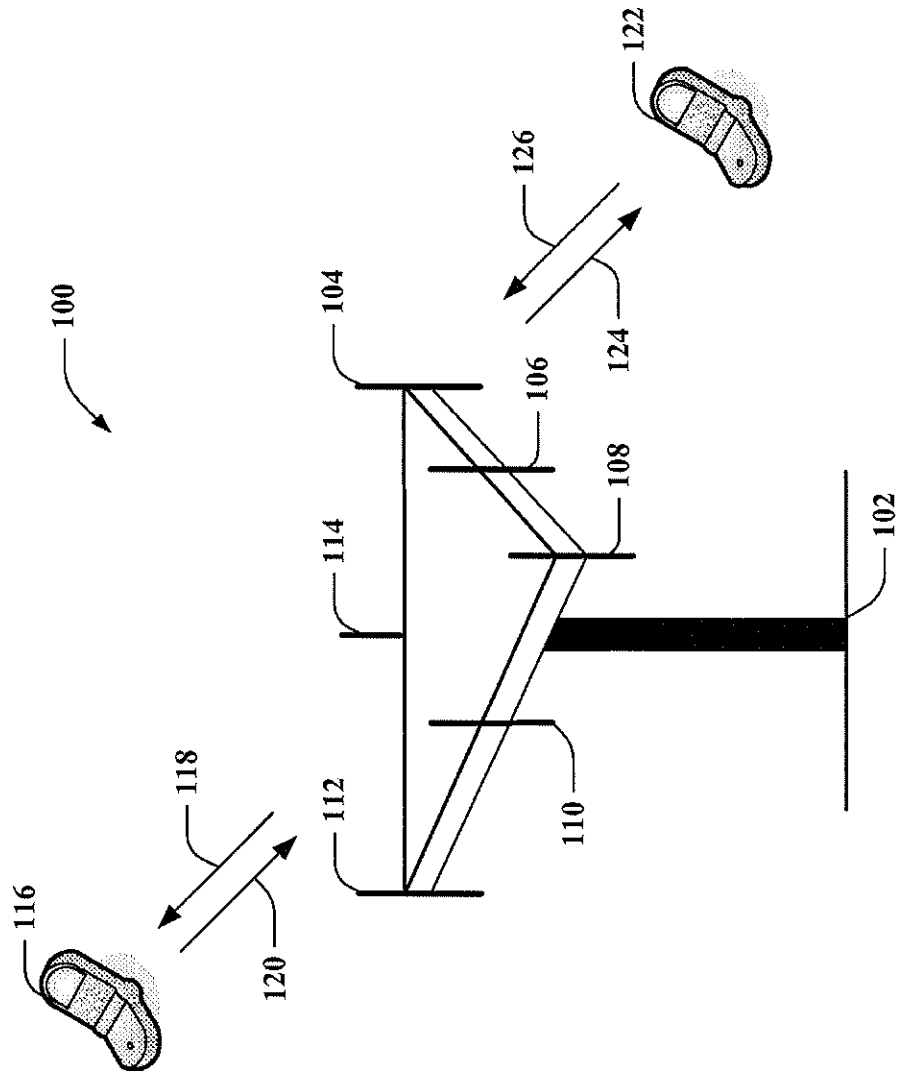


FIG. 1

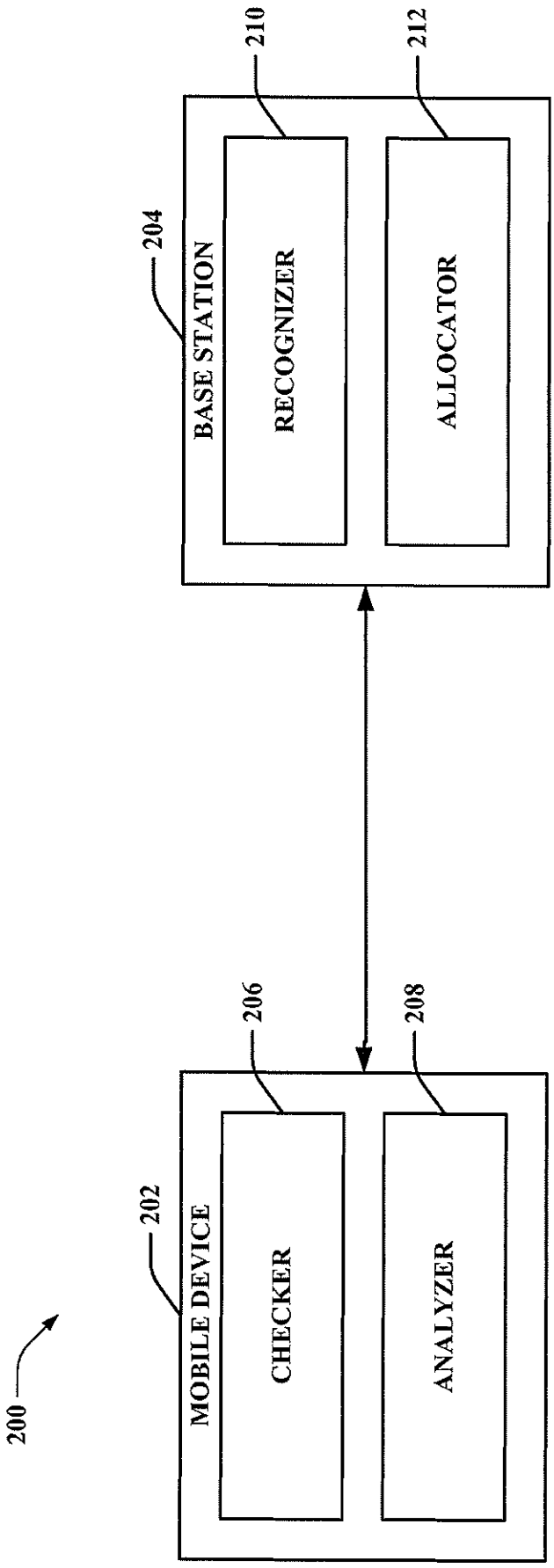

200
202
MOBILE DEVICE
CHECKER
206
ANALYZER
208
204
BASE STATION
RECOGNIZER
210
ALLOCATOR
212

FIG. 2

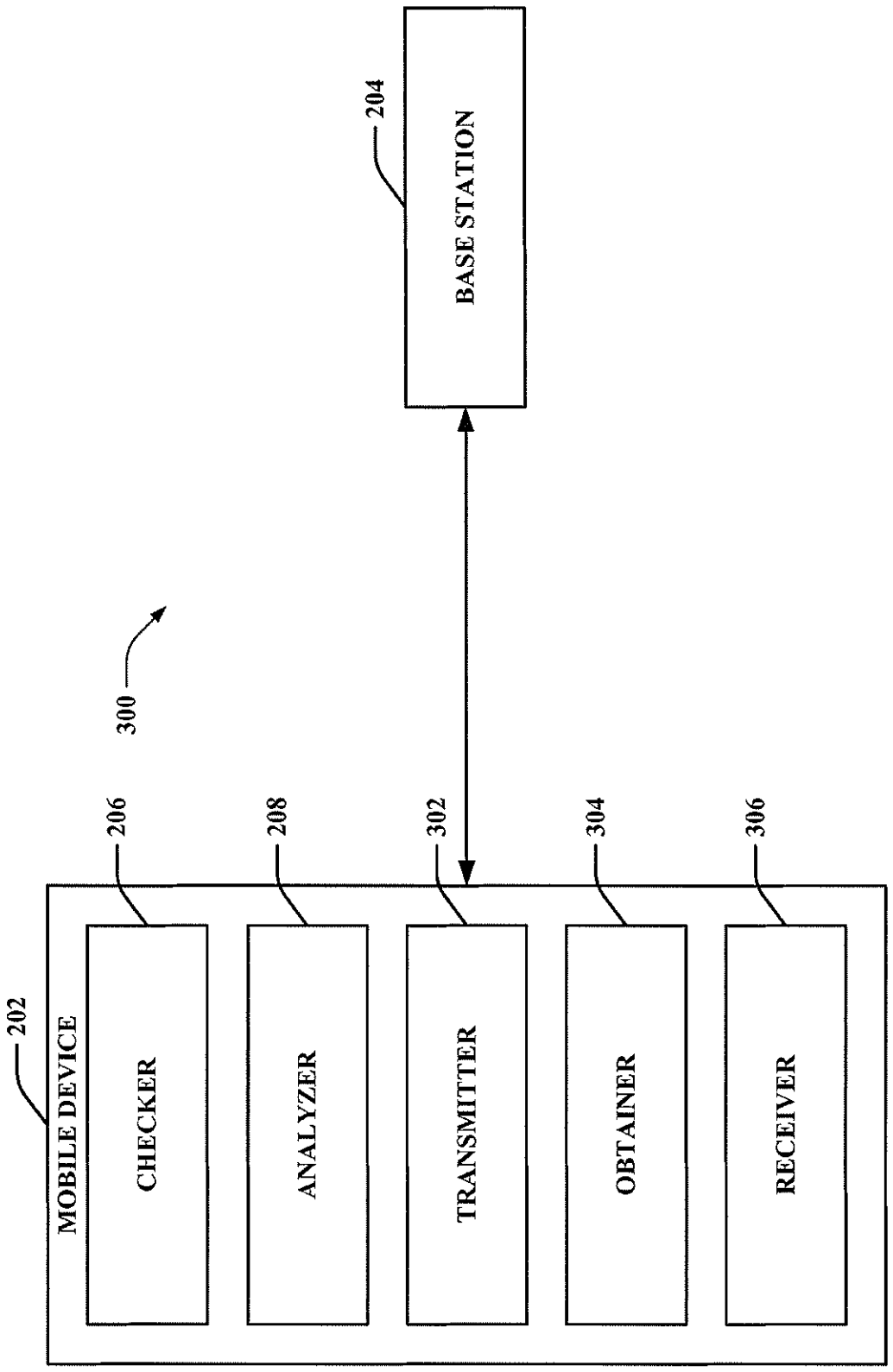

204
BASE STATION
300
206
208
302
304
306
202
MOBILE DEVICE
CHECKER
ANALYZER
TRANSMITTER
OBTAINER
RECEIVER

FIG. 3

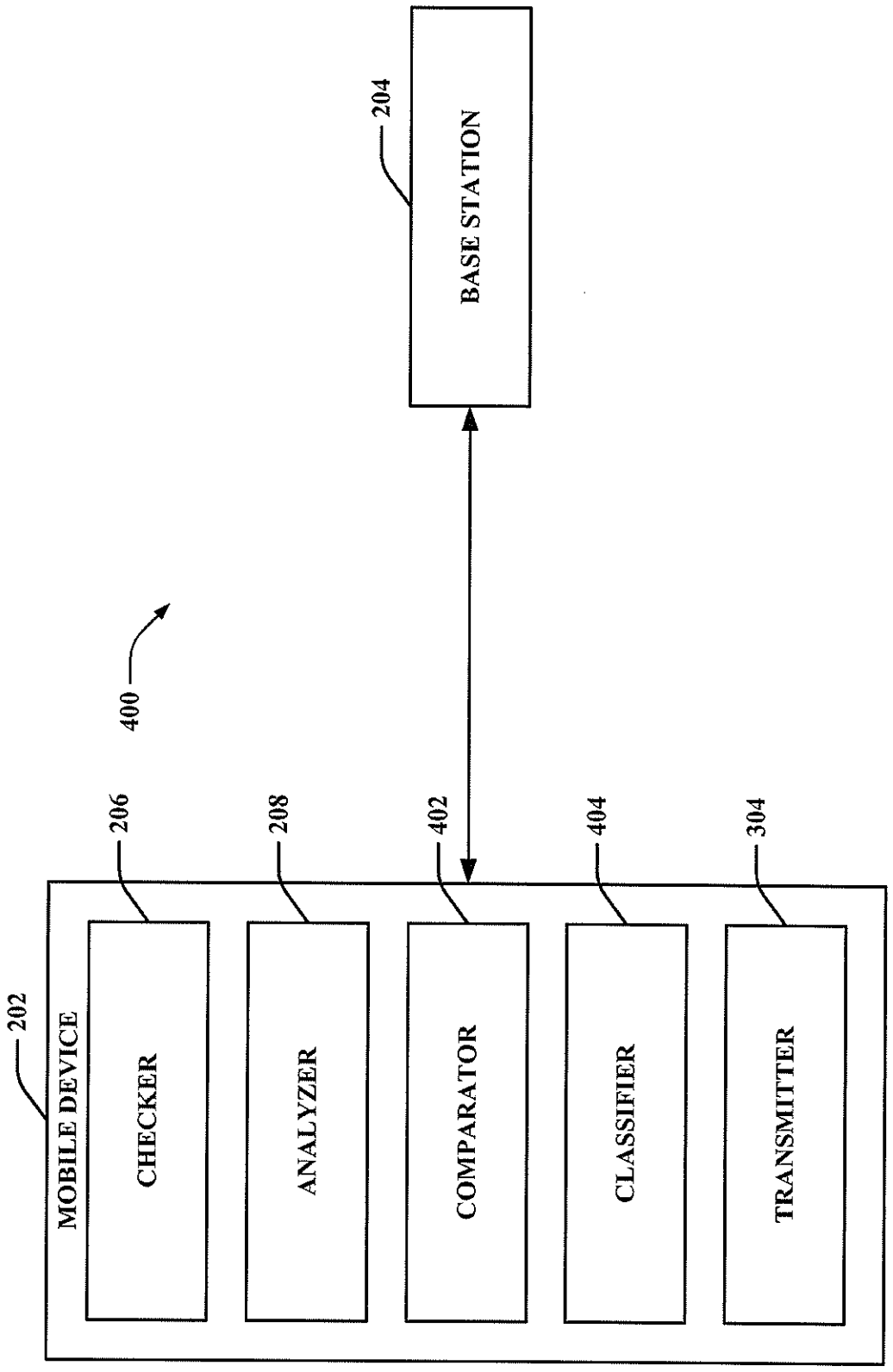

204
BASE STATION
400
206
208
402
404
304
202
MOBILE DEVICE
CHECKER
ANALYZER
COMPARATOR
CLASSIFIER
TRANSMITTER

FIG. 4

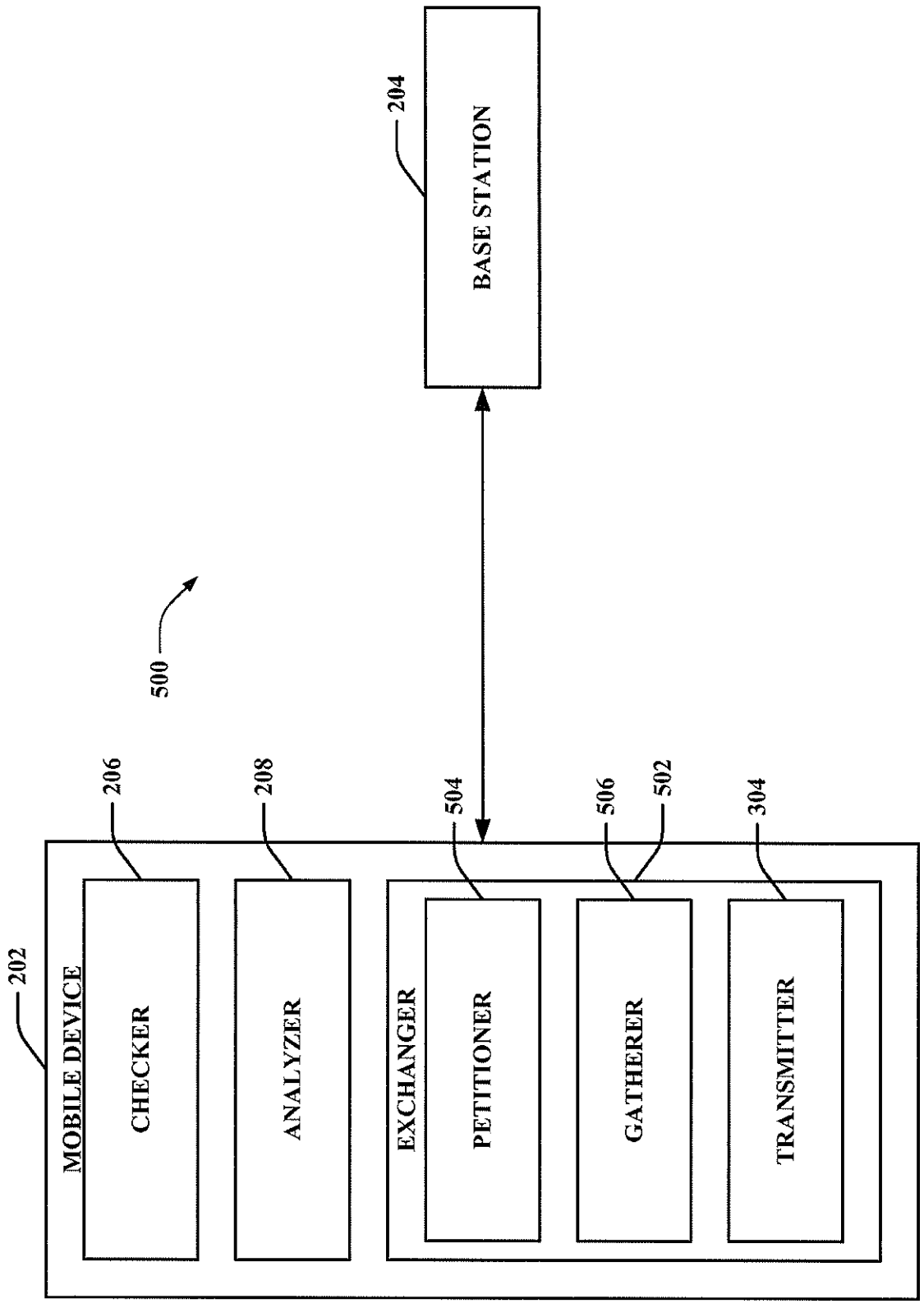

204
BASE STATION
500
206
208
504
506
502
304
202
MOBILE DEVICE
CHECKER
ANALYZER
EXCHANGER
PETITIONER
GATHERER
TRANSMITTER

FIG. 5

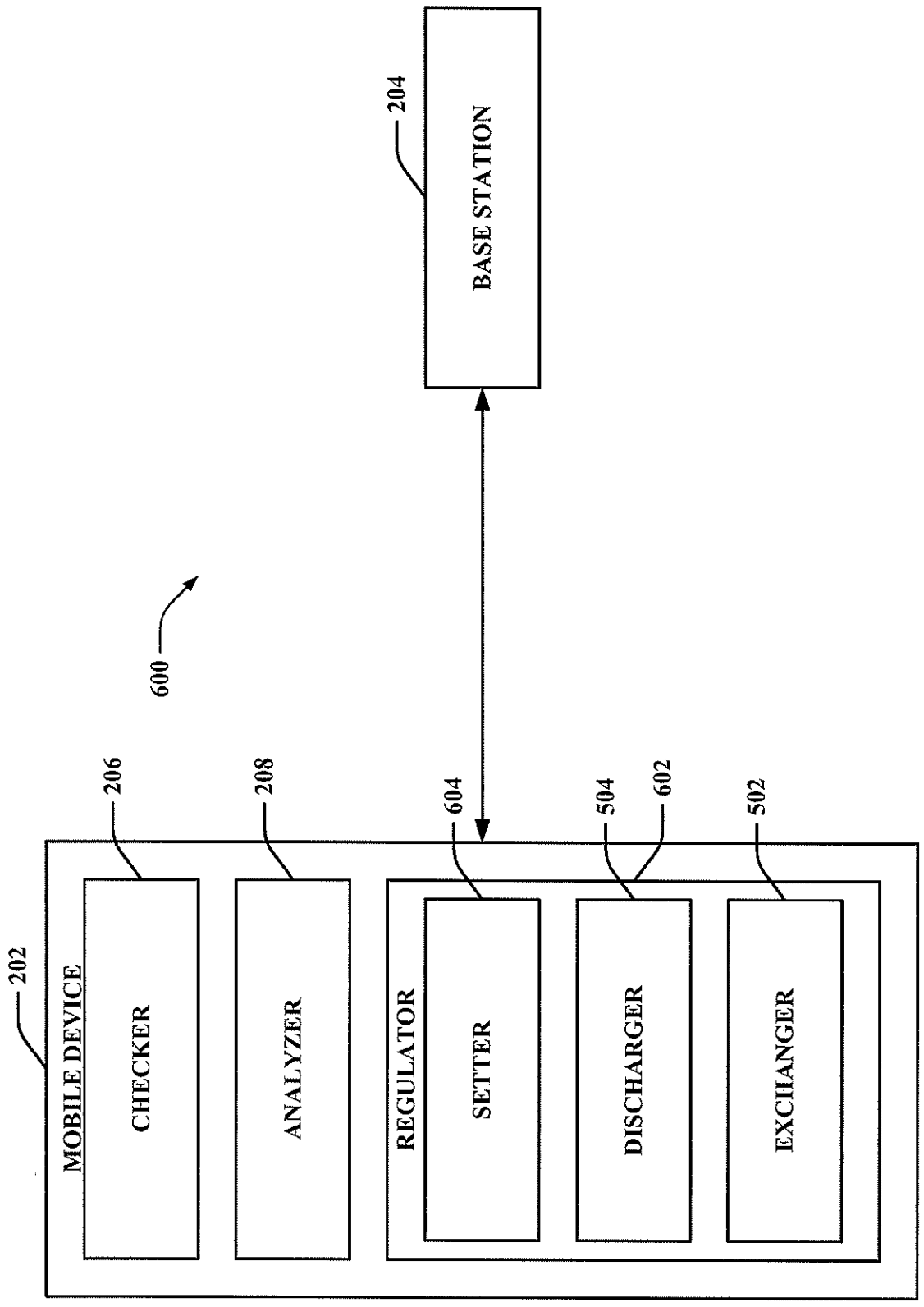

204
BASE STATION
600
206
208
604
504
602
502
202
MOBILE DEVICE
CHECKER
ANALYZER
REGULATOR
SETTER
DISCHARGER
EXCHANGER

FIG. 6

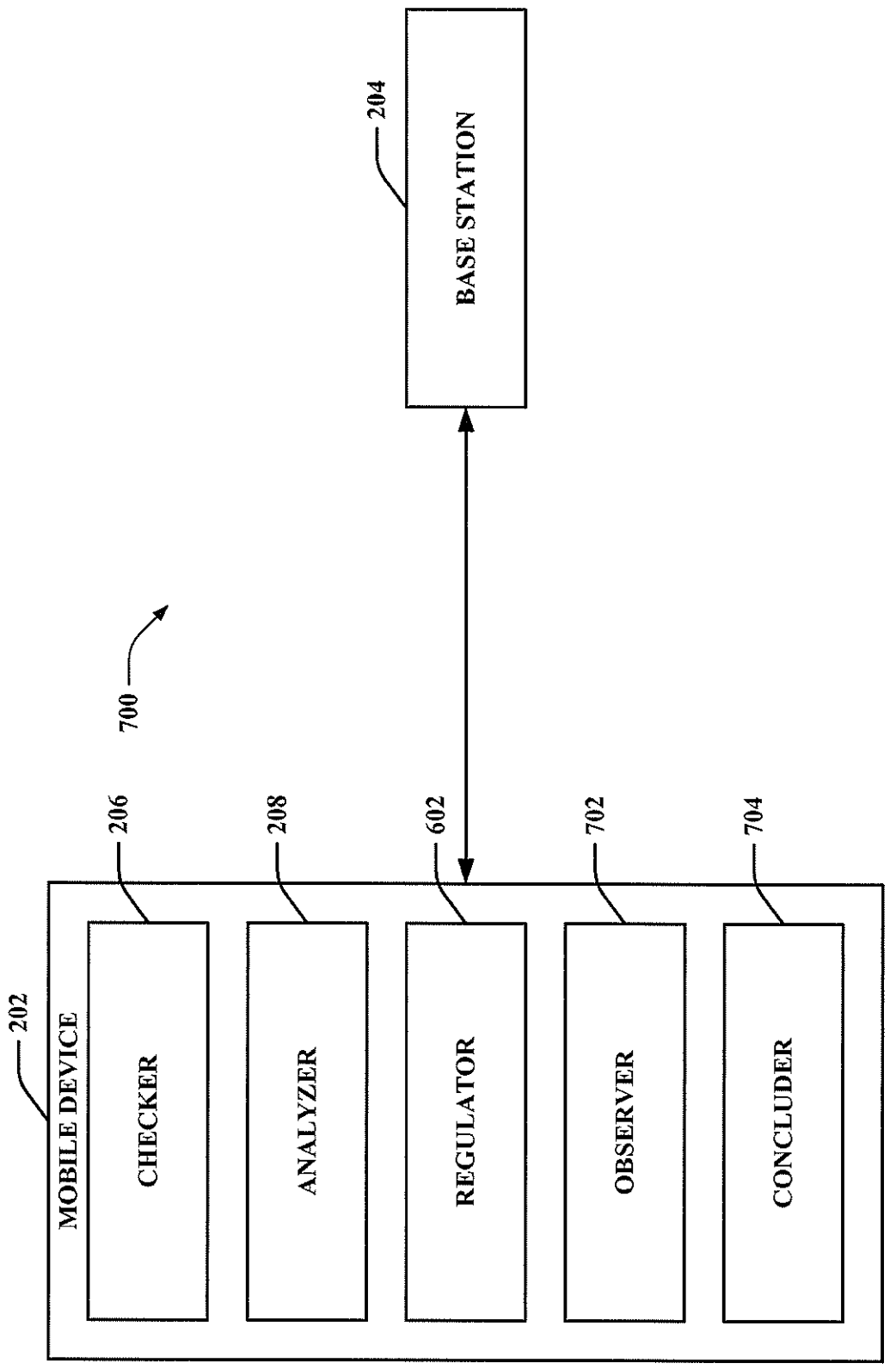

700
204
BASE STATION
206
208
602
702
704
202
MOBILE DEVICE
CHECKER
ANALYZER
REGULATOR
OBSERVER
CONCLUDER

FIG. 7

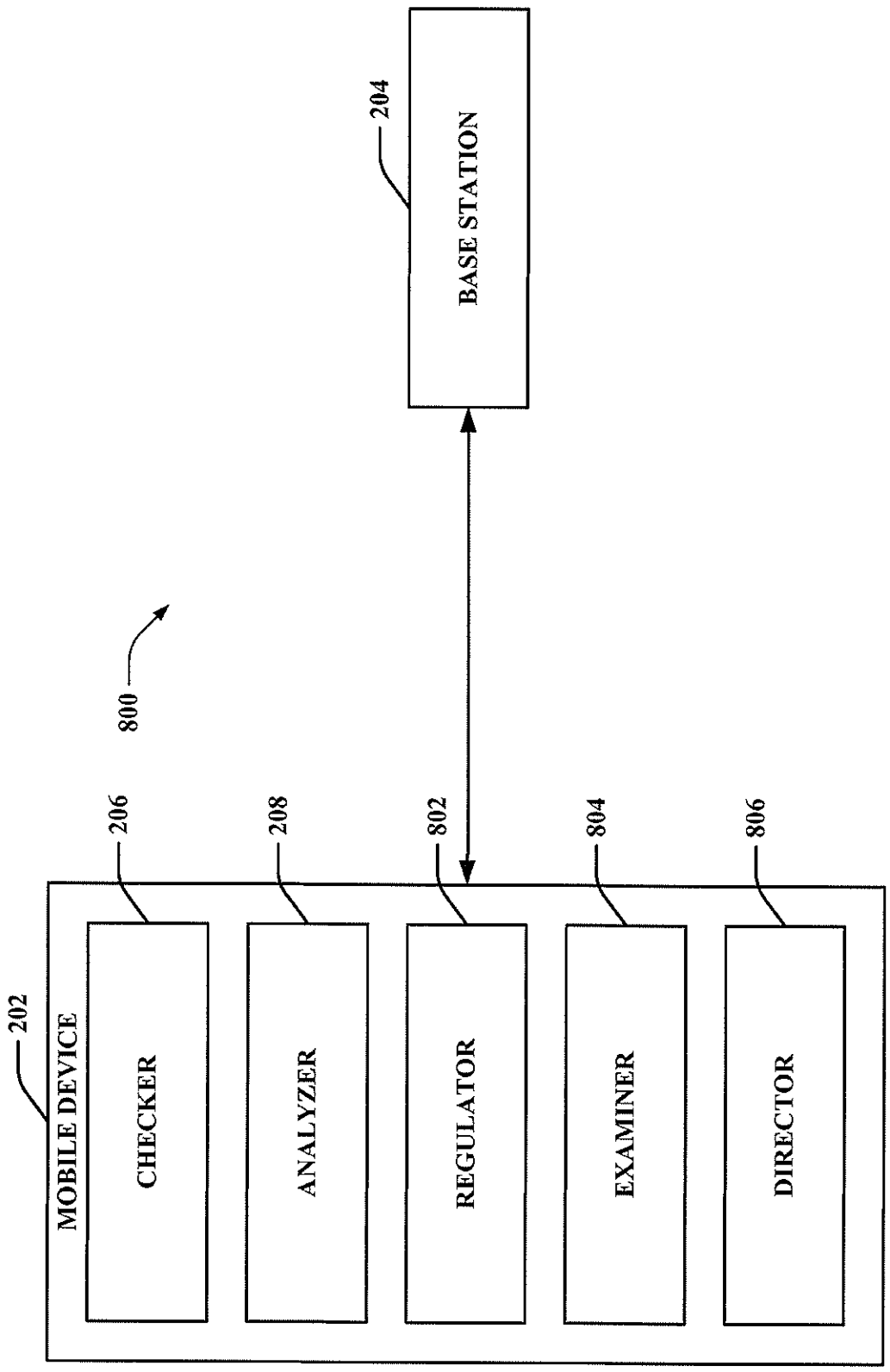

800
202
MOBILE DEVICE
206
CHECKER
208
ANALYZER
802
REGULATOR
804
EXAMINER
806
DIRECTOR
204
BASE STATION

FIG. 8

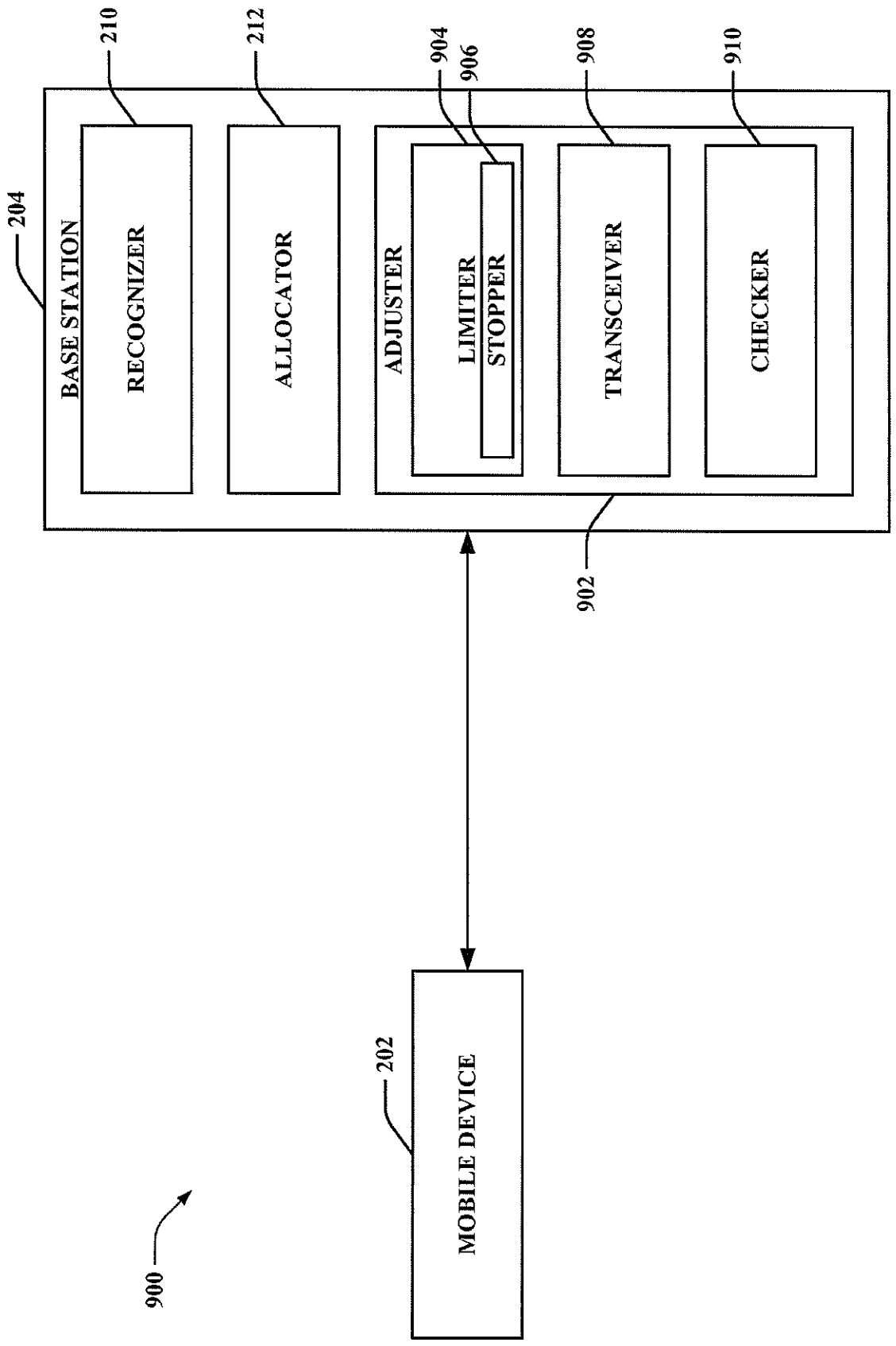

900
MOBILE DEVICE
202
BASE STATION
204
RECOGNIZER
210
ALLOCATOR
212
ADJUSTER
LIMITER
STOPPER
904
906
TRANSCEIVER
908
CHECKER
910
902

FIG. 9

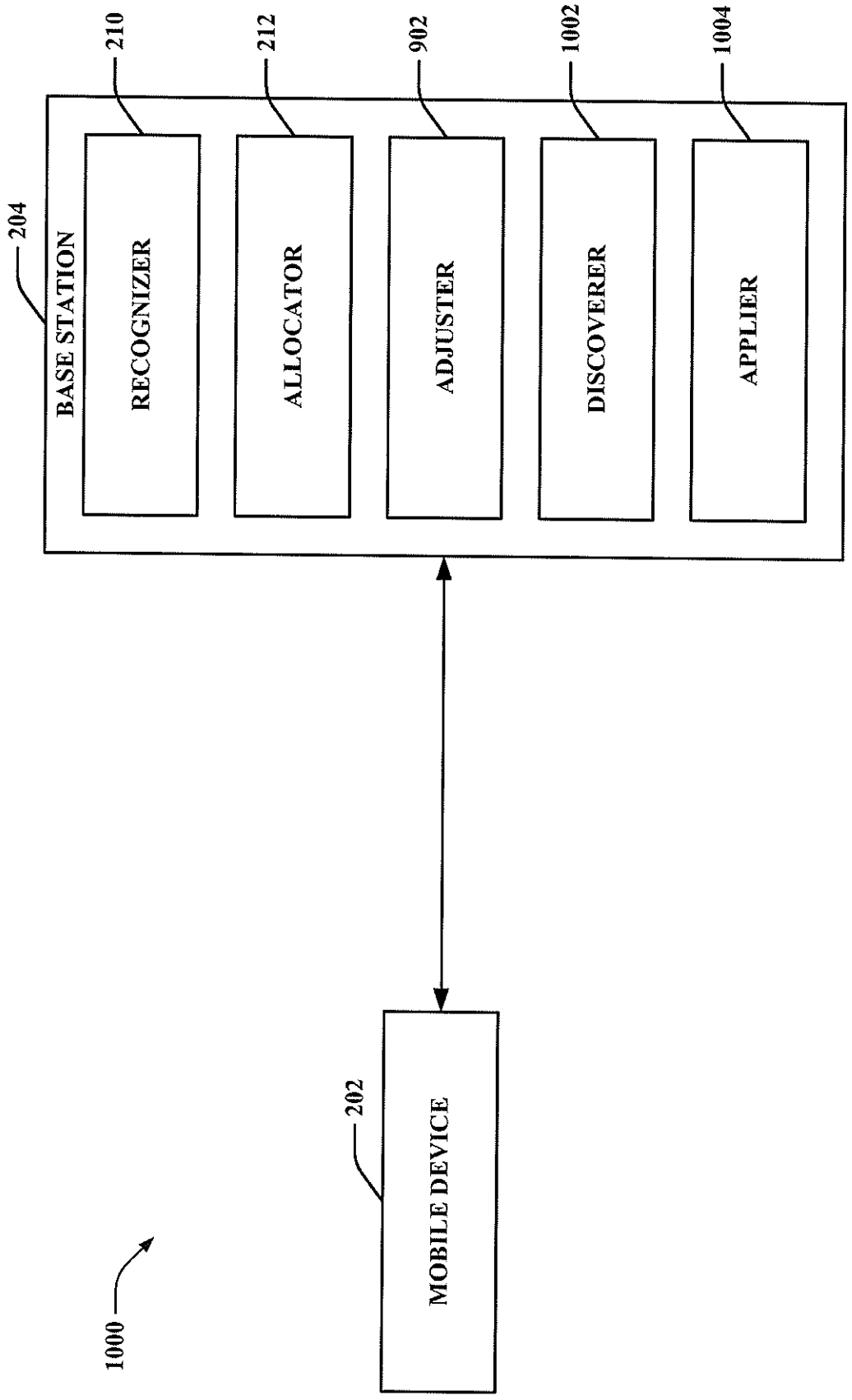

1000
MOBILE DEVICE
202
BASE STATION
204
RECOGNIZER
210
ALLOCATOR
212
ADJUSTER
902
DISCOVERER
1002
APPLIER
1004

FIG. 10

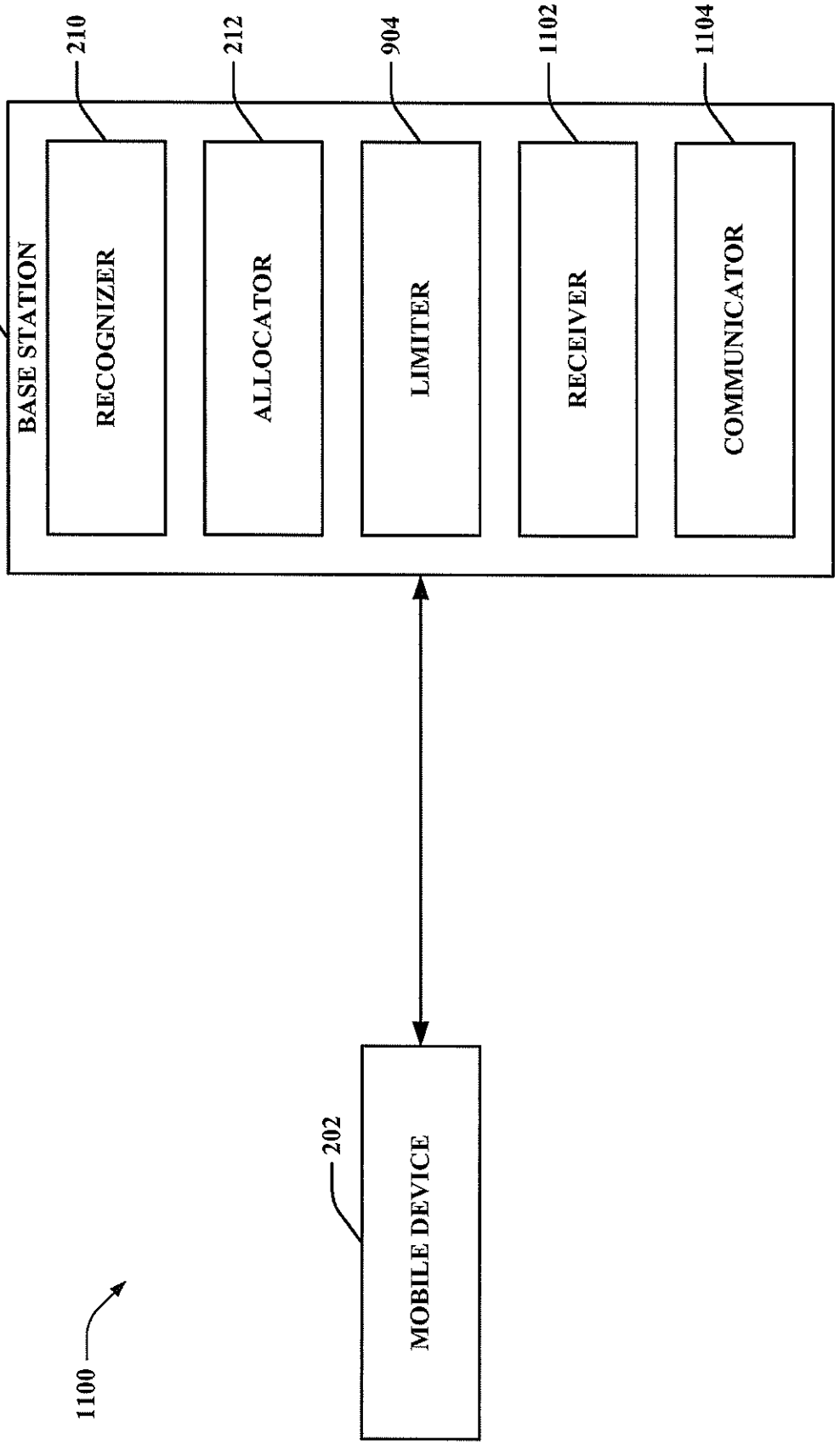

1100
MOBILE DEVICE
202
BASE STATION
204
RECOGNIZER
210
ALLOCATOR
212
LIMITER
904
RECEIVER
1102
COMMUNICATOR
1104

FIG. 11

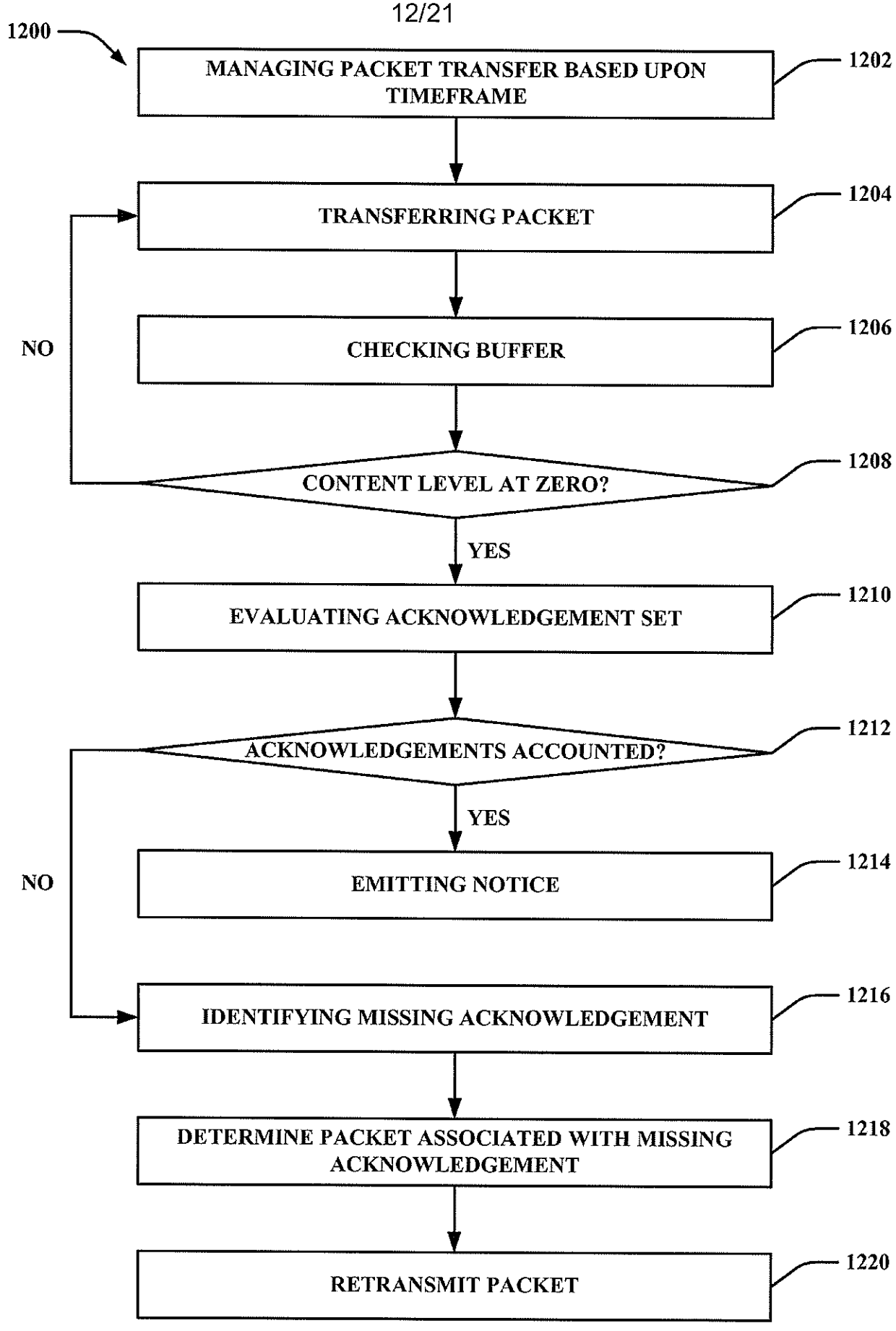

1200
MANAGING PACKET TRANSFER BASED UPON TIMEFRAME
1202
TRANSFERRING PACKET
1204
CHECKING BUFFER
1206
NO
CONTENT LEVEL AT ZERO?
1208
YES
EVALUATING ACKNOWLEDGEMENT SET
1210
ACKNOWLEDGEMENTS ACCOUNTED?
1212
YES
NO
EMITTING NOTICE
1214
IDENTIFYING MISSING ACKNOWLEDGEMENT
1216
DETERMINE PACKET ASSOCIATED WITH MISSING ACKNOWLEDGEMENT
1218
RETRANSMIT PACKET
1220

FIG. 12

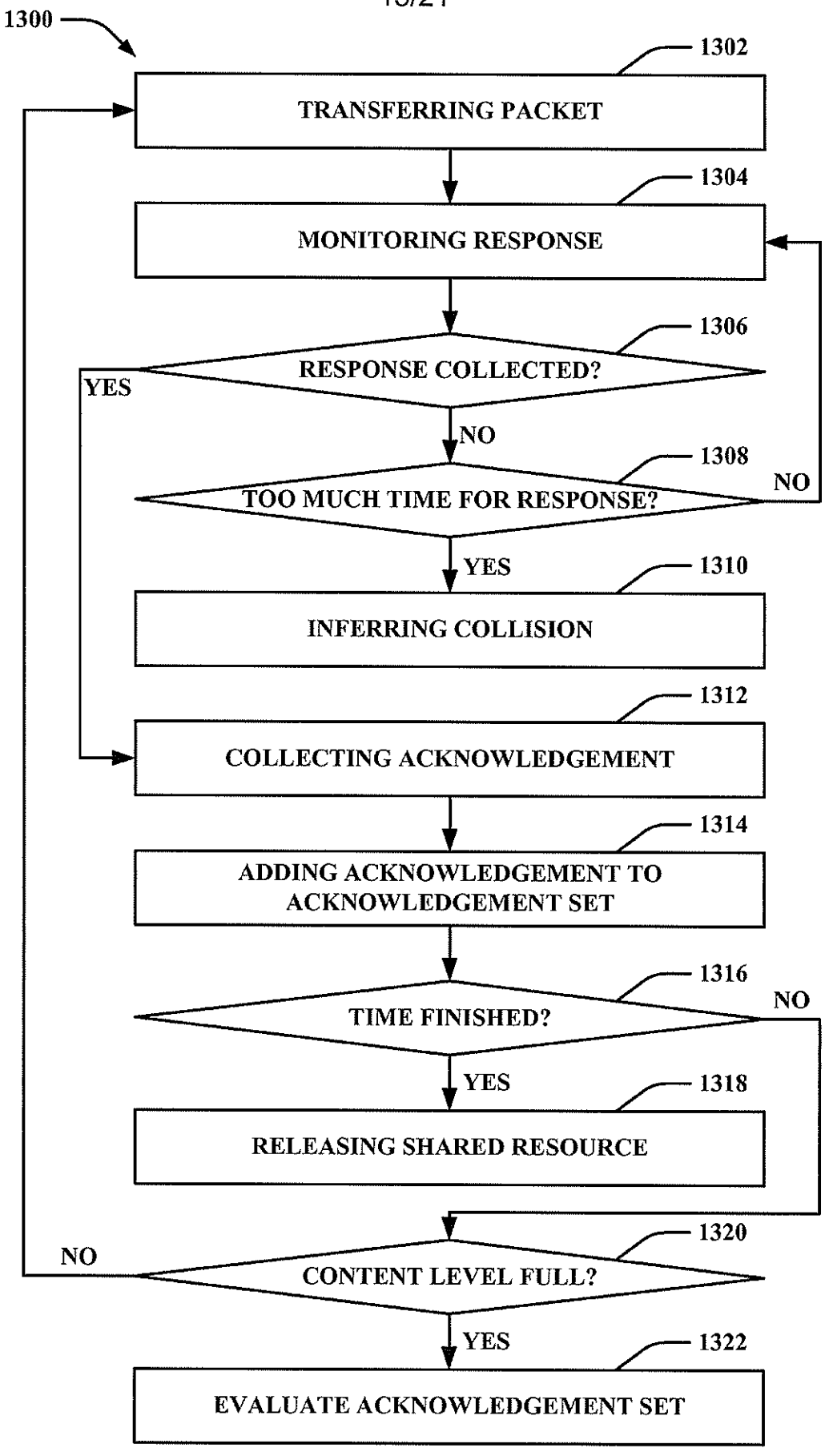

1300
1302
TRANSFERRING PACKET
1304
MONITORING RESPONSE
1306
RESPONSE COLLECTED?
YES
NO
1308
TOO MUCH TIME FOR RESPONSE?
NO
YES
1310
INFERRING COLLISION
1312
COLLECTING ACKNOWLEDGEMENT
1314
ADDING ACKNOWLEDGEMENT TO ACKNOWLEDGEMENT SET
1316
TIME FINISHED?
NO
YES
1318
RELEASING SHARED RESOURCE
1320
NO
CONTENT LEVEL FULL?
YES
1322
EVALUATE ACKNOWLEDGEMENT SET

FIG. 13

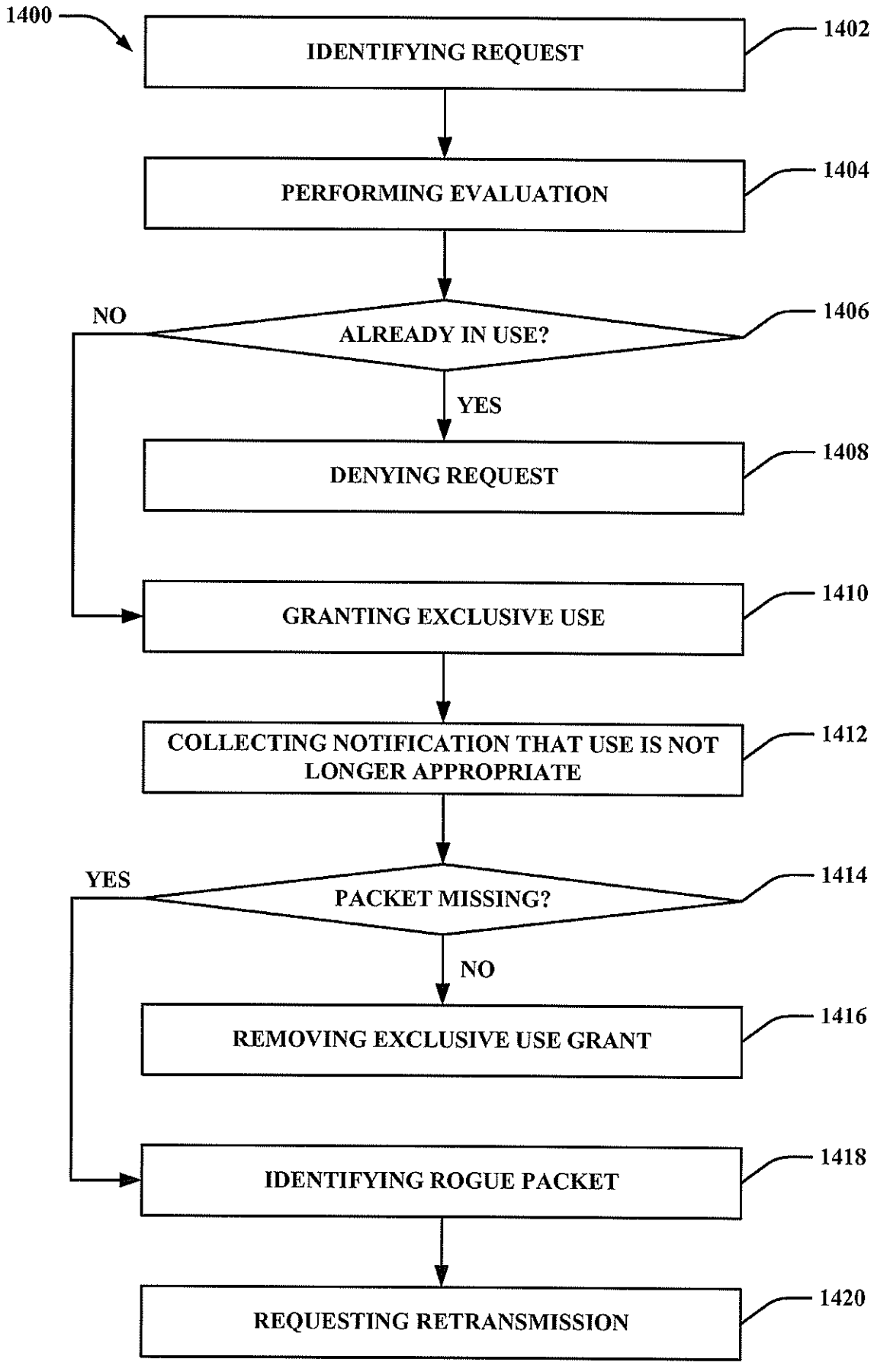

1400
IDENTIFYING REQUEST
1402
PERFORMING EVALUATION
1404
NO
ALREADY IN USE?
1406
YES
DENYING REQUEST
1408
GRANTING EXCLUSIVE USE
1410
COLLECTING NOTIFICATION THAT USE IS NOT LONGER APPROPRIATE
1412
YES
PACKET MISSING?
1414
NO
REMOVING EXCLUSIVE USE GRANT
1416
IDENTIFYING ROGUE PACKET
1418
REQUESTING RETRANSMISSION
1420

FIG. 14

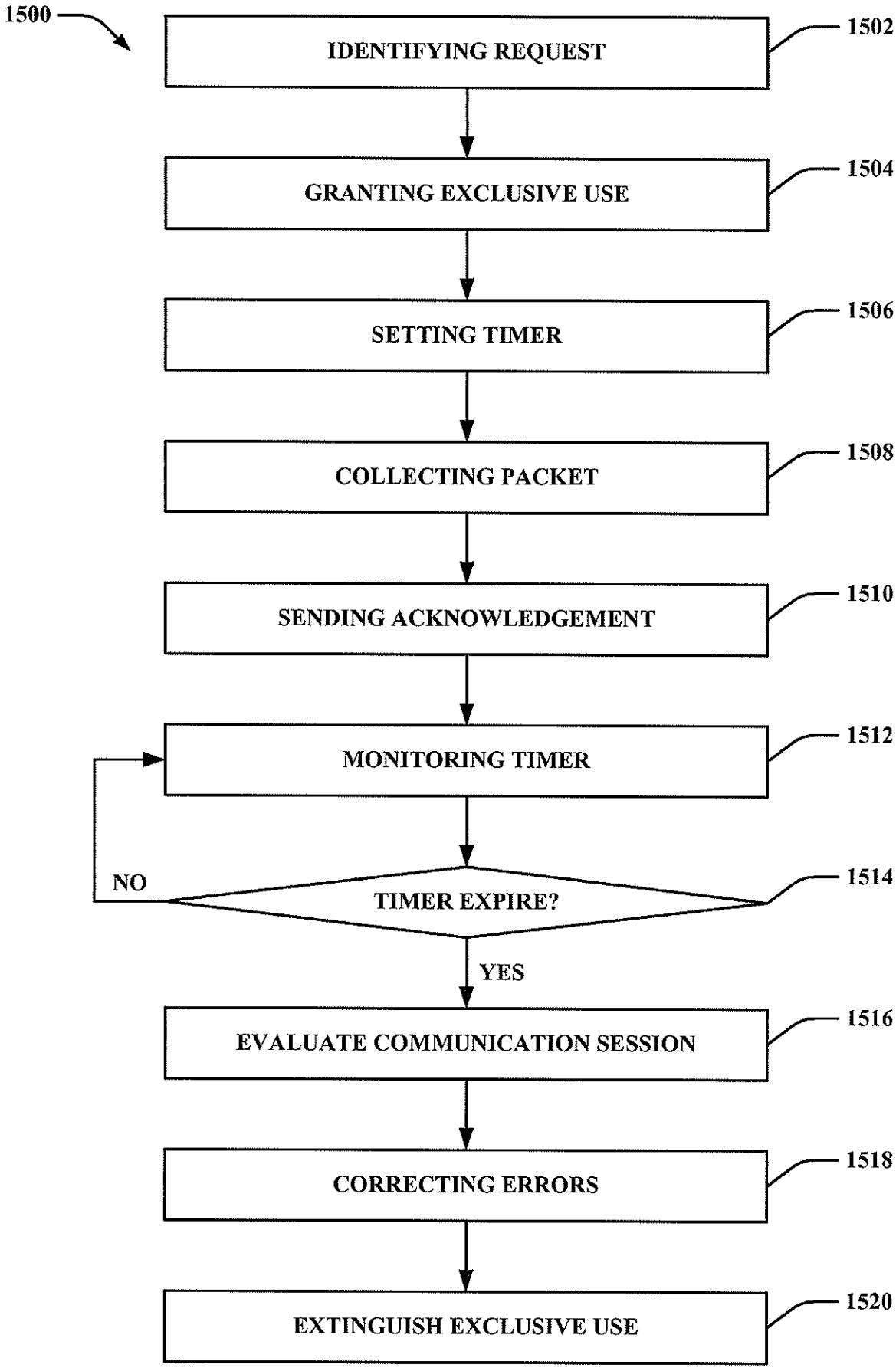

1500
IDENTIFYING REQUEST
1502
GRANTING EXCLUSIVE USE
1504
SETTING TIMER
1506
COLLECTING PACKET
1508
SENDING ACKNOWLEDGEMENT
1510
MONITORING TIMER
1512
NO
TIMER EXPIRE?
1514
YES
EVALUATE COMMUNICATION SESSION
1516
CORRECTING ERRORS
1518
EXTINGUISH EXCLUSIVE USE
1520

FIG. 15

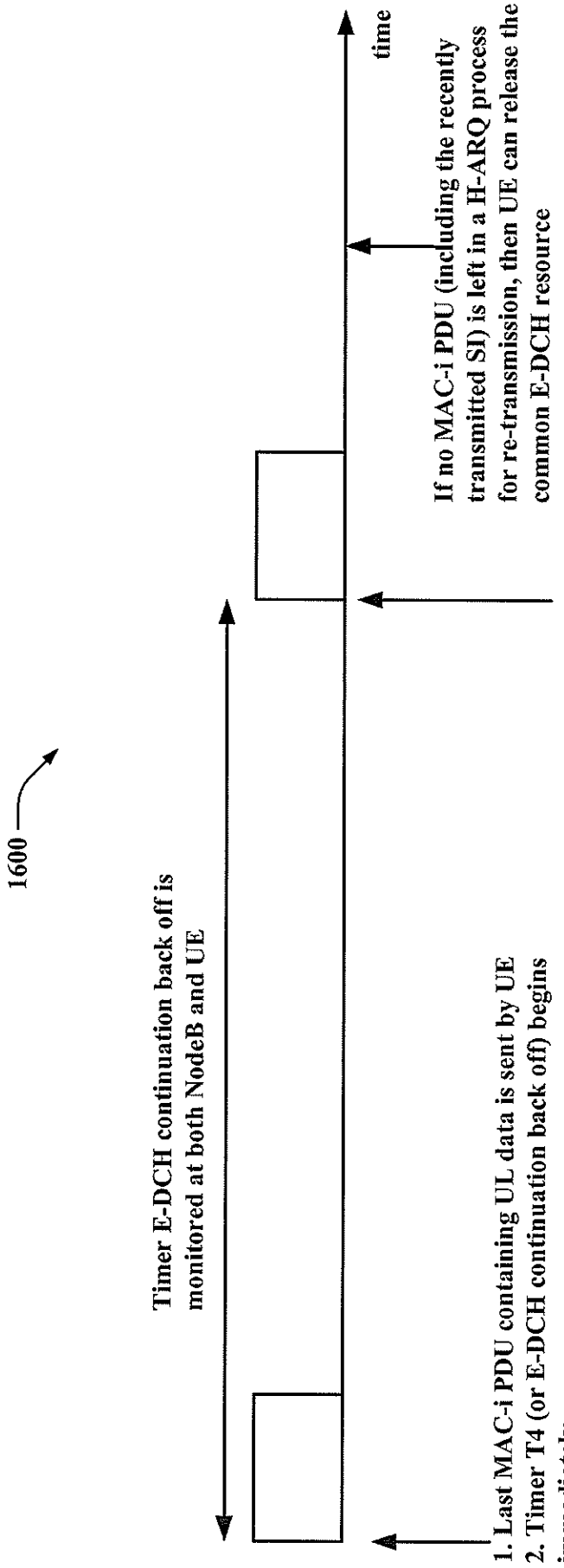

1600
Timer E-DCH continuation back off is monitored at both NodeB and UE
time
1. Last MAC-i PDU containing UL data is sent by UE
2. Timer T4 (or E-DCH continuation back off) begins immediately
Since no UL data appeared in the UE's buffer during the time "E-DCH continuation buffer the UE transmits empty buffer status report (SI containing TEBS =0) in a MAC-i PDU
If no MAC-i PDU (including the recently transmitted SI) is left in a H-ARQ process for re-transmission, then UE can release the common E-DCH resource

FIG. 16

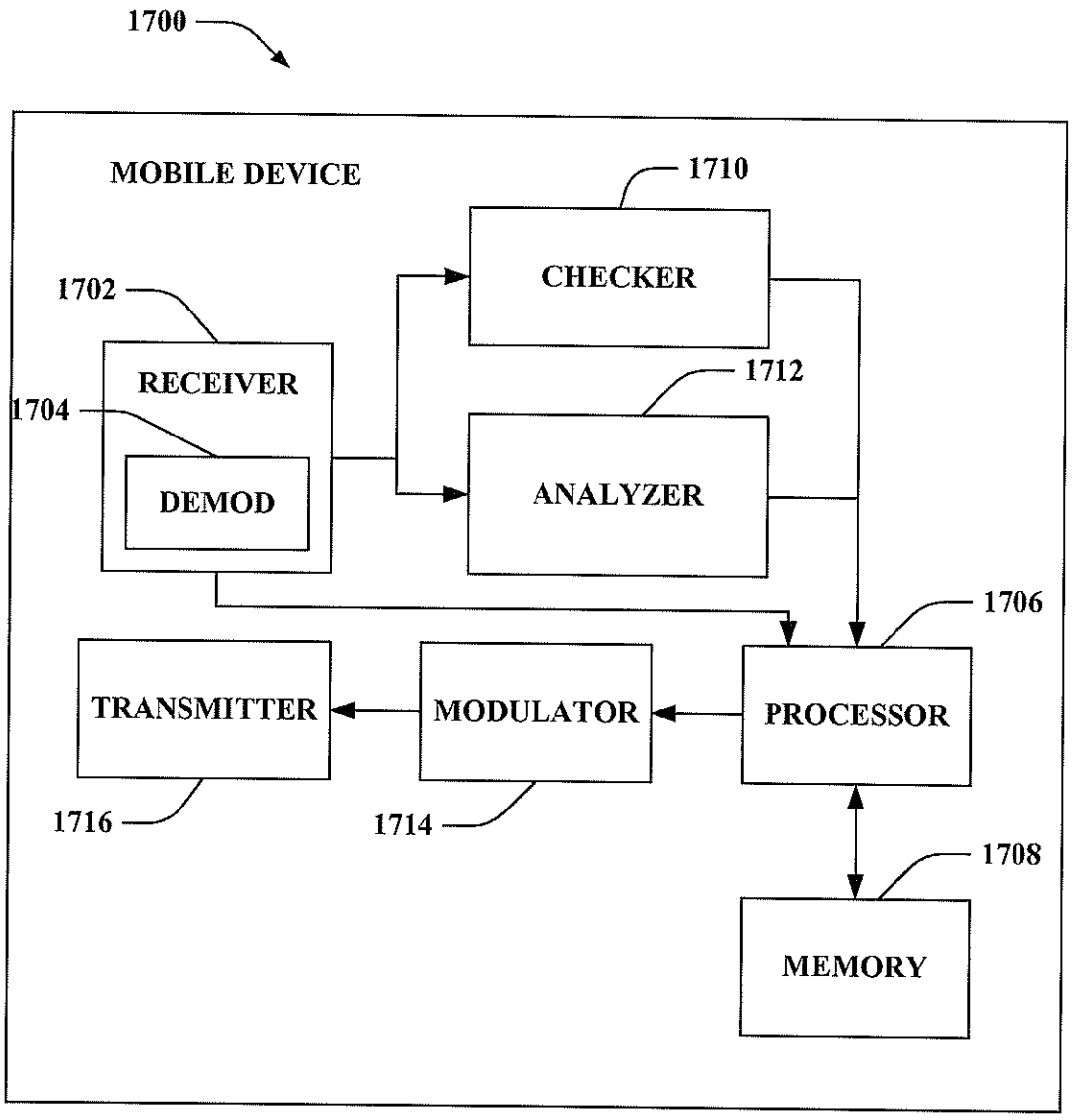

1700
MOBILE DEVICE
1710
CHECKER
1702
RECEIVER
1704
DEMOD
1712
ANALYZER
1706
TRANSMITTER
MODULATOR
PROCESSOR
1716
1714
1708
MEMORY

FIG. 17

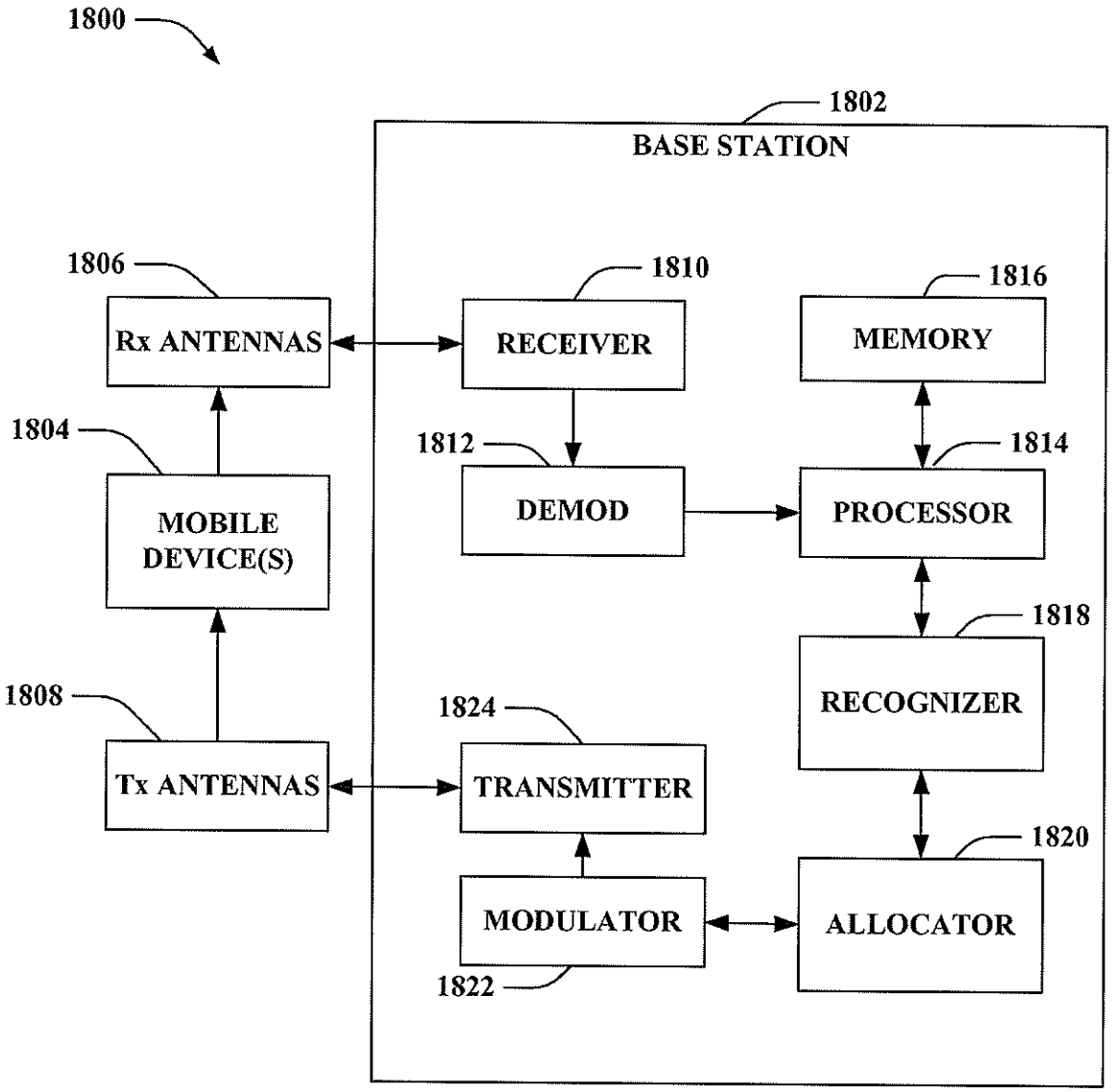

1800
1802
BASE STATION
1806
Rx ANTENNAS
1810
RECEIVER
1816
MEMORY
1804
MOBILE DEVICE(S)
1812
DEMOD
1814
PROCESSOR
1818
RECOGNIZER
1808
Tx ANTENNAS
1824
TRANSMITTER
1820
ALLOCATOR
MODULATOR
1822

FIG. 18

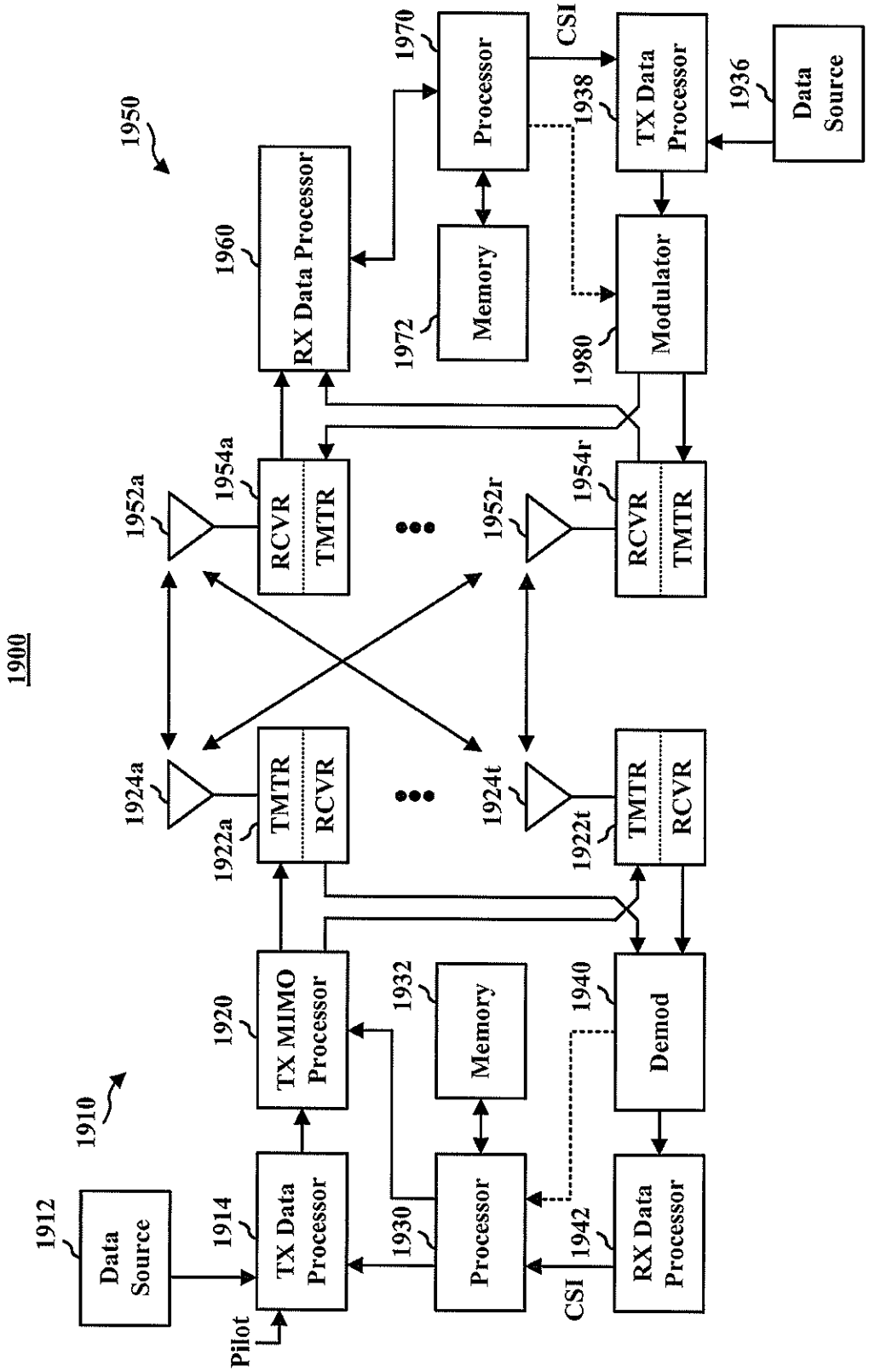

1900
1910
1912
Data Source
1914
TX Data Processor
Pilot
1920
TX MIMO Processor
1922a
TMTR
RCVR
1924a
1930
Processor
1932
Memory
1940
Demod
1942
RX Data Processor
CSI
1950
1952a
1954a
RCVR
TMTR
1952r
1954r
RCVR
TMTR
1960
RX Data Processor
1970
Processor
CSI
1972
Memory
1980
Modulator
1938
TX Data Processor
1936
Data Source
1922t
TMTR
RCVR
1924t

FIG. 19

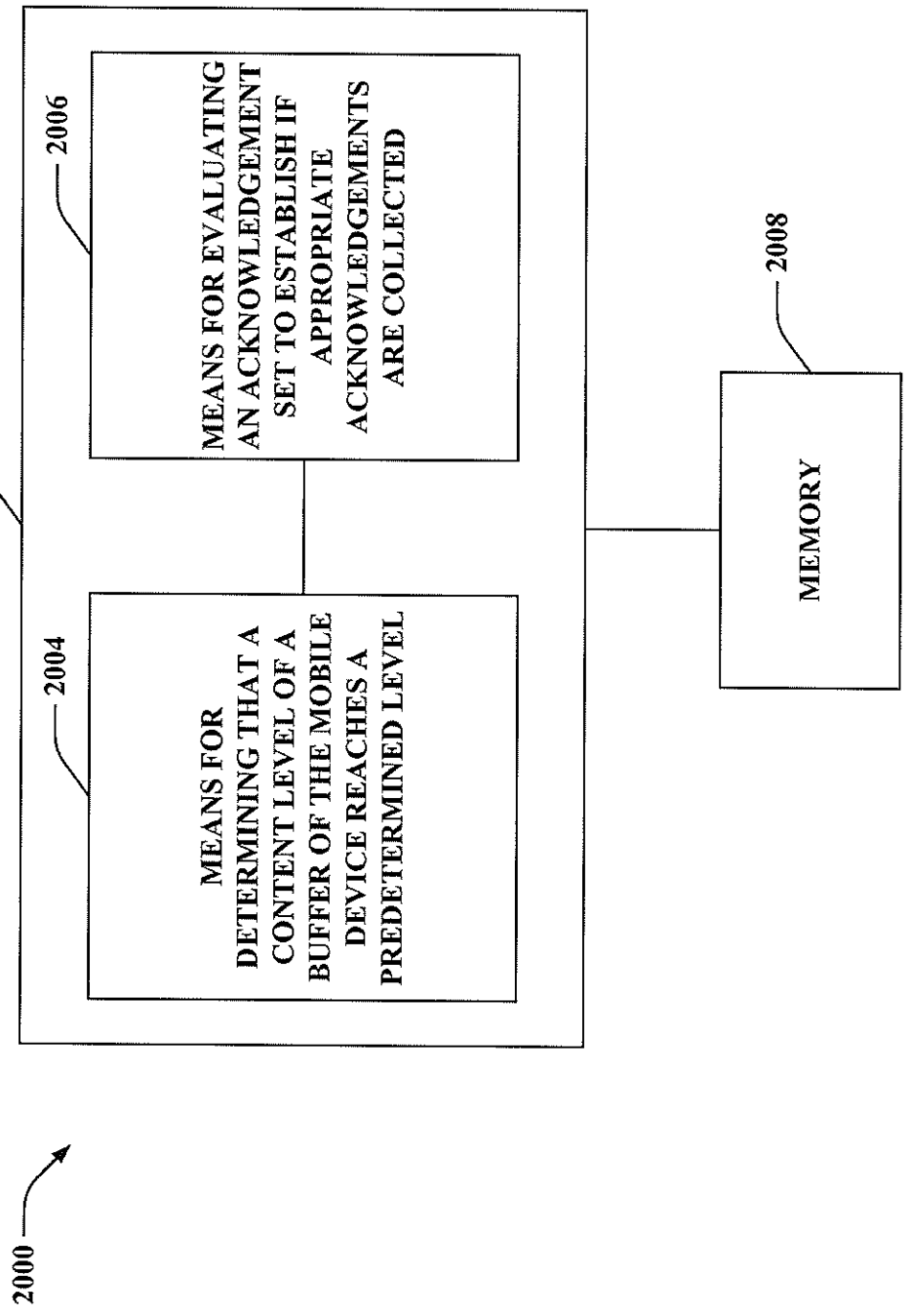

2000
2002
2004
MEANS FOR DETERMINING THAT A CONTENT LEVEL OF A BUFFER OF THE MOBILE DEVICE REACHES A PREDETERMINED LEVEL
2006
MEANS FOR EVALUATING AN ACKNOWLEDGEMENT SET TO ESTABLISH IF APPROPRIATE ACKNOWLEDGEMENTS ARE COLLECTED
2008
MEMORY

FIG. 20

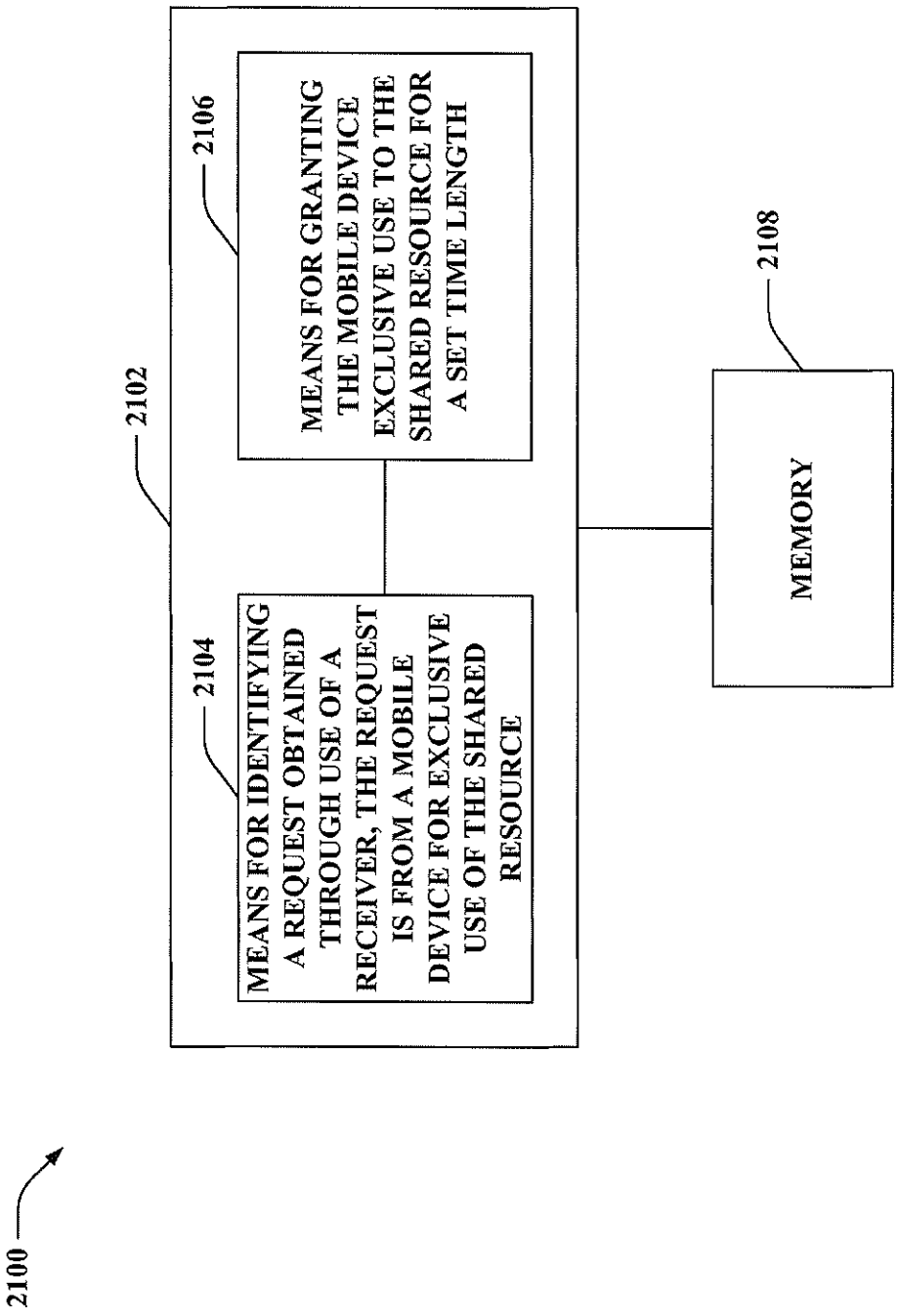

2100
2102
2104
MEANS FOR IDENTIFYING A REQUEST OBTAINED THROUGH USE OF A RECEIVER, THE REQUEST IS FROM A MOBILE DEVICE FOR EXCLUSIVE USE OF THE SHARED RESOURCE
2106
MEANS FOR GRANTING THE MOBILE DEVICE EXCLUSIVE USE TO THE SHARED RESOURCE FOR A SET TIME LENGTH
2108
MEMORY

FIG. 21