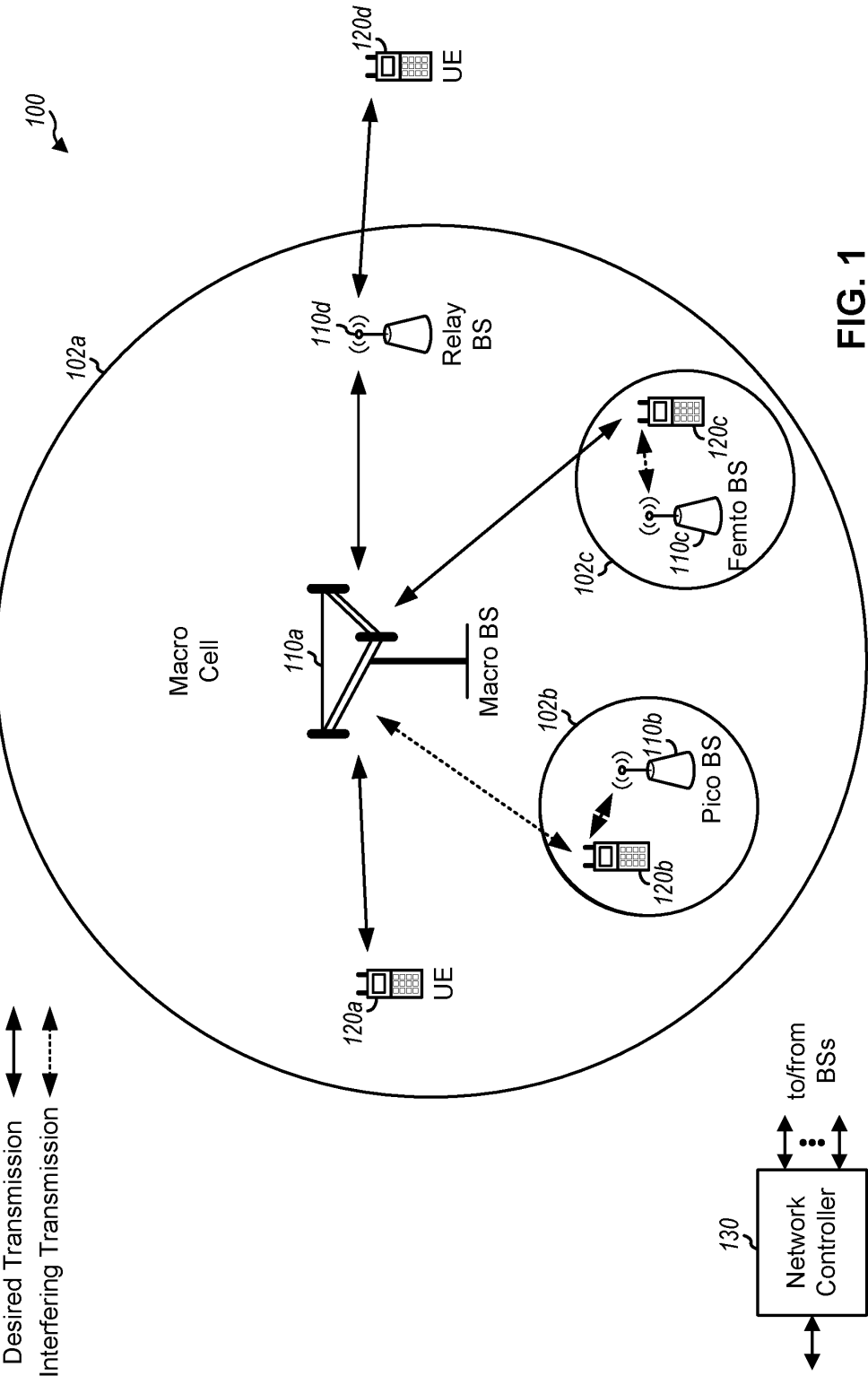




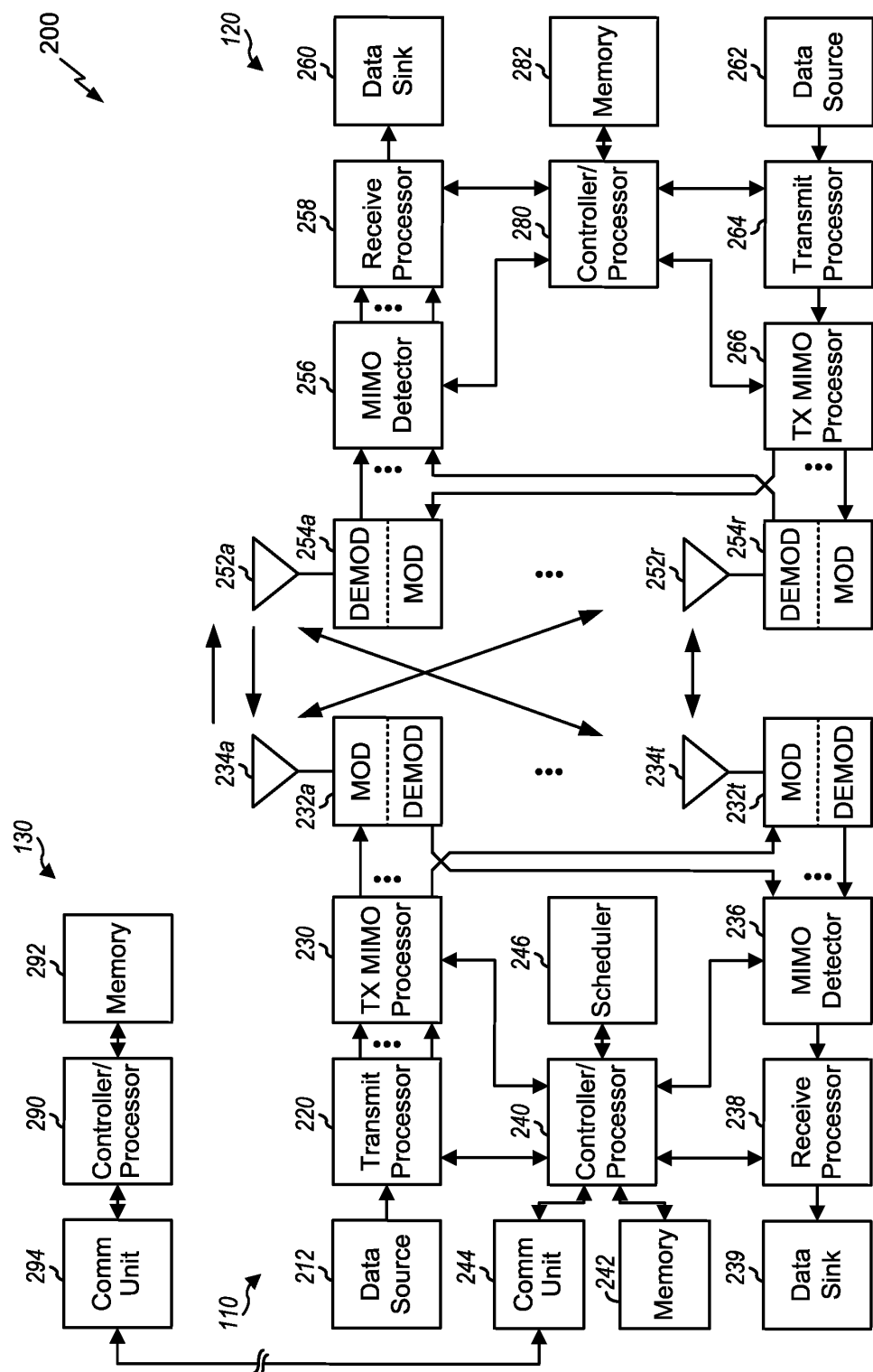
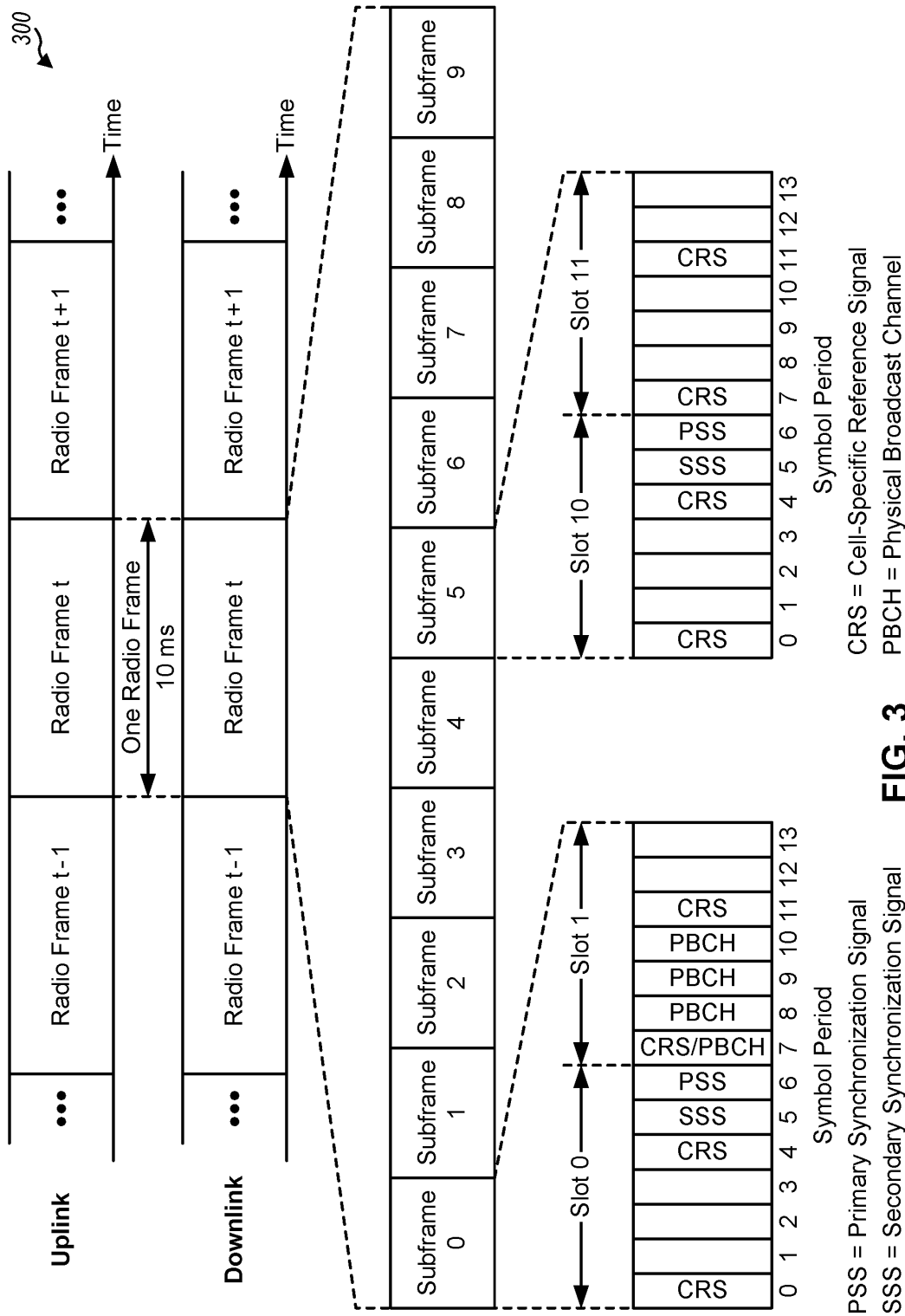


FIG. 2



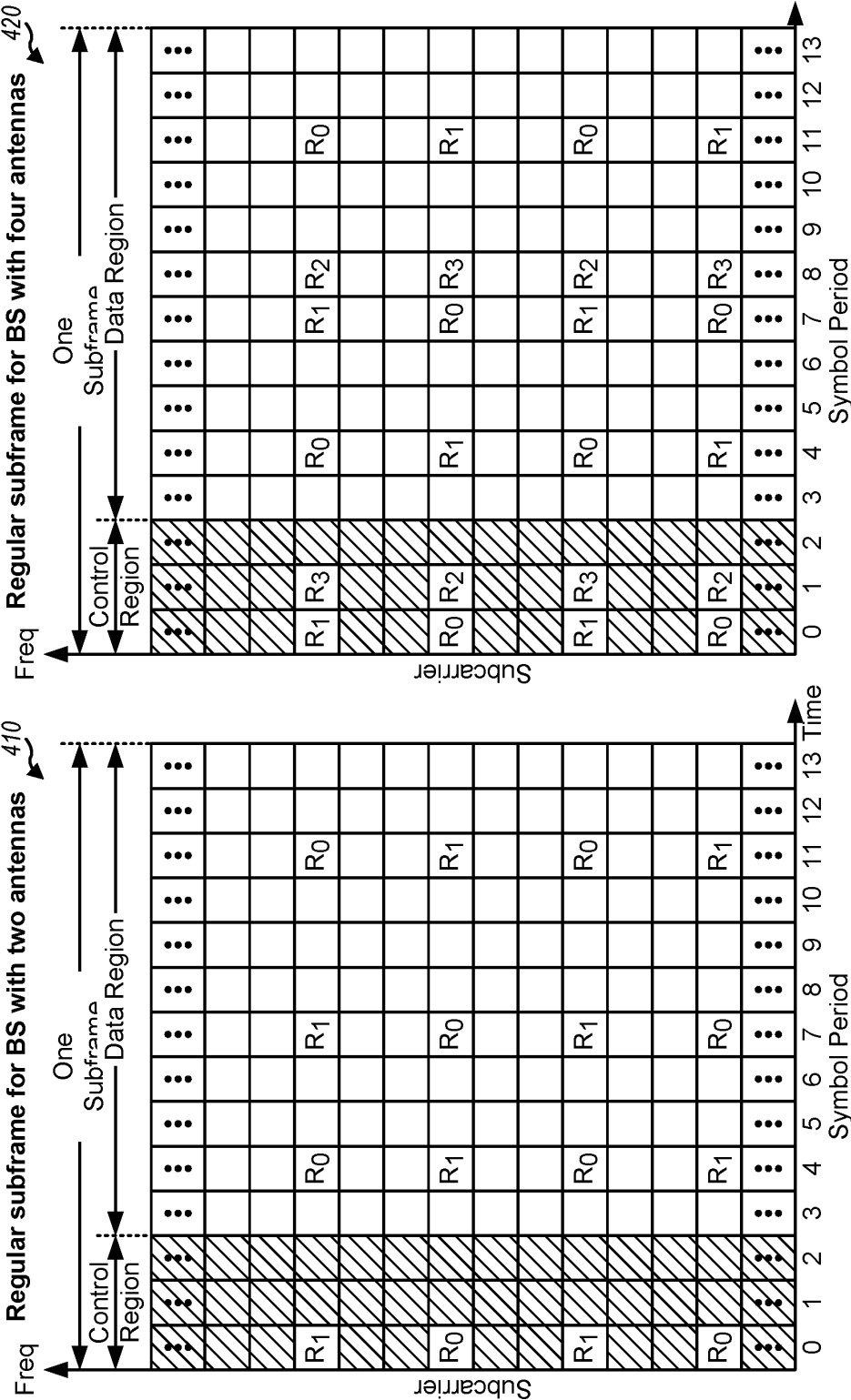


FIG. 4

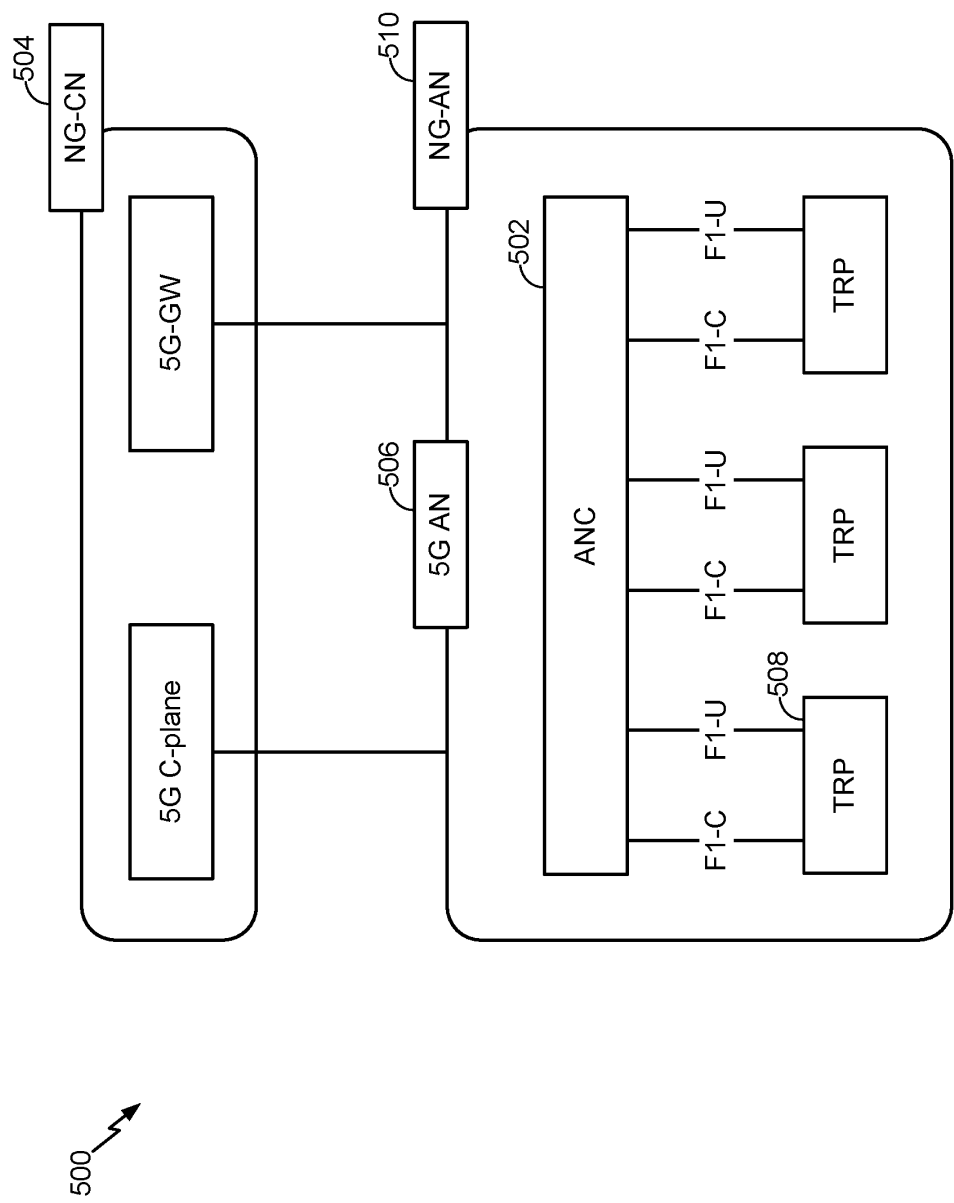


FIG. 5

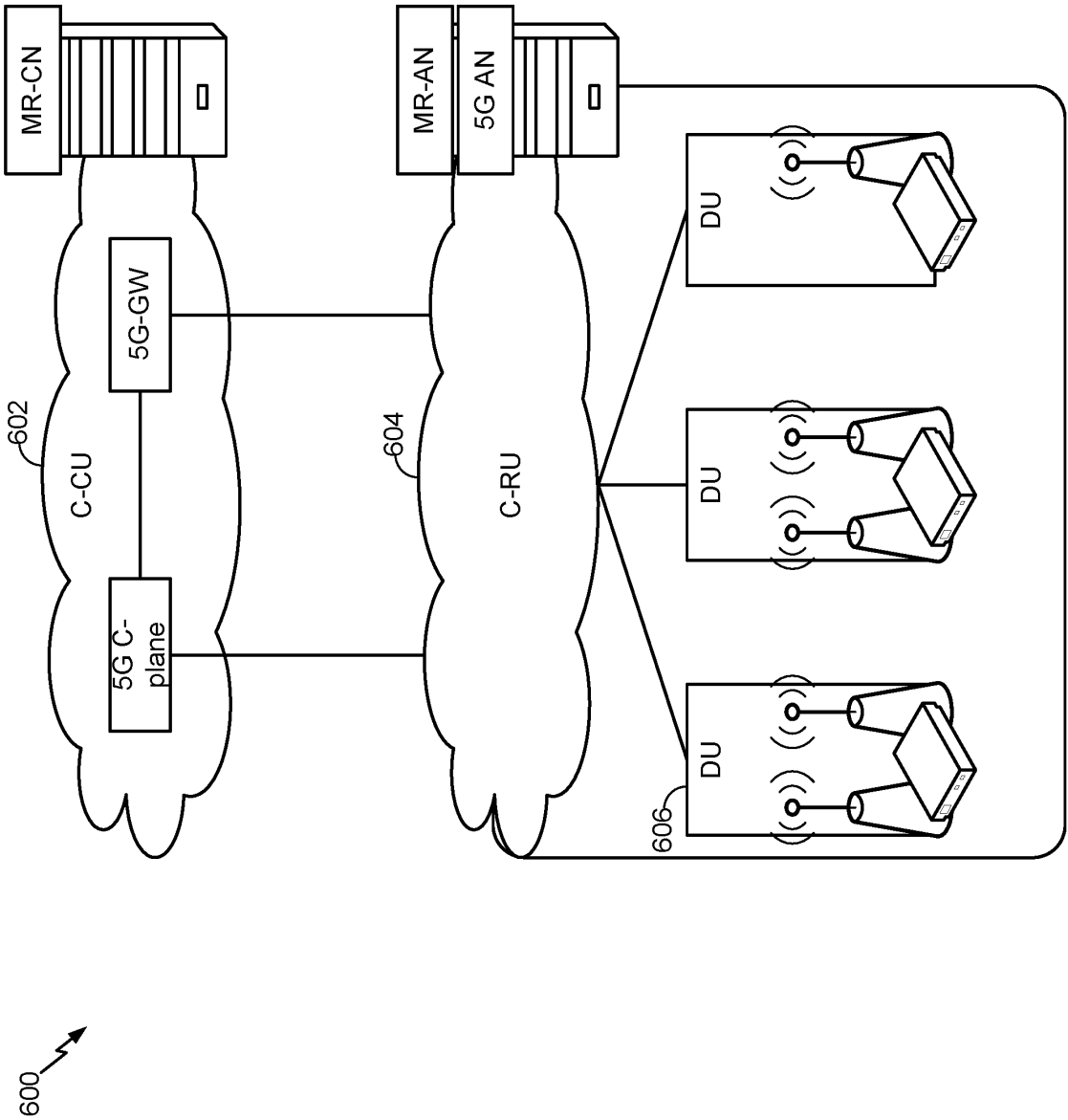


FIG. 6

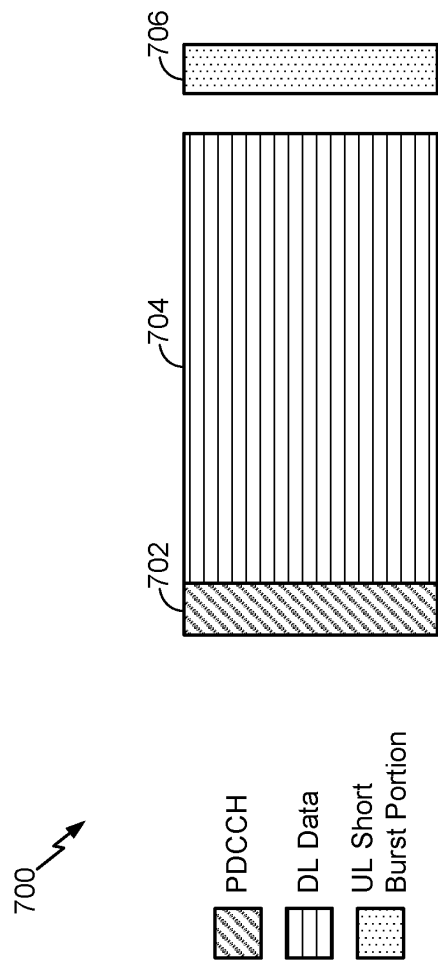


FIG. 7

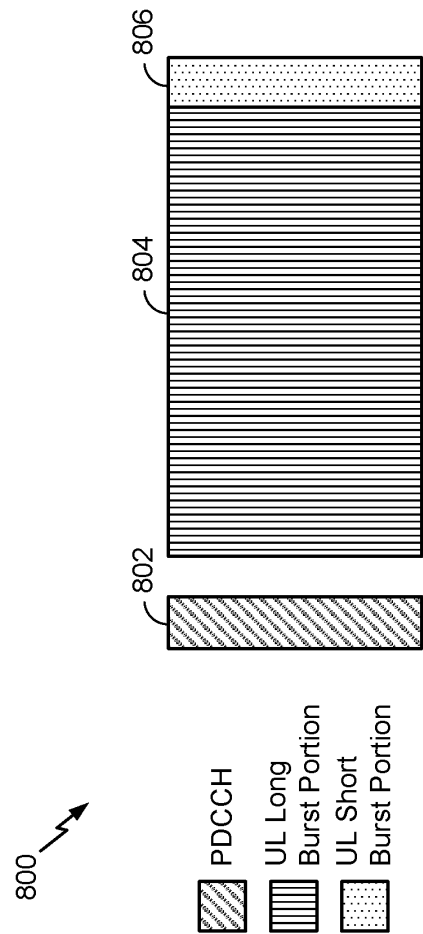


FIG. 8

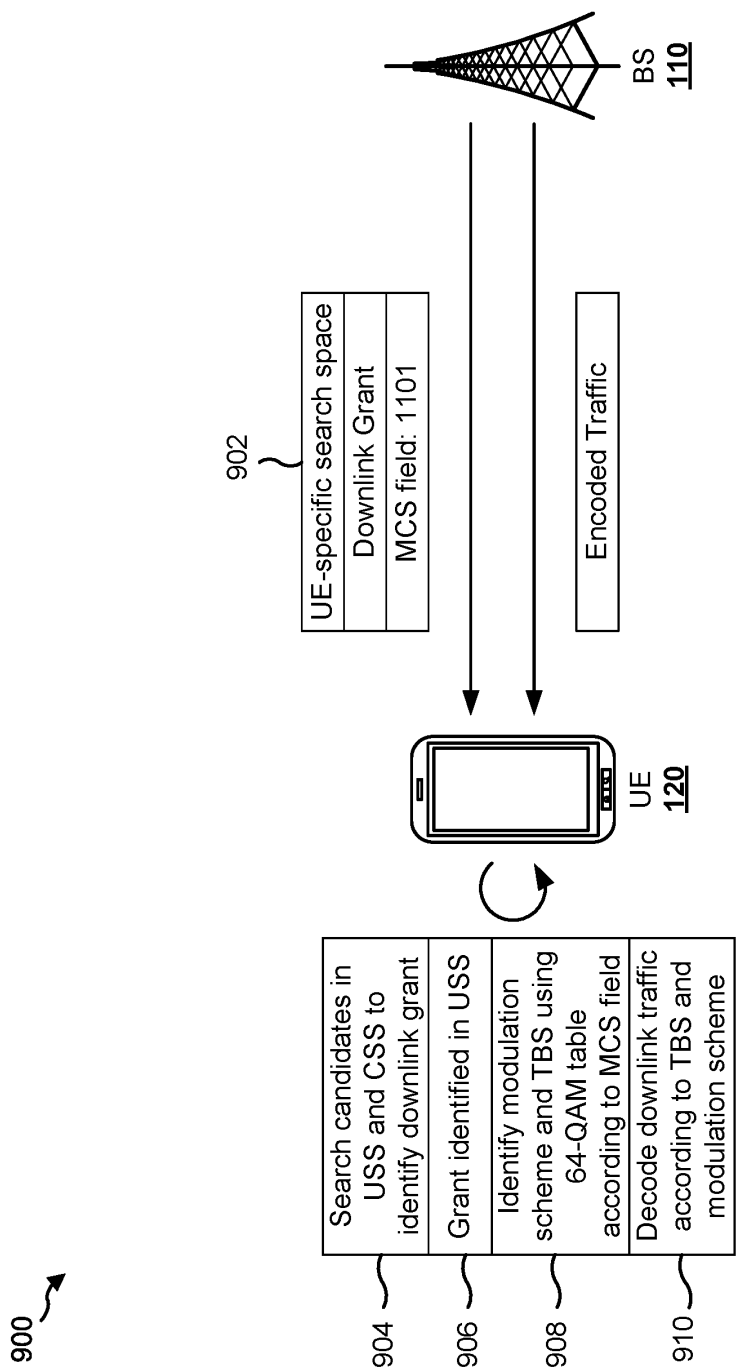


FIG. 9A

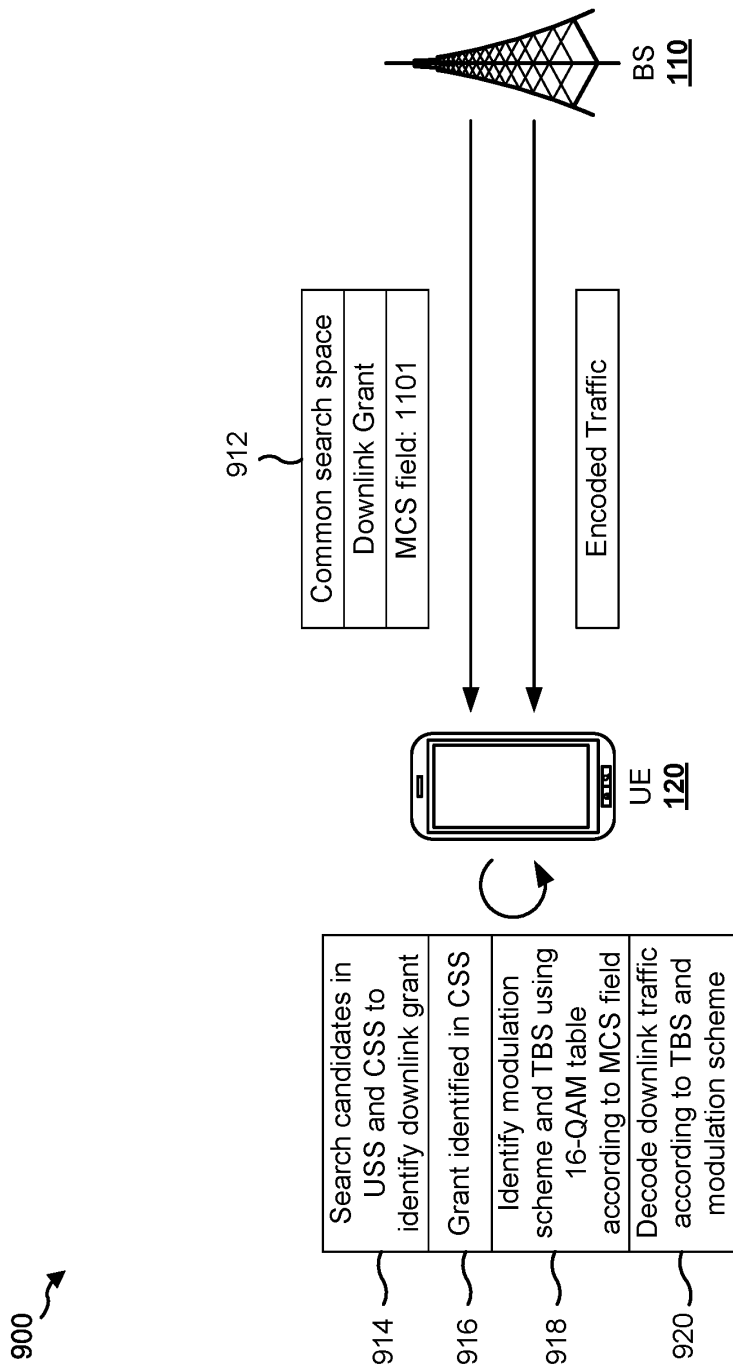


FIG. 9B

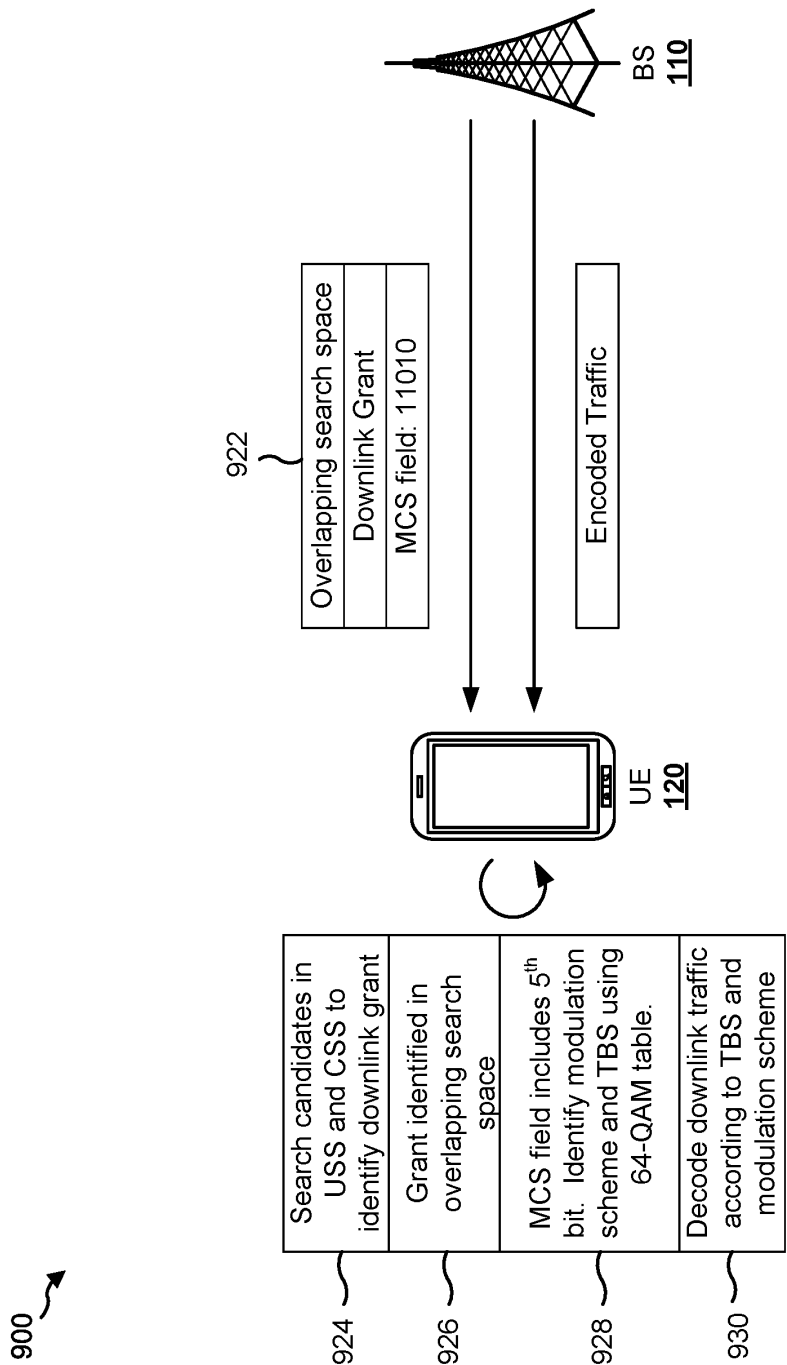


FIG. 9C

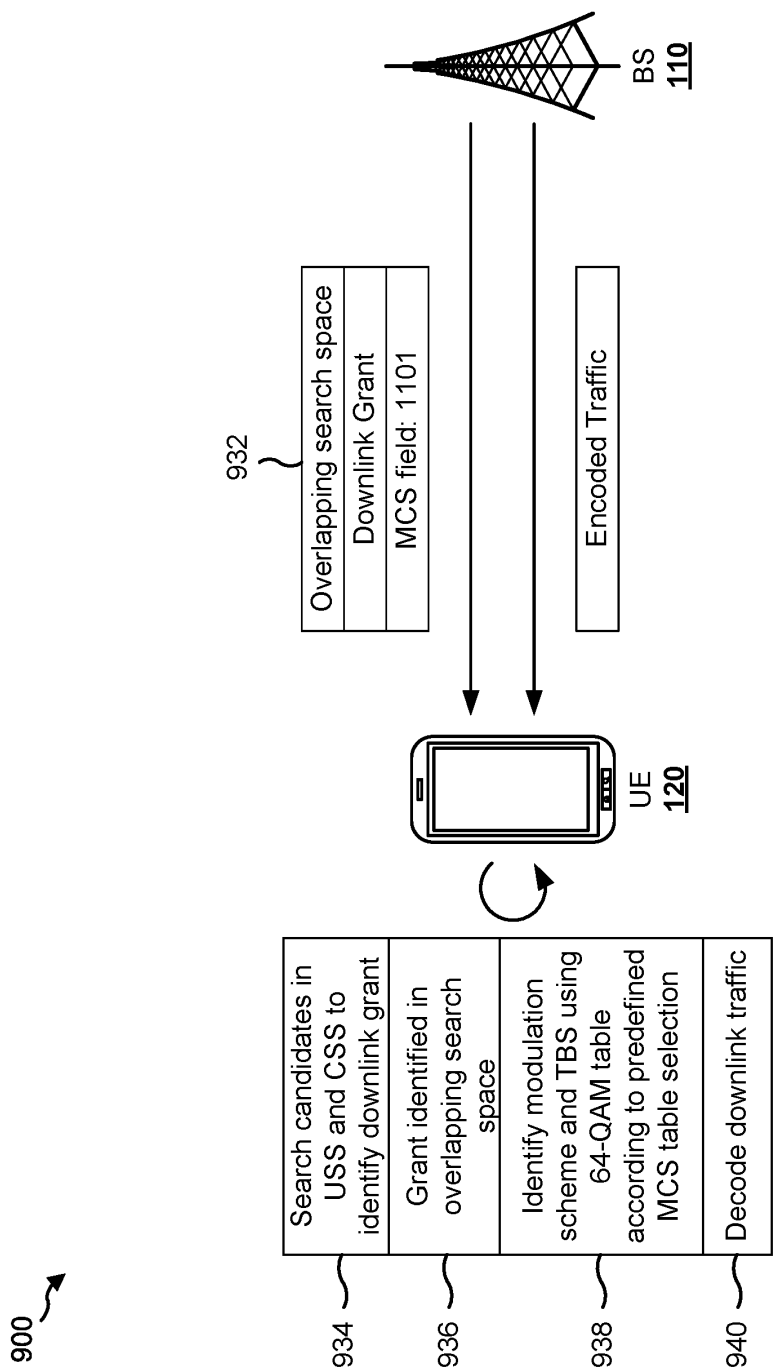
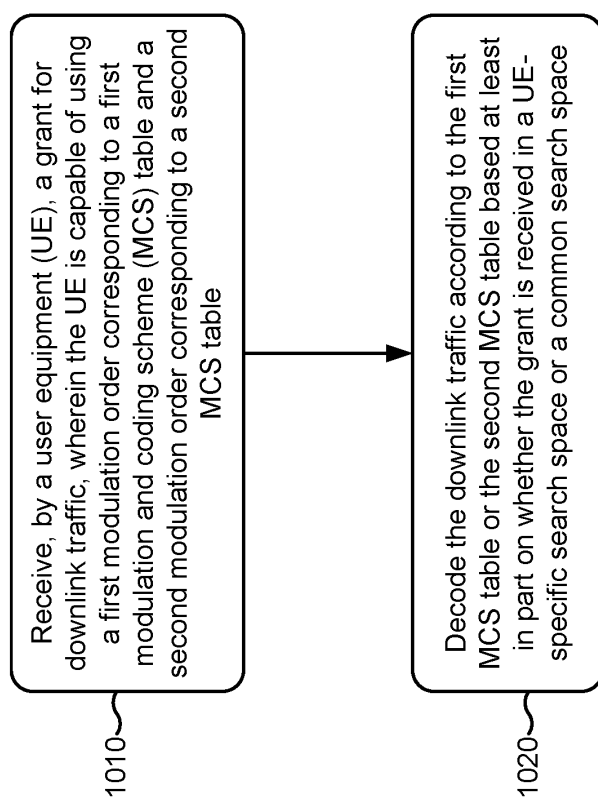


FIG. 9D

1000 ↗

**FIG. 10**

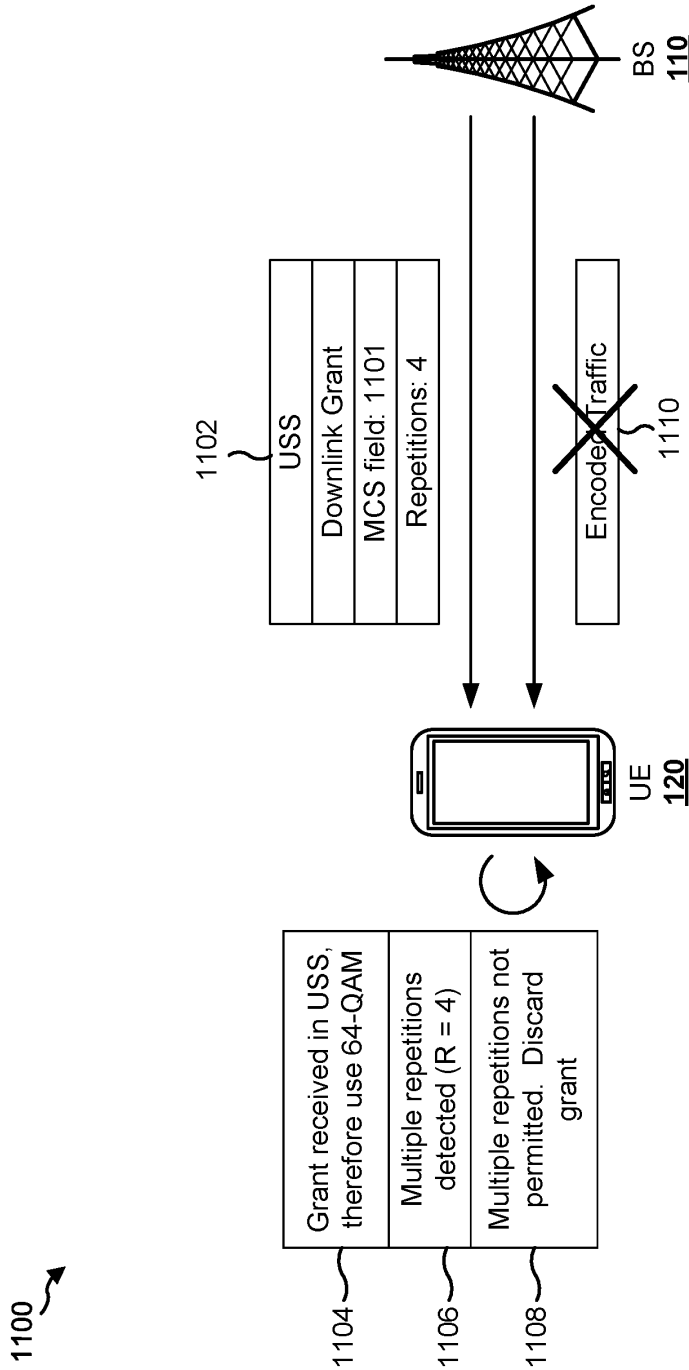


FIG. 11A

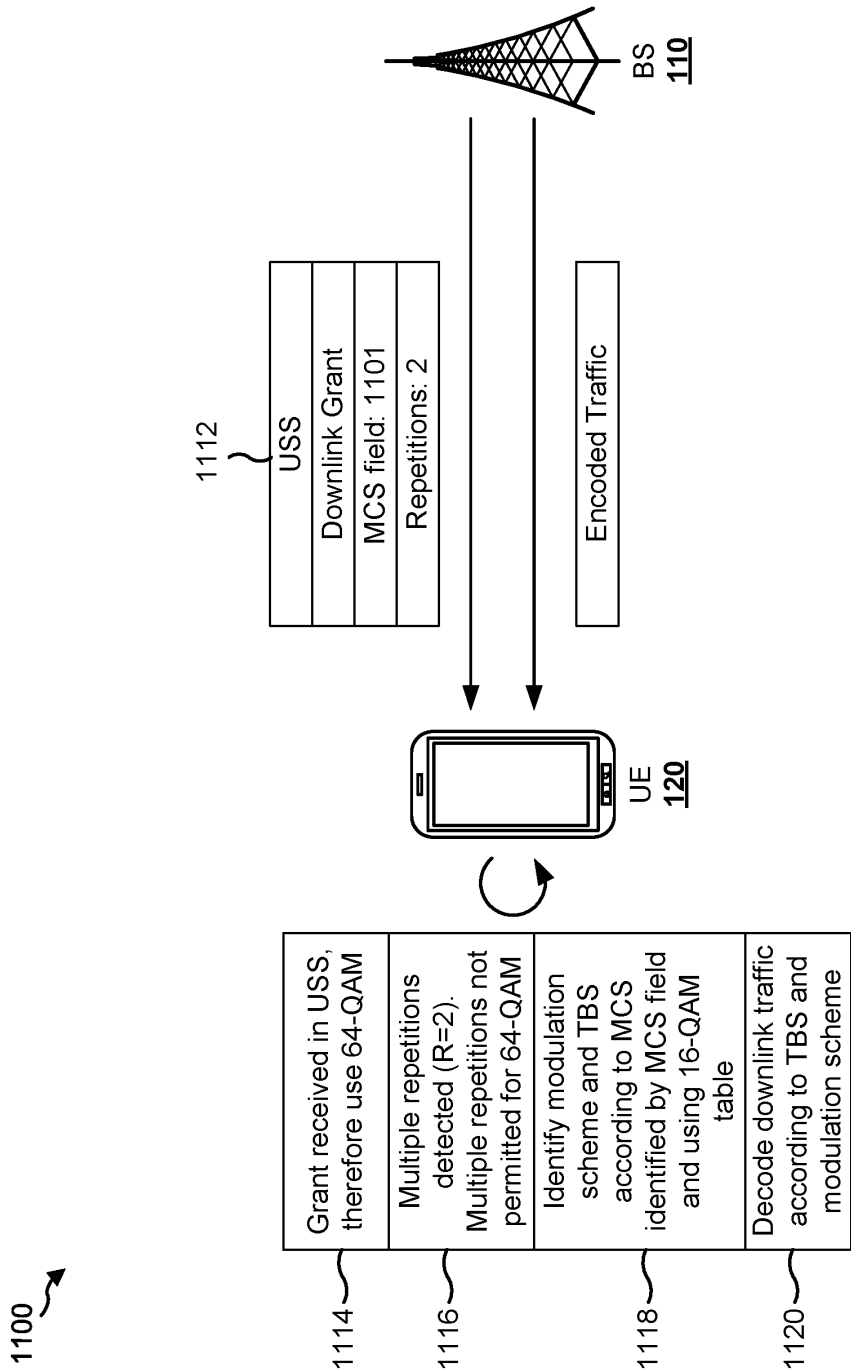


FIG. 11B

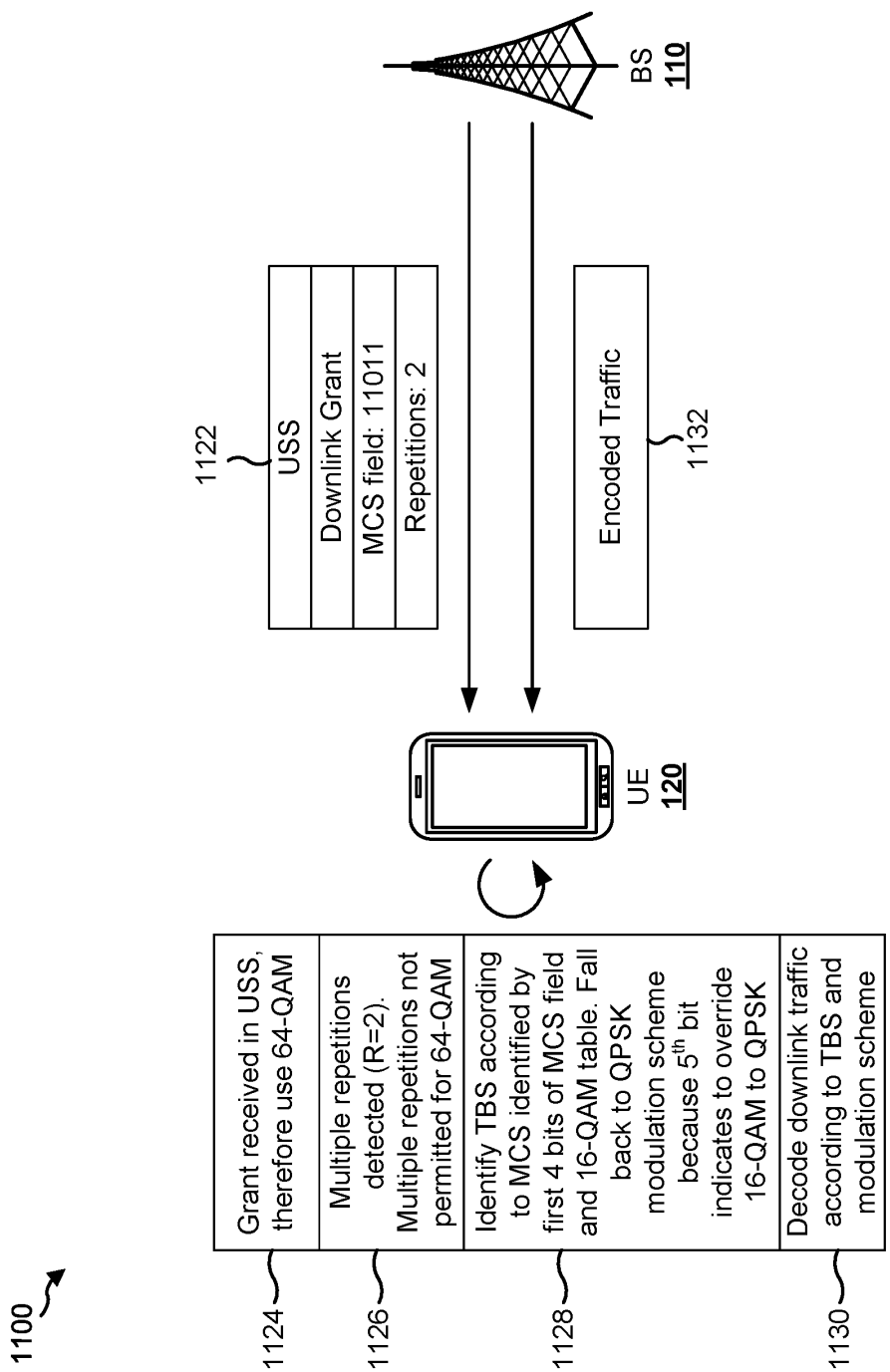


FIG. 11C

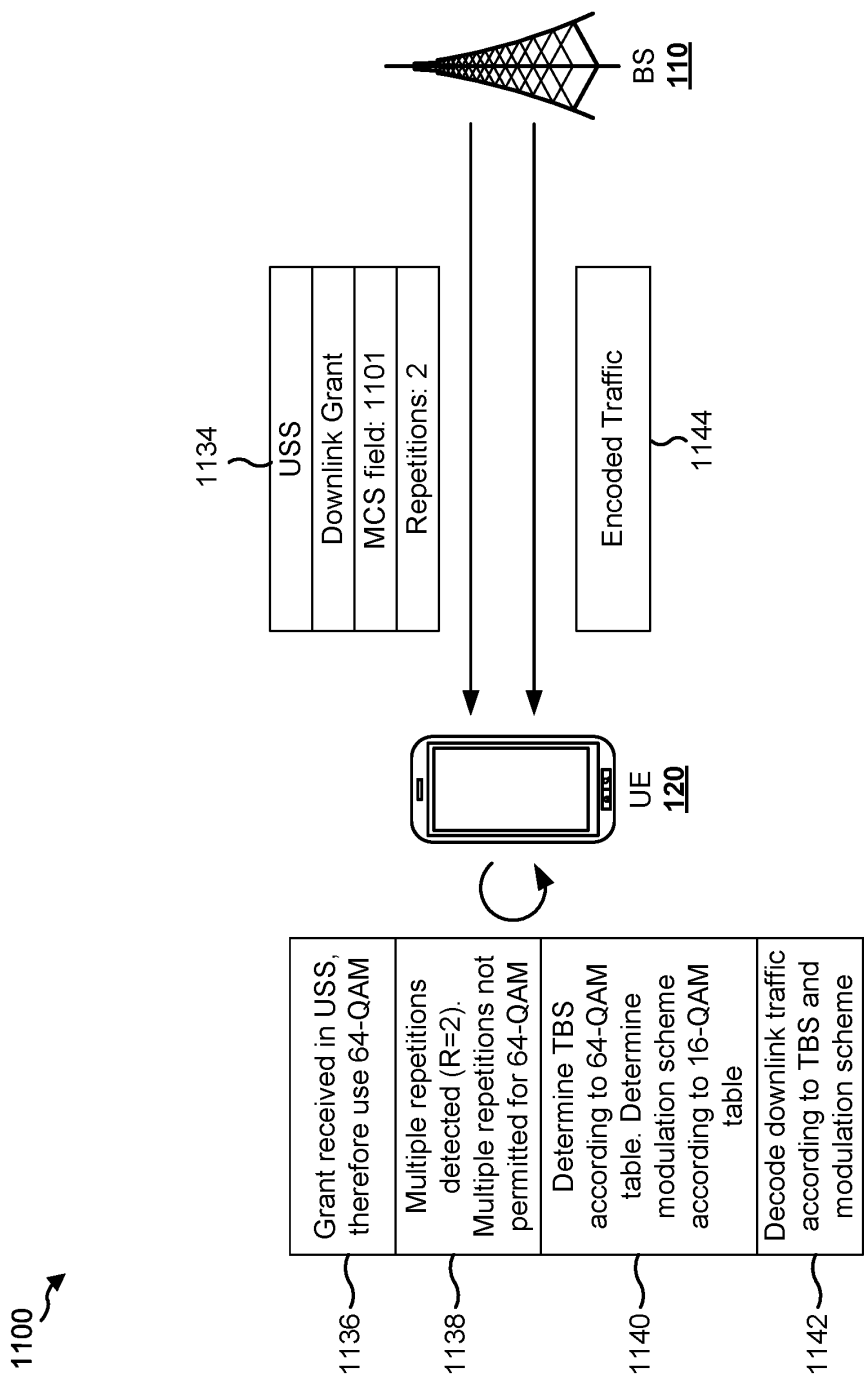


FIG. 11D

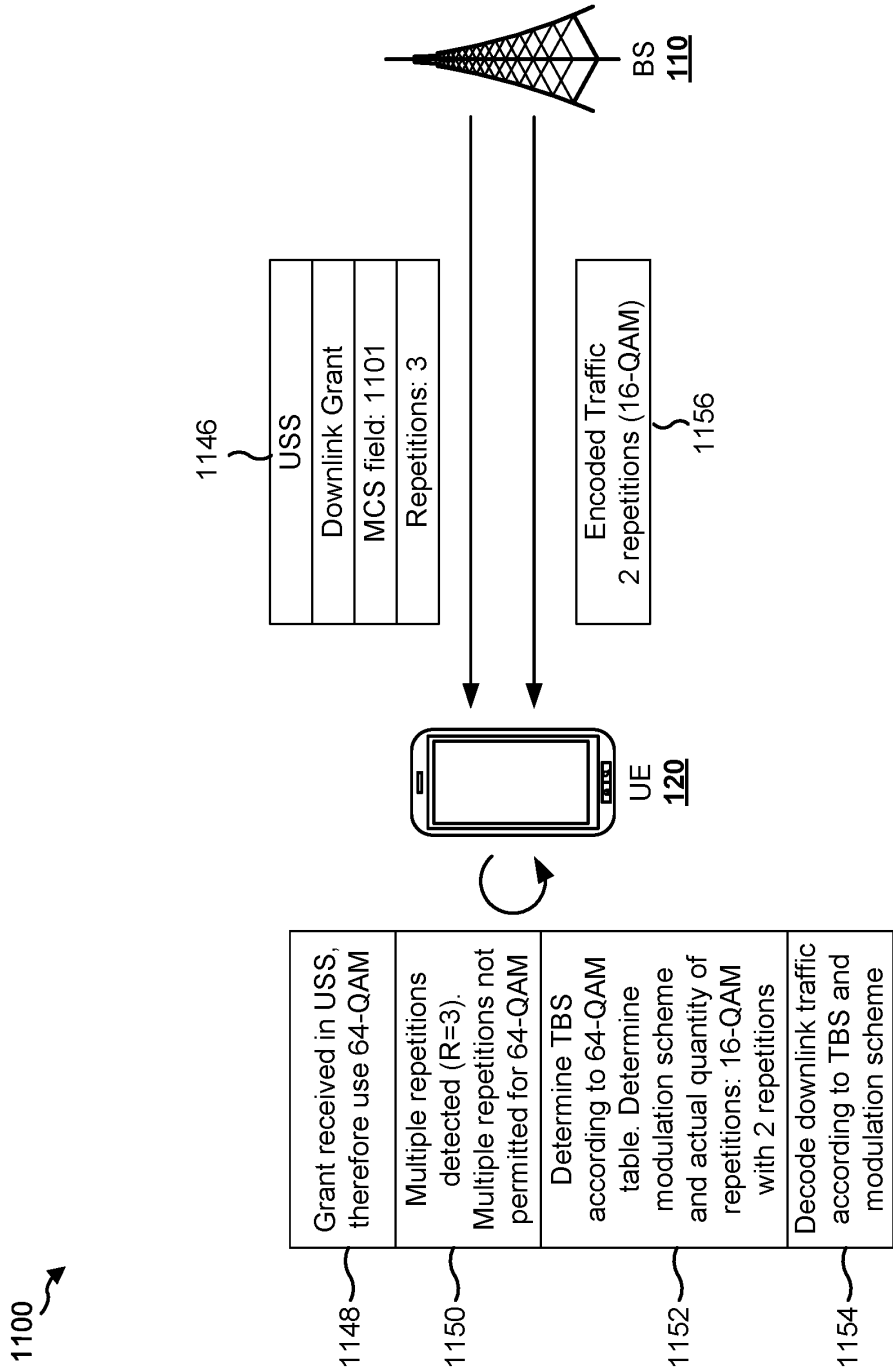
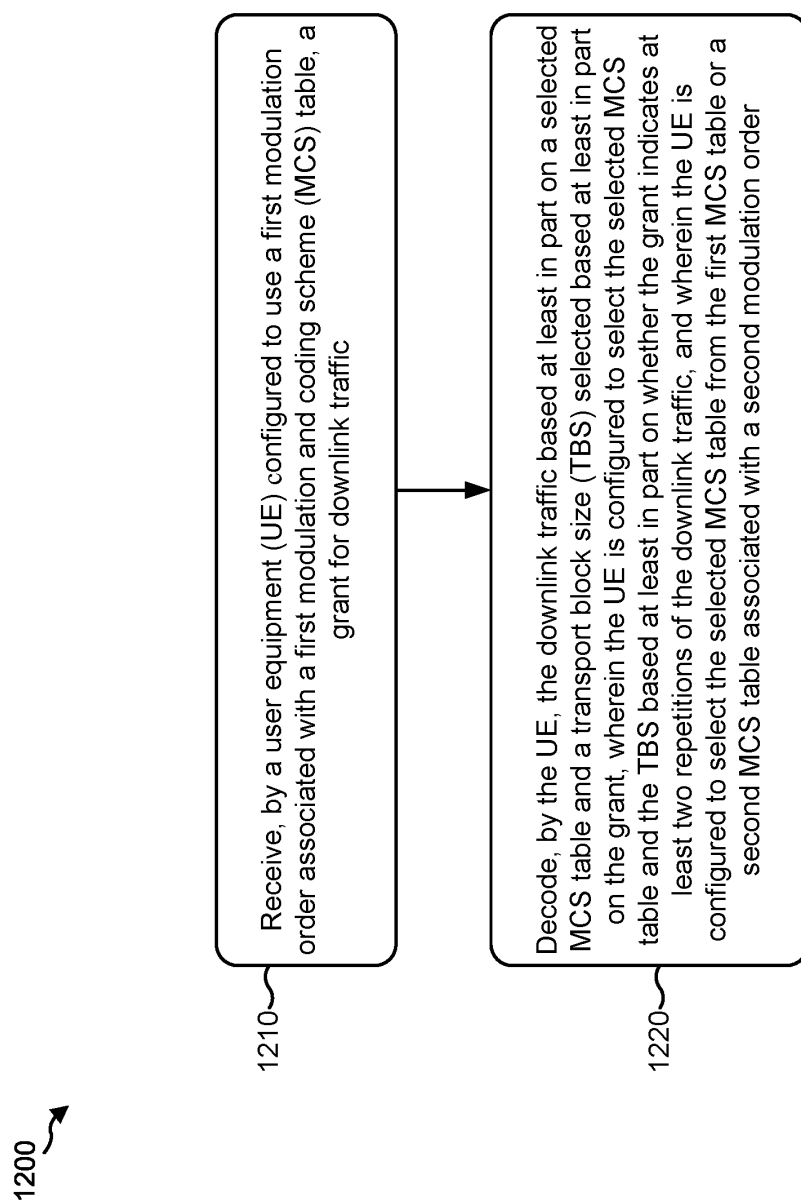


FIG. 11E

**FIG. 12**

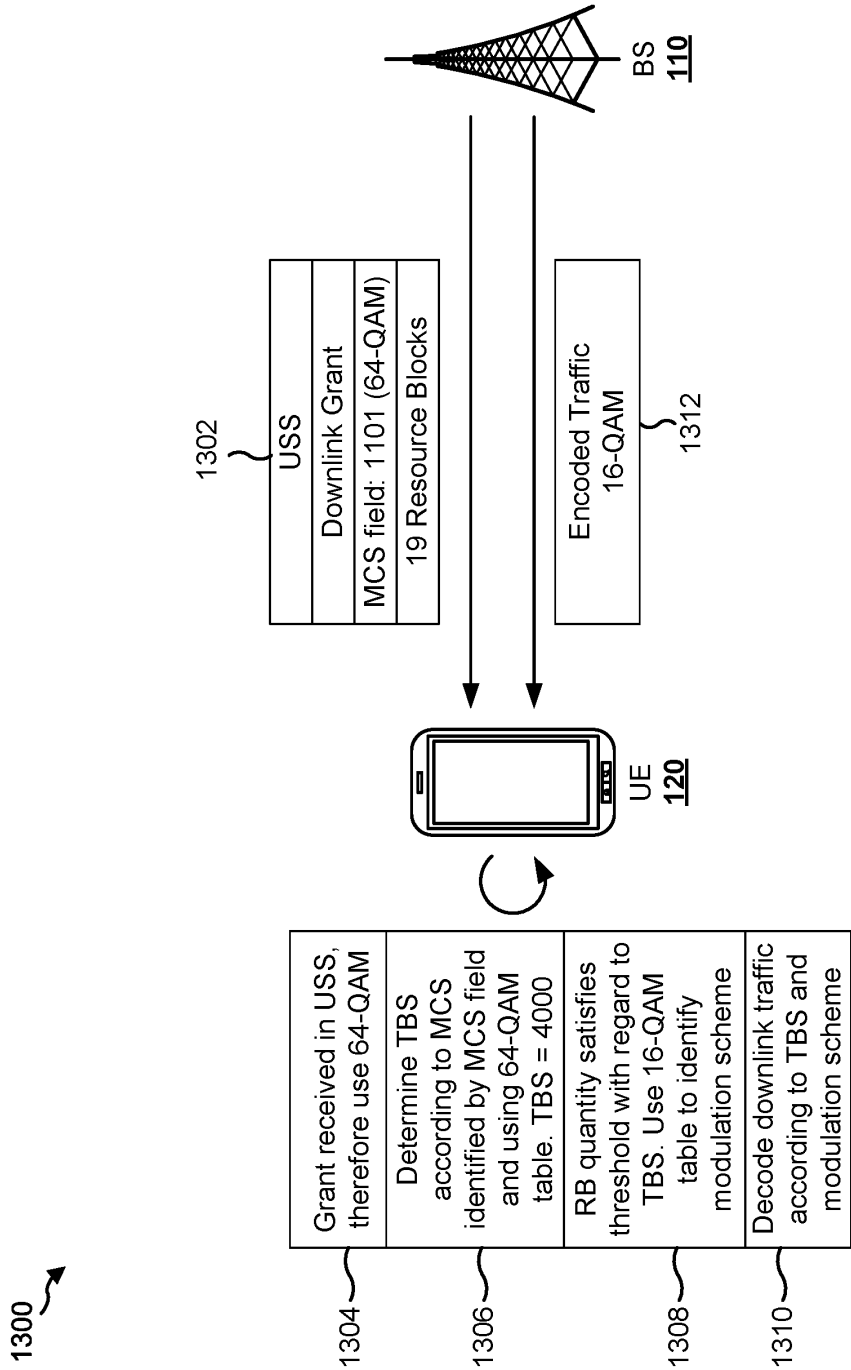
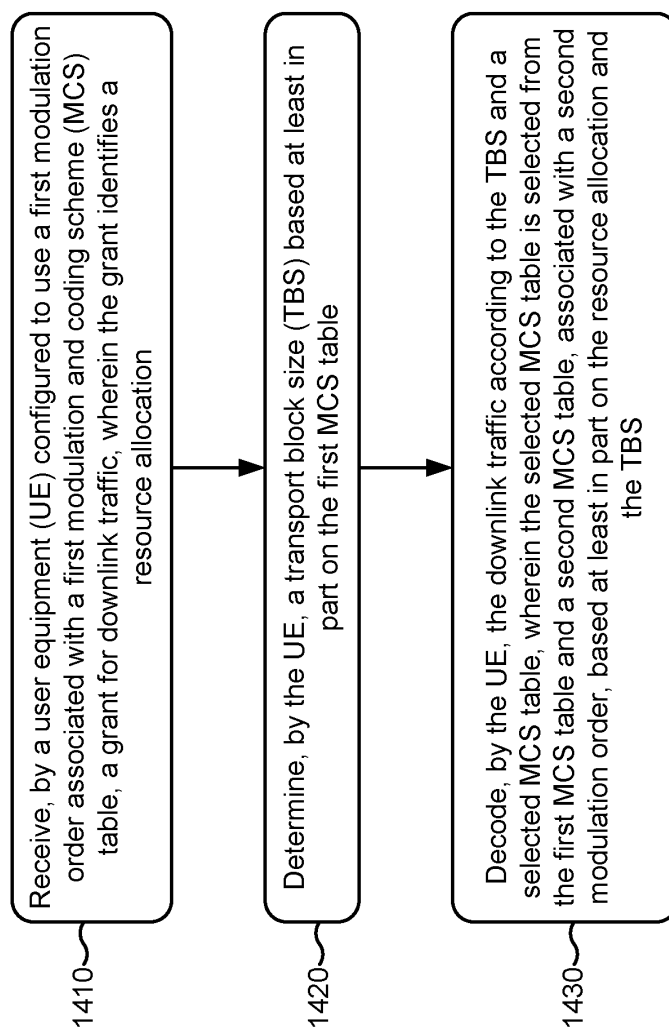


FIG. 13

1400 **FIG. 14**

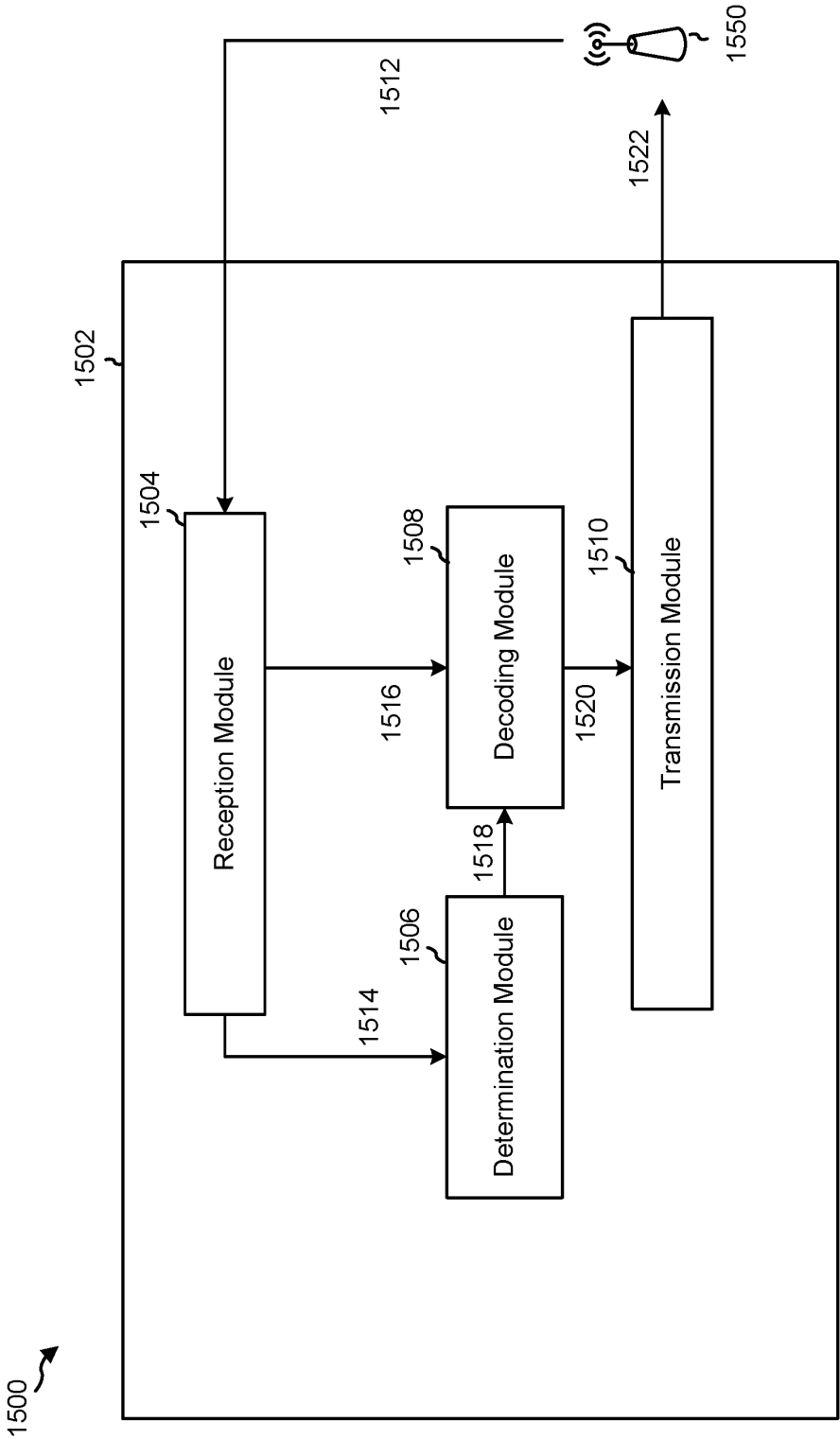


FIG. 15

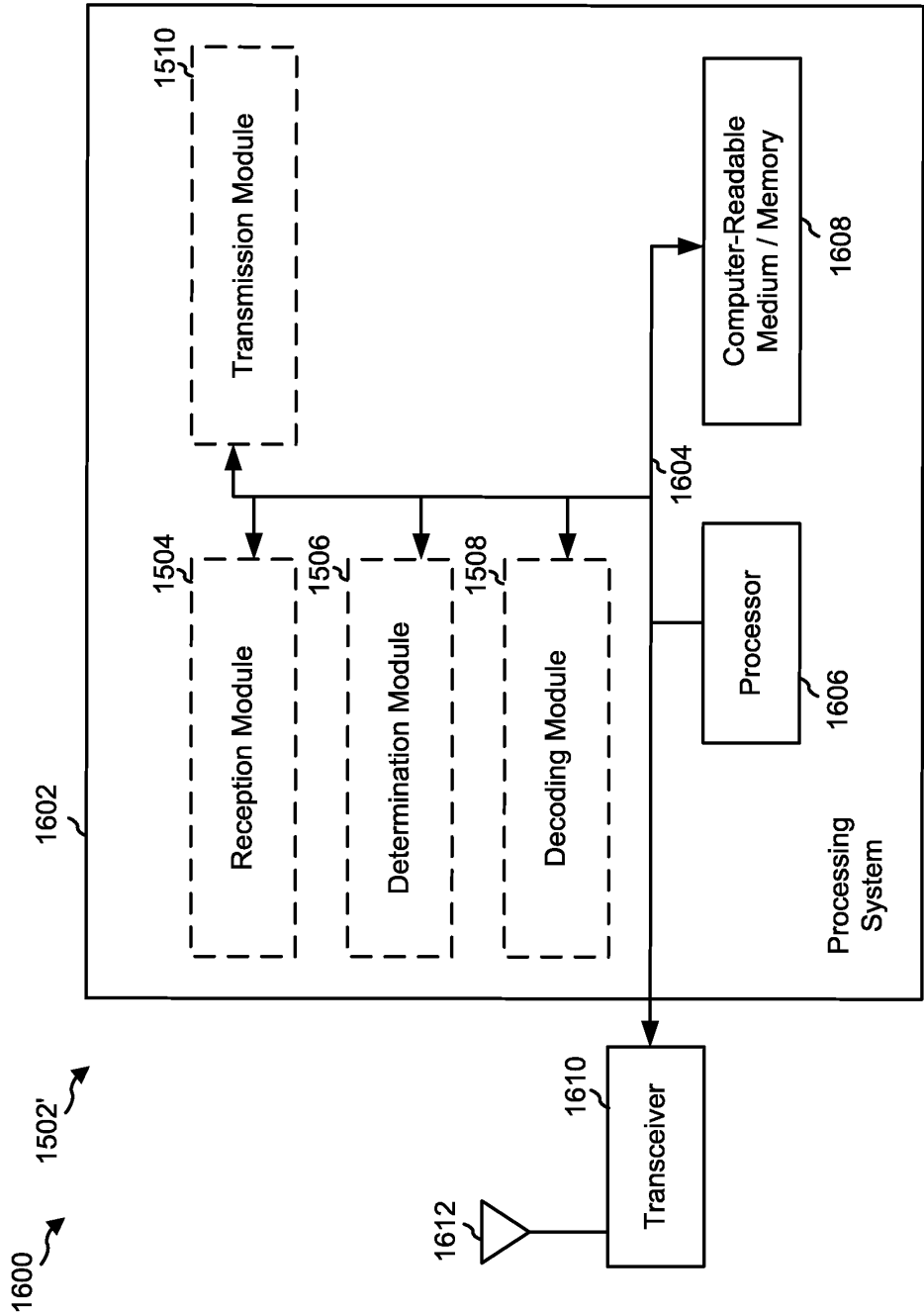


FIG. 16

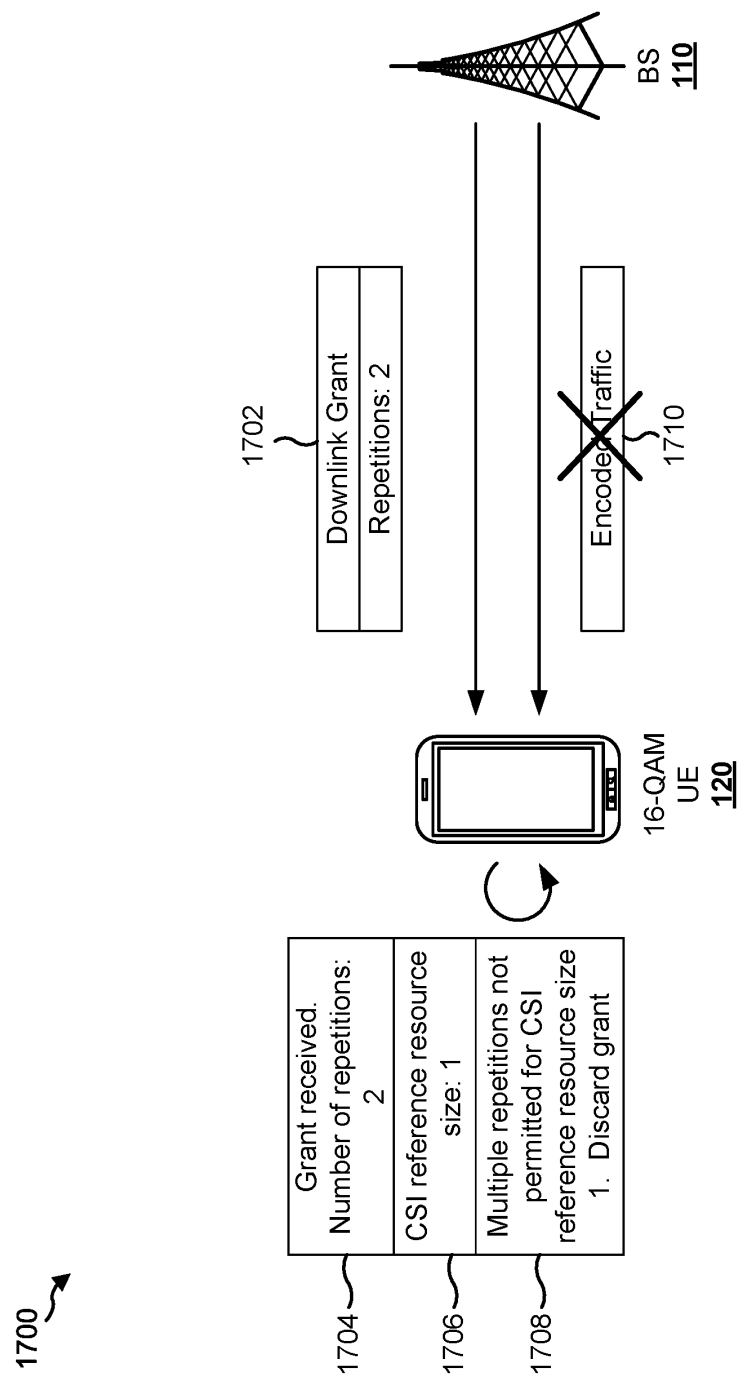


FIG. 17A

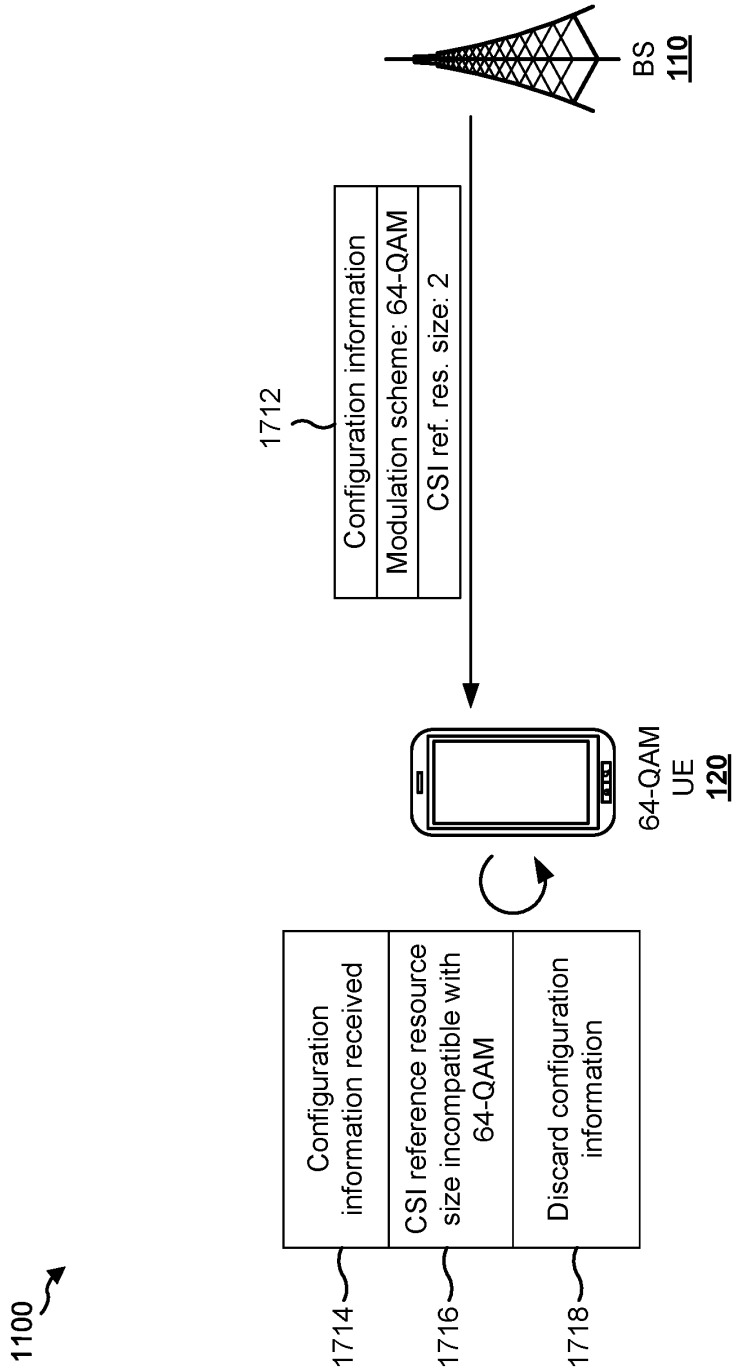


FIG. 17B

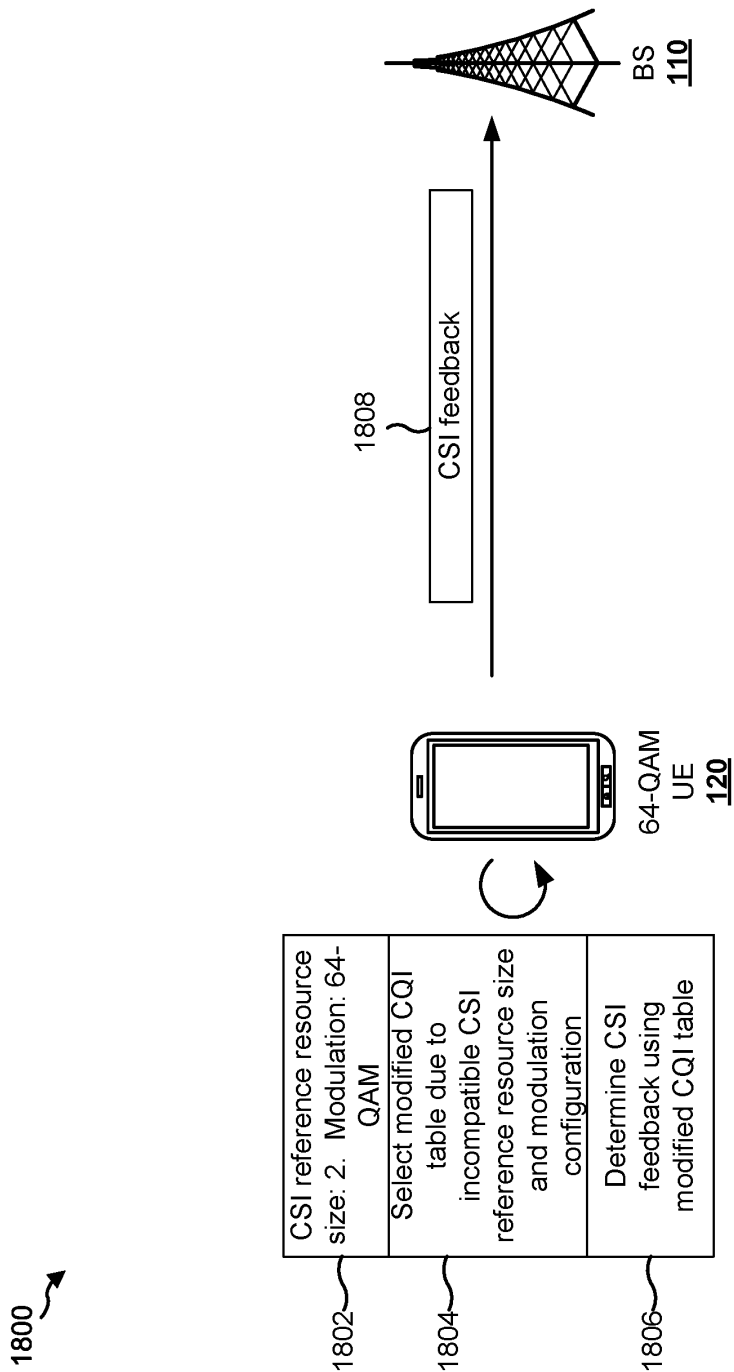


FIG. 18A

1800 ↗

| CQI index | modulation | code rate x<br>1024 x<br>R_CSIMax | efficiency<br>η x<br>R_CSIMax |
|-----------|------------|-----------------------------------|-------------------------------|
| 0         |            | out of range                      |                               |
| 1         | QPSK       | 40                                | 0.0781                        |
| 2         | QPSK       | 78                                | 0.1523                        |
| 3         | QPSK       | 120                               | 0.2344                        |
| 4         | QPSK       | 193                               | 0.3770                        |
| 5         | QPSK       | 308                               | 0.6016                        |
| 6         | QPSK       | 449                               | 0.8770                        |
| 7         | QPSK       | 602                               | 1.1758                        |
| 8         | 16QAM      | 378                               | 1.4766                        |
| 9         | 16QAM      | 490                               | 1.9141                        |
| 10        | 16QAM      | 616                               | 2.4063                        |
| 11        | 64QAM      | 466                               | 2.7305                        |
| 12        | 64QAM      | 567                               | 3.3223                        |
| 13        | 64QAM      | 666                               | 3.9023                        |
| 14        | 64QAM      | 772                               | 4.5234                        |
| 15        | 64QAM      | 873                               | 5.1152                        |

1810 ↗

| CQI index | modulation | code rate x<br>1024 x<br>R_CSIMax | efficiency<br>η x<br>R_CSIMax |
|-----------|------------|-----------------------------------|-------------------------------|
| 0         |            | out of range                      |                               |
| 1         | QPSK       | 40                                | 0.0781                        |
| 2         | QPSK       | 78                                | 0.1523                        |
| 3         | QPSK       | 120                               | 0.2344                        |
| 4         | QPSK       | 193                               | 0.3770                        |
| 5         | QPSK       | 308                               | 0.6016                        |
| 6         | QPSK       | 449                               | 0.8770                        |
| 7         | QPSK       | 602                               | 1.1758                        |
| 8         | 16QAM      | 378                               | 1.4766                        |
| 9         | 16QAM      | 490                               | 1.9141                        |
| 10        | 16QAM      | 616                               | 2.4063                        |
| 11        | 64QAM      | 466                               | 2.7305                        |
| 12        | 64QAM      | 567                               | 3.3223                        |
| 13        | 64QAM      | 666                               | 3.9023                        |
| 14        | 64QAM      | 772                               | 4.5234                        |
| 15        | 64QAM      | 873                               | 5.1152                        |

1812 ↗

| CQI index | modulation | code rate x<br>1024 x<br>R_CSIMax | Assumed<br>R_CSIMax | efficiency<br>η x<br>R_CSIMax |
|-----------|------------|-----------------------------------|---------------------|-------------------------------|
| 0         |            | out of range                      |                     |                               |
| 1         | QPSK       | 40                                | R_CSIMax            | 0.0781                        |
| 2         | QPSK       | 78                                | R_CSIMax            | 0.1523                        |
| 3         | QPSK       | 120                               | R_CSIMax            | 0.2344                        |
| 4         | QPSK       | 193                               | R_CSIMax            | 0.3770                        |
| 5         | QPSK       | 308                               | R_CSIMax            | 0.6016                        |
| 6         | QPSK       | 449                               | R_CSIMax            | 0.8770                        |
| 7         | QPSK       | 602                               | R_CSIMax            | 1.1758                        |
| 8         | 16QAM      | 378                               | R_CSIMax            | 1.4766                        |
| 9         | 16QAM      | 490                               | R_CSIMax            | 1.9141                        |
| 10        | 16QAM      | 616                               | R_CSIMax            | 2.4063                        |
| 11        | 64QAM      | 466                               | 1                   | 2.7305                        |
| 12        | 64QAM      | 567                               | 1                   | 3.3223                        |
| 13        | 64QAM      | 666                               | 1                   | 3.9023                        |
| 14        | 64QAM      | 772                               | 1                   | 4.5234                        |
| 15        | 64QAM      | 873                               | 1                   | 5.1152                        |

CSI Ref. Res. Size greater than 1

FIG. 18B

1800

1810

CSI Ref. Res. Size = 1

| CQI index | modulation | code rate x<br>1024 x<br>R_CSI <sub>Max</sub> | efficiency x<br>R_CSI <sub>Max</sub> |
|-----------|------------|-----------------------------------------------|--------------------------------------|
| 0         |            | out of range                                  |                                      |
| 1         | QPSK       | 40                                            | 0.0781                               |
| 2         | QPSK       | 78                                            | 0.1523                               |
| 3         | QPSK       | 120                                           | 0.2344                               |
| 4         | QPSK       | 193                                           | 0.3770                               |
| 5         | QPSK       | 308                                           | 0.6016                               |
| 6         | QPSK       | 449                                           | 0.8770                               |
| 7         | QPSK       | 602                                           | 1.1758                               |
| 8         | 16QAM      | 378                                           | 1.4766                               |
| 9         | 16QAM      | 490                                           | 1.9141                               |
| 10        | 16QAM      | 616                                           | 2.4063                               |
| 11        | 64QAM      | 466                                           | 2.7305                               |
| 12        | 64QAM      | 567                                           | 3.3223                               |
| 13        | 64QAM      | 666                                           | 3.9023                               |
| 14        | 64QAM      | 772                                           | 4.5234                               |
| 15        | 64QAM      | 873                                           | 5.1152                               |

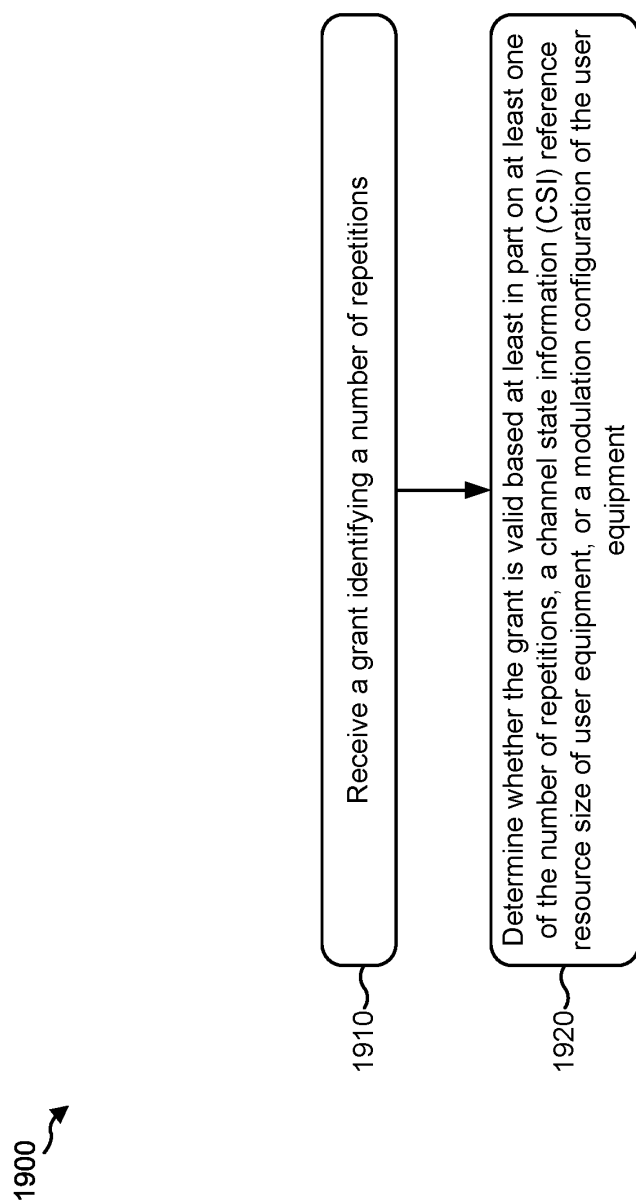
1814

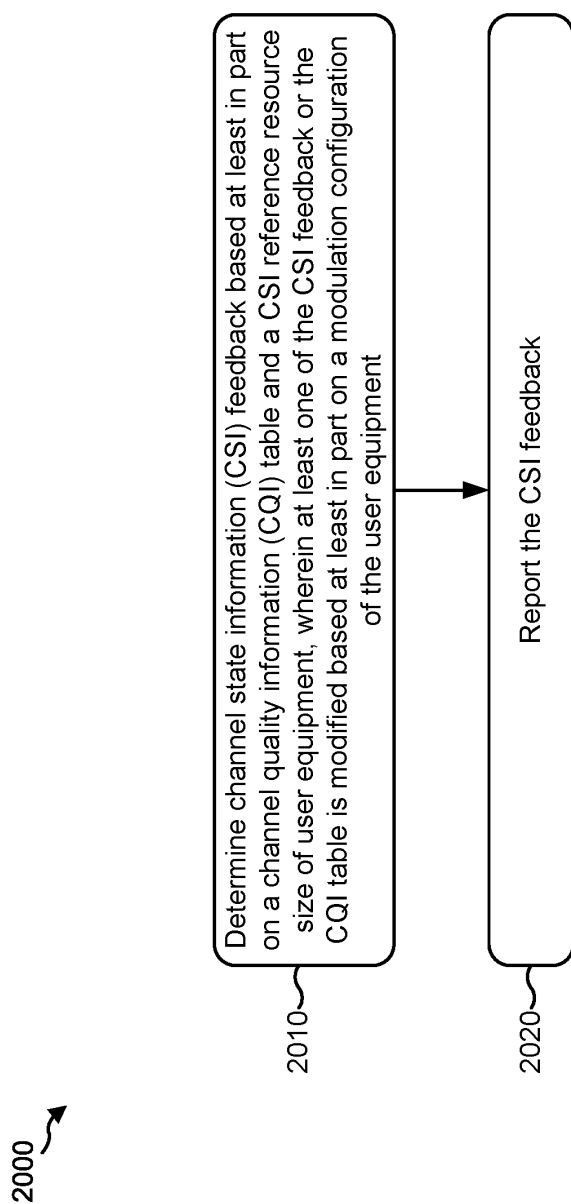
CSI Ref. Res. Size greater than 1

| CQI index | modulation | code rate x<br>1024 x<br>R_CSI <sub>Max</sub> | efficiency x<br>R_CSI <sub>Max</sub> |
|-----------|------------|-----------------------------------------------|--------------------------------------|
| 0         |            | out of range                                  |                                      |
| 1         | QPSK       | 40                                            | 0.0781                               |
| 2         | QPSK       | 78                                            | 0.1523                               |
| 3         | QPSK       | 120                                           | 0.2344                               |
| 4         | QPSK       | 193                                           | 0.3770                               |
| 5         | QPSK       | 308                                           | 0.6016                               |
| 6         | QPSK       | 449                                           | 0.8770                               |
| 7         | QPSK       | 602                                           | 1.1758                               |
| 8         | 16QAM      | 378                                           | 1.4766                               |
| 9         | 16QAM      | 490                                           | 1.9141                               |
| 10        | 16QAM      | 616                                           | 2.4063                               |
| 11        | 16QAM      | 378                                           | R_CSI <sub>Max</sub> /2              |
| 12        | 16QAM      | 490                                           | R_CSI <sub>Max</sub> /2              |
| 13        | 16QAM      | 616                                           | R_CSI <sub>Max</sub> /2              |
| 14        | 64QAM      | 466                                           | 1                                    |
| 15        | 64QAM      | 567                                           | 1                                    |

1816

FIG. 18C

**FIG. 19**

**FIG. 20**