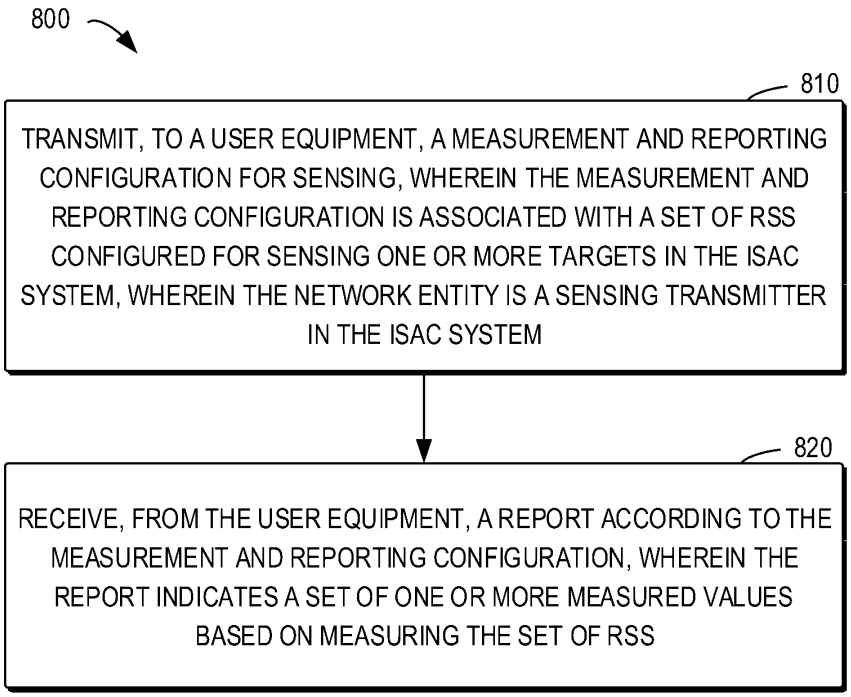

800
810
TRANSMIT, TO A USER EQUIPMENT, A MEASUREMENT AND REPORTING CONFIGURATION FOR SENSING, WHEREIN THE MEASUREMENT AND REPORTING CONFIGURATION IS ASSOCIATED WITH A SET OF RSS CONFIGURED FOR SENSING ONE OR MORE TARGETS IN THE ISAC SYSTEM, WHEREIN THE NETWORK ENTITY IS A SENSING TRANSMITTER IN THE ISAC SYSTEM
820
RECEIVE, FROM THE USER EQUIPMENT, A REPORT ACCORDING TO THE MEASUREMENT AND REPORTING CONFIGURATION, WHEREIN THE REPORT INDICATES A SET OF ONE OR MORE MEASURED VALUES BASED ON MEASURING THE SET OF RSS

FIG. 8