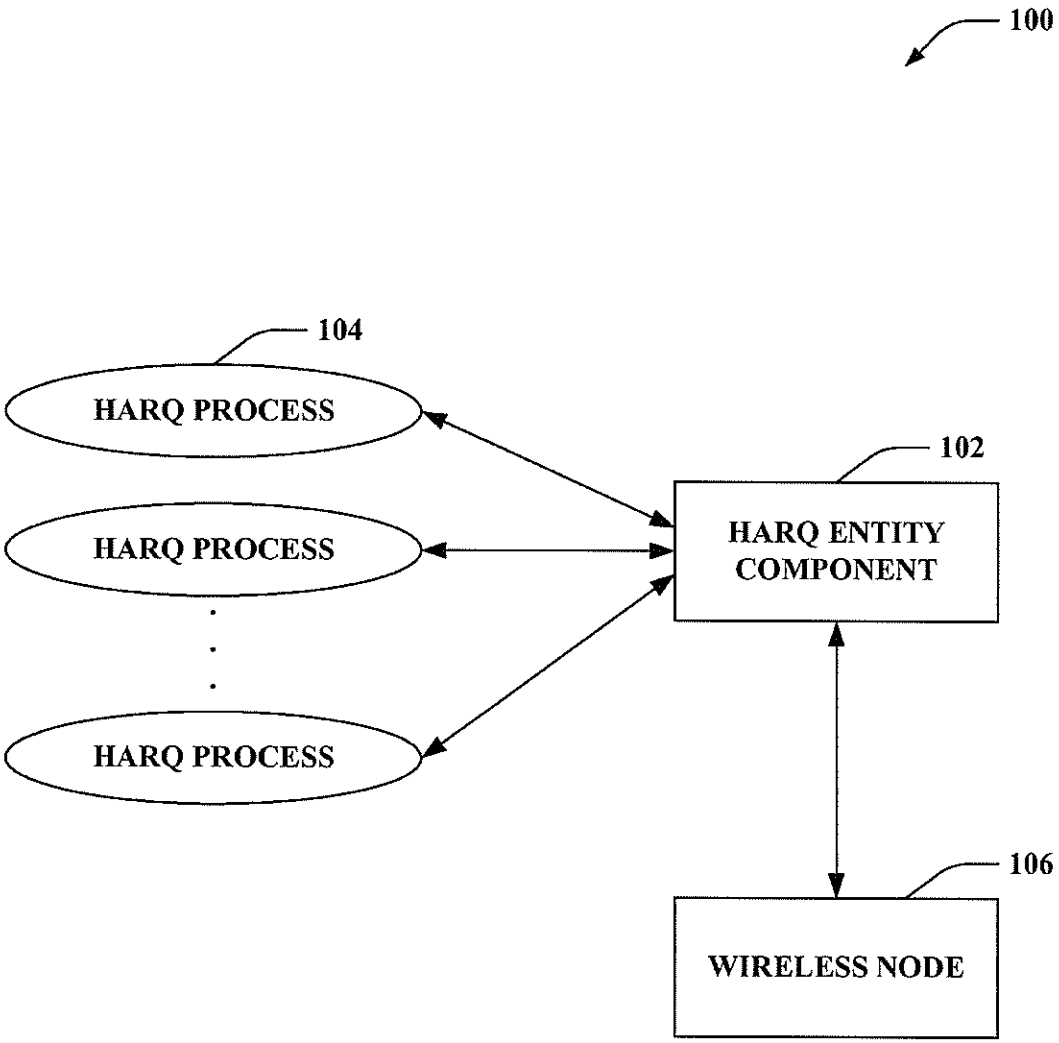
100
104
HARQ PROCESS
HARQ PROCESS
HARQ PROCESS
102
HARQ ENTITY COMPONENT
106
WIRELESS NODE

FIG. 1

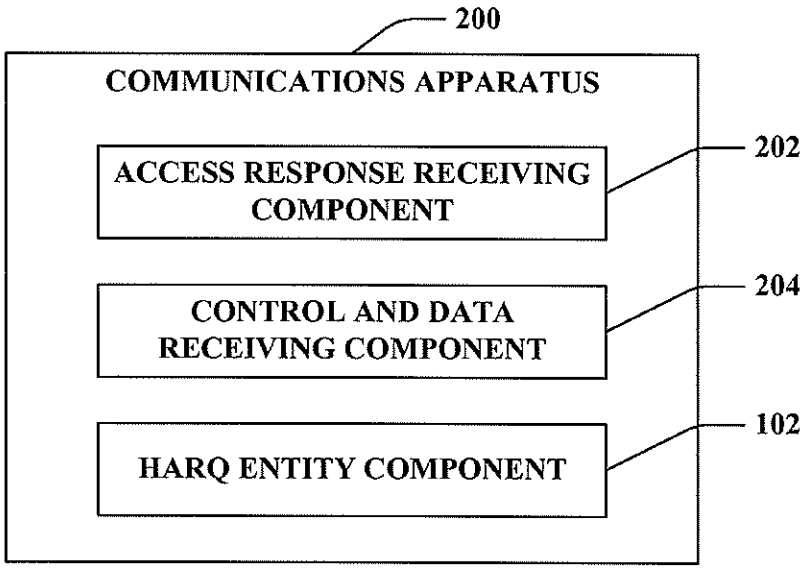
200
COMMUNICATIONS APPARATUS
ACCESS RESPONSE RECEIVING COMPONENT
202
CONTROL AND DATA RECEIVING COMPONENT
204
HARQ ENTITY COMPONENT
102

FIG. 2

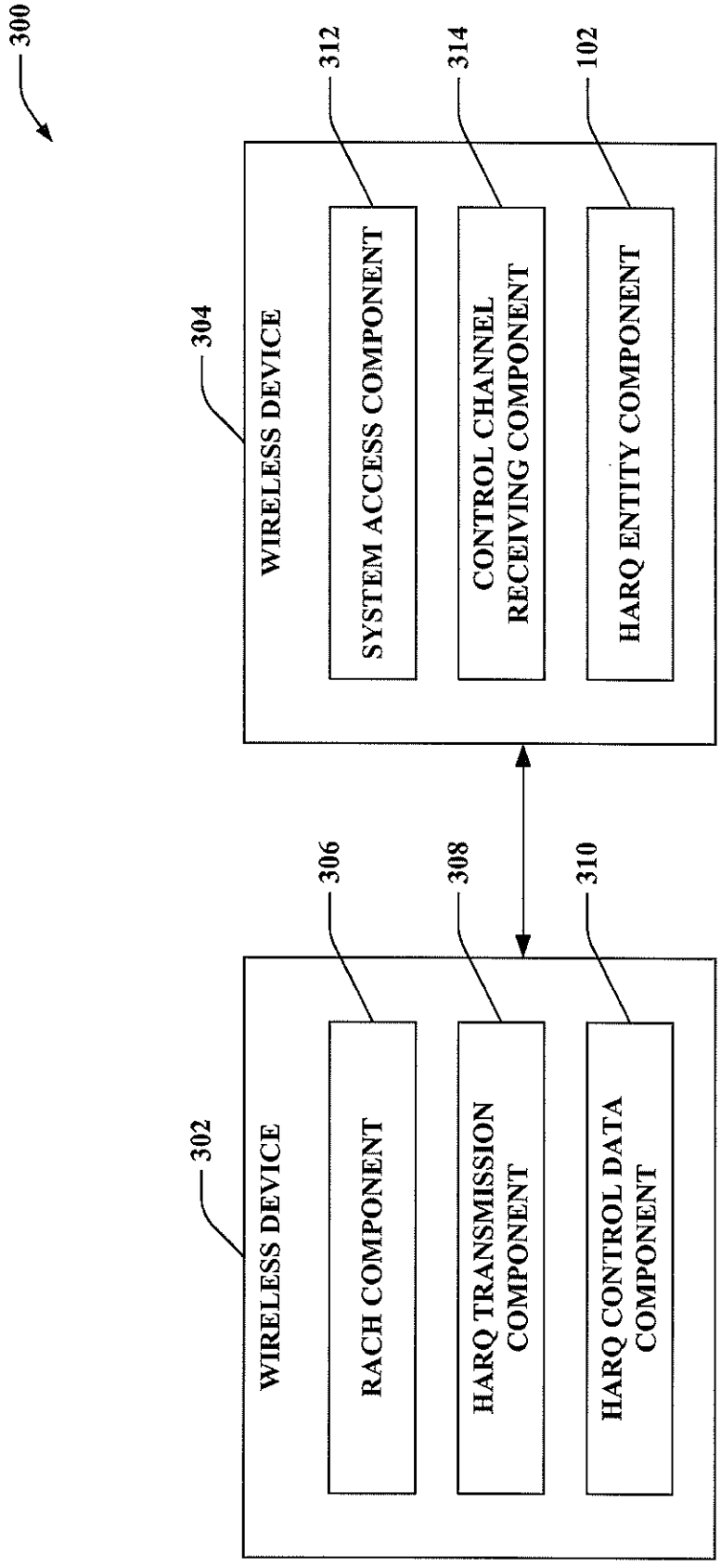
300
WIRELESS DEVICE
304
SYSTEM ACCESS COMPONENT
312
CONTROL CHANNEL RECEIVING COMPONENT
314
HARQ ENTITY COMPONENT
102
WIRELESS DEVICE
302
RACH COMPONENT
306
HARQ TRANSMISSION COMPONENT
308
HARQ CONTROL DATA COMPONENT
310

FIG. 3

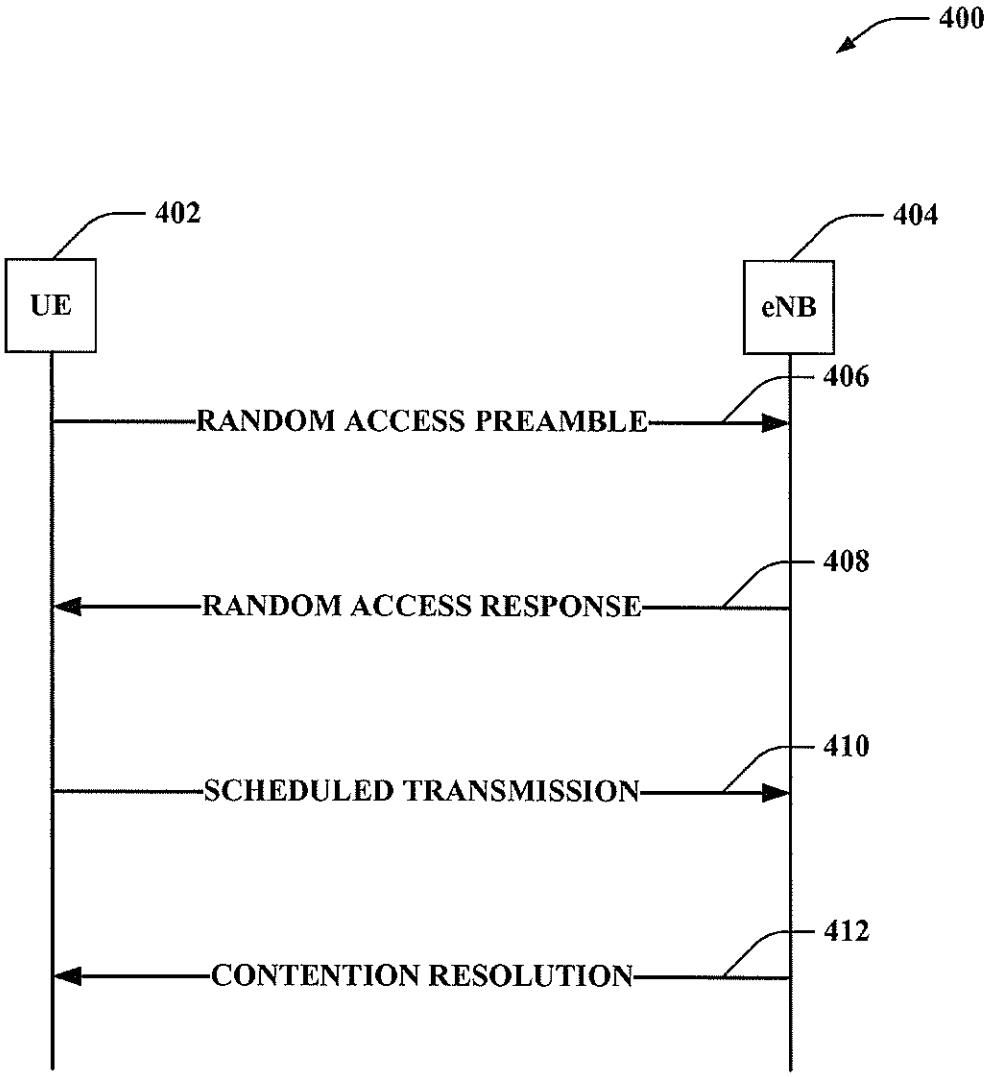
400
402
UE
404
eNB
406
RANDOM ACCESS PREAMBLE
408
RANDOM ACCESS RESPONSE
410
SCHEDULED TRANSMISSION
412
CONTENTION RESOLUTION

FIG. 4

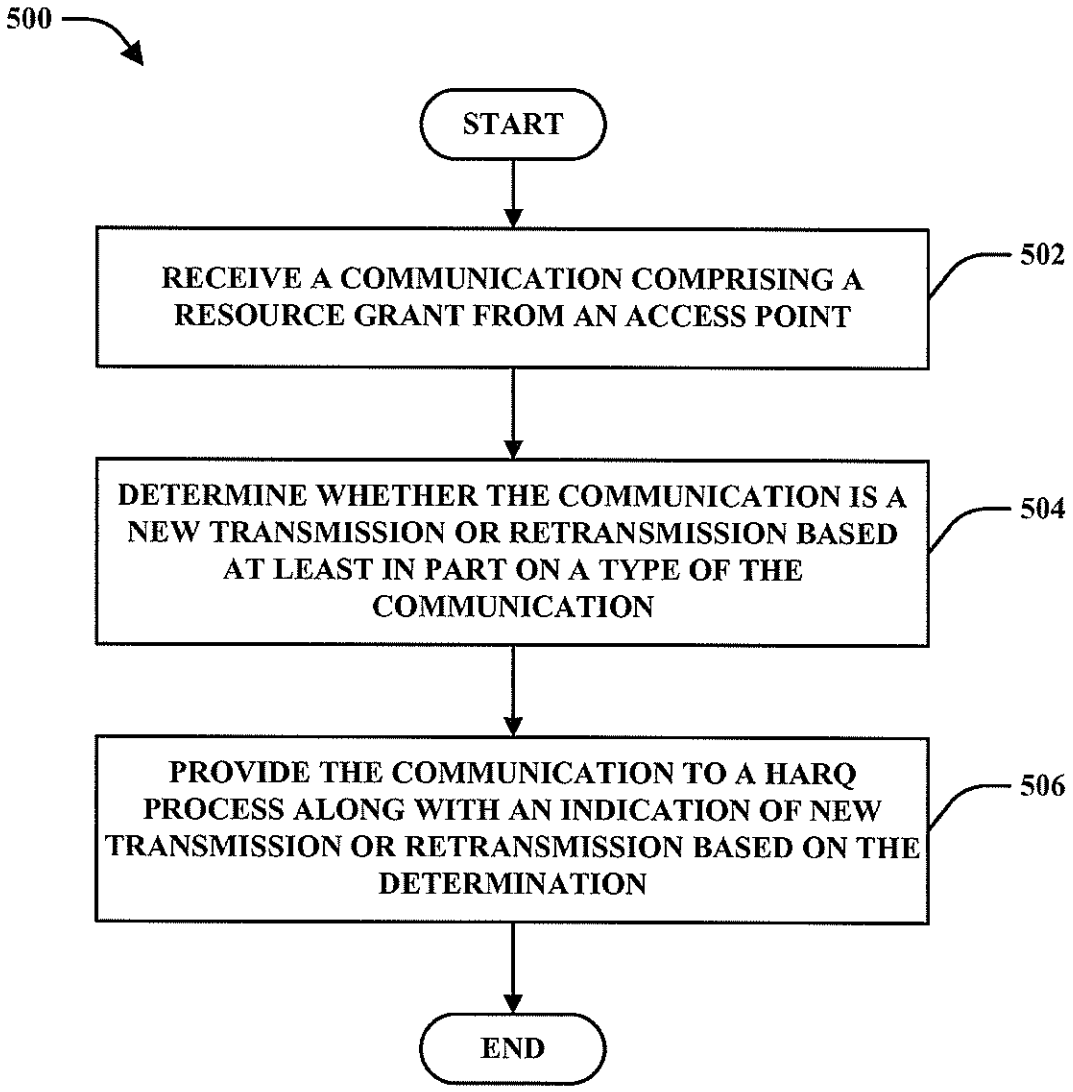
500
START
RECEIVE A COMMUNICATION COMPRISING A RESOURCE GRANT FROM AN ACCESS POINT
502
DETERMINE WHETHER THE COMMUNICATION IS A NEW TRANSMISSION OR RETRANSMISSION BASED AT LEAST IN PART ON A TYPE OF THE COMMUNICATION
504
PROVIDE THE COMMUNICATION TO A HARQ PROCESS ALONG WITH AN INDICATION OF NEW TRANSMISSION OR RETRANSMISSION BASED ON THE DETERMINATION
506
END

FIG. 5

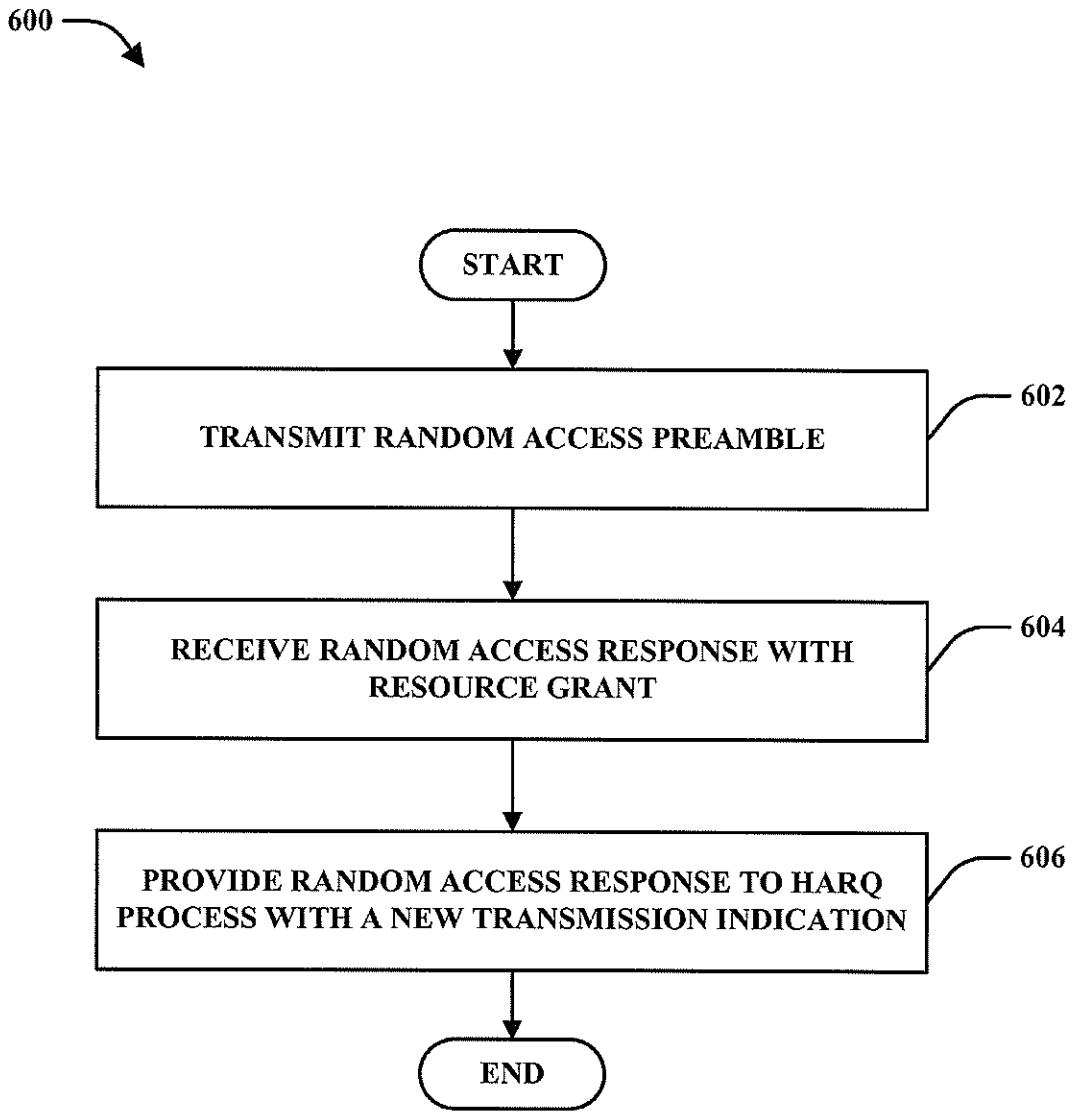
600
START
TRANSMIT RANDOM ACCESS PREAMBLE
602
RECEIVE RANDOM ACCESS RESPONSE WITH RESOURCE GRANT
604
PROVIDE RANDOM ACCESS RESPONSE TO HARQ PROCESS WITH A NEW TRANSMISSION INDICATION
606
END

FIG. 6

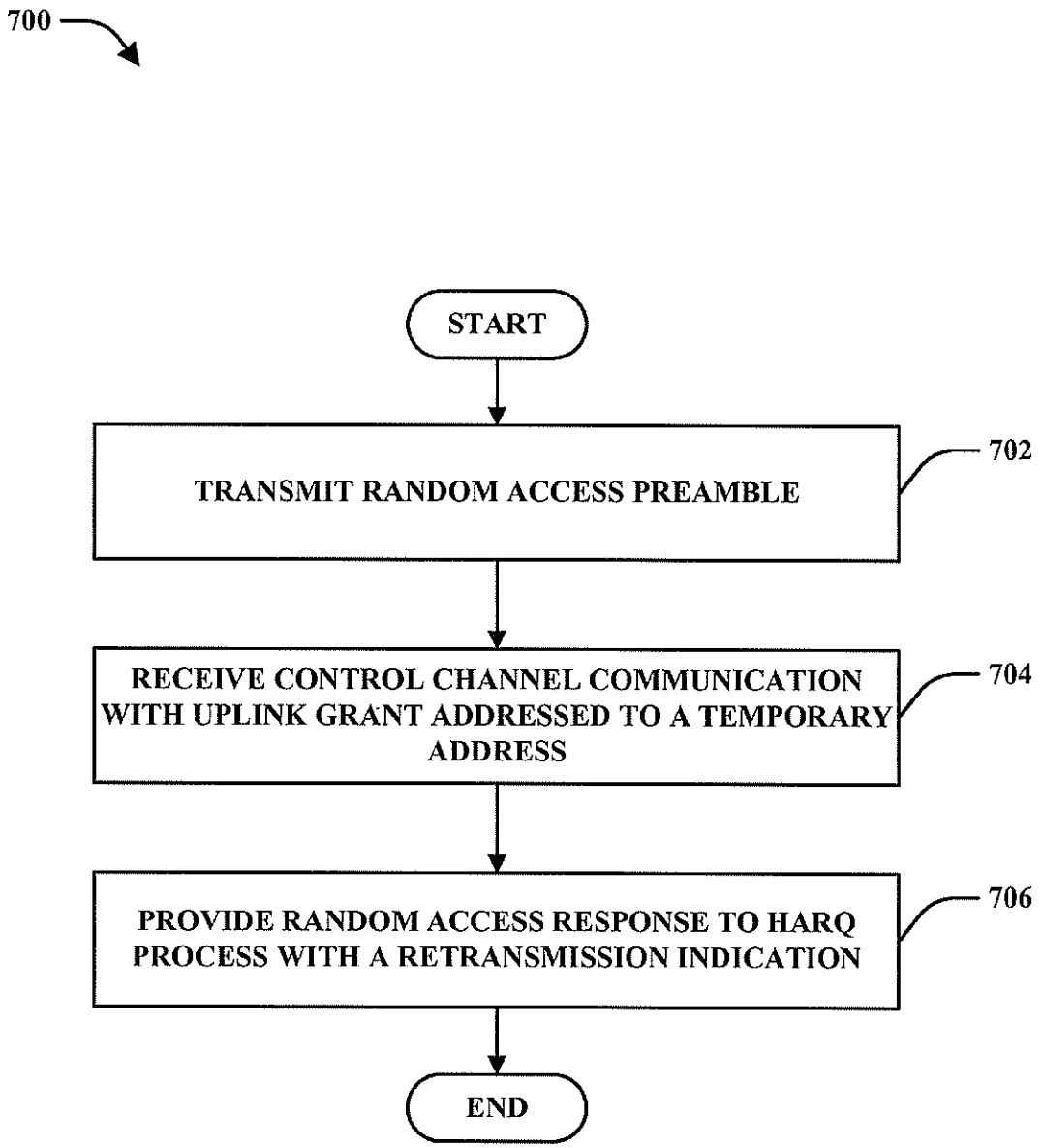
700
START
TRANSMIT RANDOM ACCESS PREAMBLE
702
RECEIVE CONTROL CHANNEL COMMUNICATION WITH UPLINK GRANT ADDRESSED TO A TEMPORARY ADDRESS
704
PROVIDE RANDOM ACCESS RESPONSE TO HARQ PROCESS WITH A RETRANSMISSION INDICATION
706
END

FIG. 7

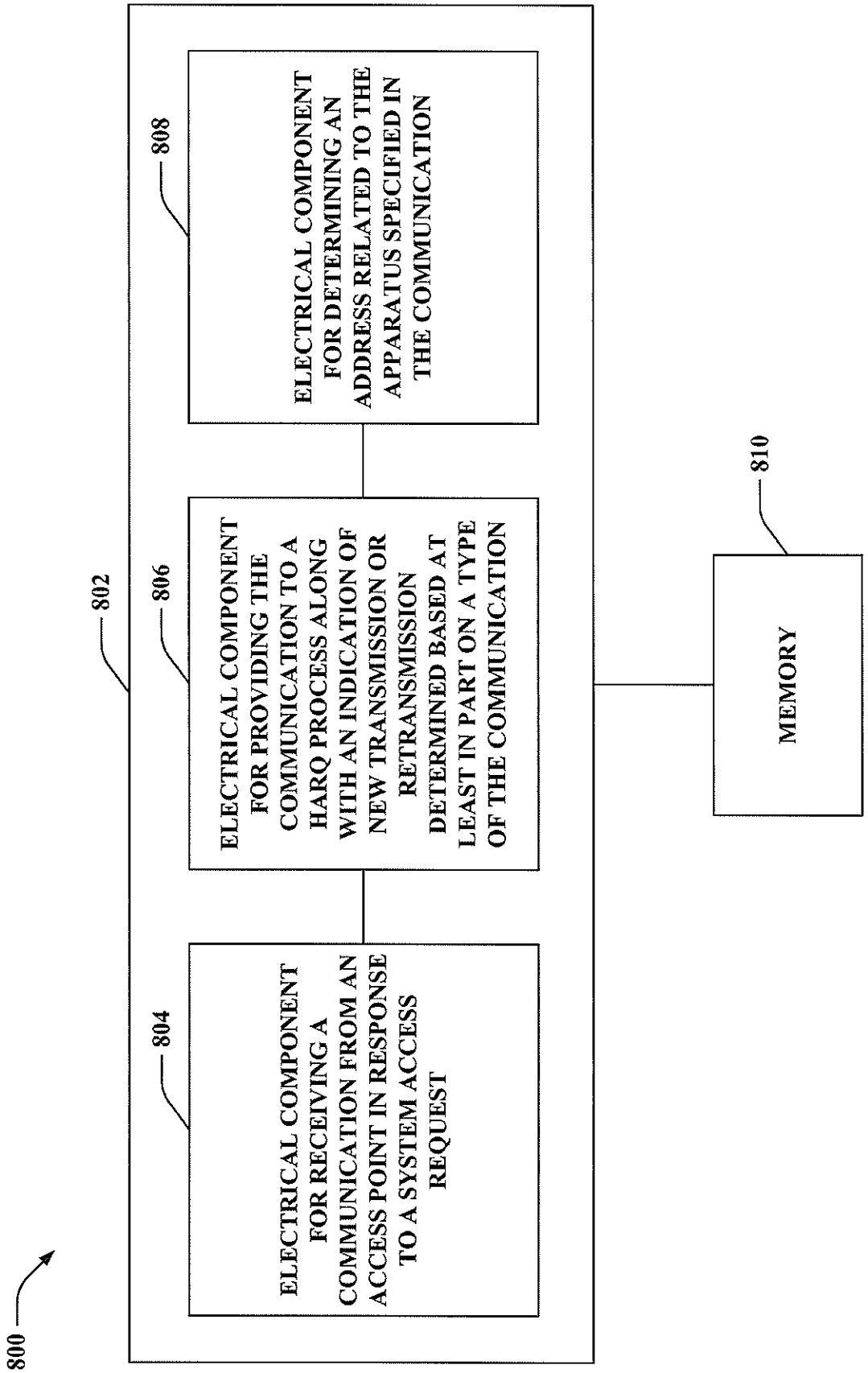
800
802
804
ELECTRICAL COMPONENT FOR RECEIVING A COMMUNICATION FROM AN ACCESS POINT IN RESPONSE TO A SYSTEM ACCESS REQUEST
806
ELECTRICAL COMPONENT FOR PROVIDING THE COMMUNICATION TO A HARQ PROCESS ALONG WITH AN INDICATION OF NEW TRANSMISSION OR RETRANSMISSION DETERMINED BASED AT LEAST IN PART ON A TYPE OF THE COMMUNICATION
808
ELECTRICAL COMPONENT FOR DETERMINING AN ADDRESS RELATED TO THE APPARATUS SPECIFIED IN THE COMMUNICATION
810
MEMORY

FIG. 8

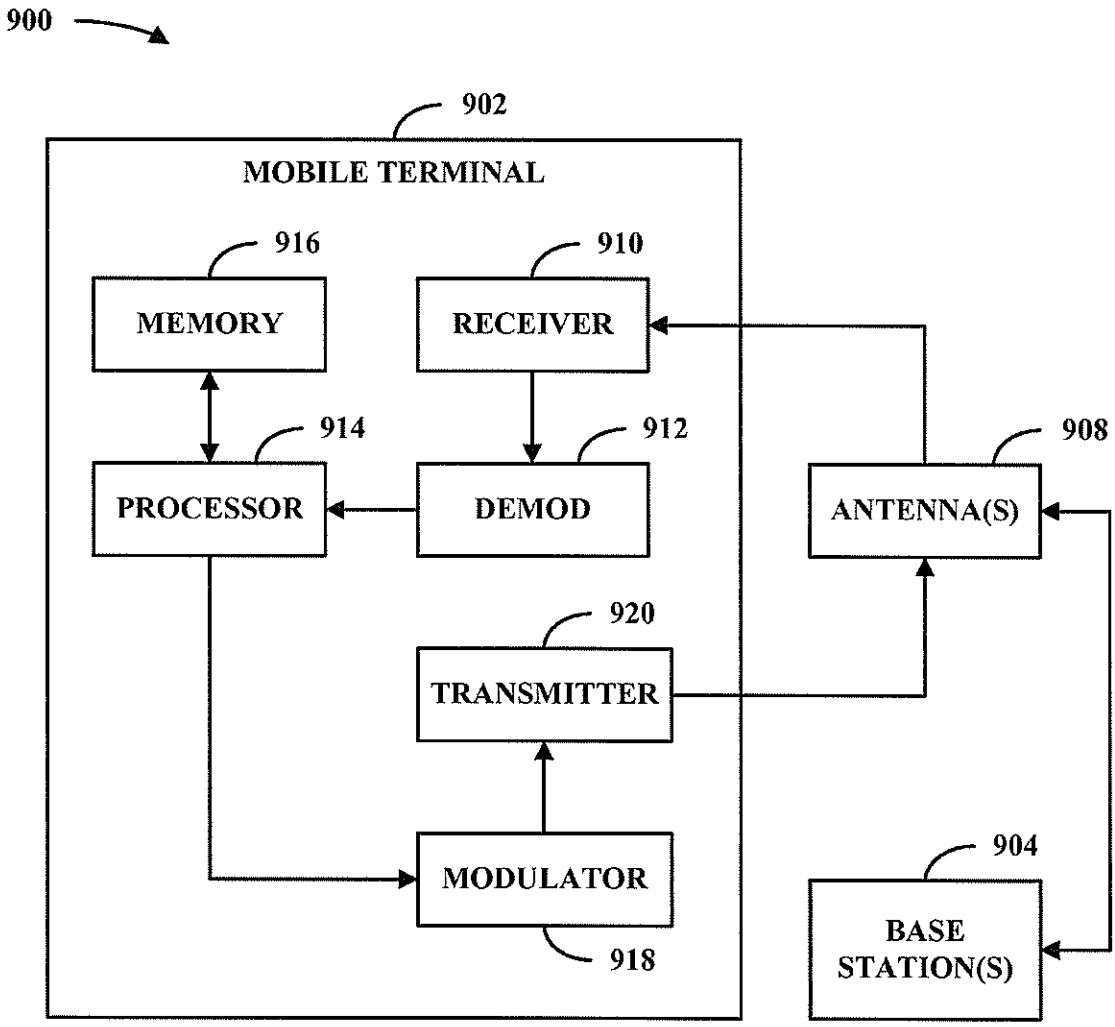
900
902
MOBILE TERMINAL
916
MEMORY
910
RECEIVER
914
PROCESSOR
912
DEMOD
908
ANTENNA(S)
920
TRANSMITTER
MODULATOR
918
904
BASE STATION(S)

FIG. 9

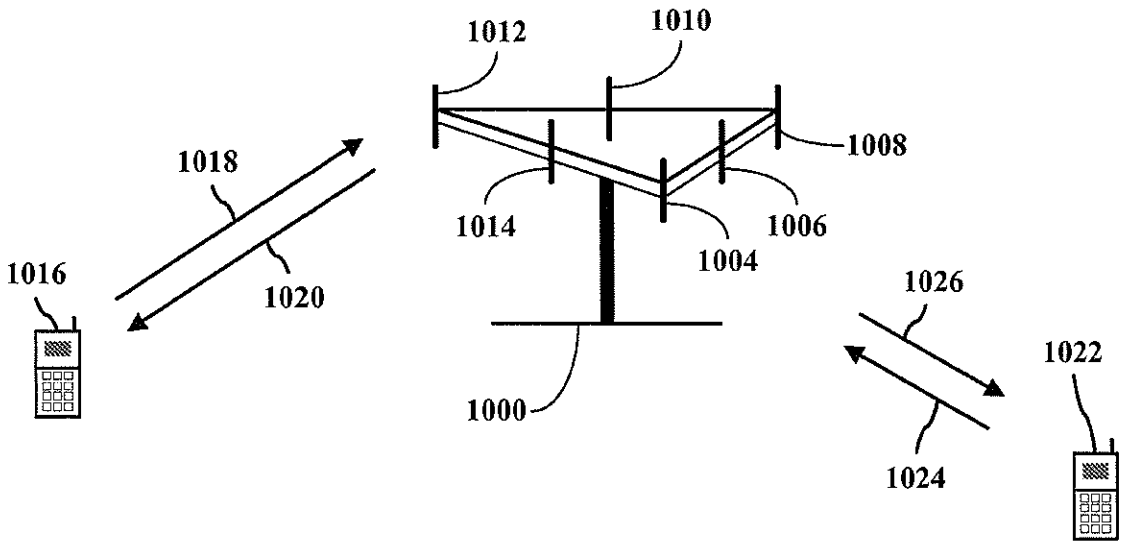
1012
1010
1008
1018
1014
1006
1004
1016
1020
1026
1022
1000
1024

FIG. 10

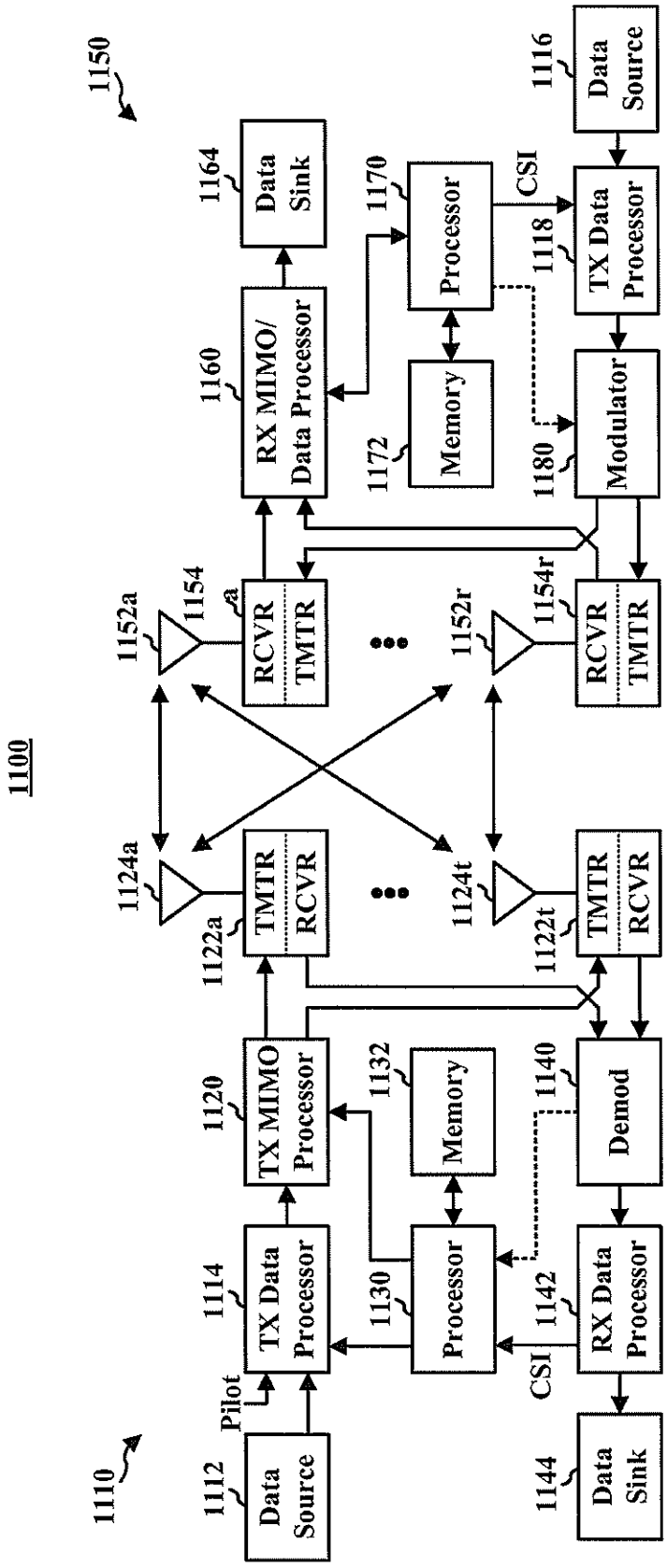
1100
1110
1112
Data Source
Pilot
1114
TX Data Processor
1120
TX MIMO Processor
1122a
TMTR
RCVR
1124a
1124t
1122t
1130
Processor
1132
Memory
1140
Demod
1142
RX Data Processor
CSI
1144
Data Sink
1150
1152a
1154a
RCVR
TMTR
1152r
1154r
1160
RX MIMO/ Data Processor
1164
Data Sink
1170
Processor
1172
Memory
1180
Modulator
1118
TX Data Processor
CSI
1116
Data Source

FIG. 11