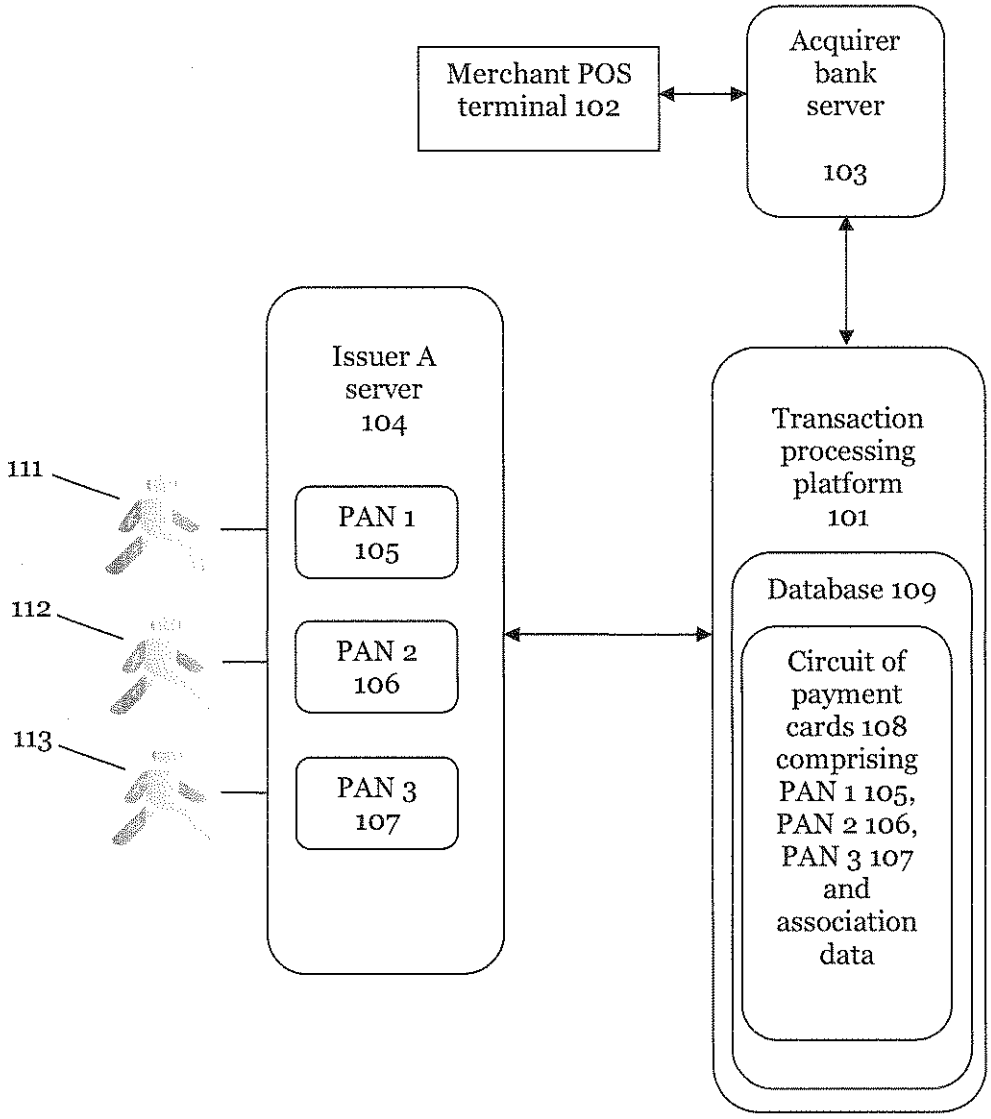

Merchant POS terminal 102
Acquirer bank server 103
100
Issuer A server 104
PAN 1 105
PAN 2 106
PAN 3 107
111
112
113
Transaction processing platform 101
Database 109
Circuit of payment cards 108 comprising PAN 1 105, PAN 2 106, PAN 3 107 and association data

Figure 1

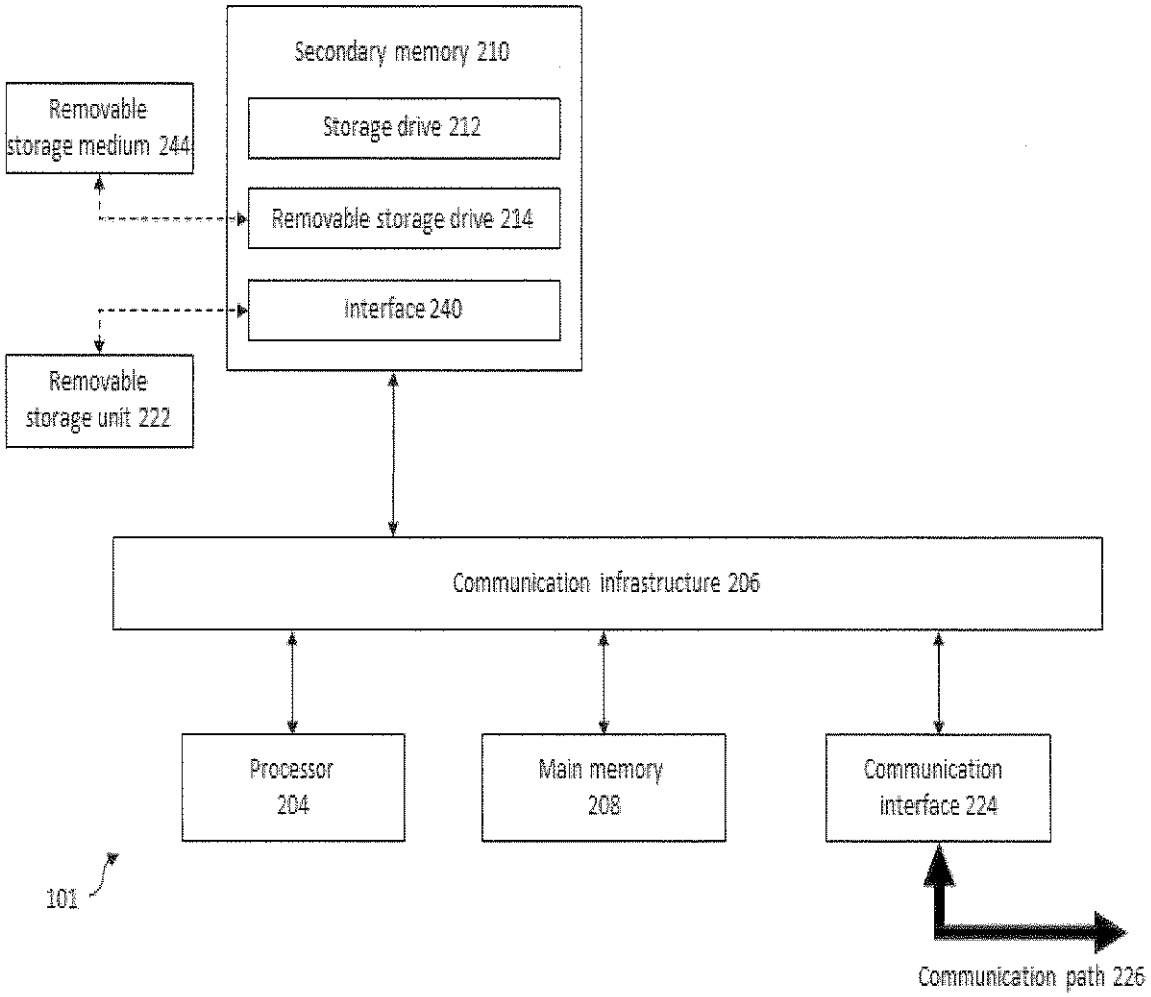

Secondary memory 210
Removable storage medium 244
Storage drive 212
Removable storage drive 214
Interface 240
Removable storage unit 222
Communication infrastructure 206
Processor 204
Main memory 208
Communication interface 224
101
Communication path 226

Figure 2

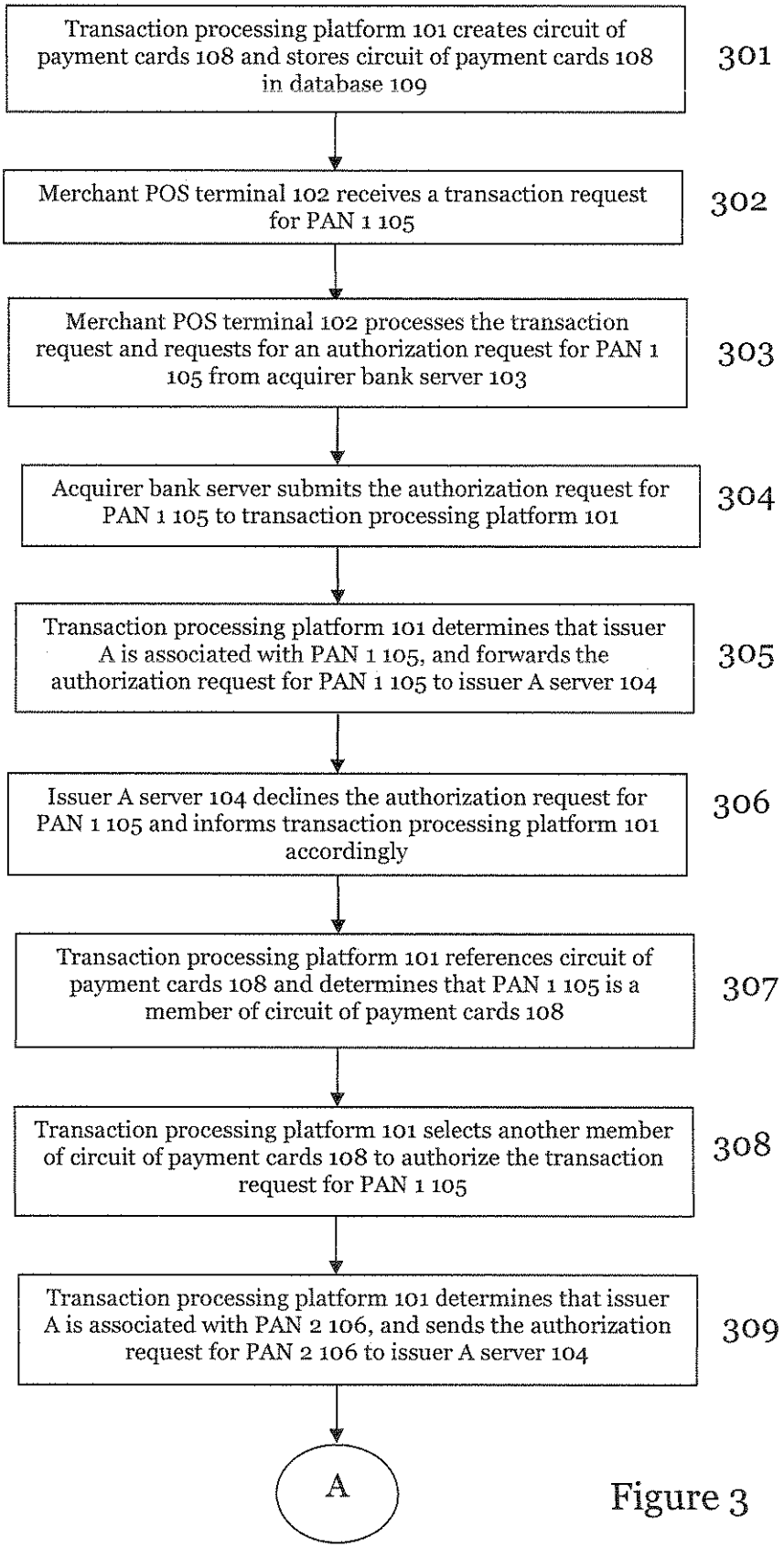

Transaction processing platform 101 creates circuit of payment cards 108 and stores circuit of payment cards 108 in database 109
301
Merchant POS terminal 102 receives a transaction request for PAN 1 105
302
Merchant POS terminal 102 processes the transaction request and requests for an authorization request for PAN 1 105 from acquirer bank server 103
303
Acquirer bank server submits the authorization request for PAN 1 105 to transaction processing platform 101
304
Transaction processing platform 101 determines that issuer A is associated with PAN 1 105, and forwards the authorization request for PAN 1 105 to issuer A server 104
305
Issuer A server 104 declines the authorization request for PAN 1 105 and informs transaction processing platform 101 accordingly
306
Transaction processing platform 101 references circuit of payment cards 108 and determines that PAN 1 105 is a member of circuit of payment cards 108
307
Transaction processing platform 101 selects another member of circuit of payment cards 108 to authorize the transaction request for PAN 1 105
308
Transaction processing platform 101 determines that issuer A is associated with PAN 2 106, and sends the authorization request for PAN 2 106 to issuer A server 104
309
A

Figure 3

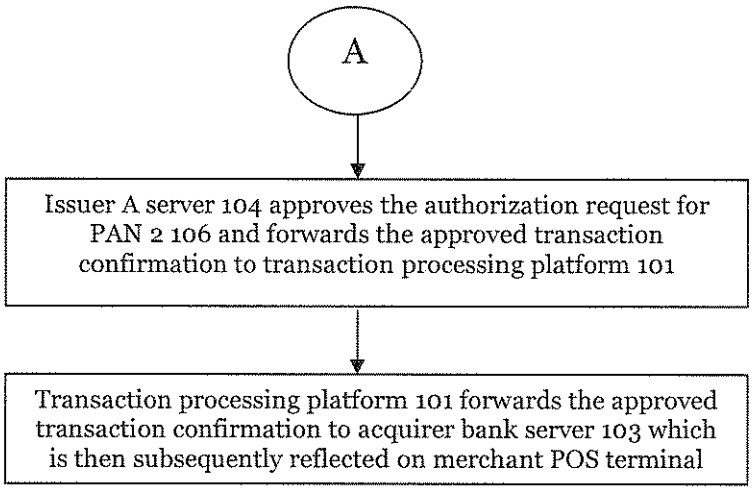


Figure 3
(continued)

109

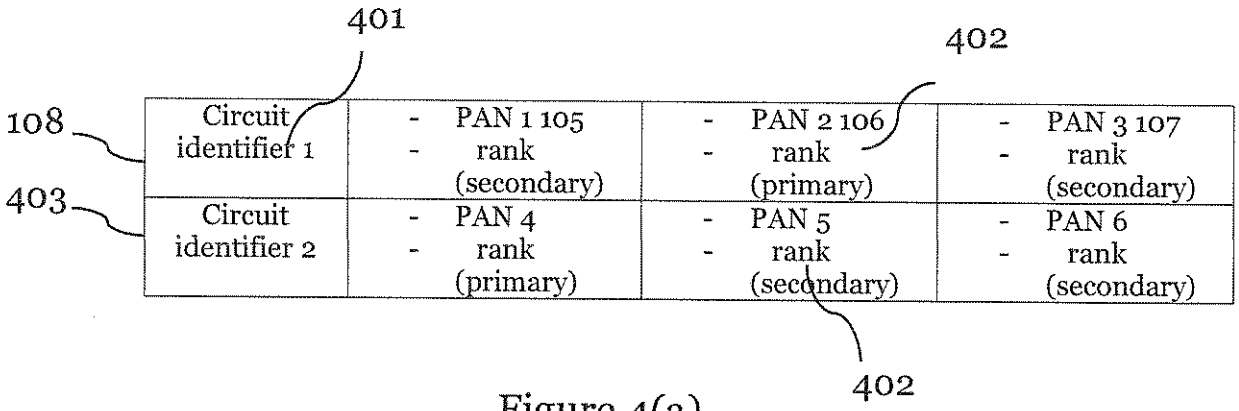


Figure 4(a)

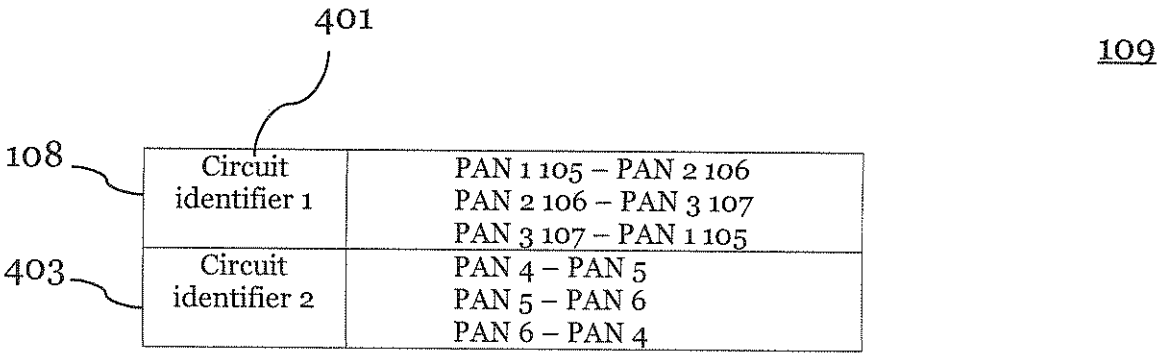


Figure 4(b)

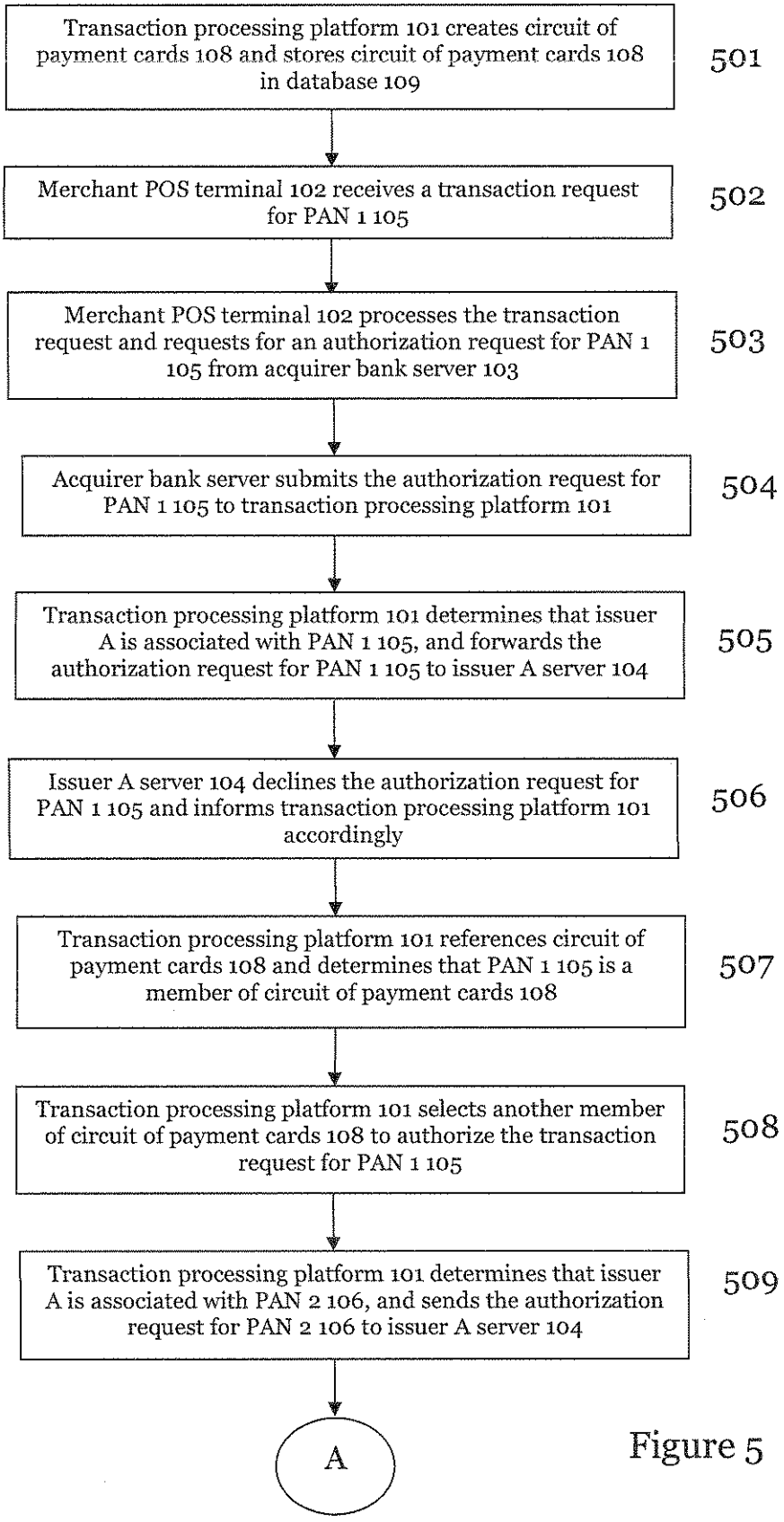

Transaction processing platform 101 creates circuit of payment cards 108 and stores circuit of payment cards 108 in database 109
501
Merchant POS terminal 102 receives a transaction request for PAN 1 105
502
Merchant POS terminal 102 processes the transaction request and requests for an authorization request for PAN 1 105 from acquirer bank server 103
503
Acquirer bank server submits the authorization request for PAN 1 105 to transaction processing platform 101
504
Transaction processing platform 101 determines that issuer A is associated with PAN 1 105, and forwards the authorization request for PAN 1 105 to issuer A server 104
505
Issuer A server 104 declines the authorization request for PAN 1 105 and informs transaction processing platform 101 accordingly
506
Transaction processing platform 101 references circuit of payment cards 108 and determines that PAN 1 105 is a member of circuit of payment cards 108
507
Transaction processing platform 101 selects another member of circuit of payment cards 108 to authorize the transaction request for PAN 1 105
508
Transaction processing platform 101 determines that issuer A is associated with PAN 2 106, and sends the authorization request for PAN 2 106 to issuer A server 104
509
A

Figure 5

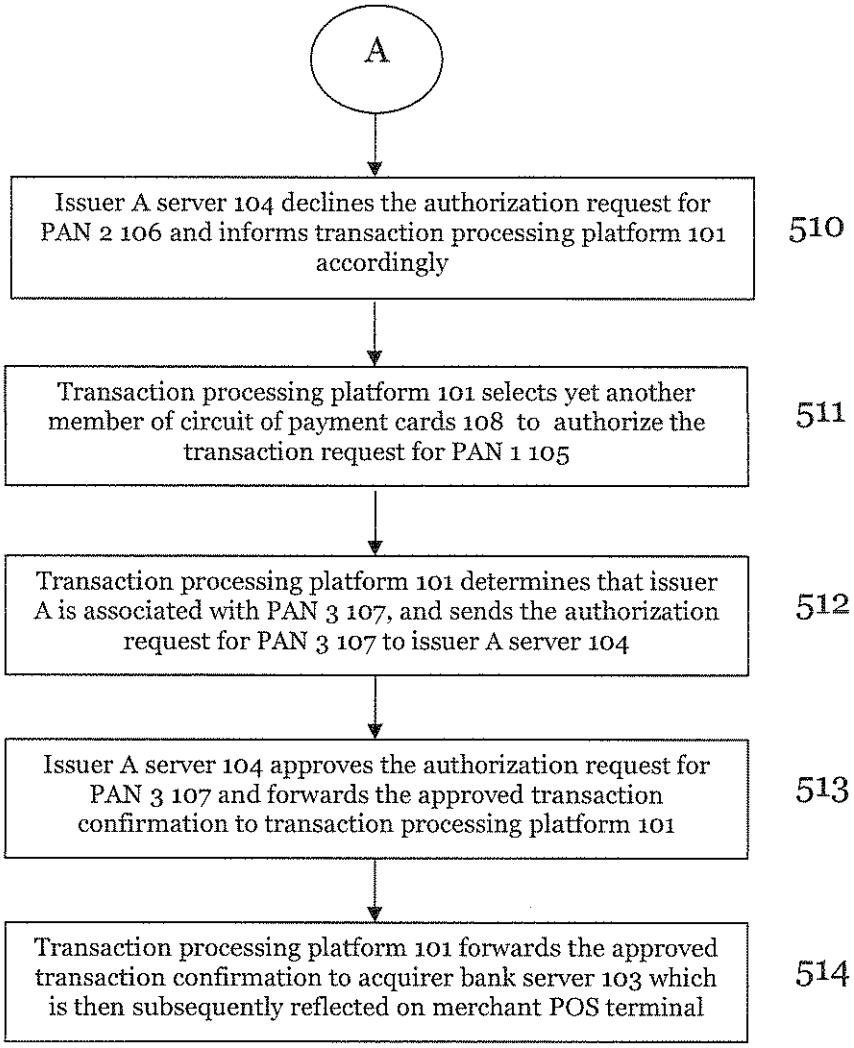


Figure 5
(continued)

600

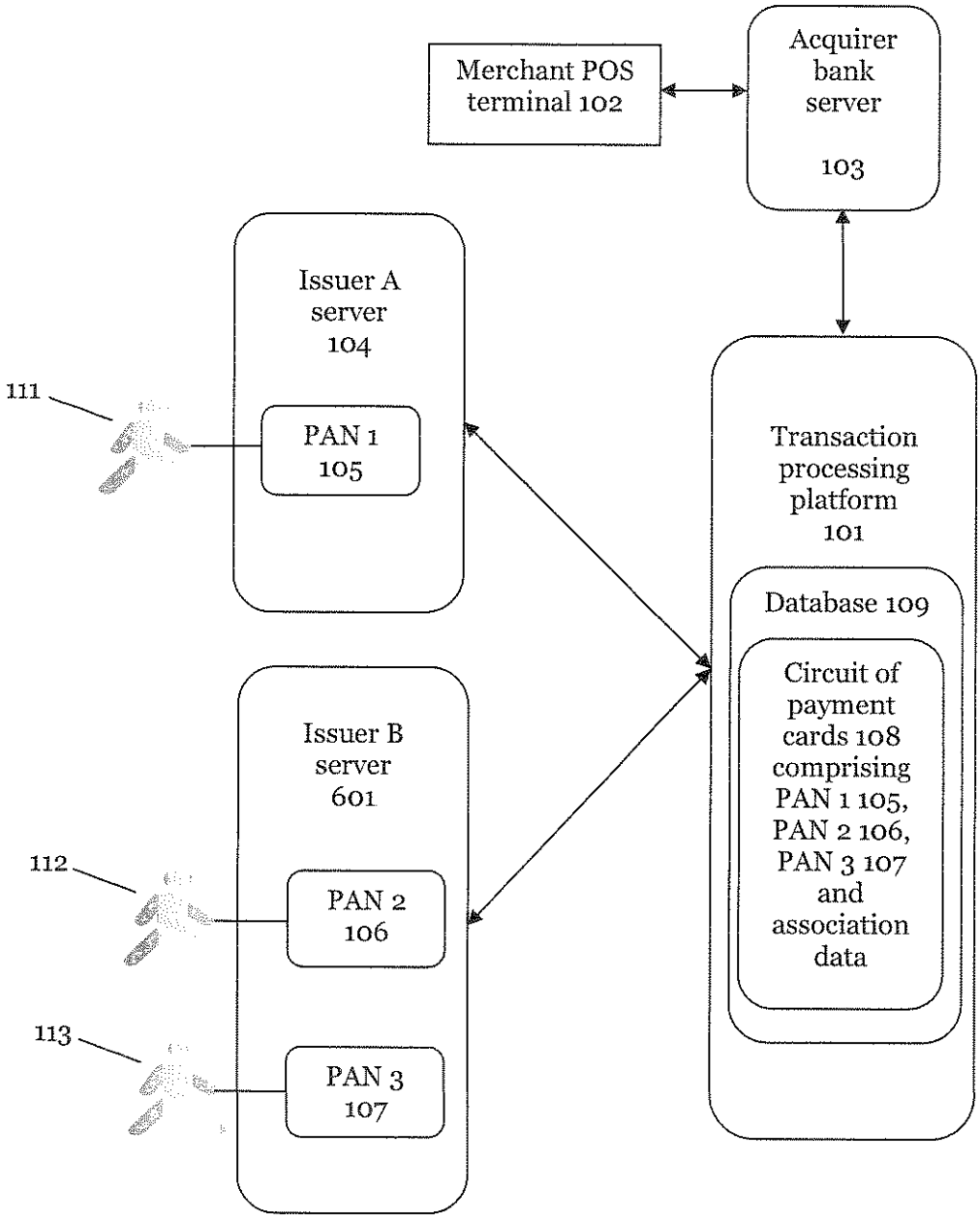

Merchant POS terminal 102
Acquirer bank server 103
Issuer A server 104
111
PAN 1 105
Transaction processing platform 101
Database 109
Circuit of payment cards 108 comprising PAN 1 105, PAN 2 106, PAN 3 107 and association data
Issuer B server 601
112
PAN 2 106
113
PAN 3 107

Figure 6

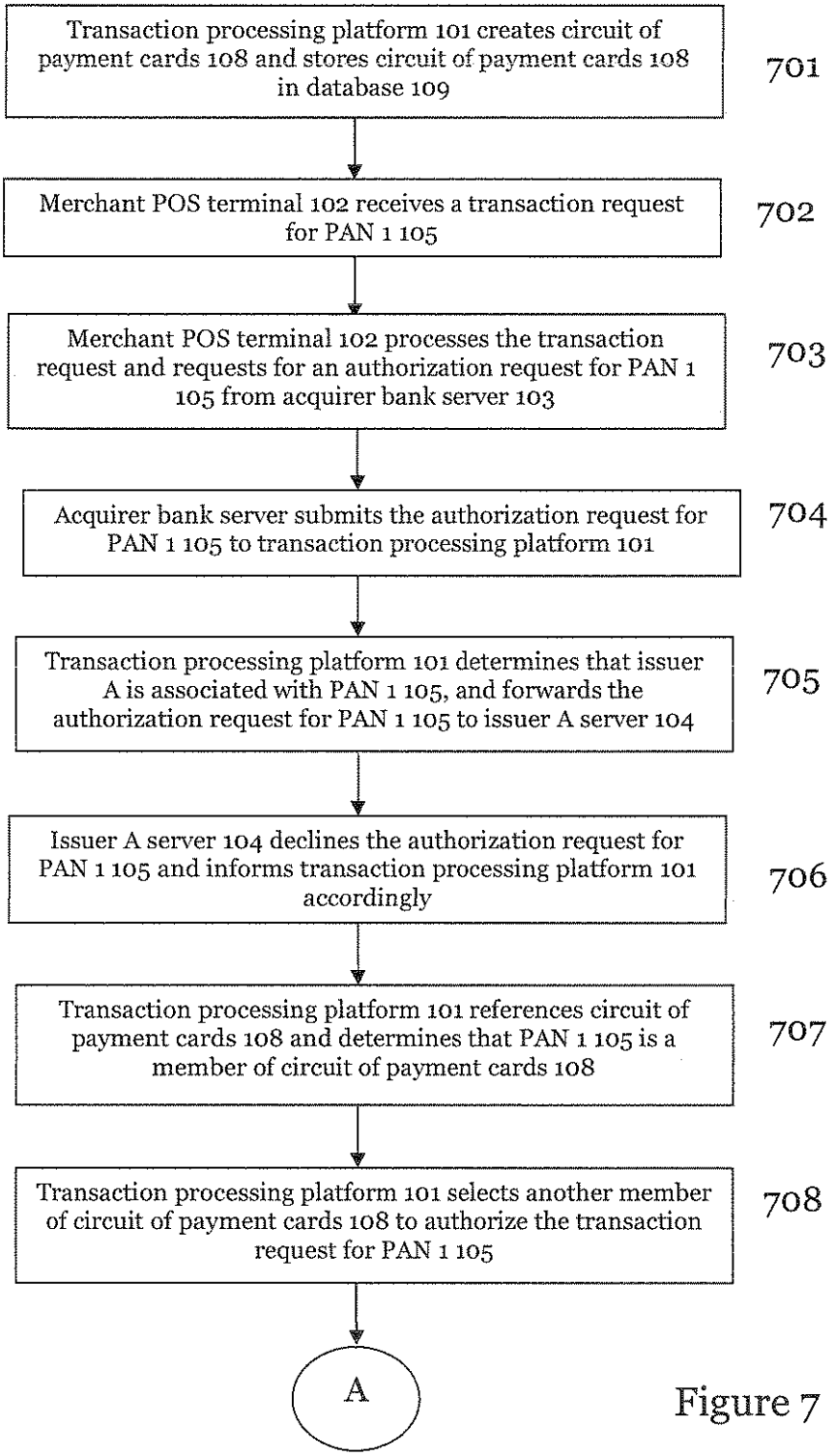

Transaction processing platform 101 creates circuit of payment cards 108 and stores circuit of payment cards 108 in database 109
701
Merchant POS terminal 102 receives a transaction request for PAN 1 105
702
Merchant POS terminal 102 processes the transaction request and requests for an authorization request for PAN 1 105 from acquirer bank server 103
703
Acquirer bank server submits the authorization request for PAN 1 105 to transaction processing platform 101
704
Transaction processing platform 101 determines that issuer A is associated with PAN 1 105, and forwards the authorization request for PAN 1 105 to issuer A server 104
705
Issuer A server 104 declines the authorization request for PAN 1 105 and informs transaction processing platform 101 accordingly
706
Transaction processing platform 101 references circuit of payment cards 108 and determines that PAN 1 105 is a member of circuit of payment cards 108
707
Transaction processing platform 101 selects another member of circuit of payment cards 108 to authorize the transaction request for PAN 1 105
708
A

Figure 7

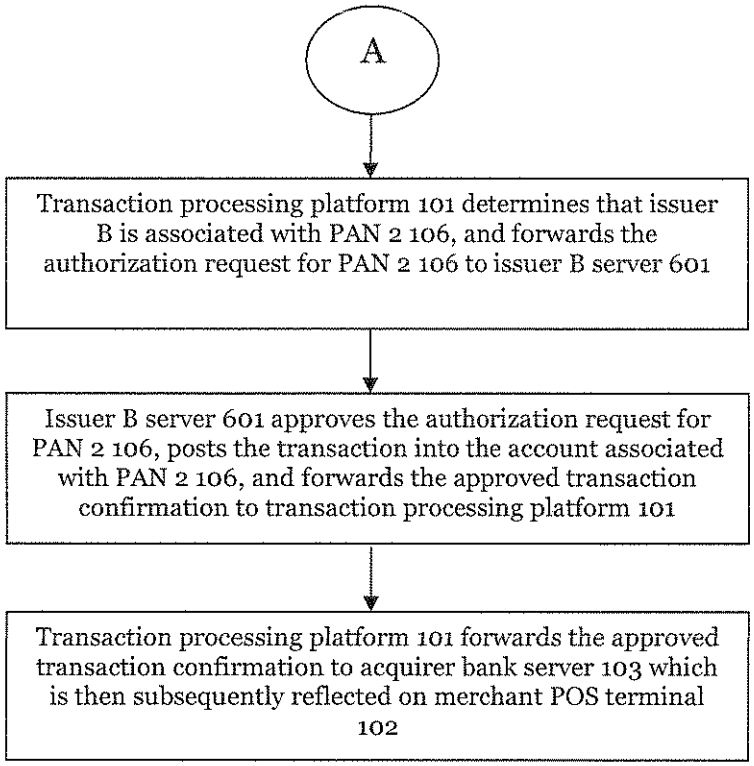


Figure 7
(continued)

109

401

108

403

801

Circuit identifier 1	- PAN 1 105 - rank (secondary)	- PAN 2 106 - rank (primary)	- PAN 3 107 - rank (secondary)
Circuit identifier 2	- PAN 4 - rank (primary)	- PAN 5 - rank (secondary)	- PAN 6 - rank (secondary)
Circuit identifier 3	- PAN 1 105 - rank (secondary)	- PAN 7 - rank (secondary)	- PAN 8 - rank (secondary)

Figure 8