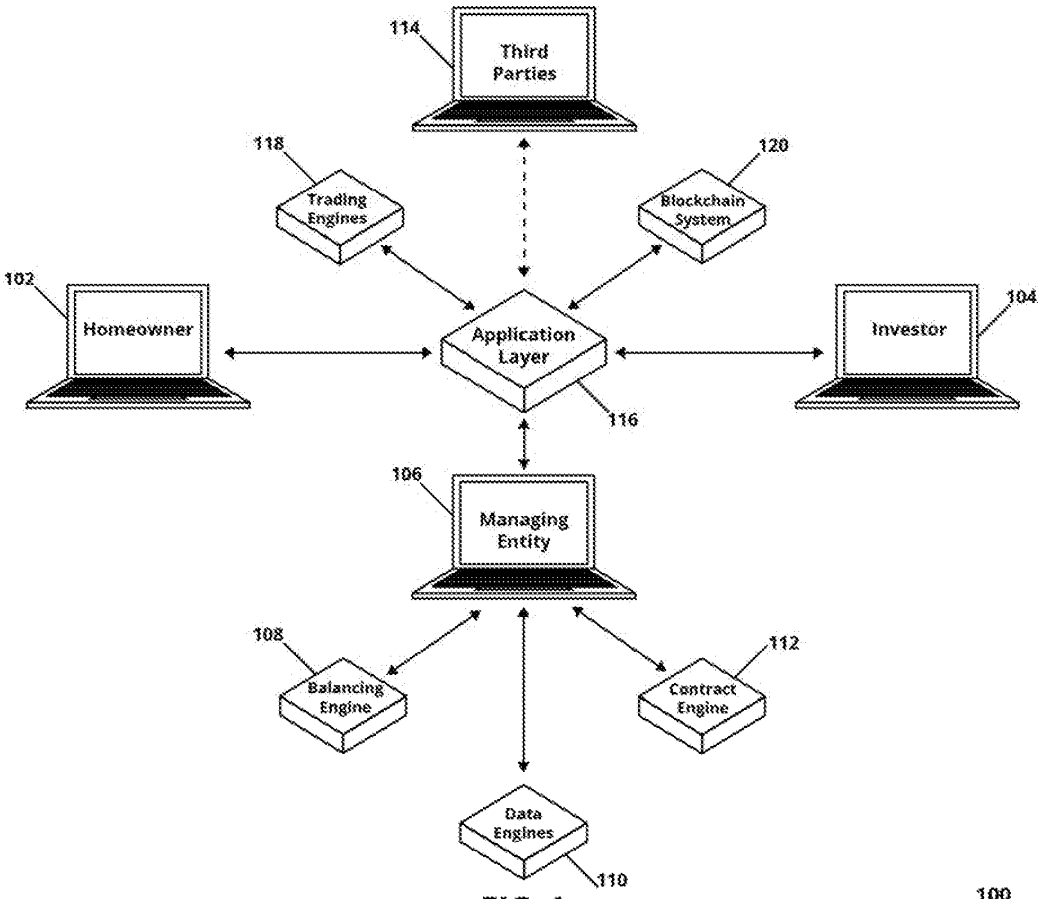

114
Third Parties
118
Trading Engines
120
Blockchain System
102
Homeowner
Application Layer
116
Investor
104
106
Managing Entity
108
Balancing Engine
112
Contract Engine
Data Engines
110
100

FIG. 1

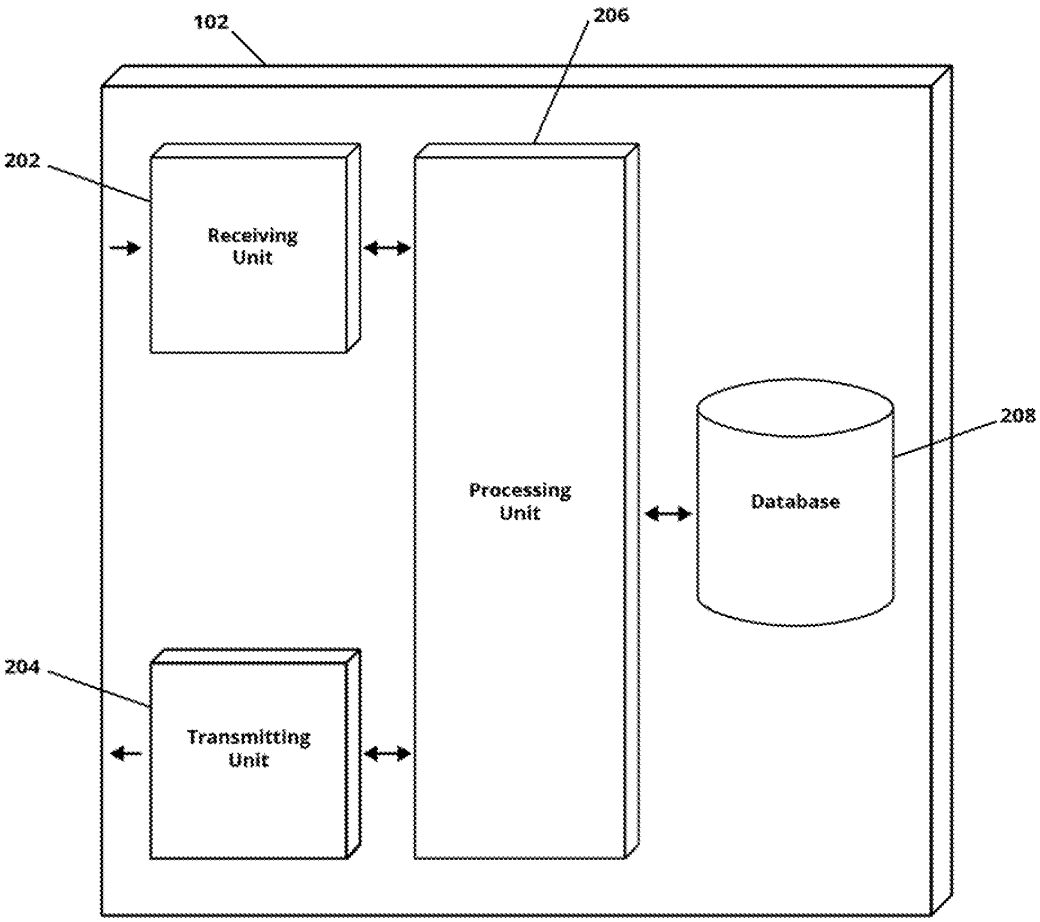

102
206
202
Receiving Unit
Processing Unit
208
Database
204
Transmitting Unit

FIG. 2

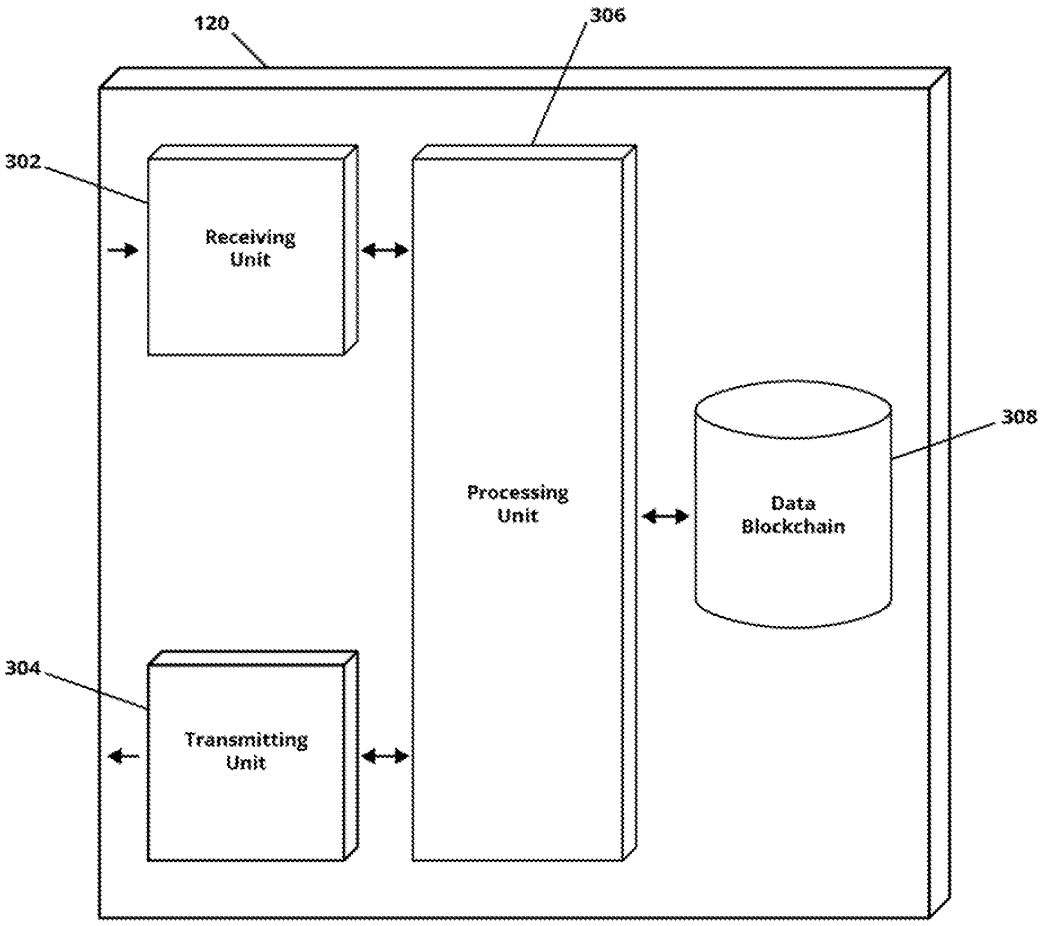

120
306
302
Receiving Unit
Processing Unit
308
Data Blockchain
304
Transmitting Unit

FIG. 3

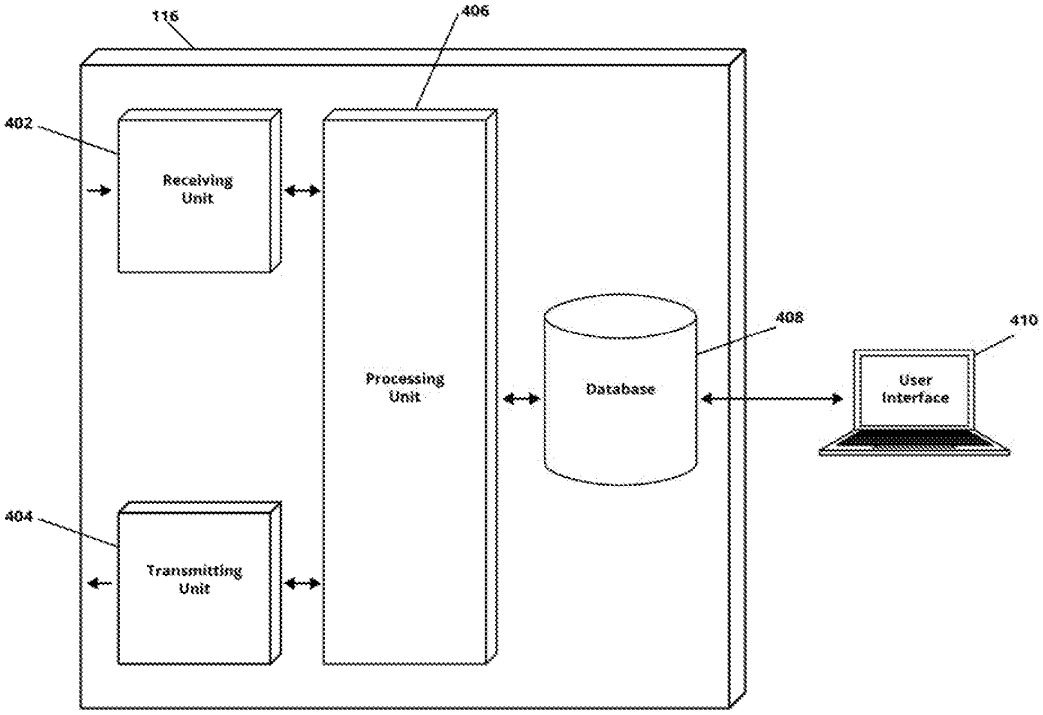

116
406
402
Receiving Unit
Processing Unit
Database
408
410
User Interface
404
Transmitting Unit

FIG. 4

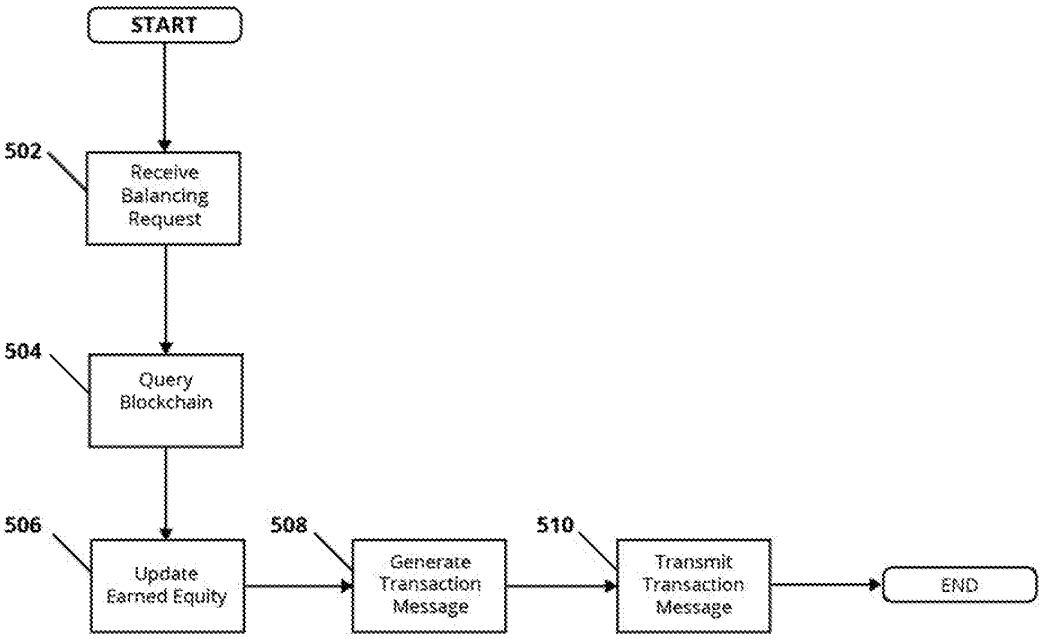

START
502
Receive Balancing Request
504
Query Blockchain
506
Update Earned Equity
508
Generate Transaction Message
510
Transmit Transaction Message
END

FIG. 5 500

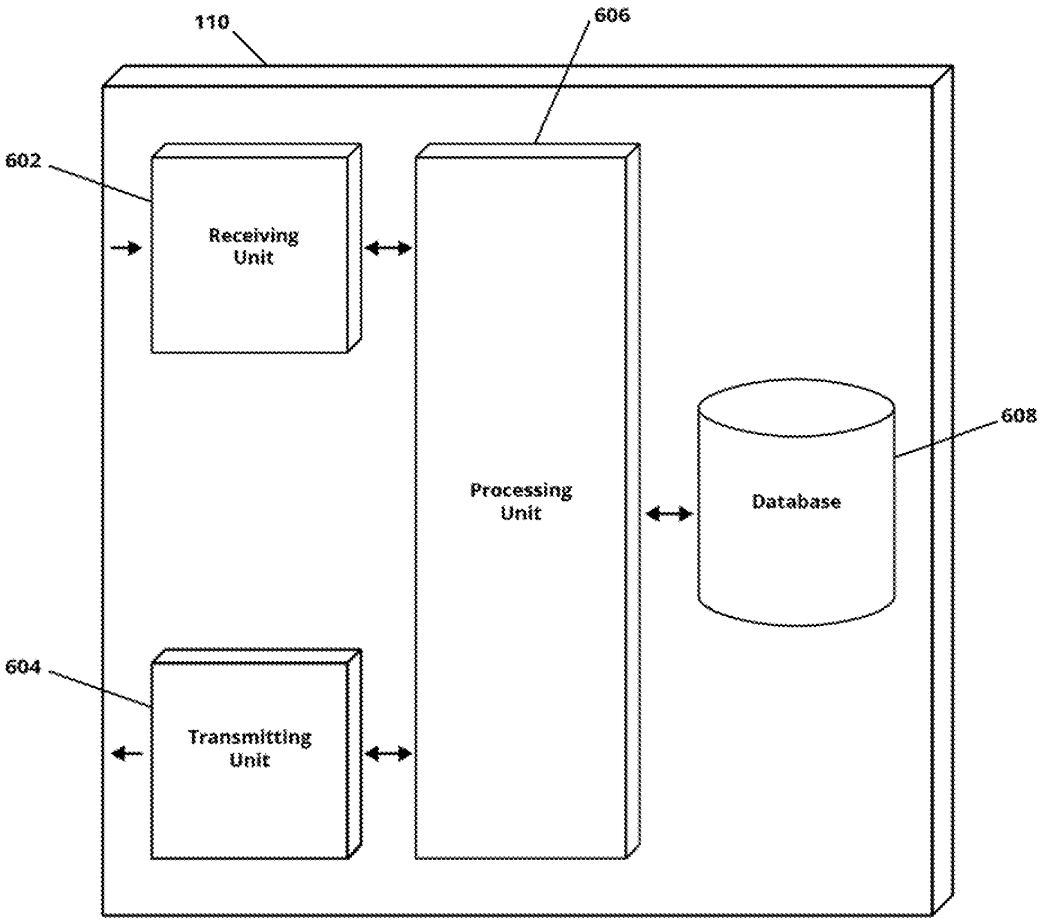

110
606
602
Receiving Unit
Processing Unit
608
Database
604
Transmitting Unit

FIG. 6

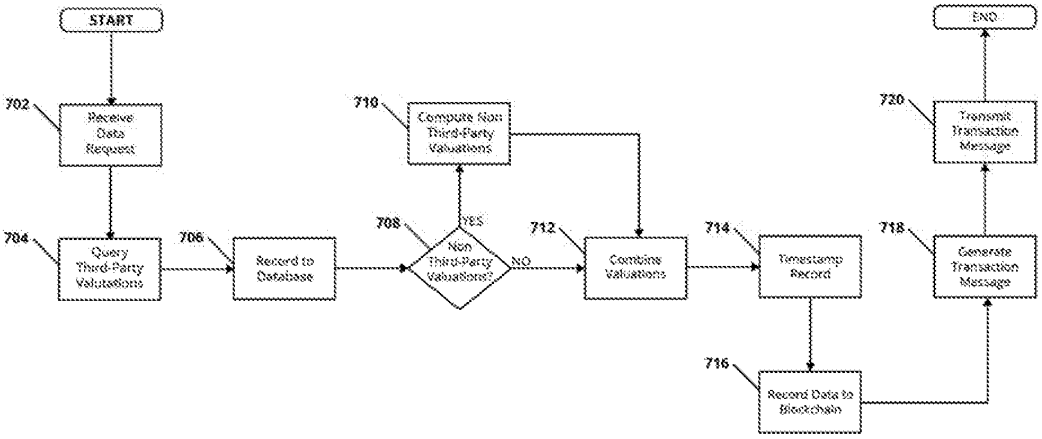

START
702
Receive Data Request
704
Query Third-Party Valuations
706
Record to Database
708
Non Third-Party Valuations?
YES
NO
710
Compute Non Third-Party Valuations
712
Combine Valuations
714
Timestamp Record
716
Record Data to Blockchain
718
Generate Transaction Message
720
Transmit Transaction Message
END

FIG. 7

700

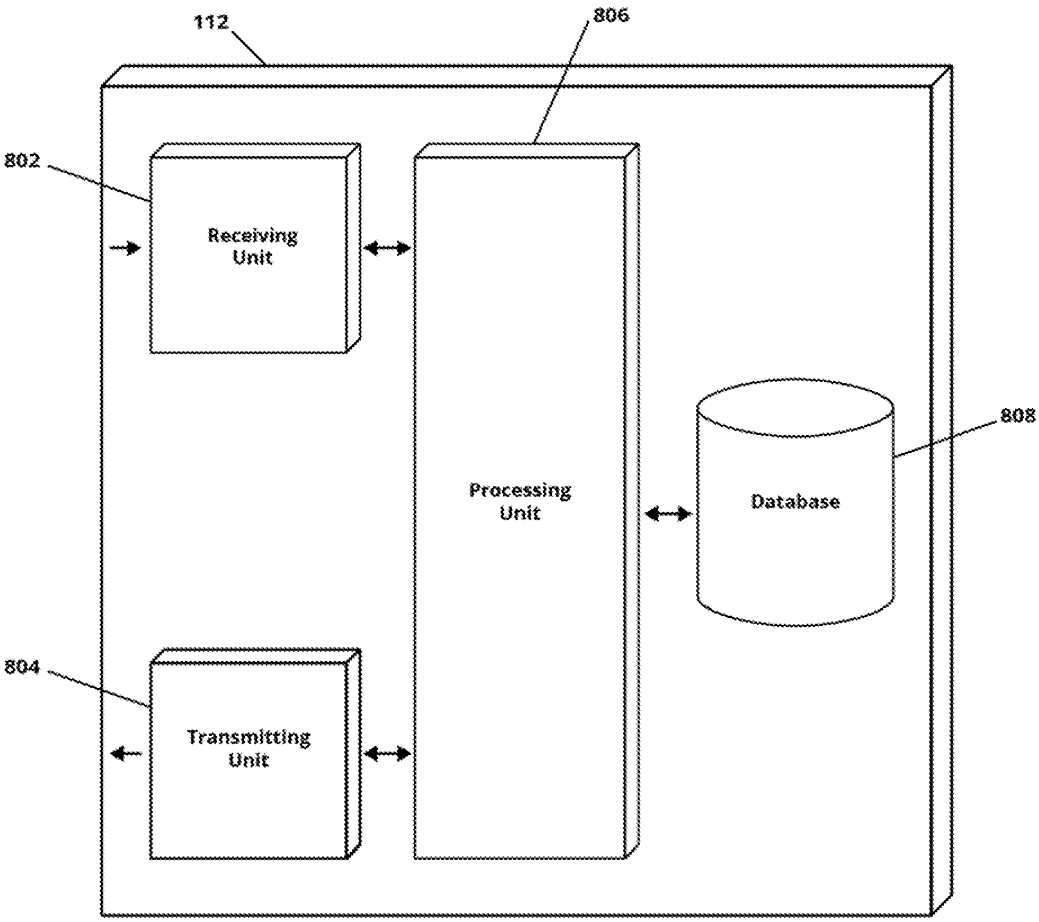

112
806
802
Receiving Unit
Processing Unit
808
Database
804
Transmitting Unit

FIG. 8

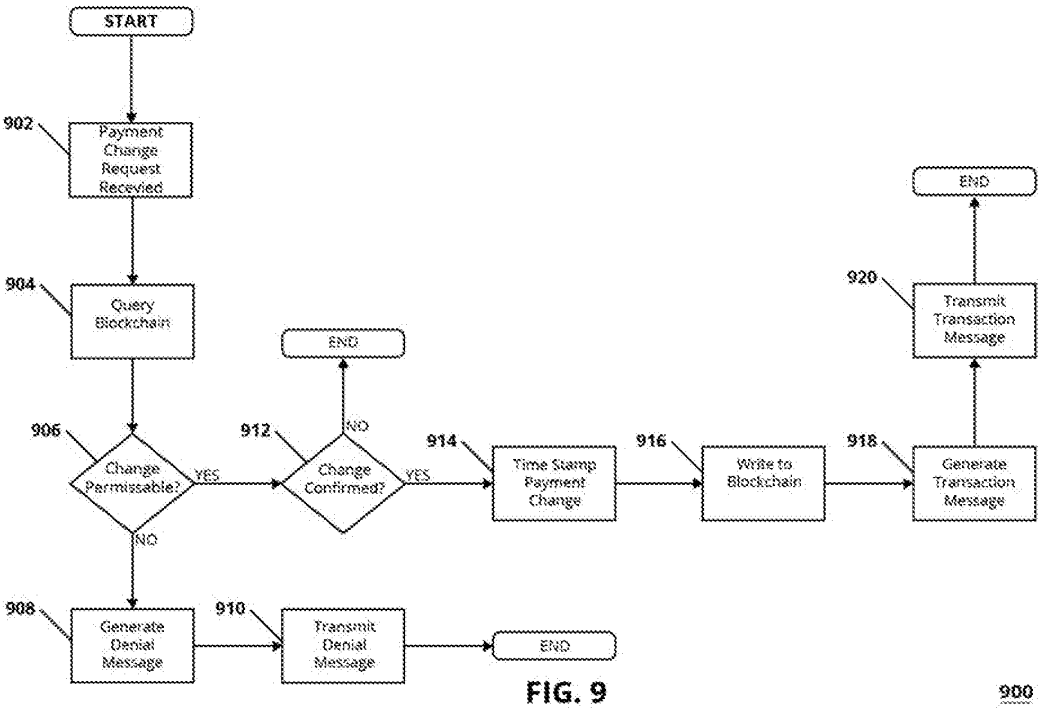

START
902
Payment Change Request Recevied
904
Query Blockchain
906
Change Permissable?
YES
NO
912
Change Confirmed?
NO
YES
END
914
Time Stamp Payment Change
916
Write to Blockchain
918
Generate Transaction Message
920
Transmit Transaction Message
END
908
Generate Denial Message
910
Transmit Denial Message
END

FIG. 9

900

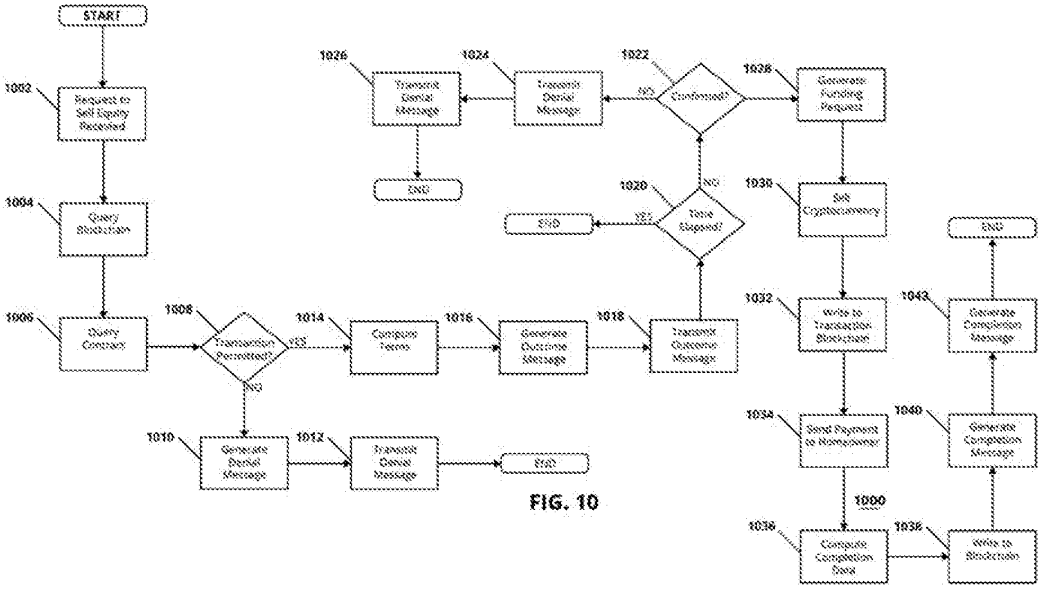

START
1002
Request to Sell Equity Received
1004
Query Blockchain
1006
Query Contract
1008
Transaction Permitted?
YES
NO
1014
Compute Terms
1016
Generate Outcome Message
1018
Transmit Outcome Message
1010
Generate Denial Message
1012
Transmit Denial Message
END
1026
Transmit Denial Message
1024
Transmit Denial Message
1022
Confirmed?
YES
NO
1020
Time Elapsed?
YES
NO
END
1028
Generate Funding Request
1030
Sell Cryptocurrency
1032
Write to Transaction Blockchain
1034
Send Payment to Homeowner
1000
1038
Compute Completion Data
1036
Write to Blockchain
1040
Generate Completion Message
1042
Generate Completion Message
END

FIG. 10

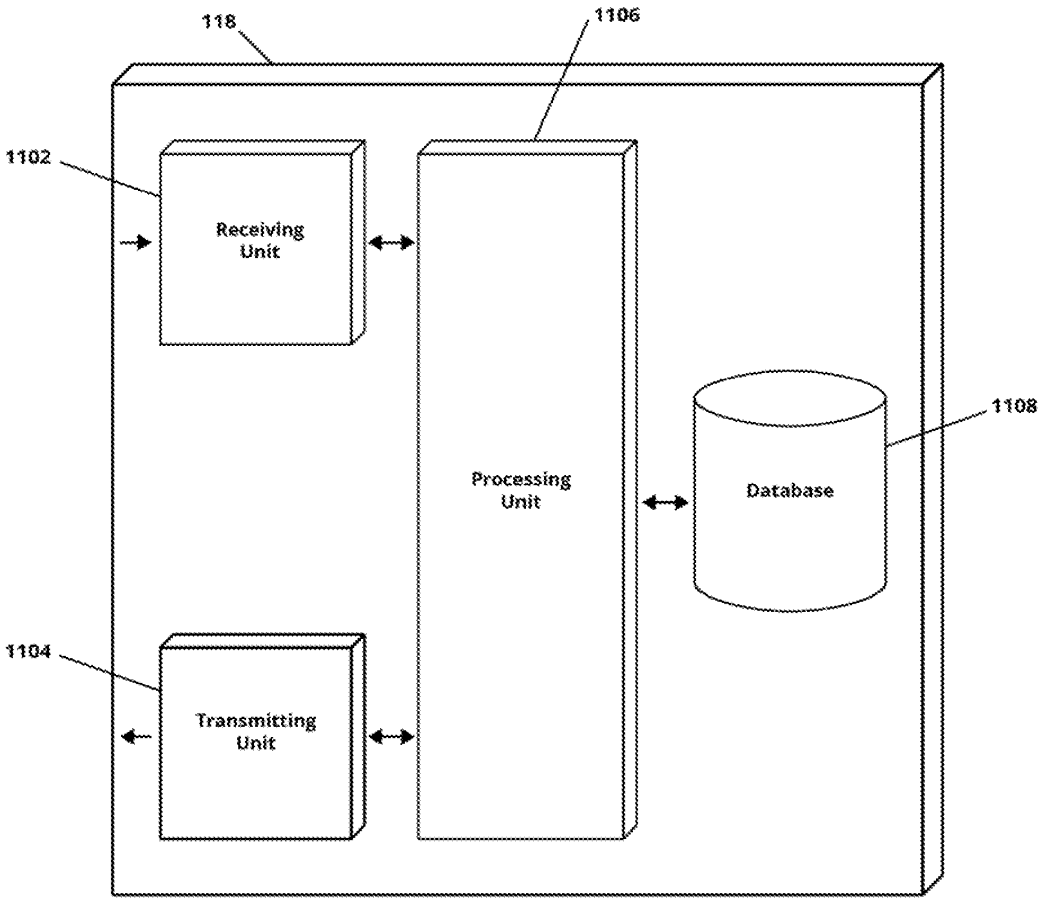

118
1106
1102
Receiving Unit
Processing Unit
Database
1108
1104
Transmitting Unit

FIG. 11

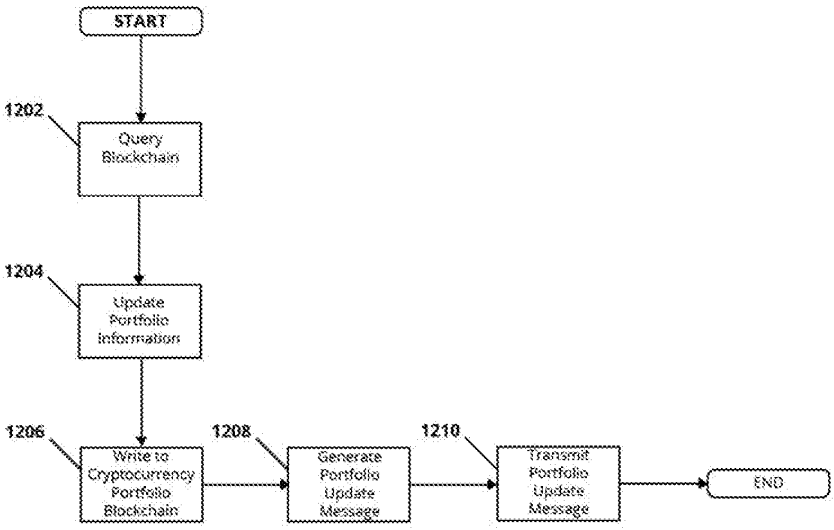

START
1202
Query Blockchain
1204
Update Portfolio Information
1206
Write to Cryptocurrency Portfolio Blockchain
1208
Generate Portfolio Update Message
1210
Transmit Portfolio Update Message
END

FIG. 12 1200

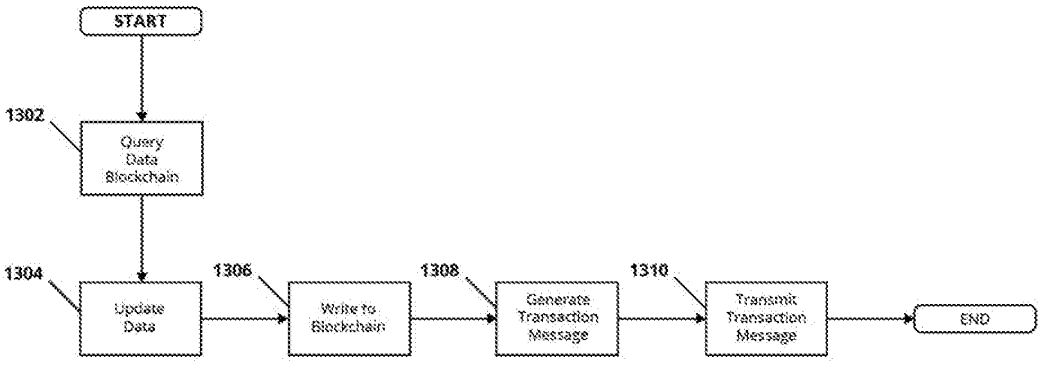

START
1302
Query Data Blockchain
1304
Update Data
1306
Write to Blockchain
1308
Generate Transaction Message
1310
Transmit Transaction Message
END

FIG. 13 1300

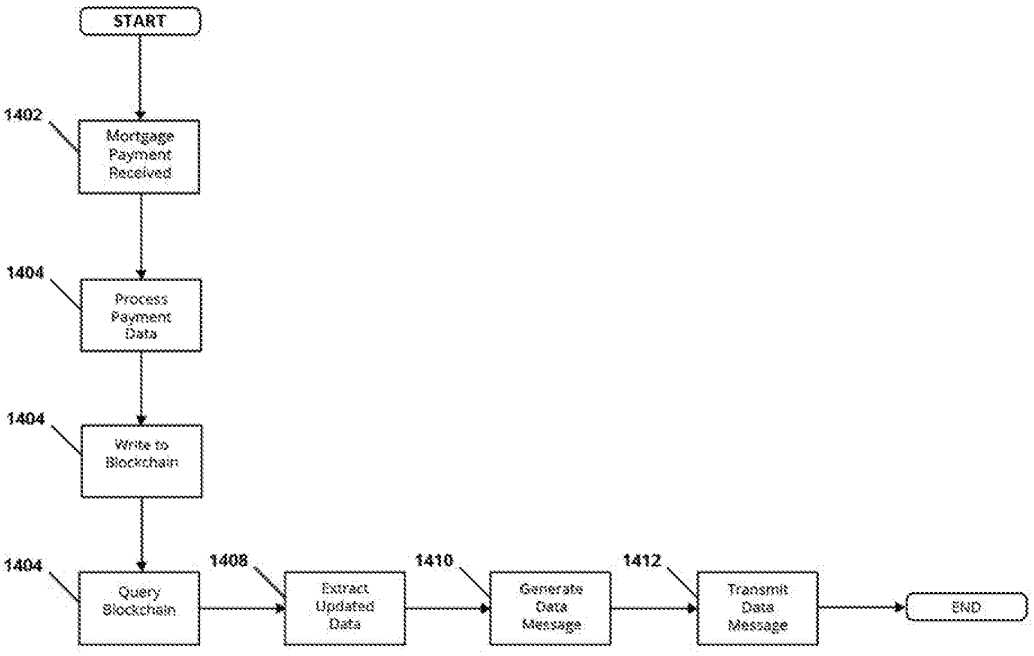

START
1402
Mortgage Payment Received
1404
Process Payment Data
1404
Write to Blockchain
1404
Query Blockchain
1408
Extract Updated Data
1410
Generate Data Message
1412
Transmit Data Message
END

FIG. 14

1400

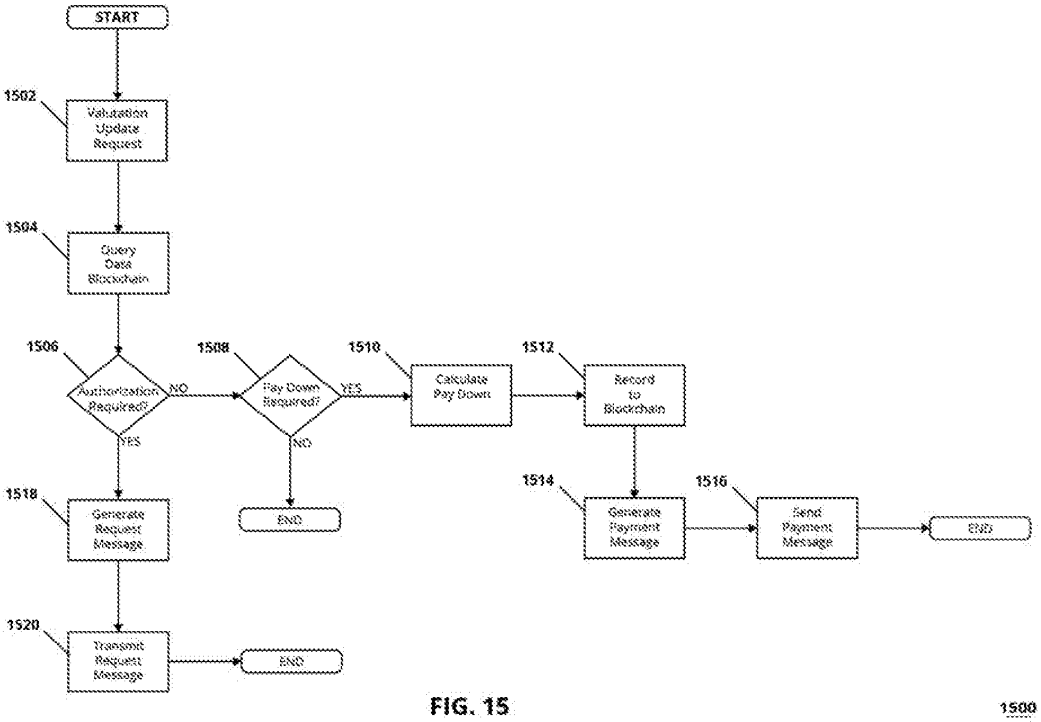

START
1502
Valuation Update Request
1504
Query Data Blockchain
1506
Authorization Required?
NO
YES
1508
Pay Down Required?
YES
NO
END
1510
Calculate Pay Down
1512
Record to Blockchain
1514
Generate Payment Message
1516
Send Payment Message
END
1518
Generate Request Message
1520
Transmit Request Message
END

FIG. 15

1500

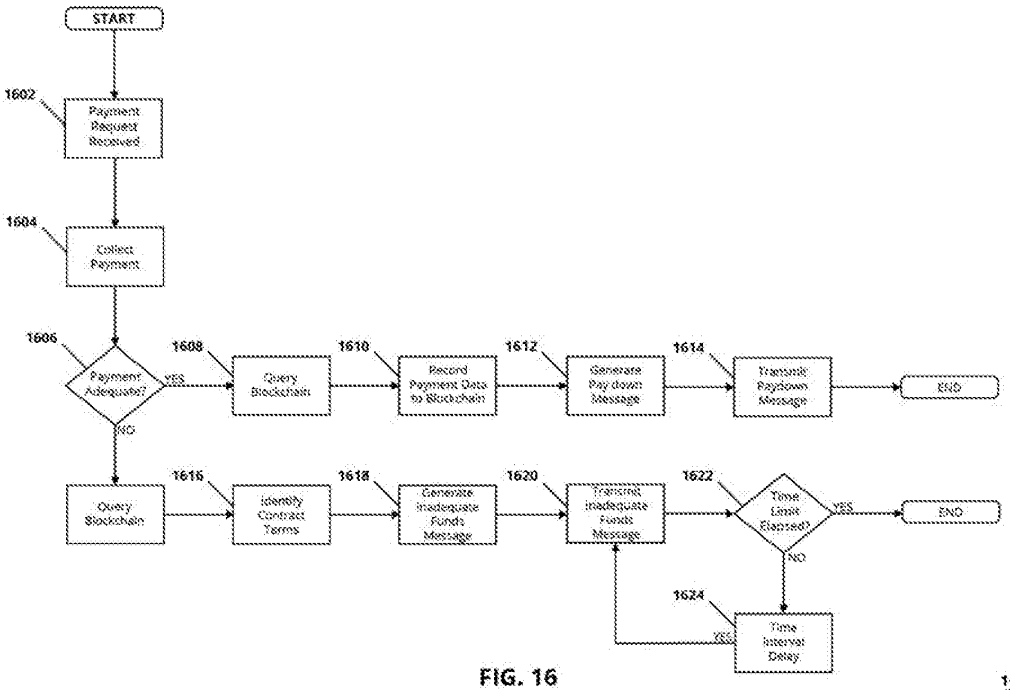

START
1602
Payment Request Received
1604
Collect Payment
1606
Payment Adequate?
YES
NO
1608
Query Blockchain
1610
Record Payment Data to Blockchain
1612
Generate Paydown Message
1614
Transmit Paydown Message
END
Query Blockchain
1616
Identify Contract Terms
1618
Generate Inadequate Funds Message
1620
Transmit Inadequate Funds Message
1622
Time Limit Elapsed?
YES
END
NO
1624
Time Interval Delay
YES
1600

FIG. 16

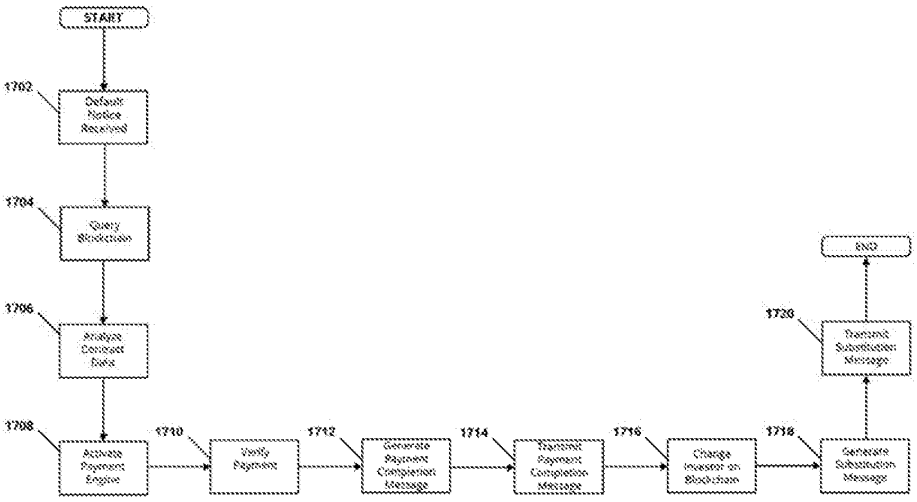

START
1702
Default Notice Received
1704
Query Blockchain
1706
Analyze Contract Data
1708
Activate Payment Engine
1710
Verify Payment
1712
Generate Payment Completion Message
1714
Transmit Payment Completion Message
1716
Change Investor on Blockchain
1718
Generate Substitution Message
1720
Transmit Substitution Message
END

FIG. 17

1700

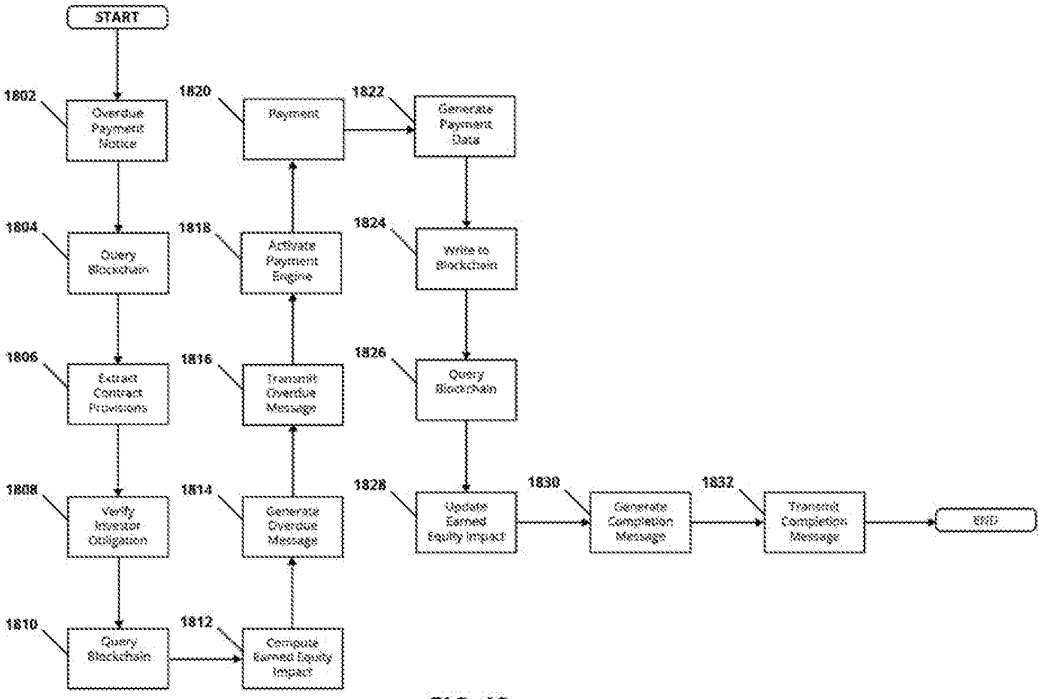

START
1802
Overdue Payment Notice
1804
Query Blockchain
1806
Extract Contract Provisions
1808
Verify Investor Obligation
1810
Query Blockchain
1812
Compute Earned Equity Impact
1814
Generate Overdue Message
1816
Transmit Overdue Message
1818
Activate Payment Engine
1820
Payment
1822
Generate Payment Data
1824
Write to Blockchain
1826
Query Blockchain
1828
Update Earned Equity Impact
1830
Generate Completion Message
1832
Transmit Completion Message
END

FIG. 18

1800

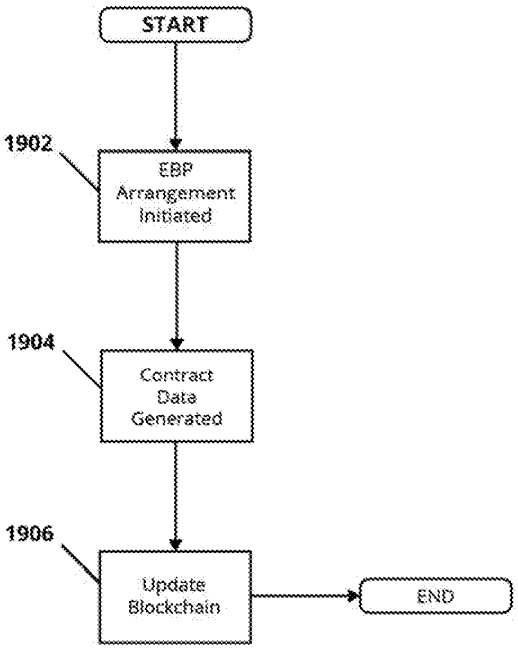

START
1902
EBP Arrangement Initiated
1904
Contract Data Generated
1906
Update Blockchain
END

FIG. 19 1900

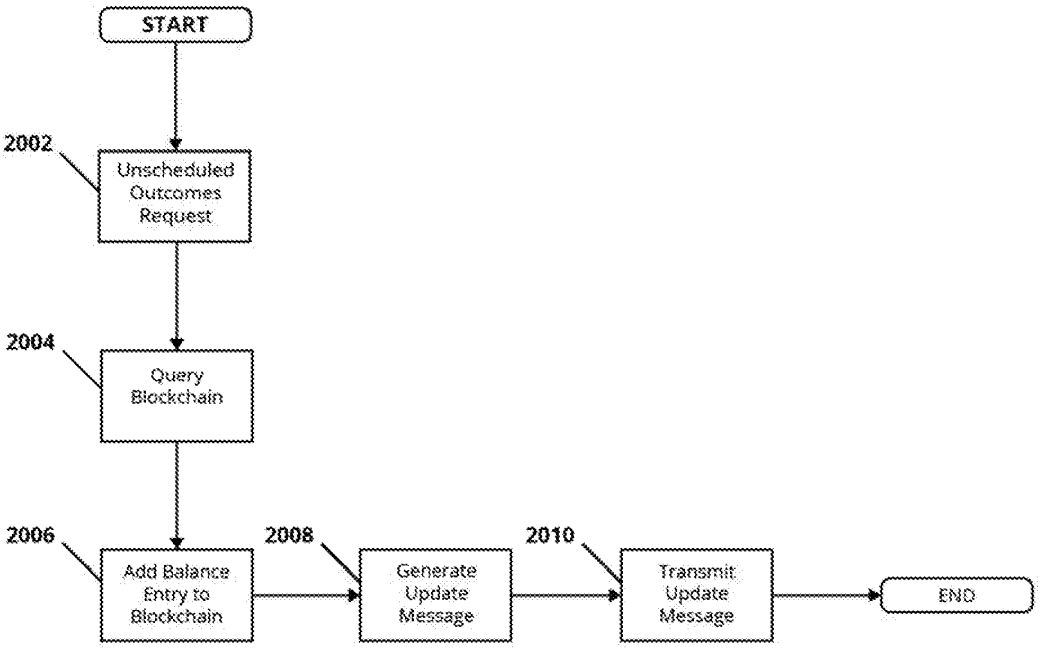

START
2002
Unscheduled Outcomes Request
2004
Query Blockchain
2006
Add Balance Entry to Blockchain
2008
Generate Update Message
2010
Transmit Update Message
END

FIG. 20 2000

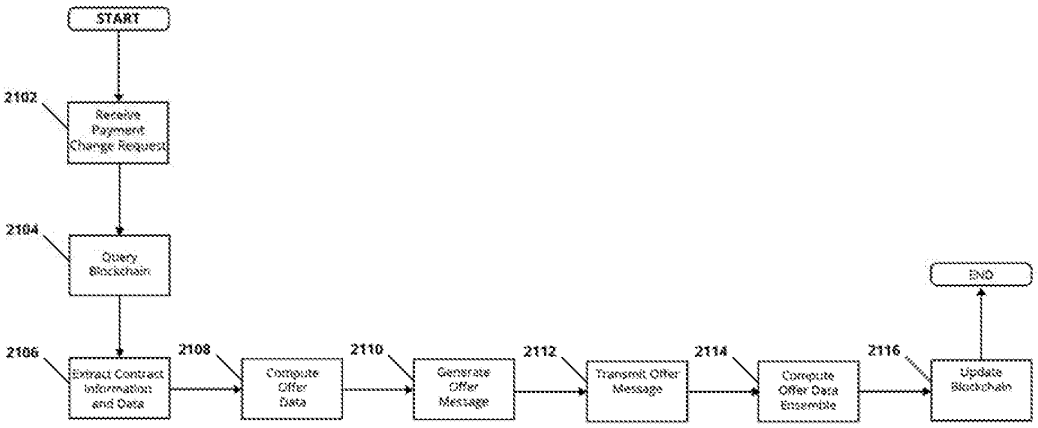

START
2102
Receive Payment Charge Request
2104
Query Blockchain
2106
Extract Contract Information and Data
2108
Compute Offer Data
2110
Generate Offer Message
2112
Transmit Offer Message
2114
Compute Offer Data Ensemble
2116
Update Blockchain
END

FIG. 21

2100

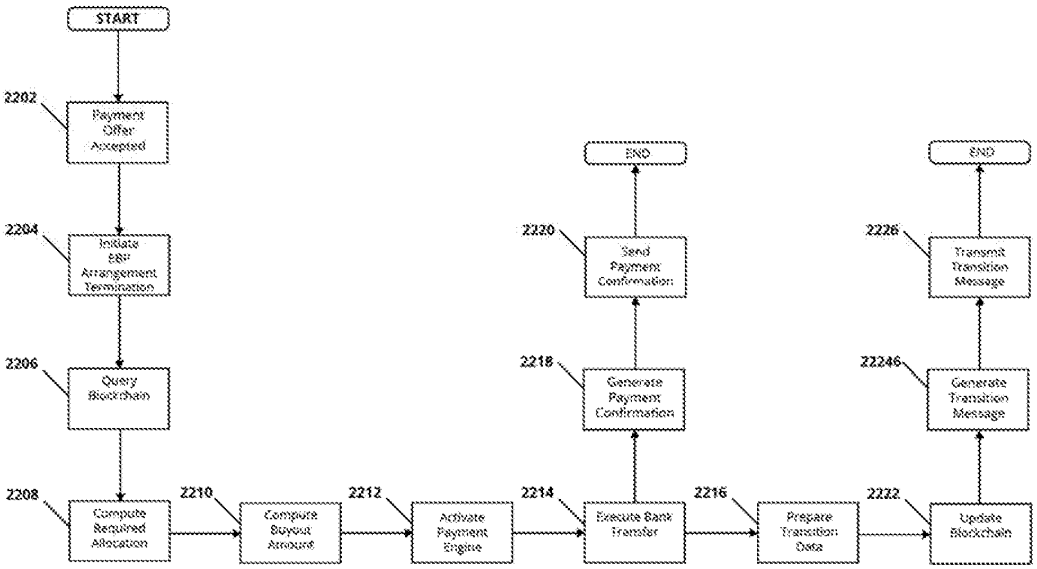

START
2202
Payment Offer Accepted
2204
Initiate EBF Arrangement Termination
2206
Query Blockchain
2208
Compute Required Allocation
2210
Compute Buyout Amount
2212
Activate Payment Engine
2214
Execute Bank Transfer
2216
Prepare Transition Data
2218
Generate Payment Confirmation
2220
Send Payment Confirmation
END
2222
Update Blockchain
22246
Generate Transition Message
2226
Transmit Transition Message
END

FIG. 22

2200

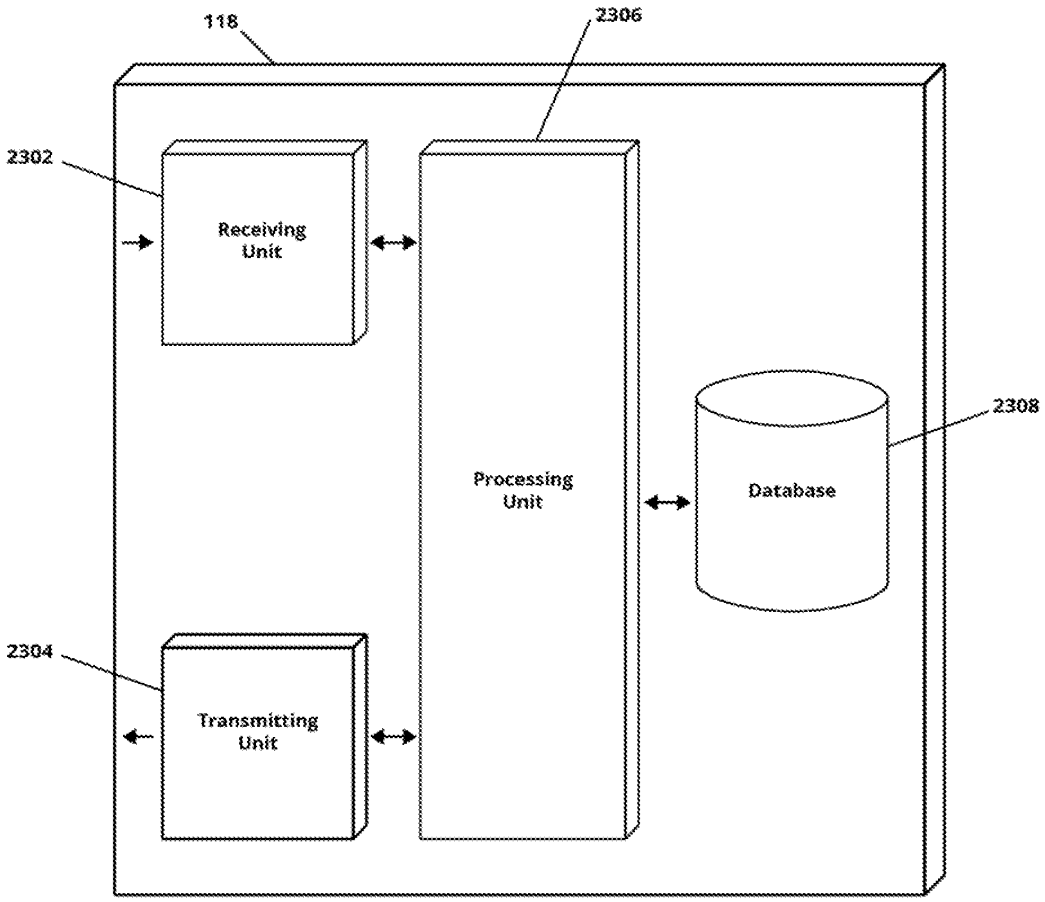

118
2306
2302
Receiving Unit
Processing Unit
Database
2308
2304
Transmitting Unit

FIG. 23

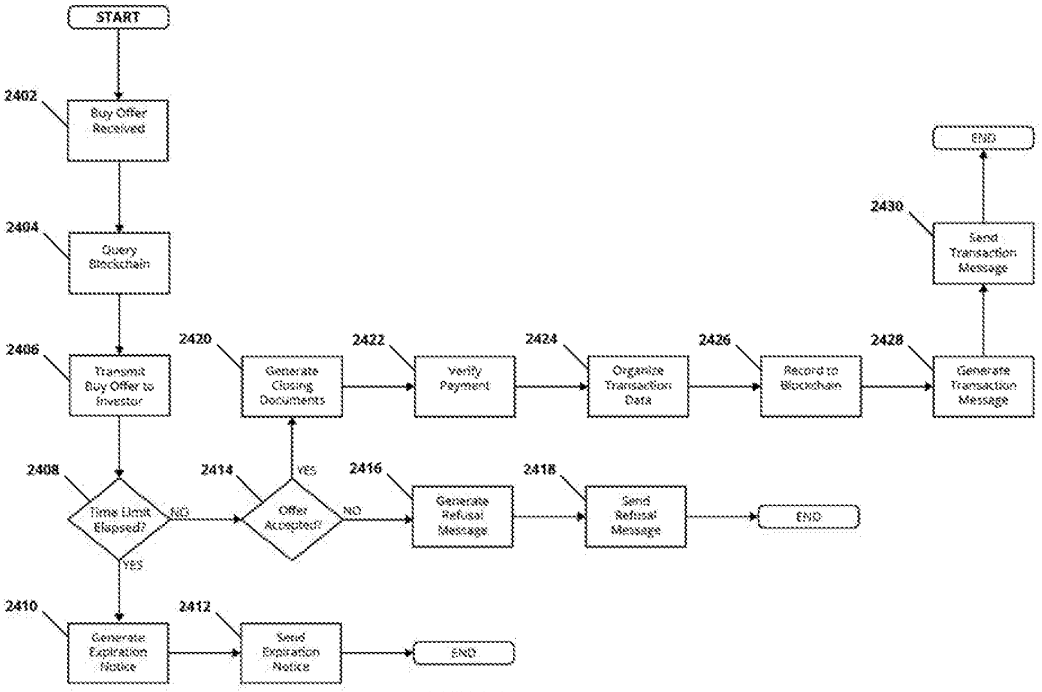

START
2402
Buy Offer Received
2404
Query Blockchain
2406
Transmit Buy Offer to Investor
2408
Time Limit Elapsed?
NO
YES
2410
Generate Expiration Notice
2412
Send Expiration Notice
END
2414
Offer Accepted?
YES
NO
2416
Generate Refusal Message
2418
Send Refusal Message
END
2420
Generate Closing Documents
2422
Verify Payment
2424
Organize Transaction Data
2426
Record to Blockchain
2428
Generate Transaction Message
2430
Send Transaction Message
END

FIG. 24

2400

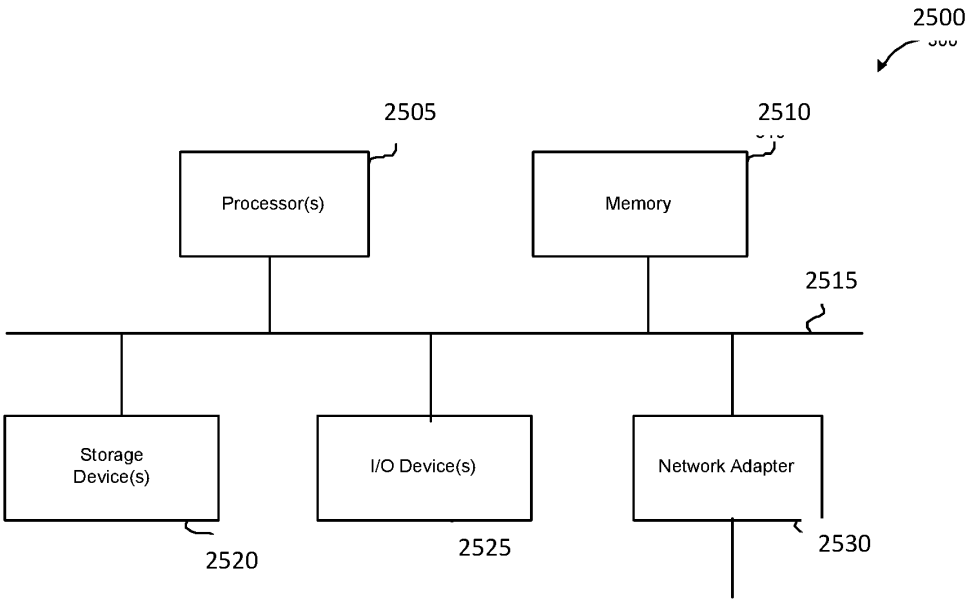

2500
2505
2510
Processor(s)
Memory
2515
Storage Device(s)
I/O Device(s)
Network Adapter
2520
2525
2530

FIG. 25