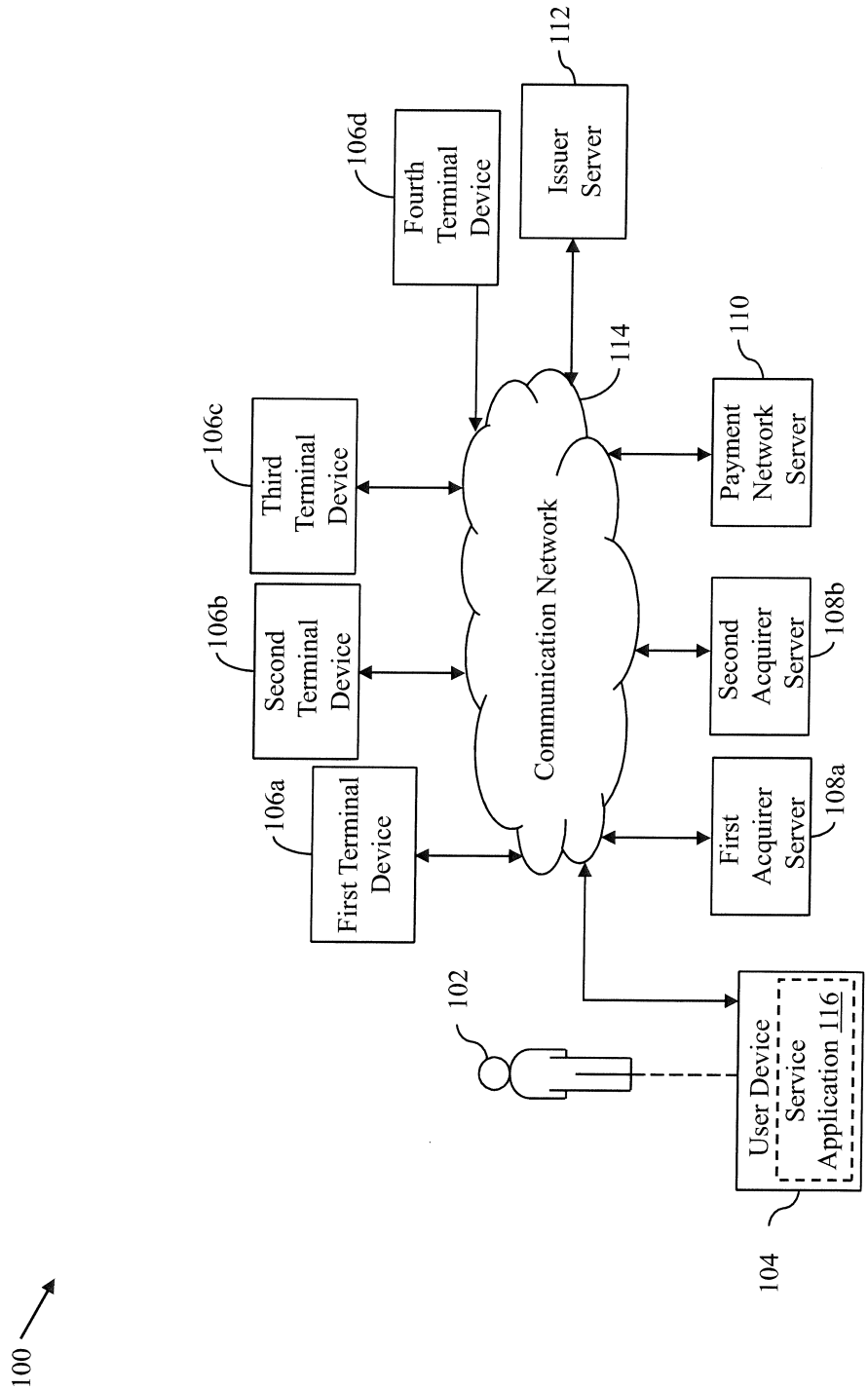

100
102
104
User Device
Service
Application 116
First Terminal Device
106a
Second Terminal Device
106b
Third Terminal Device
106c
Fourth Terminal Device
106d
Communication Network
114
First Acquirer Server
108a
Second Acquirer Server
108b
Payment Network Server
110
Issuer Server
112

FIG. 1

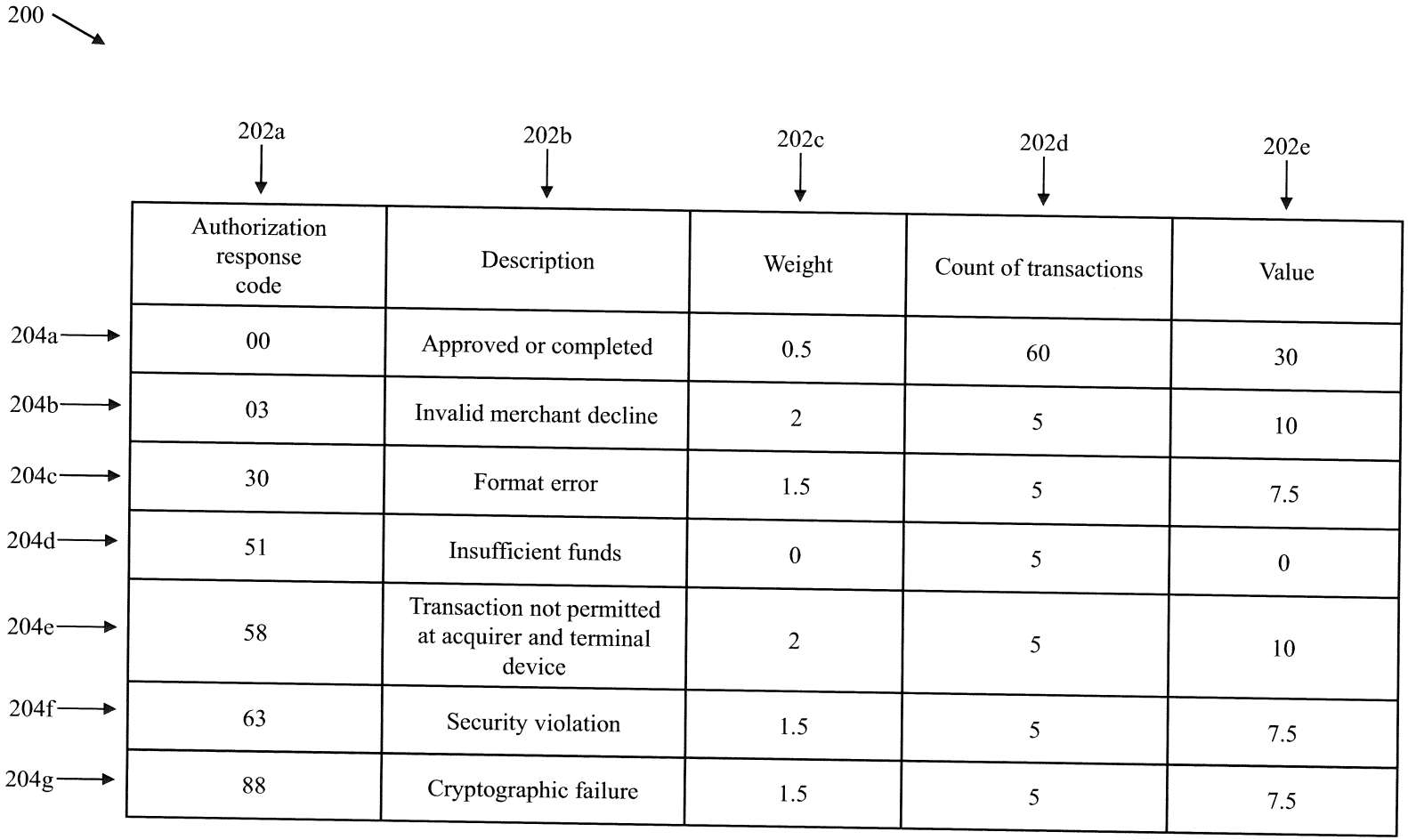

200
202a
202b
202c
202d
202e
Authorization response code
Description
Weight
Count of transactions
Value
204a
00
Approved or completed
0.5
60
30
204b
03
Invalid merchant decline
2
5
10
204c
30
Format error
1.5
5
7.5
204d
51
Insufficient funds
0
5
0
204e
58
Transaction not permitted at acquirer and terminal device
2
5
10
204f
63
Security violation
1.5
5
7.5
204g
88
Cryptographic failure
1.5
5
7.5

FIG. 2

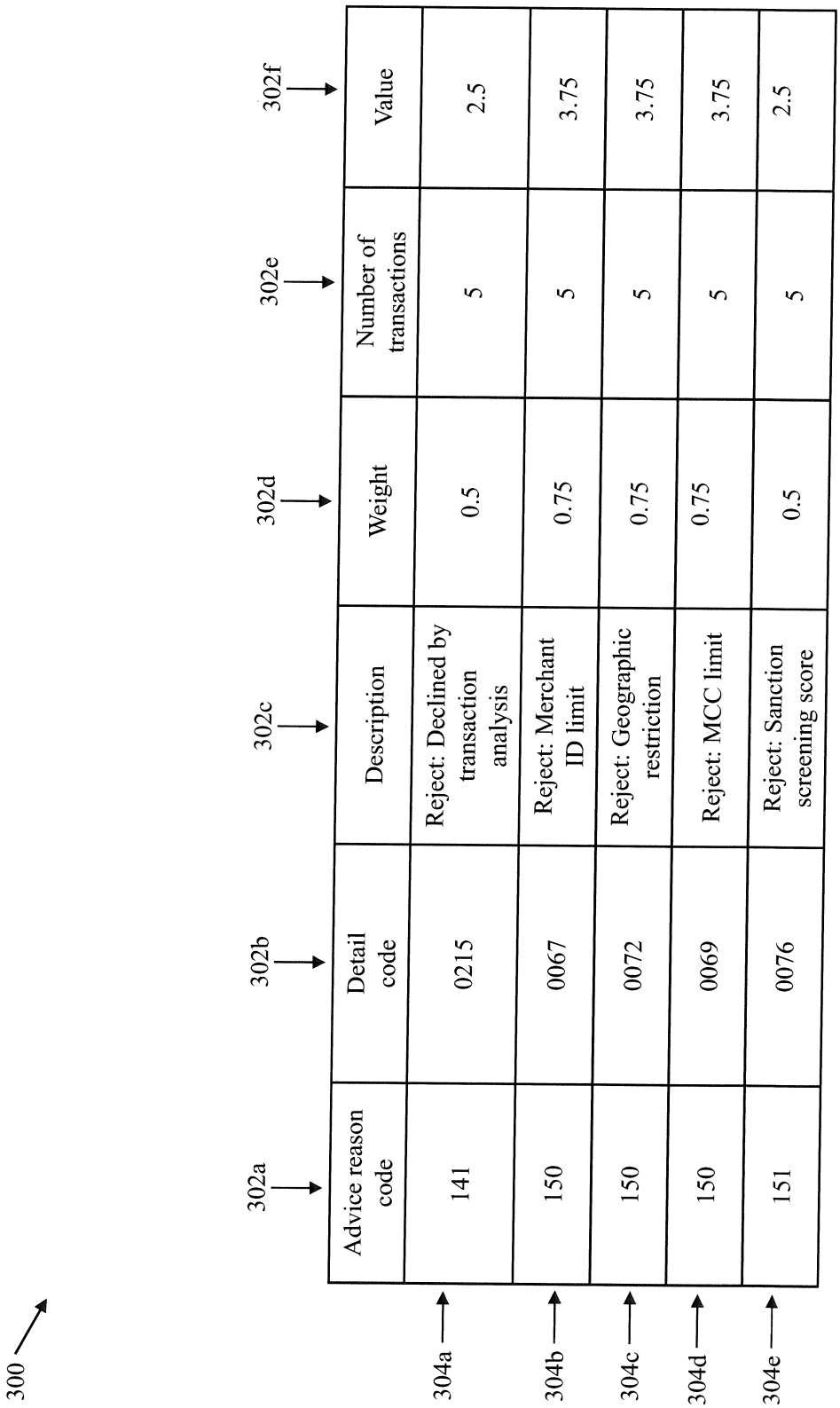

300
302a
302b
302c
302d
302e
302f
Advice reason code
Detail code
Description
Weight
Number of transactions
Value
304a
141
0215
Reject: Declined by transaction analysis
0.5
5
2.5
304b
150
0067
Reject: Merchant ID limit
0.75
5
3.75
304c
150
0072
Reject: Geographic restriction
0.75
5
3.75
304d
150
0069
Reject: MCC limit
0.75
5
3.75
304e
151
0076
Reject: Sanction screening score
0.5
5
2.5

FIG. 3

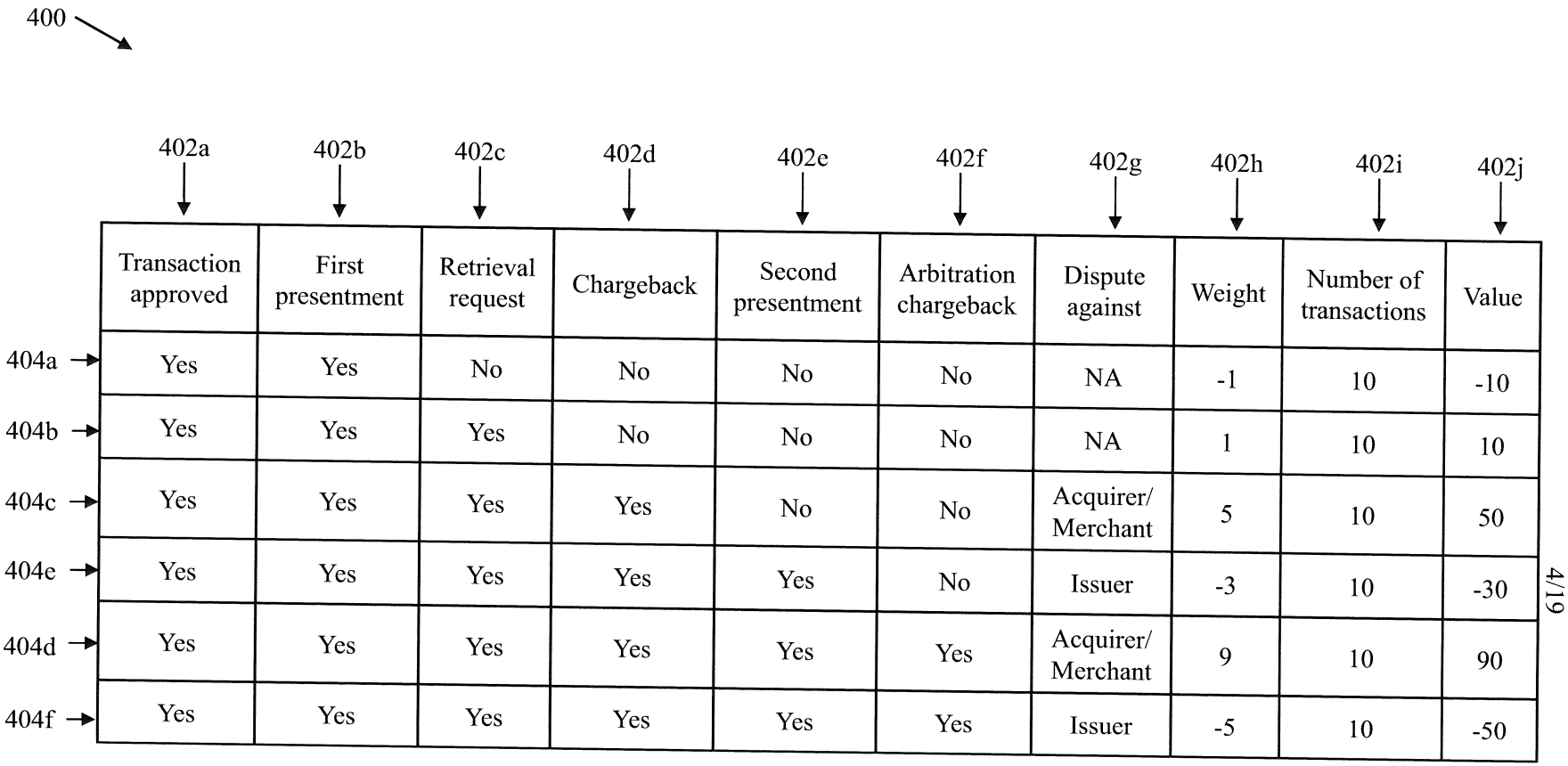

400
402a
402b
402c
402d
402e
402f
402g
402h
402i
402j
Transaction approved
First presentment
Retrieval request
Chargeback
Second presentment
Arbitration chargeback
Dispute against
Weight
Number of transactions
Value
404a
Yes
Yes
No
No
No
No
NA
-1
10
-10
404b
Yes
Yes
Yes
No
No
No
NA
1
10
10
404c
Yes
Yes
Yes
Yes
No
No
Acquirer/ Merchant
5
10
50
404e
Yes
Yes
Yes
Yes
Yes
No
Issuer
-3
10
-30
404d
Yes
Yes
Yes
Yes
Yes
Yes
Acquirer/ Merchant
9
10
90
404f
Yes
Yes
Yes
Yes
Yes
Yes
Issuer
-5
10
-50

FIG. 4

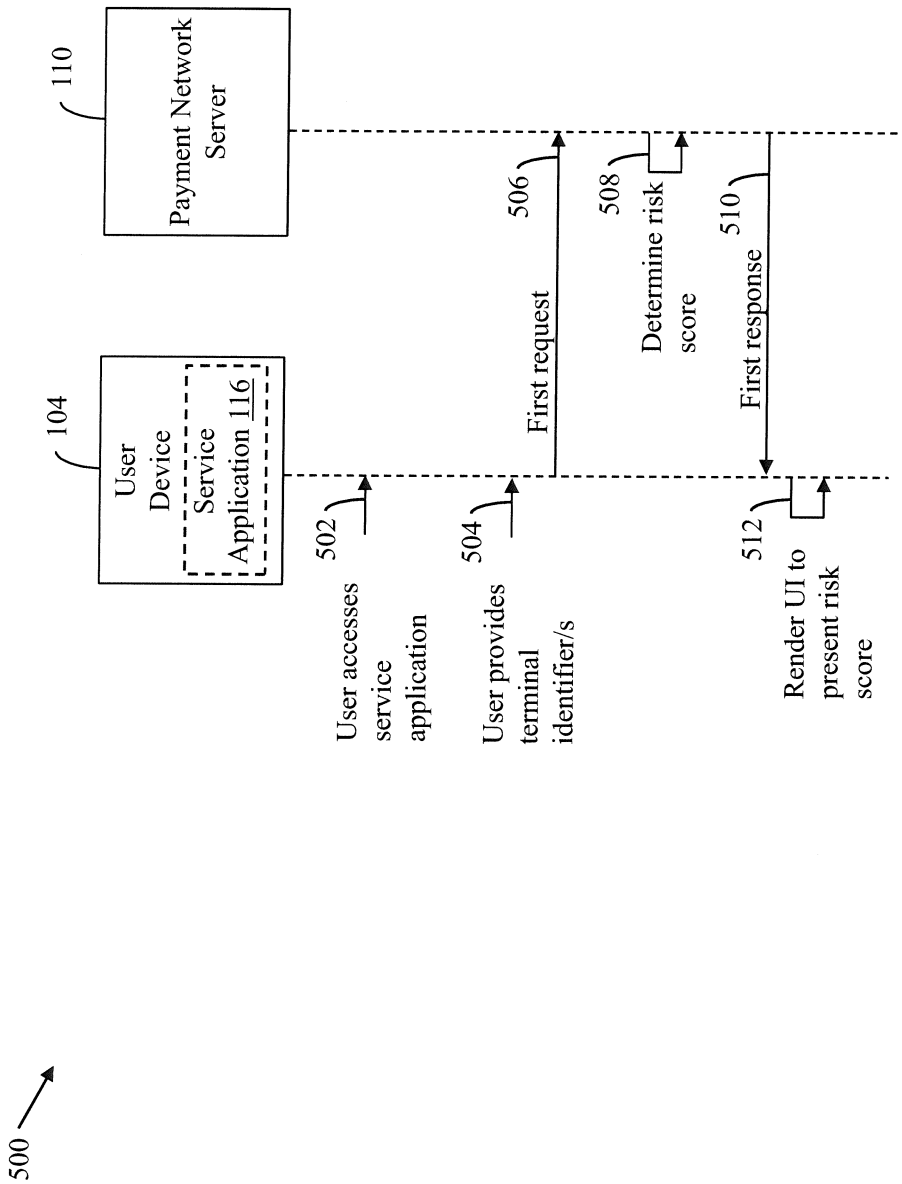

500
104
User Device
Service Application 116
110
Payment Network Server
502
User accesses service application
504
User provides terminal identifier/s
506
First request
508
Determine risk score
510
First response
512
Render UI to present risk score

FIG. 5

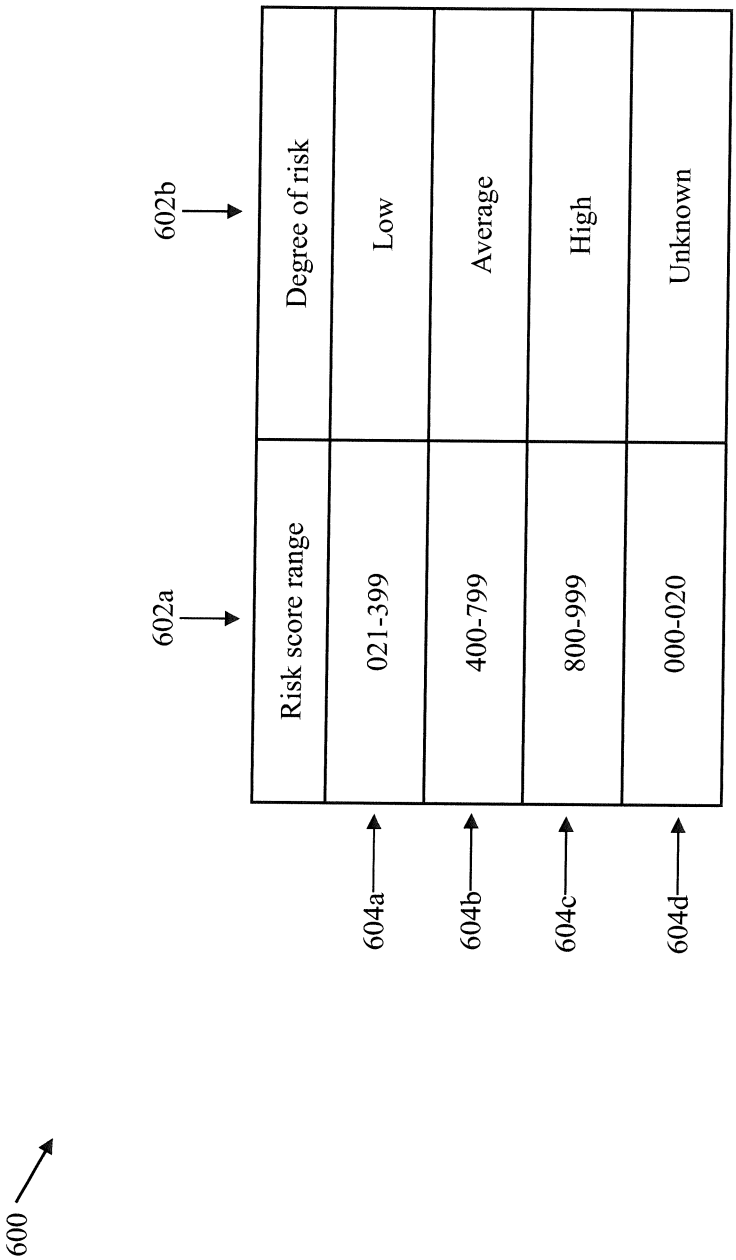

600
602a
602b
Risk score range
Degree of risk
021-399
Low
400-799
Average
800-999
High
000-020
Unknown
604a
604b
604c
604d

FIG. 6

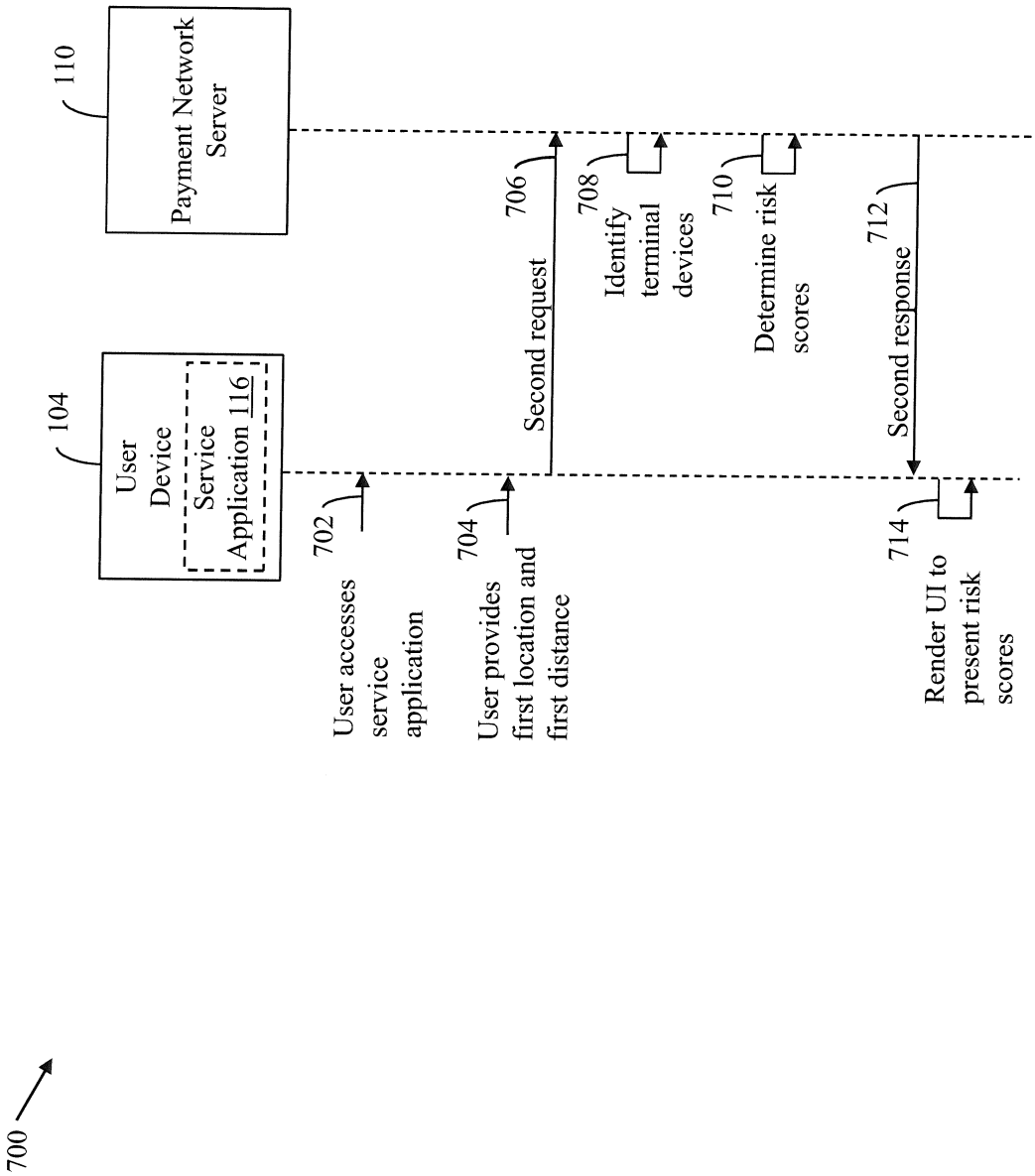

700
User Device
Service Application 116
104
Payment Network Server
110
User accesses service application
702
User provides first location and first distance
704
Second request
706
Identify terminal devices
708
Determine risk scores
710
Second response
712
Render UI to present risk scores
714

FIG. 7

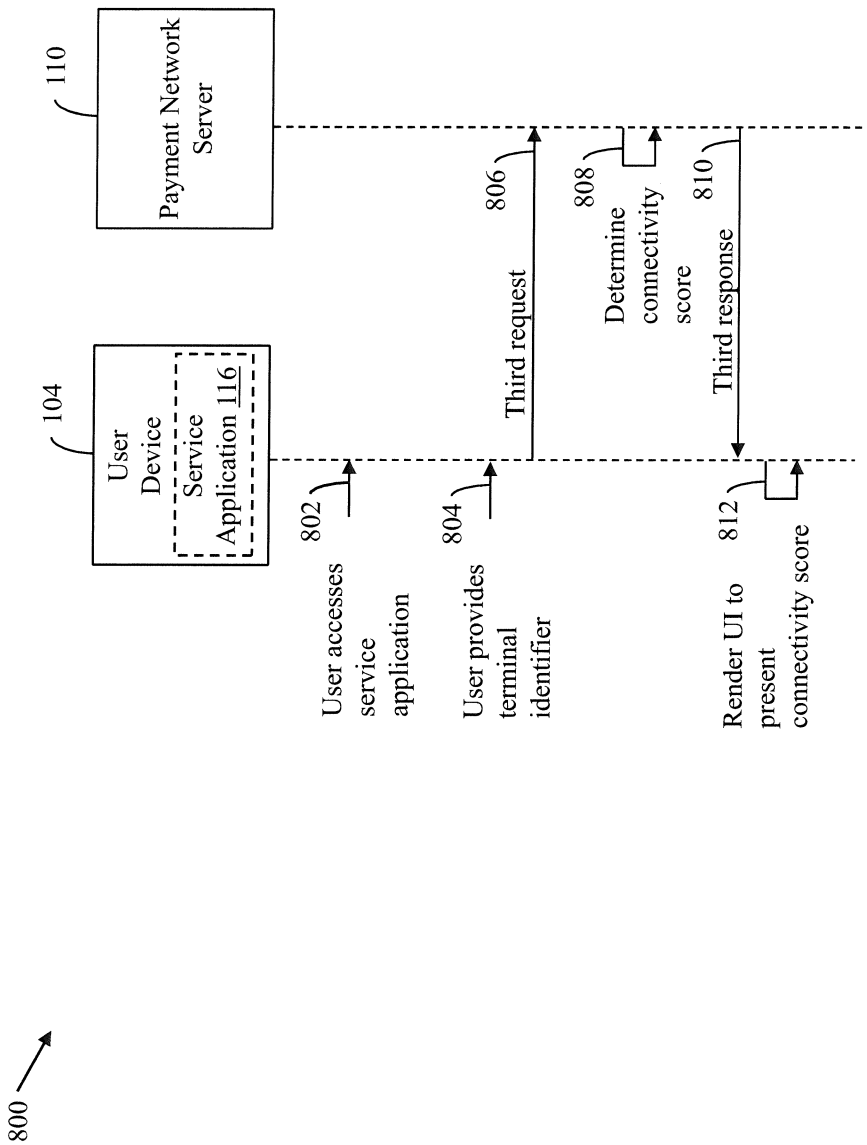

800
104
User Device
Service Application 116
110
Payment Network Server
802
User accesses service application
804
User provides terminal identifier
806
Third request
808
Determine connectivity score
810
Third response
812
Render UI to present connectivity score

FIG. 8

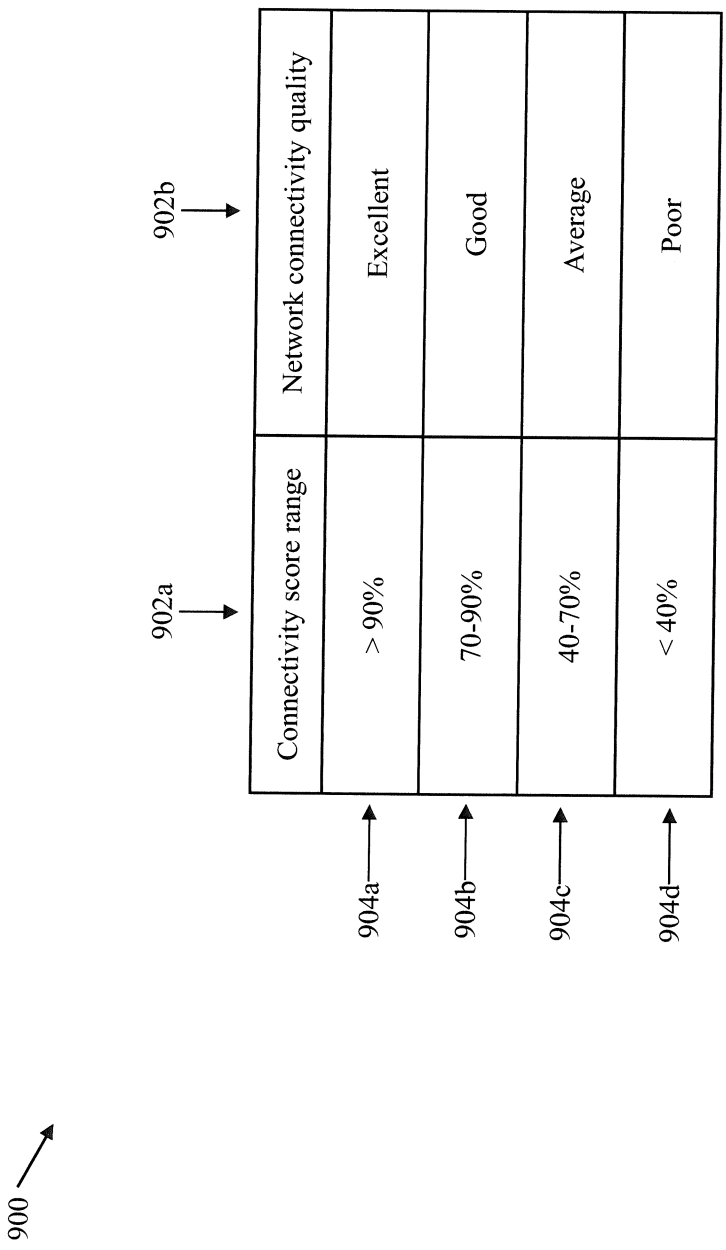

900
902a
902b
Connectivity score range
Network connectivity quality
> 90%
Excellent
70-90%
Good
40-70%
Average
< 40%
Poor
904a
904b
904c
904d

FIG. 9

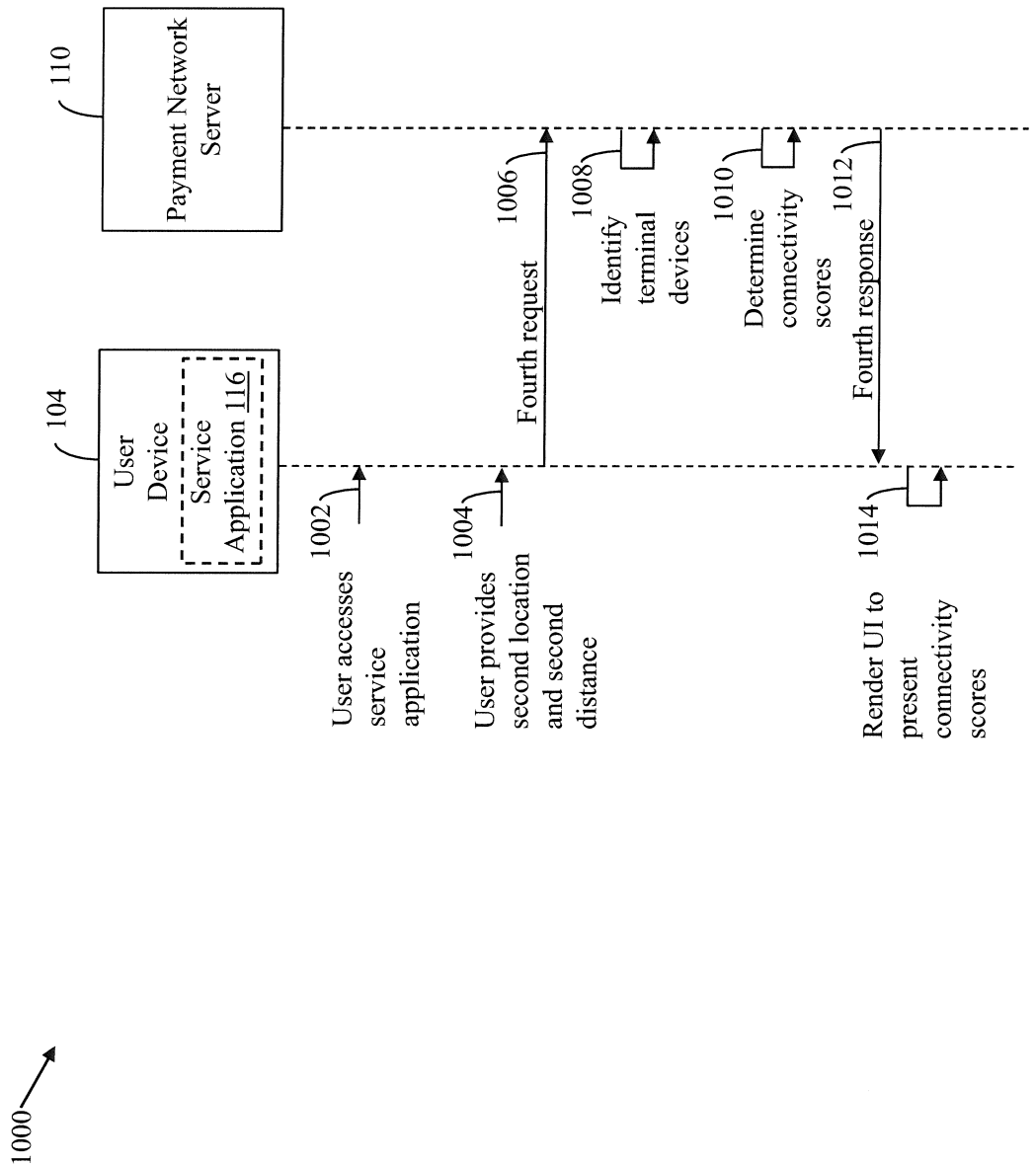

1000
104
User Device
Service Application 116
110
Payment Network Server
1002
User accesses service application
1004
User provides second location and second distance
1006
Fourth request
1008
Identify terminal devices
1010
Determine connectivity scores
1012
Fourth response
1014
Render UI to present connectivity scores

FIG. 10

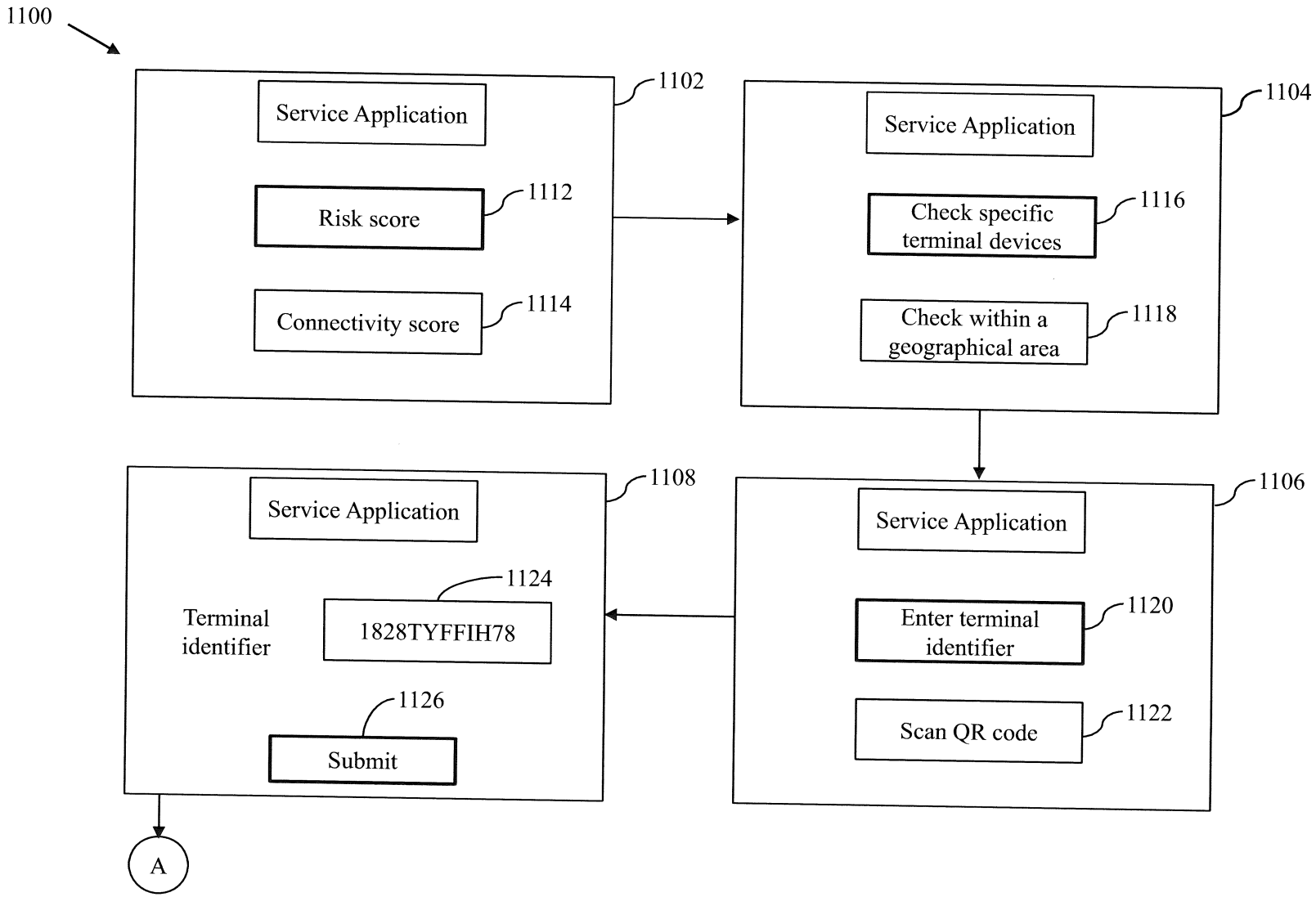

1100
Service Application
1102
Risk score
1112
Connectivity score
1114
Service Application
1104
Check specific terminal devices
1116
Check within a geographical area
1118
Service Application
1106
Enter terminal identifier
1120
Scan QR code
1122
Service Application
1108
Terminal identifier
1828TYFFIH78
1124
Submit
1126
A

FIG. 11A

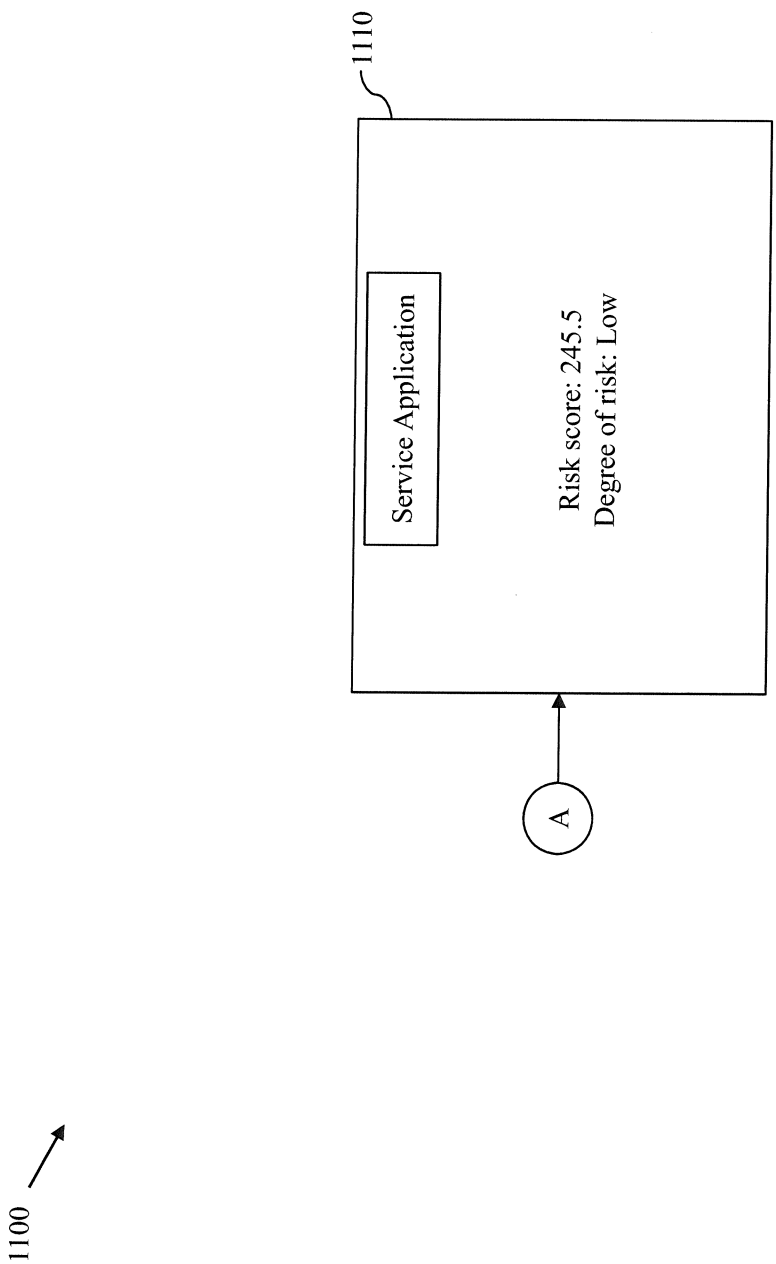

1100
1110
Service Application
Risk score: 245.5
Degree of risk: Low
A

FIG. 11B

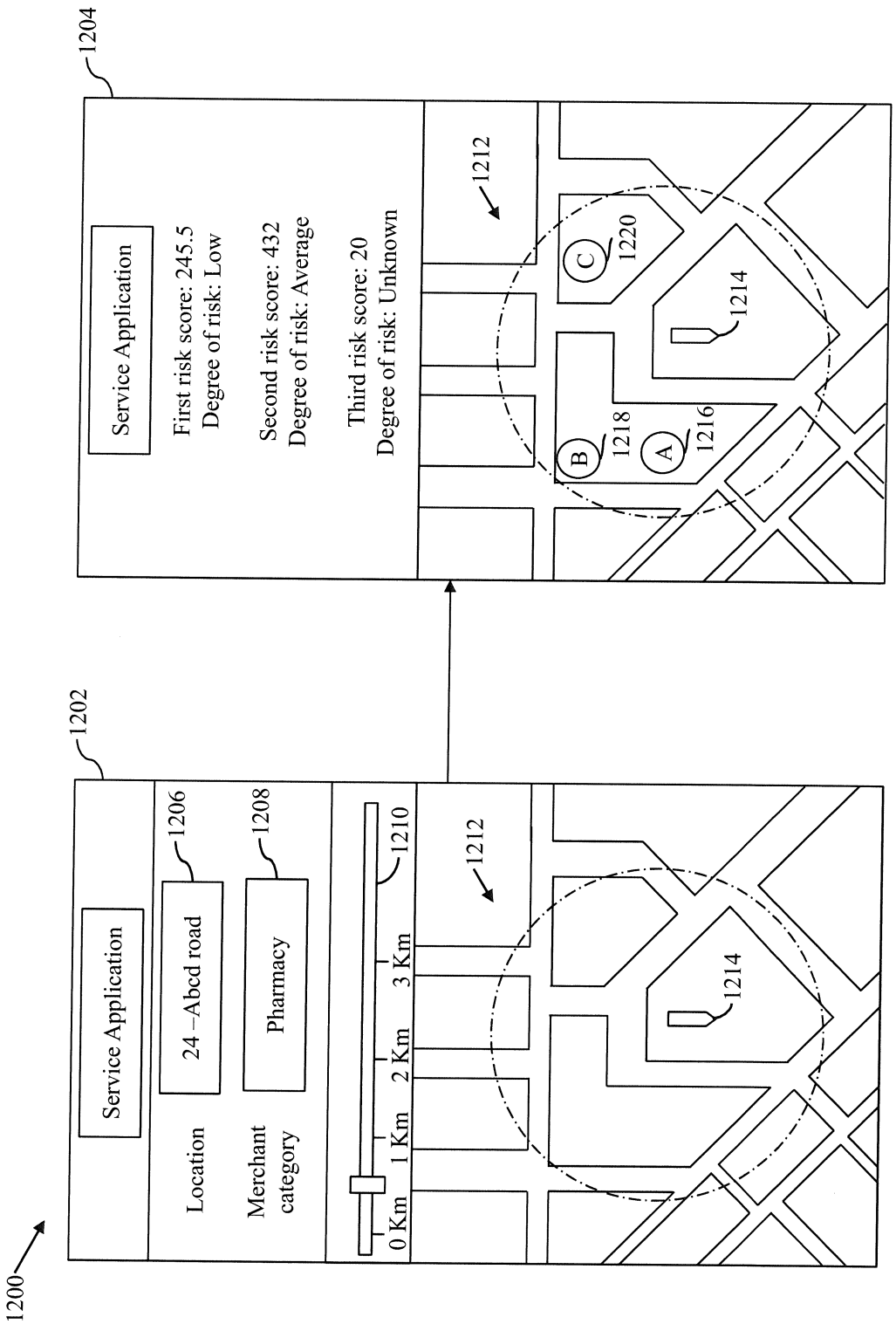

1200
1202
Service Application
Location
24 –Abcd road
1206
Merchant category
Pharmacy
1208
0 Km
1 Km
2 Km
3 Km
1210
1212
1214
1204
Service Application
First risk score: 245.5
Degree of risk: Low
Second risk score: 432
Degree of risk: Average
Third risk score: 20
Degree of risk: Unknown
1212
1214
A
1216
B
1218
C
1220

FIG. 12

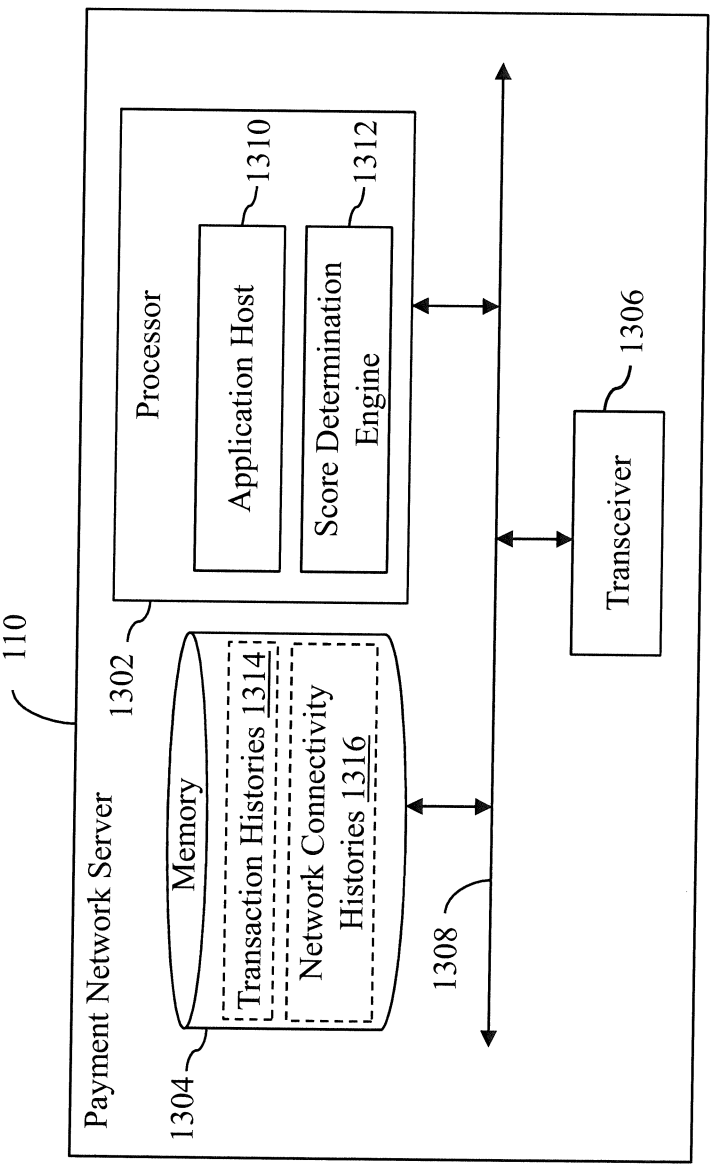

110
Payment Network Server
1302
Processor
Application Host
1310
Score Determination Engine
1312
Memory
Transaction Histories 1314
Network Connectivity Histories 1316
1304
1308
Transceiver
1306

FIG. 13

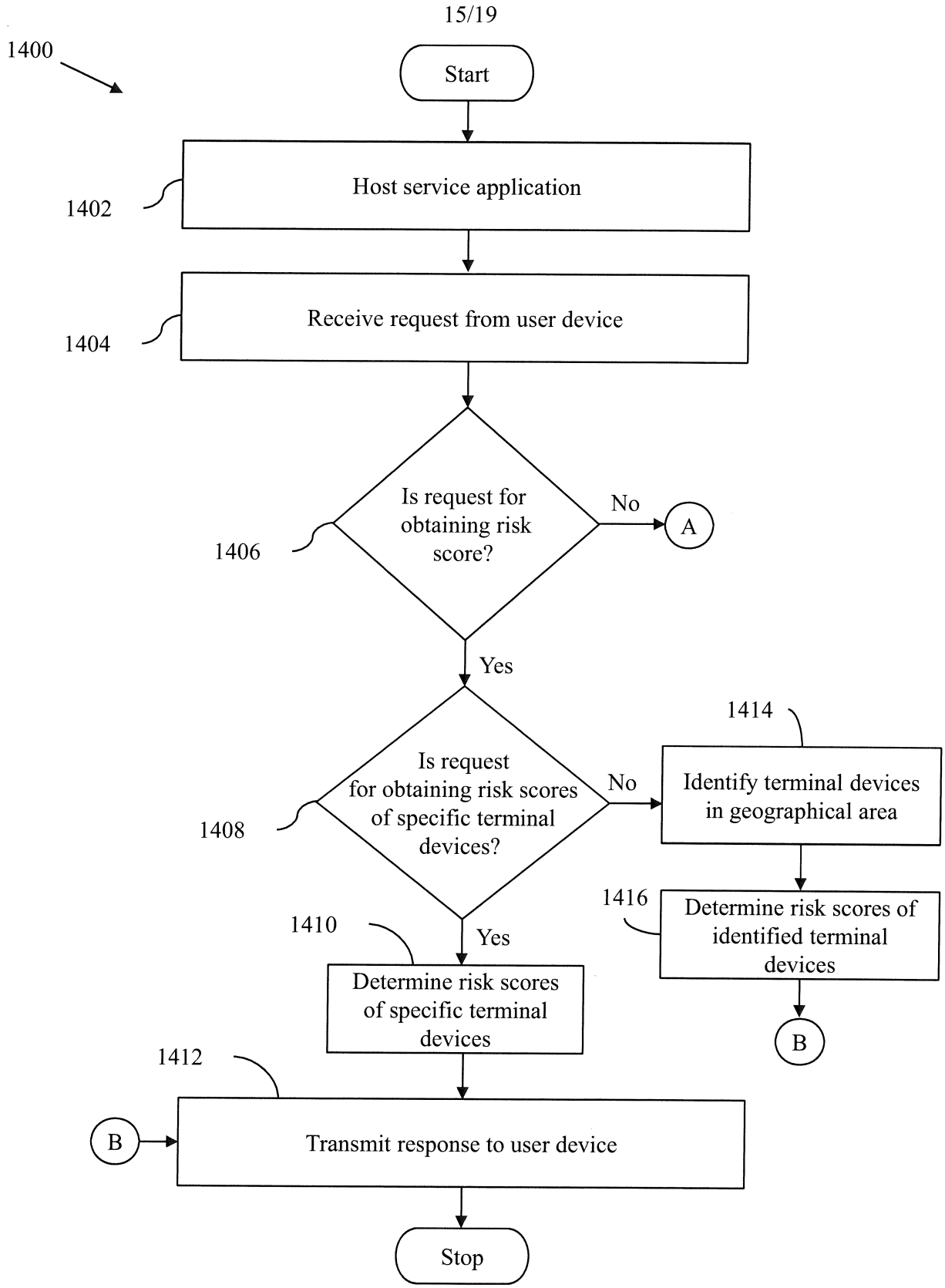

1400
Start
Host service application
1402
Receive request from user device
1404
Is request for obtaining risk score?
1406
No
A
Yes
Is request for obtaining risk scores of specific terminal devices?
1408
No
1414
Identify terminal devices in geographical area
1416
Determine risk scores of identified terminal devices
B
Yes
1410
Determine risk scores of specific terminal devices
1412
B
Transmit response to user device
Stop

FIG. 14A

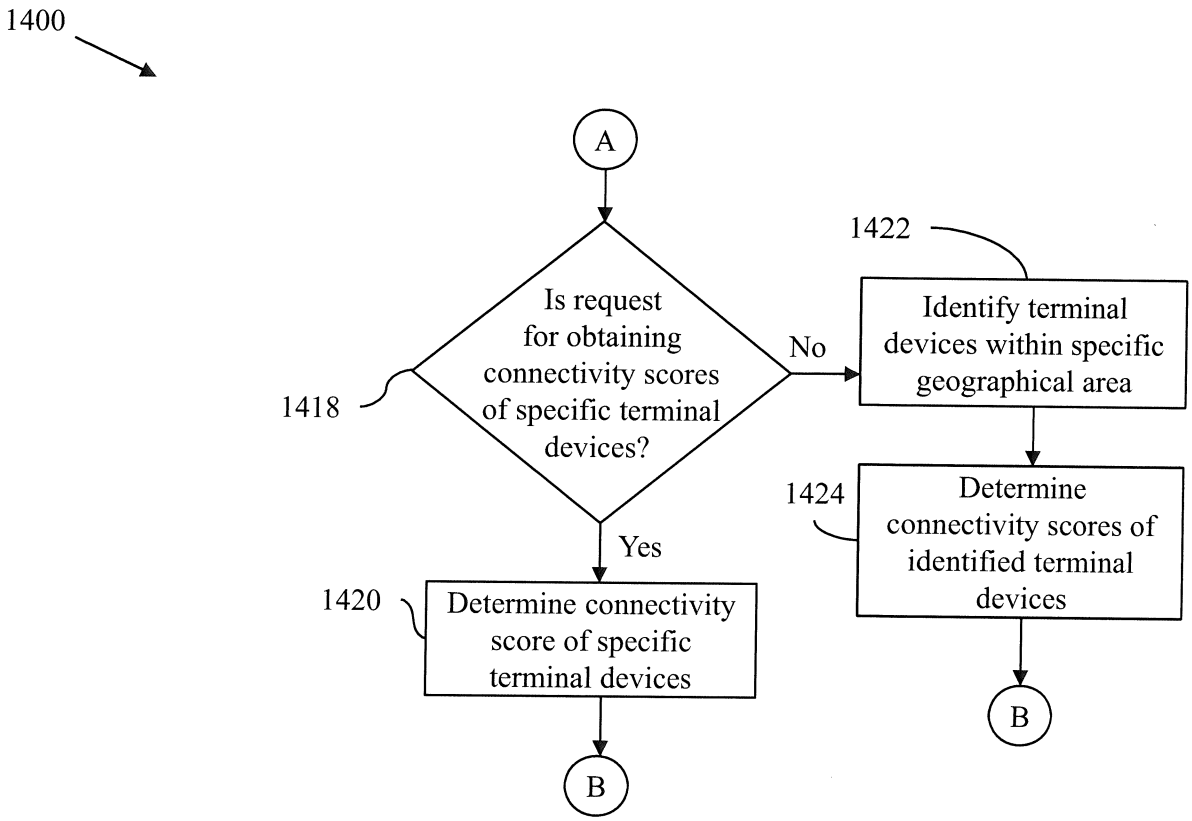

1400
A
Is request for obtaining connectivity scores of specific terminal devices?
1418
No
Yes
1422
Identify terminal devices within specific geographical area
1424
Determine connectivity scores of identified terminal devices
1420
Determine connectivity score of specific terminal devices
B
B

FIG. 14B

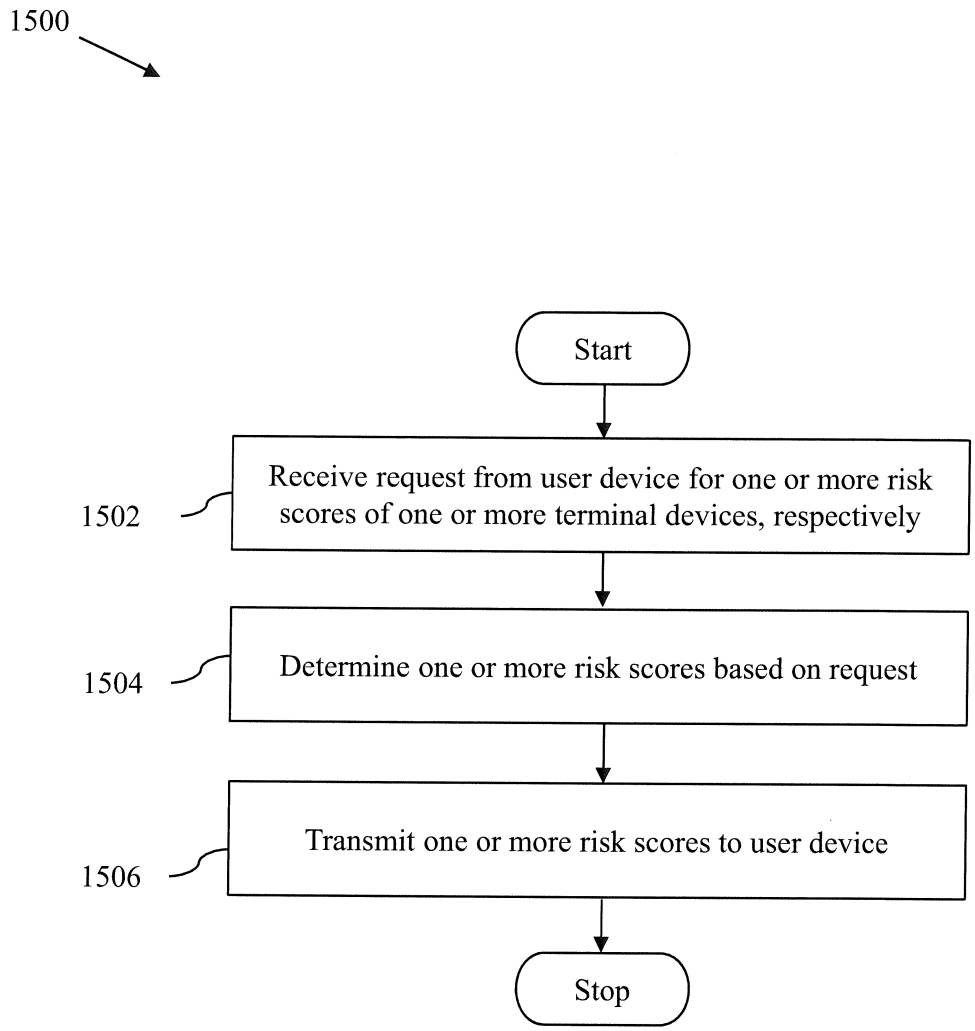

1500
Start
Receive request from user device for one or more risk scores of one or more terminal devices, respectively
1502
Determine one or more risk scores based on request
1504
Transmit one or more risk scores to user device
1506
Stop

FIG. 15

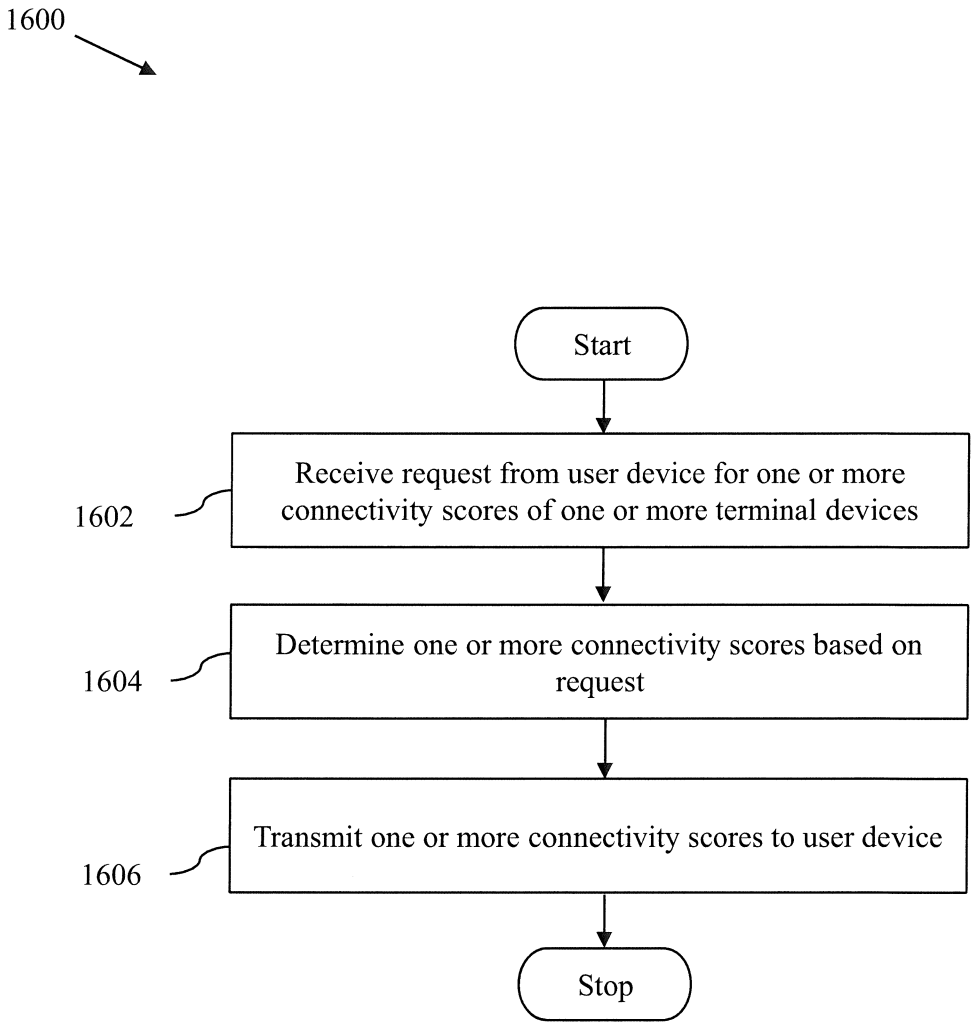

1600
Start
Receive request from user device for one or more connectivity scores of one or more terminal devices
1602
Determine one or more connectivity scores based on request
1604
Transmit one or more connectivity scores to user device
1606
Stop

FIG. 16

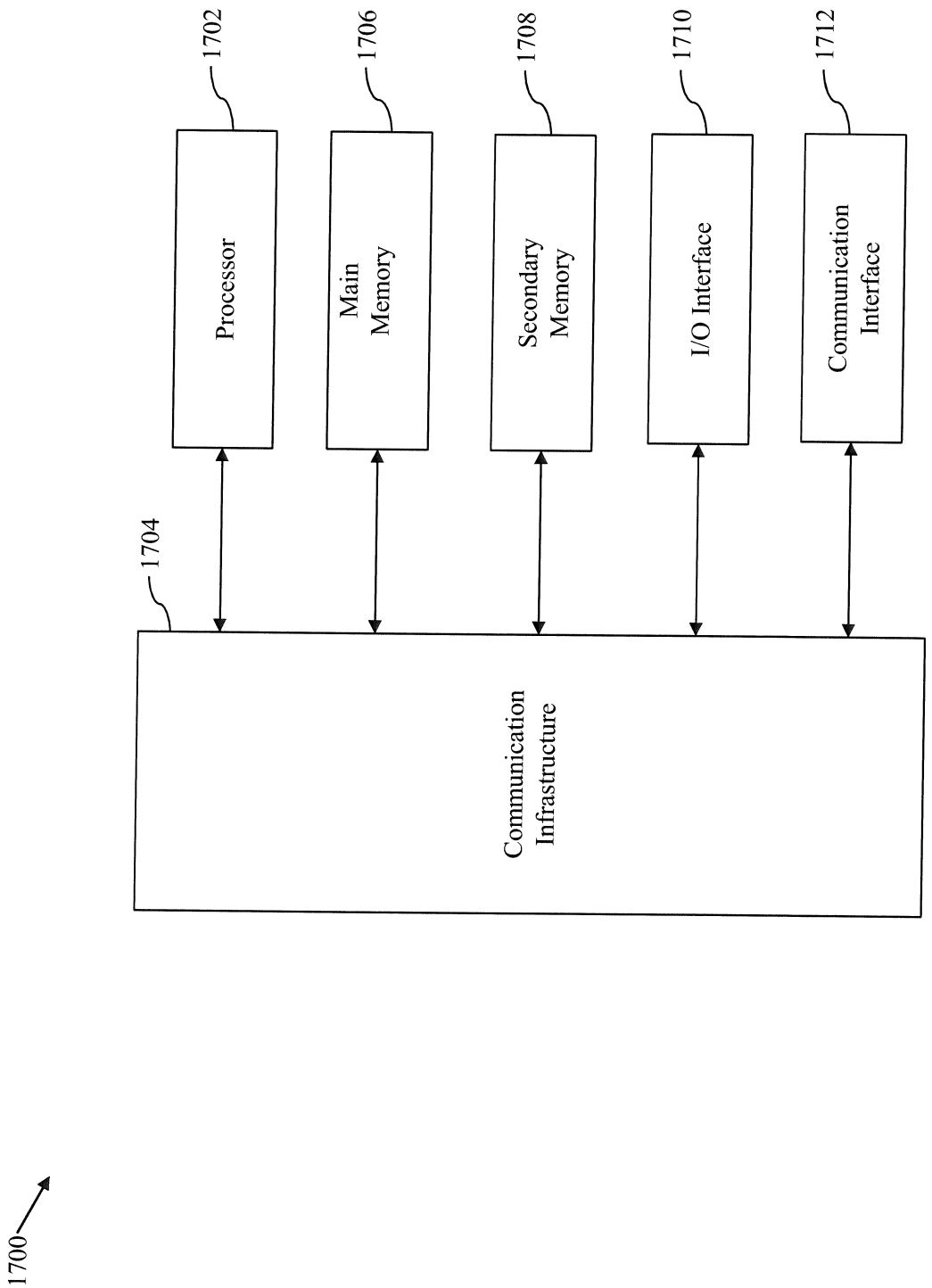

1700
1702
Processor
1706
Main Memory
1708
Secondary Memory
1710
I/O Interface
1712
Communication Interface
1704
Communication Infrastructure

FIG. 17