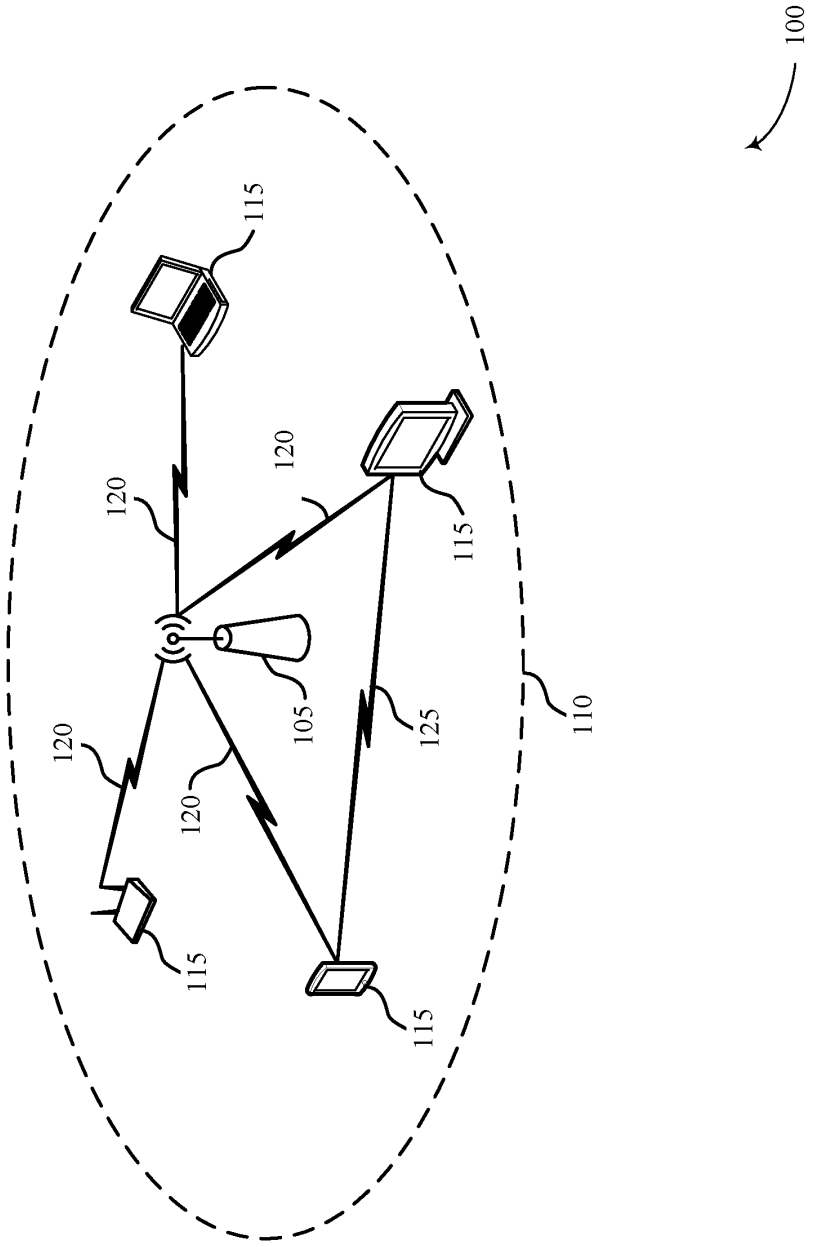

FIG. 1

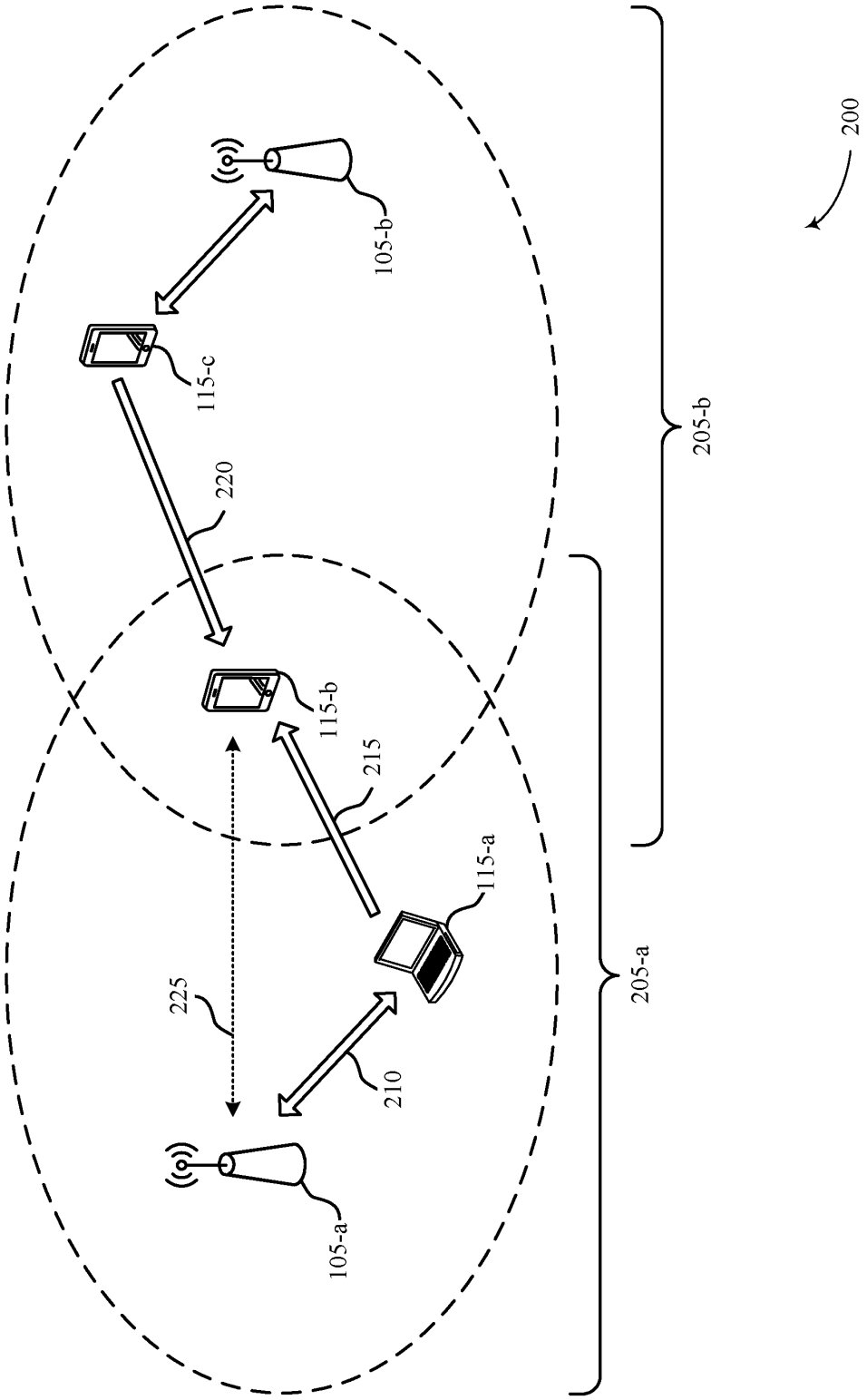

FIG. 2

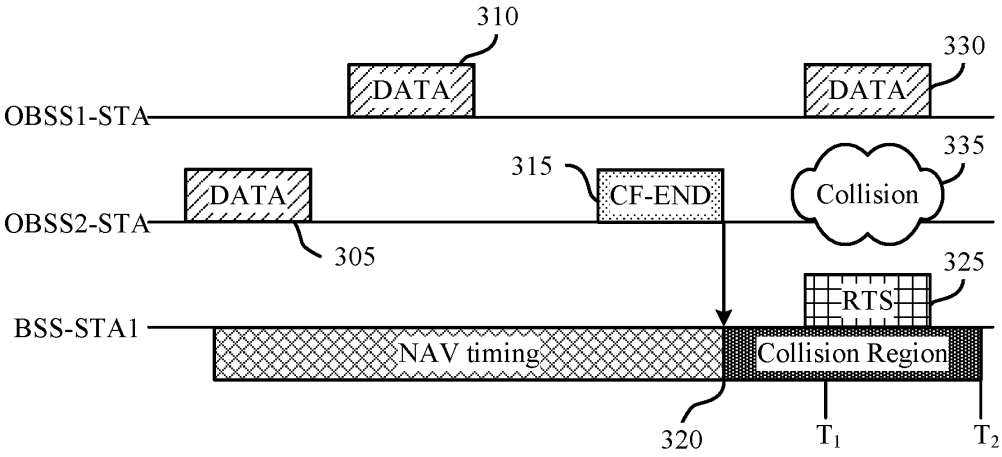
310
330
DATA
DATA
OBSS1-STA
315
335
DATA
CF-END
Collision
OBSS2-STA
305
325
RTS
BSS-STA1
NAV timing
Collision Region
320
T1
T2
300

FIG. 3A

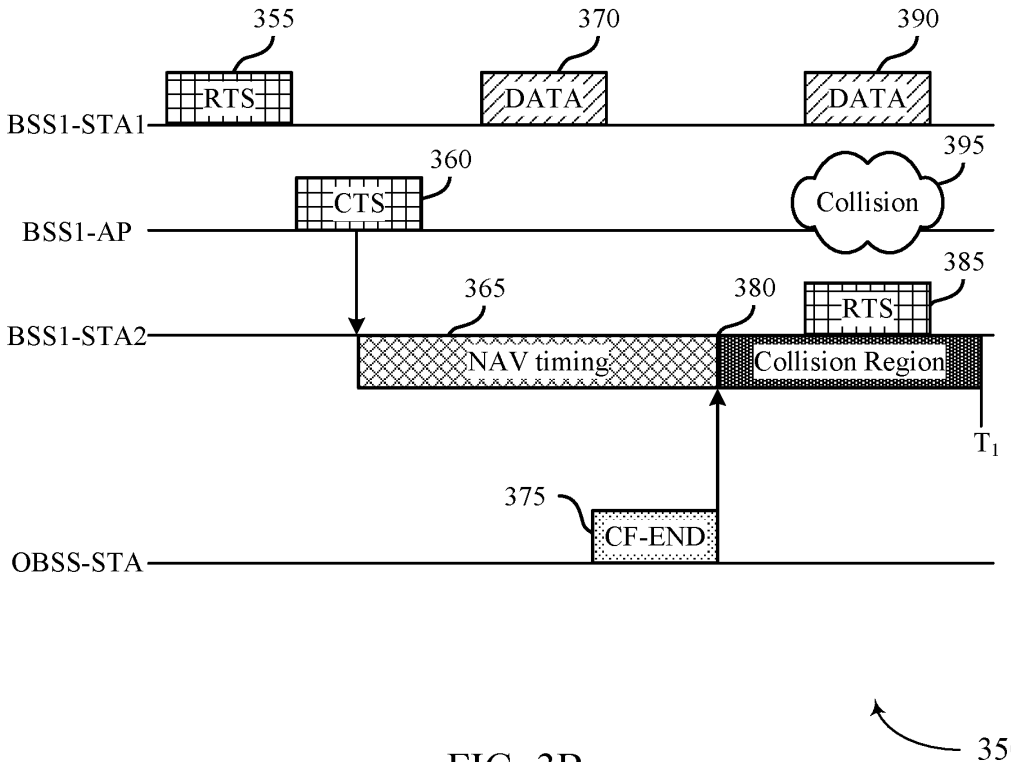
355
370
390
RTS
DATA
DATA
BSS1-STA1
360
395
CTS
Collision
BSS1-AP
365
380
385
RTS
BSS1-STA2
NAV timing
Collision Region
T1
375
CF-END
OBSS-STA
350

FIG. 3B

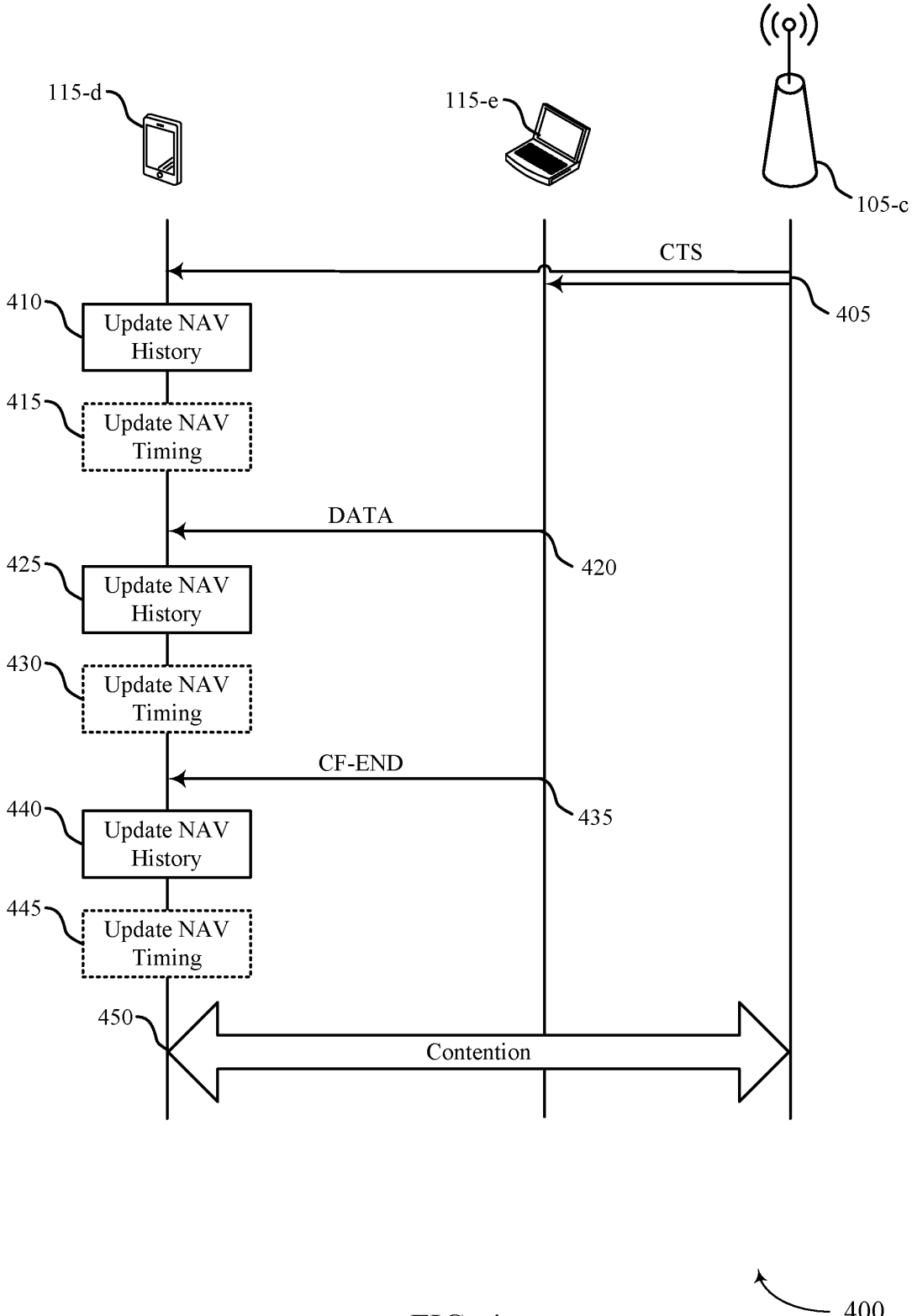
115-d
115-e
105-c
CTS
405
410
Update NAV History
415
Update NAV Timing
DATA
420
425
Update NAV History
430
Update NAV Timing
CF-END
435
440
Update NAV History
445
Update NAV Timing
450
Contention
400

FIG. 4

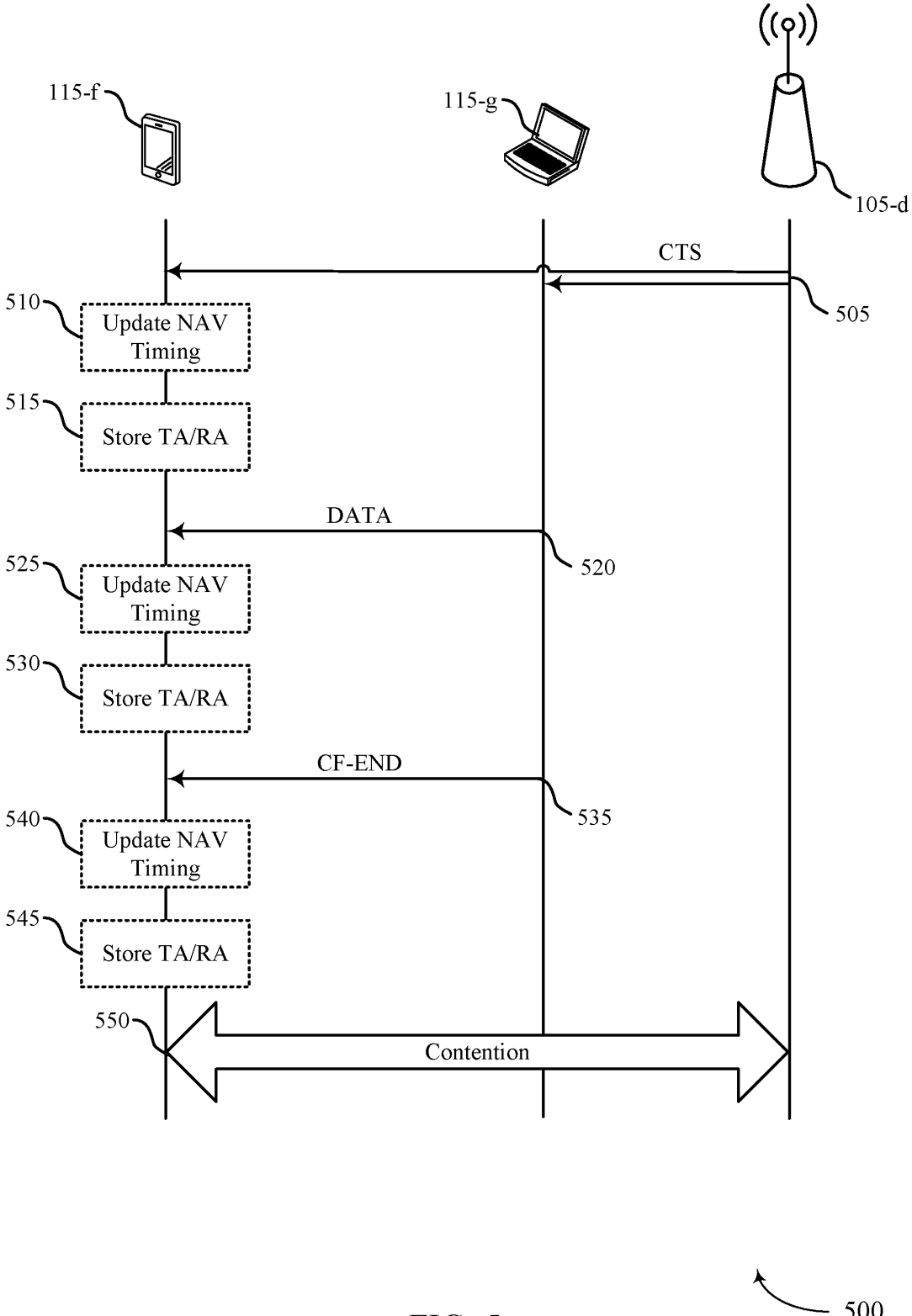
115-f
115-g
105-d
CTS
505
510
Update NAV Timing
515
Store TA/RA
DATA
520
525
Update NAV Timing
530
Store TA/RA
CF-END
535
540
Update NAV Timing
545
Store TA/RA
550
Contention
500

FIG. 5

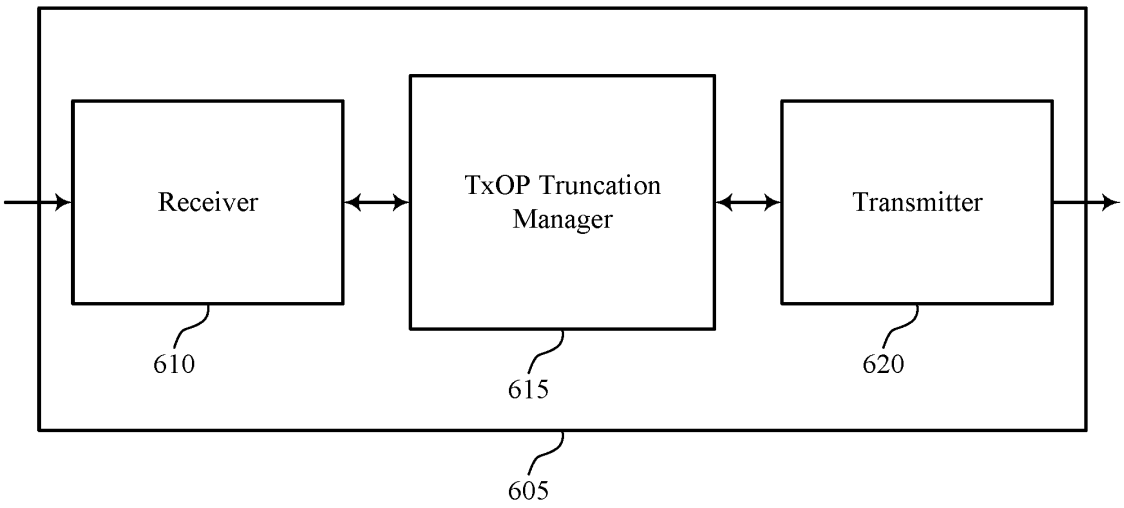
Receiver
TxOP Truncation Manager
Transmitter
610
615
620
605
600

FIG. 6

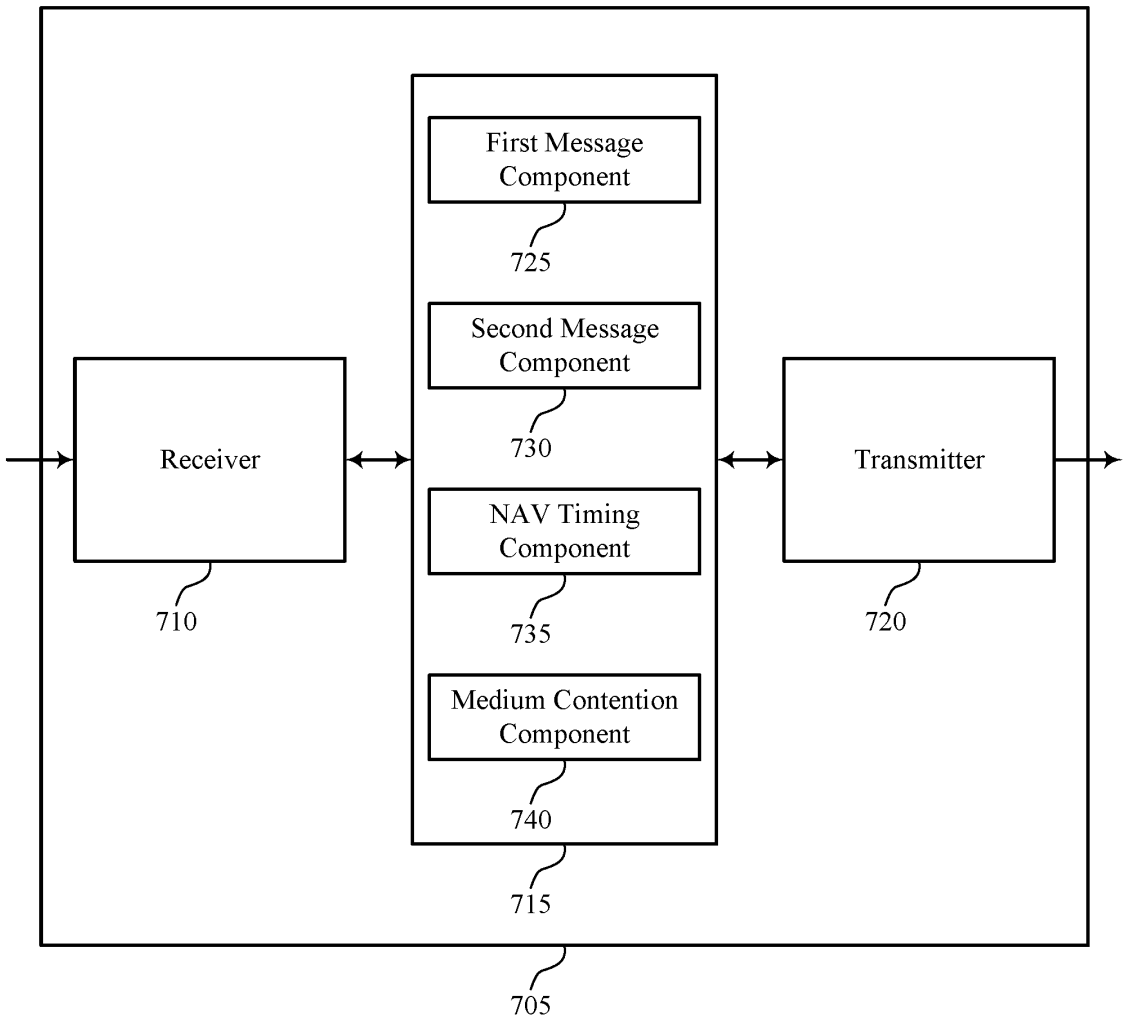
First Message Component
725
Second Message Component
730
NAV Timing Component
735
Medium Contention Component
740
715
Receiver
710
Transmitter
720
705
700

FIG. 7

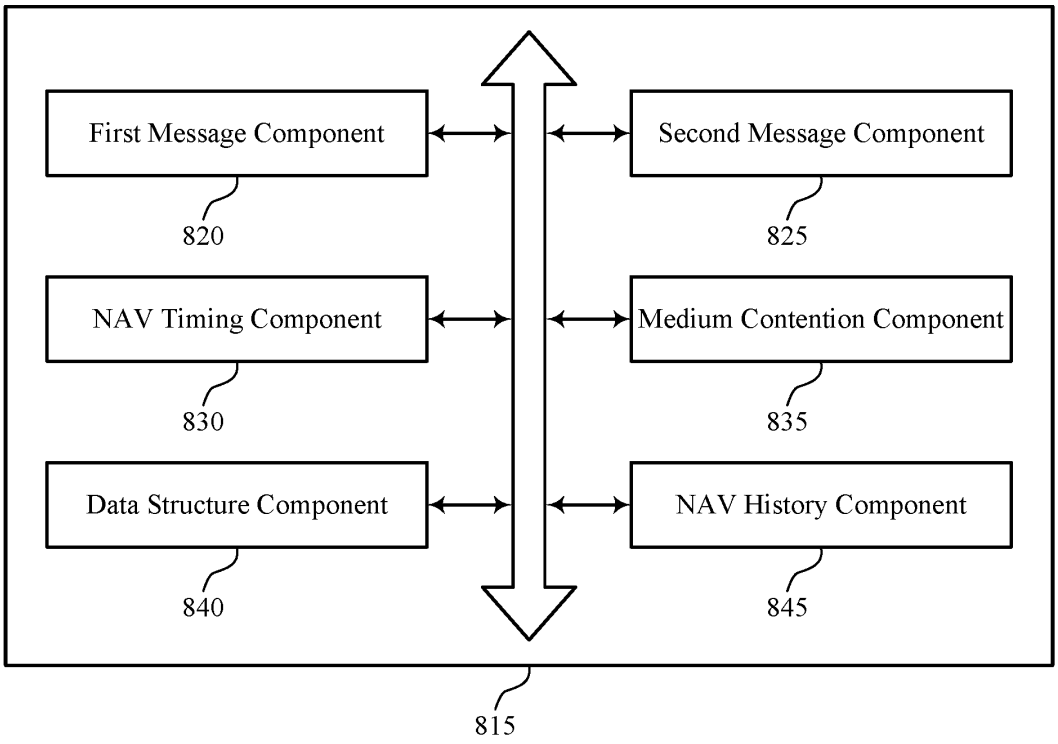
First Message Component
820
Second Message Component
825
NAV Timing Component
830
Medium Contention Component
835
Data Structure Component
840
NAV History Component
845
815
800

FIG. 8

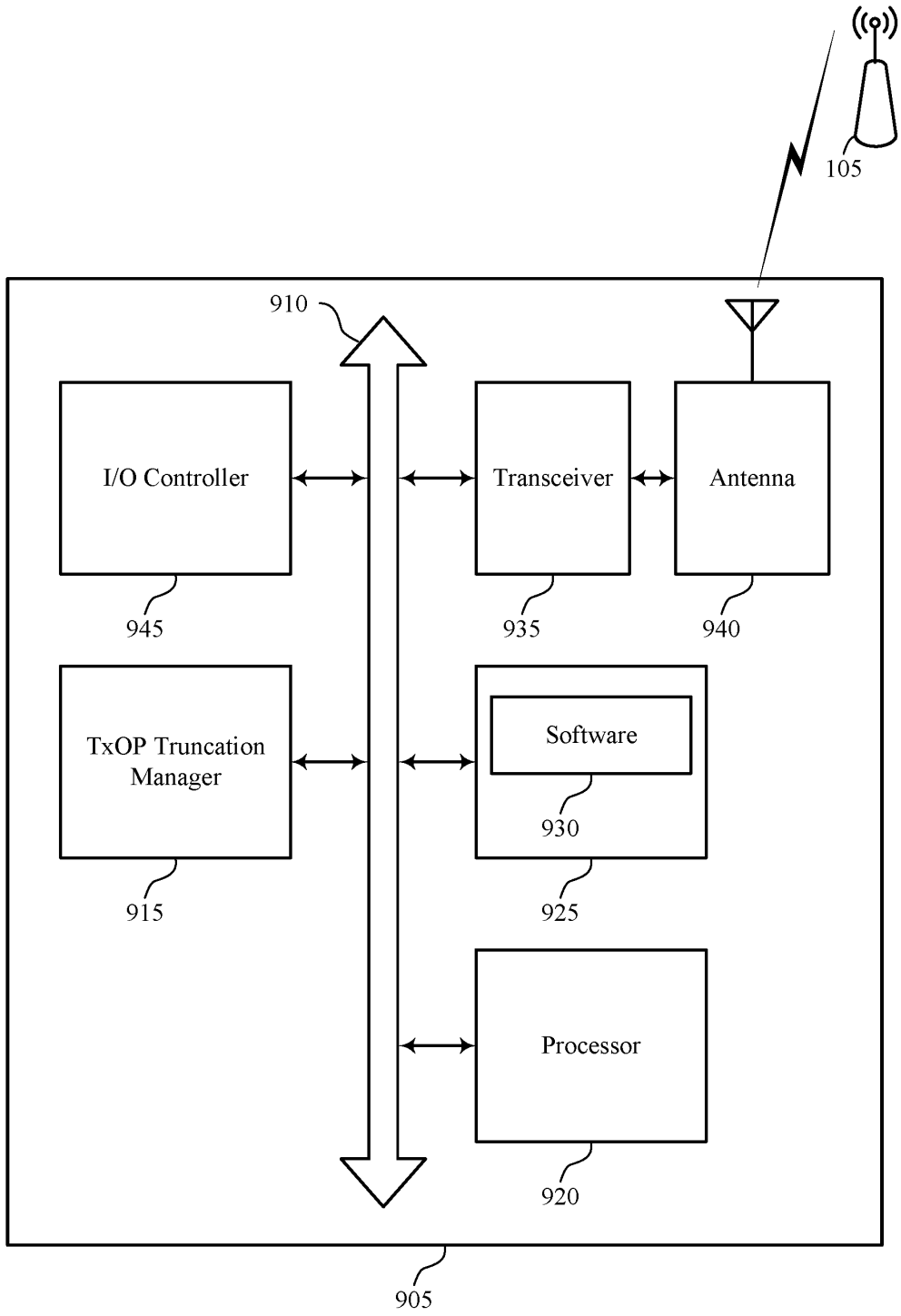
105
910
I/O Controller
Transceiver
Antenna
945
935
940
TxOP Truncation Manager
Software
930
915
925
Processor
920
905
900

FIG. 9

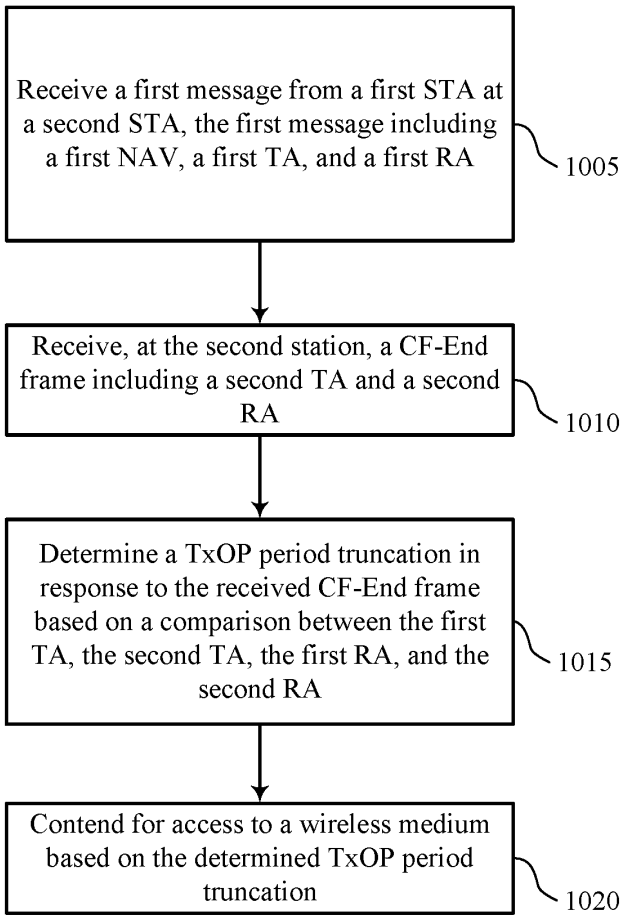
Receive a first message from a first STA at a second STA, the first message including a first NAV, a first TA, and a first RA
1005
Receive, at the second station, a CF-End frame including a second TA and a second RA
1010
Determine a TxOP period truncation in response to the received CF-End frame based on a comparison between the first TA, the second TA, the first RA, and the second RA
1015
Contend for access to a wireless medium based on the determined TxOP period truncation
1020
1000

FIG. 10

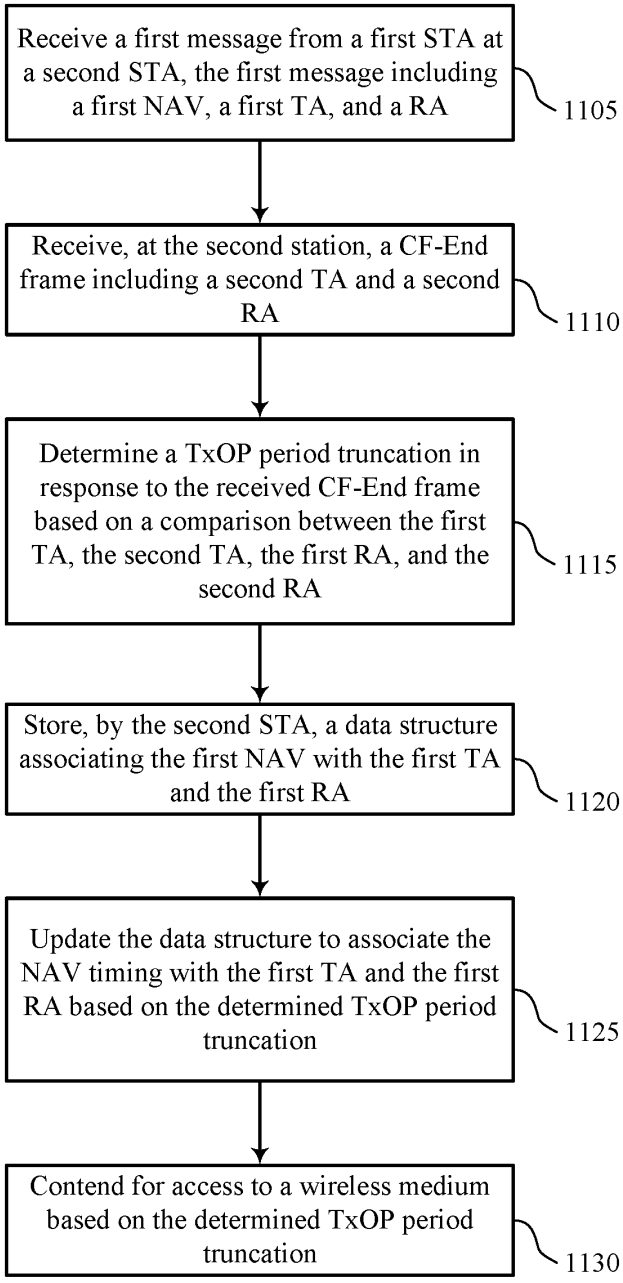
Receive a first message from a first STA at a second STA, the first message including a first NAV, a first TA, and a RA
1105
Receive, at the second station, a CF-End frame including a second TA and a second RA
1110
Determine a TxOP period truncation in response to the received CF-End frame based on a comparison between the first TA, the second TA, the first RA, and the second RA
1115
Store, by the second STA, a data structure associating the first NAV with the first TA and the first RA
1120
Update the data structure to associate the NAV timing with the first TA and the first RA based on the determined TxOP period truncation
1125
Contend for access to a wireless medium based on the determined TxOP period truncation
1130
1100

FIG. 11

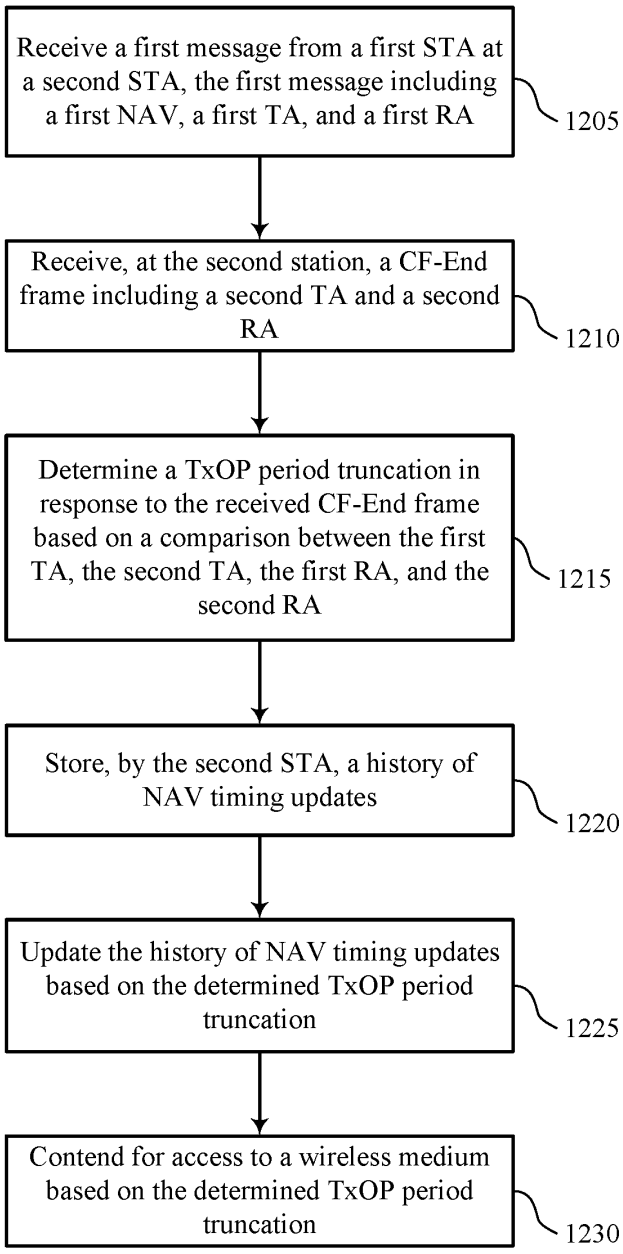
Receive a first message from a first STA at a second STA, the first message including a first NAV, a first TA, and a first RA
1205
Receive, at the second station, a CF-End frame including a second TA and a second RA
1210
Determine a TxOP period truncation in response to the received CF-End frame based on a comparison between the first TA, the second TA, the first RA, and the second RA
1215
Store, by the second STA, a history of NAV timing updates
1220
Update the history of NAV timing updates based on the determined TxOP period truncation
1225
Contend for access to a wireless medium based on the determined TxOP period truncation
1230
1200

FIG. 12