FIG. 1

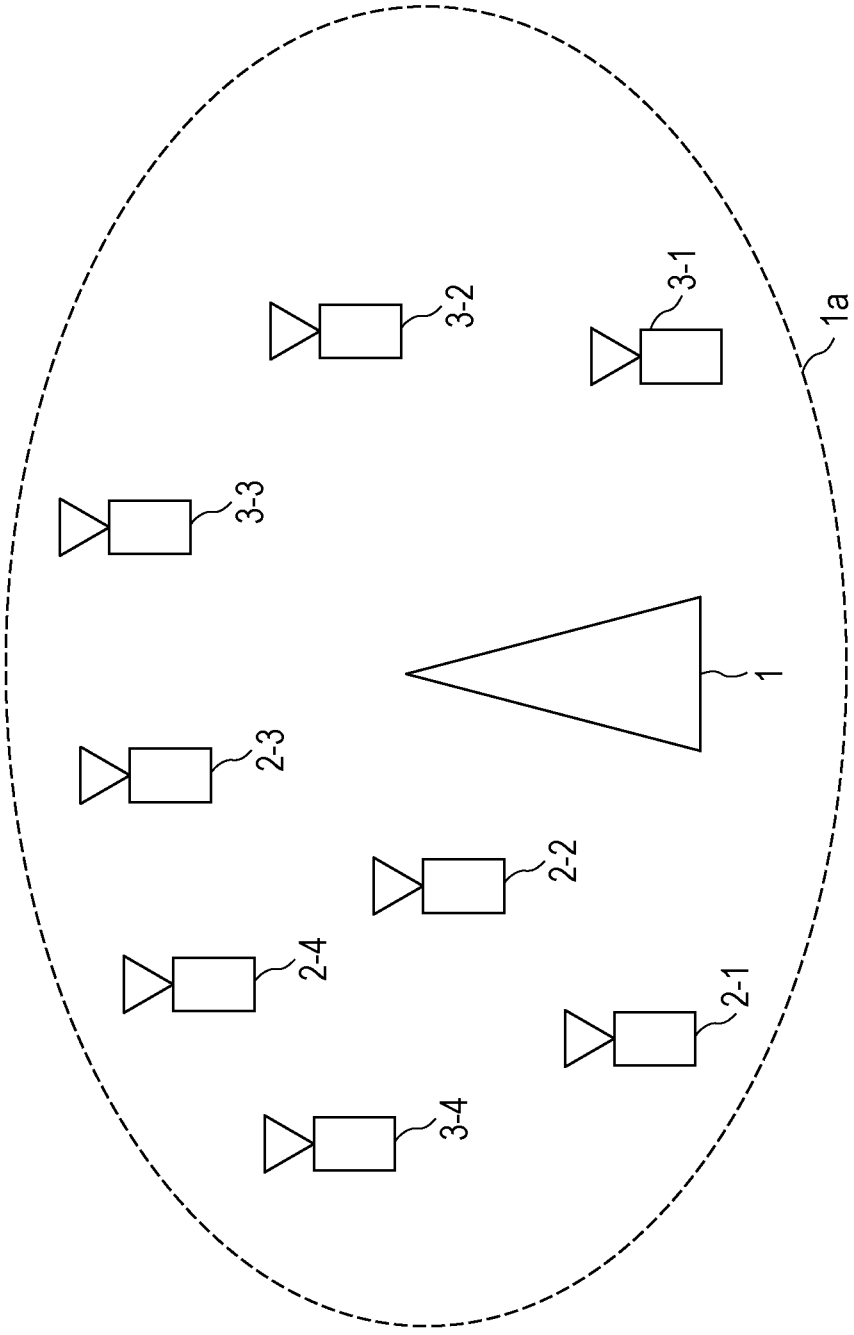


FIG. 2

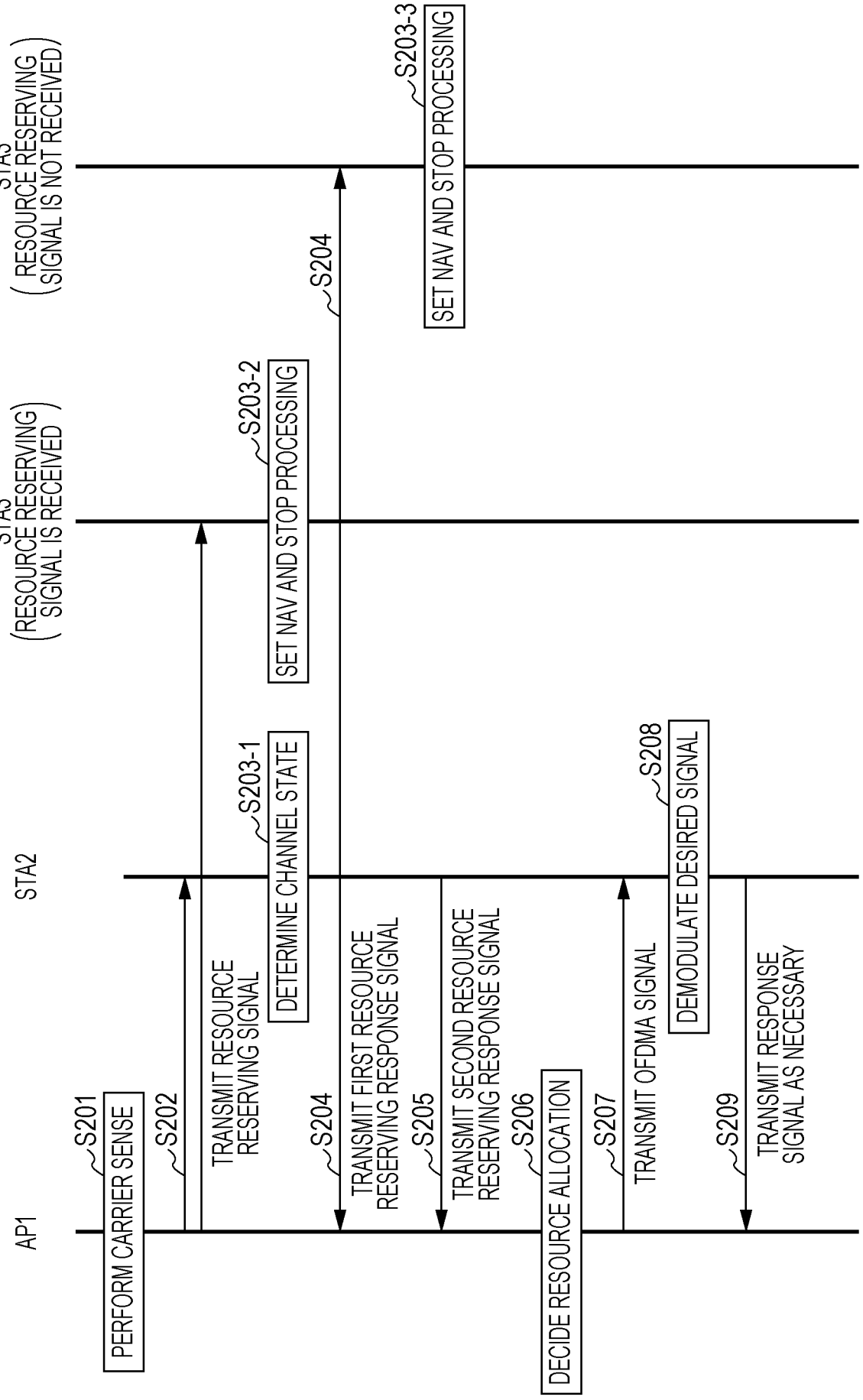

AP1
STA2
STA3
(RESOURCE RESERVING SIGNAL IS RECEIVED)
STA3
(RESOURCE RESERVING SIGNAL IS NOT RECEIVED)
S201
PERFORM CARRIER SENSE
S202
TRANSMIT RESOURCE RESERVING SIGNAL
S203-1
DETERMINE CHANNEL STATE
S203-2
SET NAV AND STOP PROCESSING
S203-3
SET NAV AND STOP PROCESSING
S204
TRANSMIT FIRST RESOURCE RESERVING RESPONSE SIGNAL
S204
S205
TRANSMIT SECOND RESOURCE RESERVING RESPONSE SIGNAL
S206
DECIDE RESOURCE ALLOCATION
S207
TRANSMIT OFDMA SIGNAL
S208
DEMODULATE DESIRED SIGNAL
S209
TRANSMIT RESPONSE SIGNAL AS NECESSARY

FIG. 3

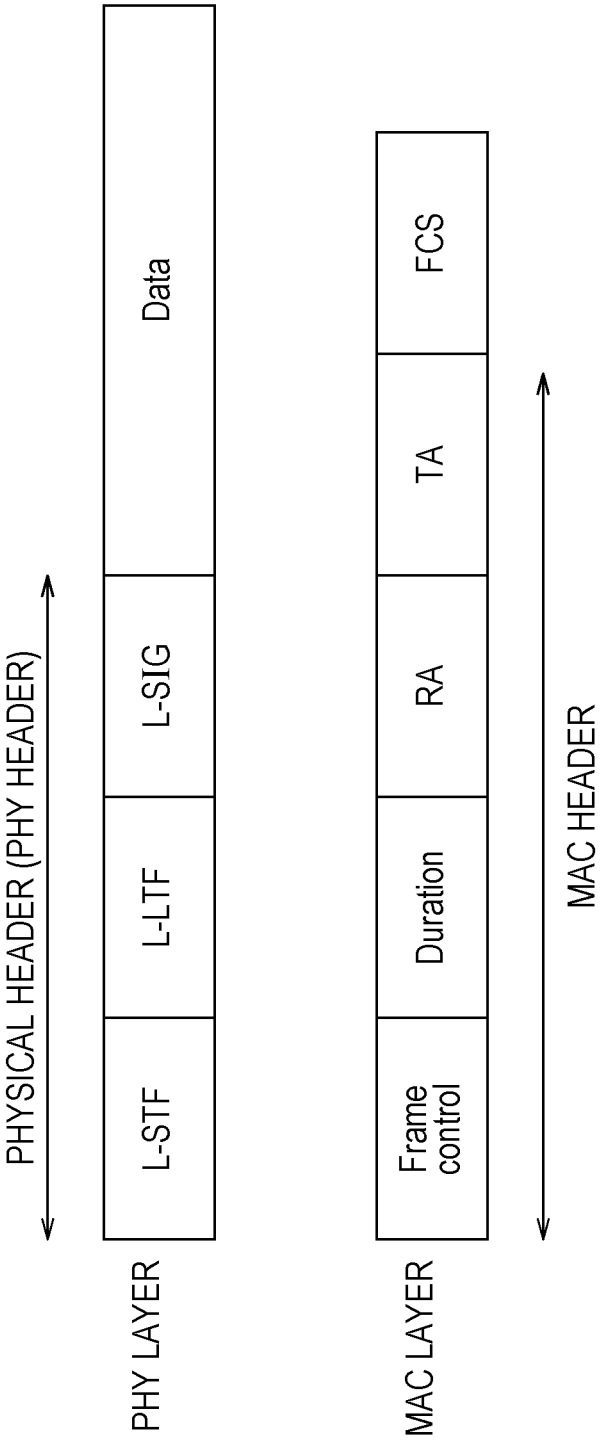

PHYSICAL HEADER (PHY HEADER)
L-STF
L-LTF
L-SIG
Data
PHY LAYER
Frame control
Duration
RA
TA
FCS
MAC LAYER
MAC HEADER

FIG. 4

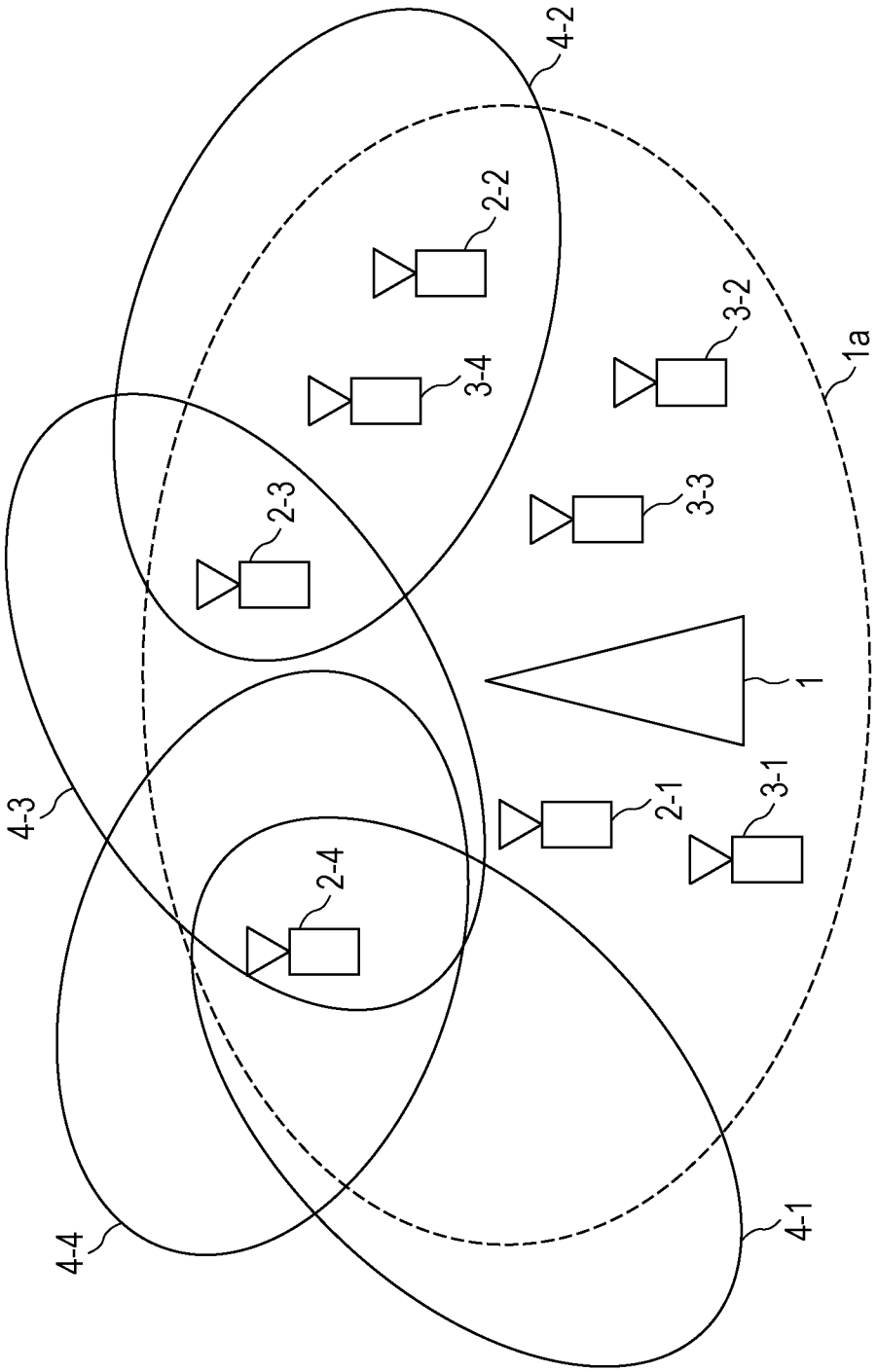


FIG. 5

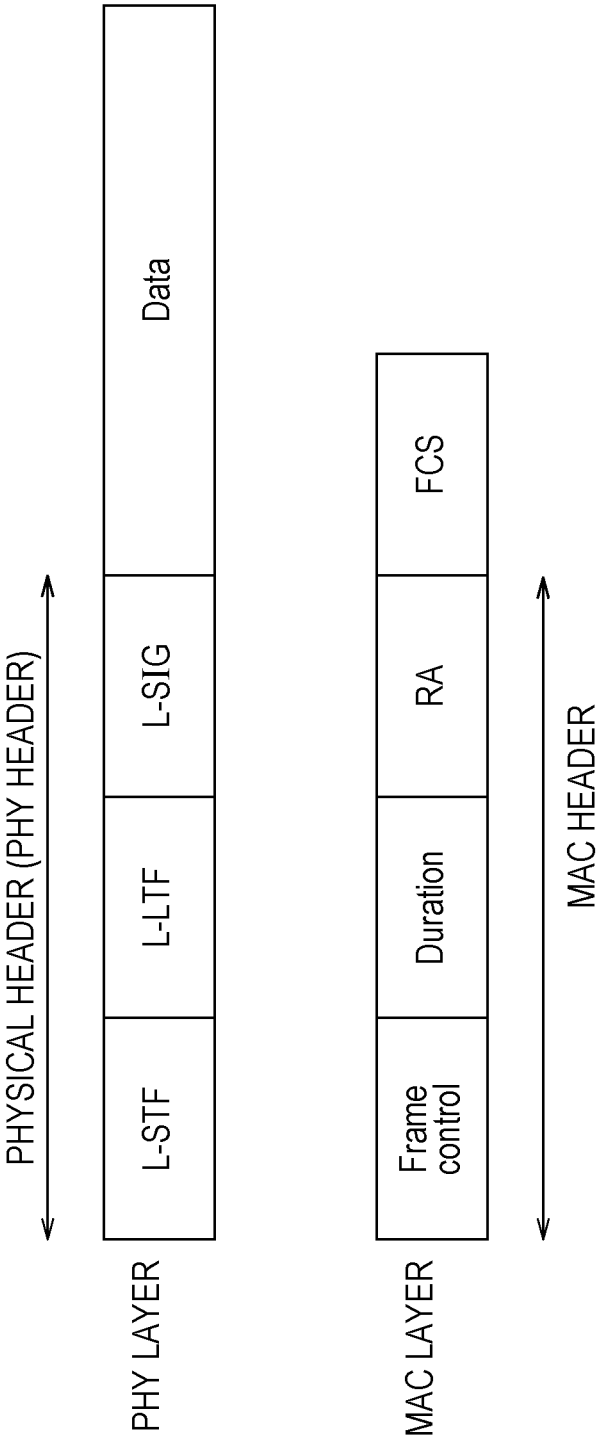

PHYSICAL HEADER (PHY HEADER)
L-STF
L-LTF
L-SIG
Data
PHY LAYER
Frame control
Duration
RA
FCS
MAC HEADER
MAC LAYER

FIG. 6

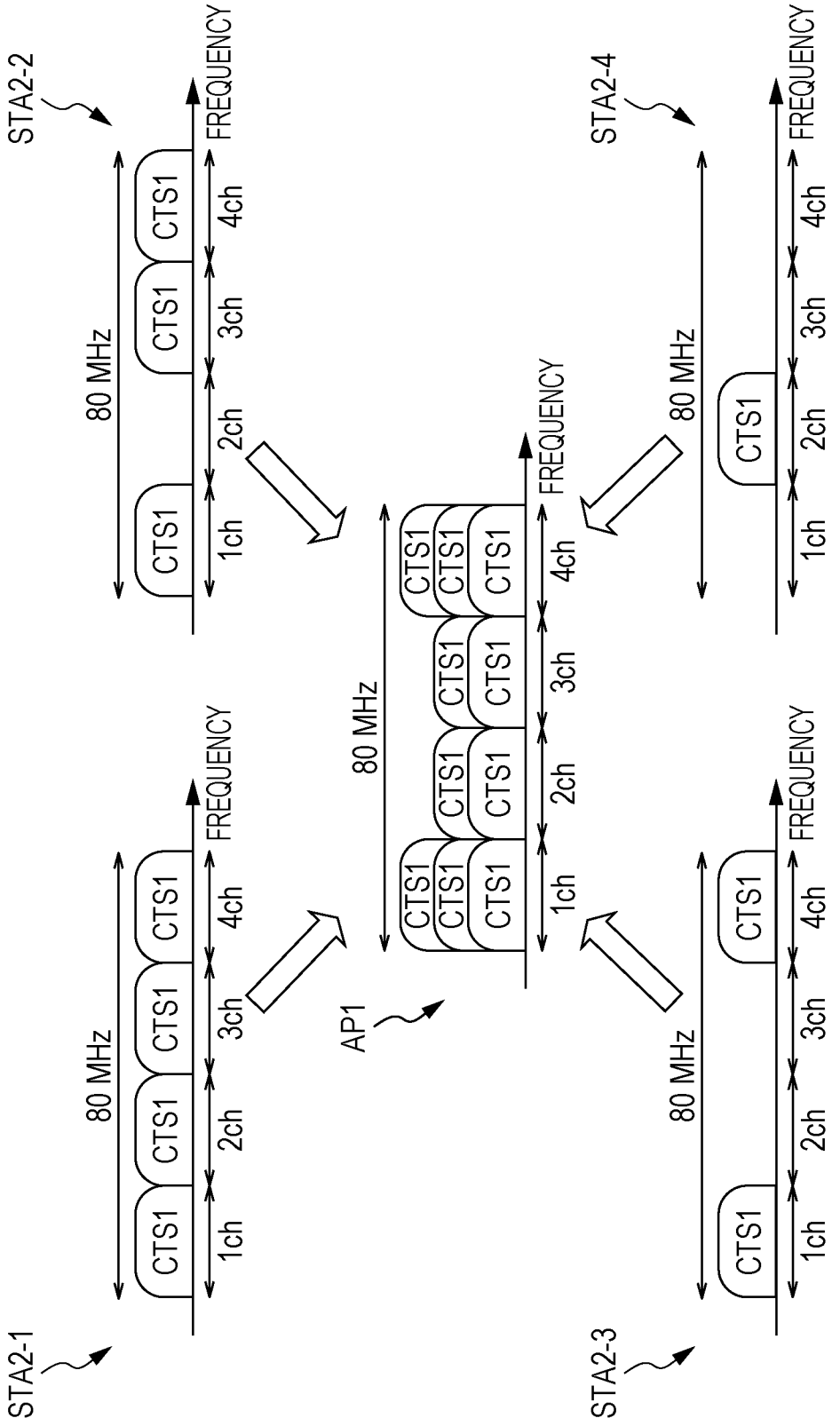

STA2-1
STA2-2
STA2-3
STA2-4
AP1
80 MHz
FREQUENCY
CTS1
1ch
2ch
3ch
4ch

FIG. 7

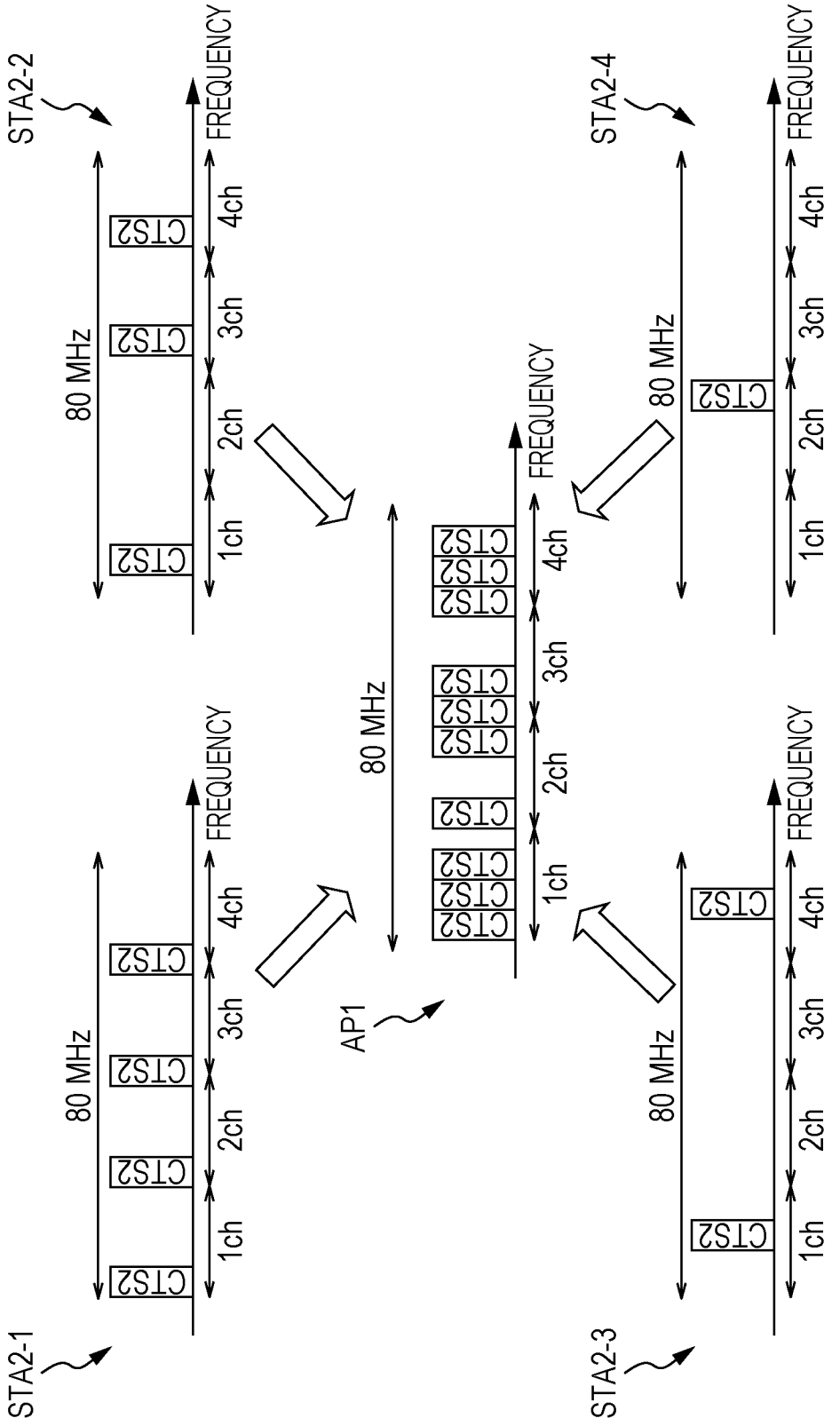

STA2-2
STA2-4
STA2-1
STA2-3
AP1
80 MHz
FREQUENCY
1ch
2ch
3ch
4ch
CTS2

FIG. 8

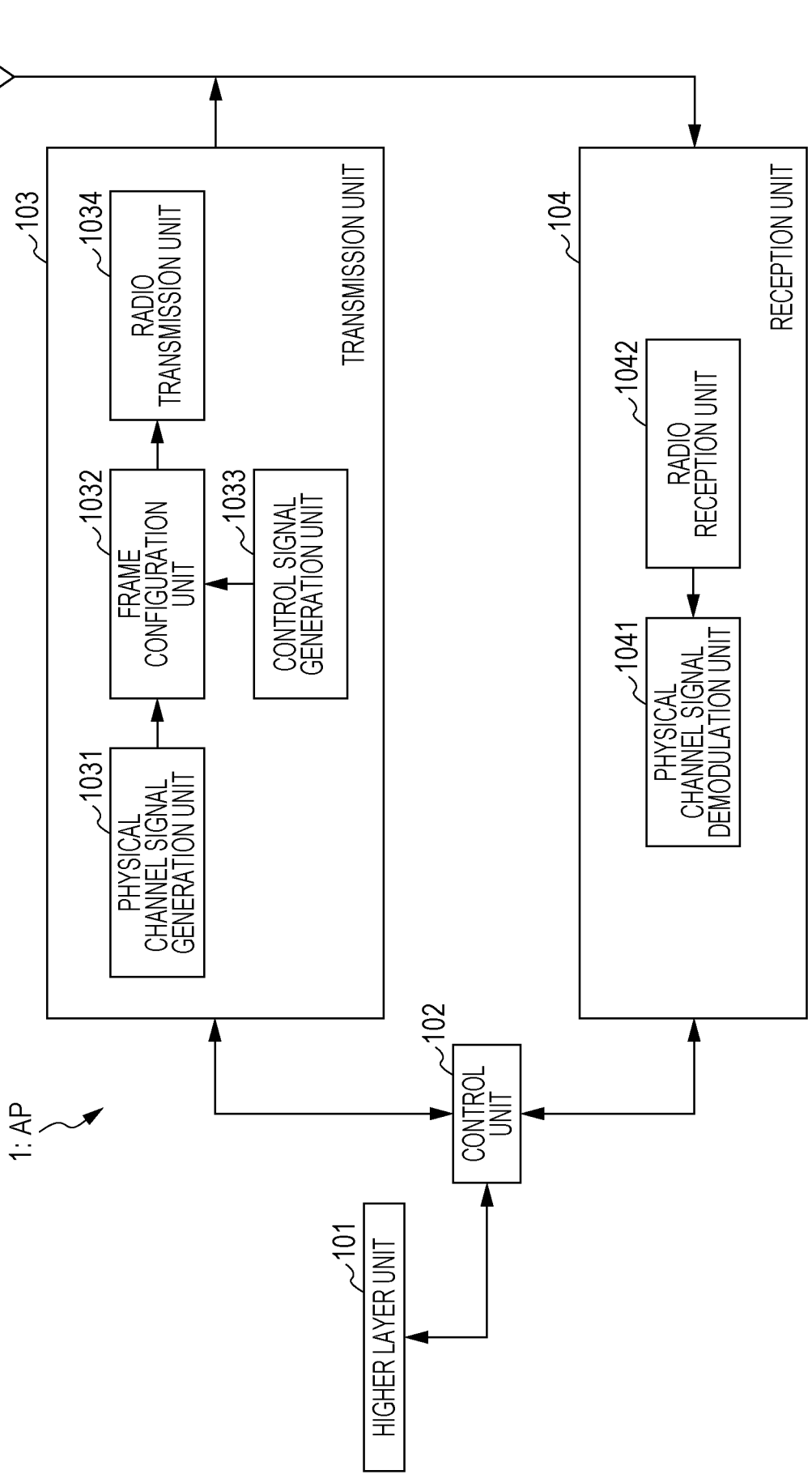

105
103
TRANSMISSION UNIT
1034
RADIO TRANSMISSION UNIT
1032
FRAME CONFIGURATION UNIT
1033
CONTROL SIGNAL GENERATION UNIT
1031
PHYSICAL CHANNEL SIGNAL GENERATION UNIT
104
RECEPTION UNIT
1042
RADIO RECEPTION UNIT
1041
PHYSICAL CHANNEL SIGNAL DEMODULATION UNIT
102
CONTROL UNIT
1: AP
101
HIGHER LAYER UNIT

FIG. 9

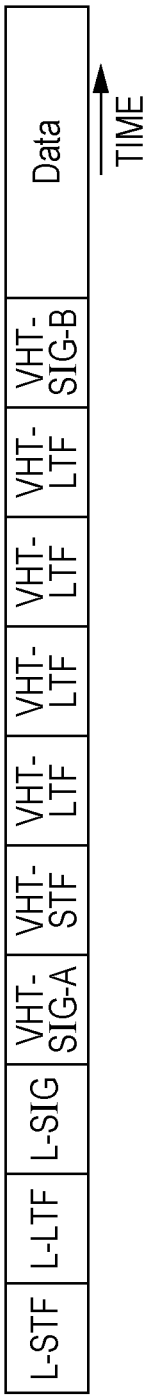

L-STF
L-LTF
L-SIG
VHT-SIG-A
VHT-STF
VHT-LTF
VHT-LTF
VHT-LTF
VHT-LTF
VHT-SIG-B
Data
TIME

FIG. 10

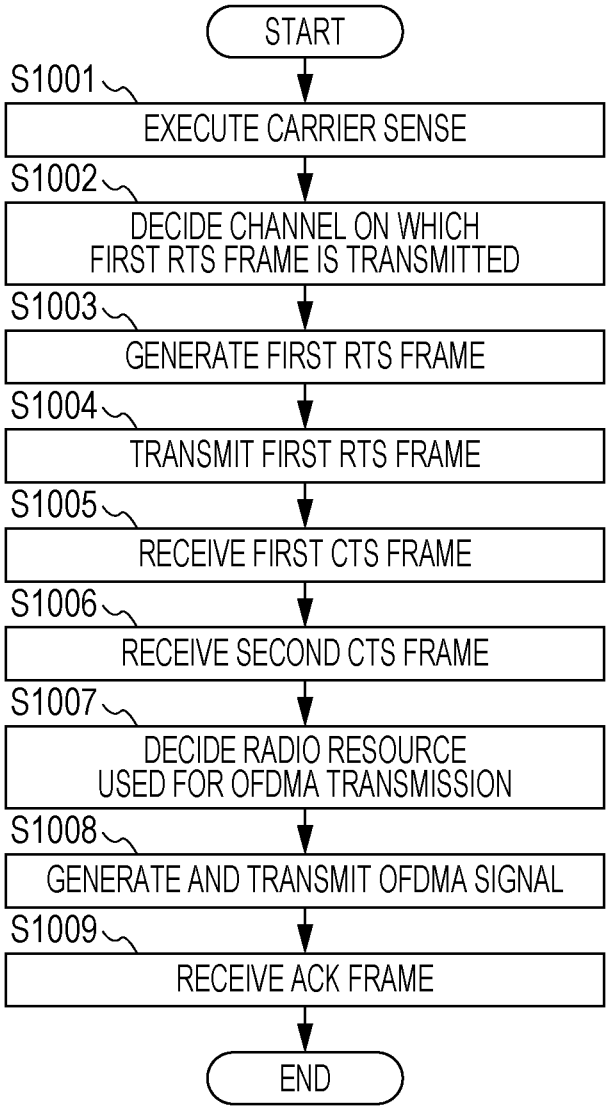

START
S1001
EXECUTE CARRIER SENSE
S1002
DECIDE CHANNEL ON WHICH FIRST RTS FRAME IS TRANSMITTED
S1003
GENERATE FIRST RTS FRAME
S1004
TRANSMIT FIRST RTS FRAME
S1005
RECEIVE FIRST CTS FRAME
S1006
RECEIVE SECOND CTS FRAME
S1007
DECIDE RADIO RESOURCE USED FOR OFDMA TRANSMISSION
S1008
GENERATE AND TRANSMIT OFDMA SIGNAL
S1009
RECEIVE ACK FRAME
END

FIG. 11

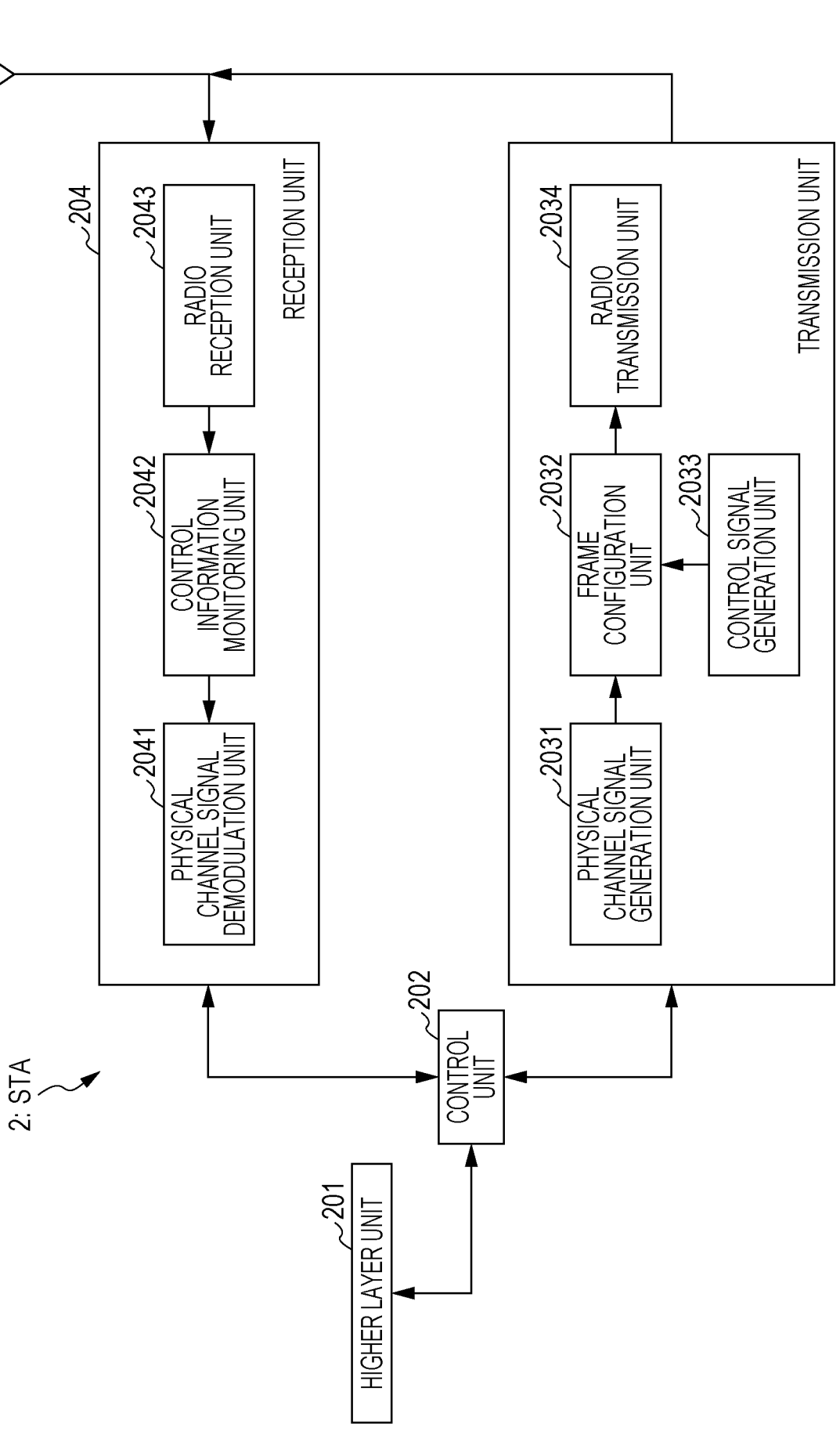
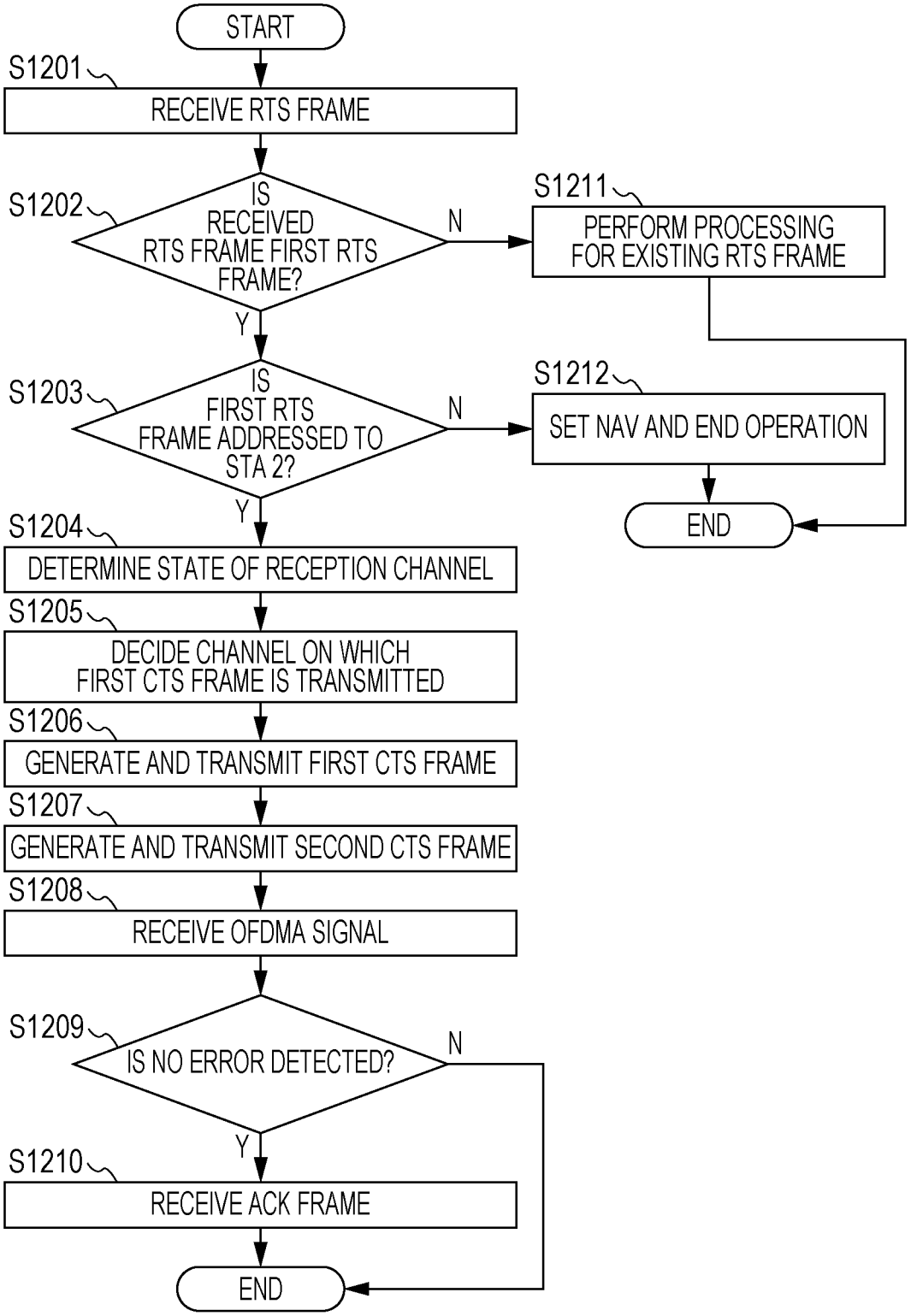

205
204
RECEPTION UNIT
2043
RADIO RECEPTION UNIT
2042
CONTROL INFORMATION MONITORING UNIT
2041
PHYSICAL CHANNEL SIGNAL DEMODULATION UNIT
TRANSMISSION UNIT
2034
RADIO TRANSMISSION UNIT
2032
FRAME CONFIGURATION UNIT
2033
CONTROL SIGNAL GENERATION UNIT
2031
PHYSICAL CHANNEL SIGNAL GENERATION UNIT
202
CONTROL UNIT
2: STA
201
HIGHER LAYER UNIT

FIG. 12


START
S1201
RECEIVE RTS FRAME
S1202
IS RECEIVED RTS FRAME FIRST RTS FRAME?
N
S1211
PERFORM PROCESSING FOR EXISTING RTS FRAME
Y
S1203
IS FIRST RTS FRAME ADDRESSED TO STA 2?
N
S1212
SET NAV AND END OPERATION
Y
END
S1204
DETERMINE STATE OF RECEPTION CHANNEL
S1205
DECIDE CHANNEL ON WHICH FIRST CTS FRAME IS TRANSMITTED
S1206
GENERATE AND TRANSMIT FIRST CTS FRAME
S1207
GENERATE AND TRANSMIT SECOND CTS FRAME
S1208
RECEIVE OFDMA SIGNAL
S1209
IS NO ERROR DETECTED?
N
Y
S1210
RECEIVE ACK FRAME
END