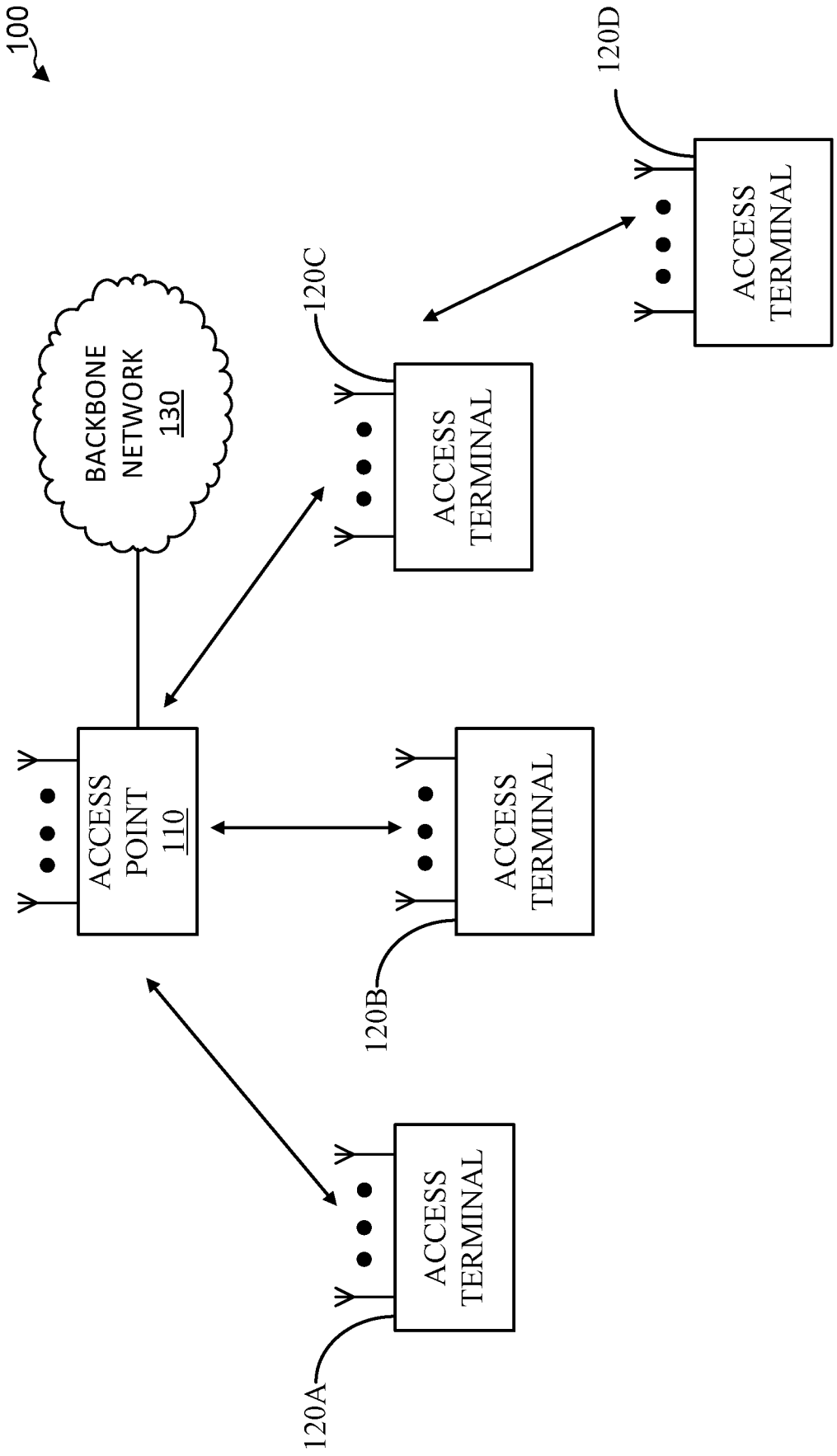

100
BACKBONE NETWORK 130
ACCESS POINT 110
ACCESS TERMINAL
120A
ACCESS TERMINAL
120B
ACCESS TERMINAL
120C
ACCESS TERMINAL
120D

FIG. 1

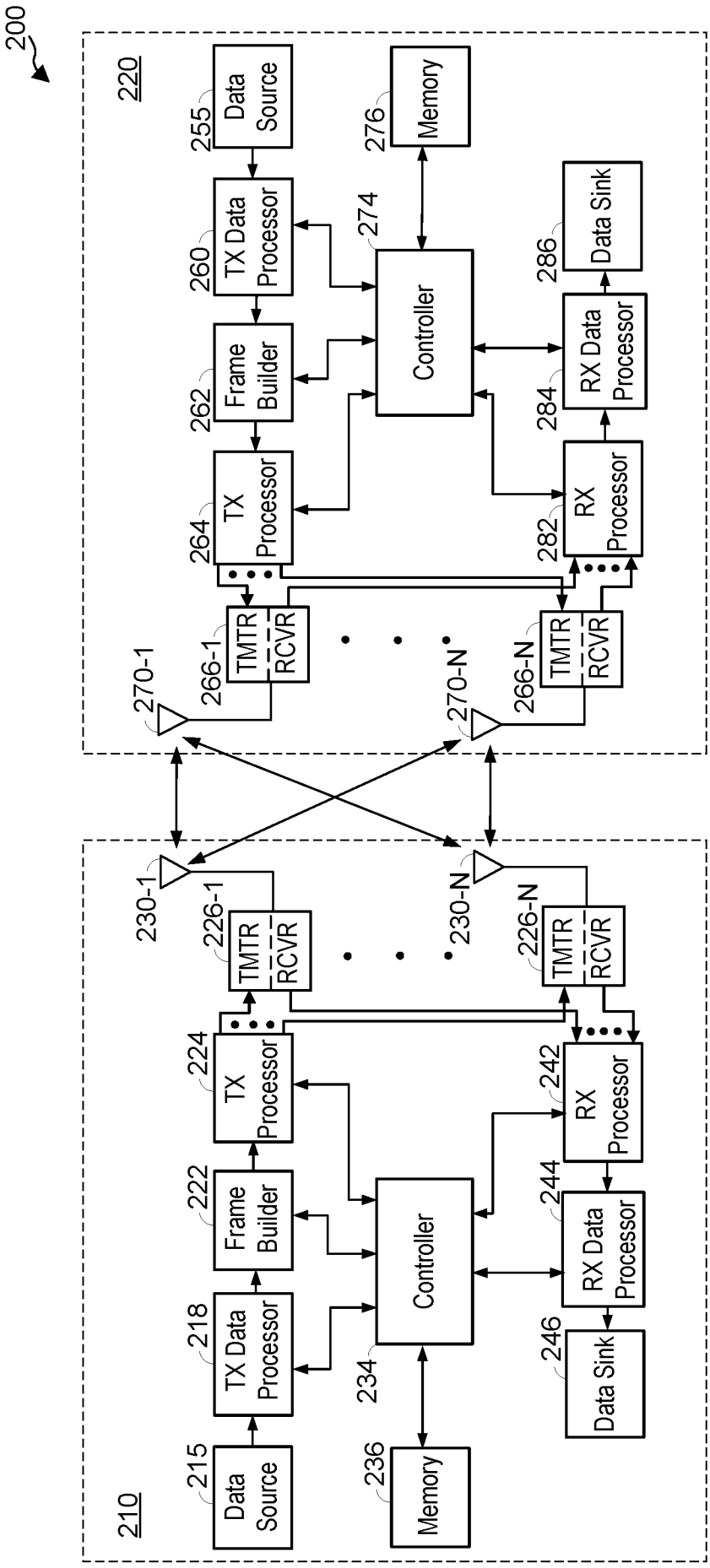

200
220
255
Data Source
276
Memory
260
TX Data Processor
274
Controller
286
Data Sink
262
Frame Builder
284
RX Data Processor
264
TX Processor
282
RX Processor
266-1
TMTR
RCVR
266-N
TMTR
RCVR
270-1
270-N
230-1
230-N
226-1
TMTR
RCVR
226-N
TMTR
RCVR
224
TX Processor
242
RX Processor
222
Frame Builder
244
RX Data Processor
218
TX Data Processor
234
Controller
246
Data Sink
215
Data Source
236
Memory
210

FIG. 2

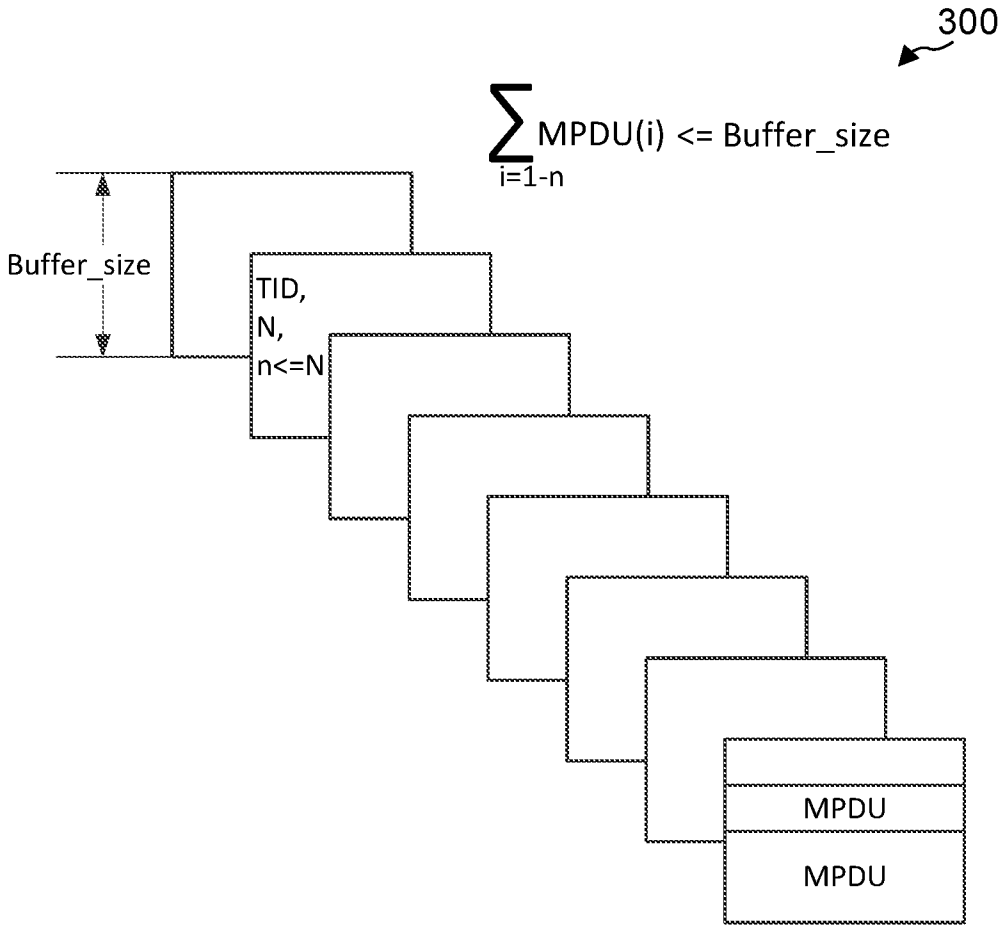

300
$\sum_{i=1-n}$ MPDU(i) <= Buffer_size
Buffer_size
TID,
N,
n<=N
MPDU
MPDU
Buffered Memory

FIG. 3A

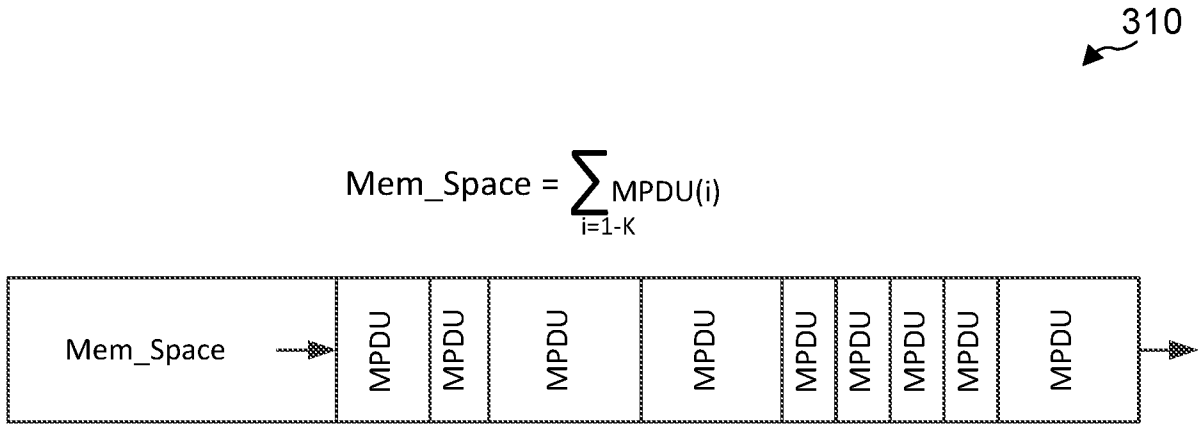

310
Mem_Space = $\sum_{i=1-K}$ MPDU(i)
Mem_Space
MPDU
MPDU
MPDU
MPDU
MPDU
MPDU
MPDU
MPDU
MPDU
FIFO stile – byte/word/dword aligned

FIG. 3B

400

	Element ID	Length	Element ID Extension	Type of memory (FIFO/ Buffered/ Both)	Mem_Unit for Mem type = FIFO (dword)	Mem_Unit for Mem type = buffered (dword)	Buff_size for Mem type = buffered (dword)	Limit of MPDU's per buffer for Mem type = buffered (dword)
Octets	1	1	1	1	2	2	1	1

FIG. 4

500

Octets:	2	variable	1
	BlockAck Starting Sequence Control	BlockAck Bitmap	RBUFCAP

BA Information Field

FIG. 5A

510

	B0	B1 B4	B5 B9	B10	B11	B12 B15
	BA Ack Policy	BA Type	Reserved	**FIFO/Buffered**	Management ACK	TID INFO
Bits:	1	4	5	1	1	4

BA Control Field

FIG. 5B

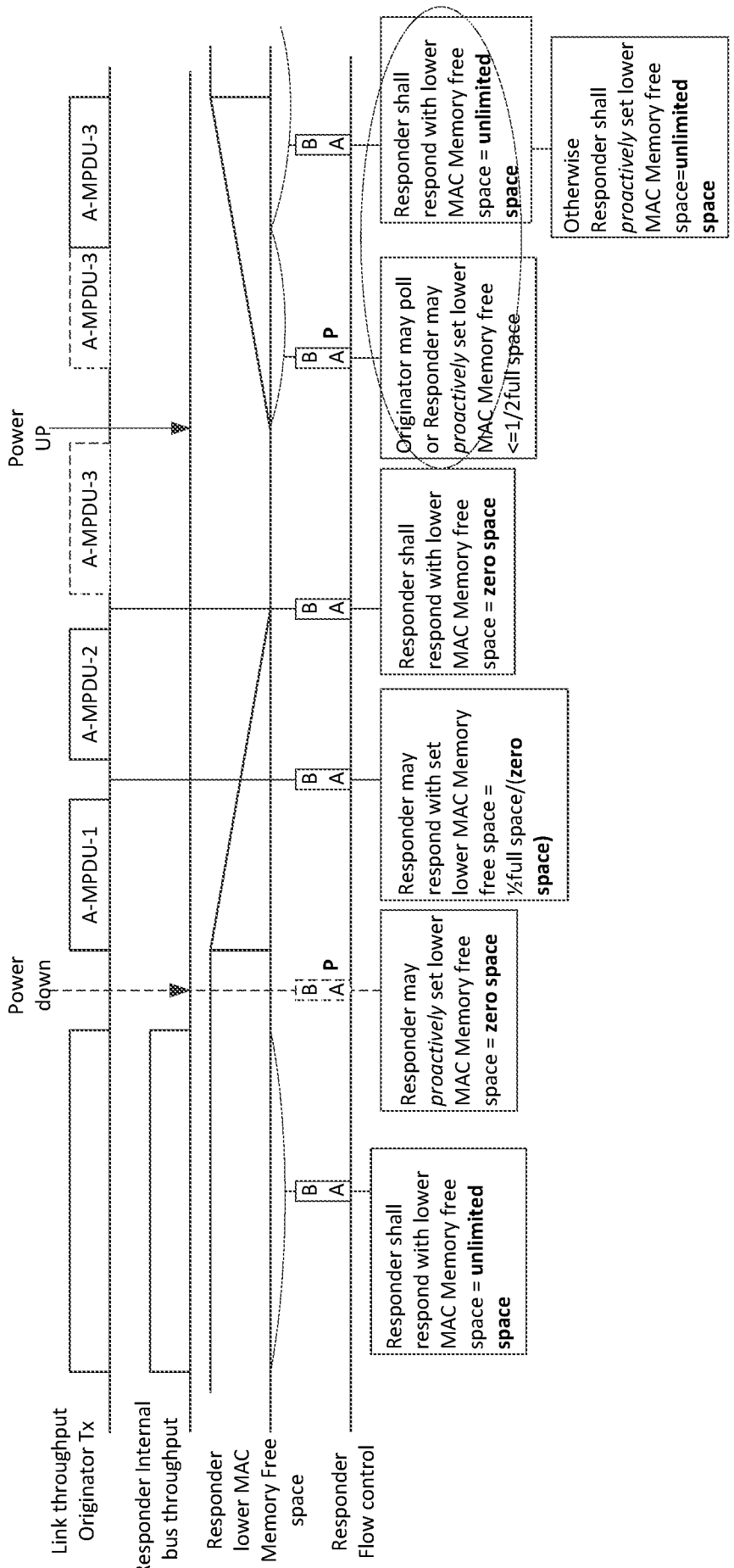

Link throughput Originator Tx
Responder Internal bus throughput
Responder lower MAC Memory Free space
Responder Flow control
Power dqwn
Power UP
A-MPDU-1
A-MPDU-2
A-MPDU-3
A-MPDU-3
A-MPDU-3
B
A
P
Responder shall respond with lower MAC Memory free space = **unlimited space**
Responder may *proactively* set lower MAC Memory free space = **zero space**
Responder may respond with set lower MAC Memory free space = ½full space/(**zero space**)
Responder shall respond with lower MAC Memory free space = **zero space**
Originator may poll or Responder may *proactively* set lower MAC Memory free <=1/2full space
Responder shall respond with lower MAC Memory free space = **unlimited space**
Otherwise Responder shall *proactively* set lower MAC Memory free space=**unlimited space**

FIG. 6

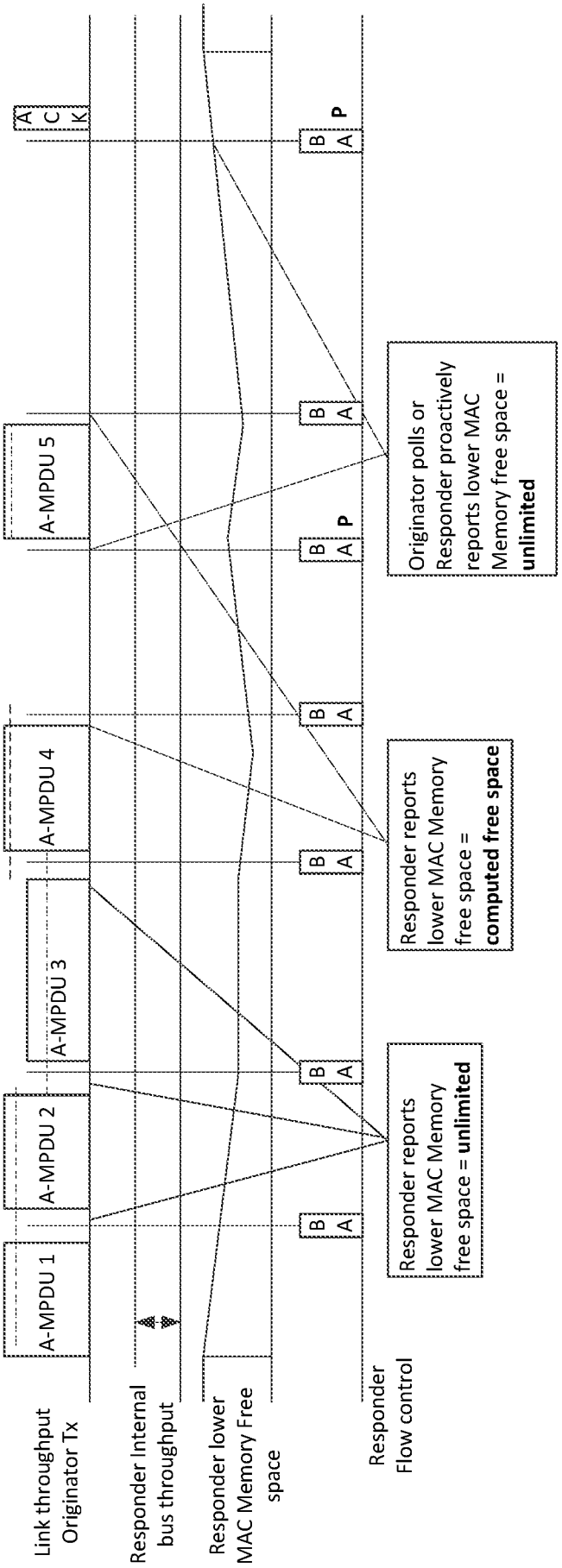

Link throughput Originator Tx
Responder Internal bus throughput
Responder lower MAC Memory Free space
Responder Flow control
A-MPDU 1
A-MPDU 2
A-MPDU 3
A-MPDU 4
A-MPDU 5
B A
B A P
A C K
Responder reports lower MAC Memory free space = unlimited
Responder reports lower MAC Memory free space = computed free space
Originator polls or Responder proactively reports lower MAC Memory free space = unlimited

FIG. 7

800

Order	Information
1	Category
2	Block Ack Action
3	Dialog Token
4	Block Ack Parameter Set
5	Block Ack Timeout Value
6	Block Ack Starting Sequence Control
7	GCR Group Address element (optional)
8	Multi-band (optional)
9	TCLAS (optional)
10	ADDBA Extension (optional)
11	EDMG Flow Control Extension Configuration

FIG. 8A

802

Order	Information
1	Category
2	Block Ack Action
3	Dialog Token
4	Status Code
5	Block Ack Parameter Set
6	Block Ack Timeout Value
7	GCR Group Address element (optional)
8	Multi-band (optional)
9	TCLAS (optional)
10	ADDBA Extension (optional)
11	EDMG Flow Control Extension Configuration

FIG. 8B

900

Element ID	Length	Element ID extension	RBUFCAP	Advanced Recipient Memory length exponent	Optional subelements
1	1	1	1	1	Variable

FIG. 9

1000

1002

	Element ID	Length	Recipient memory capabilities
Octets	1	1	1

FIG. 10A

1002

	B0	B1	B2	B3	B4	B5 B7
	RBUFCAP quantity capable	Advanced Recipient Memory length capable	Recipient Memory Multiple Buffer Units capable	TID Grouping capable	Memory config tag capable	Reserved
Bits	1	1	1	1	1	3

FIG. 10B

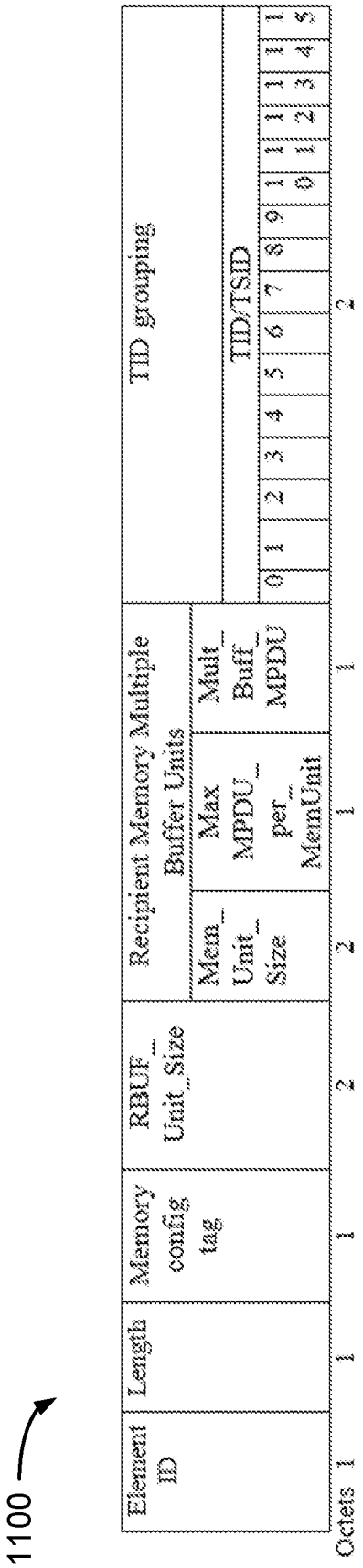

1100
Element ID
Length
Memory config tag
RBUF_ Unit_Size
Recipient Memory Multiple Buffer Units
Mem_ Unit_ Size
Max MPDU_ per_ MemUnit
Mult_ Buff_ MPDU
TID grouping
TID/TSID
Octets 1 1 1 2 2 1 1 2
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5

FIG. 11

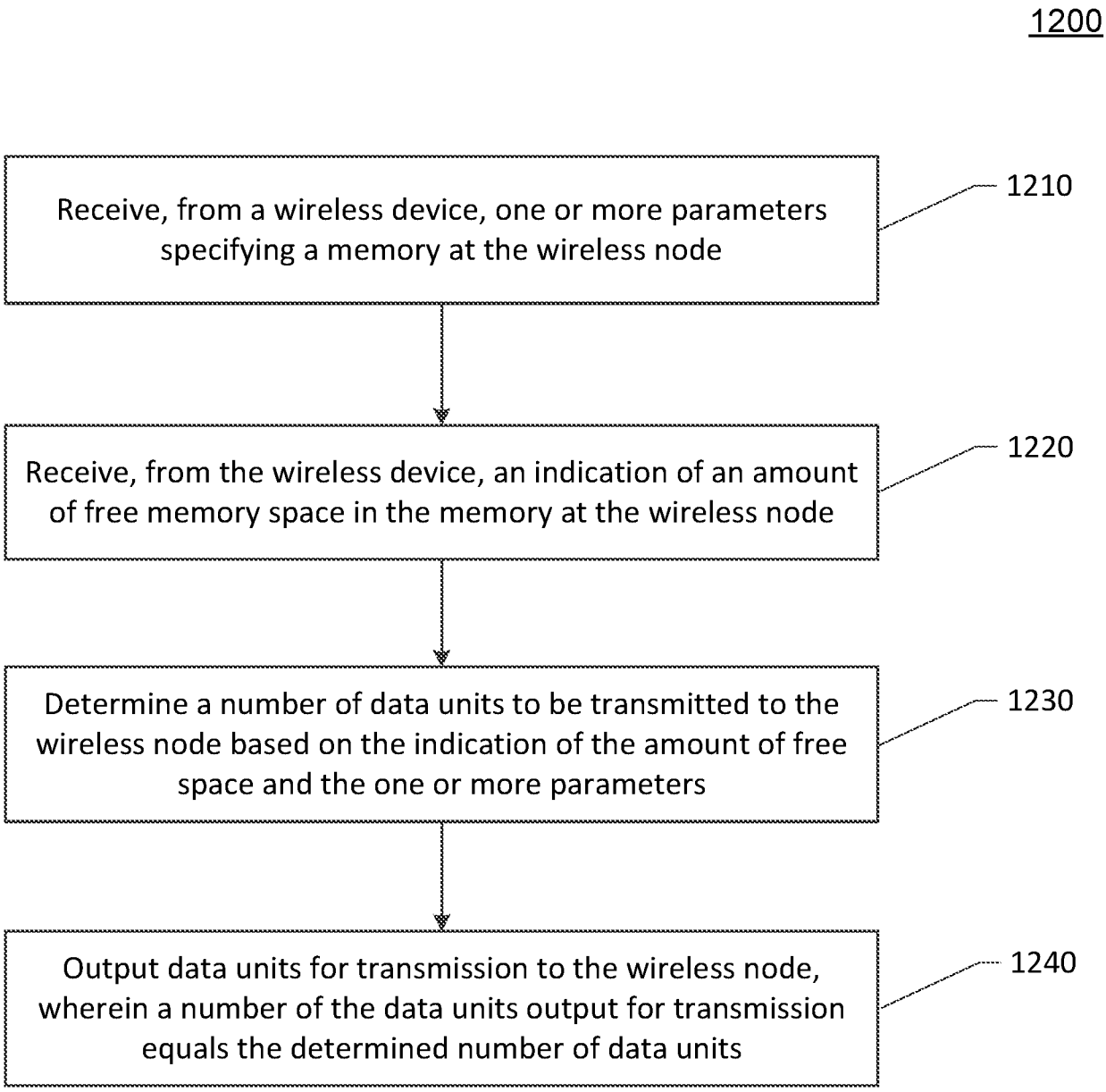

1200
Receive, from a wireless device, one or more parameters specifying a memory at the wireless node
1210
Receive, from the wireless device, an indication of an amount of free memory space in the memory at the wireless node
1220
Determine a number of data units to be transmitted to the wireless node based on the indication of the amount of free space and the one or more parameters
1230
Output data units for transmission to the wireless node, wherein a number of the data units output for transmission equals the determined number of data units
1240

FIG. 12

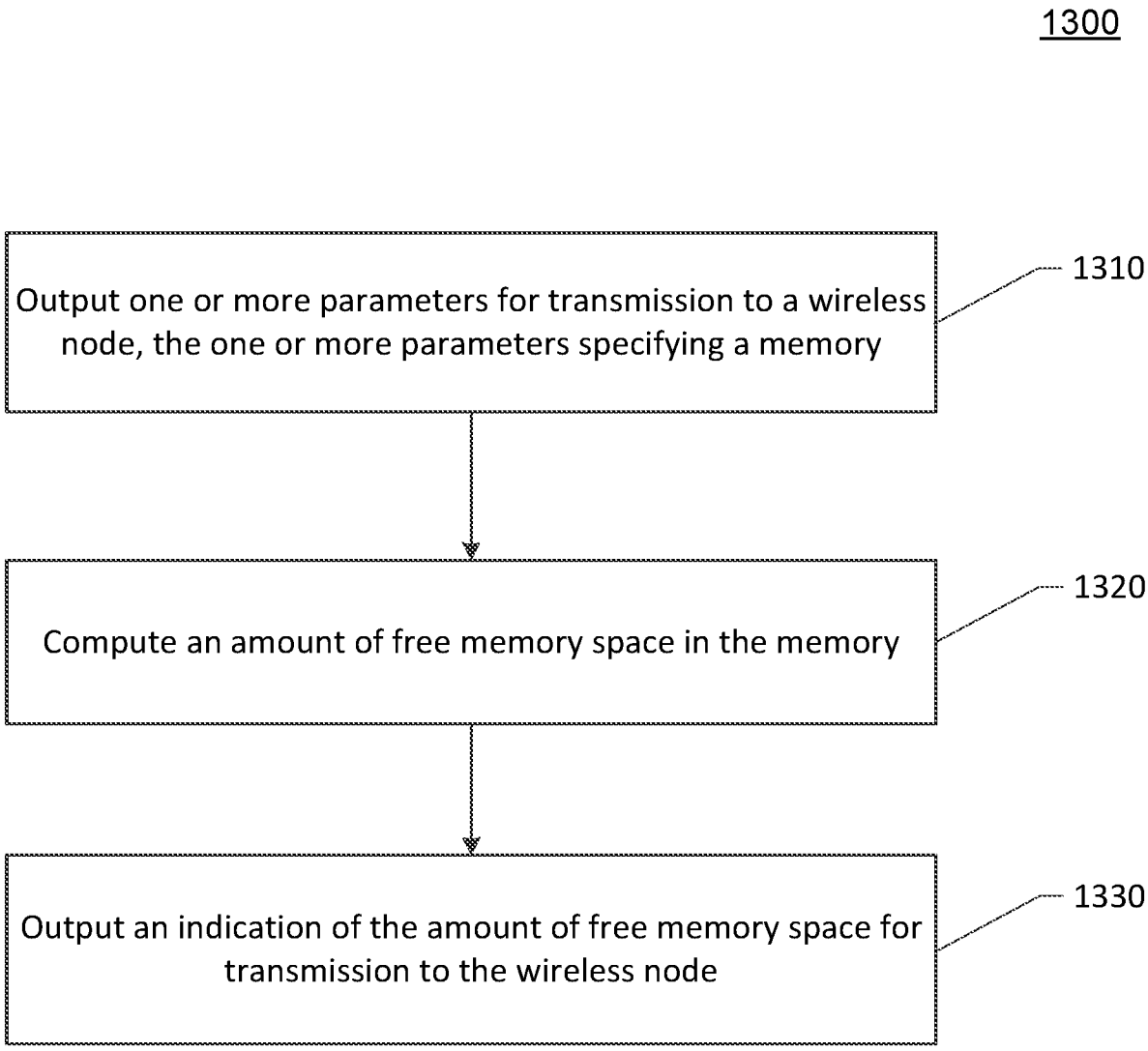

1300
Output one or more parameters for transmission to a wireless node, the one or more parameters specifying a memory
1310
Compute an amount of free memory space in the memory
1320
Output an indication of the amount of free memory space for transmission to the wireless node
1330

FIG. 13

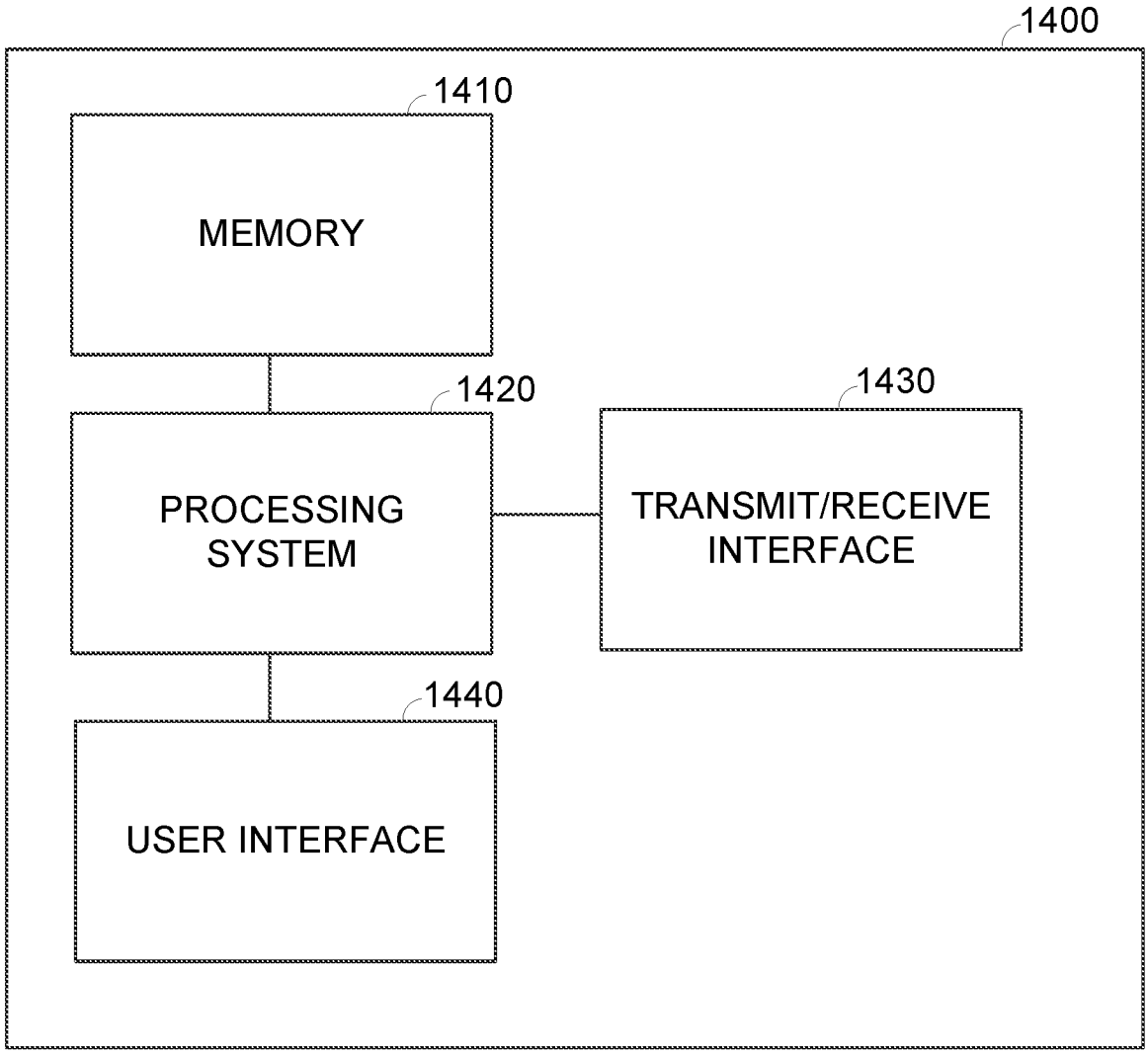

1400
1410
MEMORY
1420
PROCESSING SYSTEM
1430
TRANSMIT/RECEIVE INTERFACE
1440
USER INTERFACE

FIG. 14