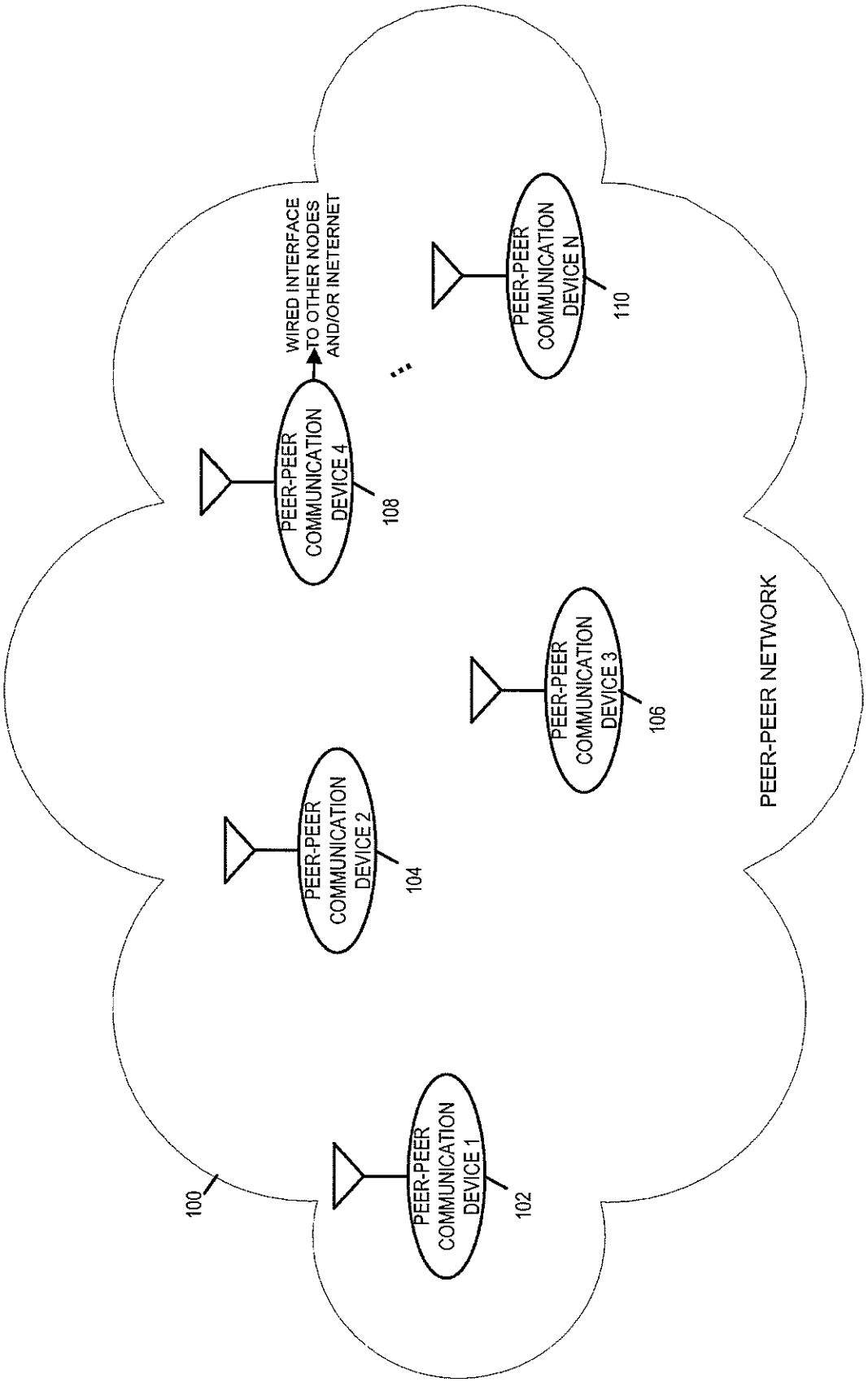

100
PEER-PEER NETWORK
PEER-PEER COMMUNICATION DEVICE 1
102
PEER-PEER COMMUNICATION DEVICE 2
104
PEER-PEER COMMUNICATION DEVICE 3
106
PEER-PEER COMMUNICATION DEVICE 4
108
PEER-PEER COMMUNICATION DEVICE N
110
WIRED INTERFACE TO OTHER NODES AND/OR INETERNET

FIGURE 1

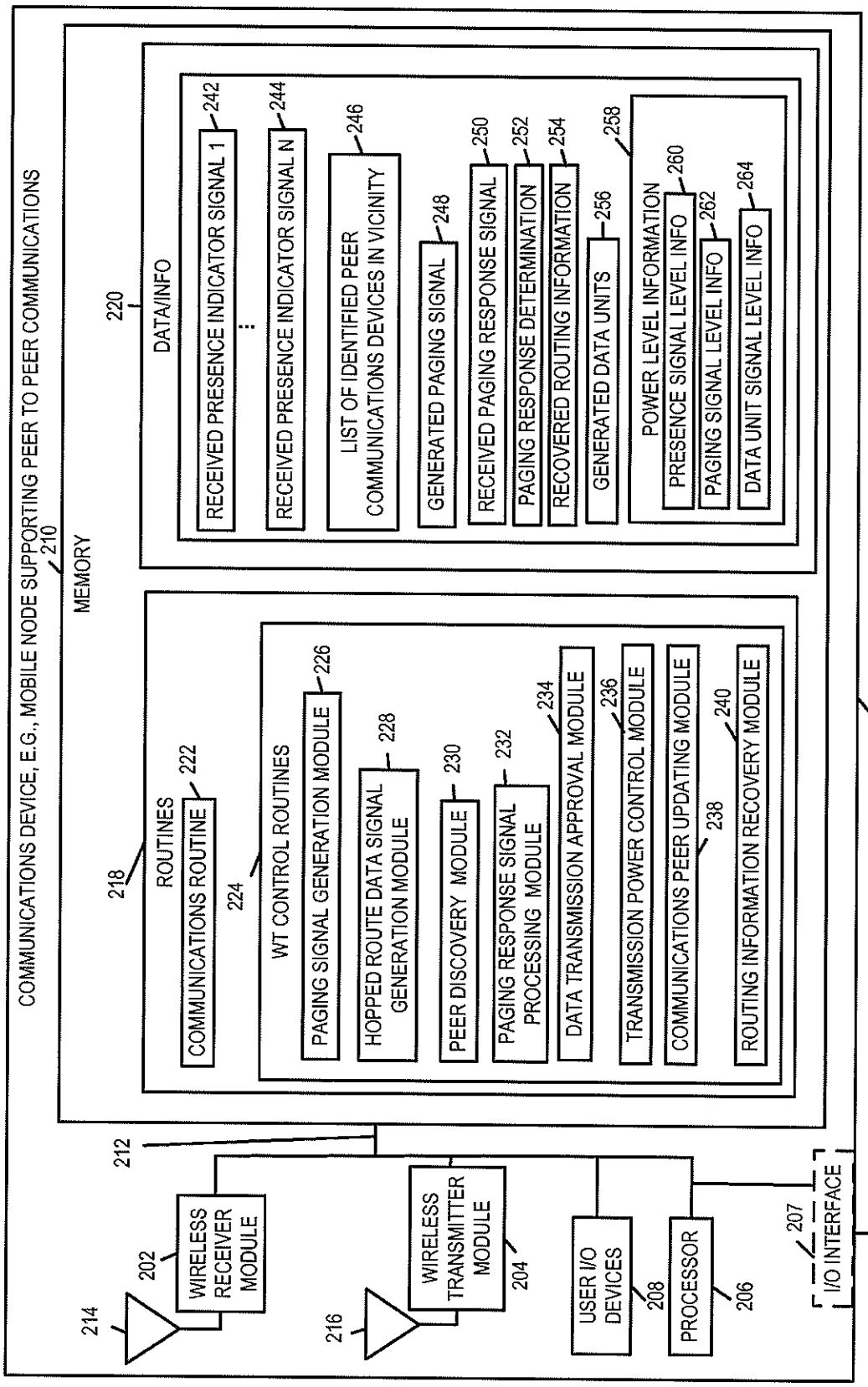

COMMUNICATIONS DEVICE, E.G., MOBILE NODE SUPPORTING PEER TO PEER COMMUNICATIONS
200
MEMORY
210
ROUTINES
218
COMMUNICATIONS ROUTINE
222
WT CONTROL ROUTINES
224
PAGING SIGNAL GENERATION MODULE
226
HOPPED ROUTE DATA SIGNAL GENERATION MODULE
228
PEER DISCOVERY MODULE
230
PAGING RESPONSE SIGNAL PROCESSING MODULE
232
DATA TRANSMISSION APPROVAL MODULE
234
TRANSMISSION POWER CONTROL MODULE
236
COMMUNICATIONS PEER UPDATING MODULE
238
ROUTING INFORMATION RECOVERY MODULE
240
DATA/INFO
220
RECEIVED PRESENCE INDICATOR SIGNAL 1
242
RECEIVED PRESENCE INDICATOR SIGNAL N
244
LIST OF IDENTIFIED PEER COMMUNICATIONS DEVICES IN VICINITY
246
GENERATED PAGING SIGNAL
248
RECEIVED PAGING RESPONSE SIGNAL
250
PAGING RESPONSE DETERMINATION
252
RECOVERED ROUTING INFORMATION
254
GENERATED DATA UNITS
256
POWER LEVEL INFORMATION
258
PRESENCE SIGNAL LEVEL INFO
260
PAGING SIGNAL LEVEL INFO
262
DATA UNIT SIGNAL LEVEL INFO
264
212
WIRELESS RECEIVER MODULE
202
214
WIRELESS TRANSMITTER MODULE
204
216
USER I/O DEVICES
208
PROCESSOR
206
I/O INTERFACE
207

FIGURE 2

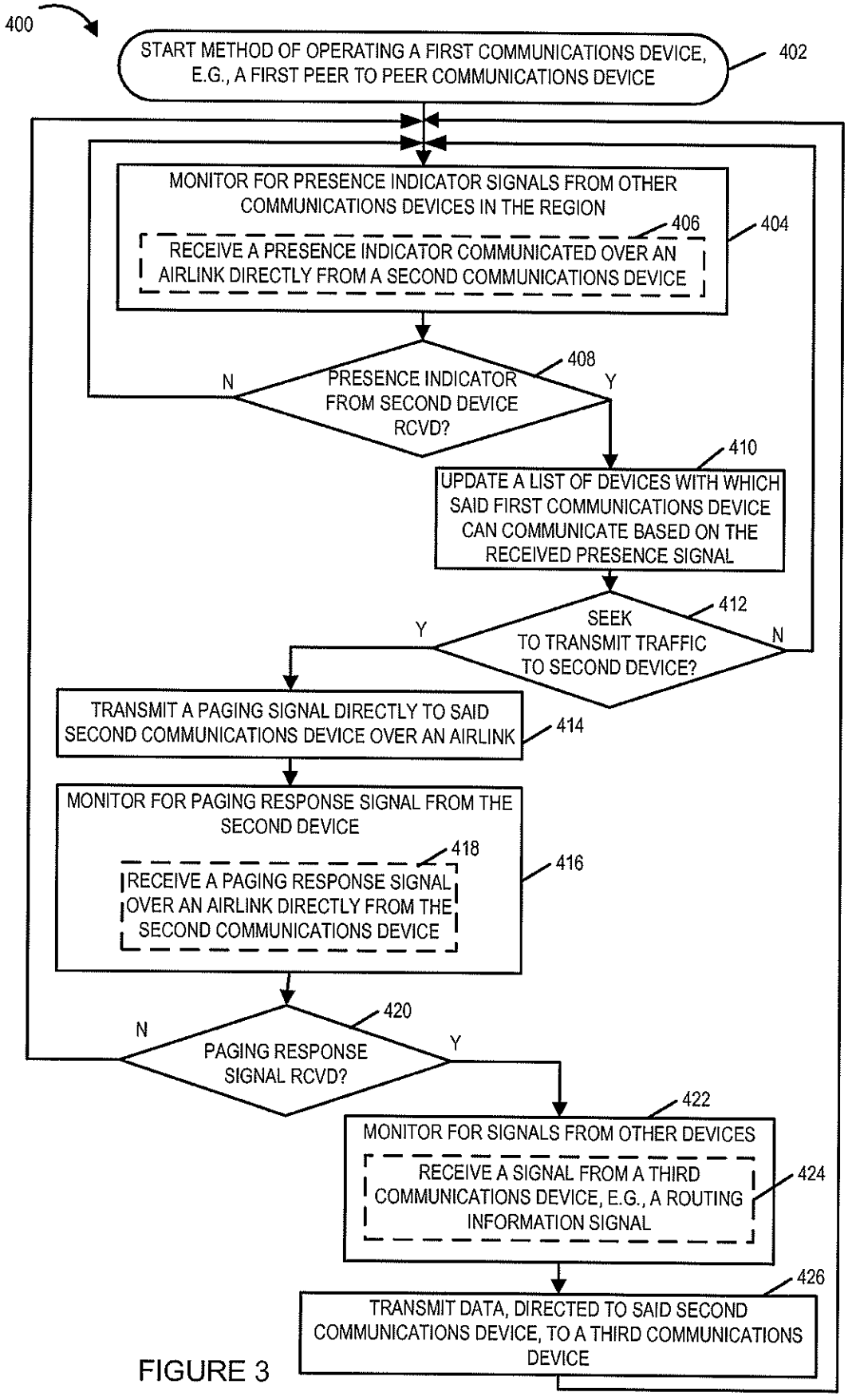

400
START METHOD OF OPERATING A FIRST COMMUNICATIONS DEVICE, E.G., A FIRST PEER TO PEER COMMUNICATIONS DEVICE
402
MONITOR FOR PRESENCE INDICATOR SIGNALS FROM OTHER COMMUNICATIONS DEVICES IN THE REGION
406
RECEIVE A PRESENCE INDICATOR COMMUNICATED OVER AN AIRLINK DIRECTLY FROM A SECOND COMMUNICATIONS DEVICE
404
408
N
PRESENCE INDICATOR FROM SECOND DEVICE RCVD?
Y
410
UPDATE A LIST OF DEVICES WITH WHICH SAID FIRST COMMUNICATIONS DEVICE CAN COMMUNICATE BASED ON THE RECEIVED PRESENCE SIGNAL
412
Y
SEEK TO TRANSMIT TRAFFIC TO SECOND DEVICE?
N
TRANSMIT A PAGING SIGNAL DIRECTLY TO SAID SECOND COMMUNICATIONS DEVICE OVER AN AIRLINK
414
MONITOR FOR PAGING RESPONSE SIGNAL FROM THE SECOND DEVICE
418
RECEIVE A PAGING RESPONSE SIGNAL OVER AN AIRLINK DIRECTLY FROM THE SECOND COMMUNICATIONS DEVICE
416
420
N
PAGING RESPONSE SIGNAL RCVD?
Y
422
MONITOR FOR SIGNALS FROM OTHER DEVICES
RECEIVE A SIGNAL FROM A THIRD COMMUNICATIONS DEVICE, E.G., A ROUTING INFORMATION SIGNAL
424
426
TRANSMIT DATA, DIRECTED TO SAID SECOND COMMUNICATIONS DEVICE, TO A THIRD COMMUNICATIONS DEVICE

FIGURE 3

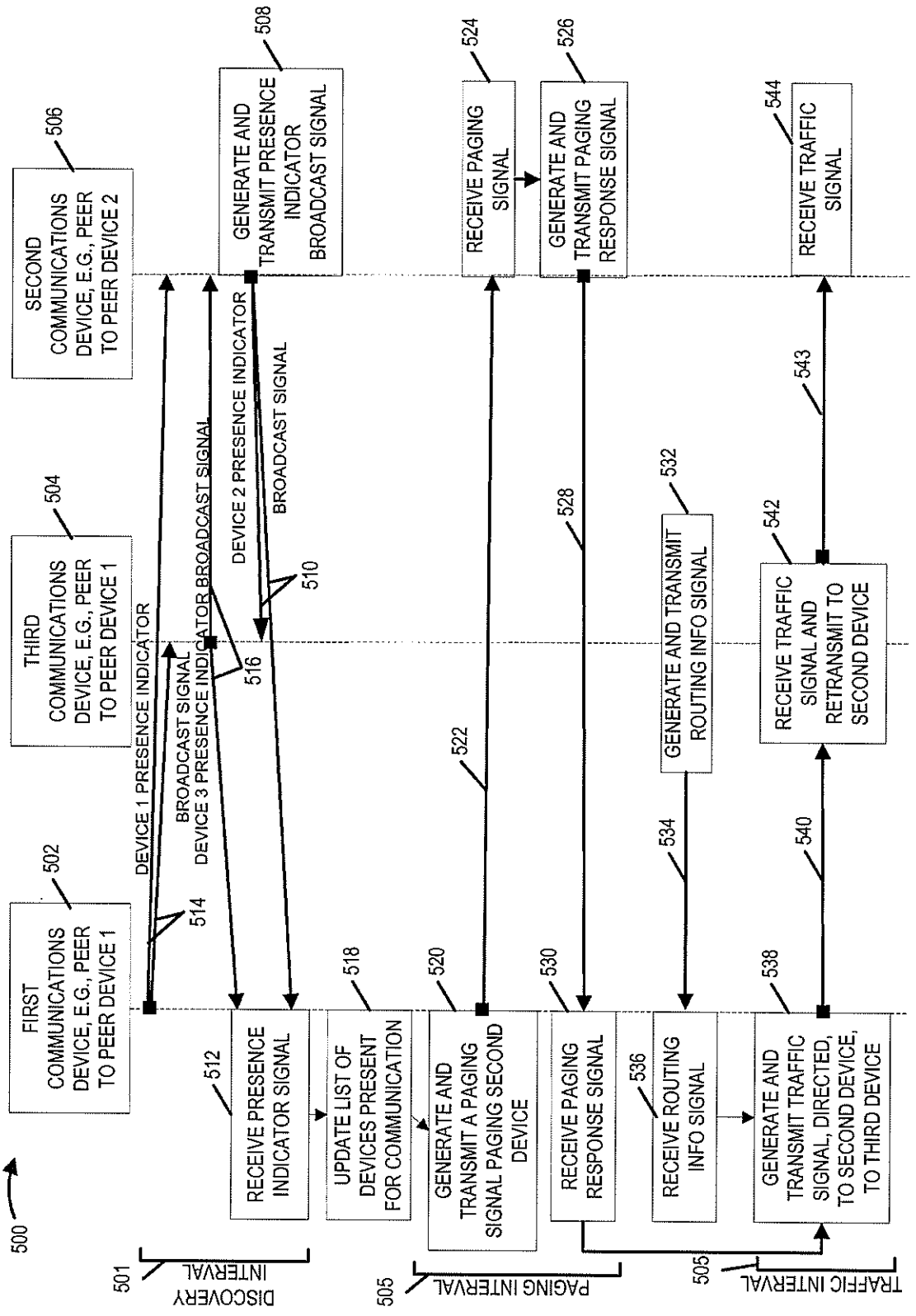

500
FIRST COMMUNICATIONS DEVICE, E.G., PEER TO PEER DEVICE 1
502
THIRD COMMUNICATIONS DEVICE, E.G., PEER TO PEER DEVICE 1
504
SECOND COMMUNICATIONS DEVICE, E.G., PEER TO PEER DEVICE 2
506
DEVICE 1 PRESENCE INDICATOR
514
BROADCAST SIGNAL
DEVICE 3 PRESENCE INDICATOR BROADCAST SIGNAL
516
DEVICE 2 PRESENCE INDICATOR
BROADCAST SIGNAL
510
GENERATE AND TRANSMIT PRESENCE INDICATOR BROADCAST SIGNAL
508
RECEIVE PRESENCE INDICATOR SIGNAL
512
UPDATE LIST OF DEVICES PRESENT FOR COMMUNICATION
518
GENERATE AND TRANSMIT A PAGING SIGNAL PAGING SECOND DEVICE
520
522
RECEIVE PAGING SIGNAL
524
GENERATE AND TRANSMIT PAGING RESPONSE SIGNAL
526
RECEIVE PAGING RESPONSE SIGNAL
530
528
GENERATE AND TRANSMIT ROUTING INFO SIGNAL
532
RECEIVE ROUTING INFO SIGNAL
534
GENERATE AND TRANSMIT TRAFFIC SIGNAL, DIRECTED, TO SECOND DEVICE, TO THIRD DEVICE
538
540
RECEIVE TRAFFIC SIGNAL AND RETRANSMIT TO SECOND DEVICE
542
543
RECEIVE TRAFFIC SIGNAL
544
501
DISCOVERY INTERVAL
505
PAGING INTERVAL
505
TRAFFIC INTERVAL

FIGURE 4