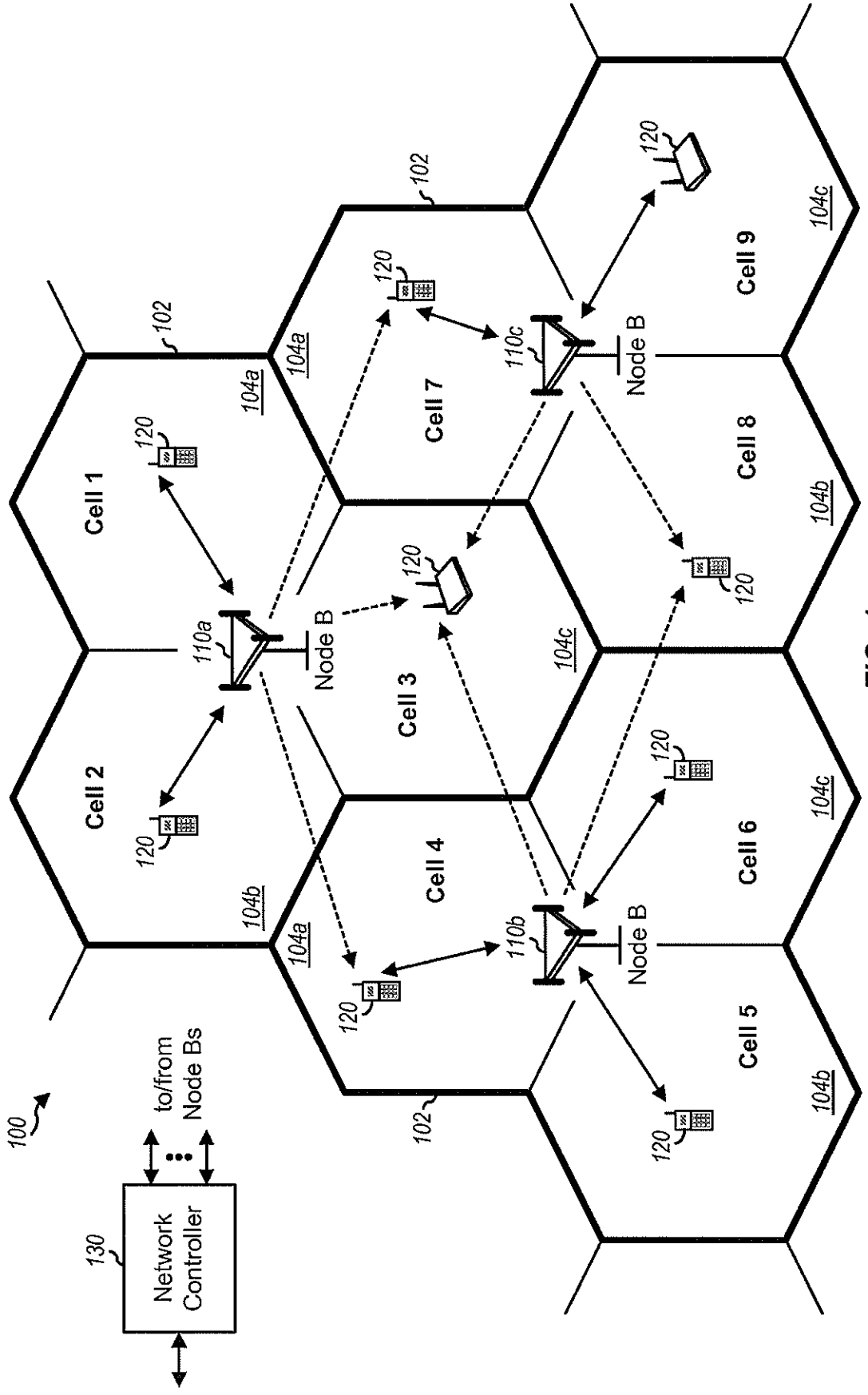

100
130
Network Controller
to/from Node Bs
Cell 1
Cell 2
Cell 3
Cell 4
Cell 5
Cell 6
Cell 7
Cell 8
Cell 9
Node B
Node B
Node B
102
104a
104b
104c
110a
110b
110c
120

FIG. 1

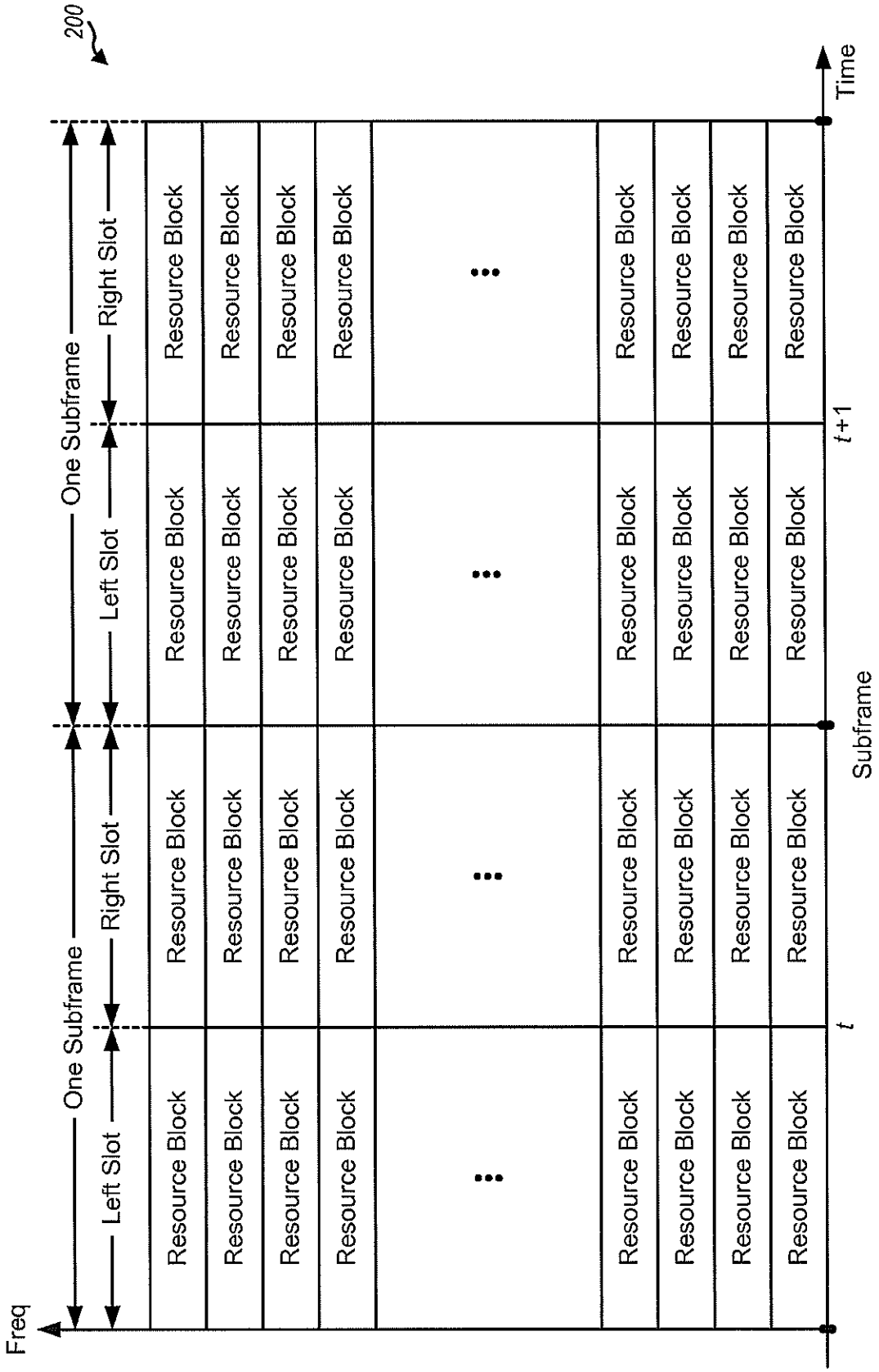

200
Freq
One Subframe
Left Slot
Right Slot
One Subframe
Left Slot
Right Slot
Resource Block
Time
Subframe
t
t+1

FIG. 2

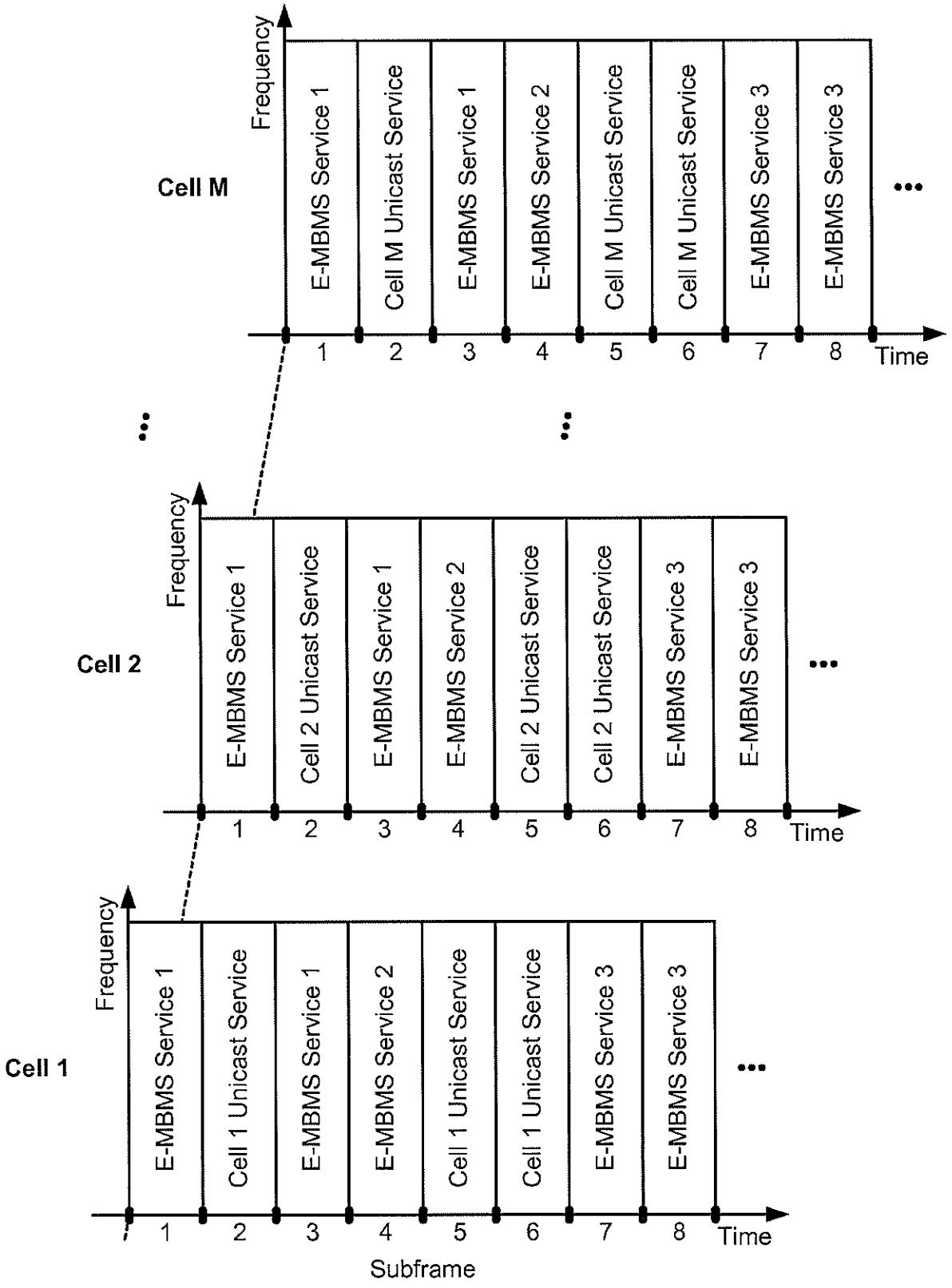

Cell M
Frequency
E-MBMS Service 1
Cell M Unicast Service
E-MBMS Service 1
E-MBMS Service 2
Cell M Unicast Service
Cell M Unicast Service
E-MBMS Service 3
E-MBMS Service 3
1 2 3 4 5 6 7 8
Time
Cell 2
Frequency
E-MBMS Service 1
Cell 2 Unicast Service
E-MBMS Service 1
E-MBMS Service 2
Cell 2 Unicast Service
Cell 2 Unicast Service
E-MBMS Service 3
E-MBMS Service 3
1 2 3 4 5 6 7 8
Time
Cell 1
Frequency
E-MBMS Service 1
Cell 1 Unicast Service
E-MBMS Service 1
E-MBMS Service 2
Cell 1 Unicast Service
Cell 1 Unicast Service
E-MBMS Service 3
E-MBMS Service 3
1 2 3 4 5 6 7 8
Time
Subframe

FIG. 3

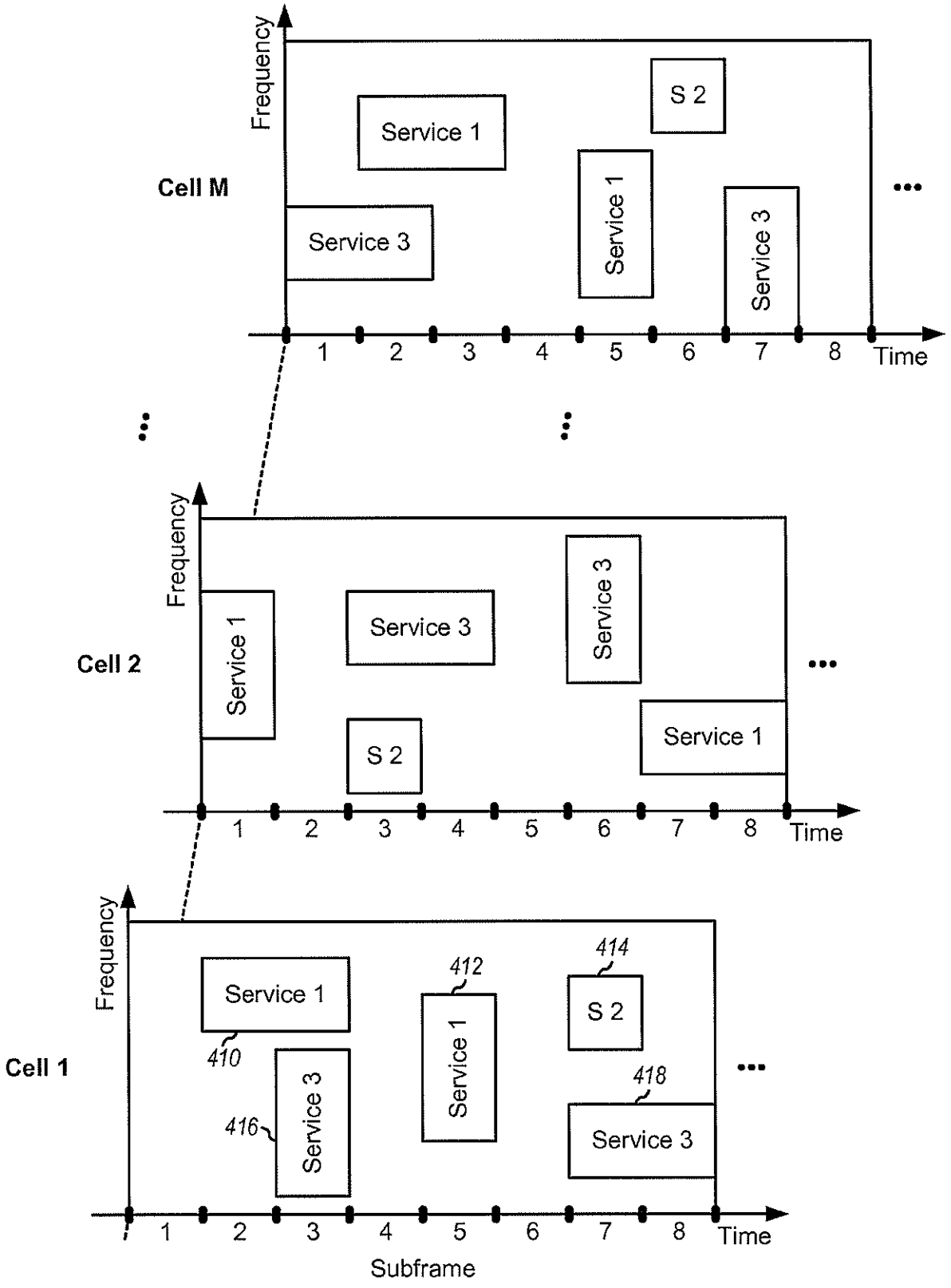

Cell M
Frequency
Service 1
S 2
Service 1
Service 3
Service 3
1 2 3 4 5 6 7 8 Time
Cell 2
Frequency
Service 1
Service 3
Service 3
S 2
Service 1
1 2 3 4 5 6 7 8 Time
Cell 1
Frequency
Service 1
410
412
414
S 2
Service 1
416
Service 3
418
Service 3
1 2 3 4 5 6 7 8 Time
Subframe

FIG. 4

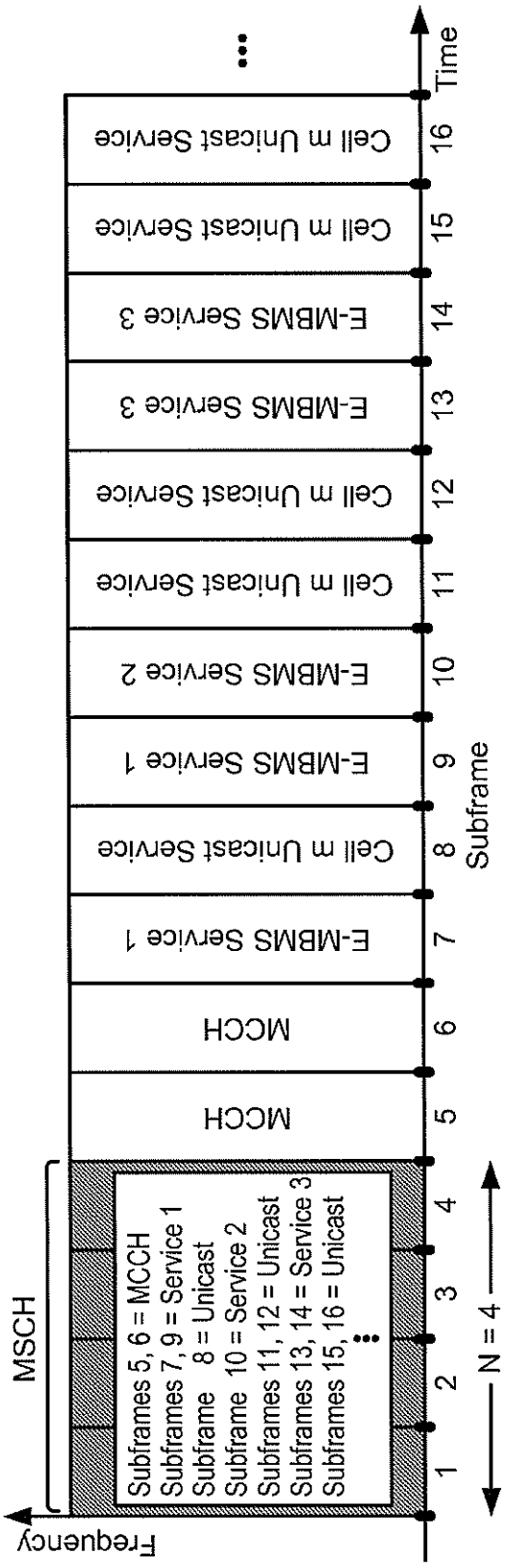

Time
Subframe
Frequency
MSCH
N = 4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Subframes 5, 6 = MCCH
Subframes 7, 9 = Service 1
Subframe 8 = Unicast
Subframe 10 = Service 2
Subframes 11, 12 = Unicast
Subframes 13, 14 = Service 3
Subframes 15, 16 = Unicast
MCCH
MCCH
E-MBMS Service 1
Cell m Unicast Service
E-MBMS Service 1
E-MBMS Service 2
Cell m Unicast Service
Cell m Unicast Service
E-MBMS Service 3
E-MBMS Service 3
Cell m Unicast Service
Cell m Unicast Service
Cell m Unicast Service

FIG. 5

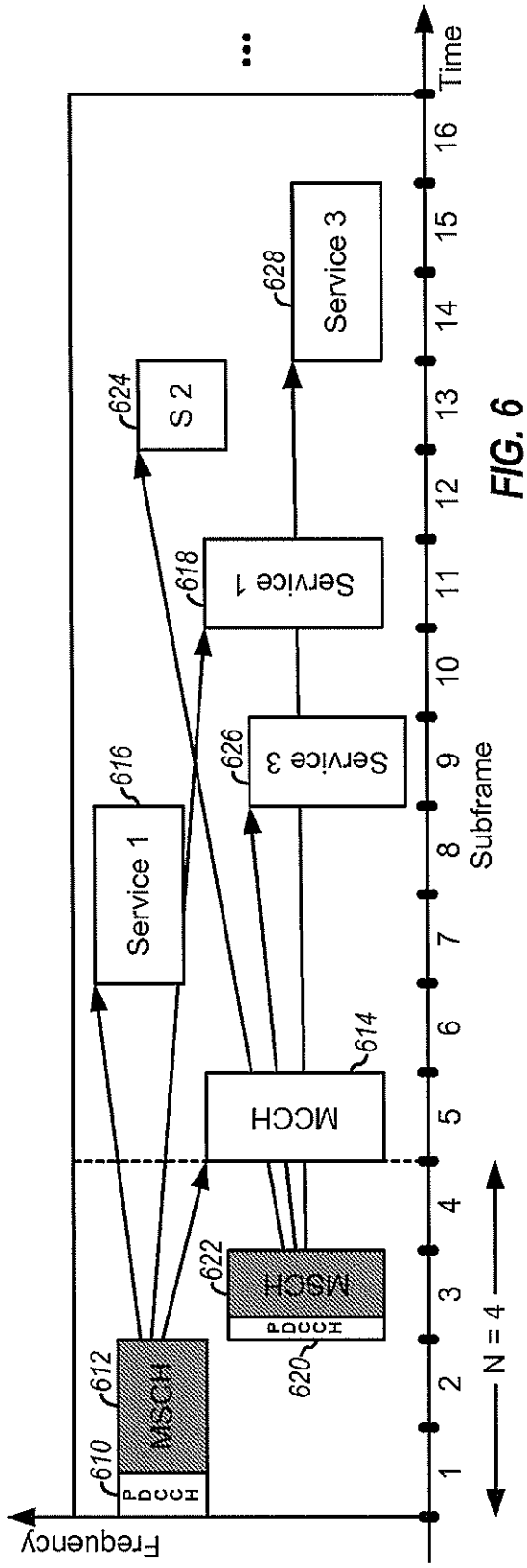

Frequency
Time
Subframe
N = 4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
MSCH
PDCCH
MCCH
Service 1
Service 3
S 2
610
612
614
616
618
620
622
624
626
628

FIG. 6

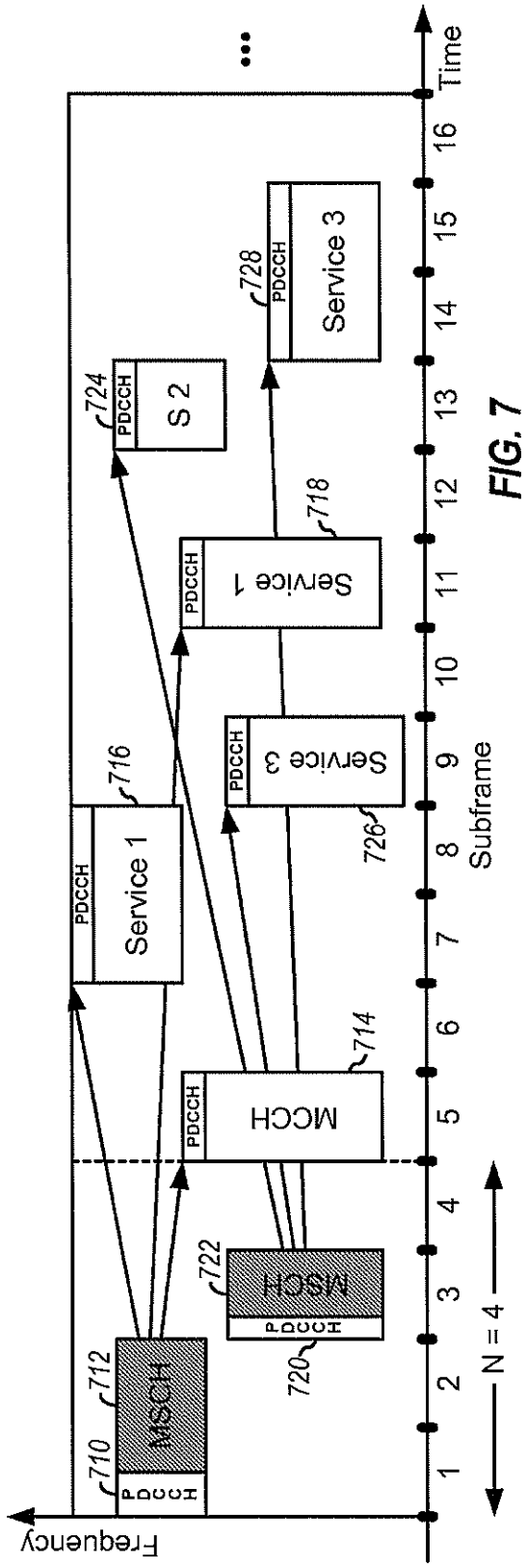

Frequency
Time
Subframe
N = 4
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
MSCH
PDCCH
MCCH
Service 1
Service 3
S 2
710
712
714
716
718
720
722
724
726
728

FIG. 7

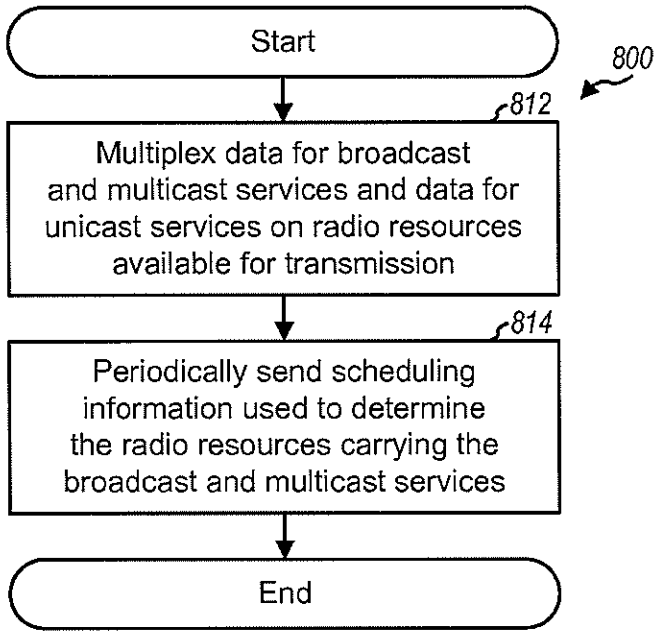


FIG. 8

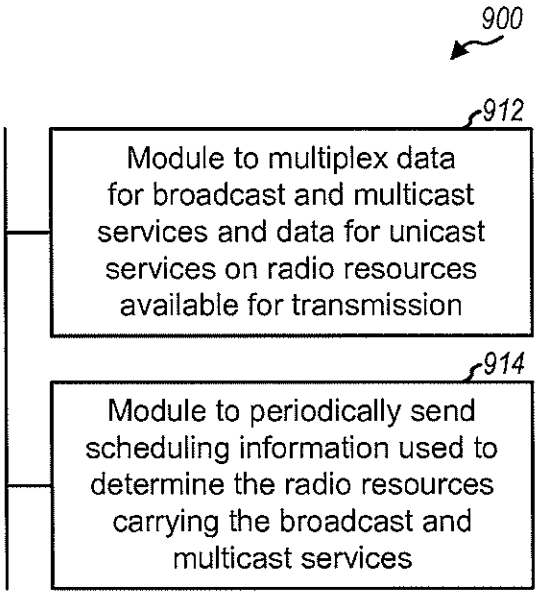


FIG. 9

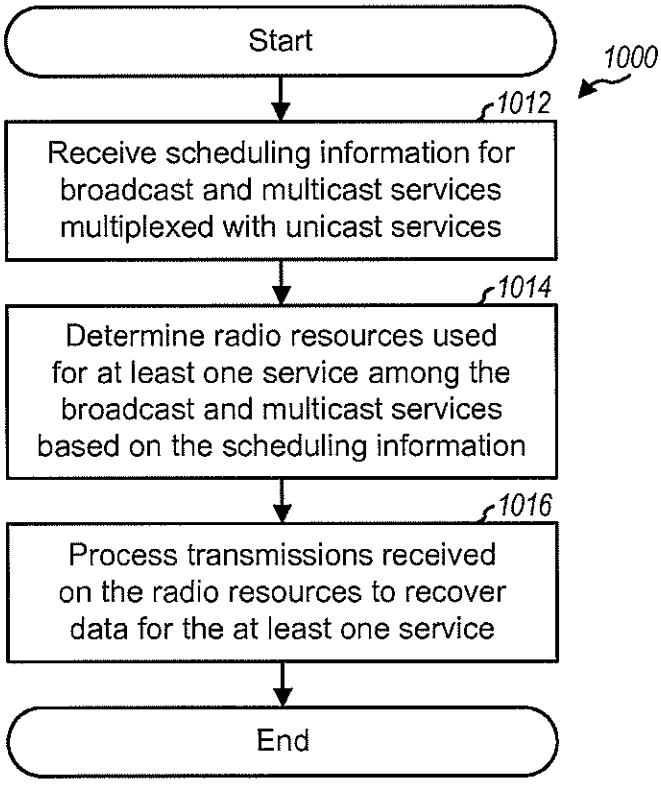


FIG. 10

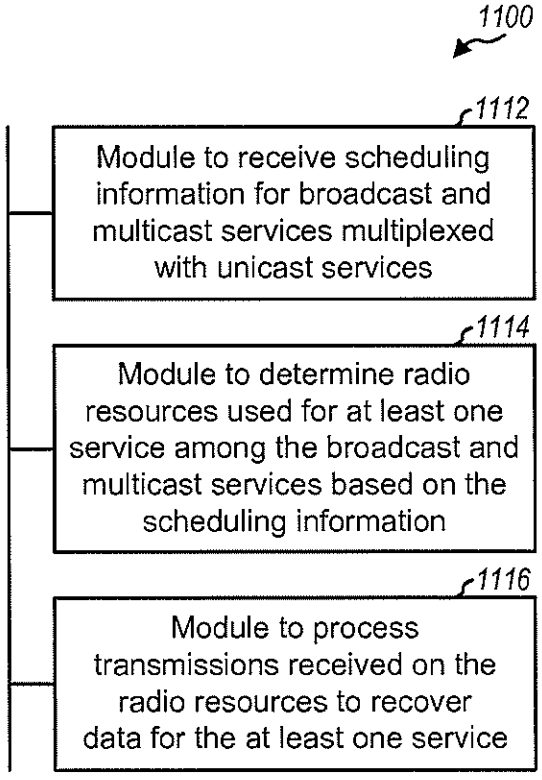


FIG. 11

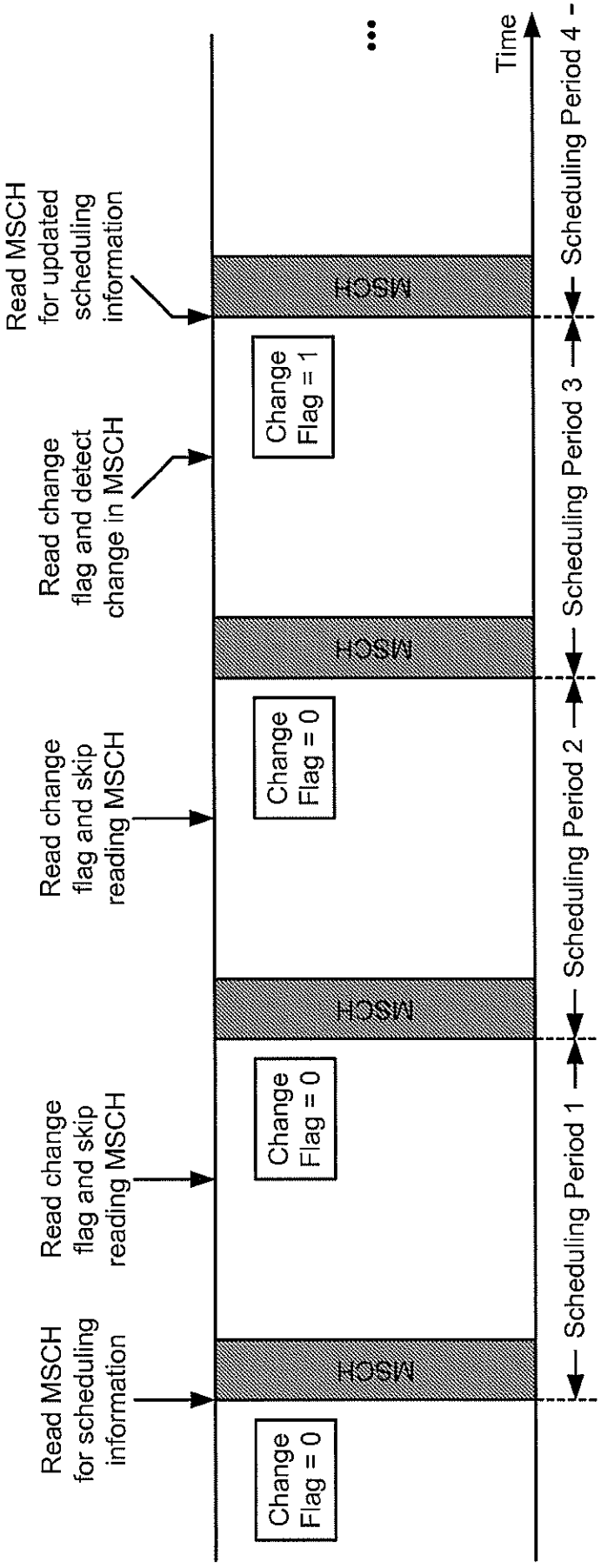

Time
Scheduling Period 1
Scheduling Period 2
Scheduling Period 3
Scheduling Period 4
MSCH
MSCH
MSCH
MSCH
Change Flag = 0
Change Flag = 0
Change Flag = 0
Change Flag = 1
Read MSCH for scheduling information
Read change flag and skip reading MSCH
Read change flag and skip reading MSCH
Read change flag and detect change in MSCH
Read MSCH for updated scheduling information

FIG. 12

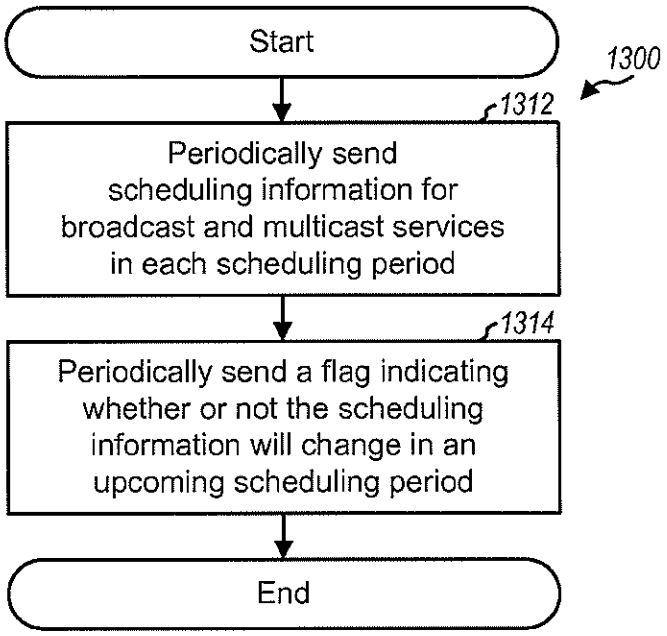


FIG. 13

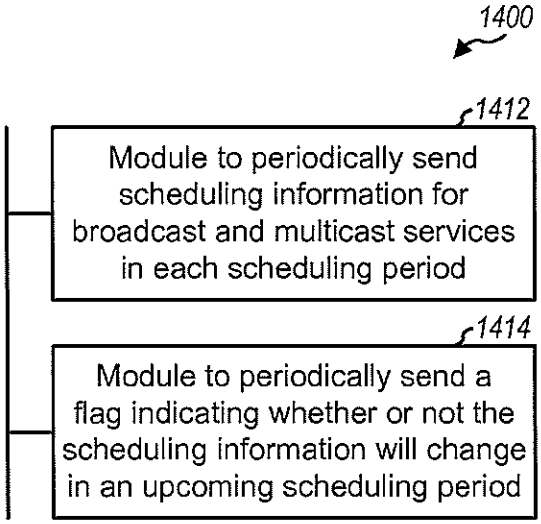


FIG. 14

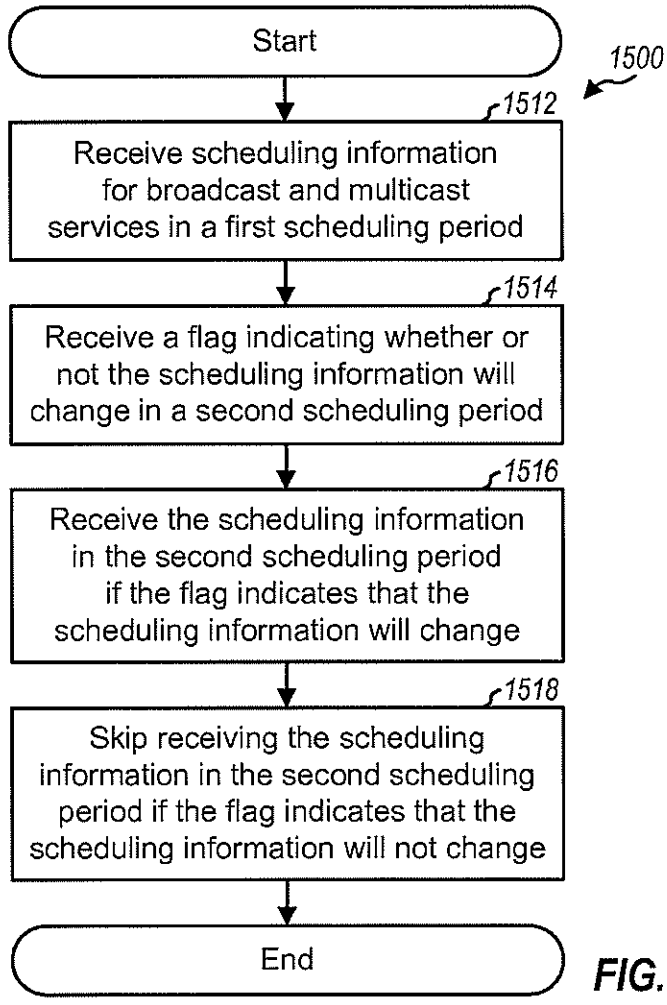


FIG. 15

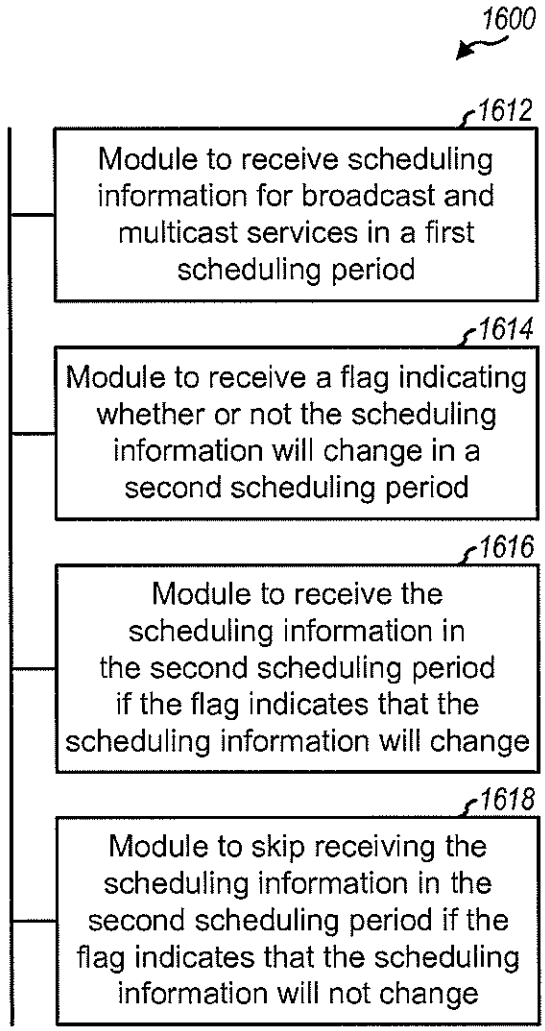


FIG. 16

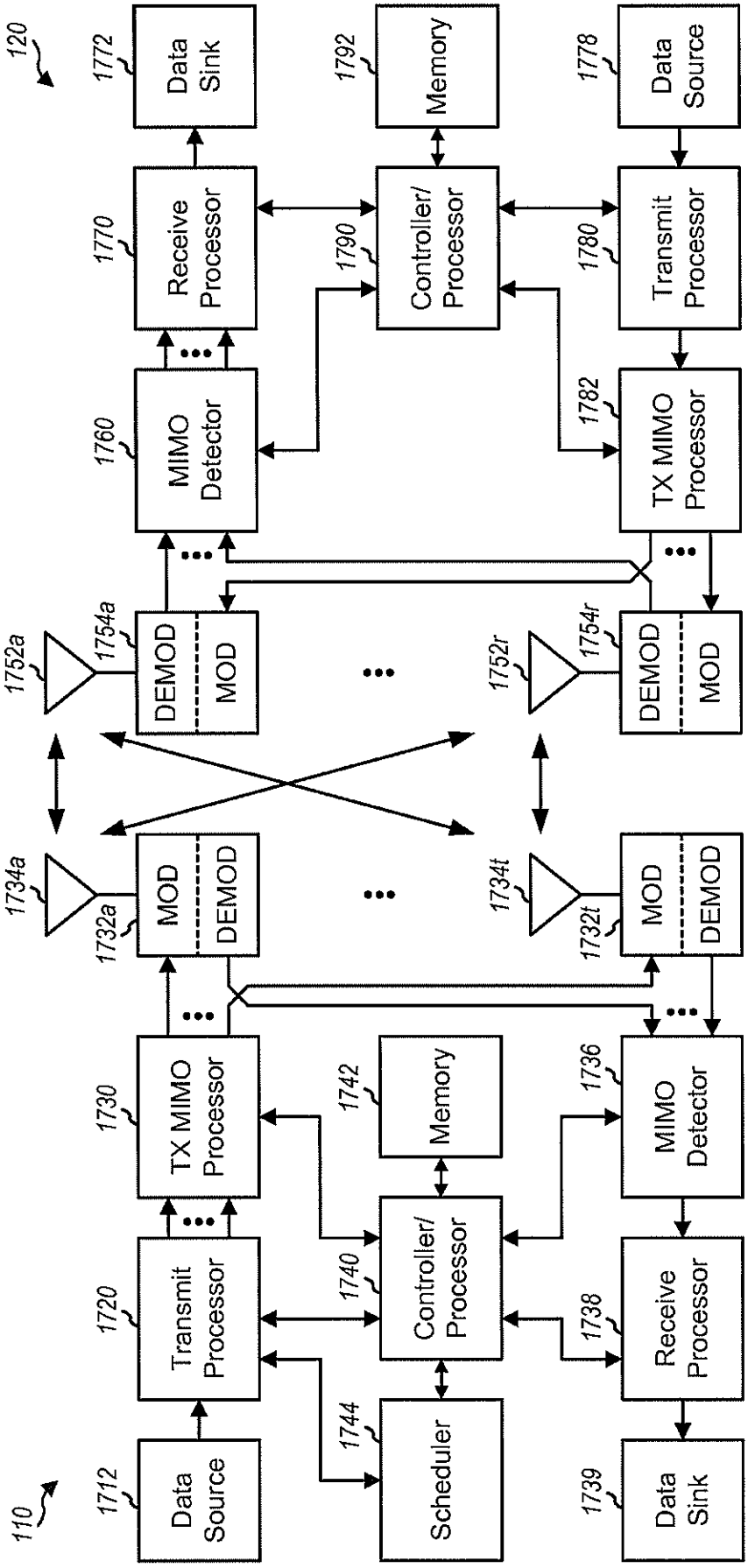

120
1772
Data Sink
1792
Memory
1778
Data Source
1770
Receive Processor
1790
Controller/ Processor
1780
Transmit Processor
1760
MIMO Detector
1782
TX MIMO Processor
1752a
1754a
DEMOD
MOD
1752r
1754r
DEMOD
MOD
1734a
1732a
MOD
DEMOD
1734t
1732t
MOD
DEMOD
1730
TX MIMO Processor
1742
Memory
1736
MIMO Detector
1720
Transmit Processor
1740
Controller/ Processor
1738
Receive Processor
1744
Scheduler
110
1712
Data Source
1739
Data Sink

FIG. 17