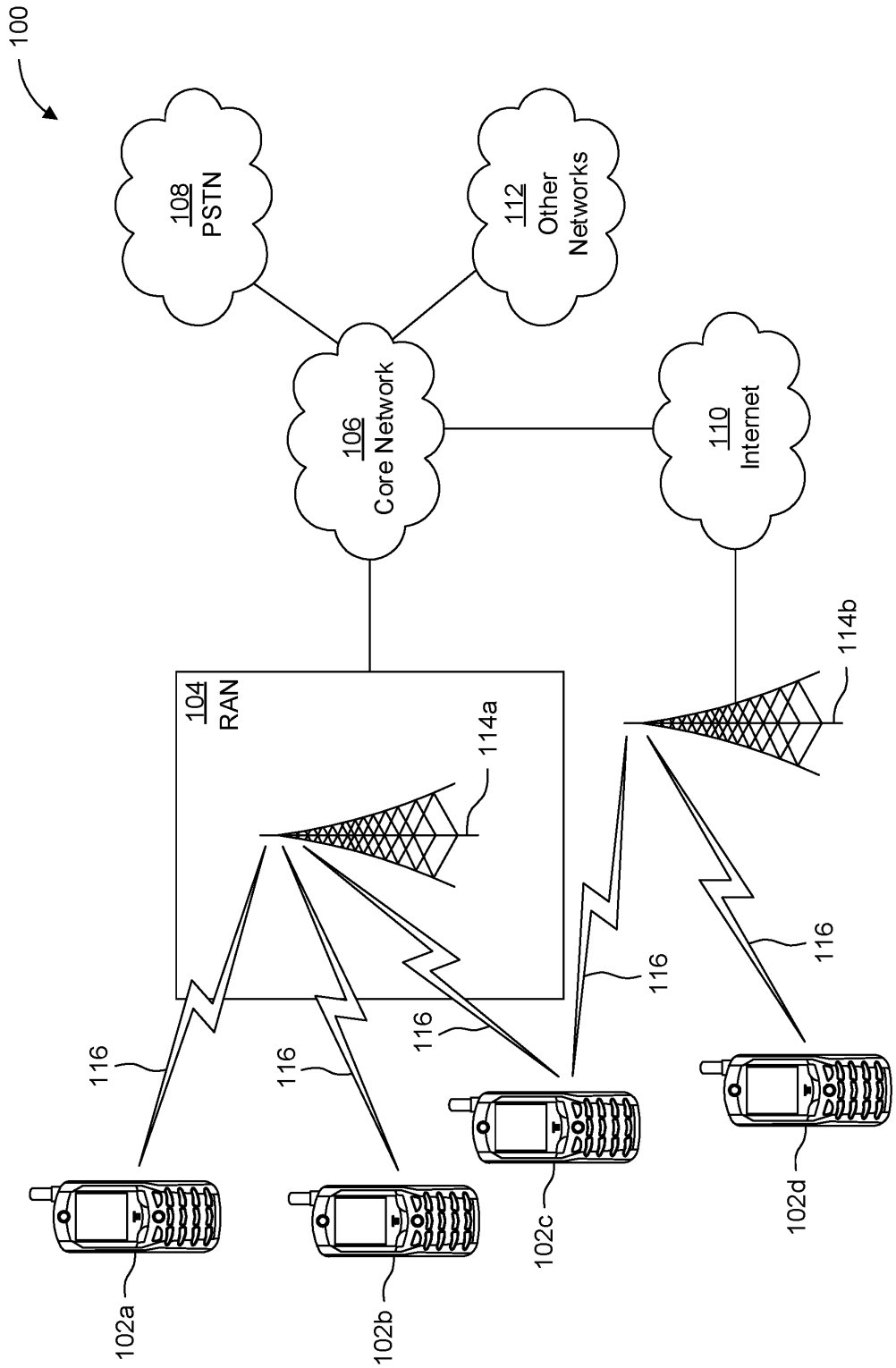

100
108 PSTN
112 Other Networks
106 Core Network
110 Internet
104 RAN
114a
114b
116
116
116
116
102a
102b
102c
102d

FIG. 1A

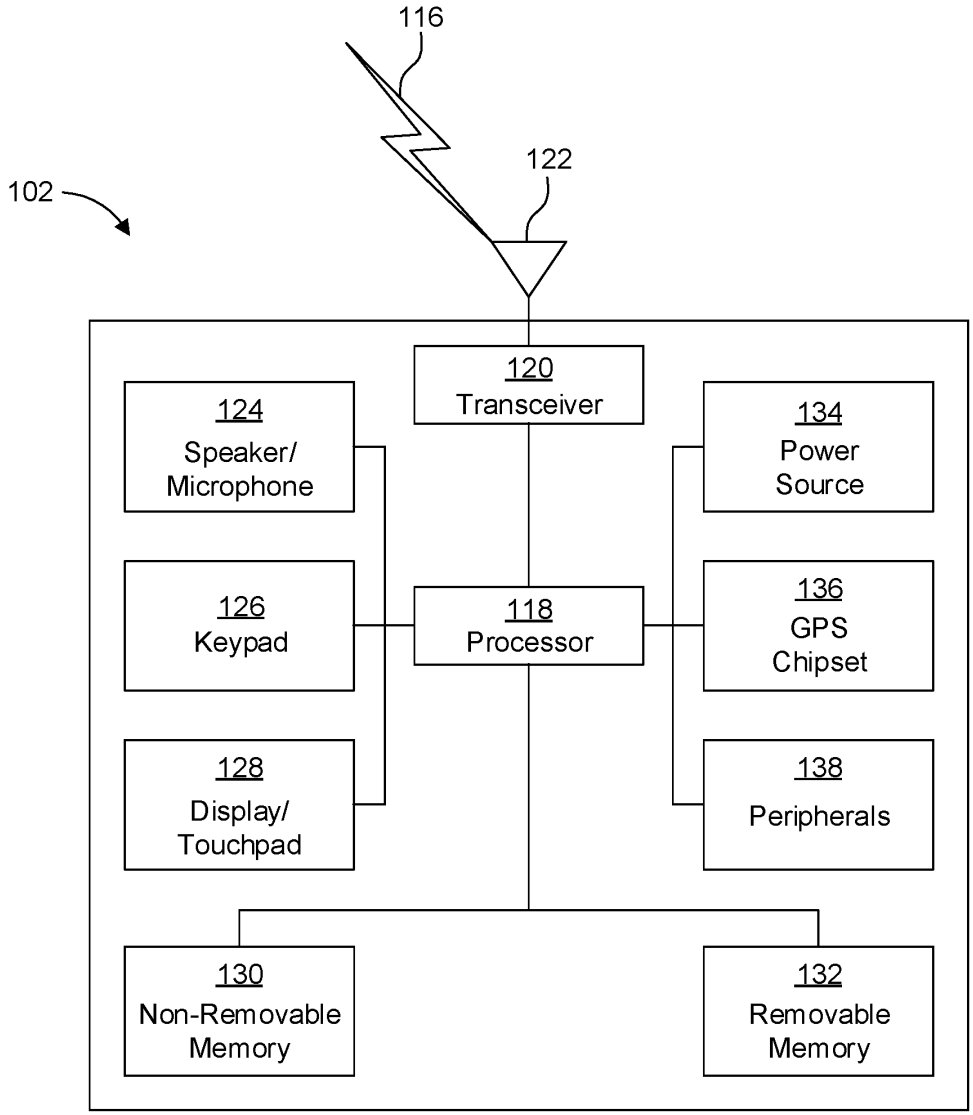

116
122
102
120
Transceiver
124
Speaker/
Microphone
126
Keypad
128
Display/
Touchpad
118
Processor
134
Power
Source
136
GPS
Chipset
138
Peripherals
130
Non-Removable
Memory
132
Removable
Memory

FIG. 1B

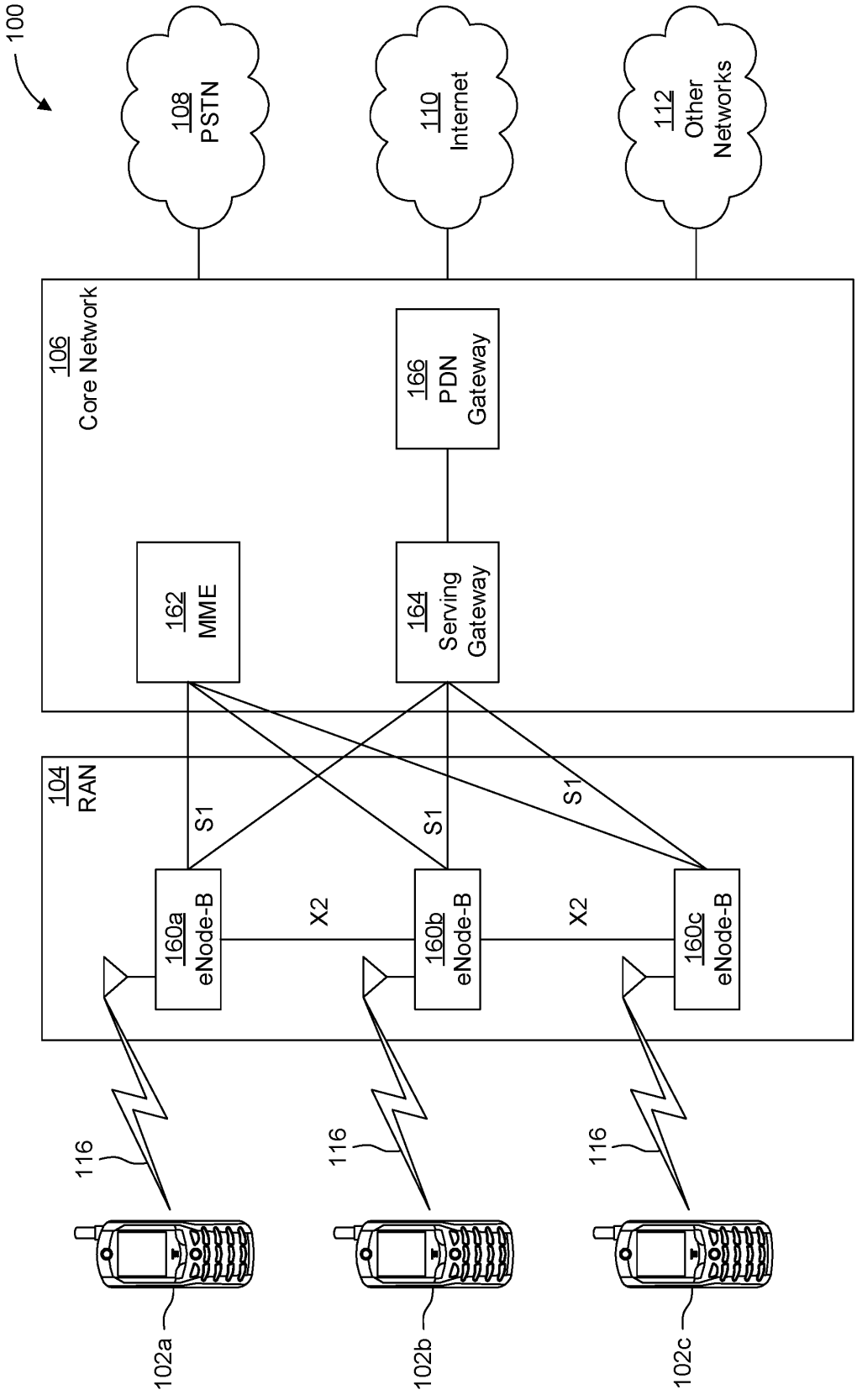

100
108 PSTN
110 Internet
112 Other Networks
106 Core Network
166 PDN Gateway
162 MME
164 Serving Gateway
104 RAN
S1
S1
S1
160a eNode-B
160b eNode-B
160c eNode-B
X2
X2
116
116
116
102a
102b
102c

FIG. 1C

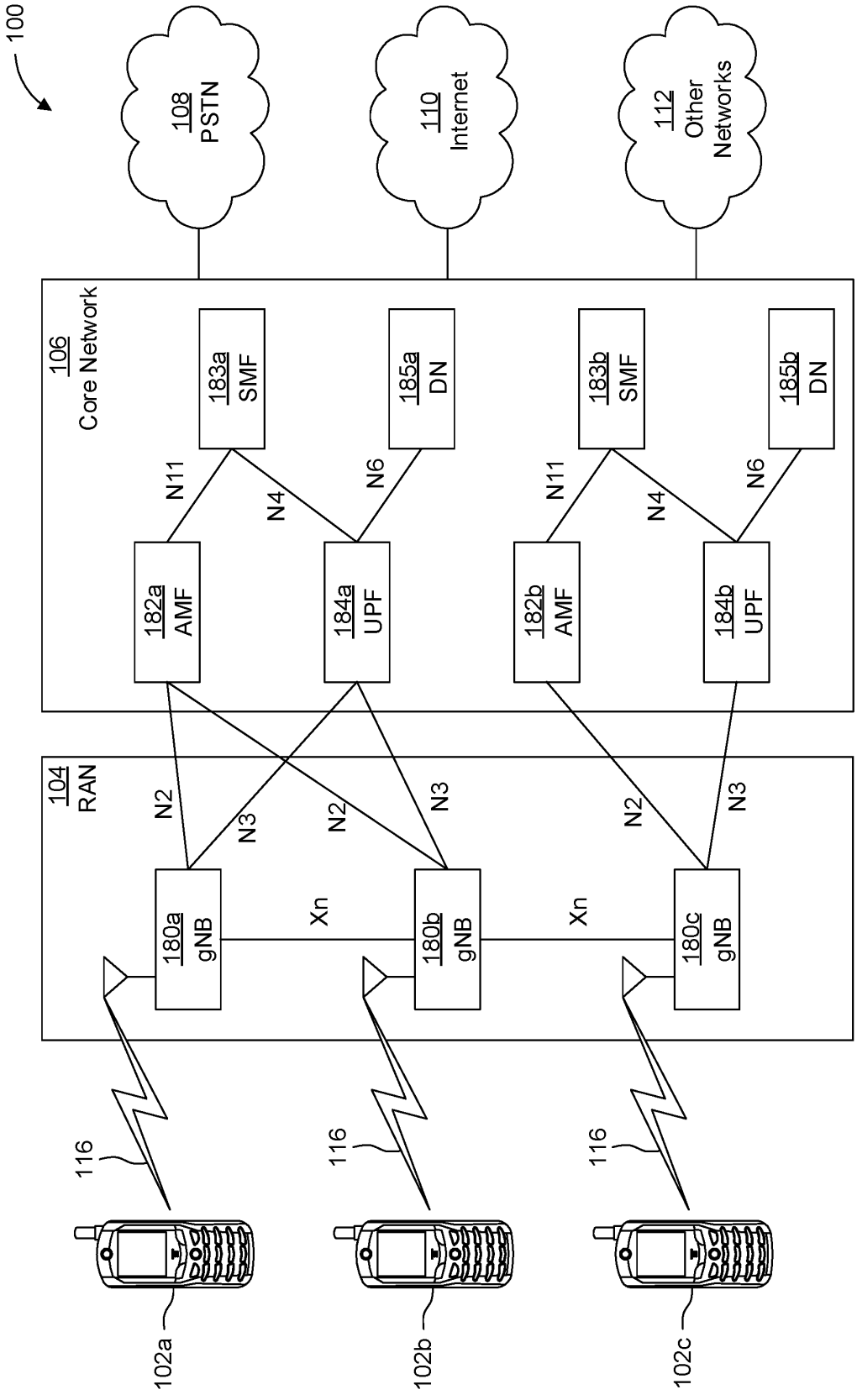

100
108 PSTN
110 Internet
112 Other Networks
106 Core Network
183a SMF
185a DN
183b SMF
185b DN
N11
N4
N6
N11
N4
N6
182a AMF
184a UPF
182b AMF
184b UPF
104 RAN
N2
N3
N2
N3
N2
N3
180a gNB
Xn
180b gNB
Xn
180c gNB
116
116
116
102a
102b
102c

FIG. 1D

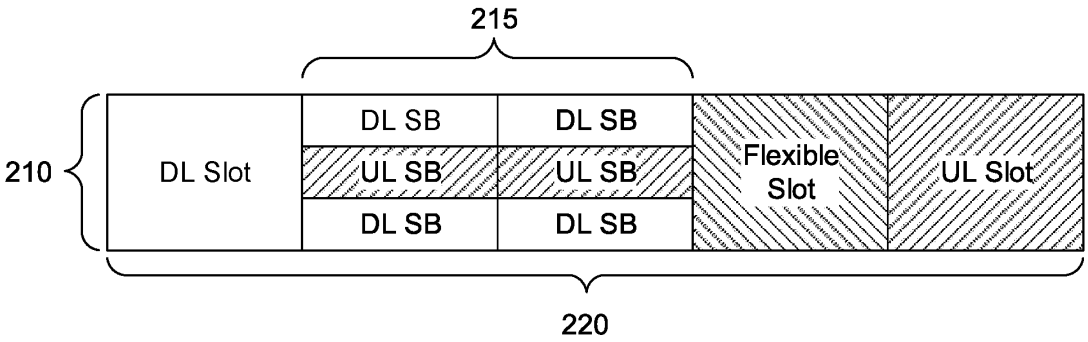

215
210
DL Slot
DL SB
DL SB
UL SB
UL SB
DL SB
DL SB
Flexible Slot
UL Slot
220

FIG. 2

```
RACH-ConfigCommon ::=                SEQUENCE {
    rach-configGeneric                       RACH-ConfigGeneric,
    totalNumberOfRA-Preambles                INTEGER (1..63)                                                
```

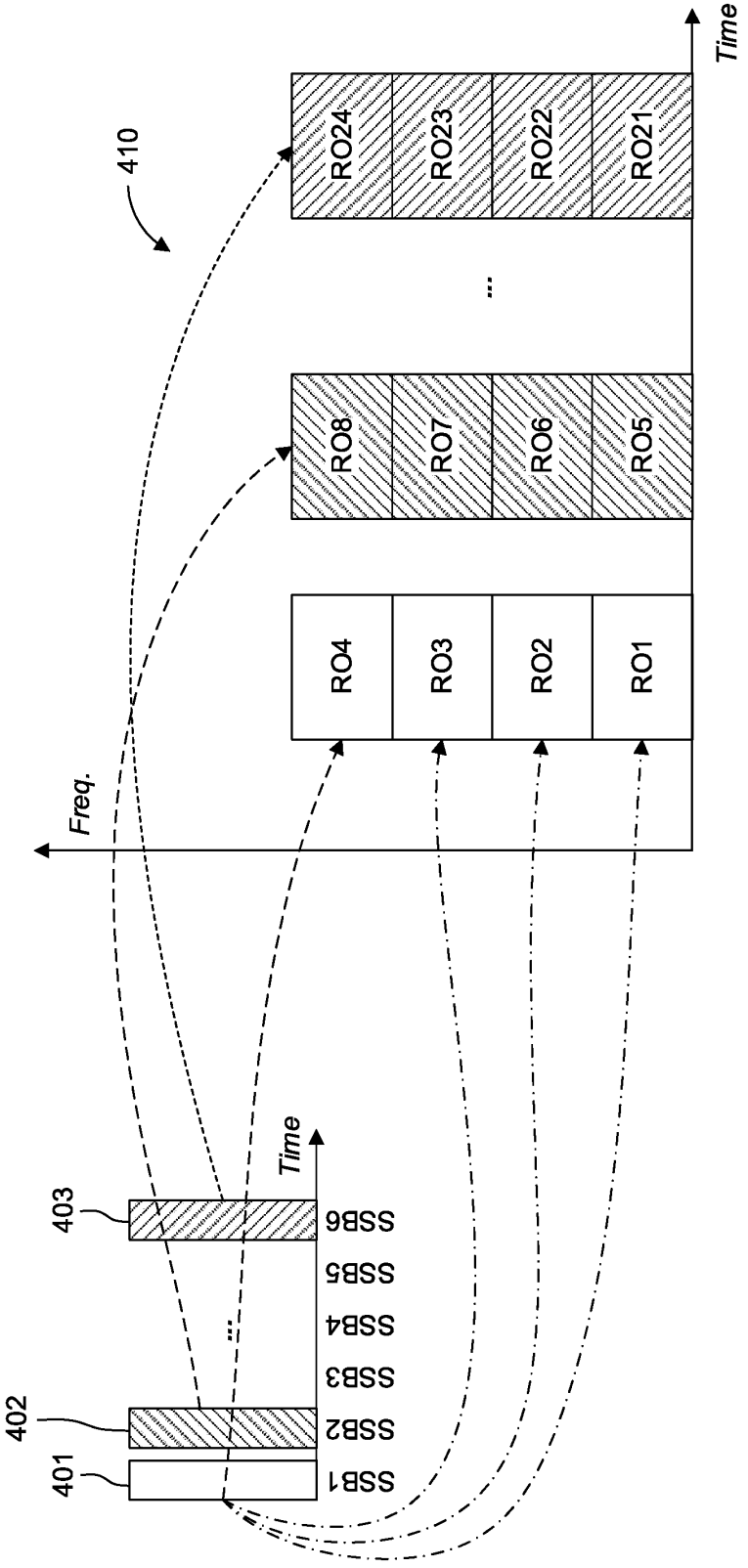

Time
410
RO24
RO23
RO22
RO21
...
RO8
RO7
RO6
RO5
RO4
RO3
RO2
RO1
Freq.
Time
403
SSB6
SSB5
...
SSB4
SSB3
402
SSB2
401
SSB1

FIG. 4

PRACH Mask Index/*msgA-SSB-SharedRO-MaskIndex/ssb-SharedRO-MaskIndex*	Allowed PRACH Occasion(s) of SSB
0	All
1	PRACH Occasion Index 1
2	PRACH Occasion Index 2
3	PRACH Occasion Index 3
4	PRACH Occasion Index 4
5	PRACH Occasion Index 5
6	PRACH Occasion Index 6
7	PRACH Occasion Index 7
8	PRACH Occasion Index 8
9	Every Even PRACH Occasion
10	Every Odd PRACH Occasion
11	Reserved
12	Reserved
13	Reserved
14	Reserved
15	Reserved

FIG. 5

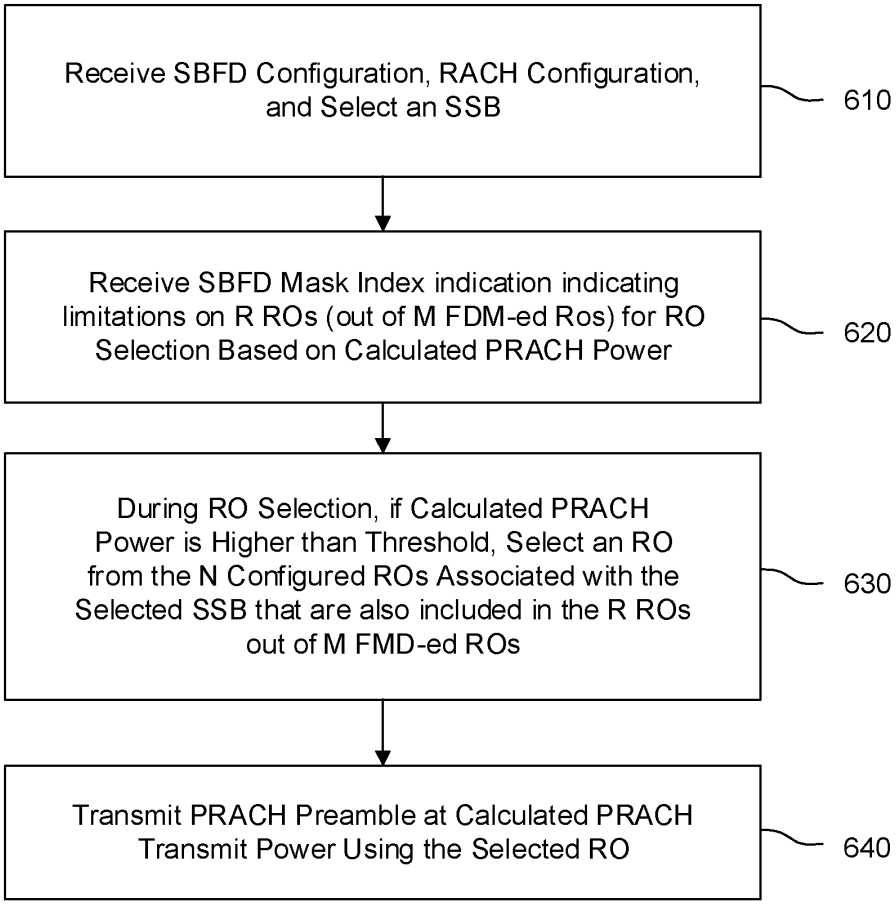

Receive SBFD Configuration, RACH Configuration, and Select an SSB
610
Receive SBFD Mask Index indication indicating limitations on R ROs (out of M FDM-ed Ros) for RO Selection Based on Calculated PRACH Power
620
During RO Selection, if Calculated PRACH Power is Higher than Threshold, Select an RO from the N Configured ROs Associated with the Selected SSB that are also included in the R ROs out of M FMD-ed ROs
630
Transmit PRACH Preamble at Calculated PRACH Transmit Power Using the Selected RO
640

FIG. 6

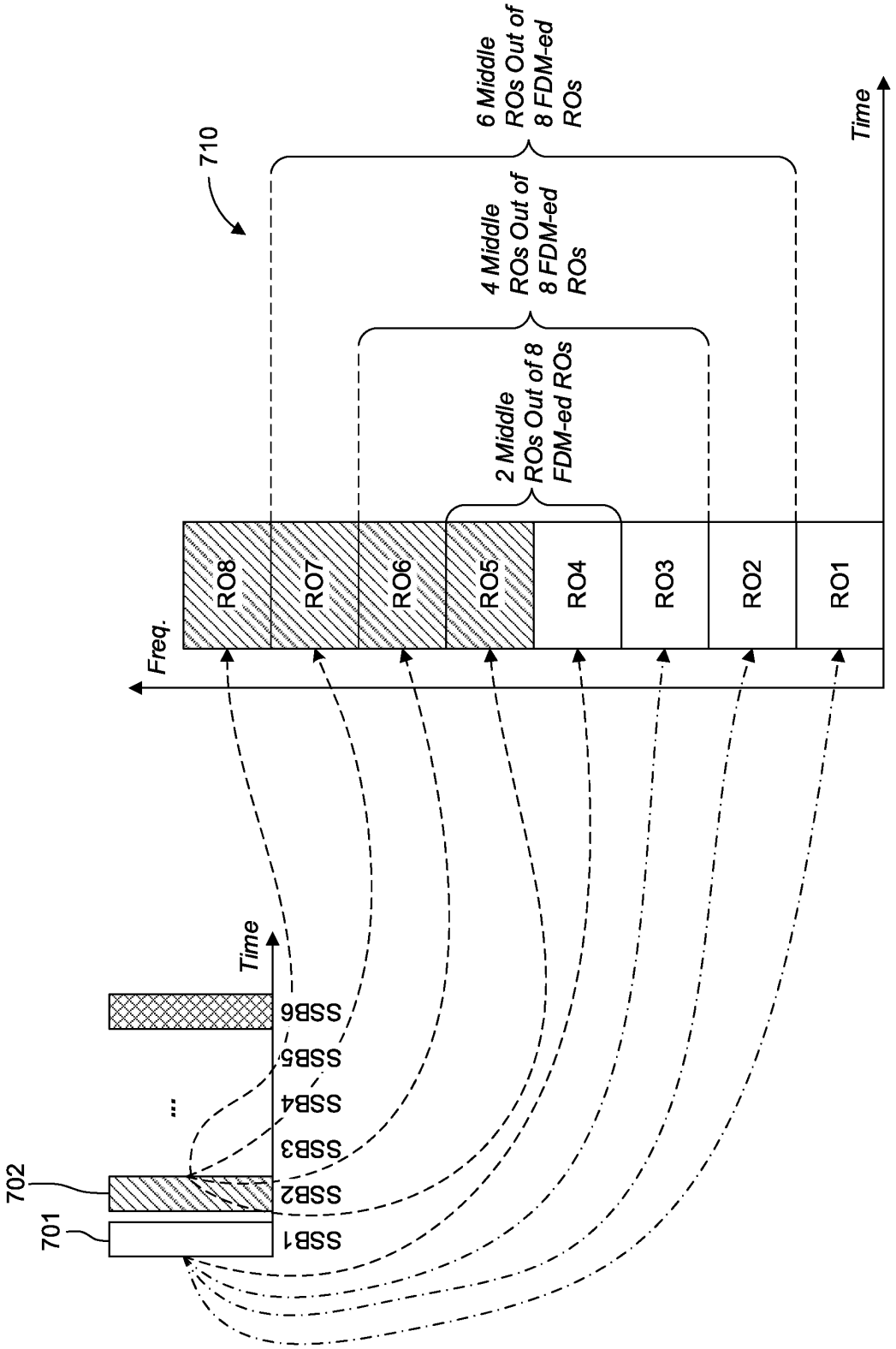

6 Middle ROs Out of 8 FDM-ed ROs
4 Middle ROs Out of 8 FDM-ed ROs
2 Middle ROs Out of 8 FDM-ed ROs
710
Time
Freq.
RO8
RO7
RO6
RO5
RO4
RO3
RO2
RO1
Time
SSB6
SSB5
SSB4
SSB3
SSB2
SSB1
...
702
701

FIG. 7A

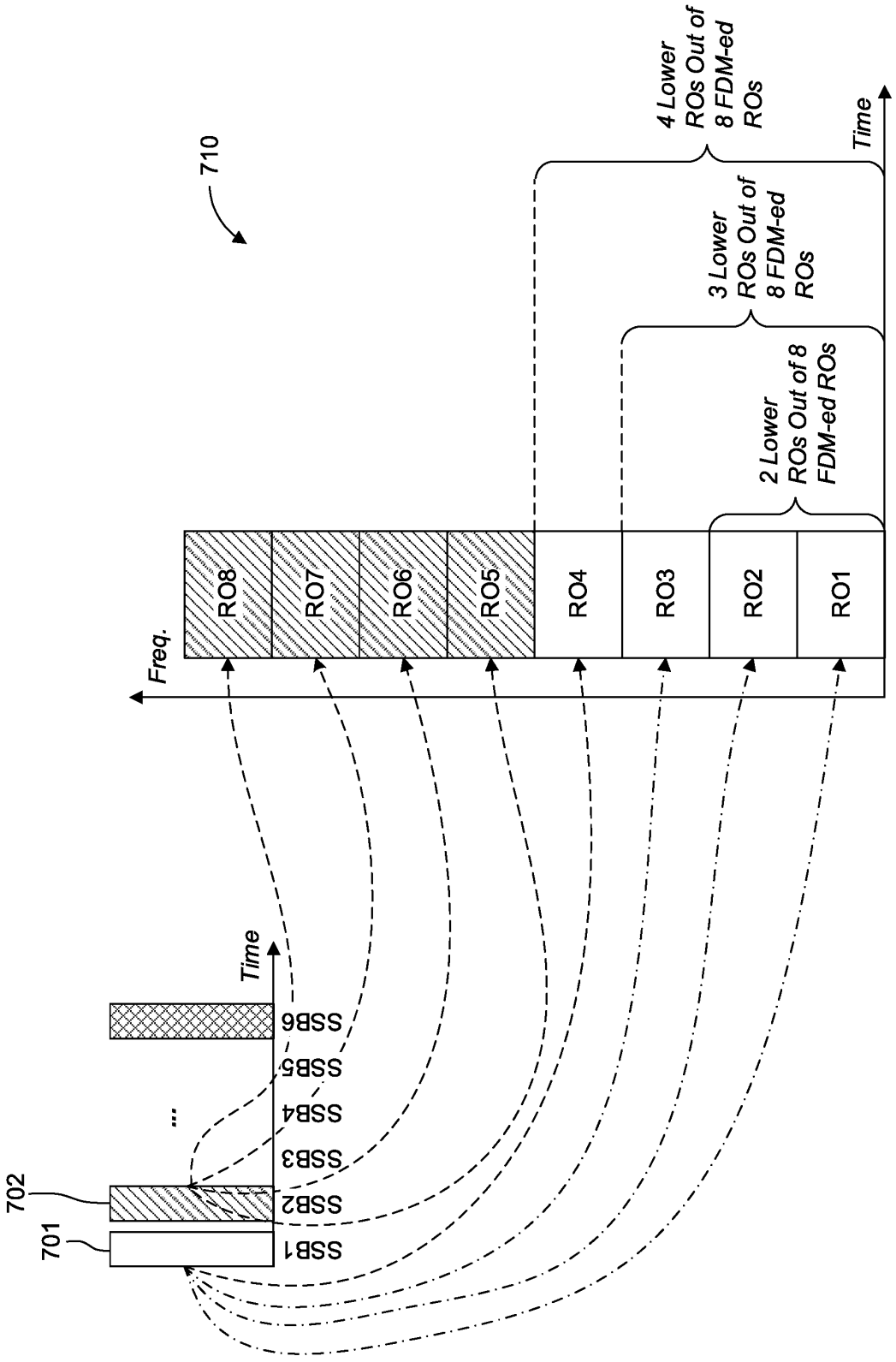

710
4 Lower ROs Out of 8 FDM-ed ROs
3 Lower ROs Out of 8 FDM-ed ROs
2 Lower ROs Out of 8 FDM-ed ROs
Time
Freq.
RO8
RO7
RO6
RO5
RO4
RO3
RO2
RO1
Time
SSB6
SSB5
SSB4
SSB3
SSB2
SSB1
...
702
701

FIG. 7B