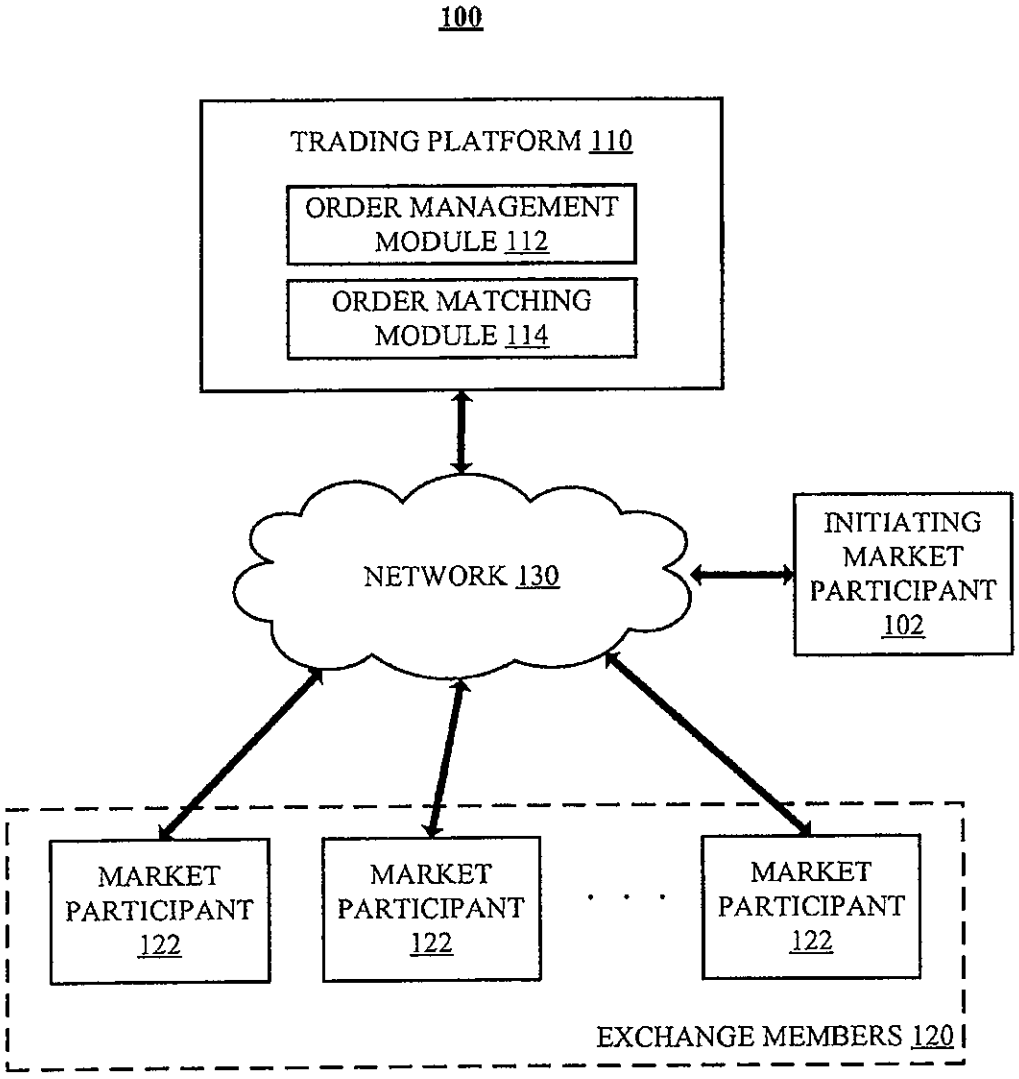

100
TRADING PLATFORM 110
ORDER MANAGEMENT MODULE 112
ORDER MATCHING MODULE 114
NETWORK 130
INITIATING MARKET PARTICIPANT 102
MARKET PARTICIPANT 122
MARKET PARTICIPANT 122
MARKET PARTICIPANT 122
EXCHANGE MEMBERS 120

FIG. 1

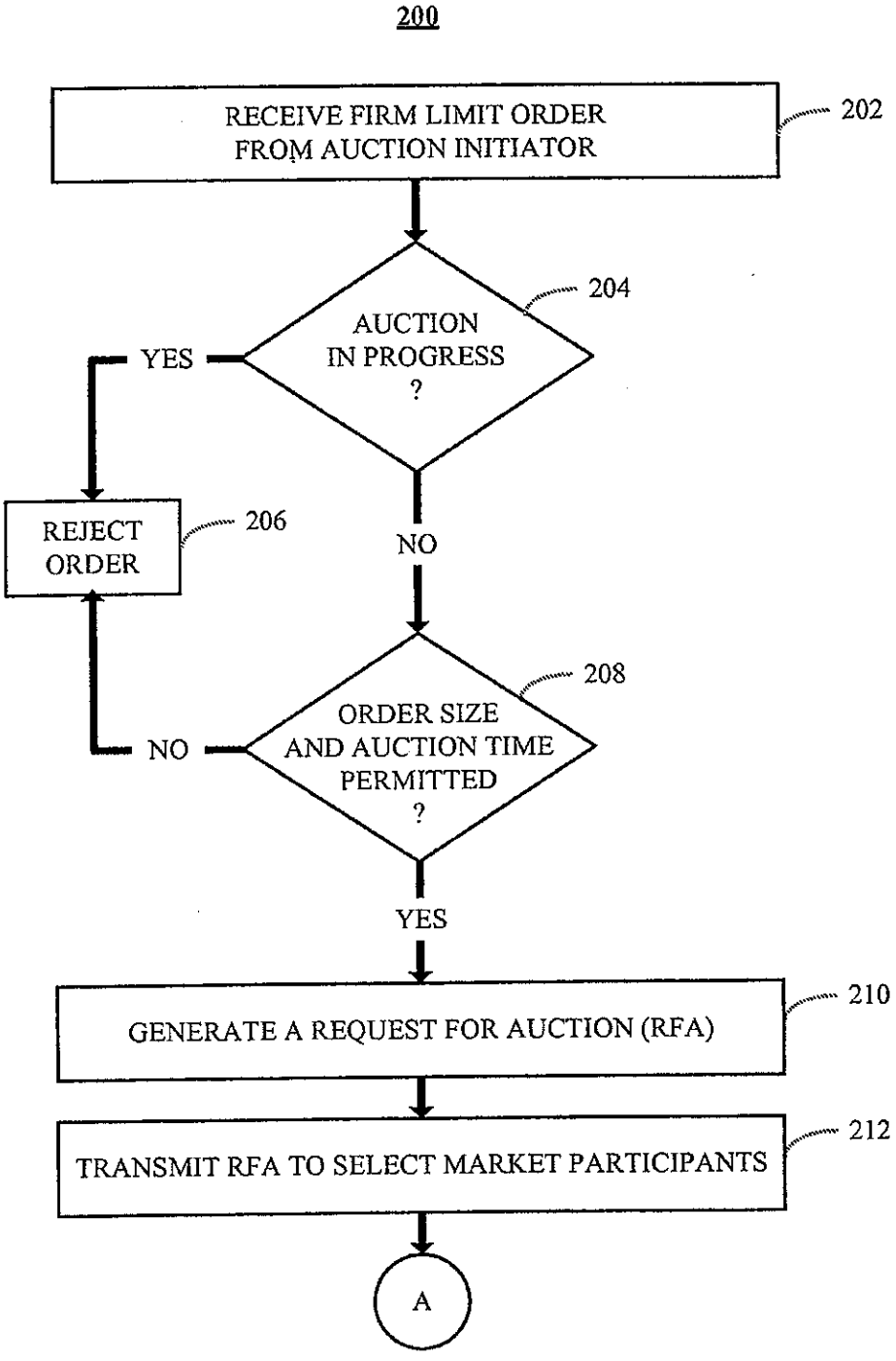

200
RECEIVE FIRM LIMIT ORDER FROM AUCTION INITIATOR
202
AUCTION IN PROGRESS ?
204
YES
NO
REJECT ORDER
206
ORDER SIZE AND AUCTION TIME PERMITTED ?
208
NO
YES
GENERATE A REQUEST FOR AUCTION (RFA)
210
TRANSMIT RFA TO SELECT MARKET PARTICIPANTS
212
A

FIG. 2A

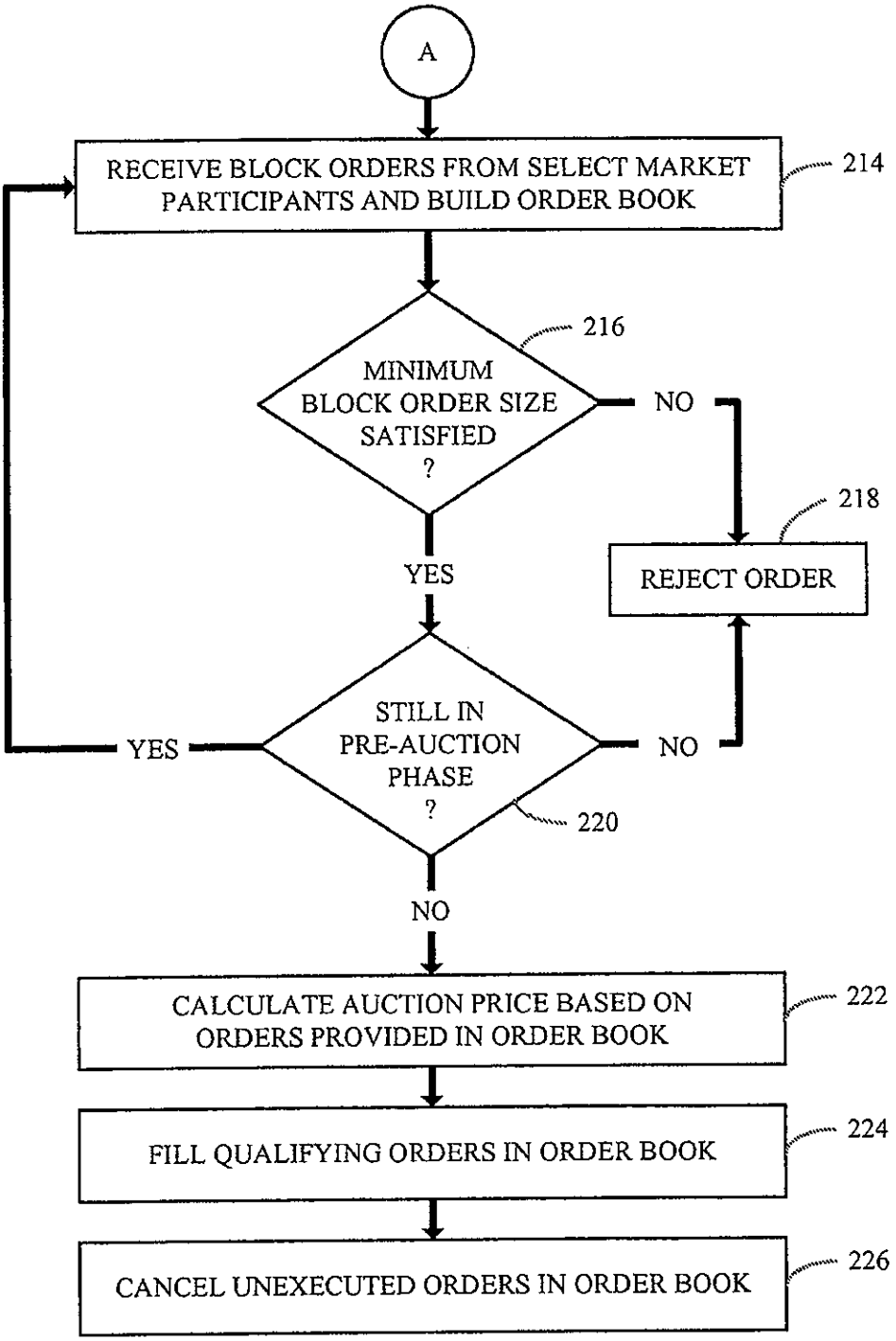

A
RECEIVE BLOCK ORDERS FROM SELECT MARKET PARTICIPANTS AND BUILD ORDER BOOK
214
MINIMUM BLOCK ORDER SIZE SATISFIED ?
216
NO
YES
218
REJECT ORDER
STILL IN PRE-AUCTION PHASE ?
220
YES
NO
NO
CALCULATE AUCTION PRICE BASED ON ORDERS PROVIDED IN ORDER BOOK
222
FILL QUALIFYING ORDERS IN ORDER BOOK
224
CANCEL UNEXECUTED ORDERS IN ORDER BOOK
226

FIG. 2B

Member	BUY size	BUY price		SELL price	SELL size	Member
Buy side A	10 000 000	101.00		100.55	7 000 000	Dealer B
				100.75	5 000 000	Dealer C
				101.20	15 000 000	Dealer D

FIG. 3A

Member	BUY size	BUY price		SELL price	SELL size	Member
Buy side A	7 000 000	100.75		100.75	7 000 000	Dealer B
Buy side A	3 000 000	100.75		100.75	3 000 000	Dealer C

FIG. 3B

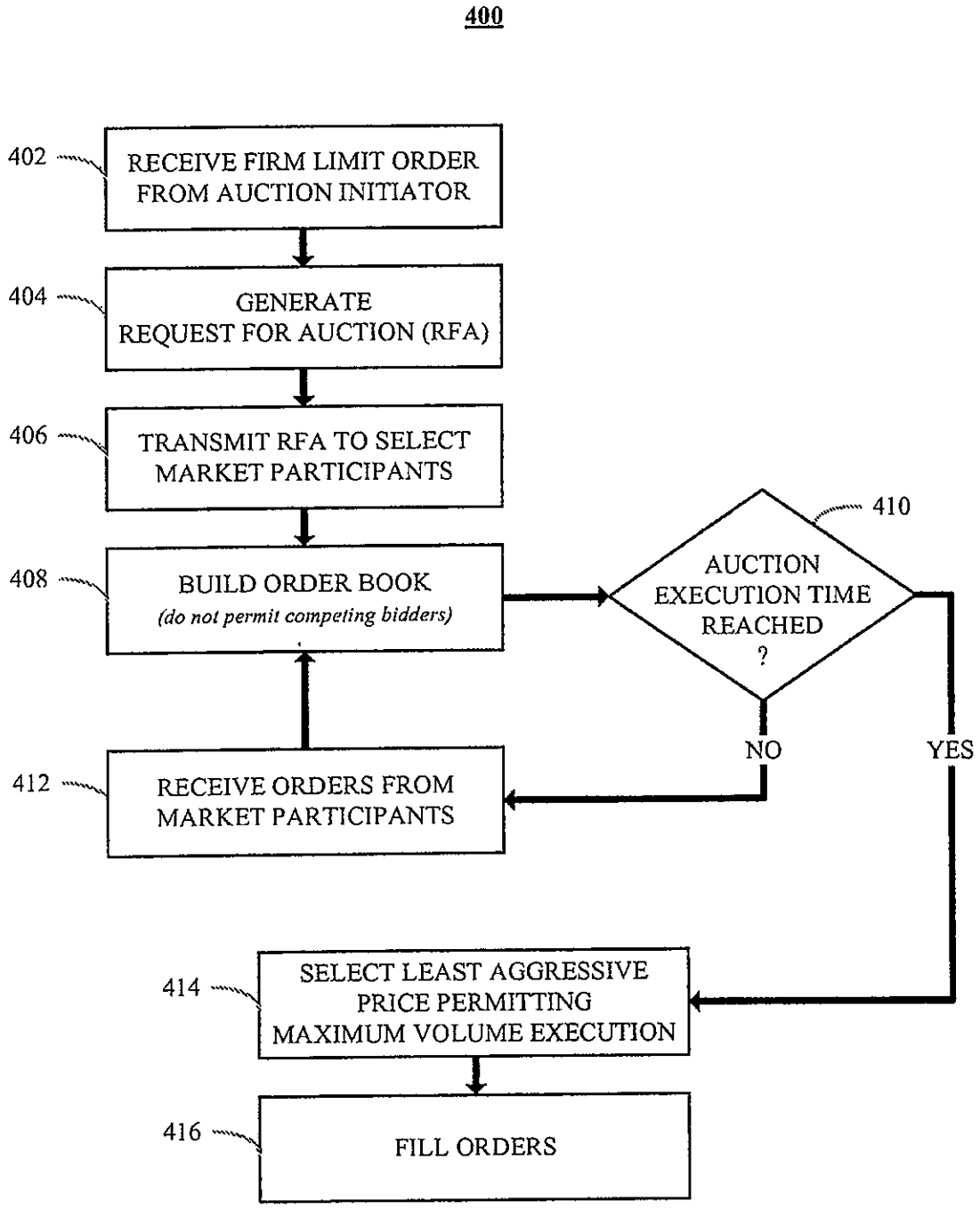

400
402
RECEIVE FIRM LIMIT ORDER FROM AUCTION INITIATOR
404
GENERATE REQUEST FOR AUCTION (RFA)
406
TRANSMIT RFA TO SELECT MARKET PARTICIPANTS
408
BUILD ORDER BOOK
(do not permit competing bidders)
410
AUCTION EXECUTION TIME REACHED ?
NO
YES
412
RECEIVE ORDERS FROM MARKET PARTICIPANTS
414
SELECT LEAST AGGRESSIVE PRICE PERMITTING MAXIMUM VOLUME EXECUTION
416
FILL ORDERS

FIG. 4

Member	BUY size	BUY price		SELL price	SELL size	Member
Buy side B	12 000 000	101.20		100.55	7 000 000	Dealer B
Buy side A	10 000 000	101.00		100.75	5 000 000	Dealer C
Dealer B	7 000 000	100.35		101.20	15 000 000	Dealer D
Dealer C	5 000 000	100.30				

FIG. 5A

Member	BUY size	BUY price		SELL price	SELL size	Member
Buy side B	7 000 000	101.00		101.00	7 000 000	Dealer B
Buy side B	5 000 000	101.00		101.00	5 000 000	Dealer C

FIG. 5B

Member	BUY size	BUY price		SELL price	SELL size	Member
Buy side A	7 000 000	101.00		101.00	7 000 000	Dealer B
Buy side A	3 000 000	101.00		101.00	3 000 000	Dealer C
Buy side B	2 000 000	101.00		101.00	2 000 000	Dealer C

FIG. 5C

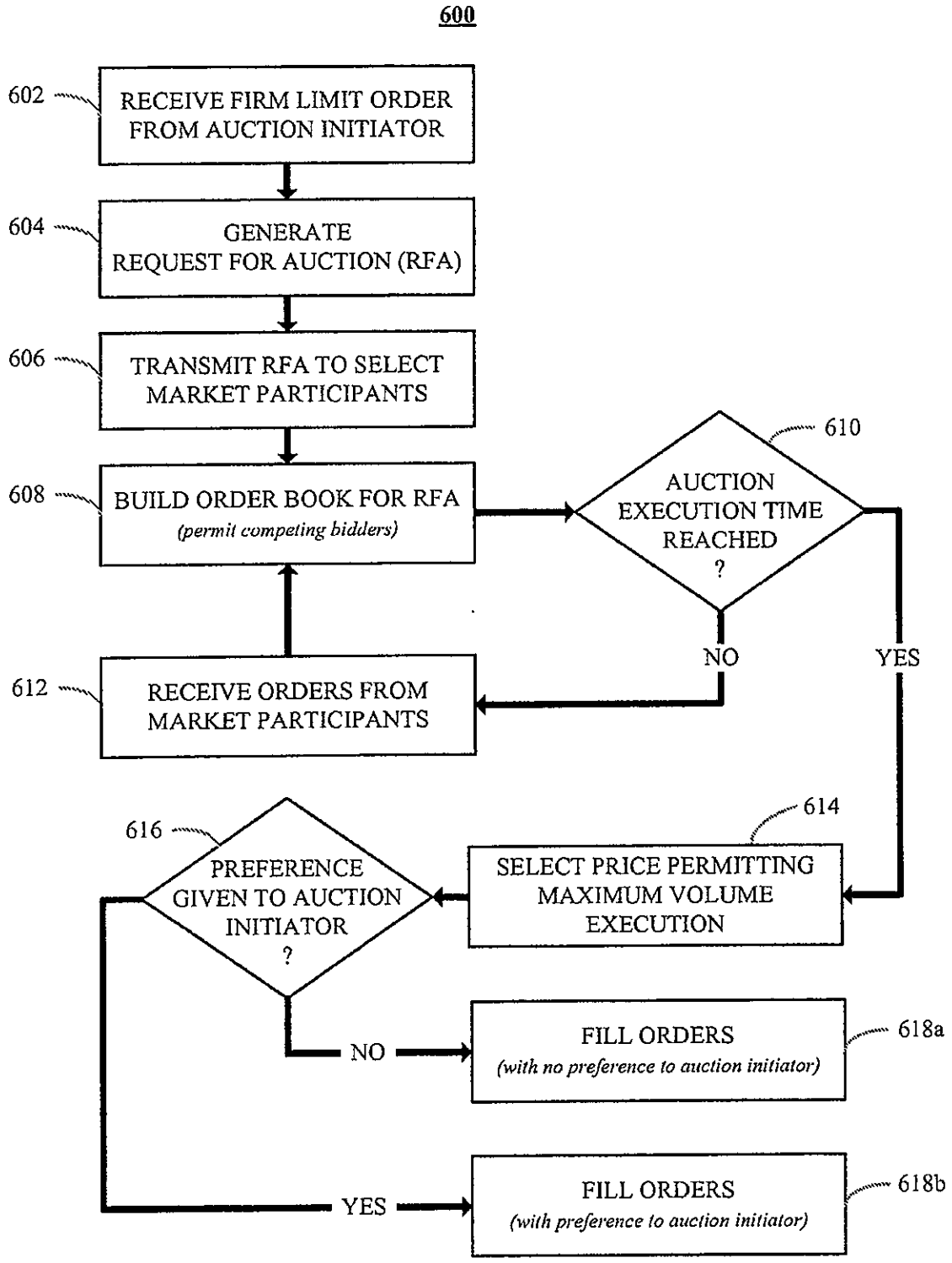

600
602
RECEIVE FIRM LIMIT ORDER FROM AUCTION INITIATOR
604
GENERATE REQUEST FOR AUCTION (RFA)
606
TRANSMIT RFA TO SELECT MARKET PARTICIPANTS
608
BUILD ORDER BOOK FOR RFA
(permit competing bidders)
610
AUCTION EXECUTION TIME REACHED ?
NO
YES
612
RECEIVE ORDERS FROM MARKET PARTICIPANTS
614
SELECT PRICE PERMITTING MAXIMUM VOLUME EXECUTION
616
PREFERENCE GIVEN TO AUCTION INITIATOR ?
NO
FILL ORDERS
(with no preference to auction initiator)
618a
YES
FILL ORDERS
(with preference to auction initiator)
618b

FIG. 6

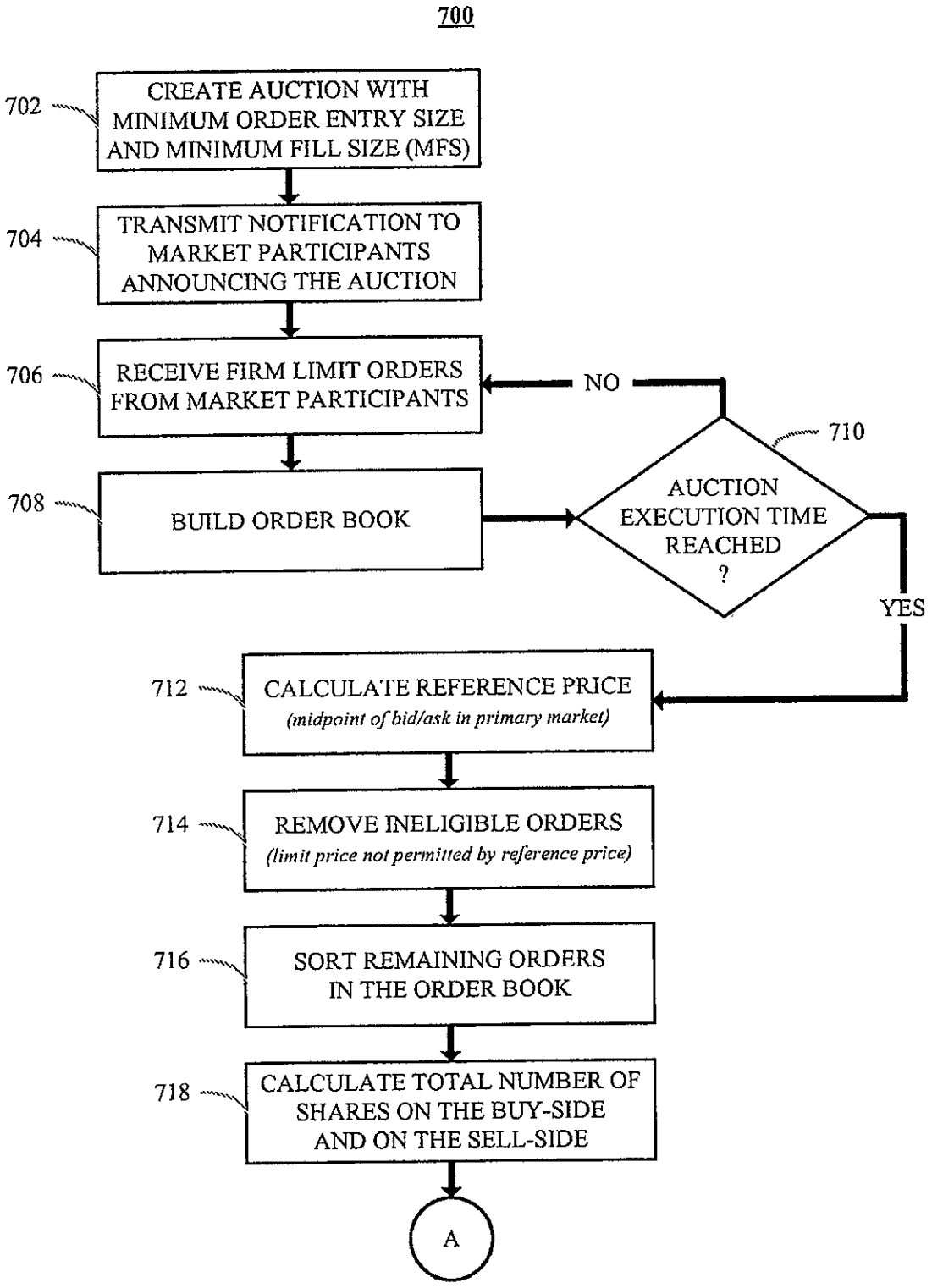

700
702
CREATE AUCTION WITH MINIMUM ORDER ENTRY SIZE AND MINIMUM FILL SIZE (MFS)
704
TRANSMIT NOTIFICATION TO MARKET PARTICIPANTS ANNOUNCING THE AUCTION
706
RECEIVE FIRM LIMIT ORDERS FROM MARKET PARTICIPANTS
NO
710
708
BUILD ORDER BOOK
AUCTION EXECUTION TIME REACHED ?
YES
712
CALCULATE REFERENCE PRICE
(midpoint of bid/ask in primary market)
714
REMOVE INELIGIBLE ORDERS
(limit price not permitted by reference price)
716
SORT REMAINING ORDERS IN THE ORDER BOOK
718
CALCULATE TOTAL NUMBER OF SHARES ON THE BUY-SIDE AND ON THE SELL-SIDE
A

FIG. 7A

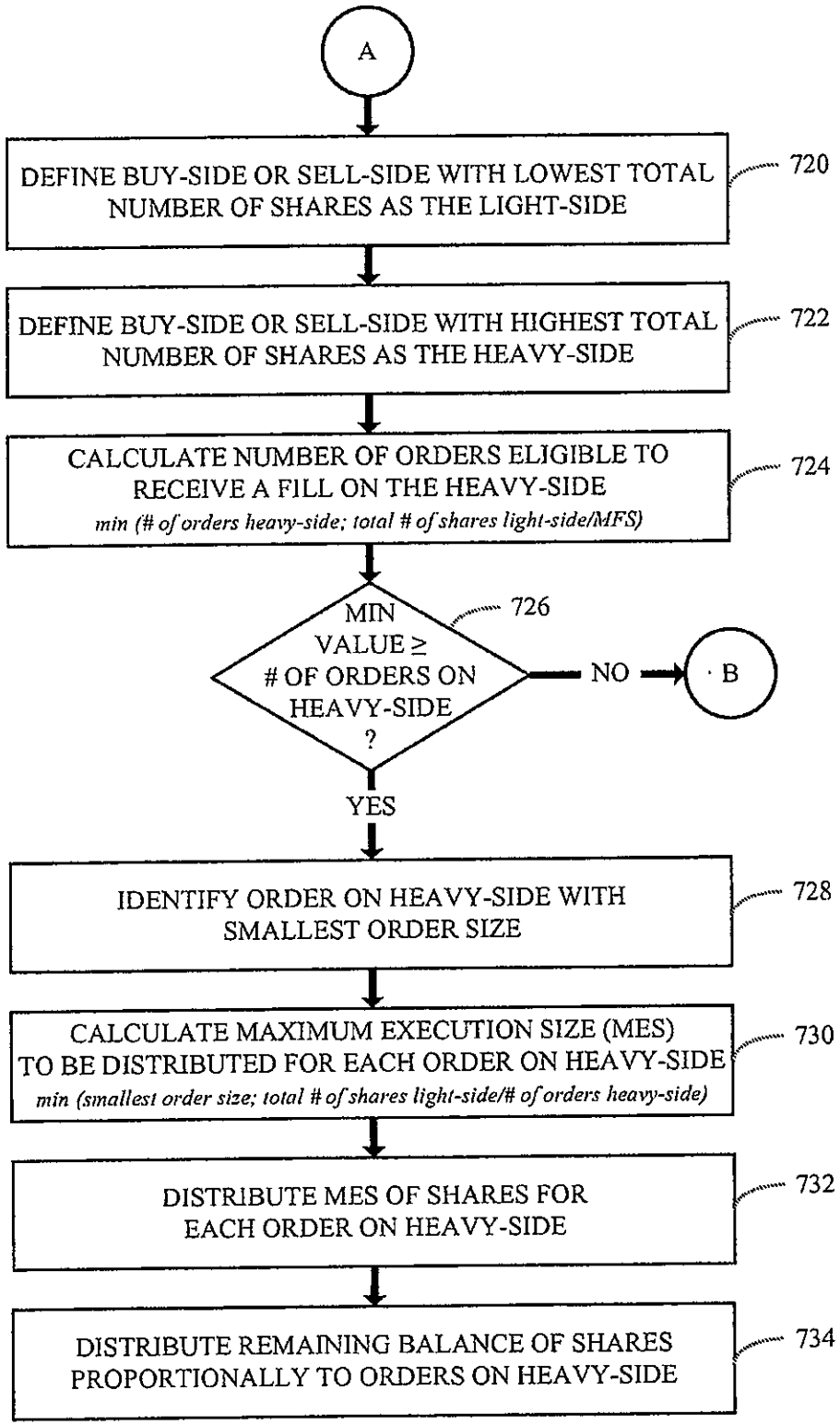

A
DEFINE BUY-SIDE OR SELL-SIDE WITH LOWEST TOTAL NUMBER OF SHARES AS THE LIGHT-SIDE
720
DEFINE BUY-SIDE OR SELL-SIDE WITH HIGHEST TOTAL NUMBER OF SHARES AS THE HEAVY-SIDE
722
CALCULATE NUMBER OF ORDERS ELIGIBLE TO RECEIVE A FILL ON THE HEAVY-SIDE
min (# of orders heavy-side; total # of shares light-side/MFS)
724
MIN VALUE ≥ # OF ORDERS ON HEAVY-SIDE ?
726
NO
B
YES
IDENTIFY ORDER ON HEAVY-SIDE WITH SMALLEST ORDER SIZE
728
CALCULATE MAXIMUM EXECUTION SIZE (MES) TO BE DISTRIBUTED FOR EACH ORDER ON HEAVY-SIDE
min (smallest order size; total # of shares light-side/# of orders heavy-side)
730
DISTRIBUTE MES OF SHARES FOR EACH ORDER ON HEAVY-SIDE
732
DISTRIBUTE REMAINING BALANCE OF SHARES PROPORTIONALLY TO ORDERS ON HEAVY-SIDE
734

FIG. 7B

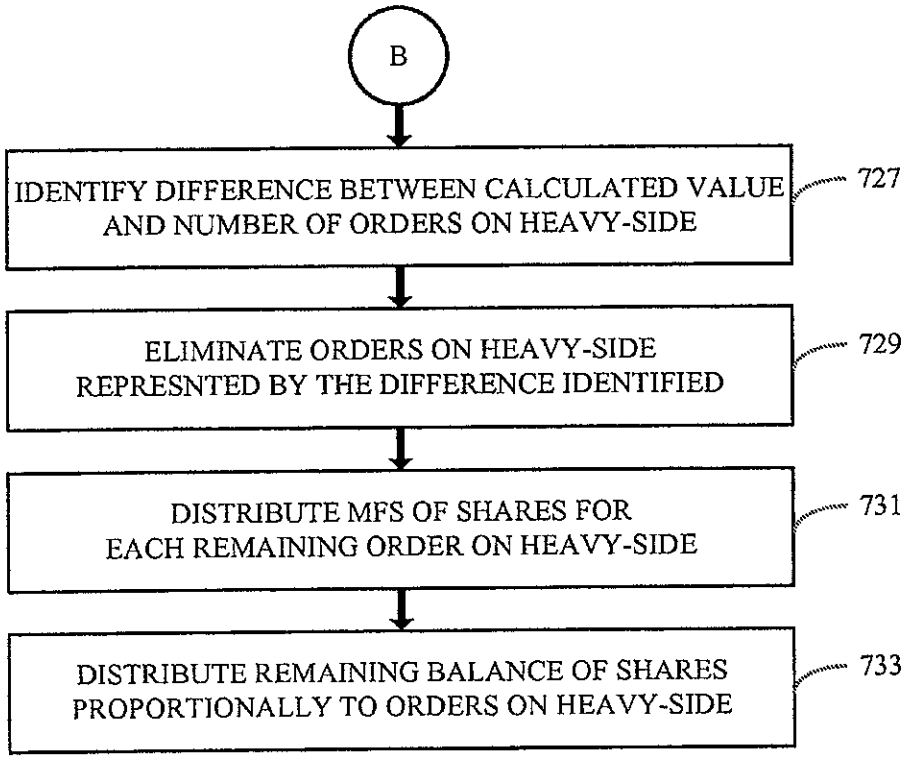

B
IDENTIFY DIFFERENCE BETWEEN CALCULATED VALUE AND NUMBER OF ORDERS ON HEAVY-SIDE
727
ELIMINATE ORDERS ON HEAVY-SIDE REPRESNTED BY THE DIFFERENCE IDENTIFIED
729
DISTRIBUTE MFS OF SHARES FOR EACH REMAINING ORDER ON HEAVY-SIDE
731
DISTRIBUTE REMAINING BALANCE OF SHARES PROPORTIONALLY TO ORDERS ON HEAVY-SIDE
733

FIG. 7C

participant	order n°	Quantity	Bid	Ask	Quantity	order n°	participant
ABC	A0001	260.000	101.00	99.00	300.000	A0002	MLN
DEF	A0003	50.000	100.50	99.50	65.000	A0006	XYZ
GHI	A0005	60.000	100.20	99.60	65.000	A0007	RST
~~JKL~~	~~A0009~~	~~50.000~~	~~100.00~~	99.70	220.000	A0008	OPQ
				99.80	50.000	A0004	UVW

FIG. 8A

participant	order n°	Quantity	Bid	Ask	Quantity	order n°	participant
ABC	A0001	260.000			300.000	A0002	MLN
GHI	A0005	60.000			220.000	A0008	OPQ
DEF	A0003	50.000	midpoint		65.000	A0006	XYZ
					65.000	A0007	RST
					50.000	A0004	UVW

FIG. 8B

participant	order n°	Quantity	Bid	Ask	Quantity	order n°	participant
ABC	A0001		midpoint		50.000	A0002	MLN
GHI	A0005				50.000	A0008	OPQ
DEF	A0003				50.000	A0006	XYZ
					50.000	A0007	RST
					50.000	A0004	UVW

FIG. 8C

participant	order n°	Quantity	Bid	Ask	Quantity	order n°	participant
ABC	A0001	260.000	midpoint		116.667	A0002	MLN
GHI	A0005	60.000			95.333	A0008	OPQ
DEF	A0003	50.000			54.000	A0006	XYZ
					54.000	A0007	RST
					50.000	A0004	UVW

FIG. 8D

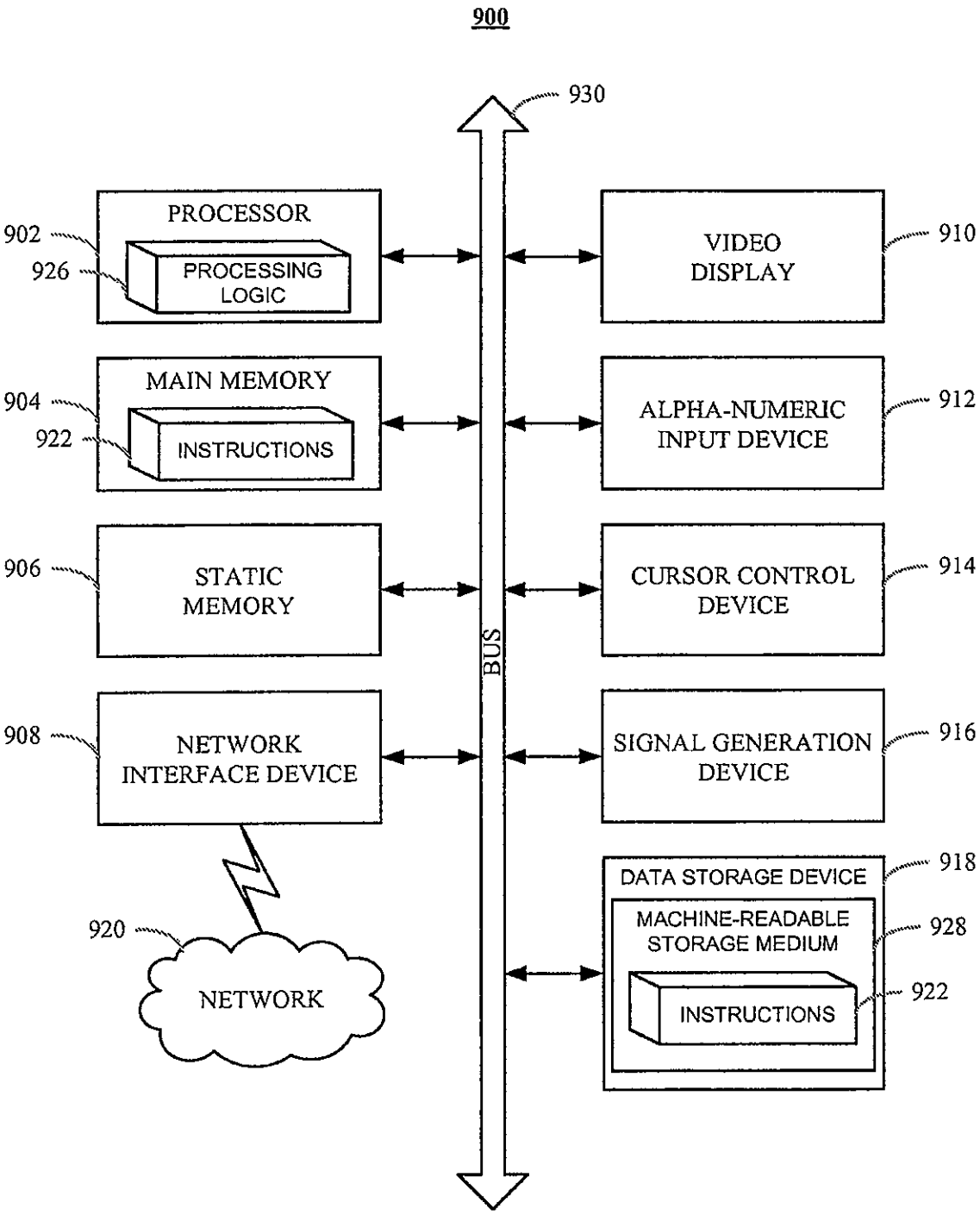

900
930
PROCESSOR
902
926
PROCESSING LOGIC
MAIN MEMORY
904
922
INSTRUCTIONS
906
STATIC MEMORY
908
NETWORK INTERFACE DEVICE
920
NETWORK
BUS
VIDEO DISPLAY
910
ALPHA-NUMERIC INPUT DEVICE
912
CURSOR CONTROL DEVICE
914
SIGNAL GENERATION DEVICE
916
DATA STORAGE DEVICE
918
MACHINE-READABLE STORAGE MEDIUM
928
INSTRUCTIONS
922

FIG. 9