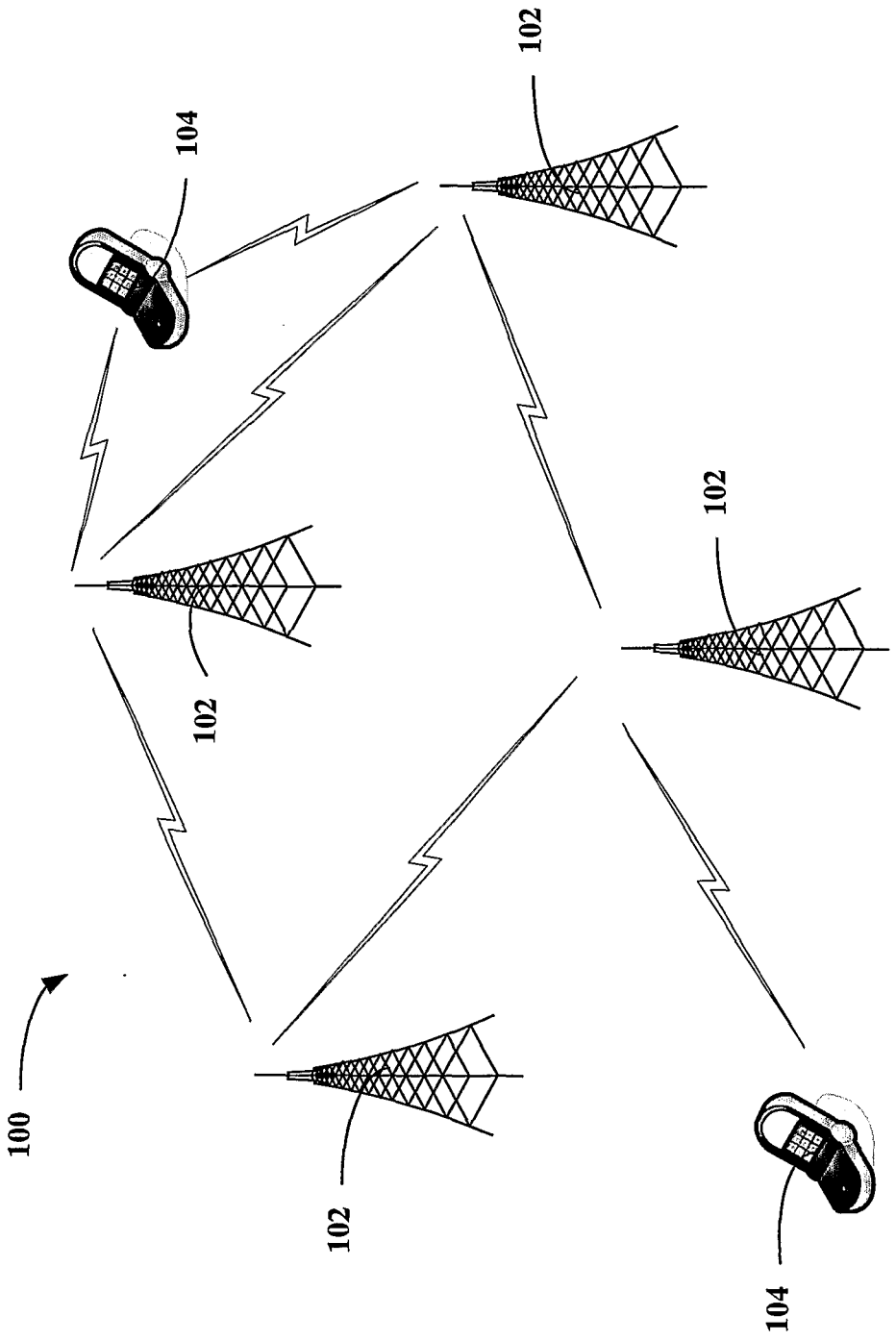


FIG. 1

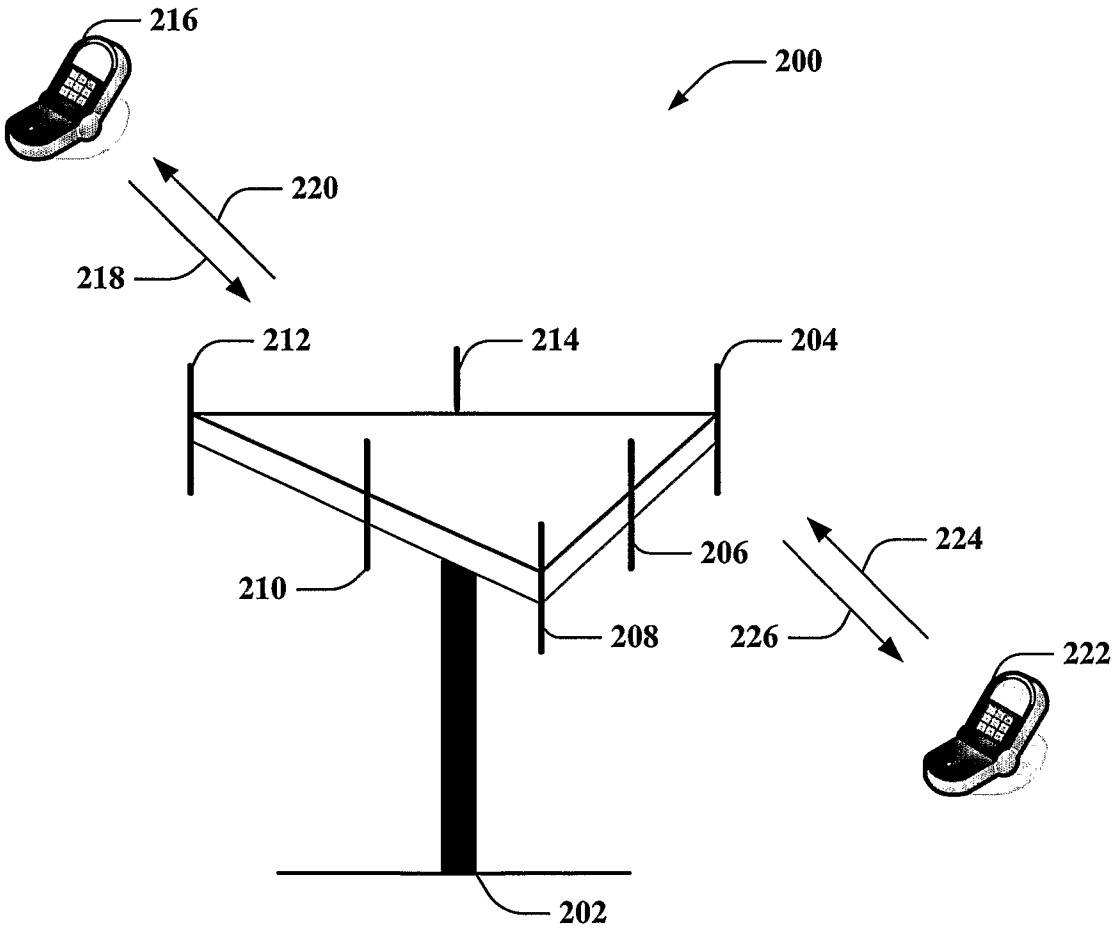


FIG. 2

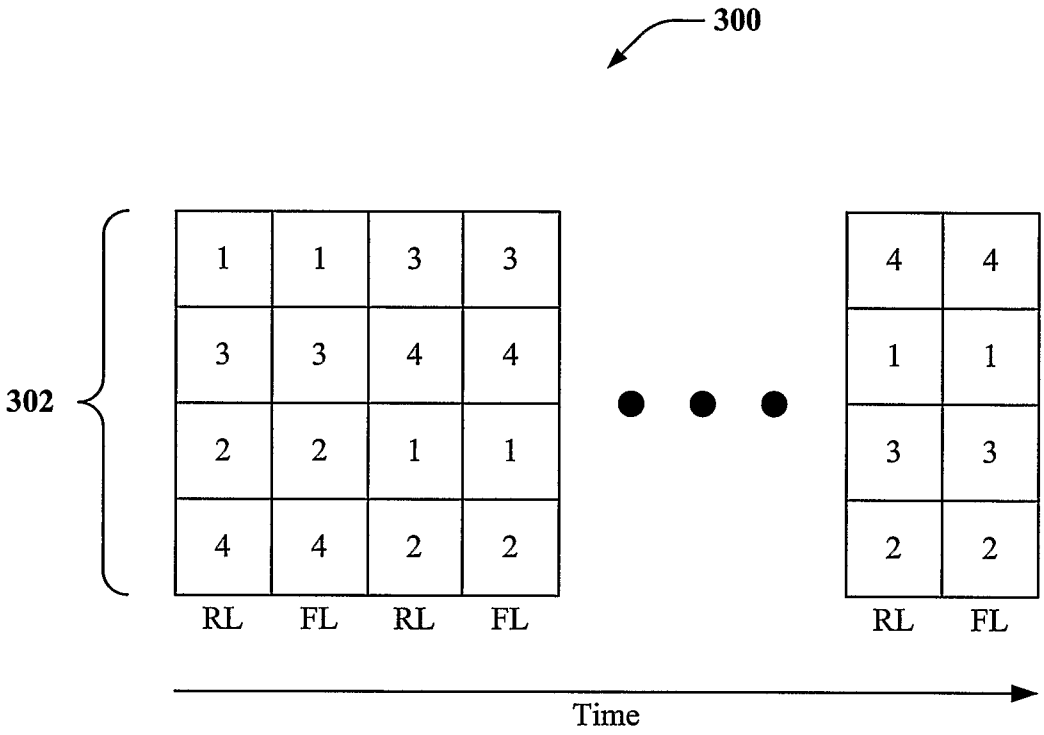


FIG. 3

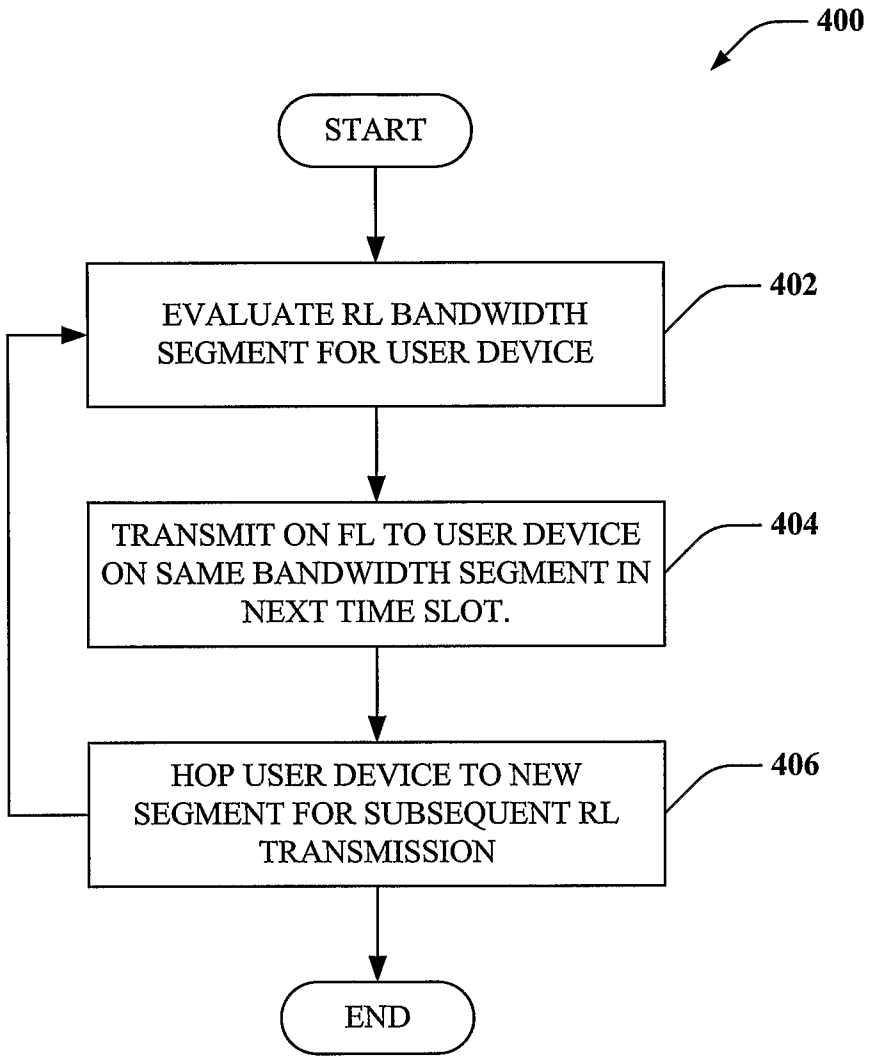

400
START
EVALUATE RL BANDWIDTH SEGMENT FOR USER DEVICE
402
TRANSMIT ON FL TO USER DEVICE ON SAME BANDWIDTH SEGMENT IN NEXT TIME SLOT.
404
HOP USER DEVICE TO NEW SEGMENT FOR SUBSEQUENT RL TRANSMISSION
406
END

FIG. 4

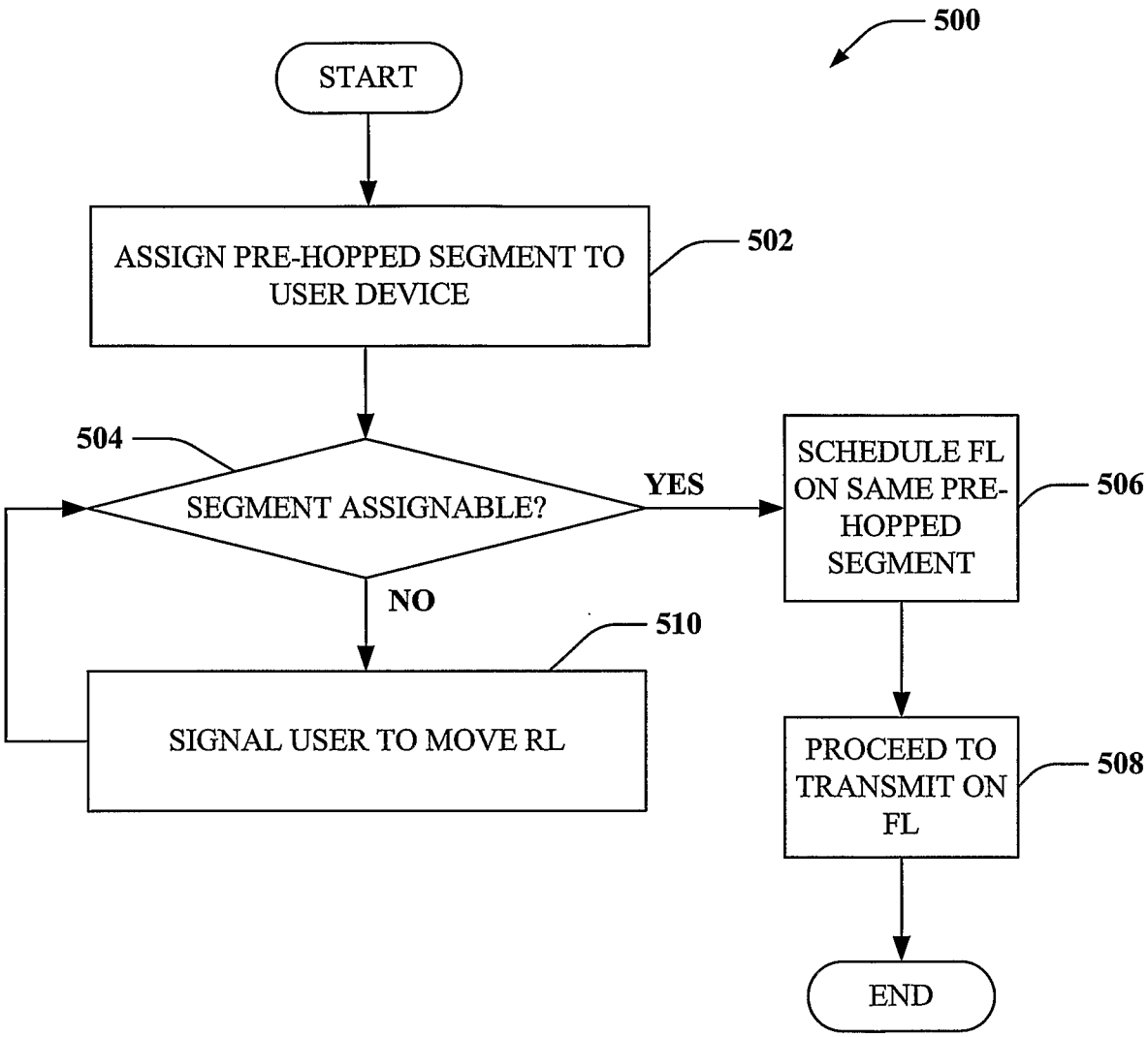

500
START
ASSIGN PRE-HOPPED SEGMENT TO USER DEVICE
502
504
SEGMENT ASSIGNABLE?
YES
NO
SCHEDULE FL ON SAME PRE-HOPPED SEGMENT
506
510
SIGNAL USER TO MOVE RL
PROCEED TO TRANSMIT ON FL
508
END

FIG. 5

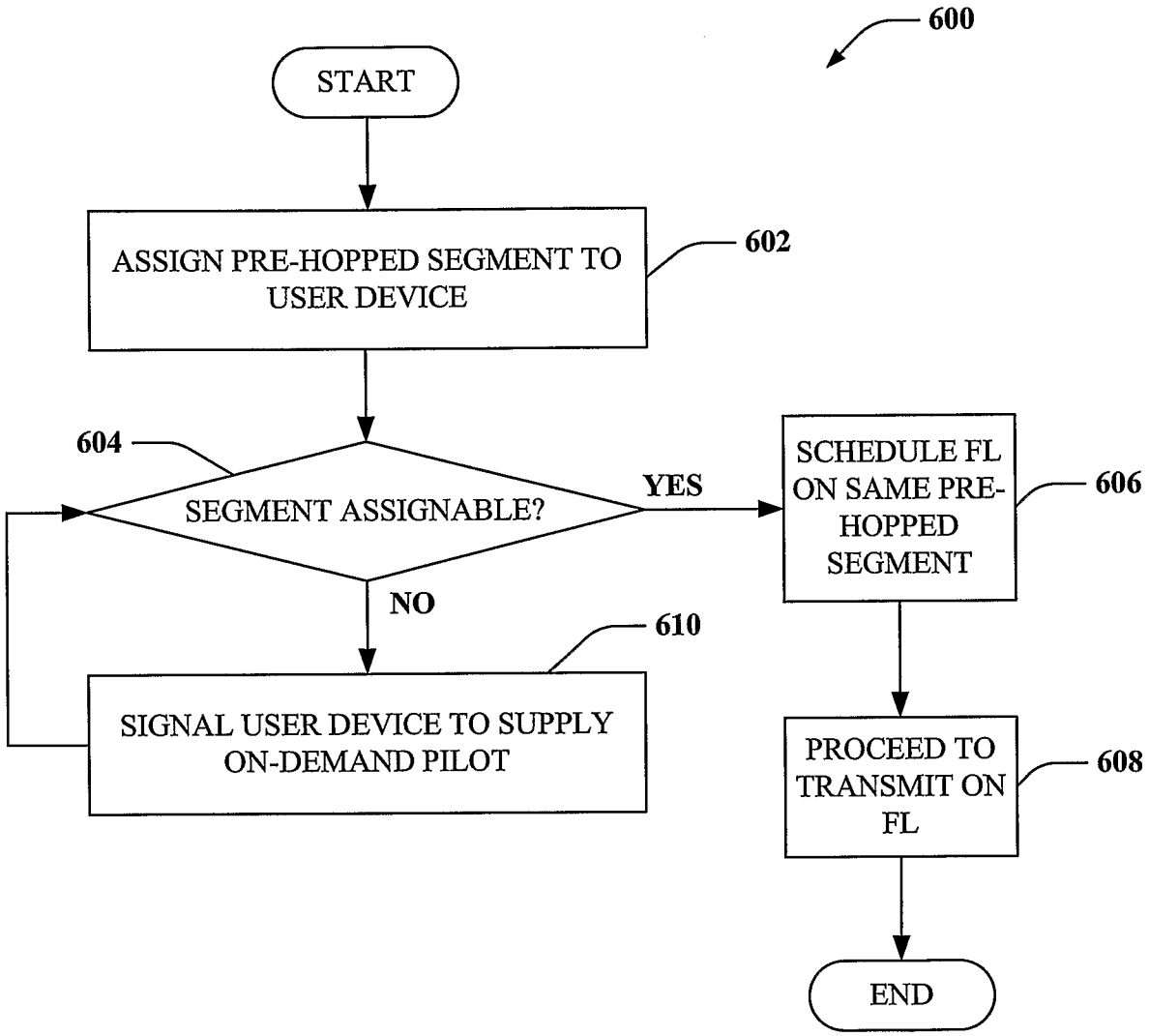

600
START
ASSIGN PRE-HOPPED SEGMENT TO USER DEVICE
602
604
SEGMENT ASSIGNABLE?
YES
NO
SCHEDULE FL ON SAME PRE-HOPPED SEGMENT
606
610
SIGNAL USER DEVICE TO SUPPLY ON-DEMAND PILOT
PROCEED TO TRANSMIT ON FL
608
END

FIG. 6

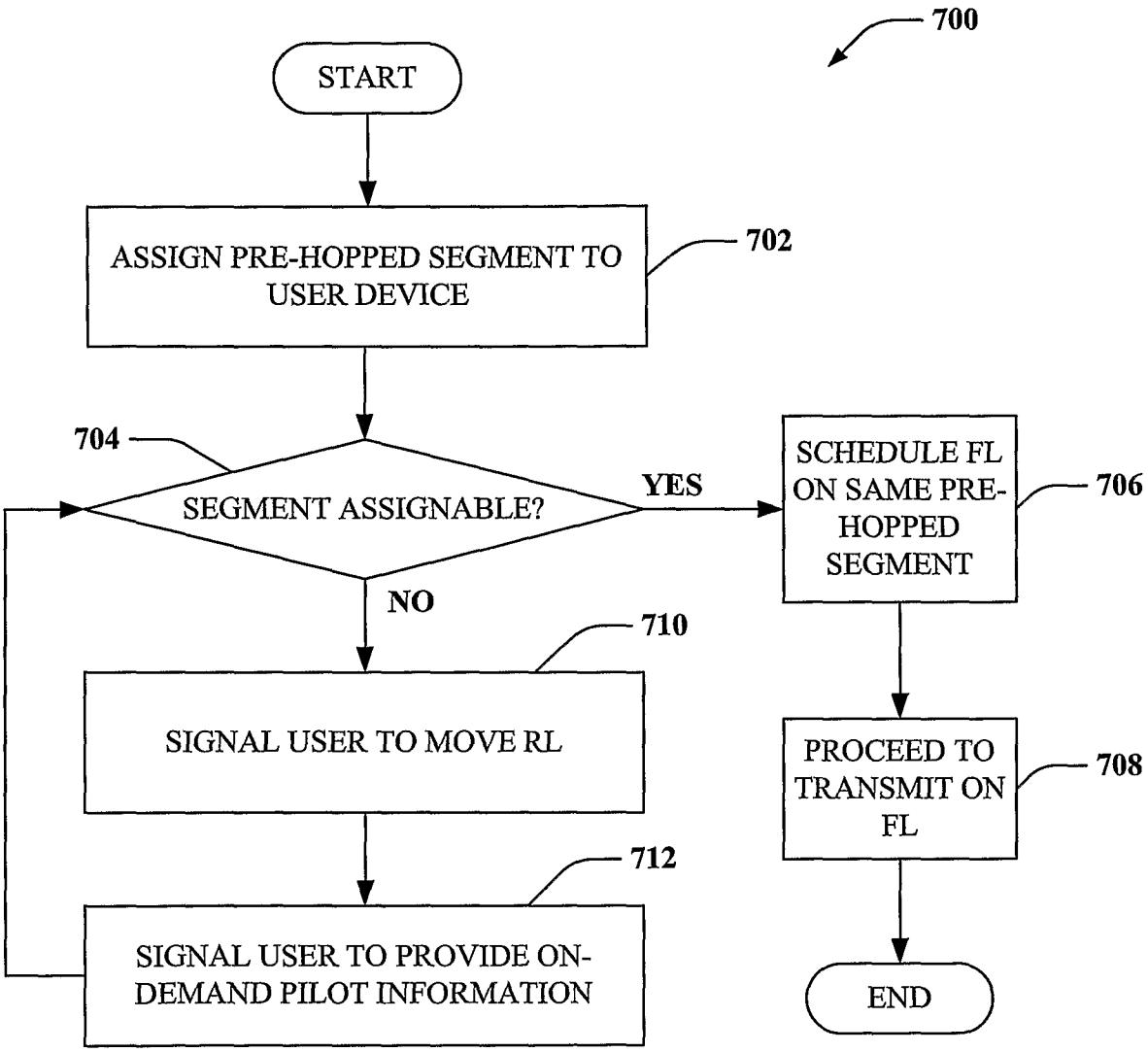

700
START
ASSIGN PRE-HOPPED SEGMENT TO USER DEVICE
702
704
SEGMENT ASSIGNABLE?
YES
NO
SCHEDULE FL ON SAME PRE-HOPPED SEGMENT
706
710
SIGNAL USER TO MOVE RL
PROCEED TO TRANSMIT ON FL
708
712
SIGNAL USER TO PROVIDE ON-DEMAND PILOT INFORMATION
END

FIG. 7

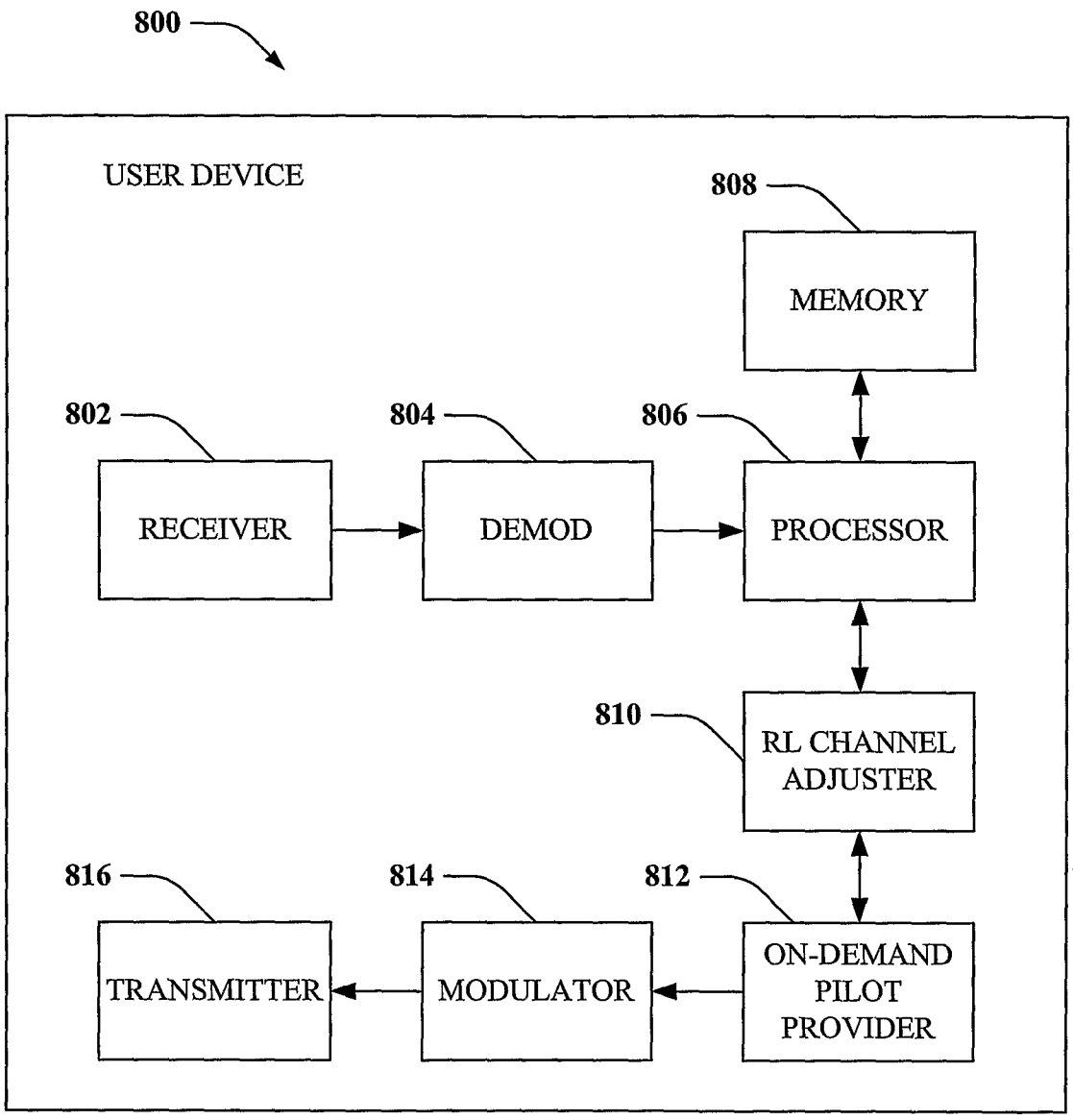

800
USER DEVICE
808
MEMORY
802
804
806
RECEIVER
DEMOD
PROCESSOR
810
RL CHANNEL ADJUSTER
816
814
812
TRANSMITTER
MODULATOR
ON-DEMAND PILOT PROVIDER

FIG. 8

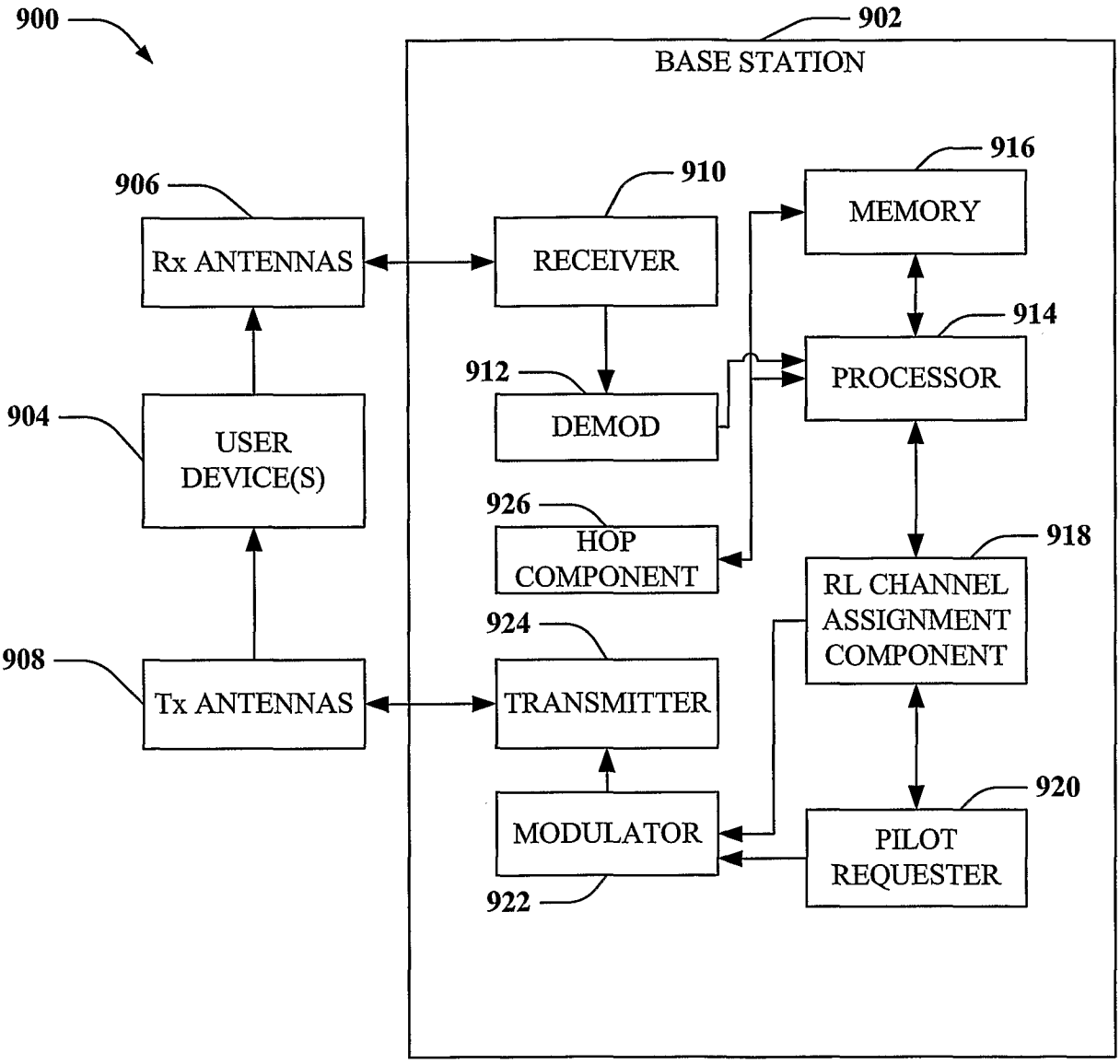

900
902
BASE STATION
906
Rx ANTENNAS
910
RECEIVER
916
MEMORY
914
PROCESSOR
912
DEMOD
904
USER DEVICE(S)
926
HOP COMPONENT
918
RL CHANNEL ASSIGNMENT COMPONENT
924
908
Tx ANTENNAS
TRANSMITTER
920
MODULATOR
PILOT REQUESTER
922

FIG. 9

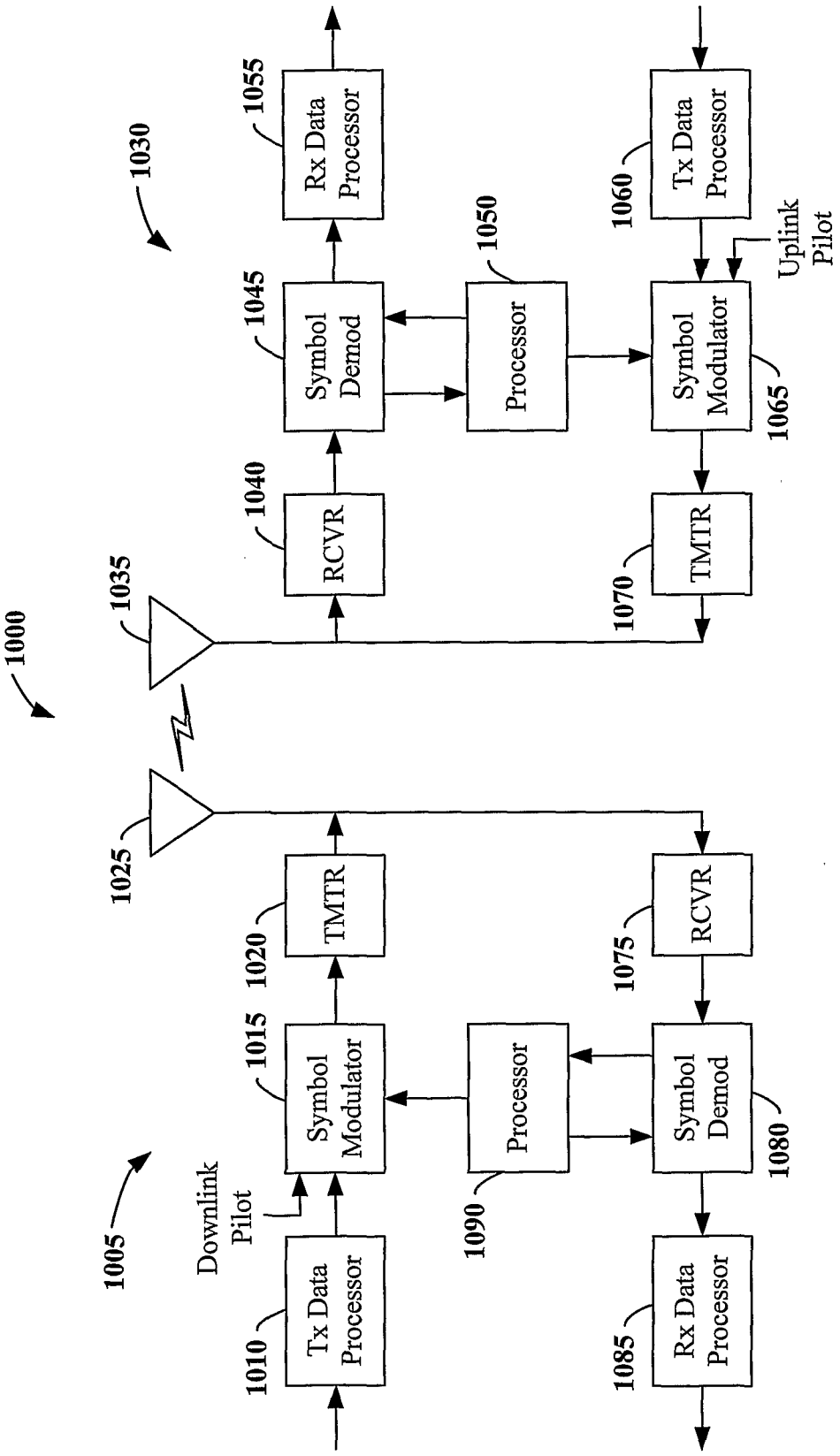

1000
1005
1010
Tx Data Processor
Downlink Pilot
1015
Symbol Modulator
1020
TMTR
1025
1030
1035
1040
RCVR
1045
Symbol Demod
1050
Processor
1055
Rx Data Processor
1060
Tx Data Processor
Uplink Pilot
1065
Symbol Modulator
1070
TMTR
1075
RCVR
1080
Symbol Demod
1085
Rx Data Processor
1090
Processor

FIG. 10

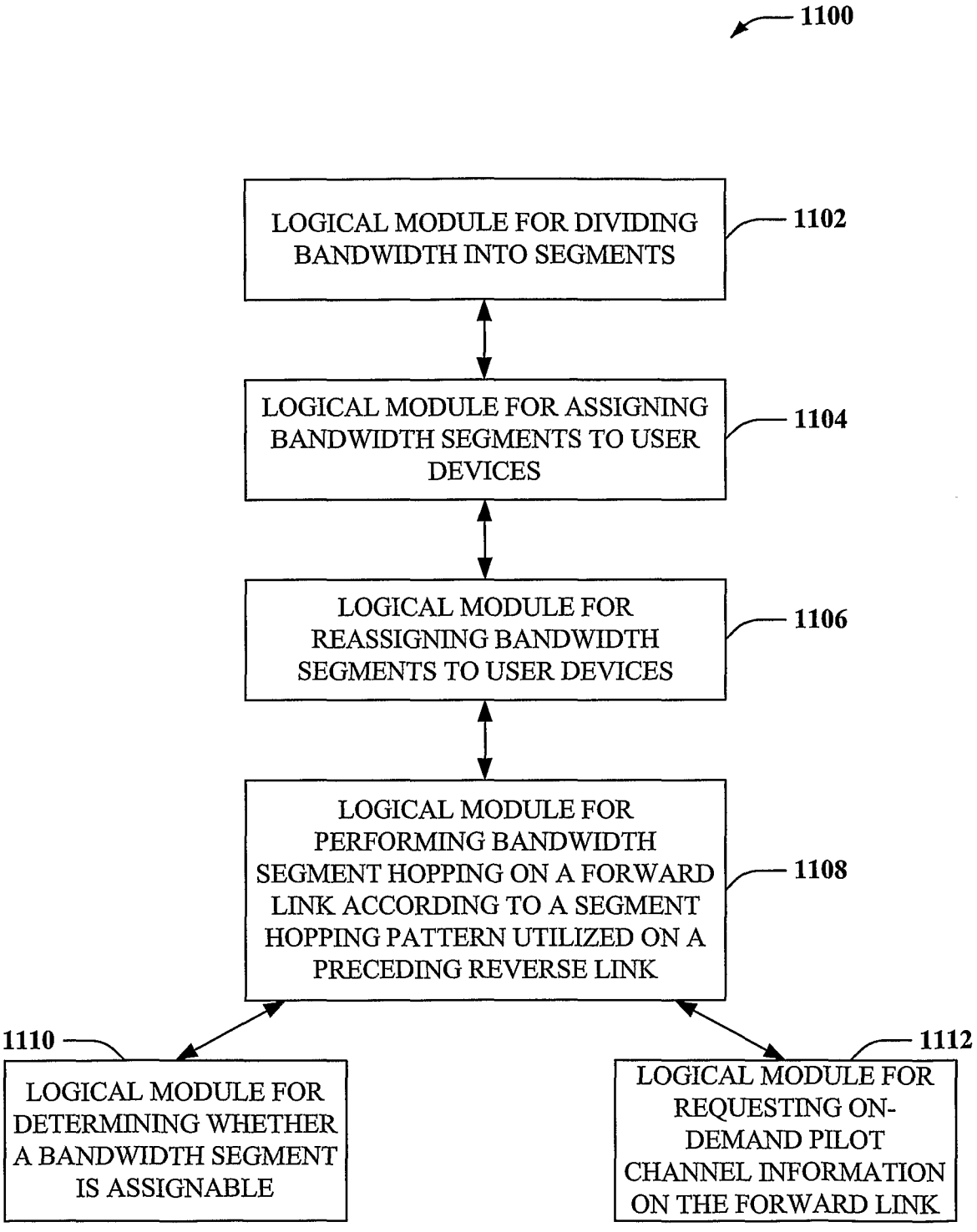

1100
LOGICAL MODULE FOR DIVIDING BANDWIDTH INTO SEGMENTS
1102
LOGICAL MODULE FOR ASSIGNING BANDWIDTH SEGMENTS TO USER DEVICES
1104
LOGICAL MODULE FOR REASSIGNING BANDWIDTH SEGMENTS TO USER DEVICES
1106
LOGICAL MODULE FOR PERFORMING BANDWIDTH SEGMENT HOPPING ON A FORWARD LINK ACCORDING TO A SEGMENT HOPPING PATTERN UTILIZED ON A PRECEDING REVERSE LINK
1108
1110
LOGICAL MODULE FOR DETERMINING WHETHER A BANDWIDTH SEGMENT IS ASSIGNABLE
1112
LOGICAL MODULE FOR REQUESTING ON-DEMAND PILOT CHANNEL INFORMATION ON THE FORWARD LINK

FIG. 11

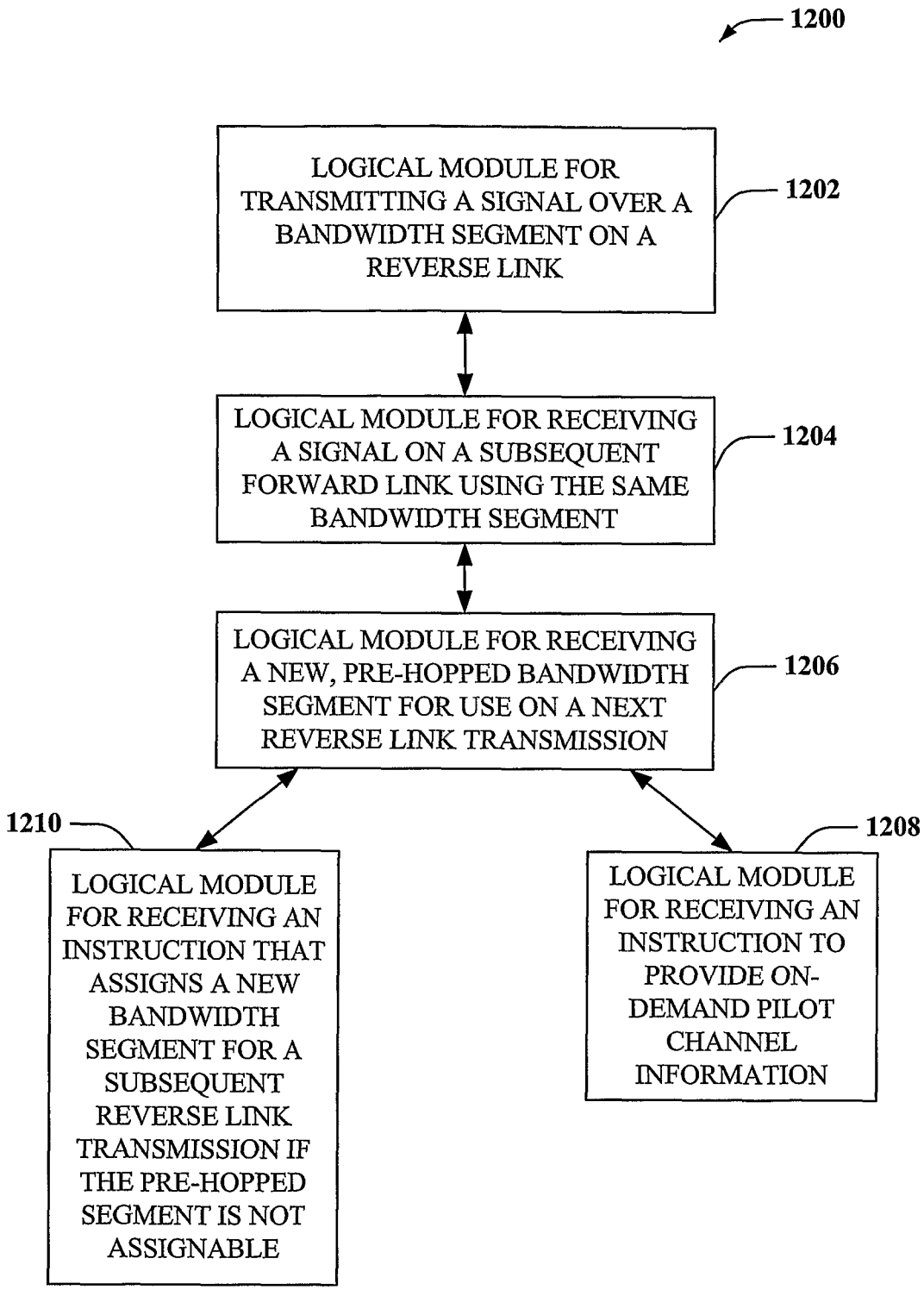

1200
LOGICAL MODULE FOR TRANSMITTING A SIGNAL OVER A BANDWIDTH SEGMENT ON A REVERSE LINK
1202
LOGICAL MODULE FOR RECEIVING A SIGNAL ON A SUBSEQUENT FORWARD LINK USING THE SAME BANDWIDTH SEGMENT
1204
LOGICAL MODULE FOR RECEIVING A NEW, PRE-HOPPED BANDWIDTH SEGMENT FOR USE ON A NEXT REVERSE LINK TRANSMISSION
1206
1210
LOGICAL MODULE FOR RECEIVING AN INSTRUCTION THAT ASSIGNS A NEW BANDWIDTH SEGMENT FOR A SUBSEQUENT REVERSE LINK TRANSMISSION IF THE PRE-HOPPED SEGMENT IS NOT ASSIGNABLE
1208
LOGICAL MODULE FOR RECEIVING AN INSTRUCTION TO PROVIDE ON-DEMAND PILOT CHANNEL INFORMATION

FIG. 12