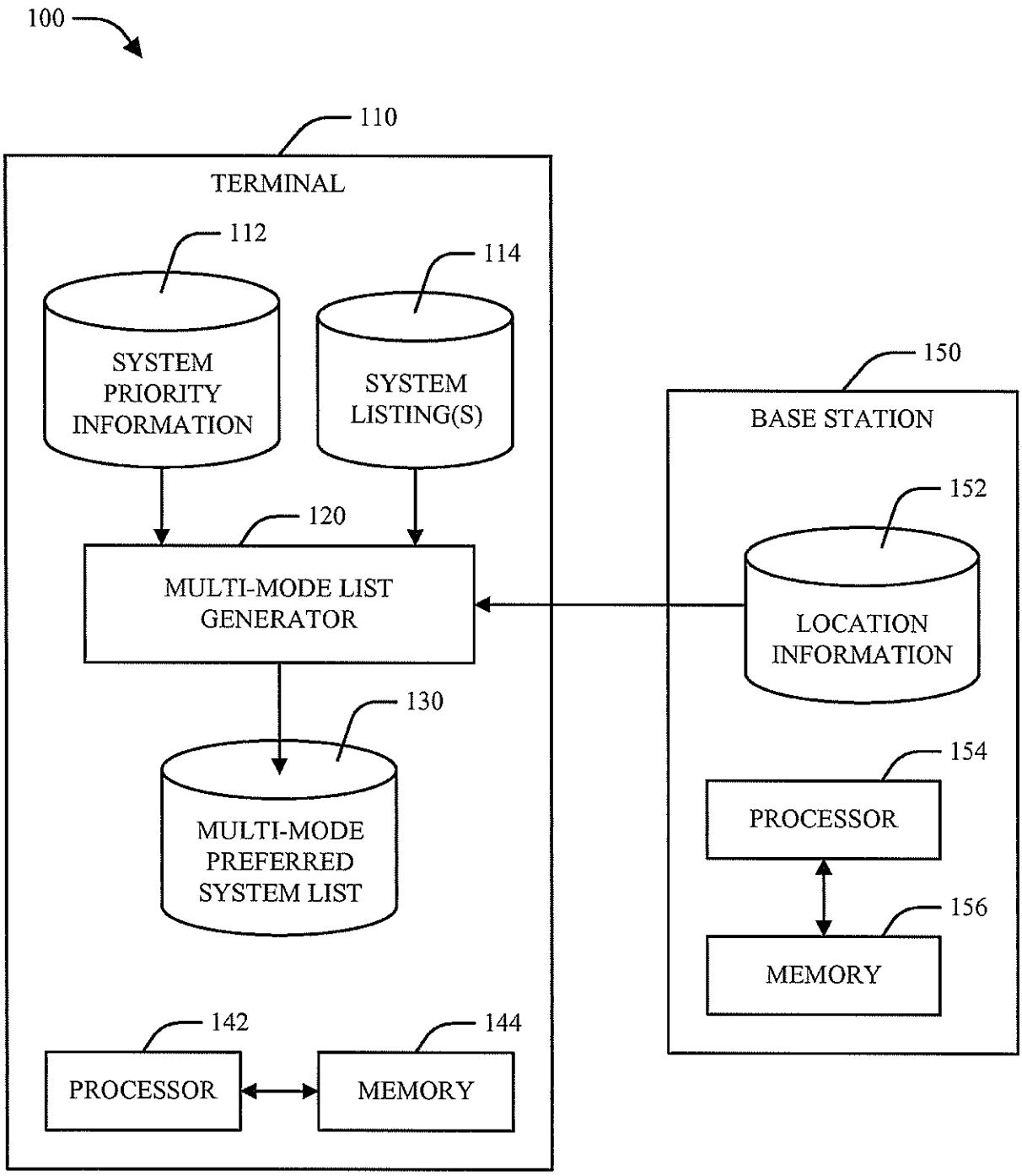

100
110
TERMINAL
112
SYSTEM PRIORITY INFORMATION
114
SYSTEM LISTING(S)
120
MULTI-MODE LIST GENERATOR
130
MULTI-MODE PREFERRED SYSTEM LIST
142
PROCESSOR
144
MEMORY
150
BASE STATION
152
LOCATION INFORMATION
154
PROCESSOR
156
MEMORY

FIG. 1

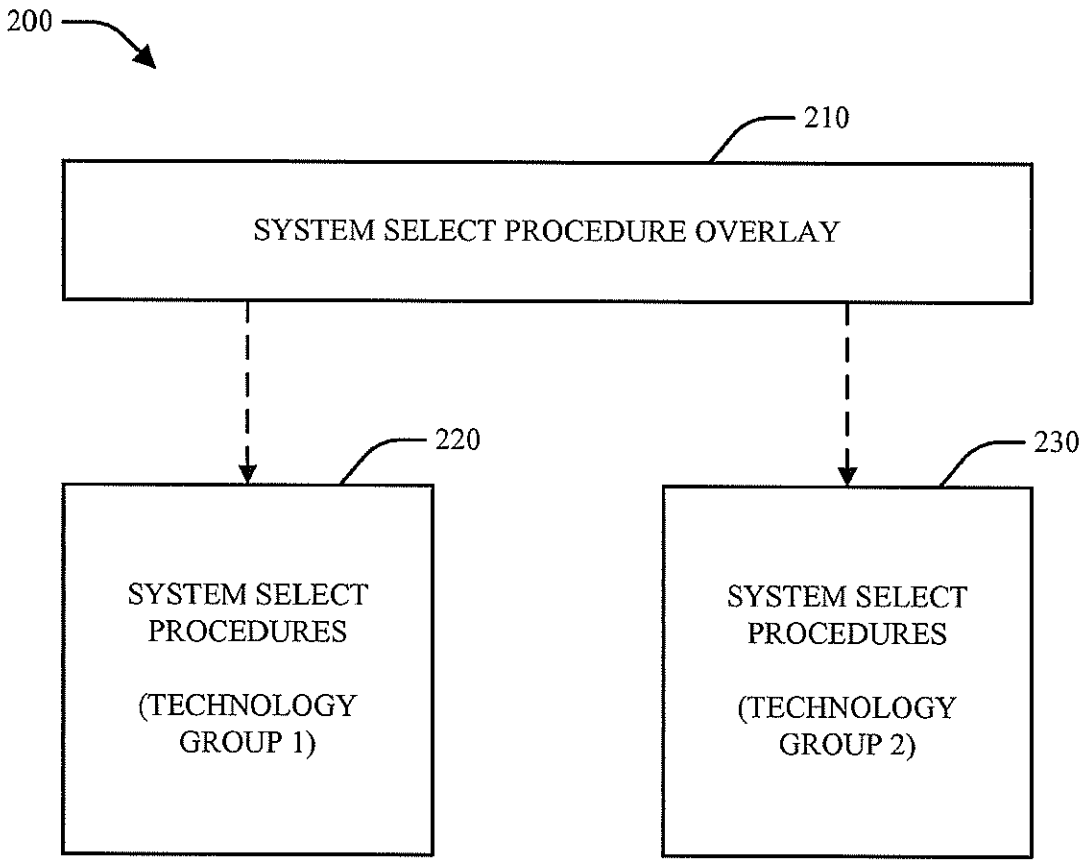

200
210
SYSTEM SELECT PROCEDURE OVERLAY
220
230
SYSTEM SELECT PROCEDURES
(TECHNOLOGY GROUP 1)
SYSTEM SELECT PROCEDURES
(TECHNOLOGY GROUP 2)

FIG. 2

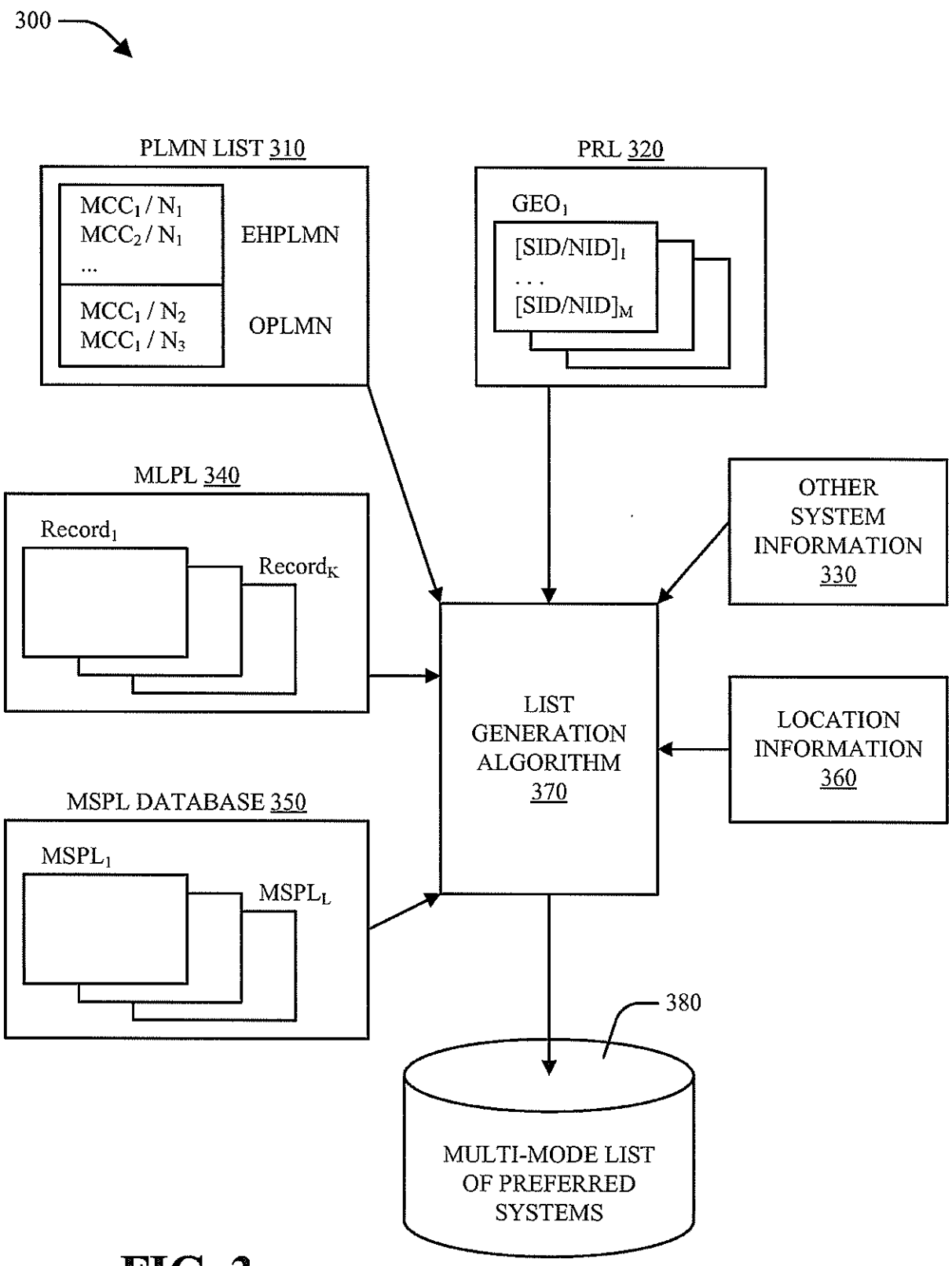

300
PLMN LIST 310
MCC1 / N1
MCC2 / N1
...
EHPLMN
MCC1 / N2
MCC1 / N3
OPLMN
PRL 320
GEO1
[SID/NID]1
. . .
[SID/NID]M
MLPL 340
Record1
RecordK
OTHER SYSTEM INFORMATION 330
LIST GENERATION ALGORITHM 370
LOCATION INFORMATION 360
MSPL DATABASE 350
MSPL1
MSPLL
380
MULTI-MODE LIST OF PREFERRED SYSTEMS

FIG. 3

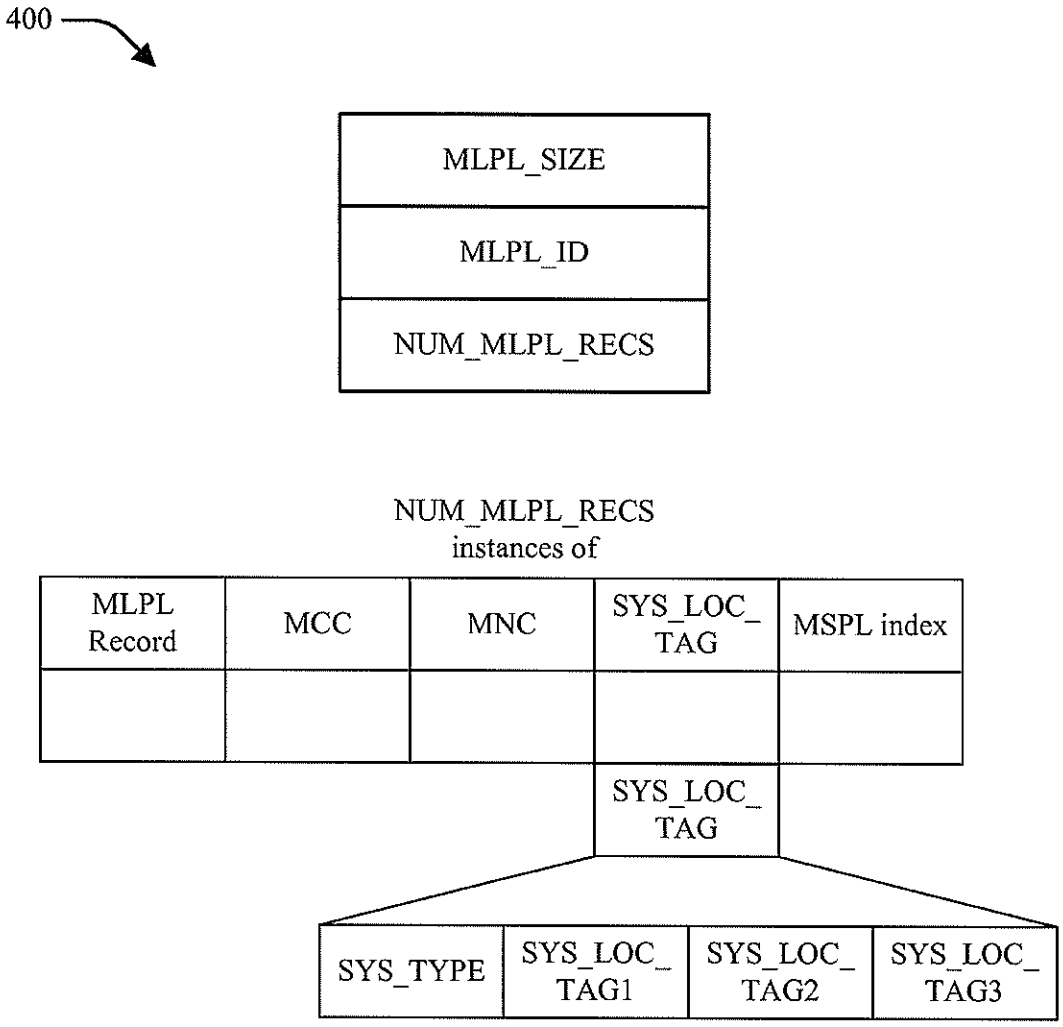

400
MLPL_SIZE
MLPL_ID
NUM_MLPL_RECS
NUM_MLPL_RECS
instances of
MLPL Record
MCC
MNC
SYS_LOC_ TAG
MSPL index
SYS_LOC_ TAG
SYS_TYPE
SYS_LOC_ TAG1
SYS_LOC_ TAG2
SYS_LOC_ TAG3

FIG. 4

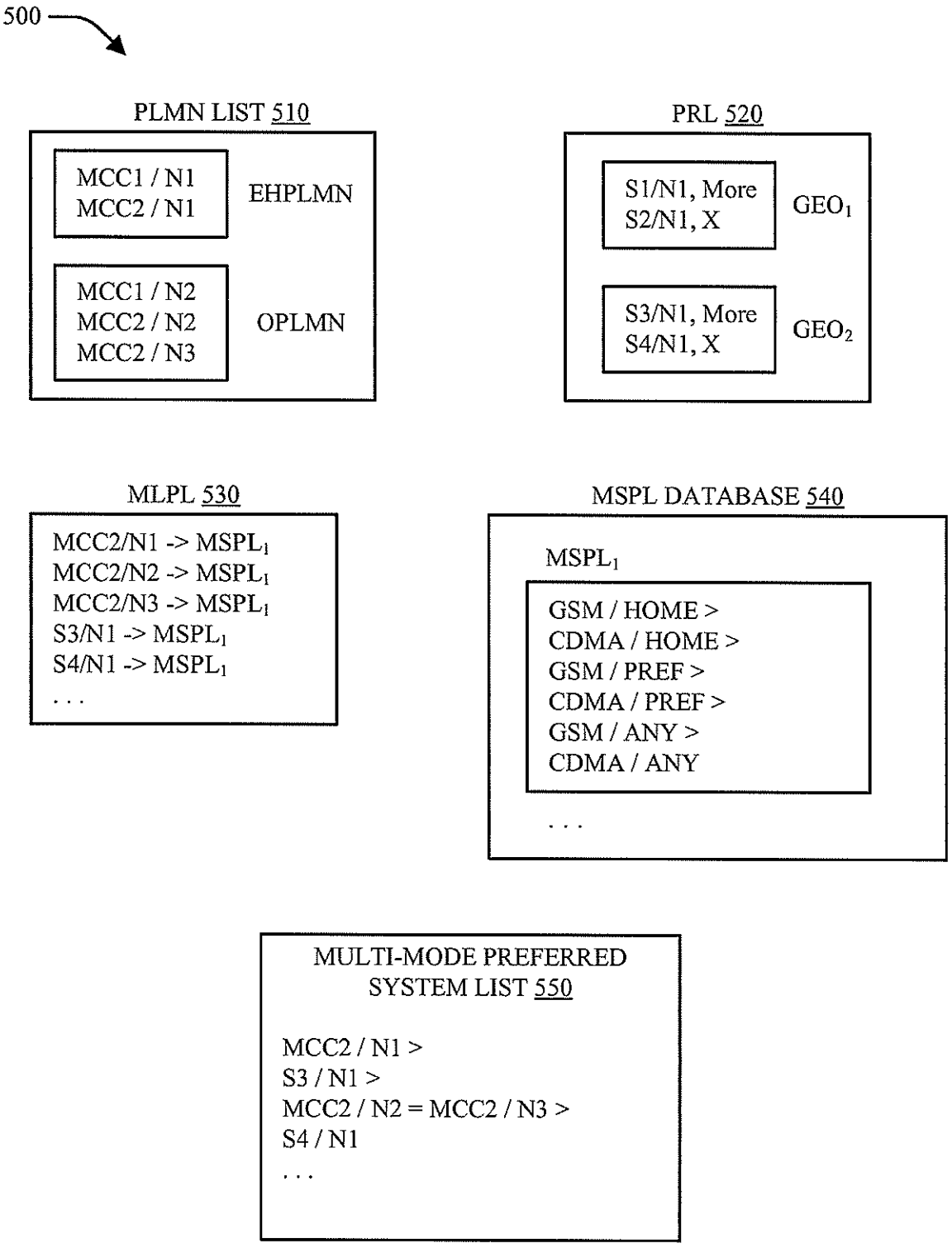

500
PLMN LIST 510
MCC1 / N1
MCC2 / N1
EHPLMN
MCC1 / N2
MCC2 / N2
MCC2 / N3
OPLMN
PRL 520
S1/N1, More
S2/N1, X
GEO1
S3/N1, More
S4/N1, X
GEO2
MLPL 530
MCC2/N1 -> MSPL1
MCC2/N2 -> MSPL1
MCC2/N3 -> MSPL1
S3/N1 -> MSPL1
S4/N1 -> MSPL1
. . .
MSPL DATABASE 540
MSPL1
GSM / HOME >
CDMA / HOME >
GSM / PREF >
CDMA / PREF >
GSM / ANY >
CDMA / ANY
. . .
MULTI-MODE PREFERRED
SYSTEM LIST 550
MCC2 / N1 >
S3 / N1 >
MCC2 / N2 = MCC2 / N3 >
S4 / N1
. . .

FIG. 5

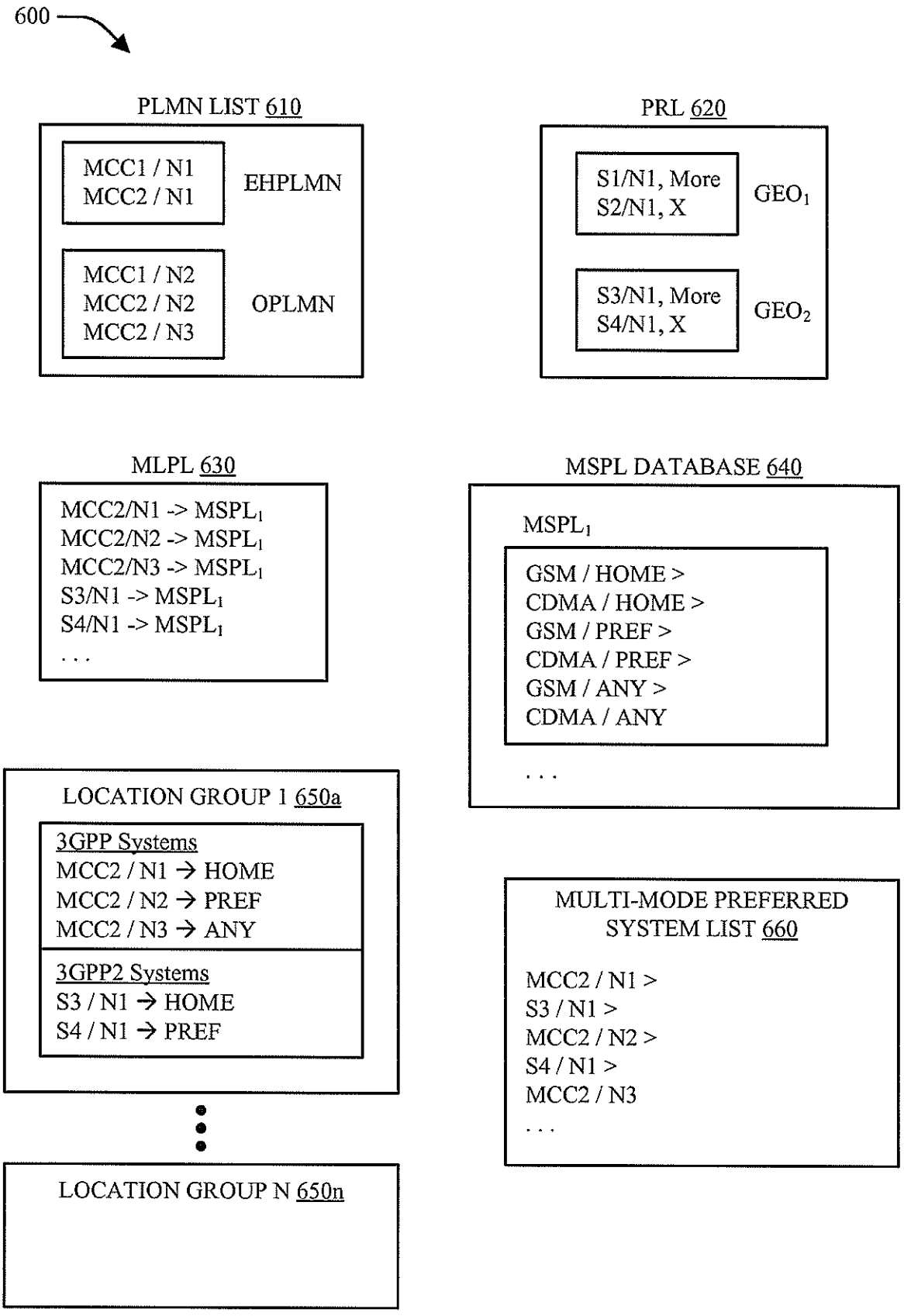

600
PLMN LIST 610
MCC1 / N1
MCC2 / N1
EHPLMN
MCC1 / N2
MCC2 / N2
MCC2 / N3
OPLMN
PRL 620
S1/N1, More
S2/N1, X
GEO1
S3/N1, More
S4/N1, X
GEO2
MLPL 630
MCC2/N1 -> MSPL1
MCC2/N2 -> MSPL1
MCC2/N3 -> MSPL1
S3/N1 -> MSPL1
S4/N1 -> MSPL1
. . .
MSPL DATABASE 640
MSPL1
GSM / HOME >
CDMA / HOME >
GSM / PREF >
CDMA / PREF >
GSM / ANY >
CDMA / ANY
. . .
LOCATION GROUP 1 650a
3GPP Systems
MCC2 / N1 → HOME
MCC2 / N2 → PREF
MCC2 / N3 → ANY
3GPP2 Systems
S3 / N1 → HOME
S4 / N1 → PREF
LOCATION GROUP N 650n
MULTI-MODE PREFERRED SYSTEM LIST 660
MCC2 / N1 >
S3 / N1 >
MCC2 / N2 >
S4 / N1 >
MCC2 / N3
. . .

FIG. 6

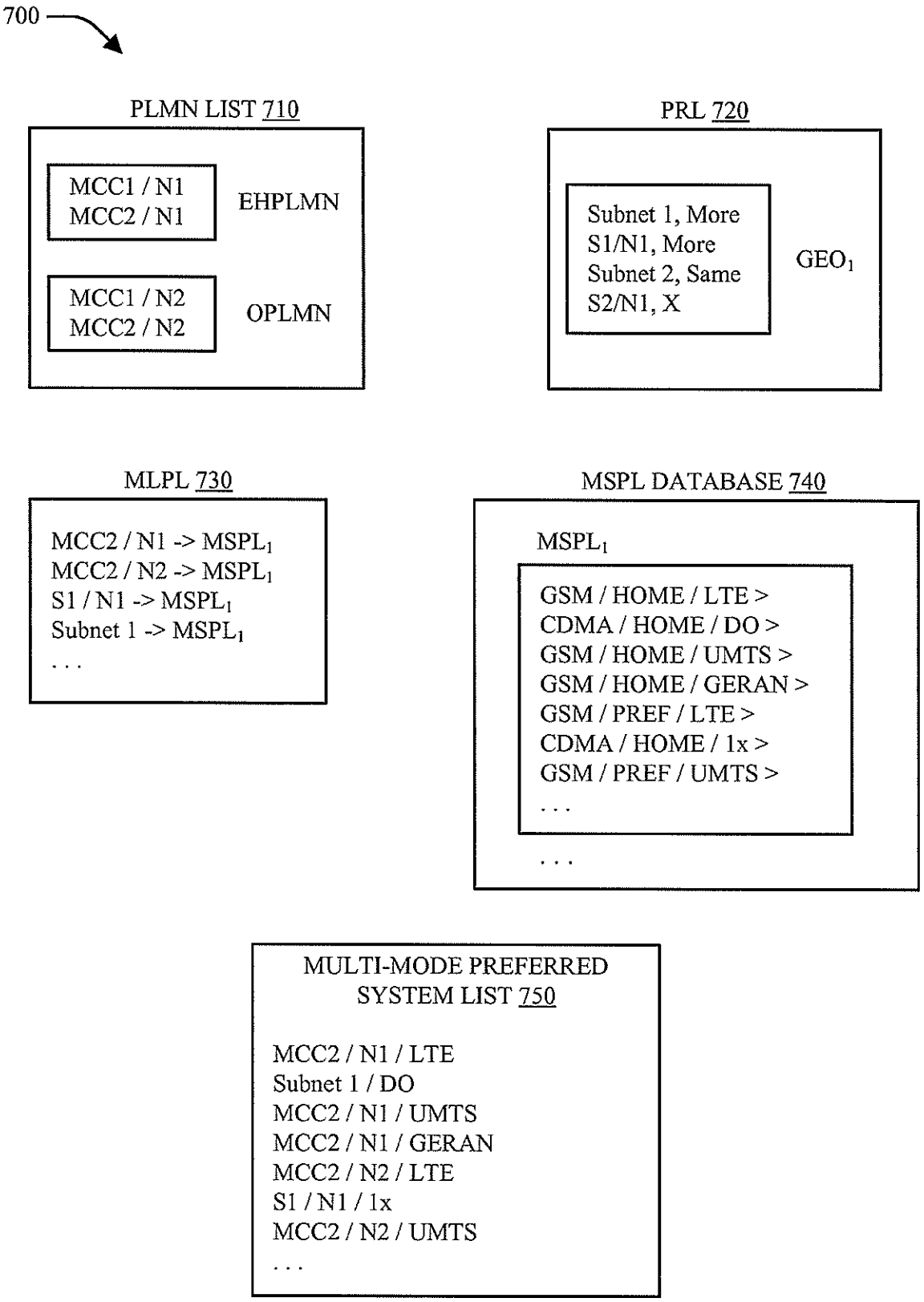

700
PLMN LIST 710
MCC1 / N1
MCC2 / N1
EHPLMN
MCC1 / N2
MCC2 / N2
OPLMN
PRL 720
Subnet 1, More
S1/N1, More
Subnet 2, Same
S2/N1, X
GEO1
MLPL 730
MCC2 / N1 -> MSPL1
MCC2 / N2 -> MSPL1
S1 / N1 -> MSPL1
Subnet 1 -> MSPL1
. . .
MSPL DATABASE 740
MSPL1
GSM / HOME / LTE >
CDMA / HOME / DO >
GSM / HOME / UMTS >
GSM / HOME / GERAN >
GSM / PREF / LTE >
CDMA / HOME / 1x >
GSM / PREF / UMTS >
. . .
. . .
MULTI-MODE PREFERRED
SYSTEM LIST 750
MCC2 / N1 / LTE
Subnet 1 / DO
MCC2 / N1 / UMTS
MCC2 / N1 / GERAN
MCC2 / N2 / LTE
S1 / N1 / 1x
MCC2 / N2 / UMTS
. . .

FIG. 7

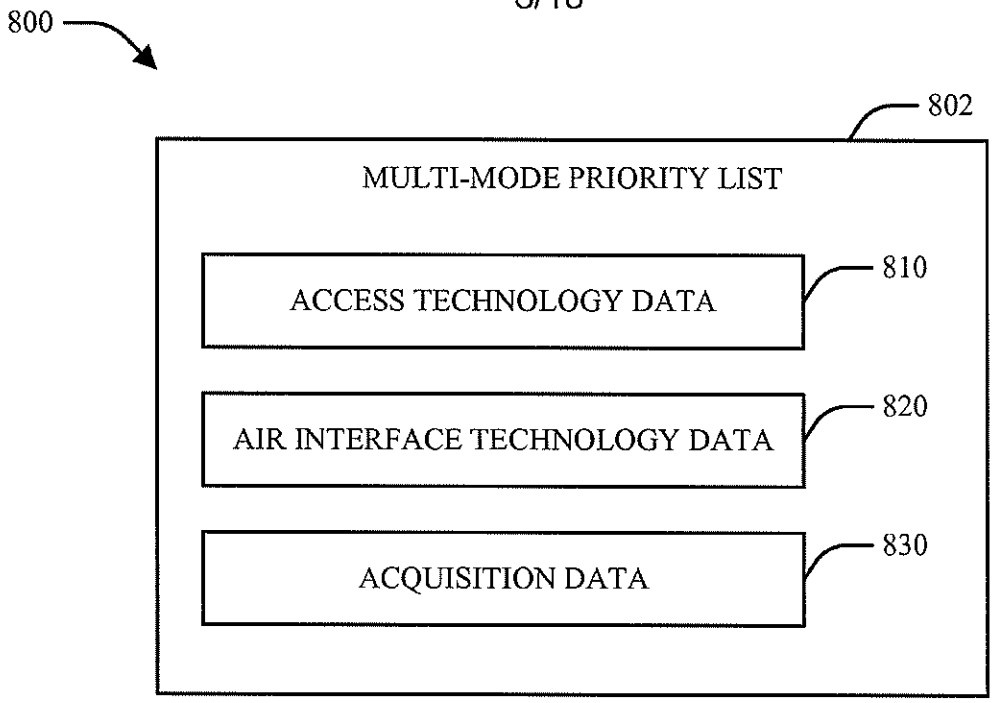

800
802
MULTI-MODE PRIORITY LIST
ACCESS TECHNOLOGY DATA
810
AIR INTERFACE TECHNOLOGY DATA
820
ACQUISITION DATA
830

FIG. 8

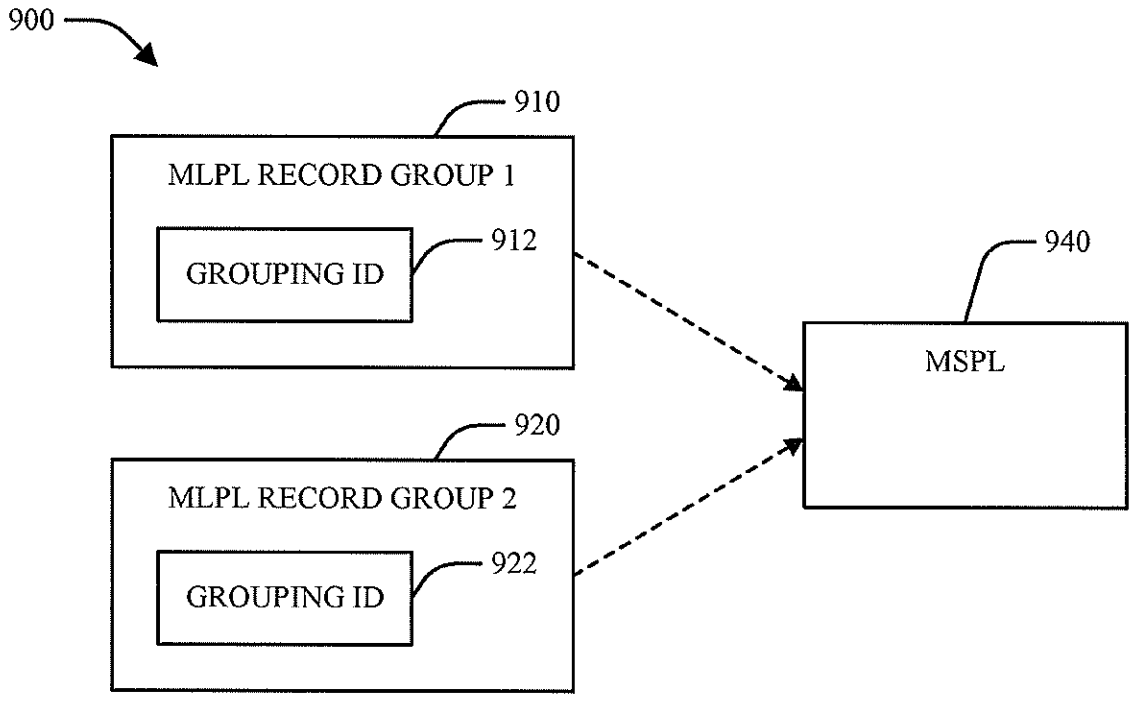

900
910
MLPL RECORD GROUP 1
GROUPING ID
912
940
MSPL
920
MLPL RECORD GROUP 2
GROUPING ID
922

FIG. 9

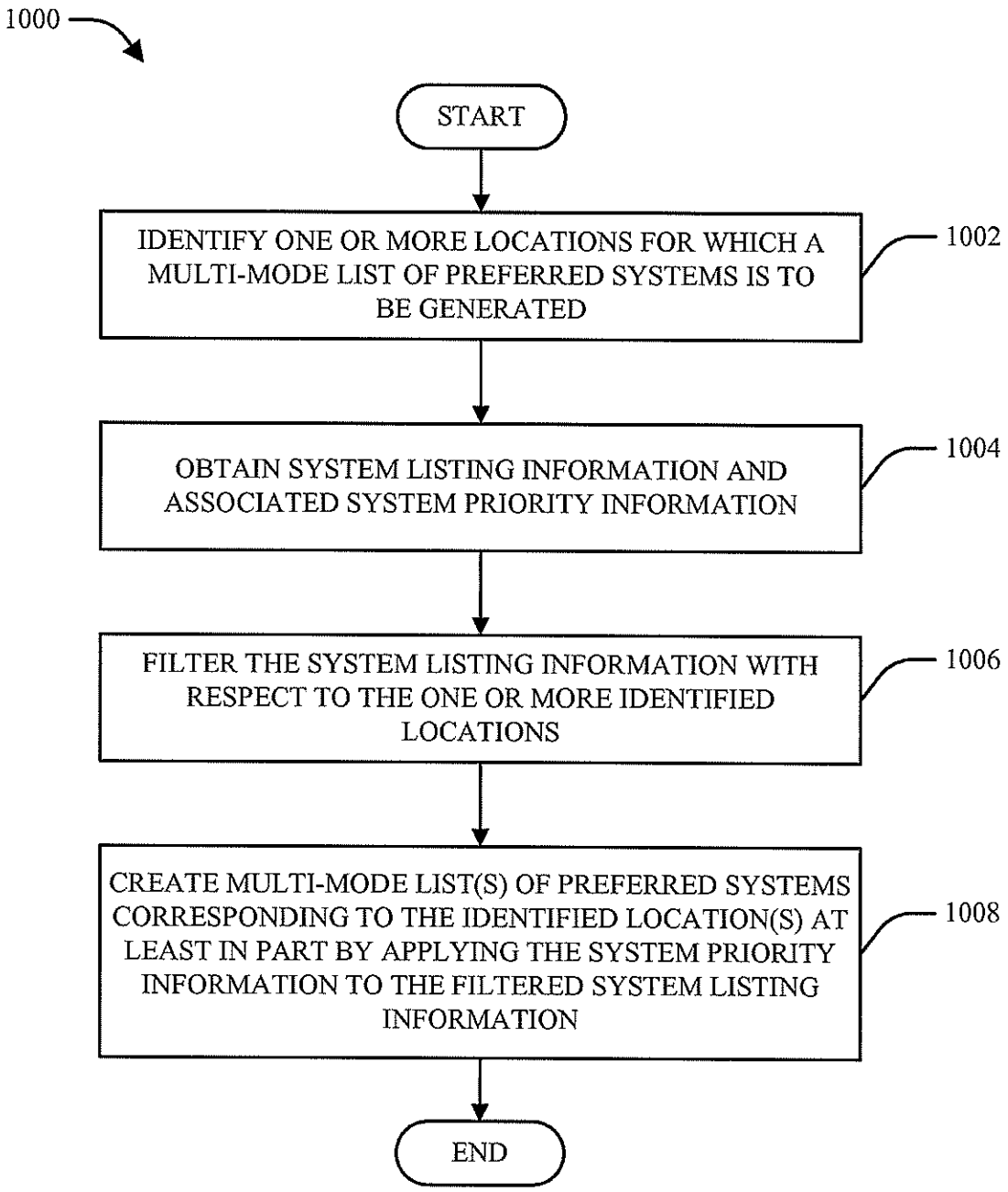

1000
START
IDENTIFY ONE OR MORE LOCATIONS FOR WHICH A MULTI-MODE LIST OF PREFERRED SYSTEMS IS TO BE GENERATED
1002
OBTAIN SYSTEM LISTING INFORMATION AND ASSOCIATED SYSTEM PRIORITY INFORMATION
1004
FILTER THE SYSTEM LISTING INFORMATION WITH RESPECT TO THE ONE OR MORE IDENTIFIED LOCATIONS
1006
CREATE MULTI-MODE LIST(S) OF PREFERRED SYSTEMS CORRESPONDING TO THE IDENTIFIED LOCATION(S) AT LEAST IN PART BY APPLYING THE SYSTEM PRIORITY INFORMATION TO THE FILTERED SYSTEM LISTING INFORMATION
1008
END

FIG. 10

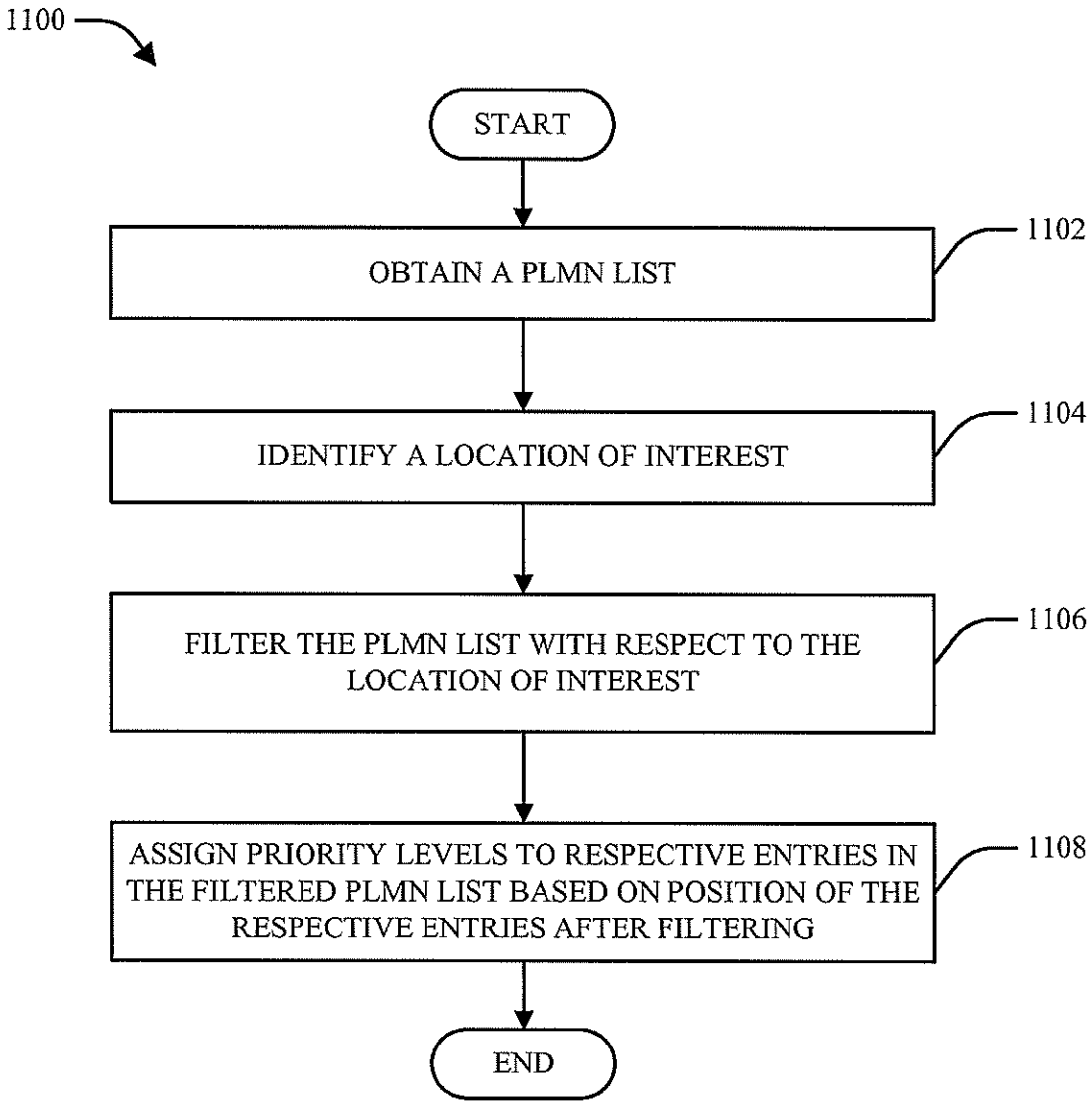

1100
START
OBTAIN A PLMN LIST
1102
IDENTIFY A LOCATION OF INTEREST
1104
FILTER THE PLMN LIST WITH RESPECT TO THE LOCATION OF INTEREST
1106
ASSIGN PRIORITY LEVELS TO RESPECTIVE ENTRIES IN THE FILTERED PLMN LIST BASED ON POSITION OF THE RESPECTIVE ENTRIES AFTER FILTERING
1108
END

FIG. 11

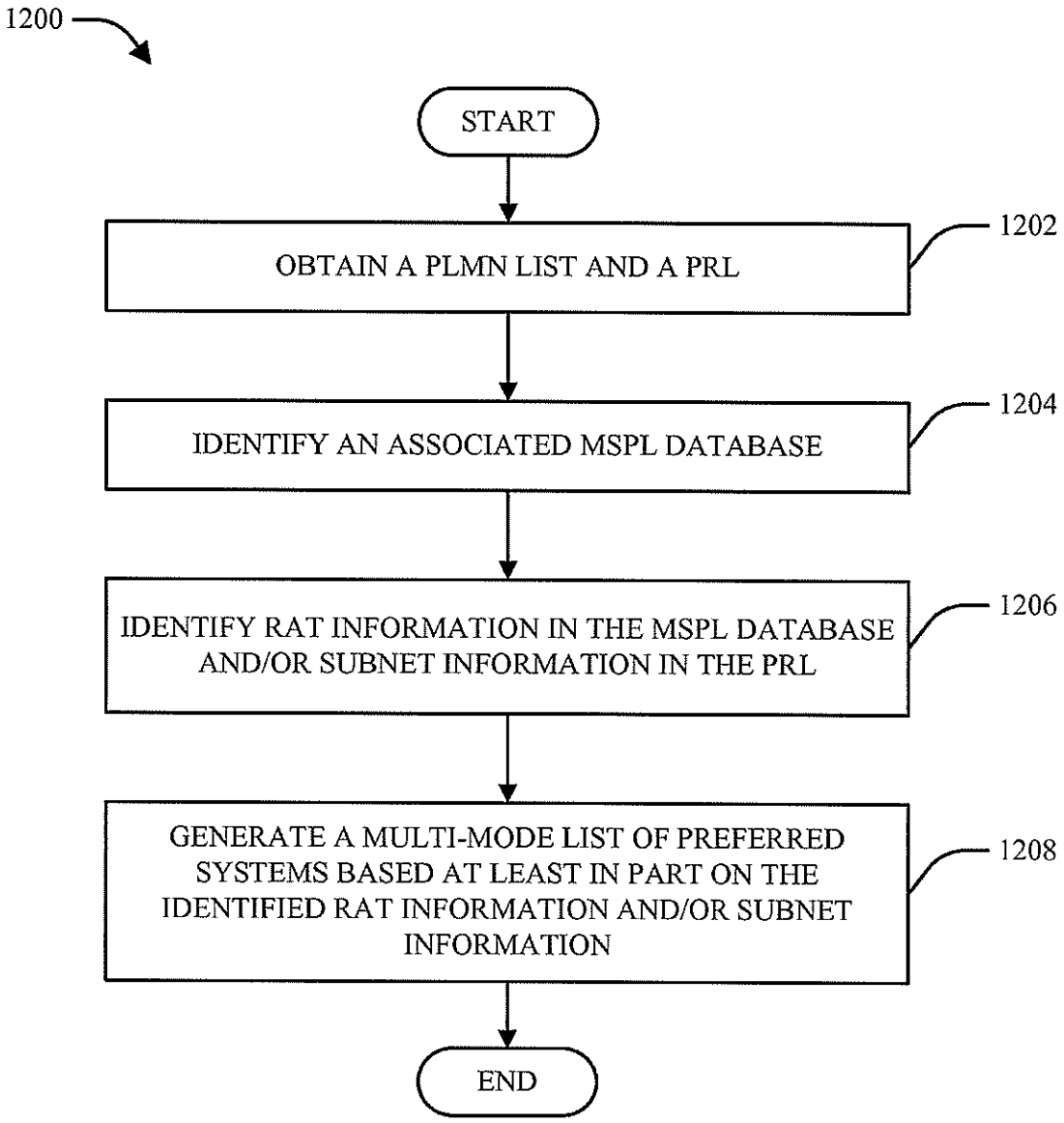

1200
START
OBTAIN A PLMN LIST AND A PRL
1202
IDENTIFY AN ASSOCIATED MSPL DATABASE
1204
IDENTIFY RAT INFORMATION IN THE MSPL DATABASE AND/OR SUBNET INFORMATION IN THE PRL
1206
GENERATE A MULTI-MODE LIST OF PREFERRED SYSTEMS BASED AT LEAST IN PART ON THE IDENTIFIED RAT INFORMATION AND/OR SUBNET INFORMATION
1208
END

FIG. 12

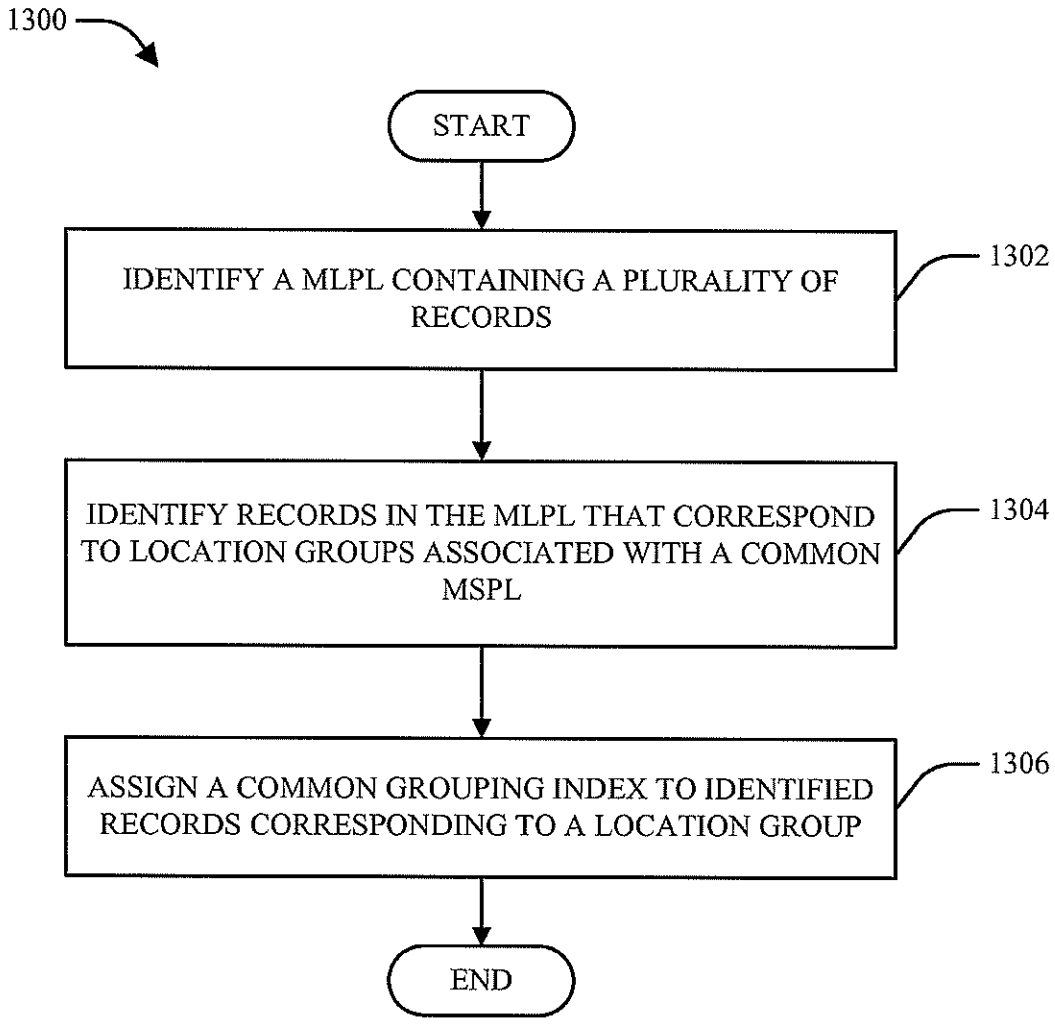

1300
START
IDENTIFY A MLPL CONTAINING A PLURALITY OF RECORDS
1302
IDENTIFY RECORDS IN THE MLPL THAT CORRESPOND TO LOCATION GROUPS ASSOCIATED WITH A COMMON MSPL
1304
ASSIGN A COMMON GROUPING INDEX TO IDENTIFIED RECORDS CORRESPONDING TO A LOCATION GROUP
1306
END

FIG. 13

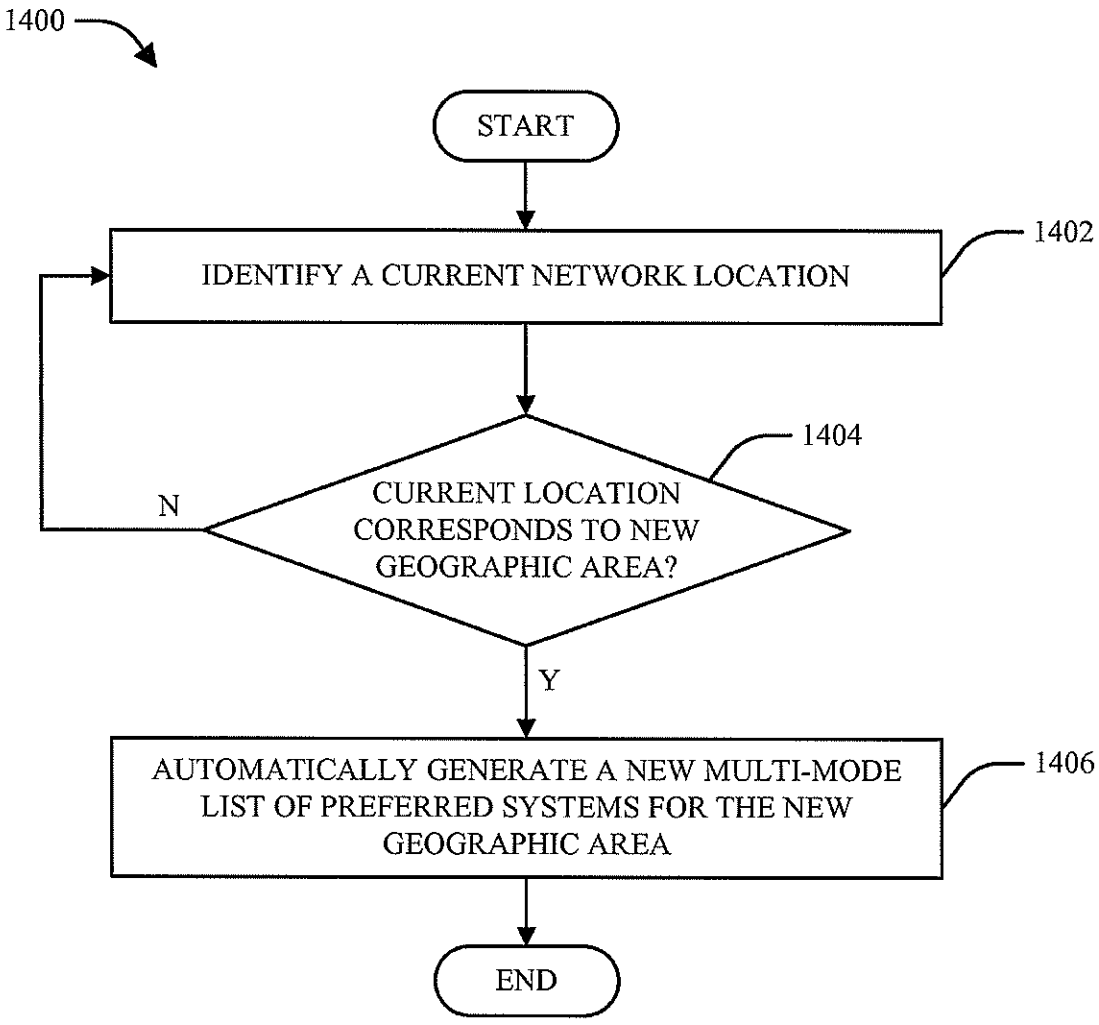

1400
START
IDENTIFY A CURRENT NETWORK LOCATION
1402
CURRENT LOCATION CORRESPONDS TO NEW GEOGRAPHIC AREA?
1404
N
Y
AUTOMATICALLY GENERATE A NEW MULTI-MODE LIST OF PREFERRED SYSTEMS FOR THE NEW GEOGRAPHIC AREA
1406
END

FIG. 14

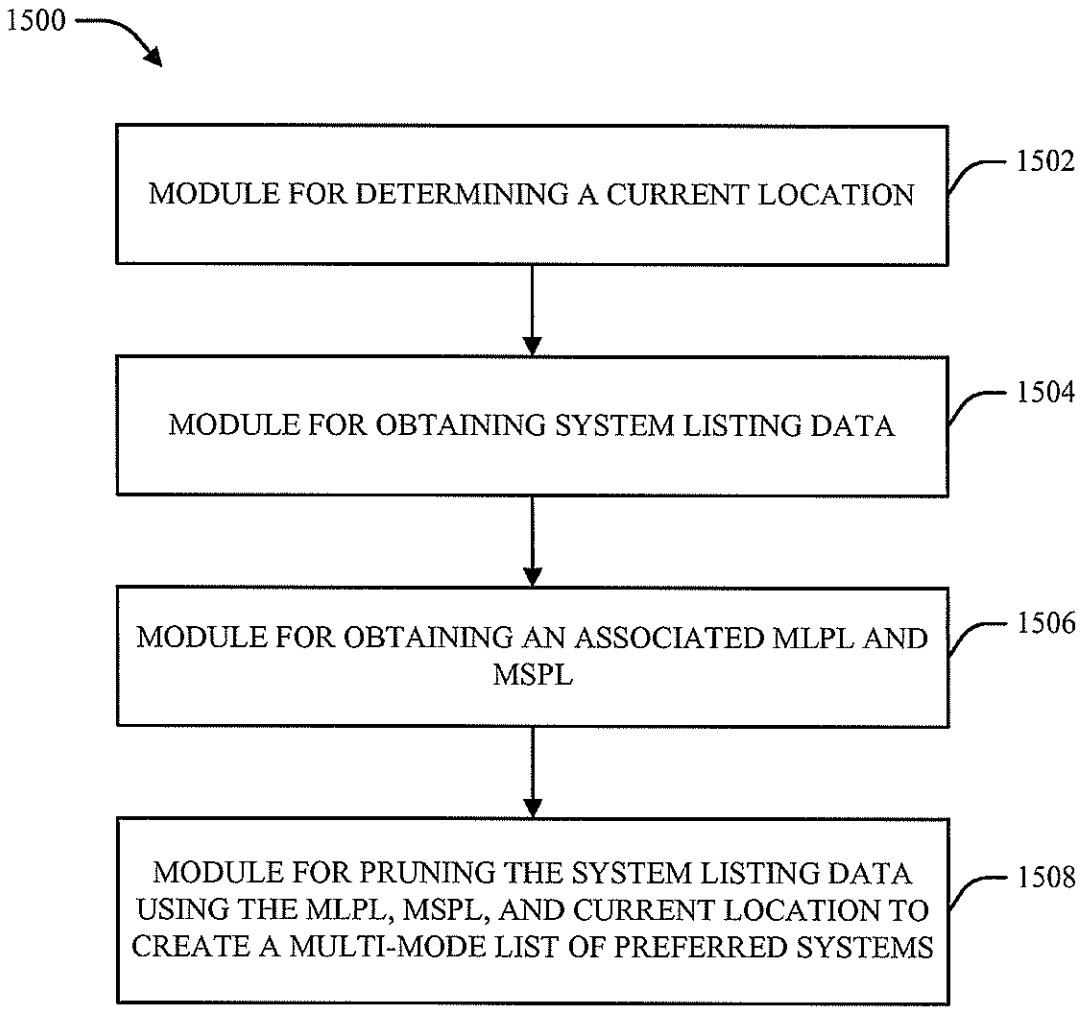

1500
MODULE FOR DETERMINING A CURRENT LOCATION
1502
MODULE FOR OBTAINING SYSTEM LISTING DATA
1504
MODULE FOR OBTAINING AN ASSOCIATED MLPL AND MSPL
1506
MODULE FOR PRUNING THE SYSTEM LISTING DATA USING THE MLPL, MSPL, AND CURRENT LOCATION TO CREATE A MULTI-MODE LIST OF PREFERRED SYSTEMS
1508

FIG. 15

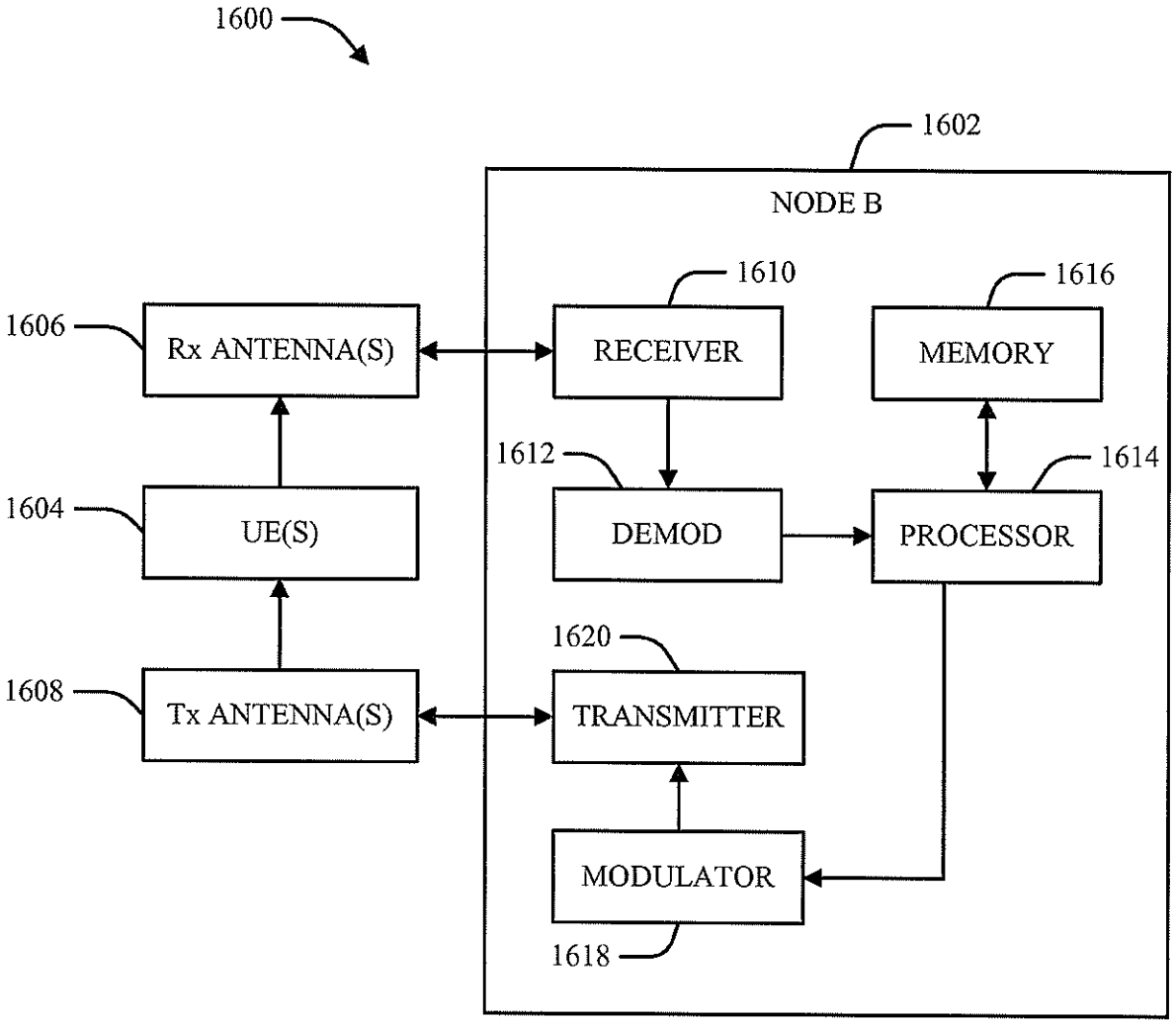

1600
1602
NODE B
1610
1616
1606
Rx ANTENNA(S)
RECEIVER
MEMORY
1612
1614
1604
UE(S)
DEMOD
PROCESSOR
1620
1608
Tx ANTENNA(S)
TRANSMITTER
MODULATOR
1618

FIG. 16

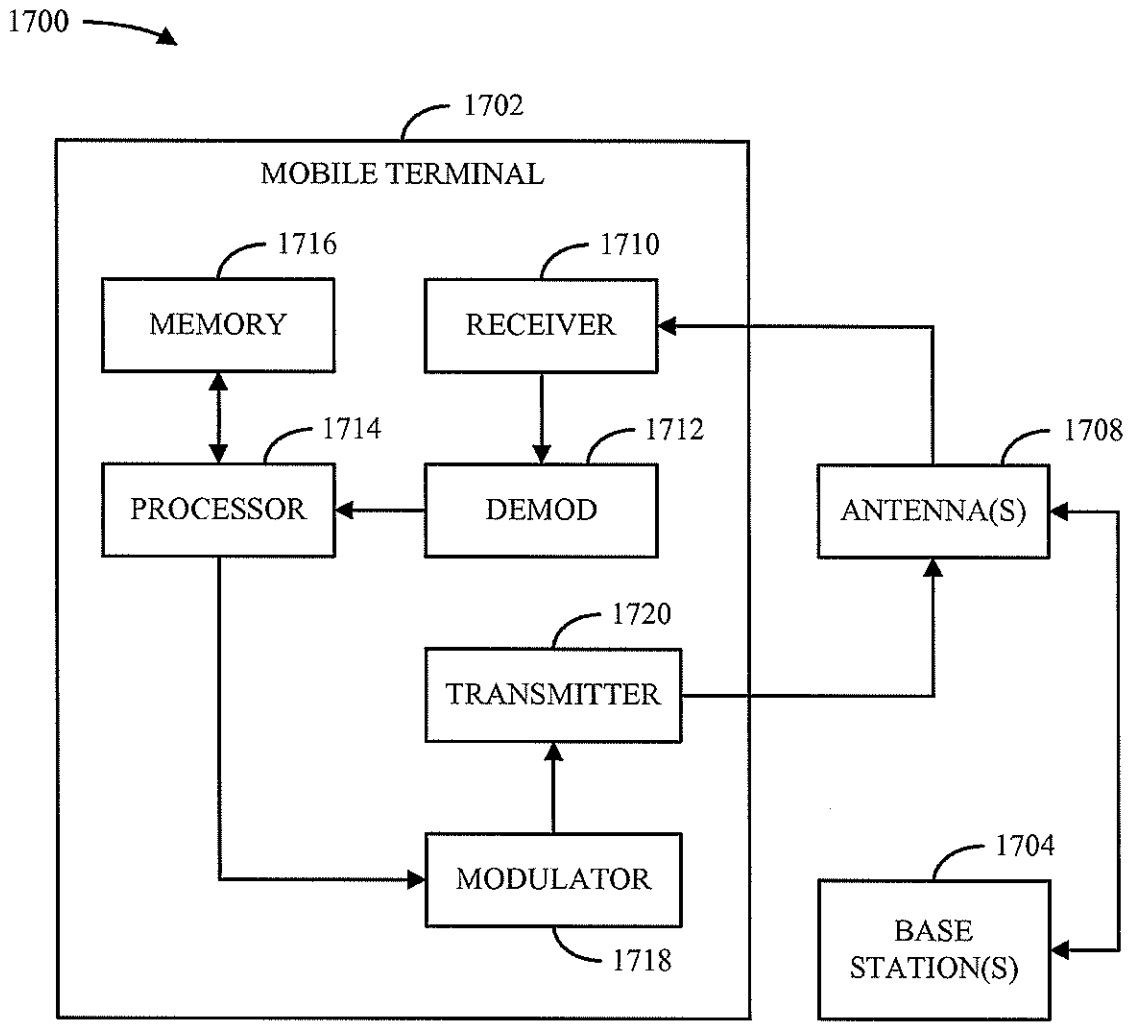

1700
1702
MOBILE TERMINAL
1716
MEMORY
1710
RECEIVER
1714
PROCESSOR
1712
DEMOD
1708
ANTENNA(S)
1720
TRANSMITTER
MODULATOR
1718
1704
BASE STATION(S)

FIG. 17

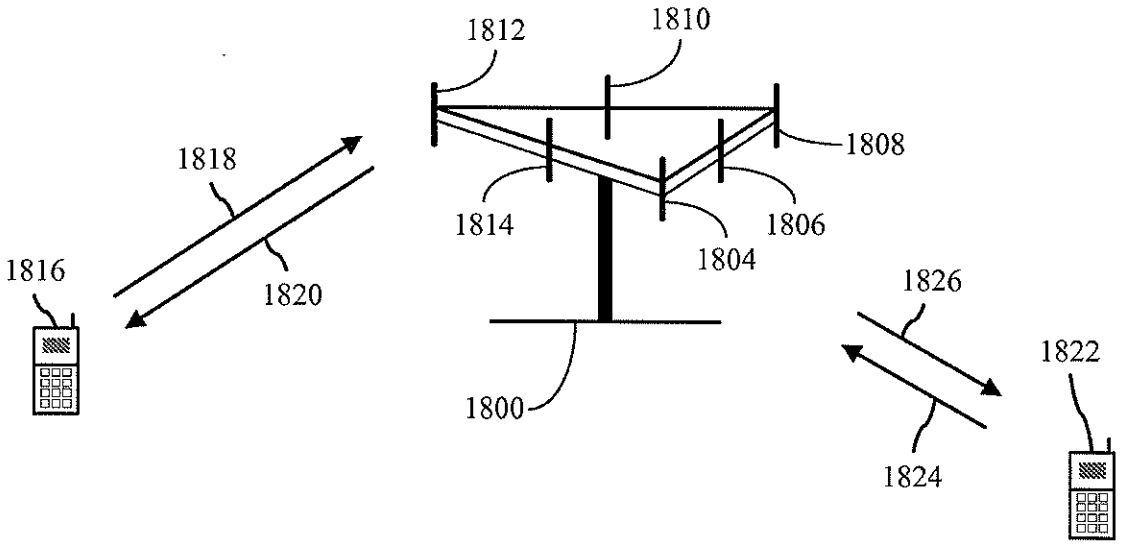

1812
1810
1808
1818
1814
1806
1804
1816
1820
1826
1822
1800
1824

FIG. 18

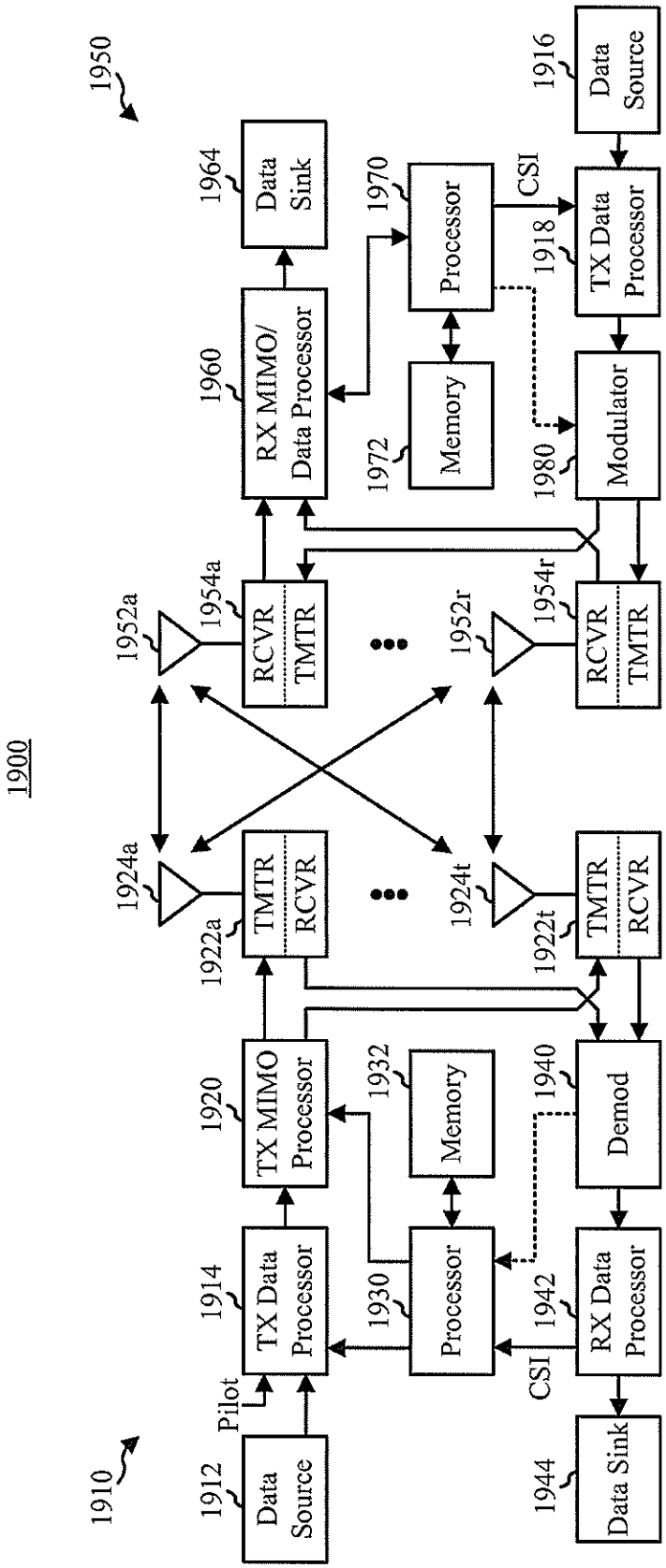

1900
1910
1912
Data Source
Pilot
1914
TX Data Processor
1920
TX MIMO Processor
1922a
TMTR RCVR
1924a
1924t
1922t
TMTR RCVR
1930
Processor
1932
Memory
1940
Demod
1942
RX Data Processor
CSI
1944
Data Sink
1950
1952a
1952r
1954a
RCVR TMTR
1954r
RCVR TMTR
1960
RX MIMO/ Data Processor
1964
Data Sink
1970
Processor
1972
Memory
1980
Modulator
1918
TX Data Processor
CSI
1916
Data Source

FIG. 19