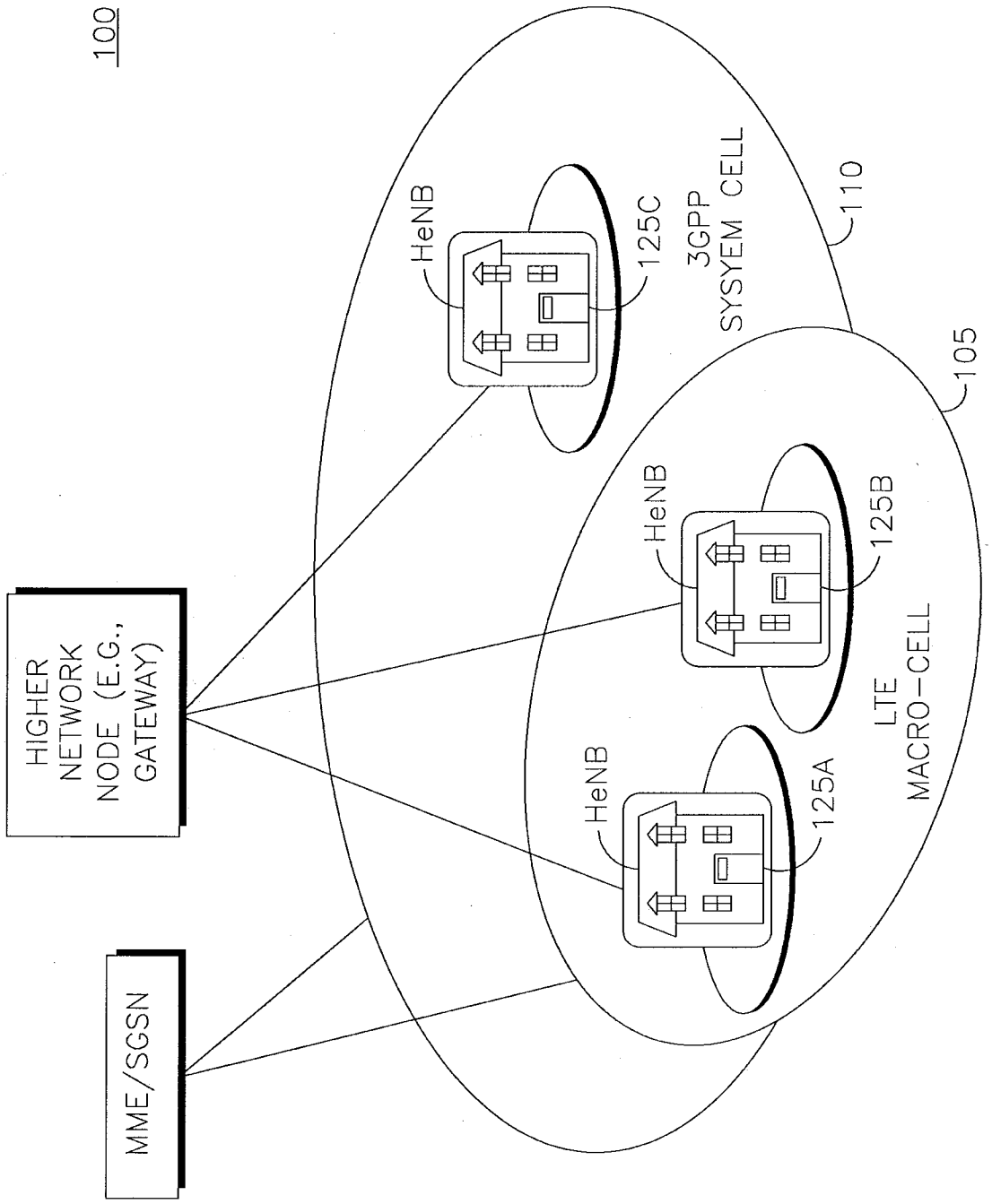


FIG. 1
PRIOR ART

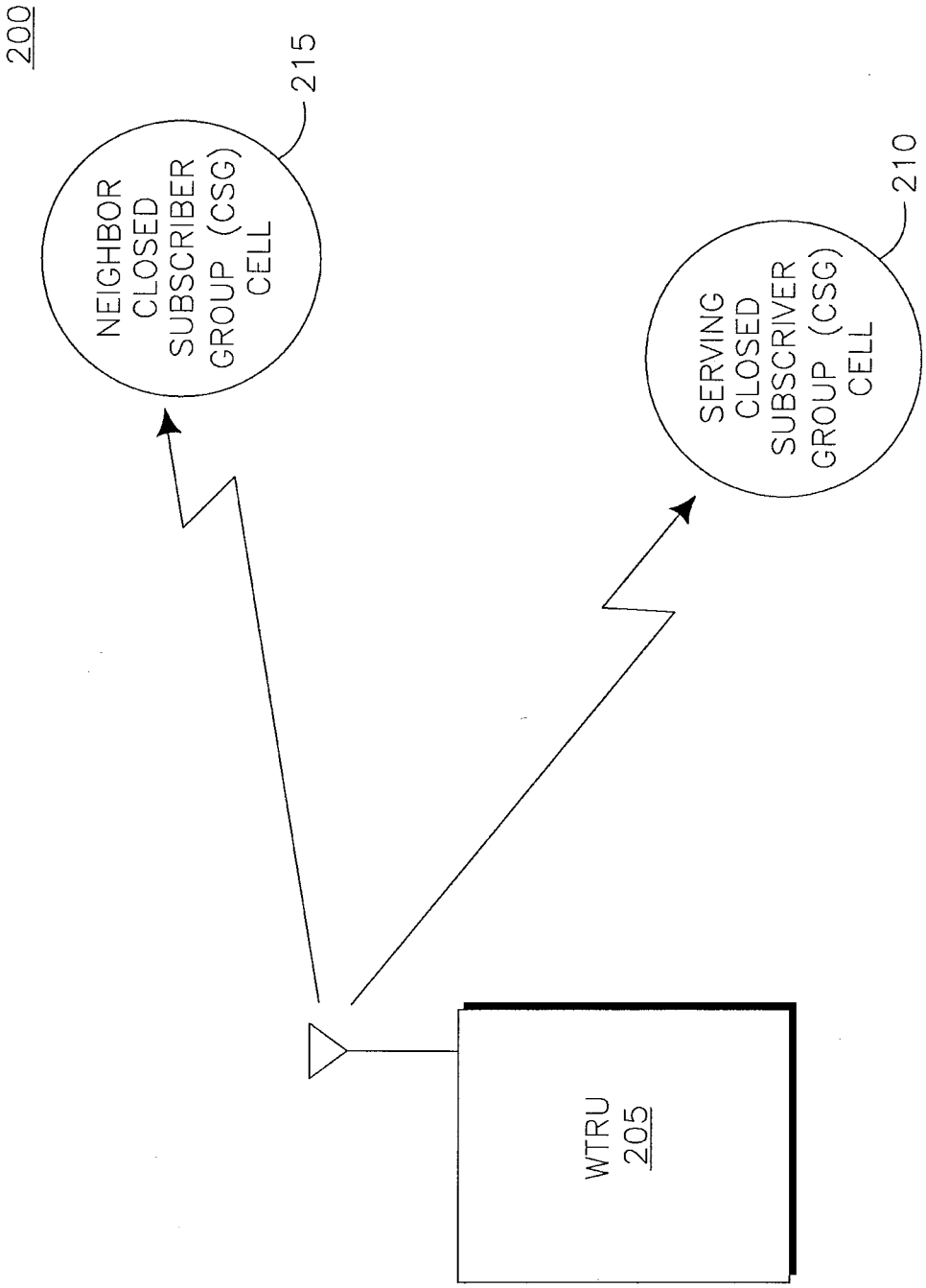


FIG. 2
PRIOR ART

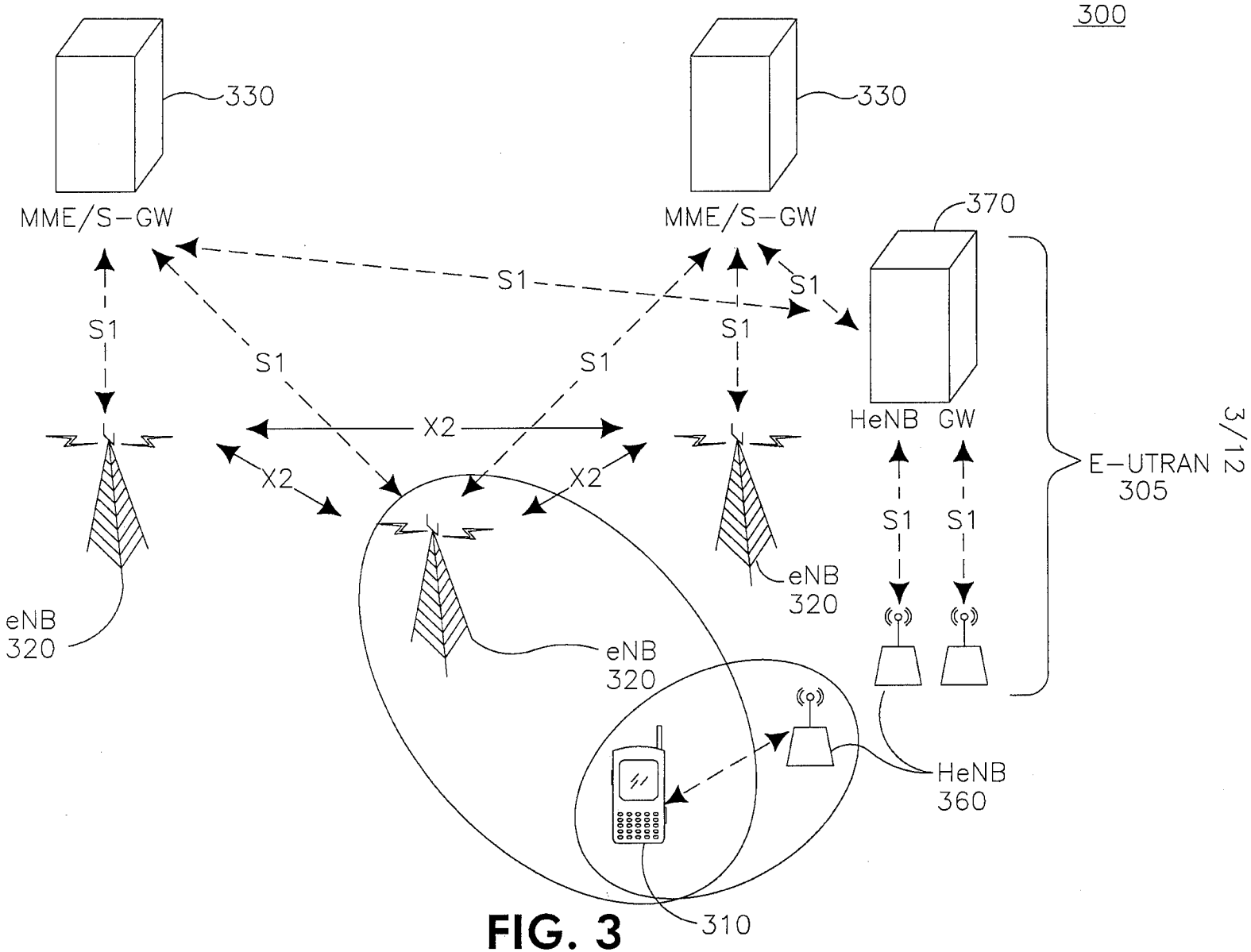

300
330
330
MME/S-GW
MME/S-GW
370
S1
S1
S1
S1
S1
S1
X2
X2
X2
HeNB GW
E-UTRAN
305
S1
S1
eNB
320
eNB
320
eNB
320
HeNB
360
310

FIG. 3

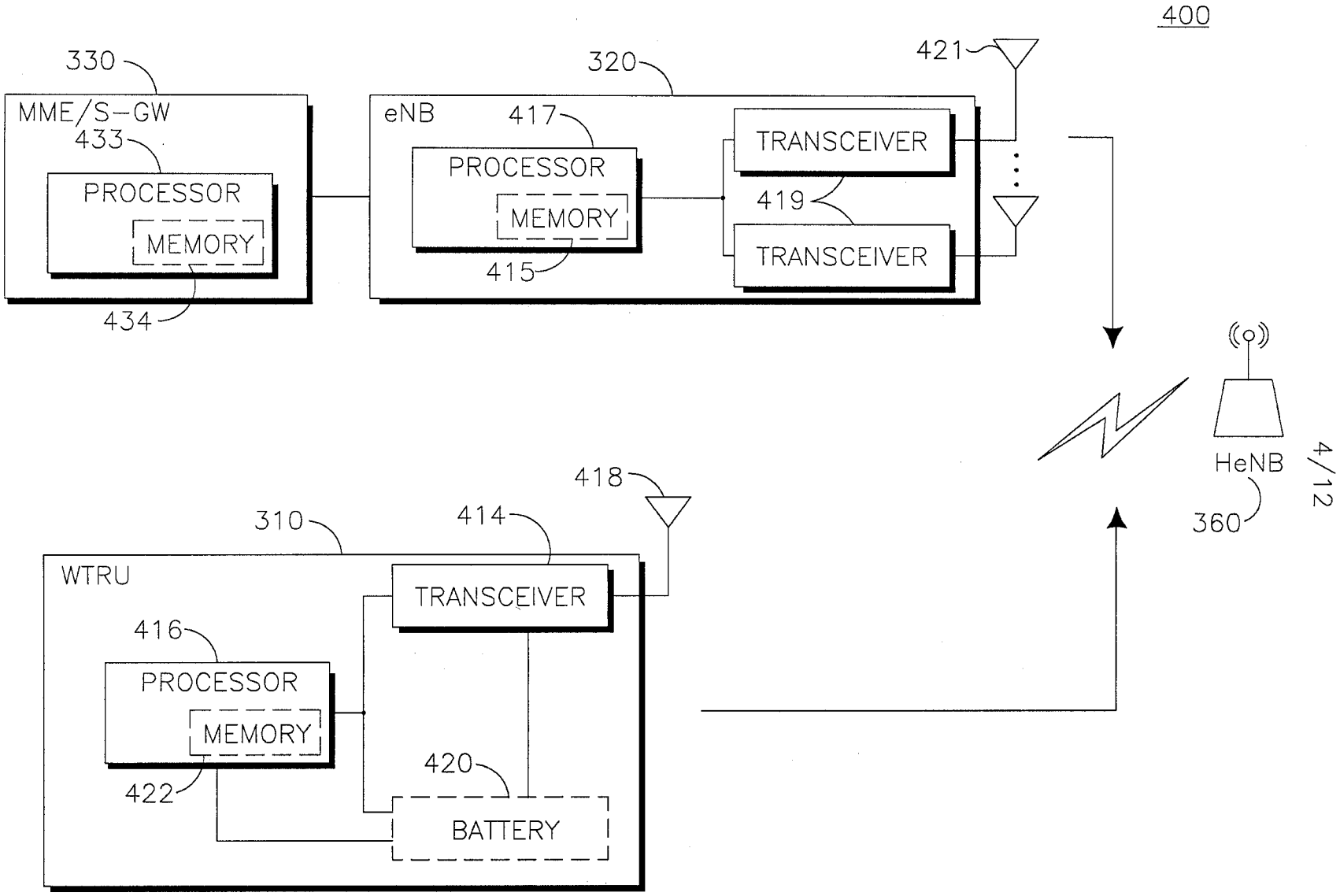

400
330
MME/S-GW
433
PROCESSOR
MEMORY
434
320
eNB
417
PROCESSOR
MEMORY
415
421
TRANSCEIVER
419
TRANSCEIVER
HeNB
360
4/12
418
310
WTRU
414
TRANSCEIVER
416
PROCESSOR
MEMORY
422
420
BATTERY

FIG. 4

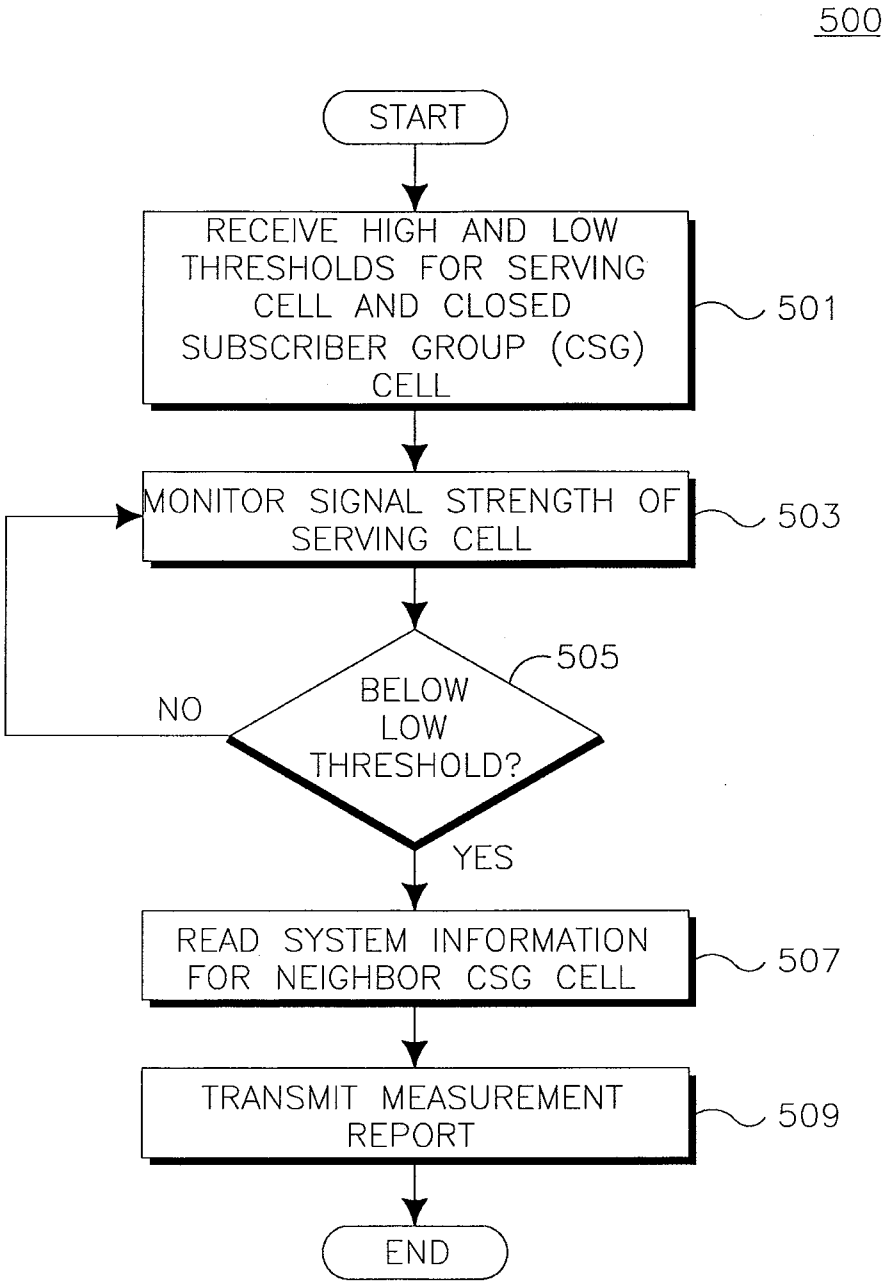

500
START
RECEIVE HIGH AND LOW THRESHOLDS FOR SERVING CELL AND CLOSED SUBSCRIBER GROUP (CSG) CELL
501
MONITOR SIGNAL STRENGTH OF SERVING CELL
503
BELOW LOW THRESHOLD?
505
NO
YES
READ SYSTEM INFORMATION FOR NEIGHBOR CSG CELL
507
TRANSMIT MEASUREMENT REPORT
509
END

FIG. 5

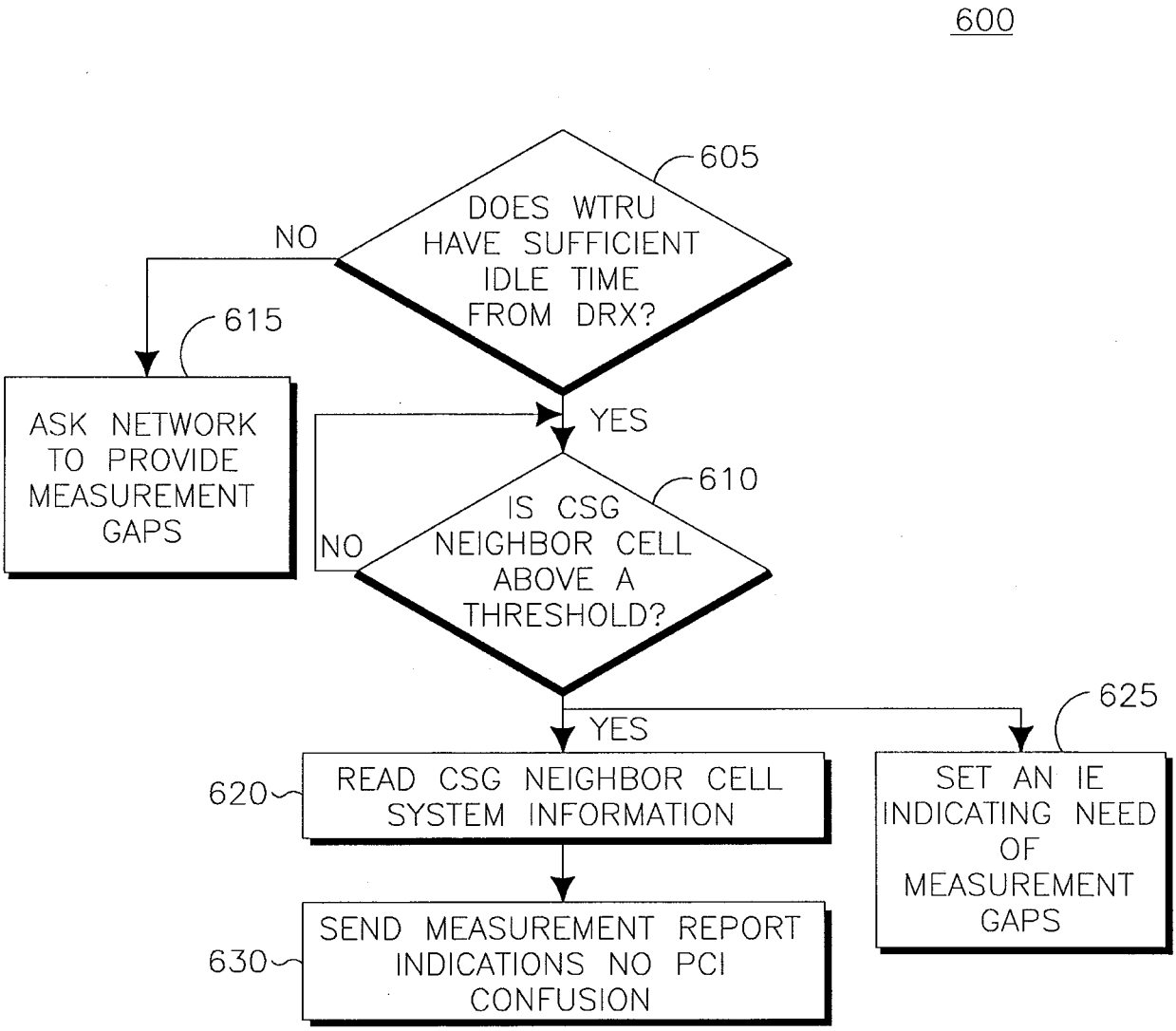

600
605
DOES WTRU HAVE SUFFICIENT IDLE TIME FROM DRX?
NO
615
ASK NETWORK TO PROVIDE MEASUREMENT GAPS
YES
610
IS CSG NEIGHBOR CELL ABOVE A THRESHOLD?
NO
YES
625
620
READ CSG NEIGHBOR CELL SYSTEM INFORMATION
SET AN IE INDICATING NEED OF MEASUREMENT GAPS
630
SEND MEASUREMENT REPORT INDICATIONS NO PCI CONFUSION

FIG. 6

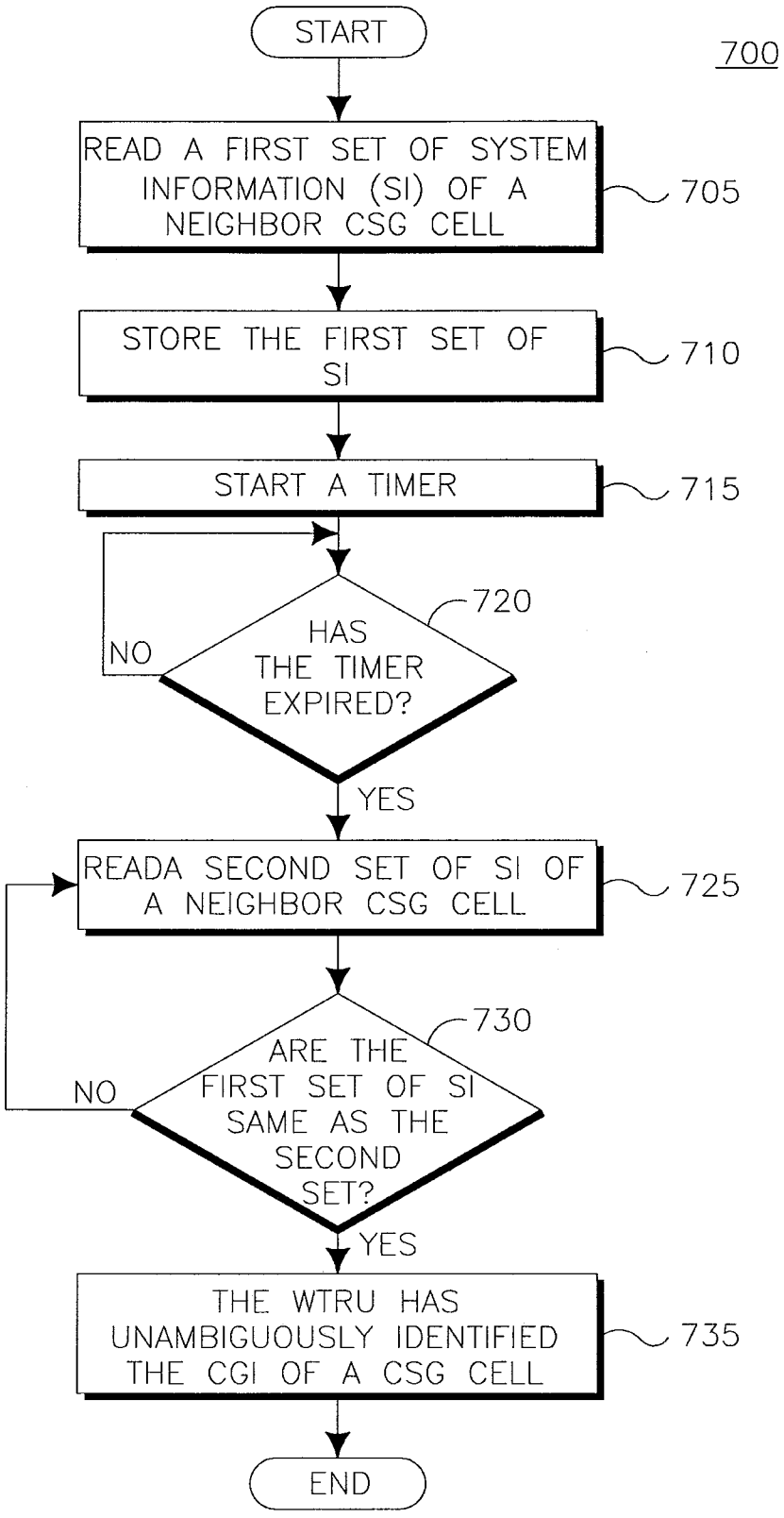

START
700
READ A FIRST SET OF SYSTEM INFORMATION (SI) OF A NEIGHBOR CSG CELL
705
STORE THE FIRST SET OF SI
710
START A TIMER
715
720
HAS THE TIMER EXPIRED?
NO
YES
READA SECOND SET OF SI OF A NEIGHBOR CSG CELL
725
730
ARE THE FIRST SET OF SI SAME AS THE SECOND SET?
NO
YES
THE WTRU HAS UNAMBIGUOUSLY IDENTIFIED THE CGI OF A CSG CELL
735
END

FIG. 7

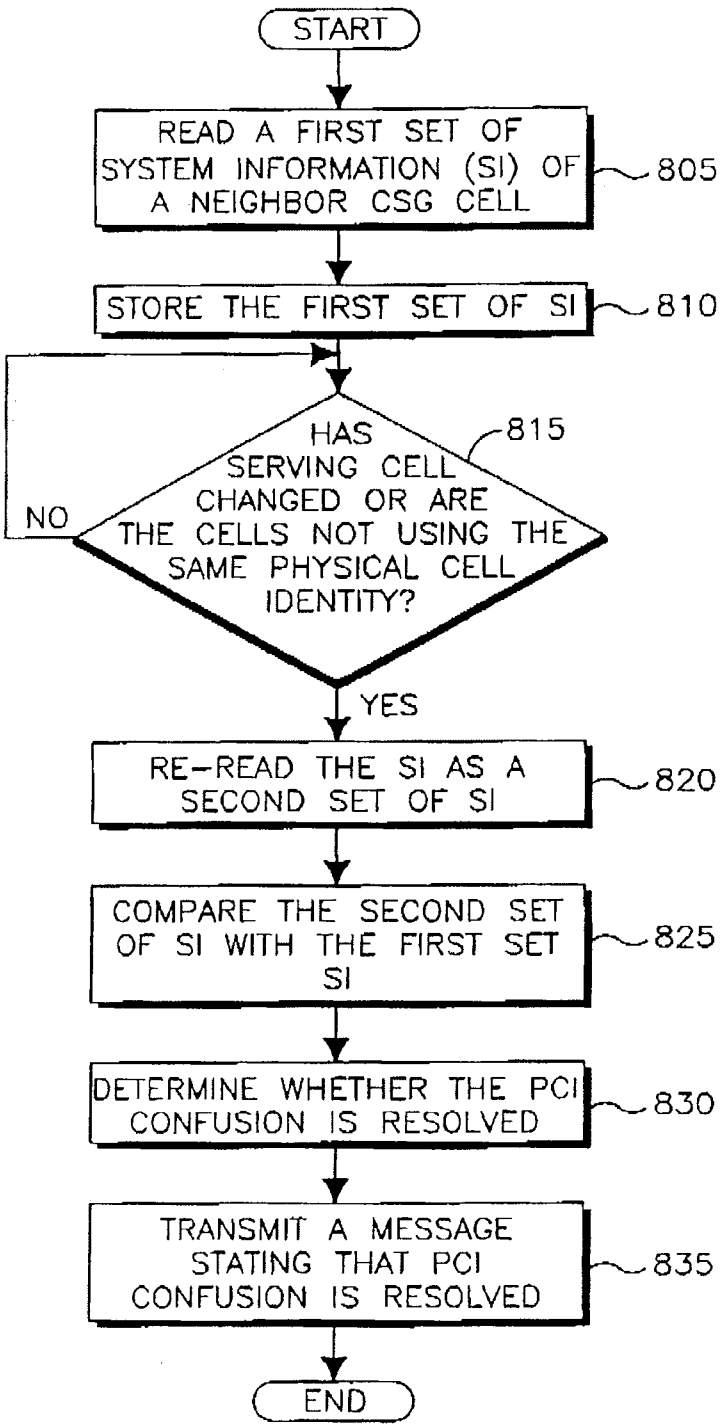

800
START
READ A FIRST SET OF SYSTEM INFORMATION (SI) OF A NEIGHBOR CSG CELL
805
STORE THE FIRST SET OF SI
810
HAS SERVING CELL CHANGED OR ARE THE CELLS NOT USING THE SAME PHYSICAL CELL IDENTITY?
815
NO
YES
RE-READ THE SI AS A SECOND SET OF SI
820
COMPARE THE SECOND SET OF SI WITH THE FIRST SET SI
825
DETERMINE WHETHER THE PCI CONFUSION IS RESOLVED
830
TRANSMIT A MESSAGE STATING THAT PCI CONFUSION IS RESOLVED
835
END

FIG. 8

900

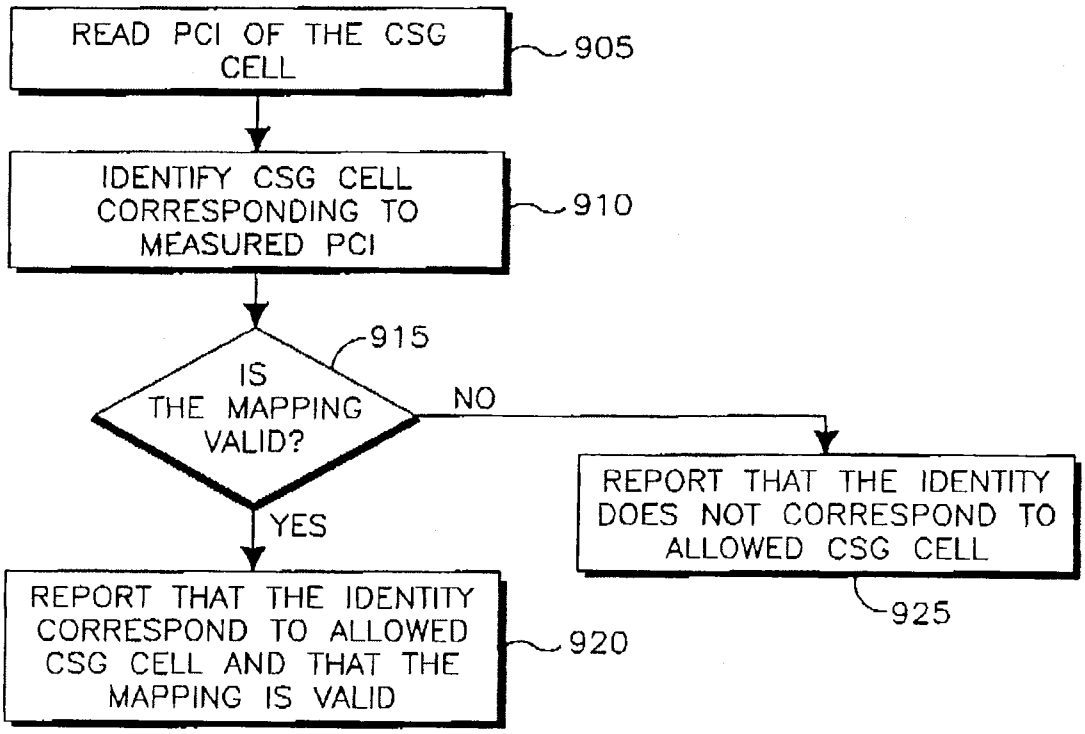

READ PCI OF THE CSG CELL
905
IDENTIFY CSG CELL CORRESPONDING TO MEASURED PCI
910
915
IS THE MAPPING VALID?
NO
YES
REPORT THAT THE IDENTITY DOES NOT CORRESPOND TO ALLOWED CSG CELL
925
REPORT THAT THE IDENTITY CORRESPOND TO ALLOWED CSG CELL AND THAT THE MAPPING IS VALID
920

FIG. 9

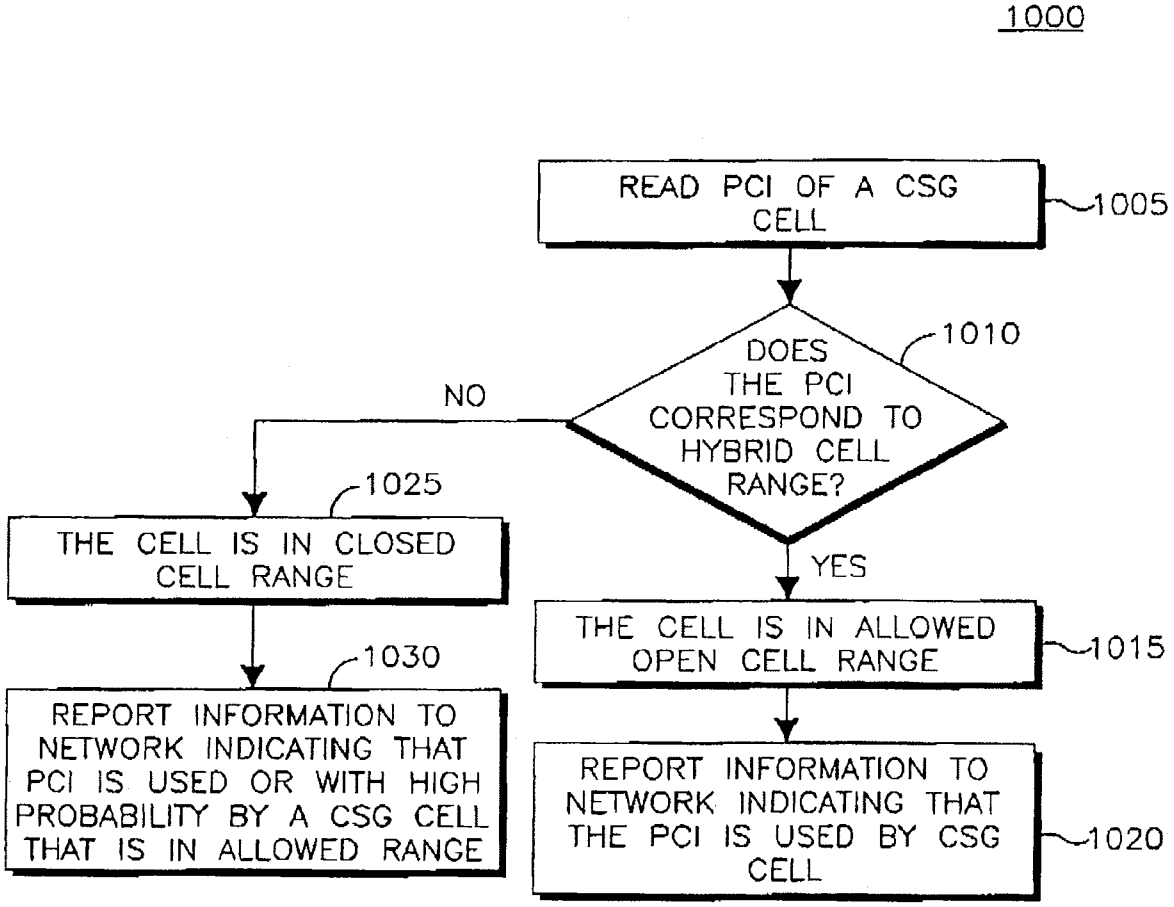

1000
READ PCI OF A CSG CELL
1005
DOES THE PCI CORRESPOND TO HYBRID CELL RANGE?
1010
NO
YES
1025
THE CELL IS IN CLOSED CELL RANGE
1030
REPORT INFORMATION TO NETWORK INDICATING THAT PCI IS USED OR WITH HIGH PROBABILITY BY A CSG CELL THAT IS IN ALLOWED RANGE
THE CELL IS IN ALLOWED OPEN CELL RANGE
1015
REPORT INFORMATION TO NETWORK INDICATING THAT THE PCI IS USED BY CSG CELL
1020

FIG. 10

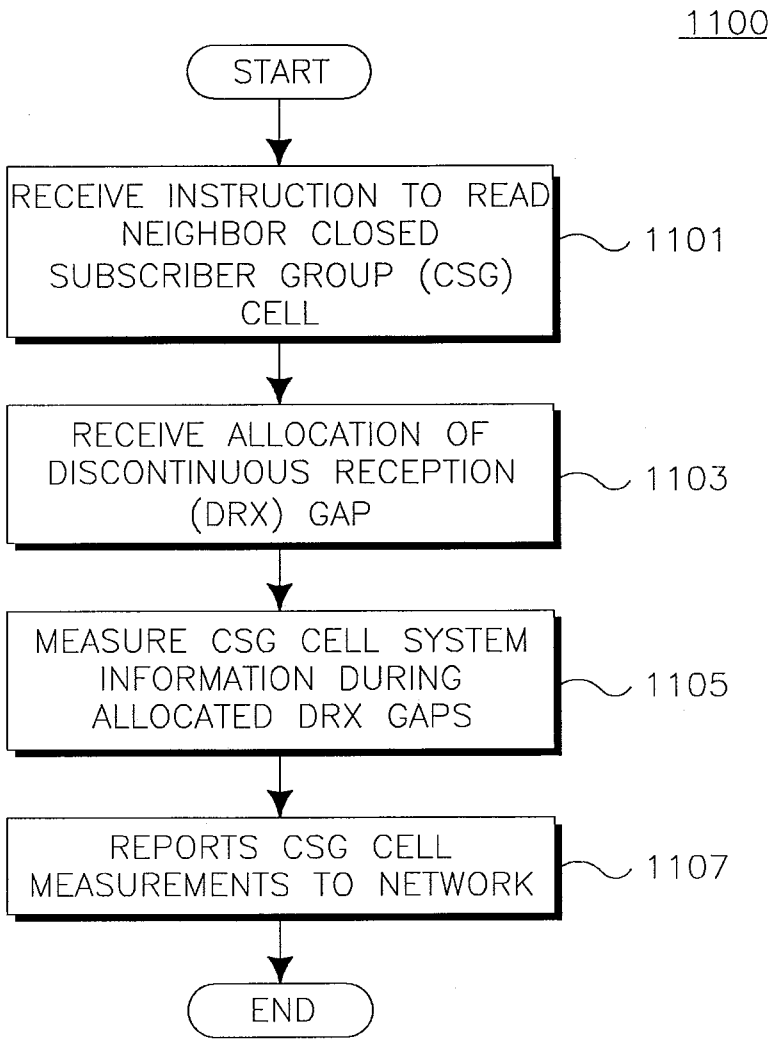

1100
START
RECEIVE INSTRUCTION TO READ NEIGHBOR CLOSED SUBSCRIBER GROUP (CSG) CELL
1101
RECEIVE ALLOCATION OF DISCONTINUOUS RECEPTION (DRX) GAP
1103
MEASURE CSG CELL SYSTEM INFORMATION DURING ALLOCATED DRX GAPS
1105
REPORTS CSG CELL MEASUREMENTS TO NETWORK
1107
END

FIG. 11

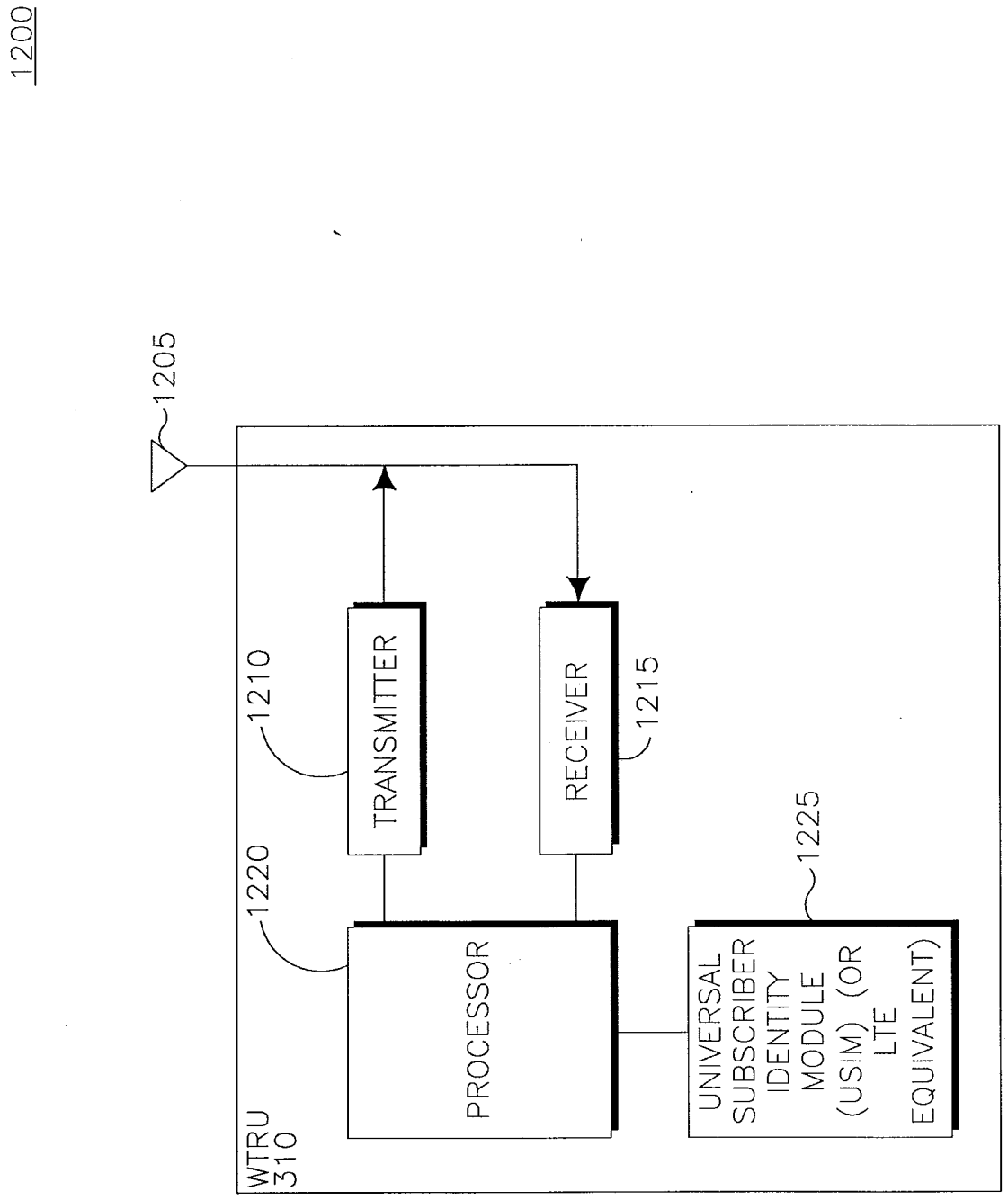

1200
1205
WTRU
310
1210
TRANSMITTER
1215
RECEIVER
1220
PROCESSOR
1225
UNIVERSAL SUBSCRIBER IDENTITY MODULE (USIM) (OR LTE EQUIVALENT)

FIG. 12