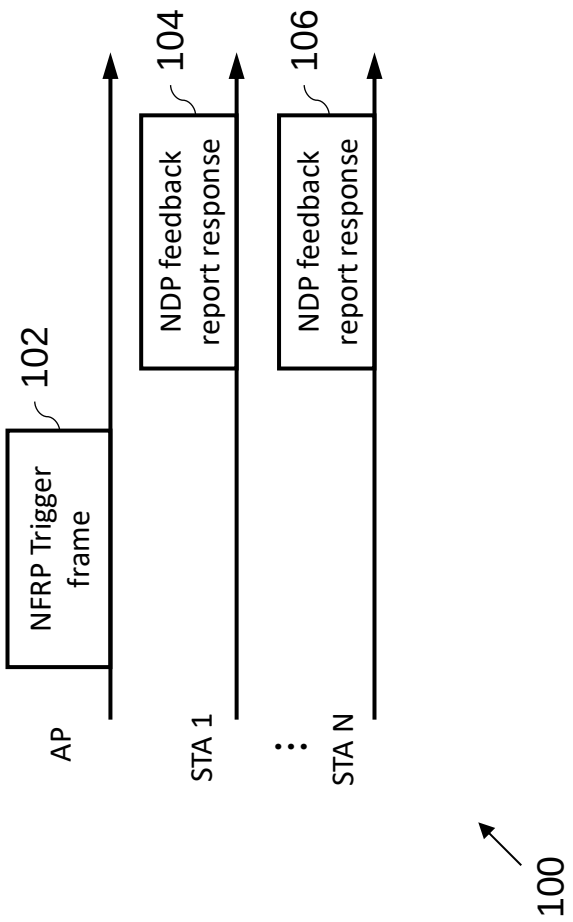
102
104
106
NFRP Trigger frame
NDP feedback report response
NDP feedback report response
AP
STA 1
STA N
100

Figure 1

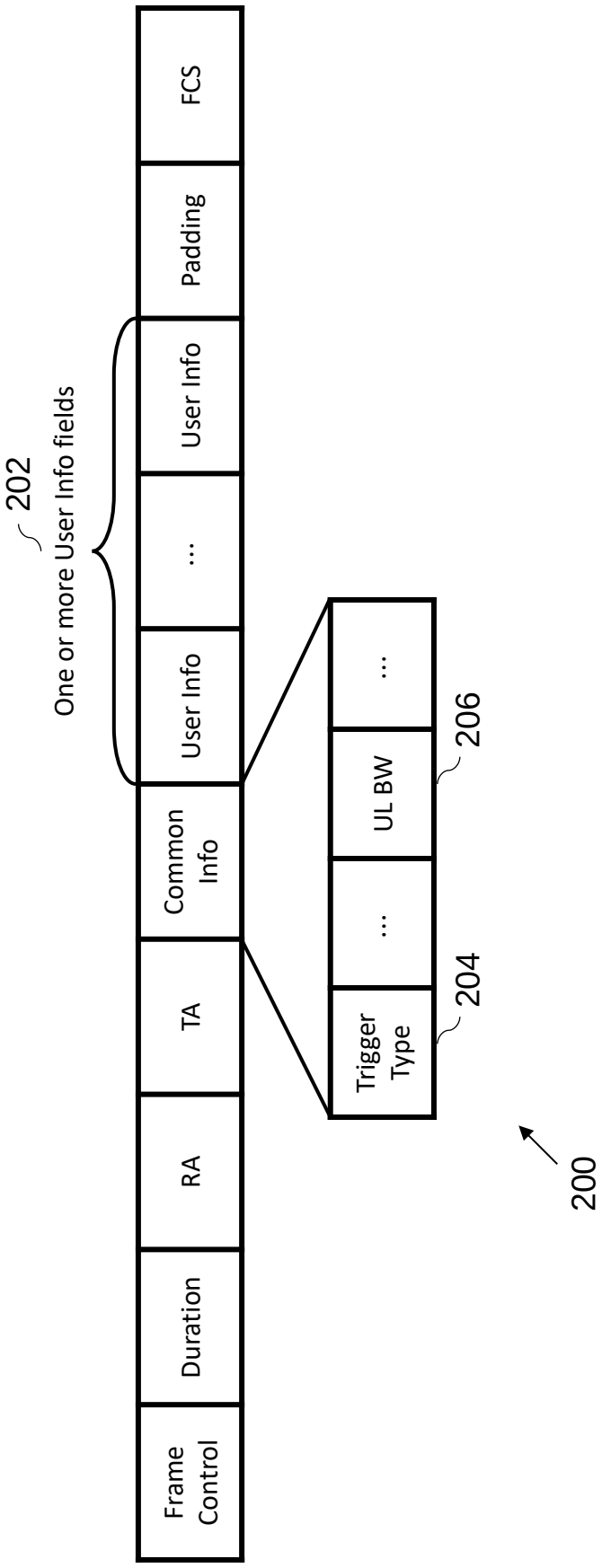
Frame Control
Duration
RA
TA
Common Info
User Info
...
User Info
Padding
FCS
202
One or more User Info fields
Trigger Type
...
UL BW
...
204
206
200

Figure 2

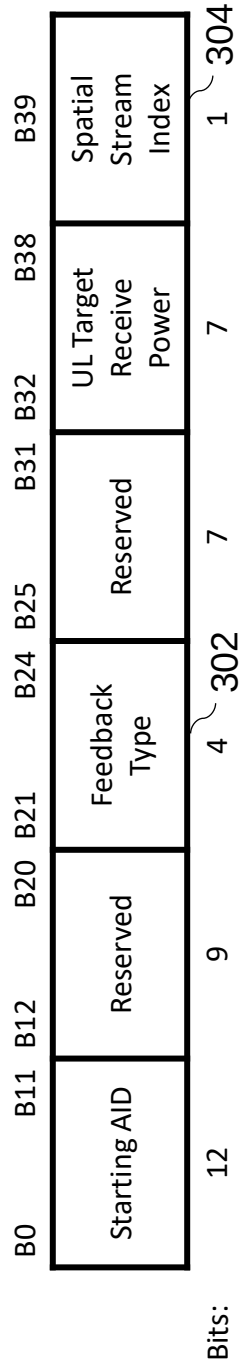
B0
B11
B12
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
Reserved
Feedback Type
Reserved
UL Target Receive Power
Spatial Stream Index
Bits:
12
9
4
7
7
1
302
304
300

Figure 3

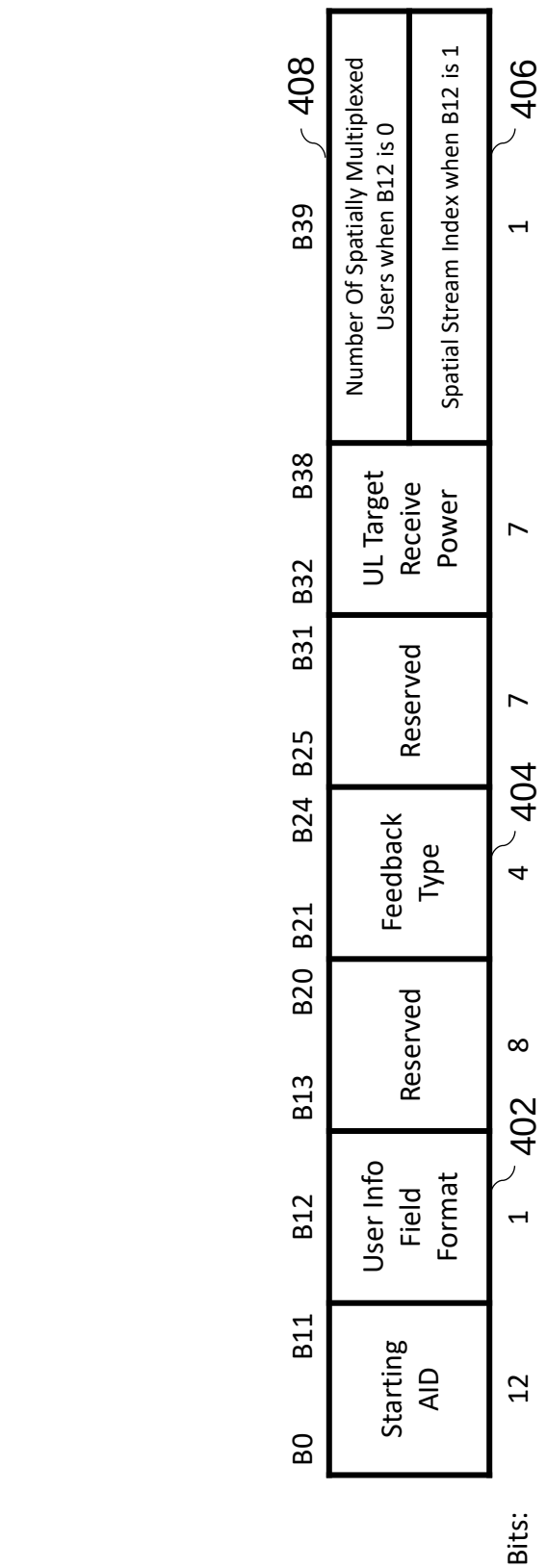
B0
B11
B12
B13
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
User Info Field Format
Reserved
Feedback Type
Reserved
UL Target Receive Power
Number Of Spatially Multiplexed Users when B12 is 0
Spatial Stream Index when B12 is 1
Bits:
12
1
8
4
7
7
1
402
404
406
408
400

Figure 4

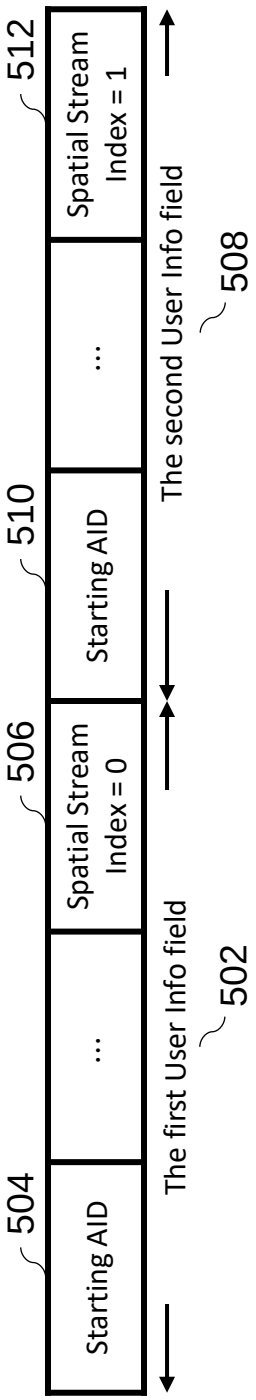
500
502
The first User Info field
504
Starting AID
...
506
Spatial Stream Index = 0
510
Starting AID
The second User Info field
508
...
512
Spatial Stream Index = 1

Figure 5

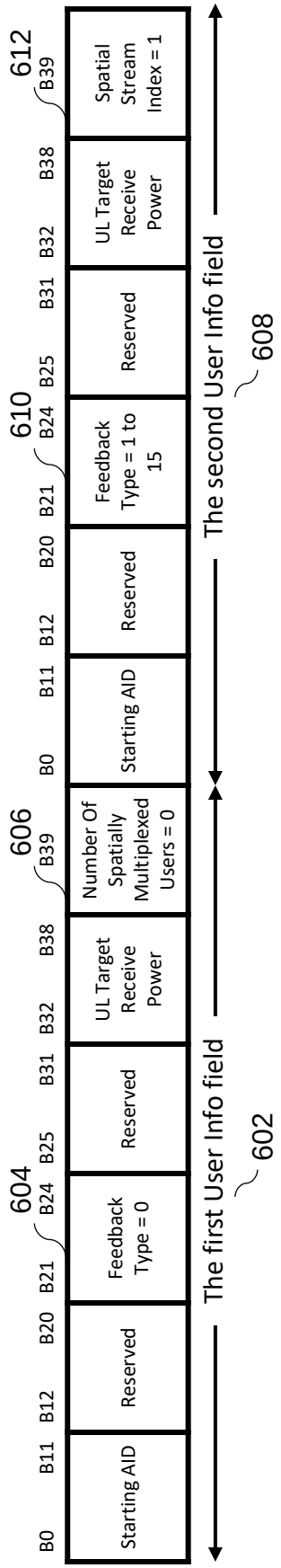
B0
B11
B12
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
Reserved
Feedback Type = 0
Reserved
UL Target Receive Power
Number Of Spatially Multiplexed Users = 0
604
606
The first User Info field
602
B0
B11
B12
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
Reserved
Feedback Type = 1 to 15
Reserved
UL Target Receive Power
Spatial Stream Index = 1
610
612
The second User Info field
608
600

Figure 6

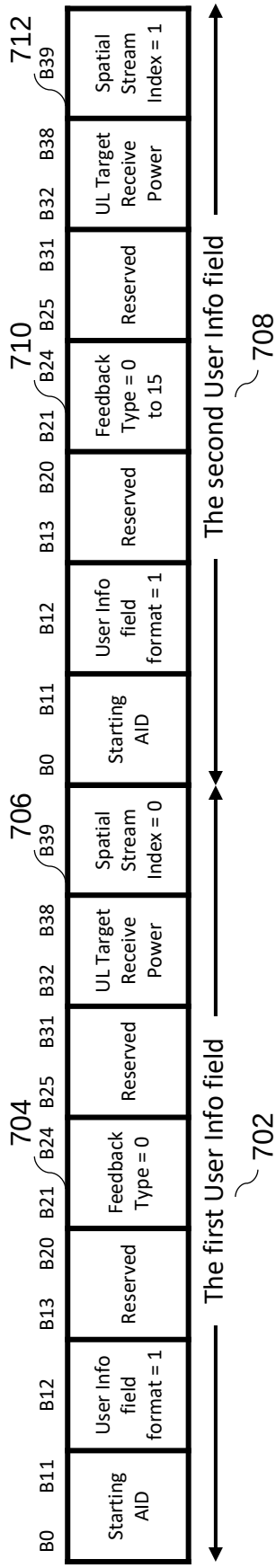
B0
B11
B12
B13
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
User Info field format = 1
Reserved
Feedback Type = 0
Reserved
UL Target Receive Power
Spatial Stream Index = 0
Starting AID
User Info field format = 1
Reserved
Feedback Type = 0 to 15
Reserved
UL Target Receive Power
Spatial Stream Index = 1
704
706
710
712
The first User Info field
The second User Info field
702
708
700

Figure 7

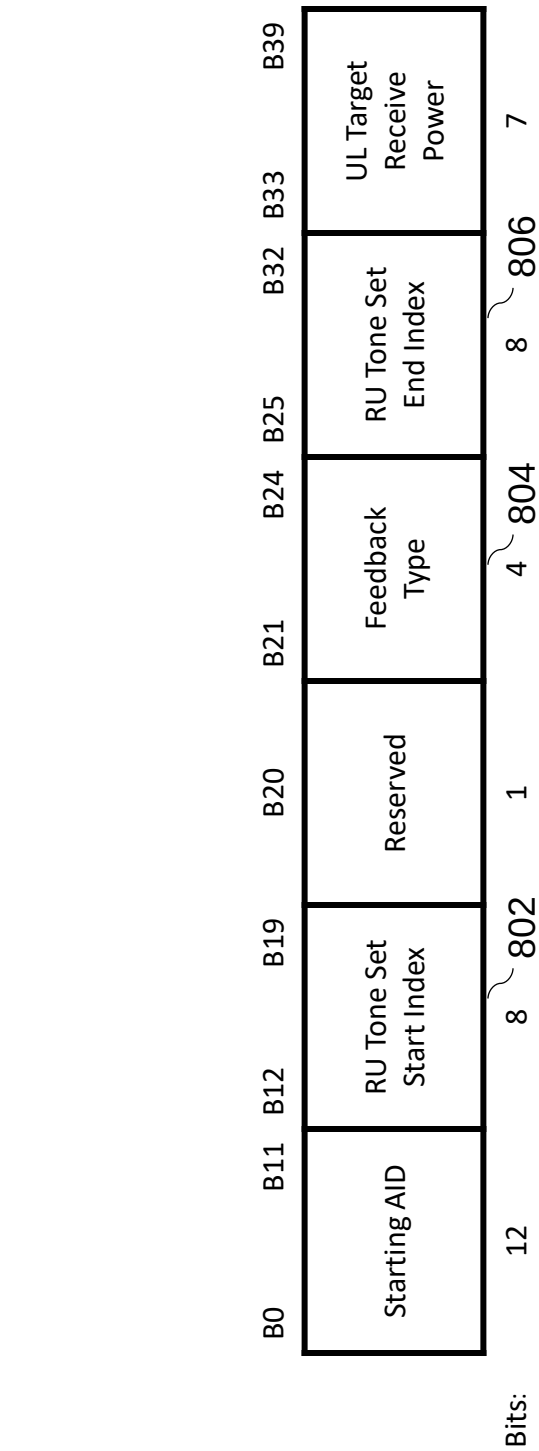
B0
B11
B12
B19
B20
B21
B24
B25
B32
B33
B39
Starting AID
RU Tone Set Start Index
Reserved
Feedback Type
RU Tone Set End Index
UL Target Receive Power
Bits:
12
8
1
4
8
7
802
804
806
800

Figure 8

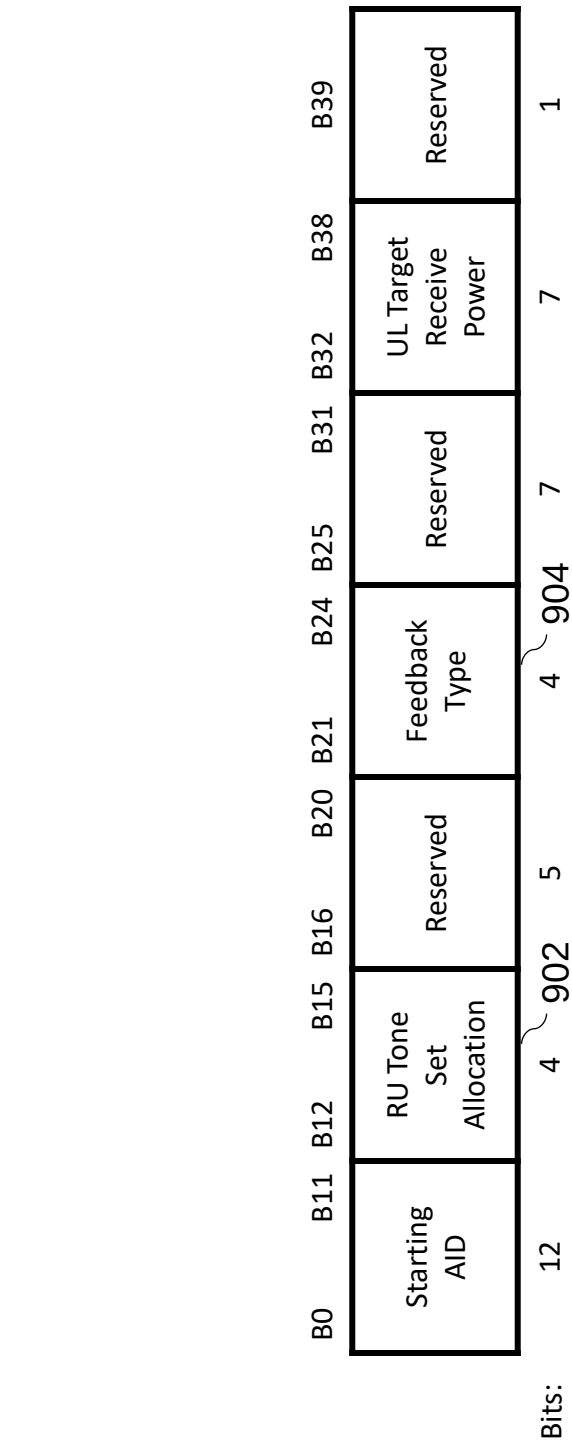
B0
B11
B12
B15
B16
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
RU Tone Set Allocation
Reserved
Feedback Type
Reserved
UL Target Receive Power
Reserved
Bits:
12
4
5
4
7
7
1
902
904
900

Figure 9

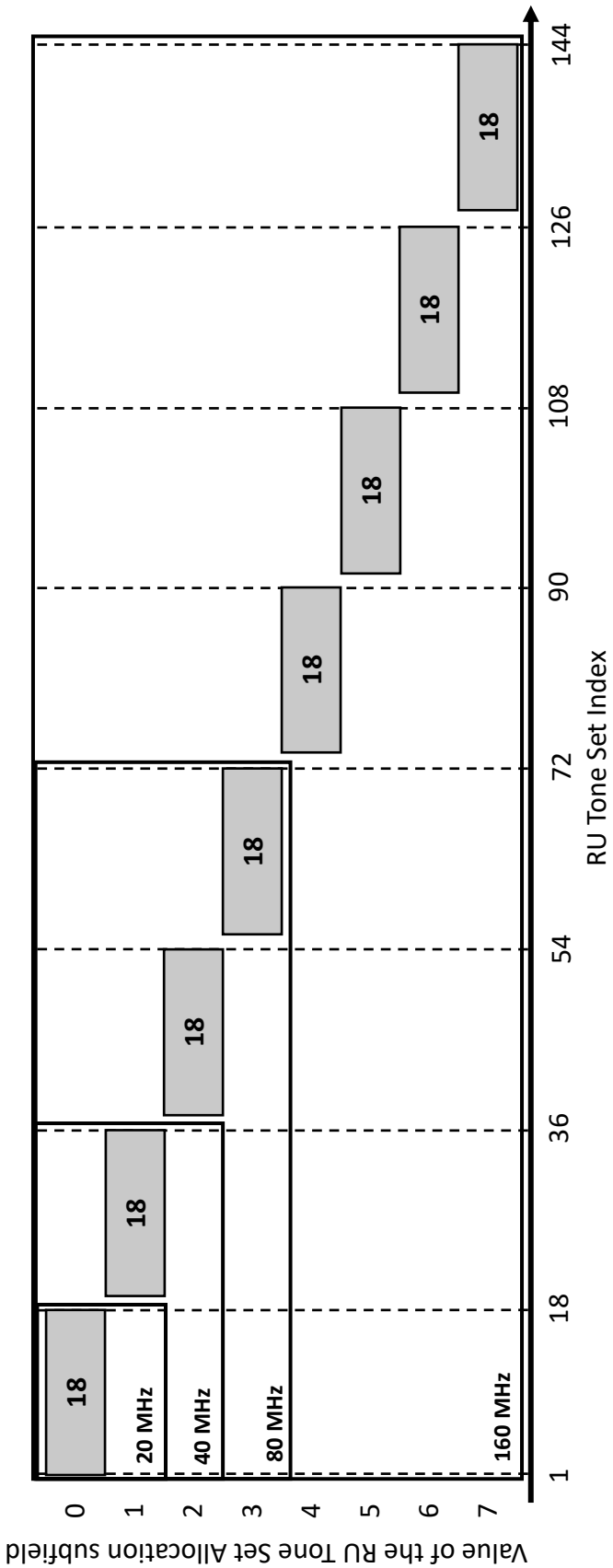
Value of the RU Tone Set Allocation subfield
0
1
2
3
4
5
6
7
20 MHz
40 MHz
80 MHz
160 MHz
18
1
18
36
54
72
90
108
126
144
RU Tone Set Index
1000

Figure 10

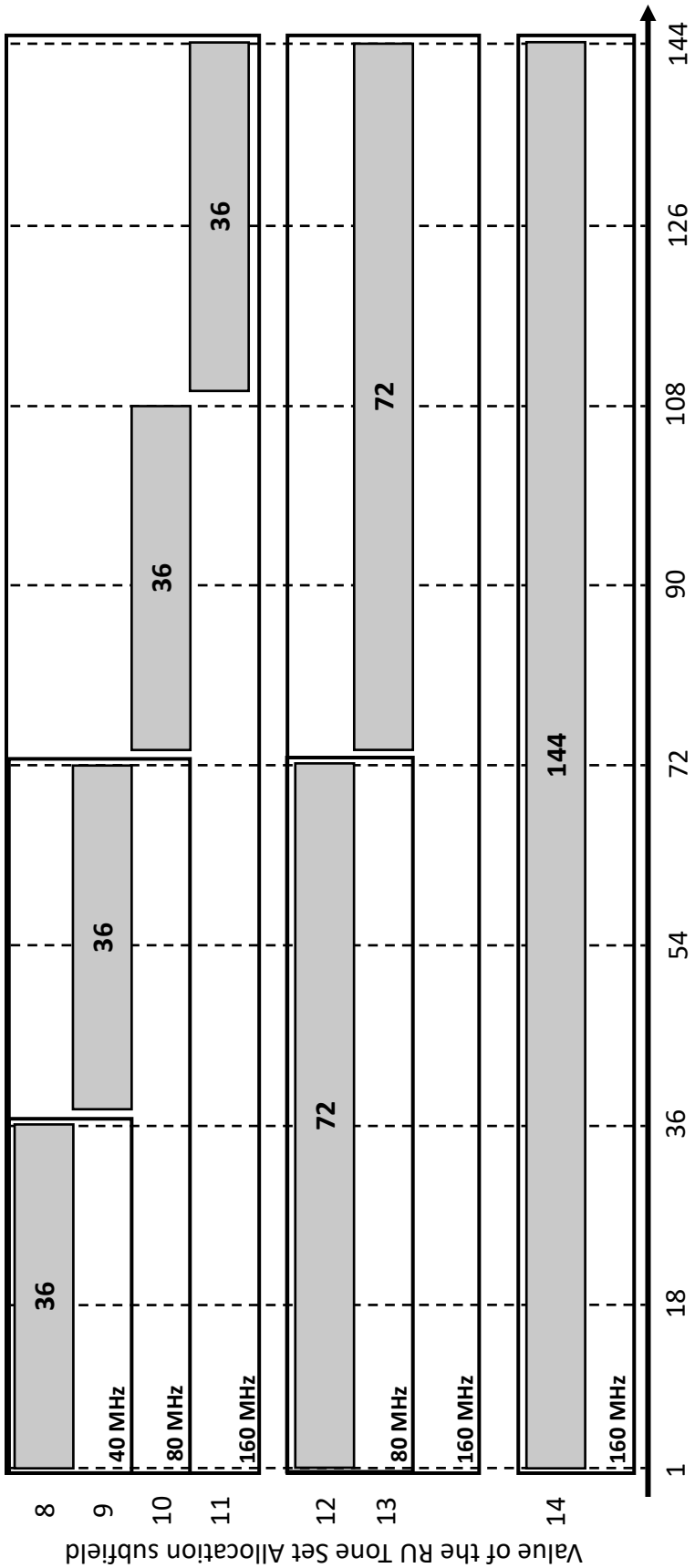
Value of the RU Tone Set Allocation subfield
8
9
10
11
12
13
14
40 MHz
80 MHz
160 MHz
80 MHz
160 MHz
160 MHz
36
36
36
36
72
72
144
1
18
36
54
72
90
108
126
144
RU Tone Set Index
1100

Figure 11

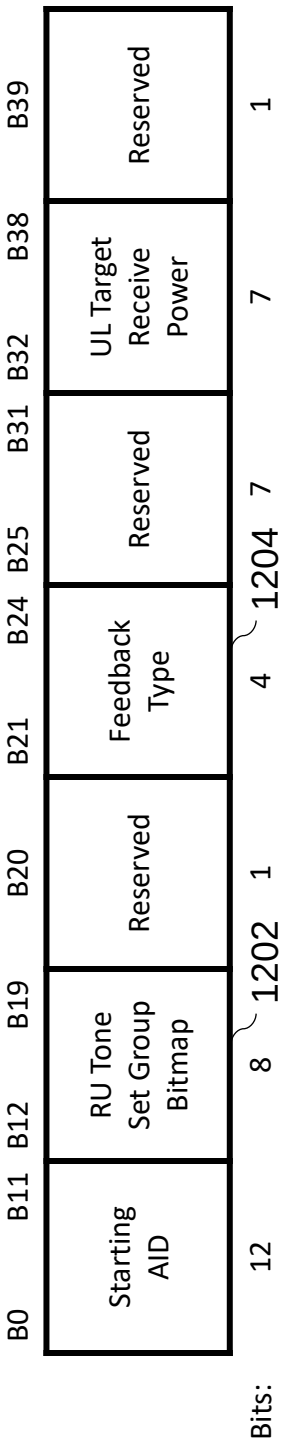
B0
B11
B12
B19
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
RU Tone Set Group Bitmap
Reserved
Feedback Type
Reserved
UL Target Receive Power
Reserved
Bits:
12
8
1
4
7
7
1
1202
1204
1200

Figure 12

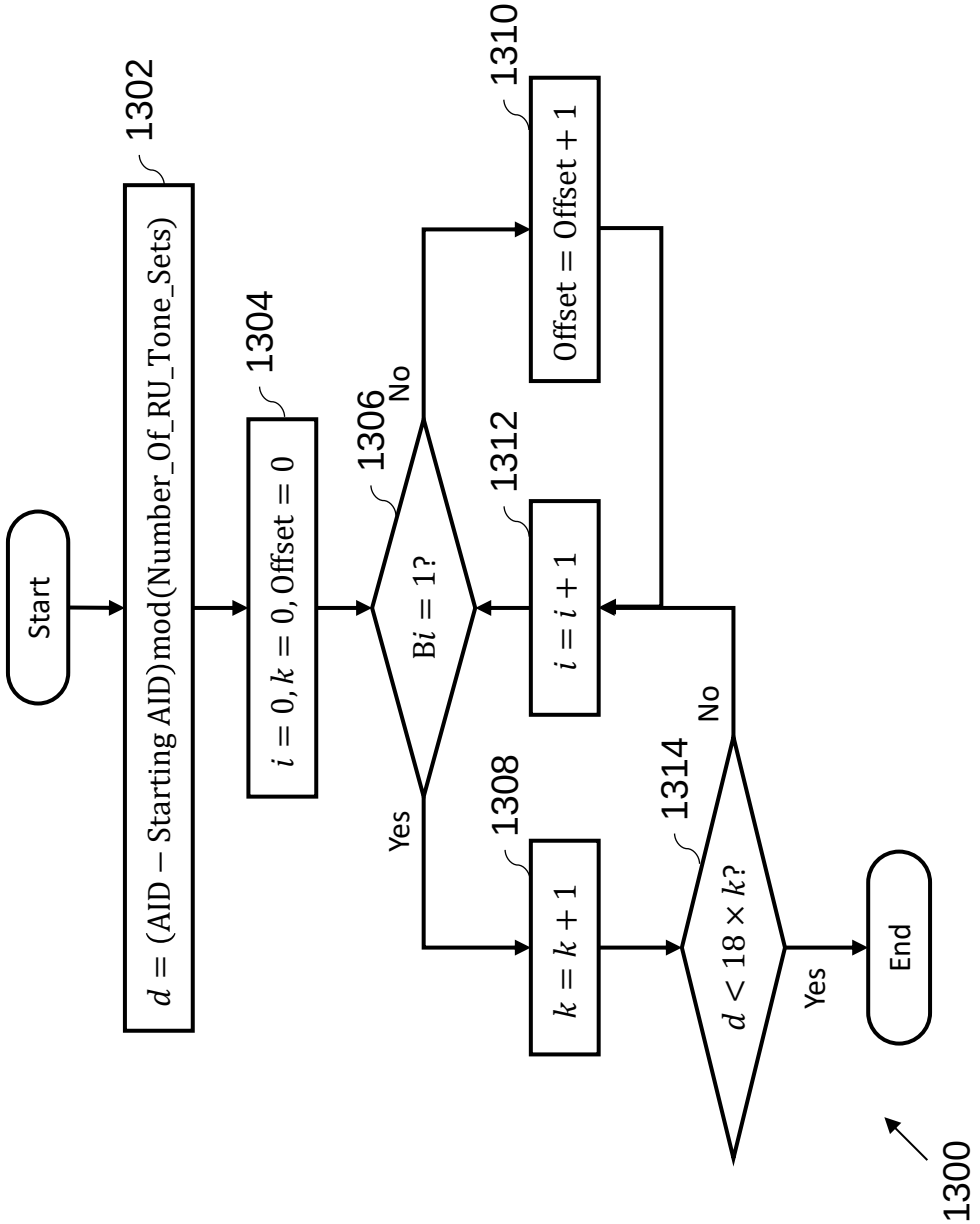
Start
$d = (\text{AID} - \text{Starting AID}) \bmod (\text{Number_Of_RU_Tone_Sets})$
1302
$i = 0, k = 0, \text{Offset} = 0$
1304
$Bi = 1?$
1306
No
Yes
$i = i + 1$
1312
Offset = Offset + 1
1310
$k = k + 1$
1308
$d < 18 \times k?$
1314
No
Yes
End
1300

Figure 13

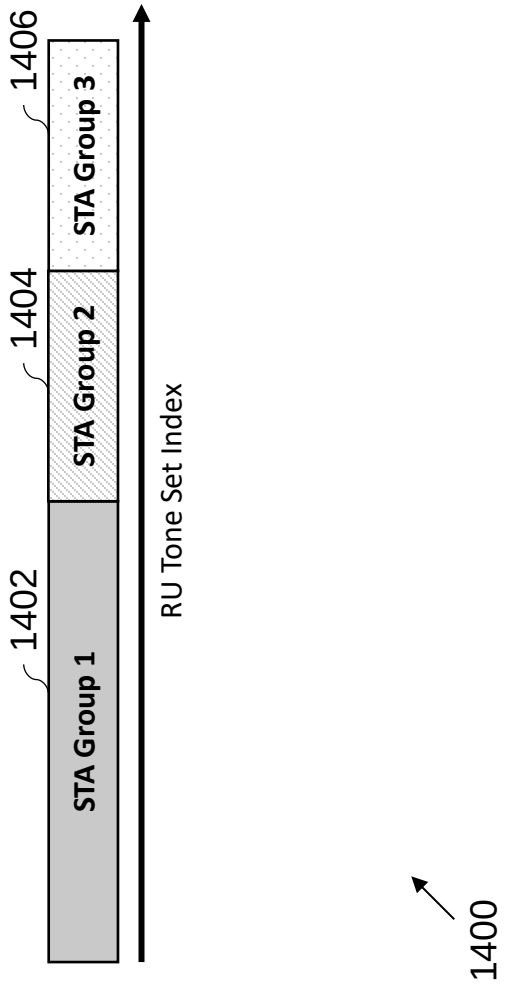
1400
1402
STA Group 1
1404
STA Group 2
1406
STA Group 3
RU Tone Set Index

Figure 14

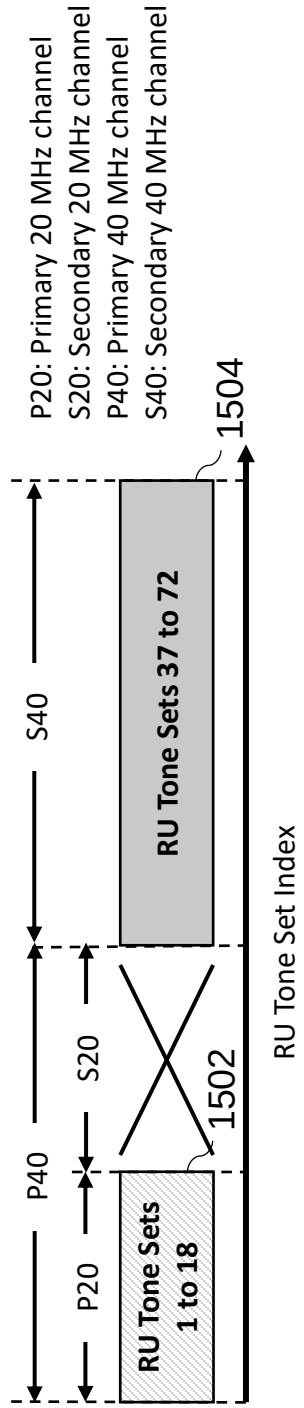
P20: Primary 20 MHz channel
S20: Secondary 20 MHz channel
P40: Primary 40 MHz channel
S40: Secondary 40 MHz channel
1504
S40
RU Tone Sets 37 to 72
P40
S20
1502
P20
RU Tone Sets
1 to 18
RU Tone Set Index
1500

Figure 15

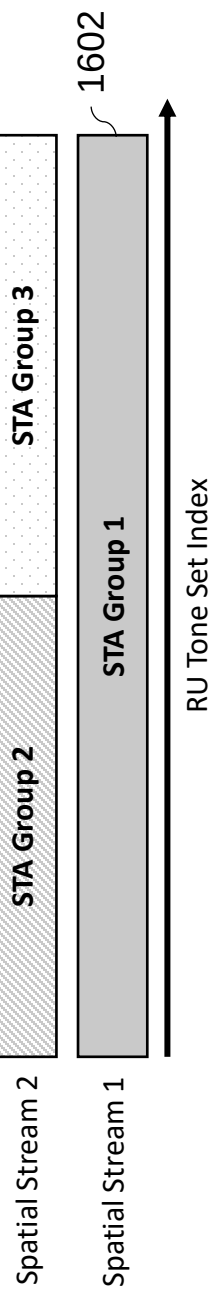
1600
1602
1604
1606
STA Group 1
STA Group 2
STA Group 3
RU Tone Set Index
Spatial Stream 1
Spatial Stream 2

Figure 16

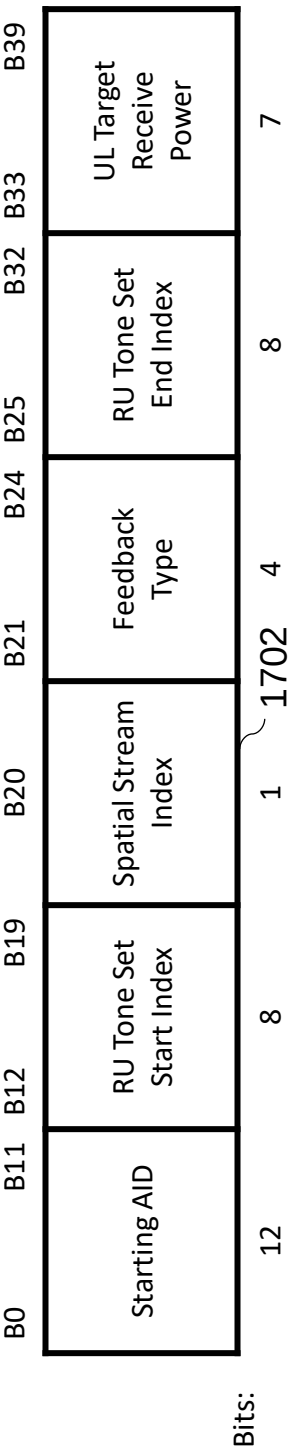
B0
B11
B12
B19
B20
B21
B24
B25
B32
B33
B39
Starting AID
RU Tone Set Start Index
Spatial Stream Index
Feedback Type
RU Tone Set End Index
UL Target Receive Power
Bits:
12
8
1
4
8
7
1702
1700

Figure 17

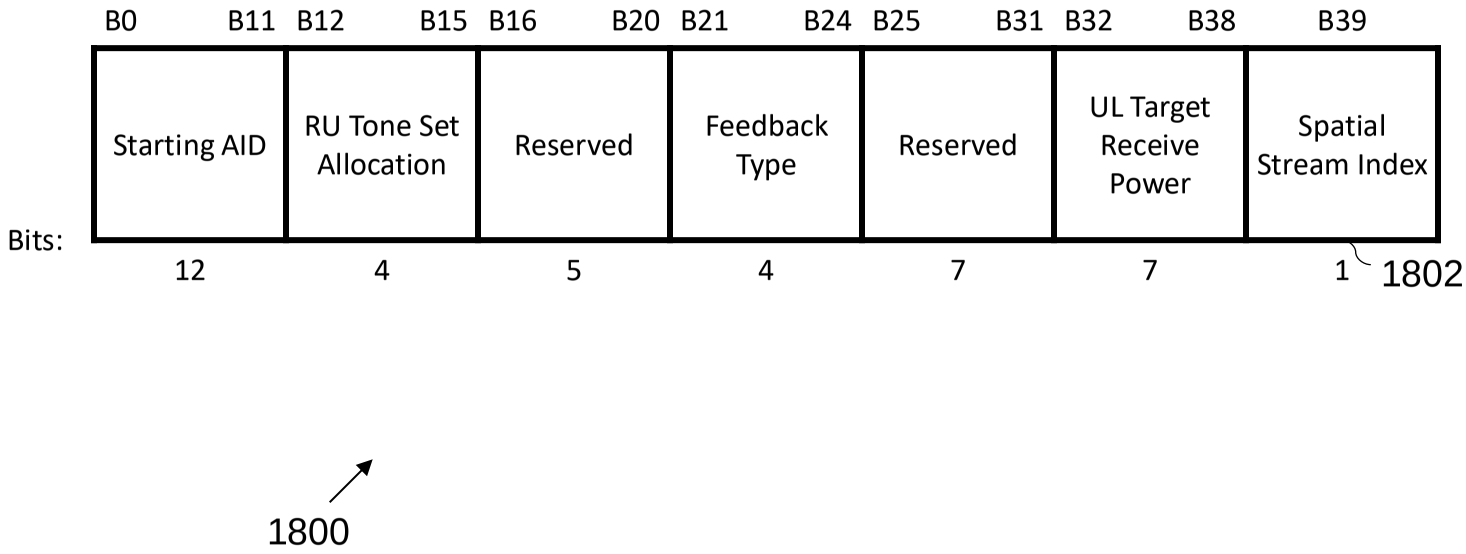
B0
B11
B12
B15
B16
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
RU Tone Set Allocation
Reserved
Feedback Type
Reserved
UL Target Receive Power
Spatial Stream Index
Bits:
12
4
5
4
7
7
1
1802
1800

Figure 18

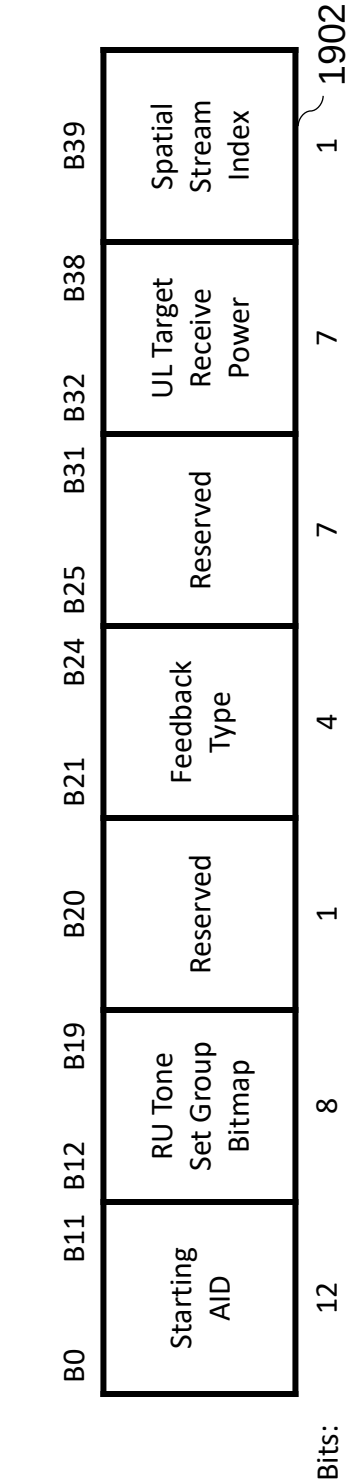
B0
B11
B12
B19
B20
B21
B24
B25
B31
B32
B38
B39
Starting AID
RU Tone Set Group Bitmap
Reserved
Feedback Type
Reserved
UL Target Receive Power
Spatial Stream Index
Bits:
12
8
1
4
7
7
1
1902
1900

Figure 19

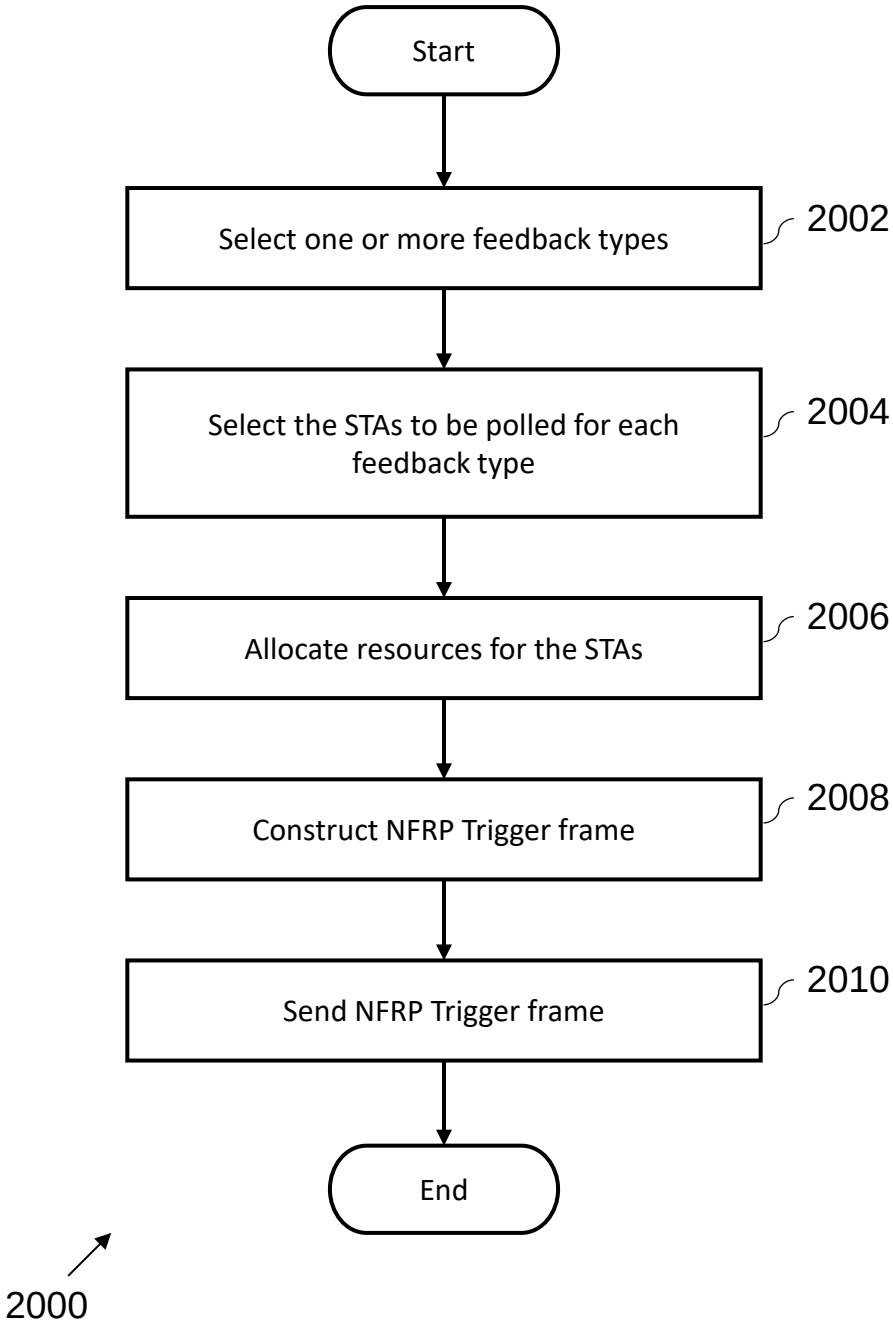
Start
Select one or more feedback types
2002
Select the STAs to be polled for each feedback type
2004
Allocate resources for the STAs
2006
Construct NFRP Trigger frame
2008
Send NFRP Trigger frame
2010
End
2000

Figure 20

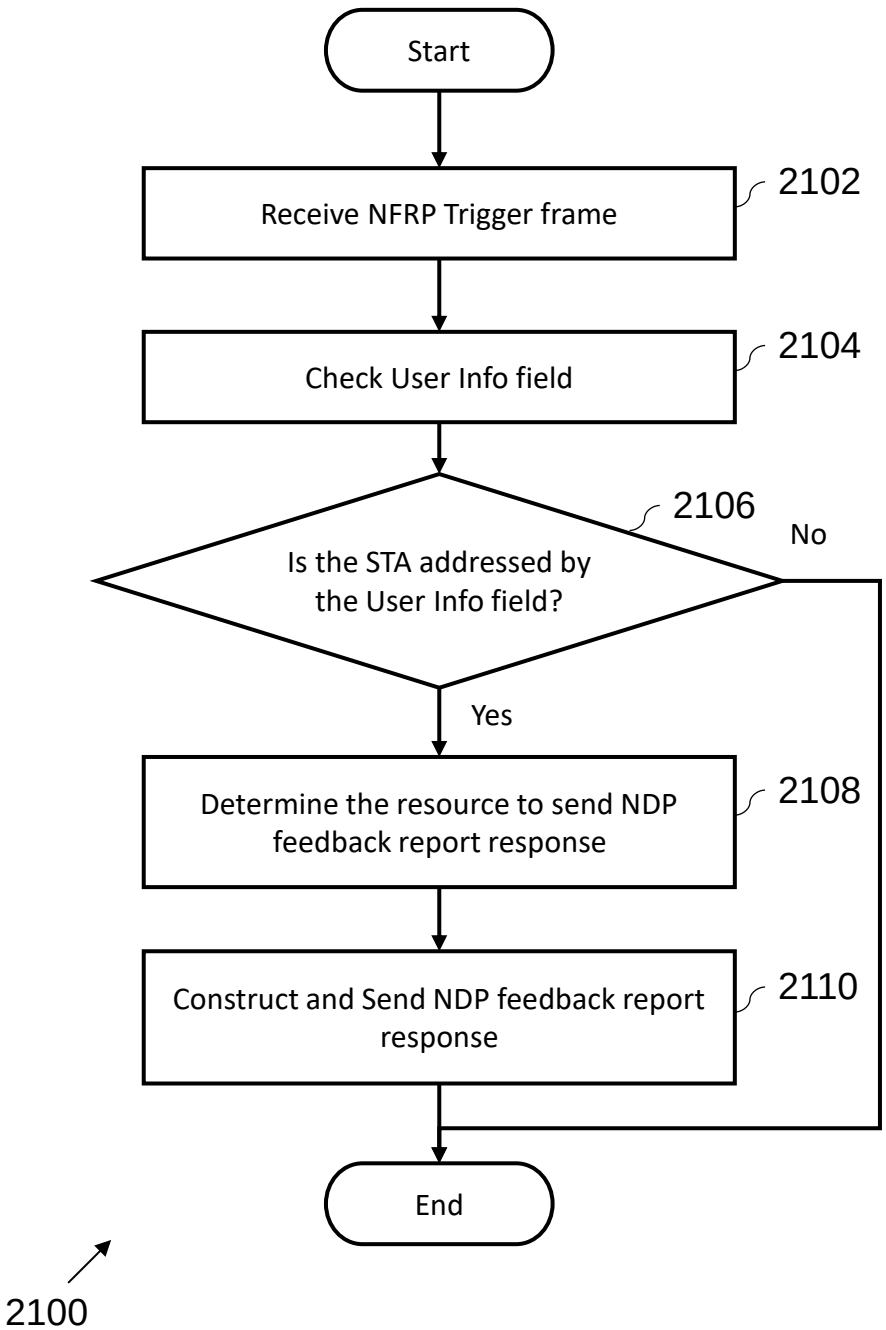
Start
Receive NFRP Trigger frame
2102
Check User Info field
2104
Is the STA addressed by the User Info field?
2106
No
Yes
Determine the resource to send NDP feedback report response
2108
Construct and Send NDP feedback report response
2110
End
2100

Figure 21

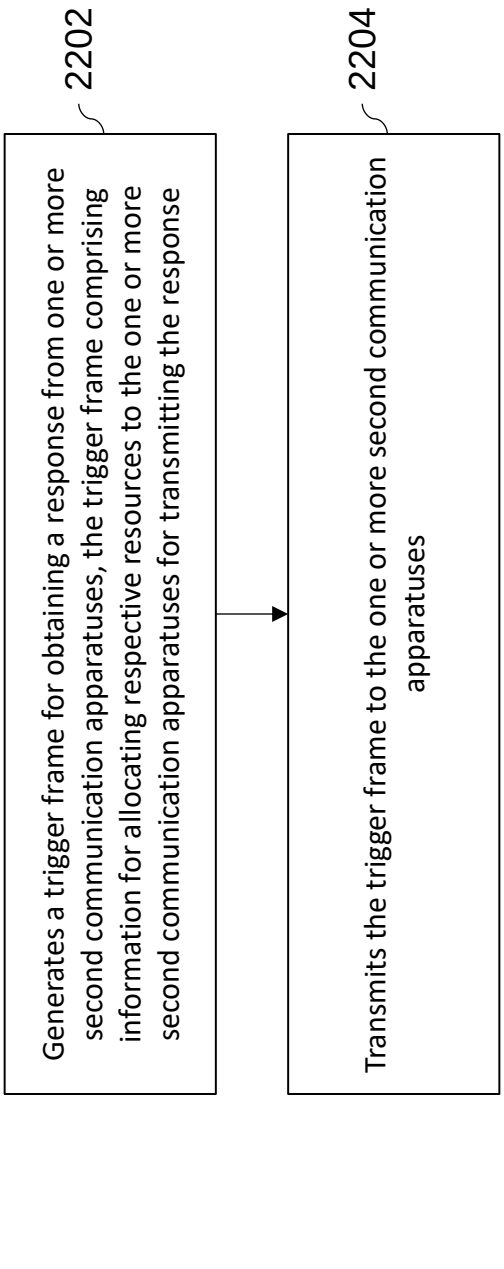
2202
Generates a trigger frame for obtaining a response from one or more second communication apparatuses, the trigger frame comprising information for allocating respective resources to the one or more second communication apparatuses for transmitting the response
2204
Transmits the trigger frame to the one or more second communication apparatuses
2200

Figure 22

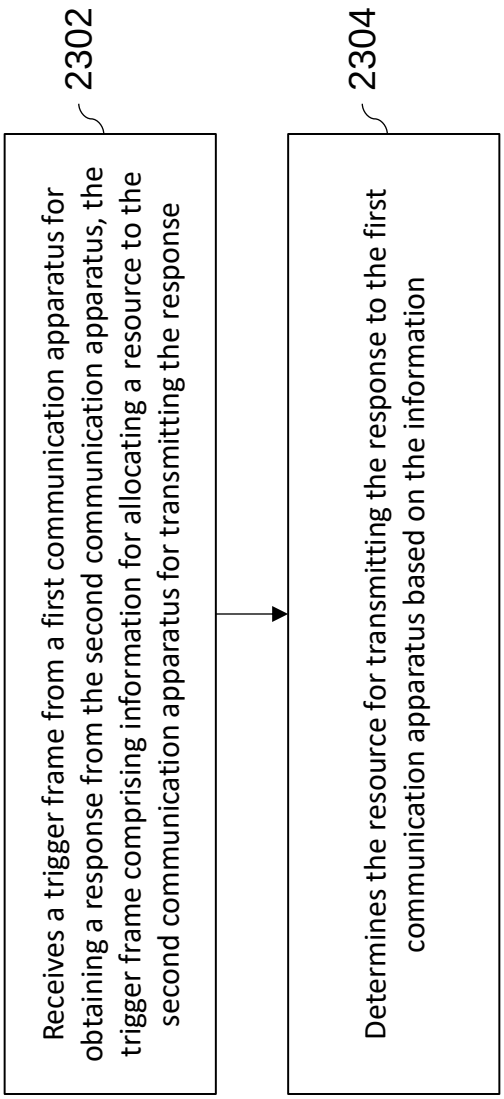
2302
Receives a trigger frame from a first communication apparatus for obtaining a response from the second communication apparatus, the trigger frame comprising information for allocating a resource to the second communication apparatus for transmitting the response
2304
Determines the resource for transmitting the response to the first communication apparatus based on the information
2300

Figure 23

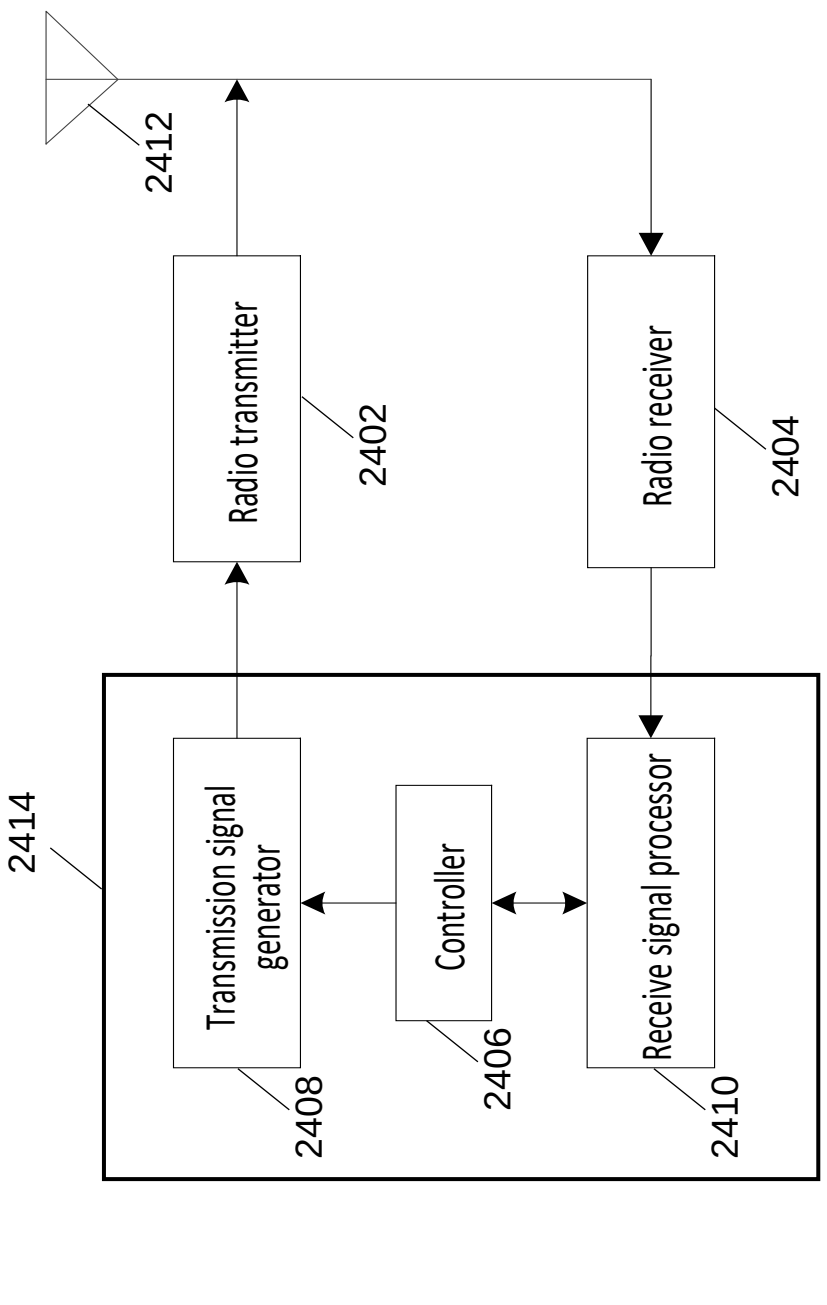
2412
Radio transmitter
2402
Radio receiver
2404
2414
Transmission signal generator
Controller
Receive signal processor
2408
2406
2410
2400

Figure 24