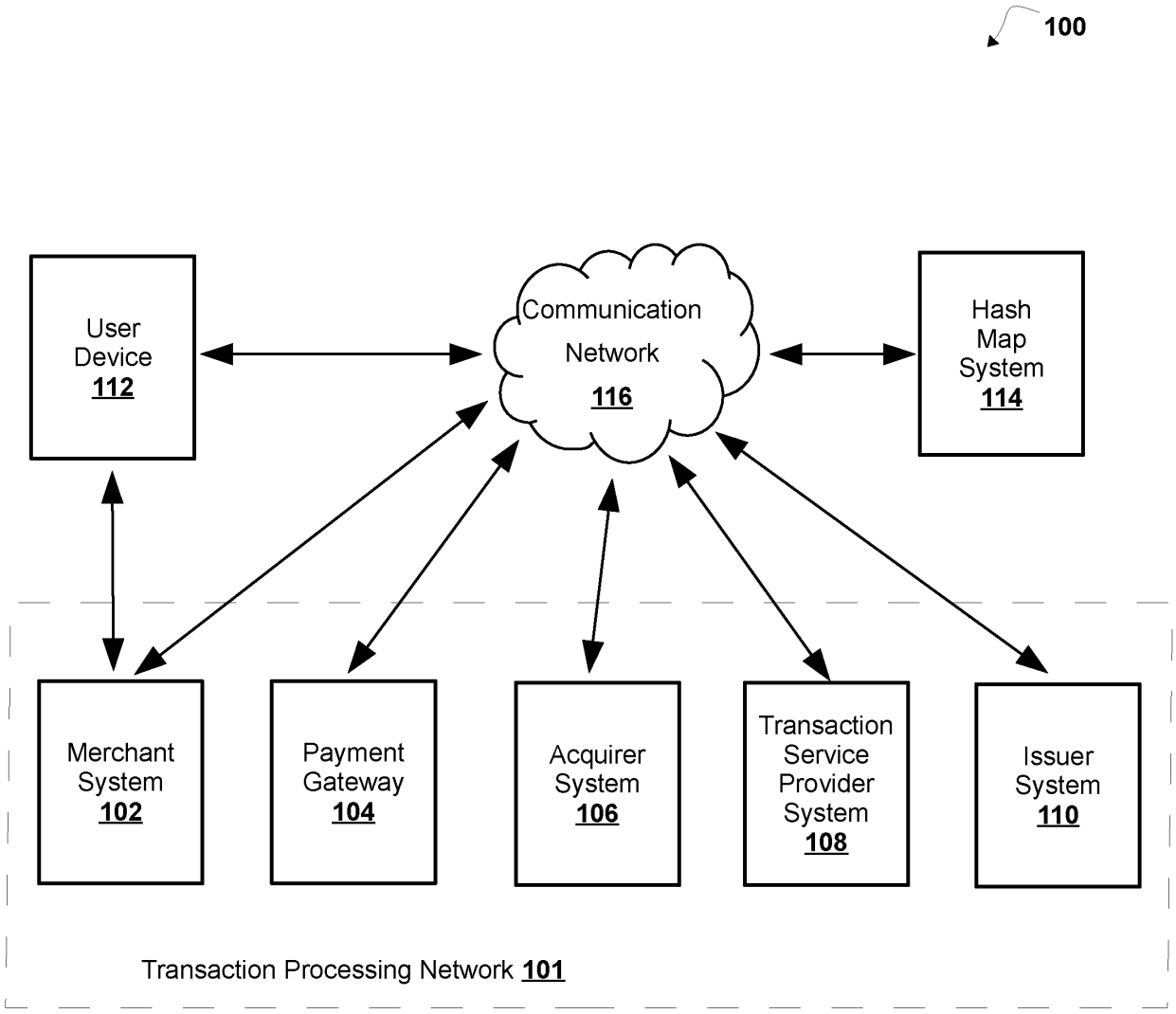

100
User Device 112
Communication Network 116
Hash Map System 114
Merchant System 102
Payment Gateway 104
Acquirer System 106
Transaction Service Provider System 108
Issuer System 110
Transaction Processing Network 101

FIG. 1

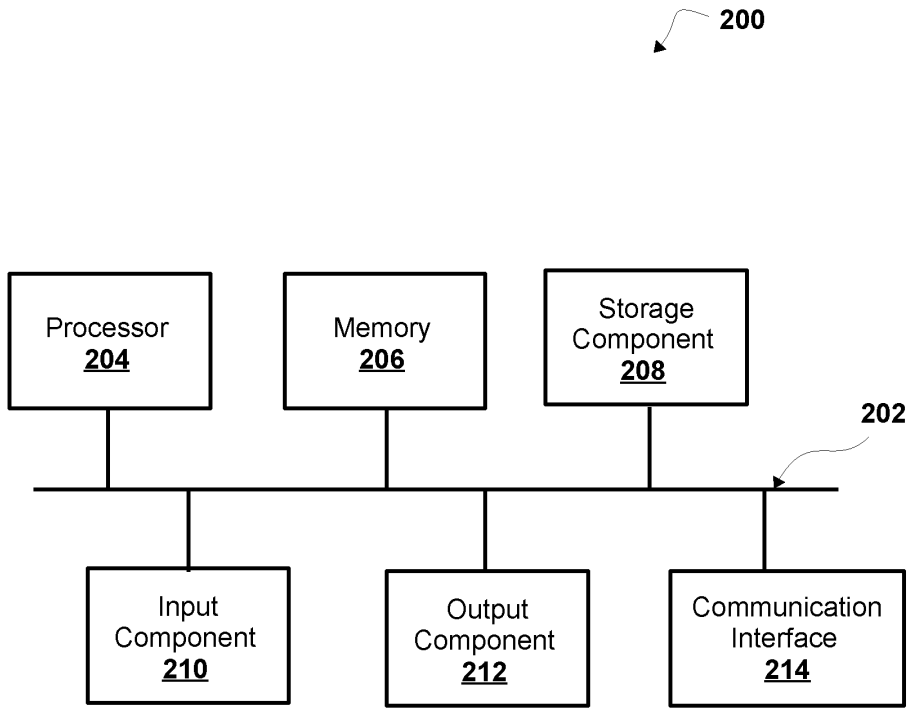

200
Processor
204
Memory
206
Storage
Component
208
202
Input
Component
210
Output
Component
212
Communication
Interface
214

FIG. 2

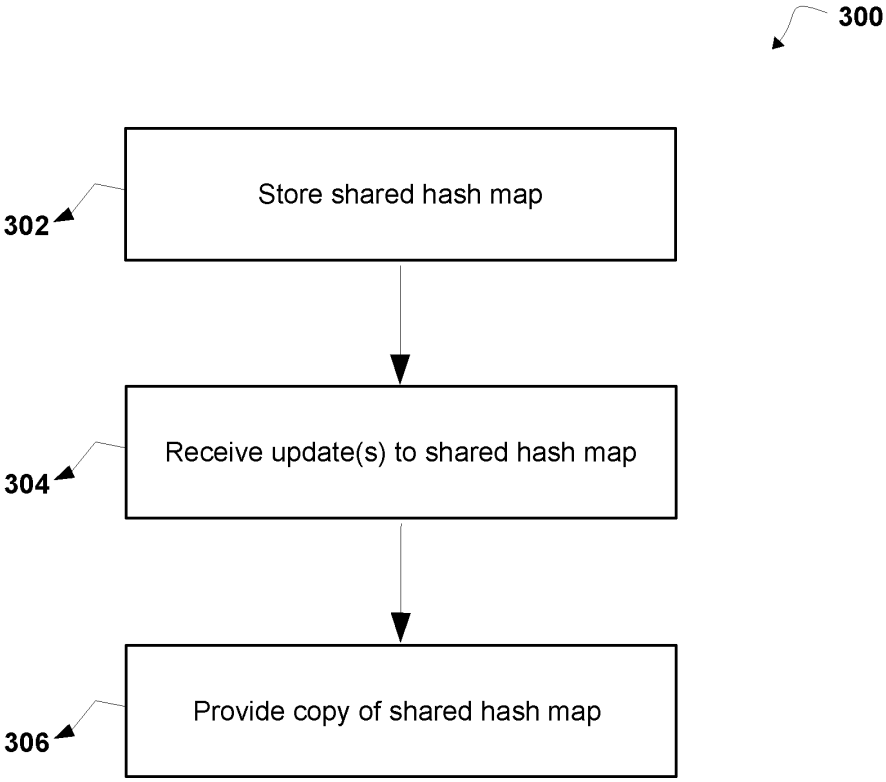

300
Store shared hash map
302
Receive update(s) to shared hash map
304
Provide copy of shared hash map
306

FIG. 3

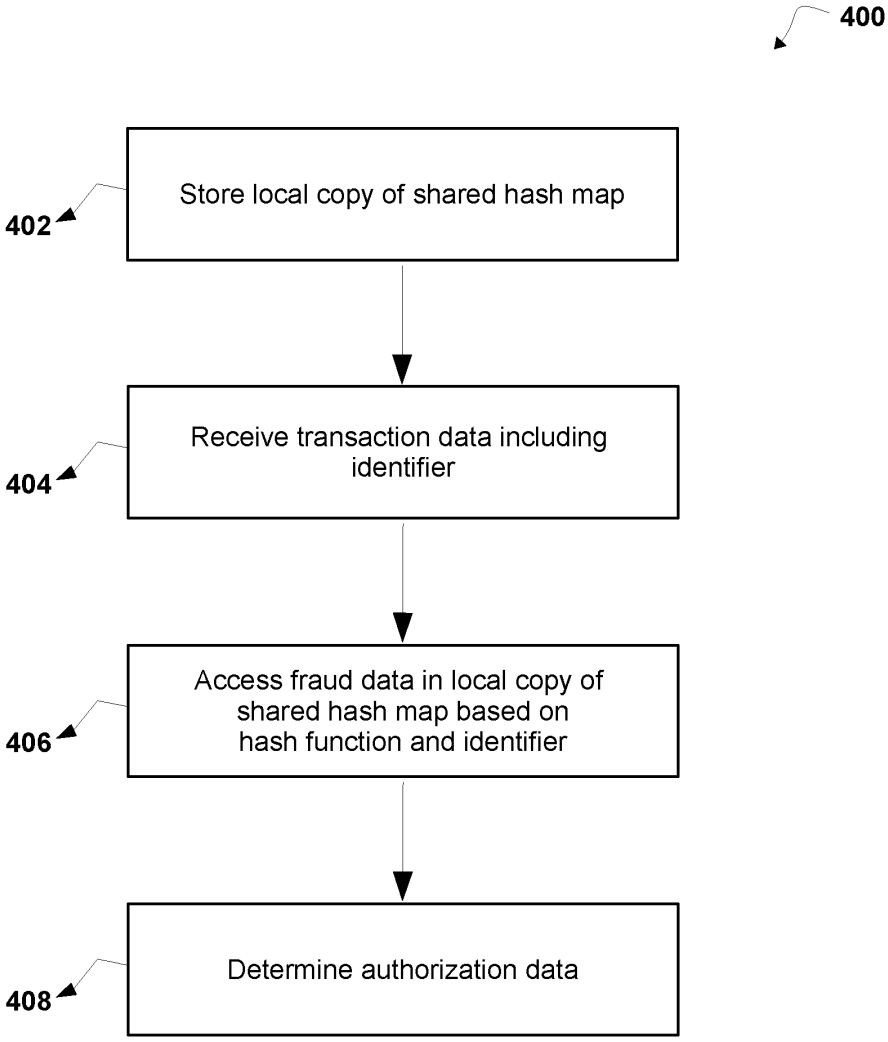

400
Store local copy of shared hash map
402
Receive transaction data including identifier
404
Access fraud data in local copy of shared hash map based on hash function and identifier
406
Determine authorization data
408

FIG. 4

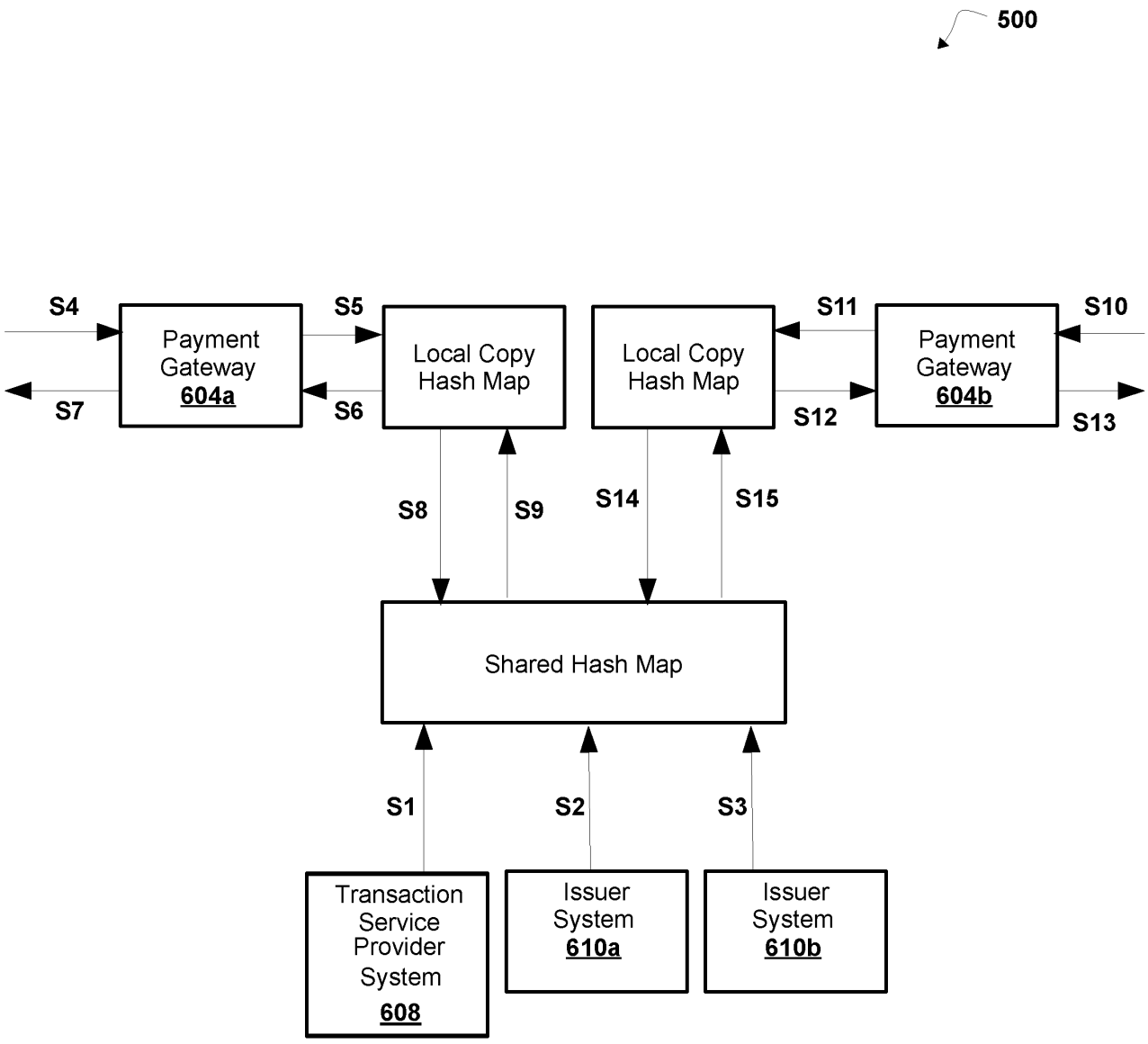

500
S4
Payment Gateway 604a
S7
S5
S6
Local Copy Hash Map
Local Copy Hash Map
S11
S12
Payment Gateway 604b
S10
S13
S8
S9
S14
S15
Shared Hash Map
S1
S2
S3
Transaction Service Provider System 608
Issuer System 610a
Issuer System 610b

FIG. 5

600

Hash	Hash Type	Fraud Probability (FP)	Whitelist (W)	Blacklist (B)
H01	Device Fingerprint	Blockchain(FP)(H01)	Blockchain(W)(H01)	Blockchain(B)(H01)
H02	Email address	Blockchain(FP)(H02)	Blockchain(W)(H02)	Blockchain(B)(H02)
H03	Phone number	Blockchain(FP)(H03)	Blockchain(W)(H03)	Blockchain(B)(H03)
HNN	Hash Type N	Blockchain(FP)(HNN)	Blockchain(W)(HNN)	Blockchain(B)(HNN)

FIG. 6

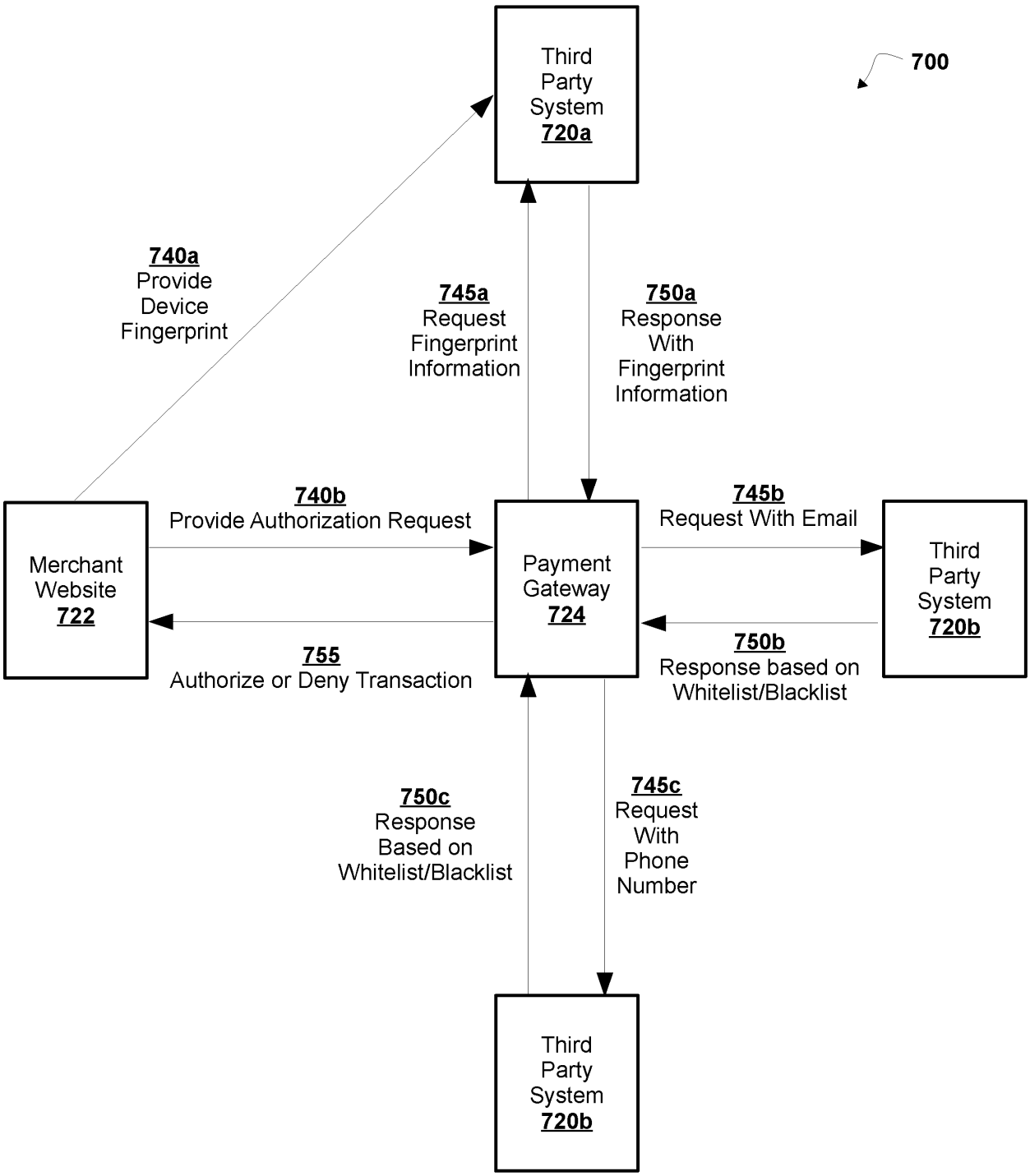

Third Party System 720a
700
740a Provide Device Fingerprint
745a Request Fingerprint Information
750a Response With Fingerprint Information
740b Provide Authorization Request
745b Request With Email
Merchant Website 722
Payment Gateway 724
Third Party System 720b
755 Authorize or Deny Transaction
750b Response based on Whitelist/Blacklist
750c Response Based on Whitelist/Blacklist
745c Request With Phone Number
Third Party System 720b

FIG. 7