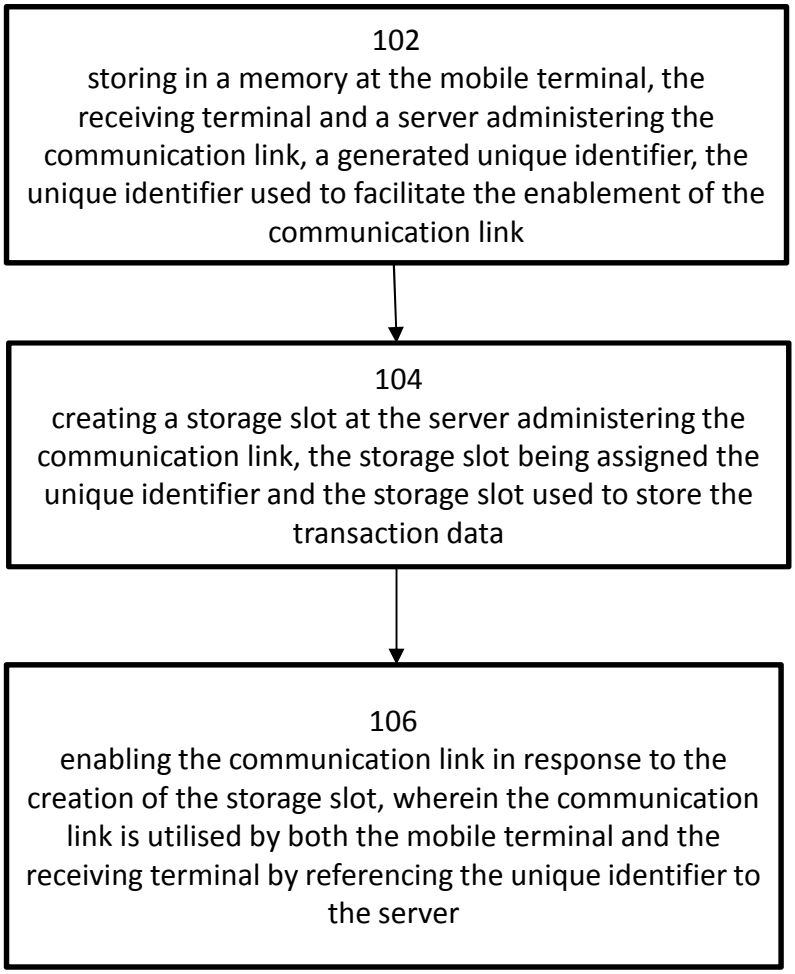

102
storing in a memory at the mobile terminal, the receiving terminal and a server administering the communication link, a generated unique identifier, the unique identifier used to facilitate the enablement of the communication link
104
creating a storage slot at the server administering the communication link, the storage slot being assigned the unique identifier and the storage slot used to store the transaction data
106
enabling the communication link in response to the creation of the storage slot, wherein the communication link is utilised by both the mobile terminal and the receiving terminal by referencing the unique identifier to the server

Figure 1

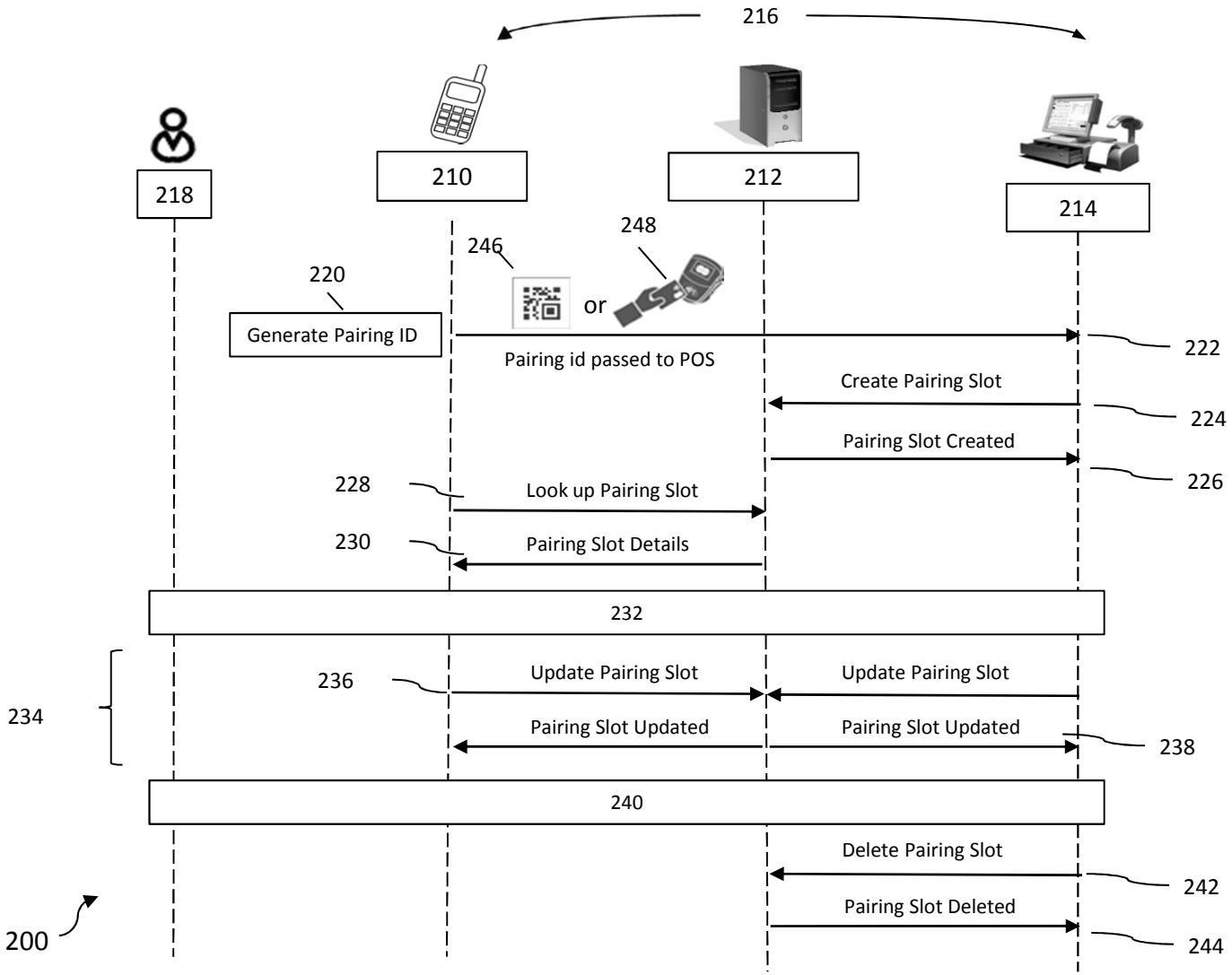

216
218
210
212
214
246
248
220
Generate Pairing ID
or
222
Pairing id passed to POS
Create Pairing Slot
224
Pairing Slot Created
226
228
Look up Pairing Slot
230
Pairing Slot Details
232
234
236
Update Pairing Slot
Update Pairing Slot
Pairing Slot Updated
Pairing Slot Updated
238
240
Delete Pairing Slot
242
Pairing Slot Deleted
244
200

Figure 2

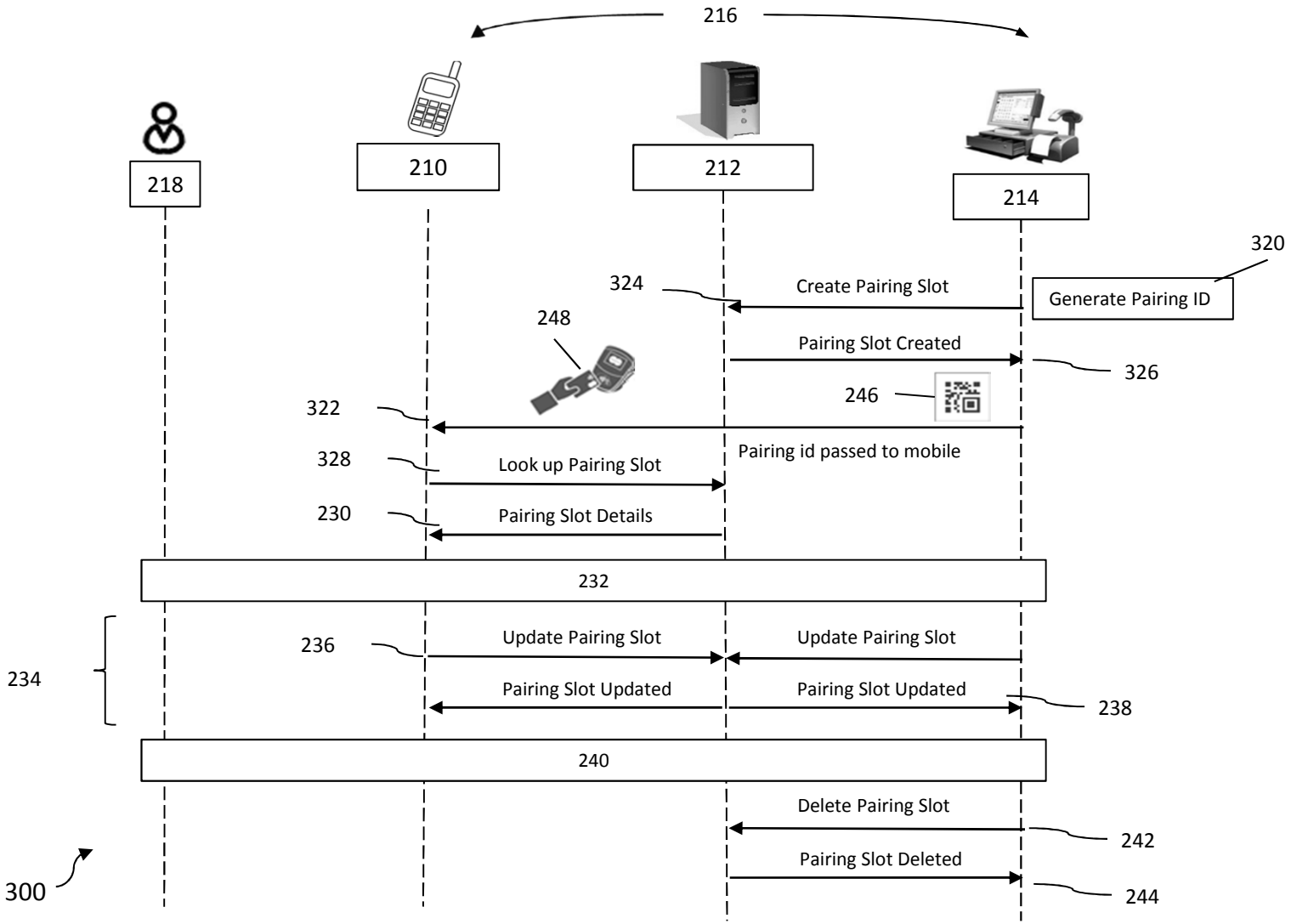

216
218
210
212
214
320
Generate Pairing ID
324
Create Pairing Slot
248
Pairing Slot Created
326
246
322
Pairing id passed to mobile
328
Look up Pairing Slot
230
Pairing Slot Details
232
236
Update Pairing Slot
Update Pairing Slot
234
Pairing Slot Updated
Pairing Slot Updated
238
240
Delete Pairing Slot
242
Pairing Slot Deleted
244
300

Figure 3

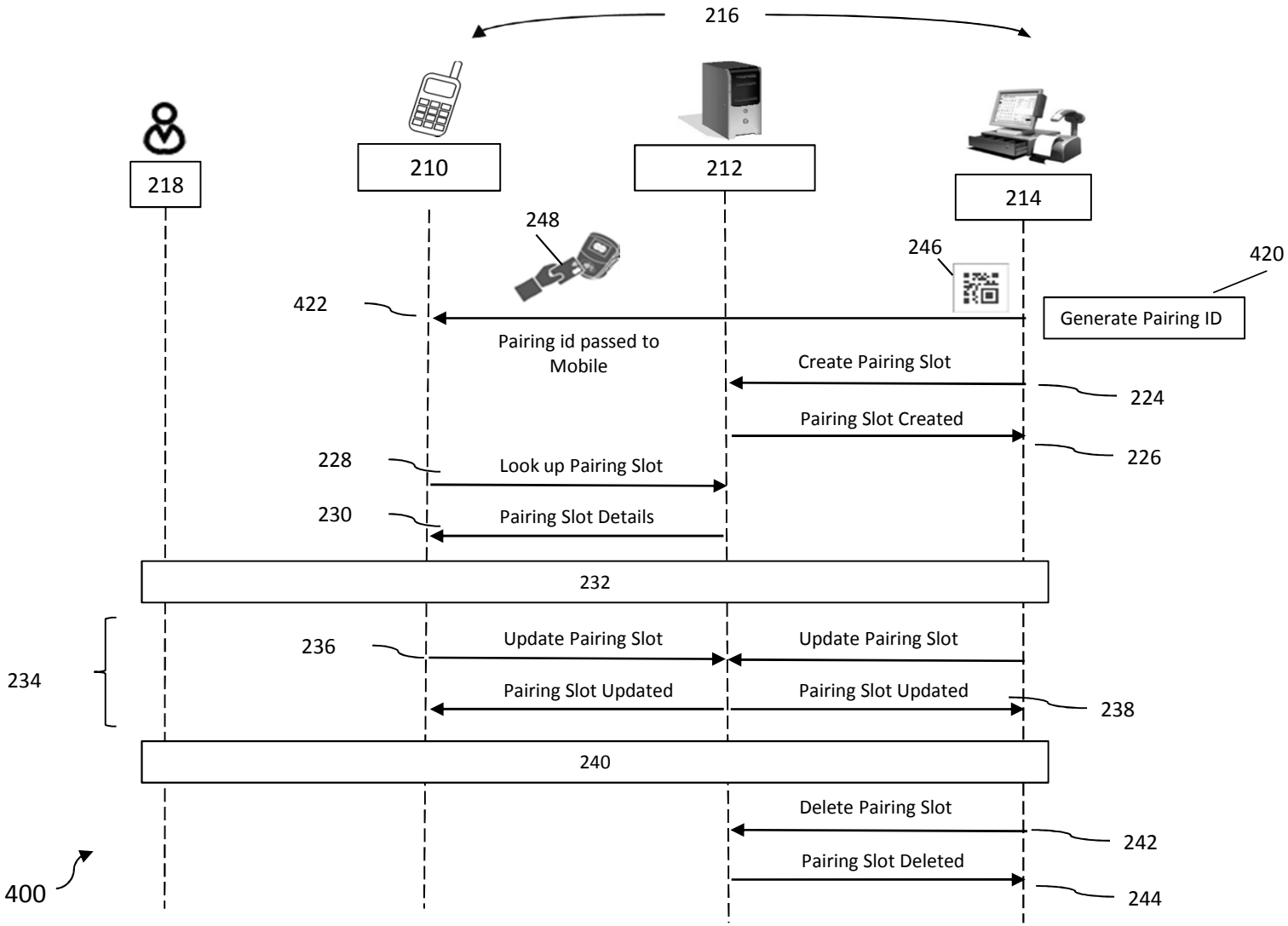

216
218
210
212
214
248
246
420
422
Generate Pairing ID
Pairing id passed to Mobile
Create Pairing Slot
224
Pairing Slot Created
226
228
Look up Pairing Slot
230
Pairing Slot Details
232
234
236
Update Pairing Slot
Update Pairing Slot
Pairing Slot Updated
Pairing Slot Updated
238
240
Delete Pairing Slot
242
Pairing Slot Deleted
244
400

Figure 4

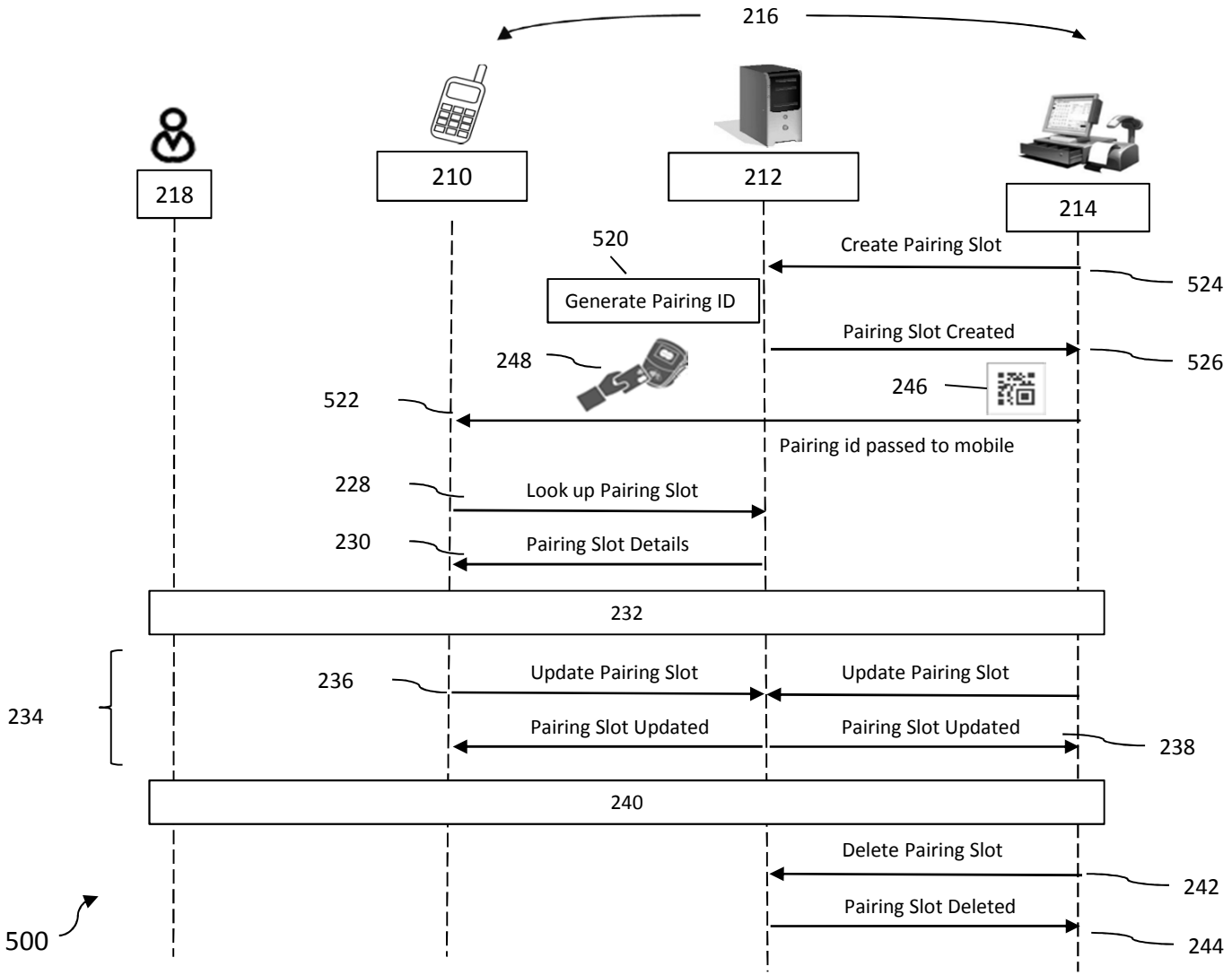

216
218
210
212
214
520
Create Pairing Slot
524
Generate Pairing ID
Pairing Slot Created
526
248
246
522
Pairing id passed to mobile
228
Look up Pairing Slot
230
Pairing Slot Details
232
236
Update Pairing Slot
Update Pairing Slot
234
Pairing Slot Updated
Pairing Slot Updated
238
240
Delete Pairing Slot
242
Pairing Slot Deleted
244
500

Figure 5

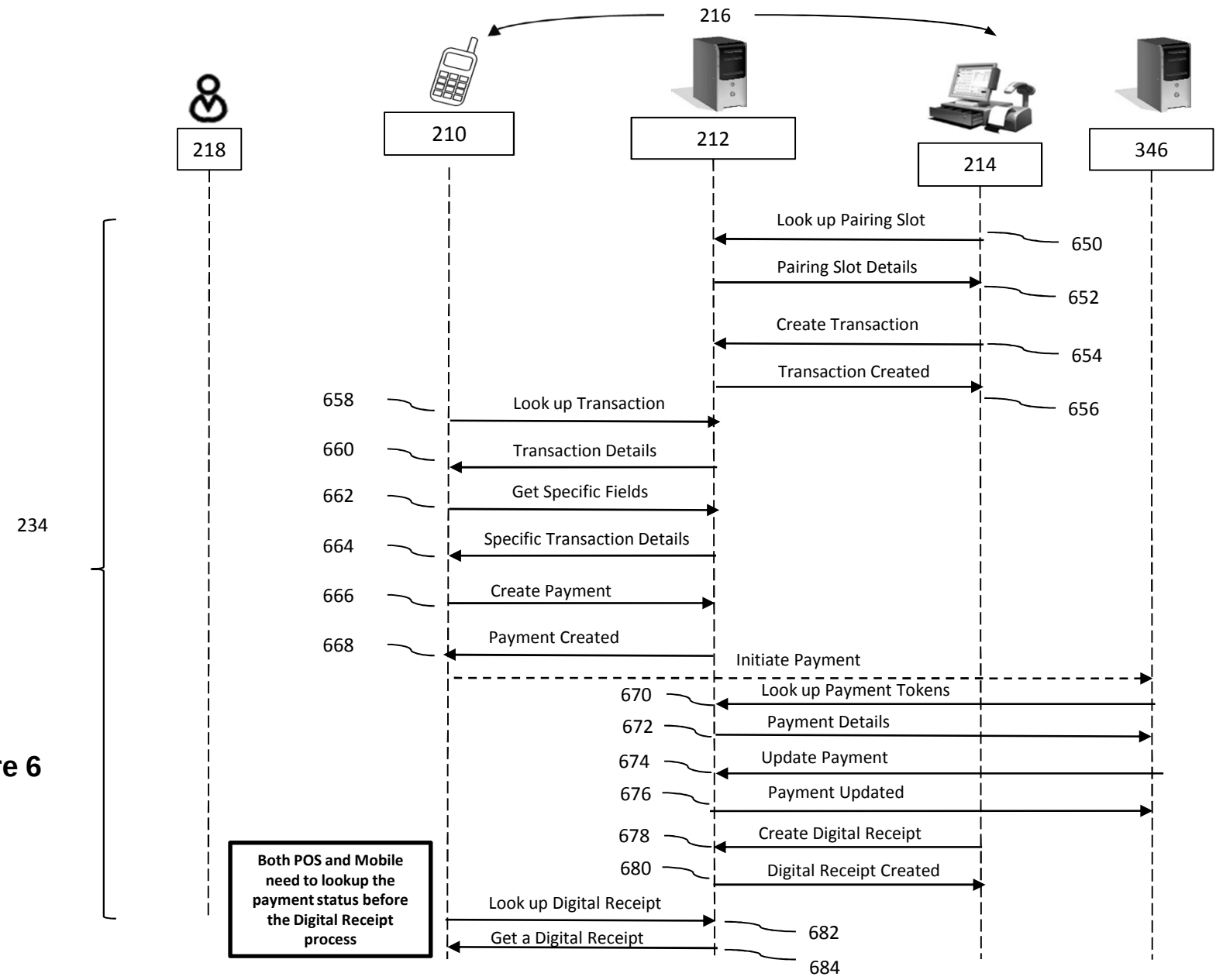

216
218
210
212
214
346
234
Look up Pairing Slot
650
Pairing Slot Details
652
Create Transaction
654
Transaction Created
656
658
Look up Transaction
660
Transaction Details
662
Get Specific Fields
664
Specific Transaction Details
666
Create Payment
668
Payment Created
Initiate Payment
670
Look up Payment Tokens
672
Payment Details
674
Update Payment
676
Payment Updated
678
Create Digital Receipt
680
Digital Receipt Created
Look up Digital Receipt
682
Get a Digital Receipt
684
Both POS and Mobile need to lookup the payment status before the Digital Receipt process

Figure 6

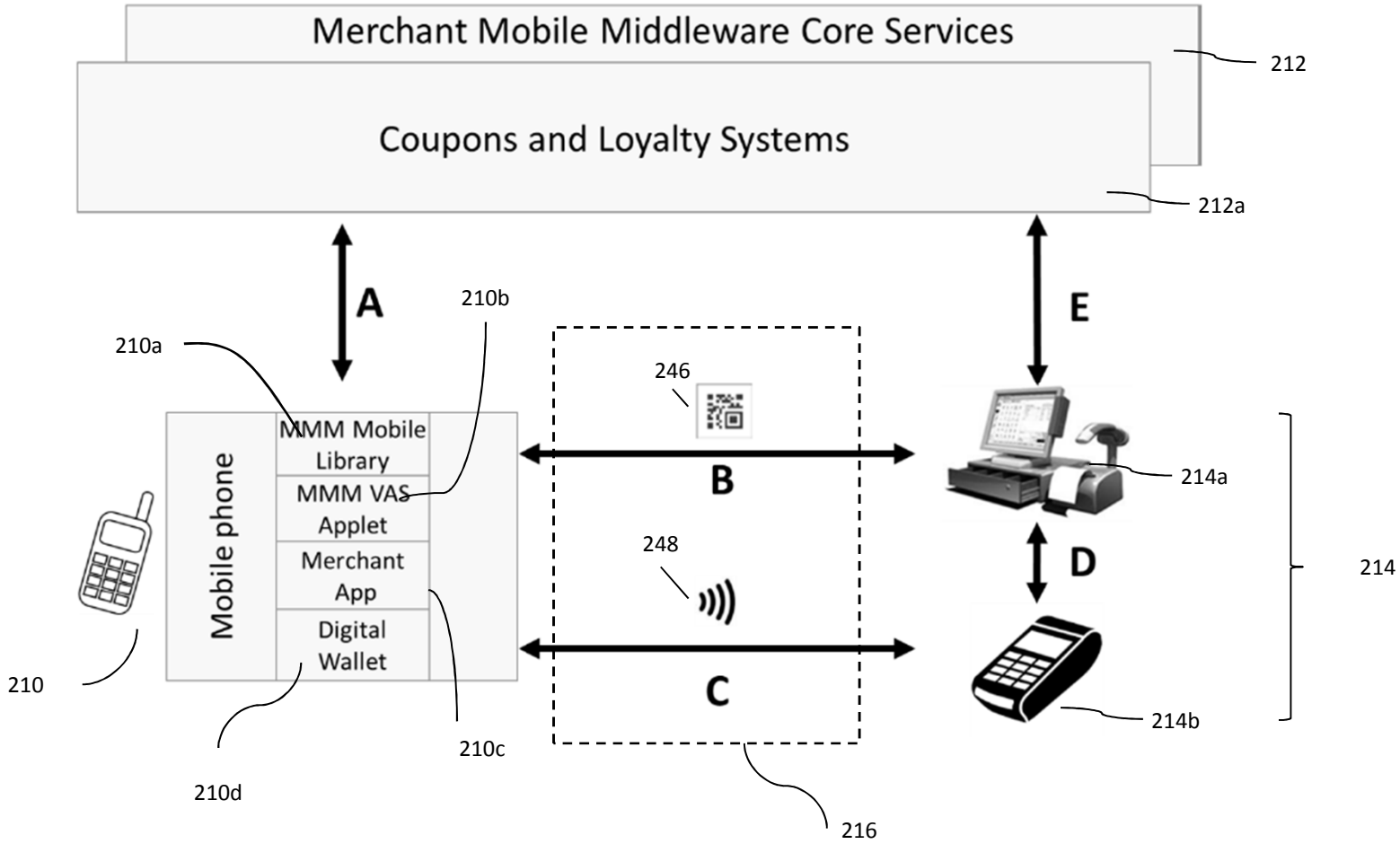

Merchant Mobile Middleware Core Services
212
Coupons and Loyalty Systems
212a
A
E
210b
210a
246
MMM Mobile Library
MMM VAS Applet
Merchant App
Digital Wallet
Mobile phone
B
214a
248
D
214
C
214b
210
210c
210d
216

Figure 7

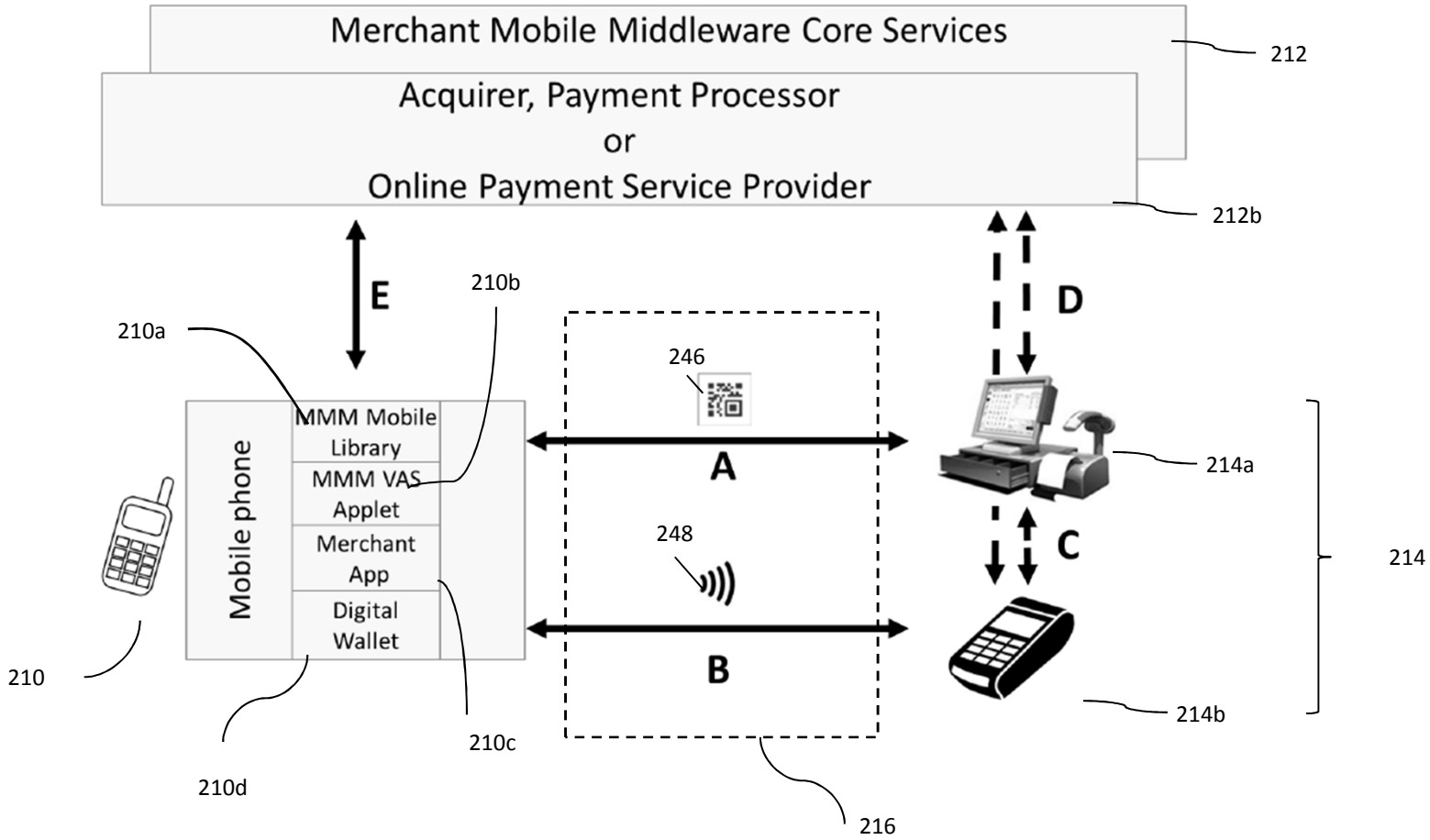

Merchant Mobile Middleware Core Services
212
Acquirer, Payment Processor
or
Online Payment Service Provider
212b
E
D
210b
210a
246
MMM Mobile Library
MMM VAS Applet
Merchant App
Digital Wallet
Mobile phone
A
214a
248
C
214
B
210
214b
210c
210d
216

Figure 8

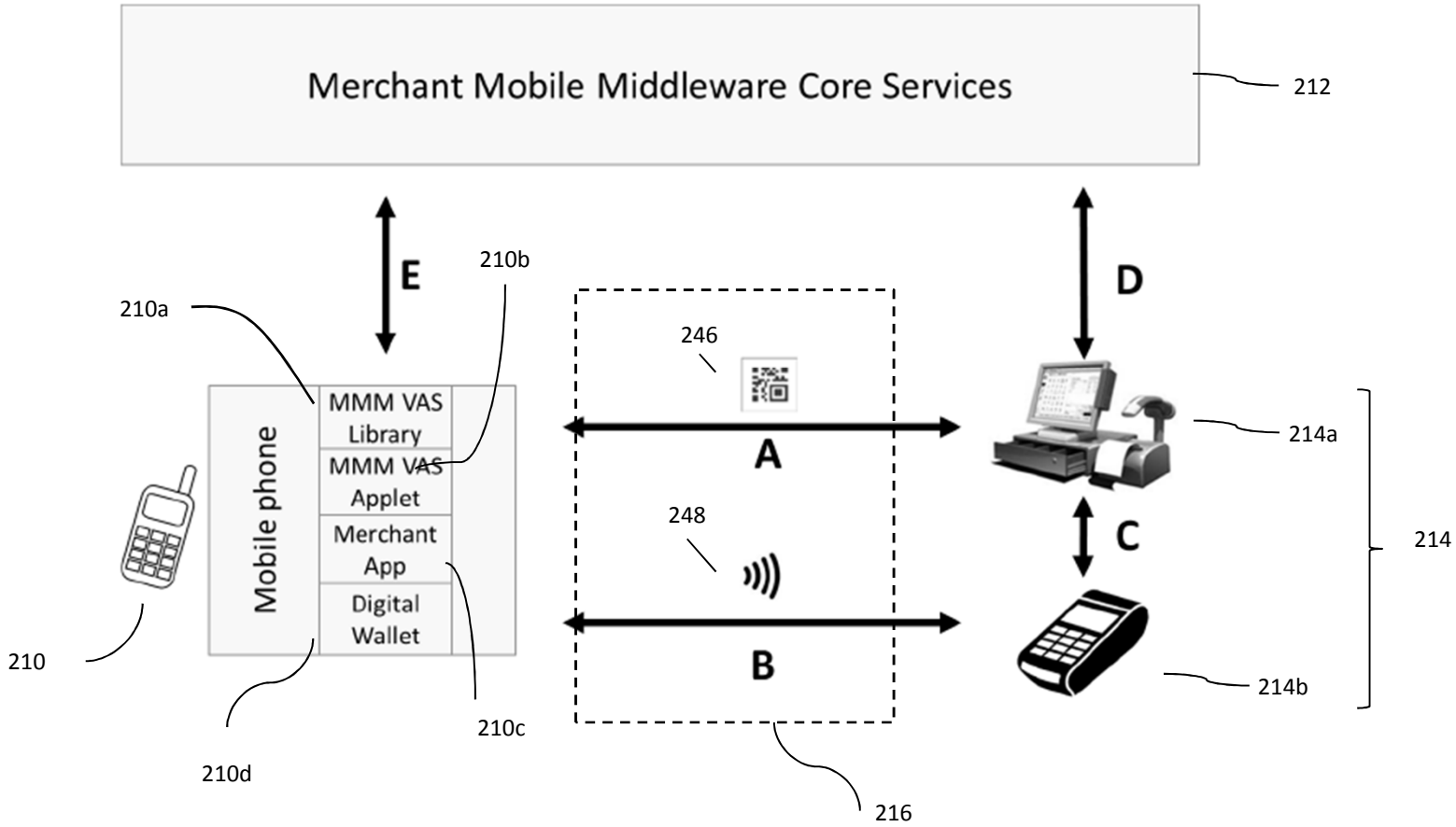

Merchant Mobile Middleware Core Services
212
E
D
210a
210b
246
MMM VAS Library
MMM VAS Applet
Merchant App
Digital Wallet
Mobile phone
A
214a
248
C
214
B
214b
210
210c
210d
216

Figure 9

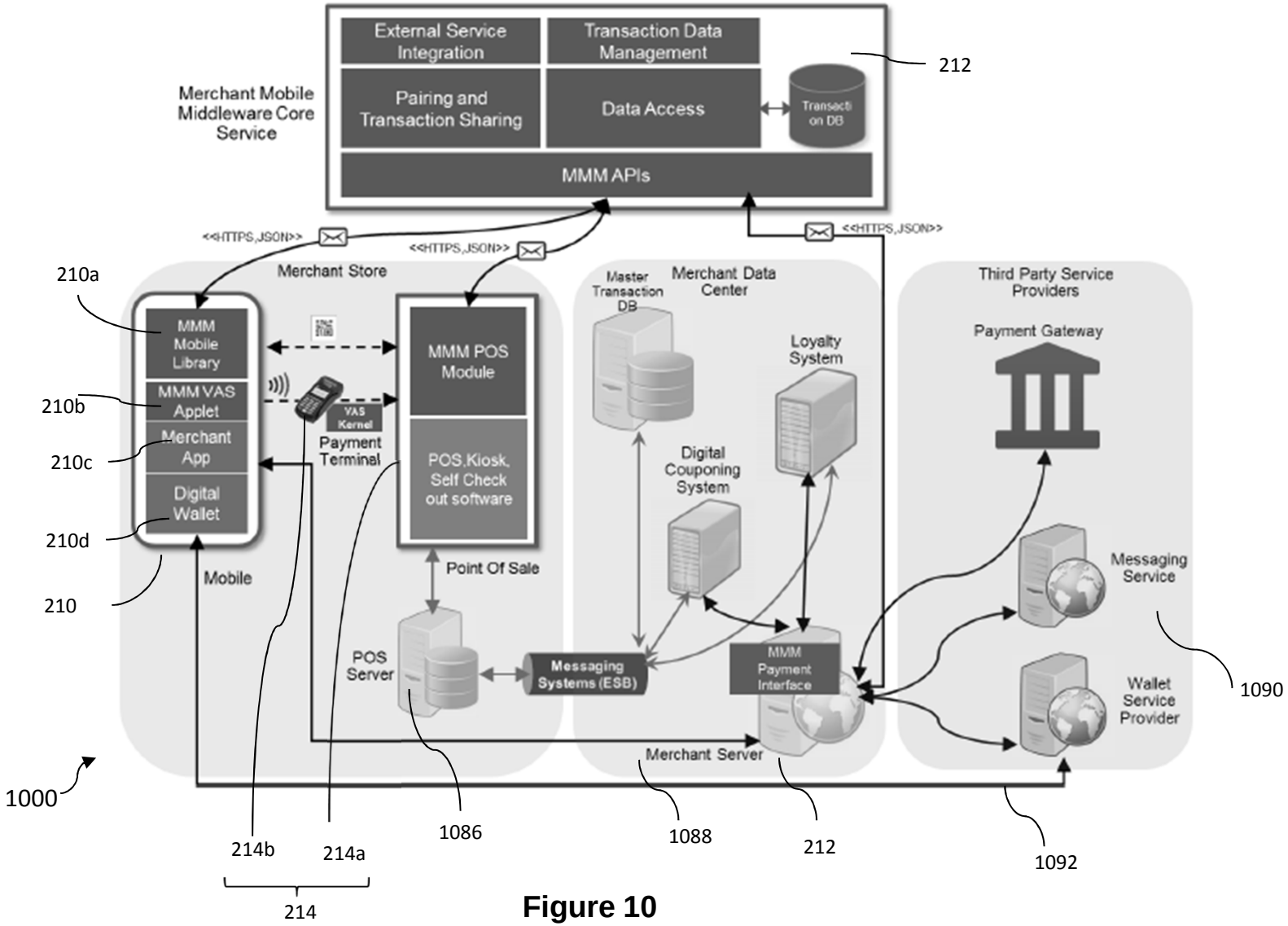

External Service Integration
Transaction Data Management
Pairing and Transaction Sharing
Data Access
Transacti on DB
MMM APIs
212
Merchant Mobile Middleware Core Service
<<HTTPS,JSON>>
<<HTTPS,JSON>>
<<HTTPS,JSON>>
Merchant Store
210a
MMM Mobile Library
MMM VAS Applet
Merchant App
Digital Wallet
210b
210c
210d
210
Mobile
VAS Kernel
Payment Terminal
MMM POS Module
POS,Kiosk, Self Check out software
Point Of Sale
POS Server
Messaging Systems (ESB)
Master Transaction DB
Merchant Data Center
Loyalty System
Digital Couponing System
MMM Payment Interface
Merchant Server
Third Party Service Providers
Payment Gateway
Messaging Service
Wallet Service Provider
1090
1000
214b
214a
214
1086
1088
212
1092

Figure 10

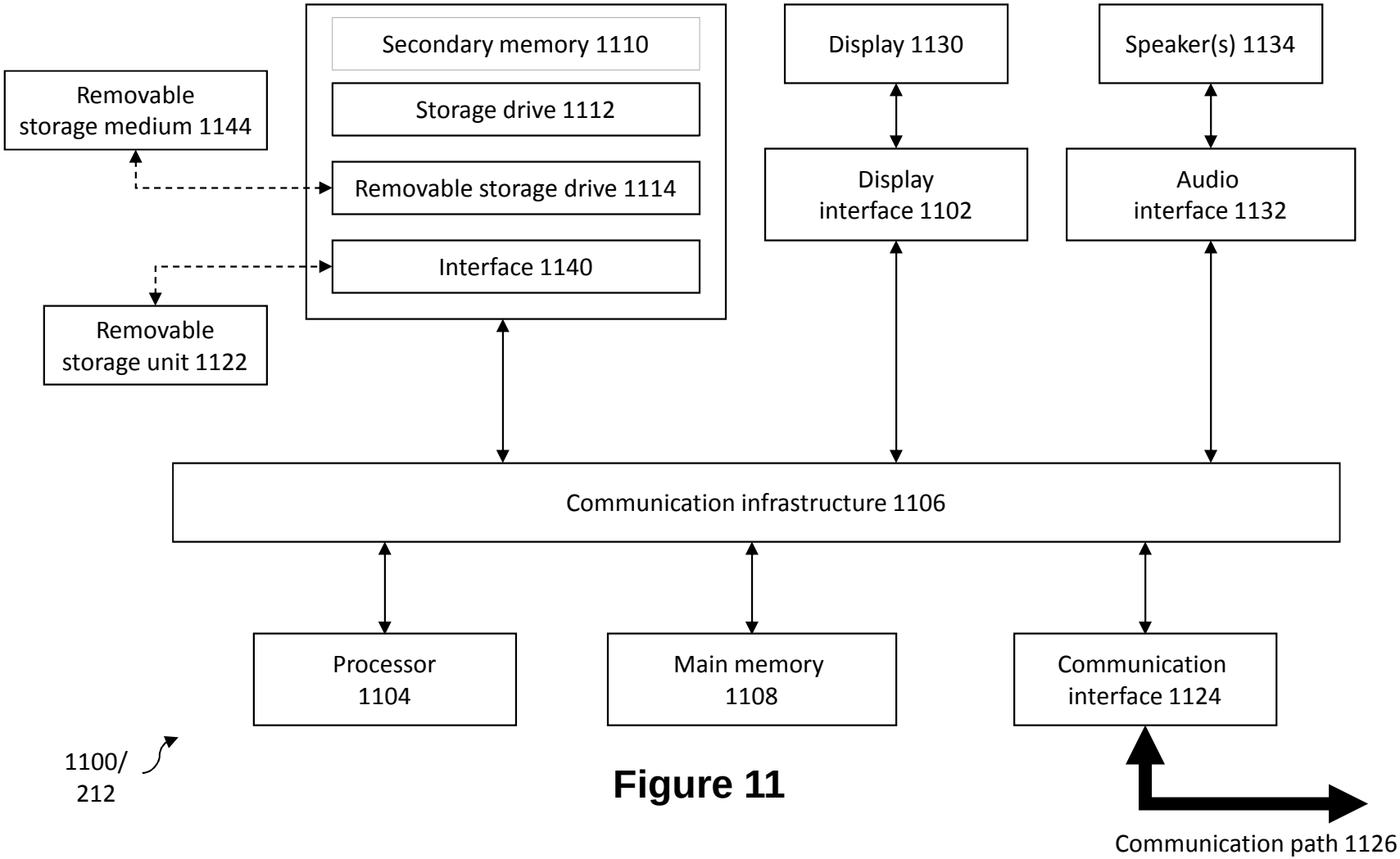

Secondary memory 1110
Storage drive 1112
Removable storage drive 1114
Interface 1140
Removable storage medium 1144
Removable storage unit 1122
Display 1130
Speaker(s) 1134
Display interface 1102
Audio interface 1132
Communication infrastructure 1106
Processor 1104
Main memory 1108
Communication interface 1124
1100/ 212
Communication path 1126

Figure 11

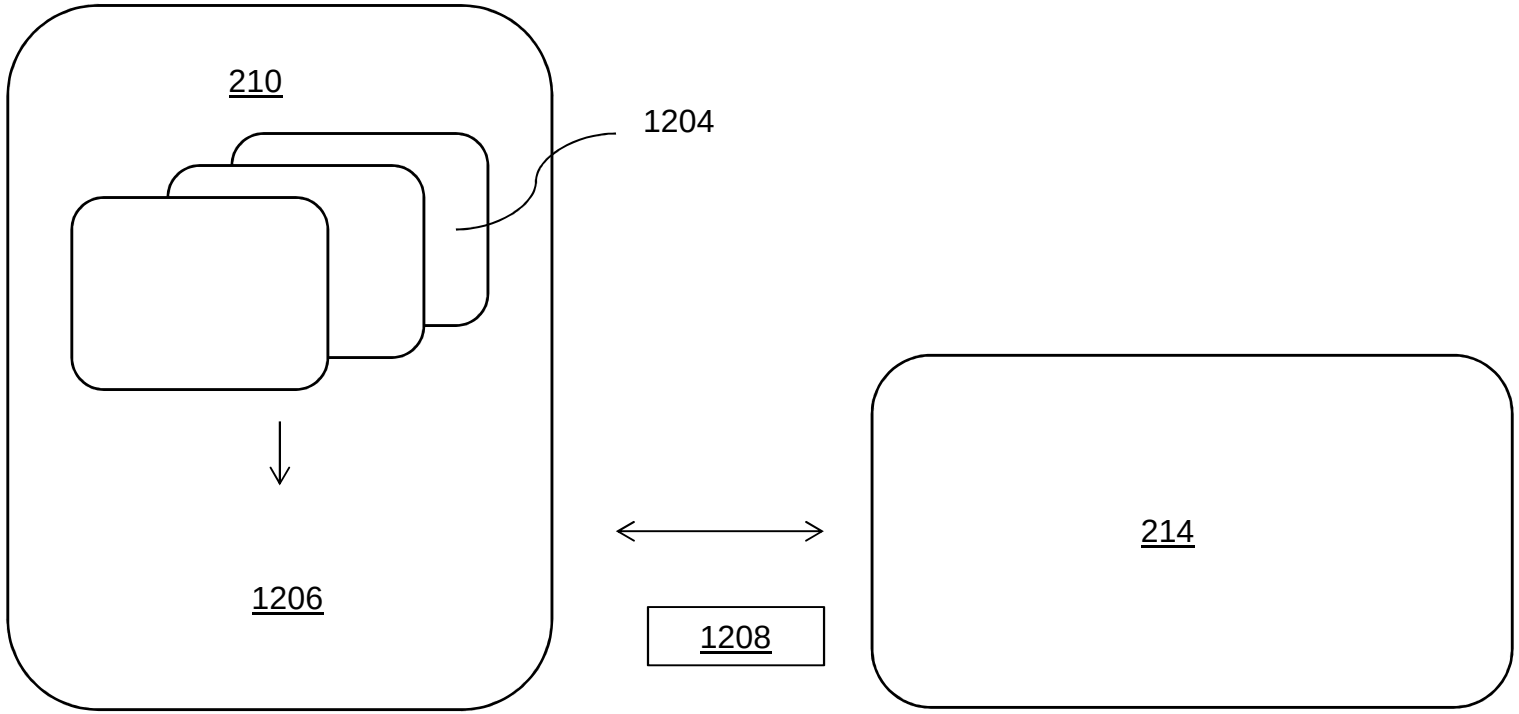


Figure 12

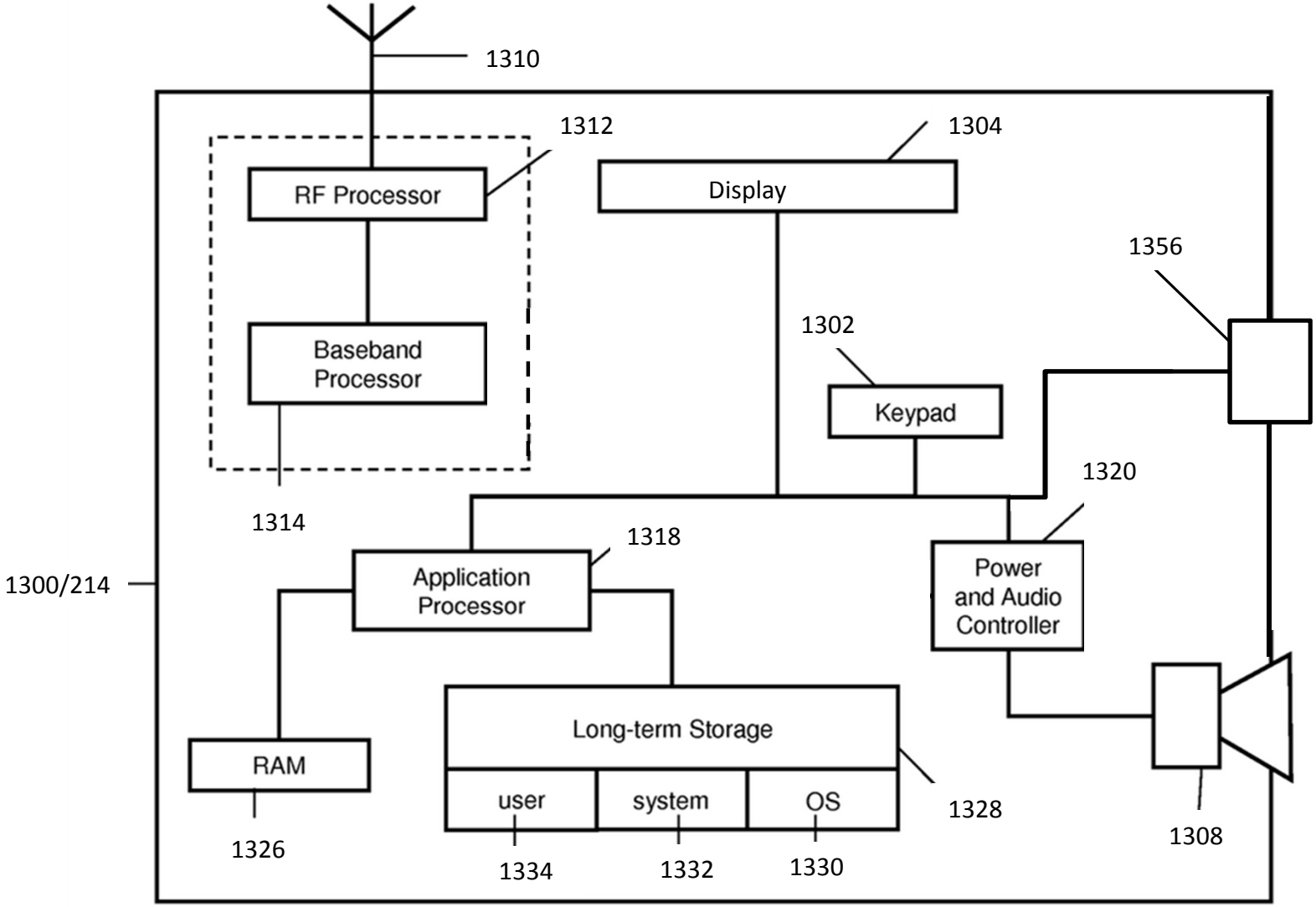

1310
1312
1304
RF Processor
Display
1356
1302
Baseband Processor
Keypad
1320
1314
1318
1300/214
Application Processor
Power and Audio Controller
Long-term Storage
RAM
user
system
OS
1328
1326
1334
1332
1330
1308

Figure 13

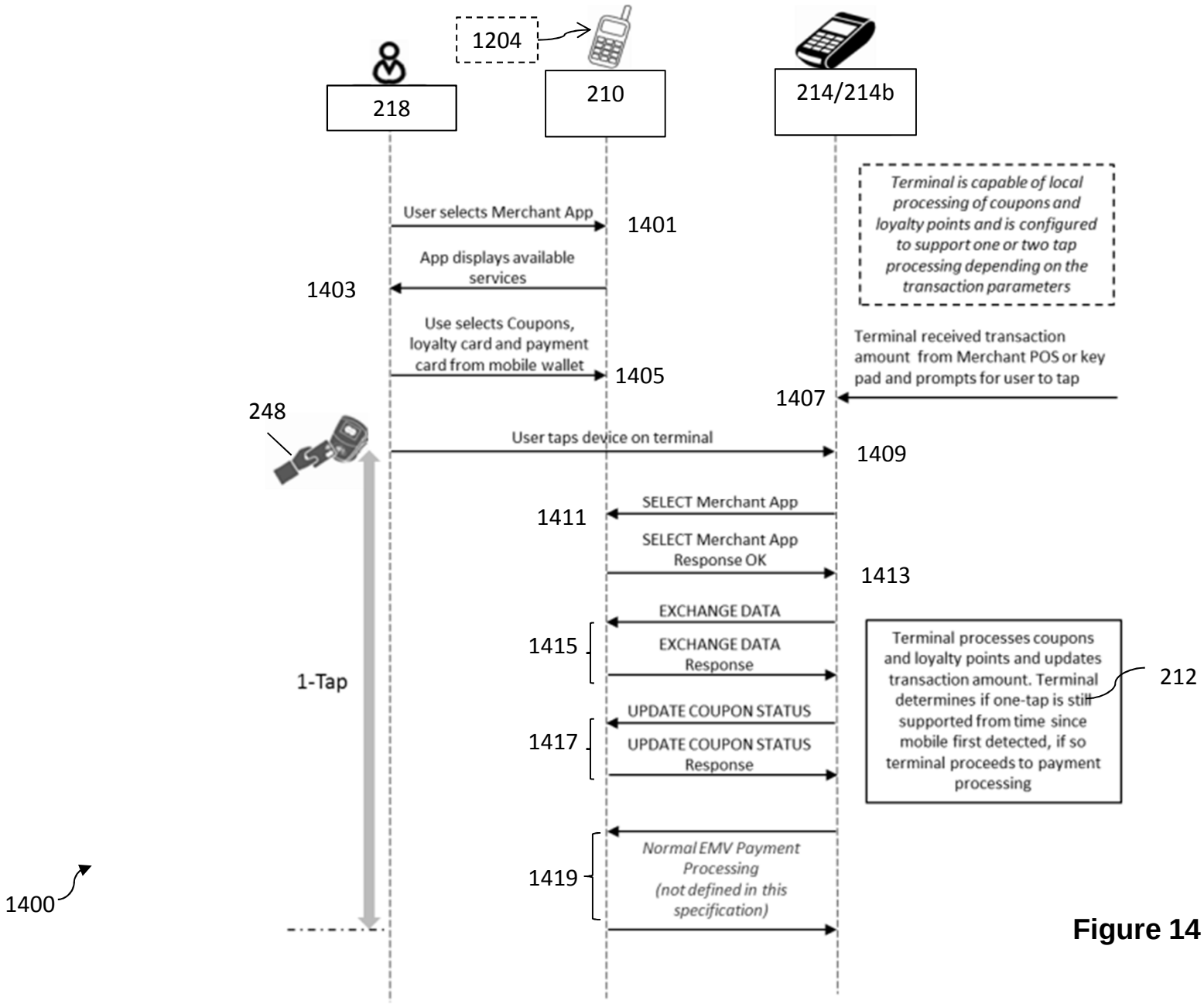

1204
218
210
214/214b
Terminal is capable of local processing of coupons and loyalty points and is configured to support one or two tap processing depending on the transaction parameters
User selects Merchant App
1401
App displays available services
1403
Use selects Coupons, loyalty card and payment card from mobile wallet
1405
Terminal received transaction amount from Merchant POS or key pad and prompts for user to tap
1407
248
User taps device on terminal
1409
SELECT Merchant App
1411
SELECT Merchant App Response OK
1413
EXCHANGE DATA
1415
EXCHANGE DATA Response
1-Tap
Terminal processes coupons and loyalty points and updates transaction amount. Terminal determines if one-tap is still supported from time since mobile first detected, if so terminal proceeds to payment processing
212
UPDATE COUPON STATUS
1417
UPDATE COUPON STATUS Response
Normal EMV Payment Processing (not defined in this specification)
1419
1400

Figure 14

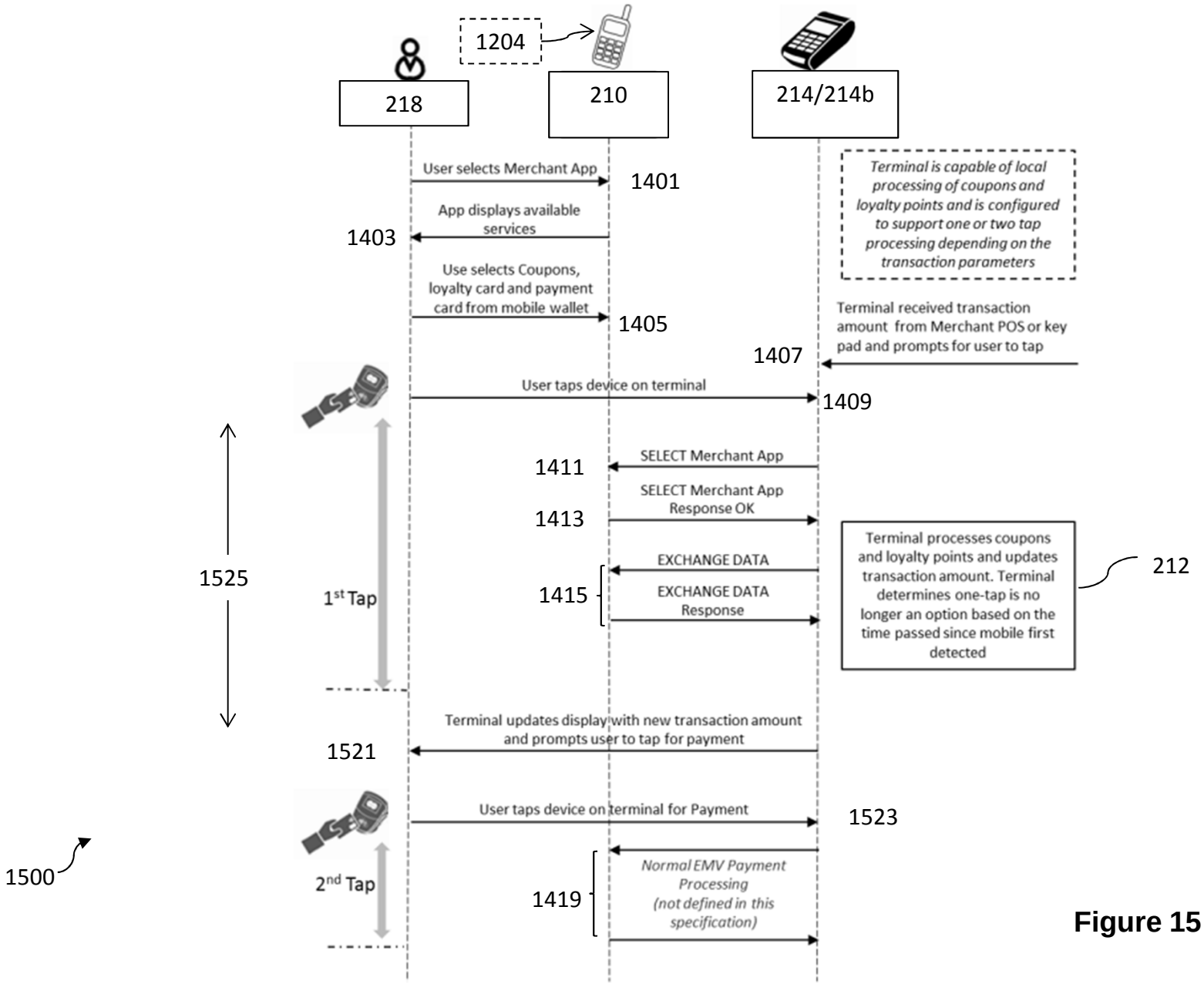

1204
218
210
214/214b
User selects Merchant App
1401
App displays available services
1403
Use selects Coupons, loyalty card and payment card from mobile wallet
1405
Terminal is capable of local processing of coupons and loyalty points and is configured to support one or two tap processing depending on the transaction parameters
Terminal received transaction amount from Merchant POS or key pad and prompts for user to tap
1407
User taps device on terminal
1409
1525
1st Tap
SELECT Merchant App
1411
SELECT Merchant App Response OK
1413
EXCHANGE DATA
1415
EXCHANGE DATA Response
Terminal processes coupons and loyalty points and updates transaction amount. Terminal determines one-tap is no longer an option based on the time passed since mobile first detected
212
Terminal updates display with new transaction amount and prompts user to tap for payment
1521
User taps device on terminal for Payment
1523
2nd Tap
1419
Normal EMV Payment Processing (not defined in this specification)
1500

Figure 15

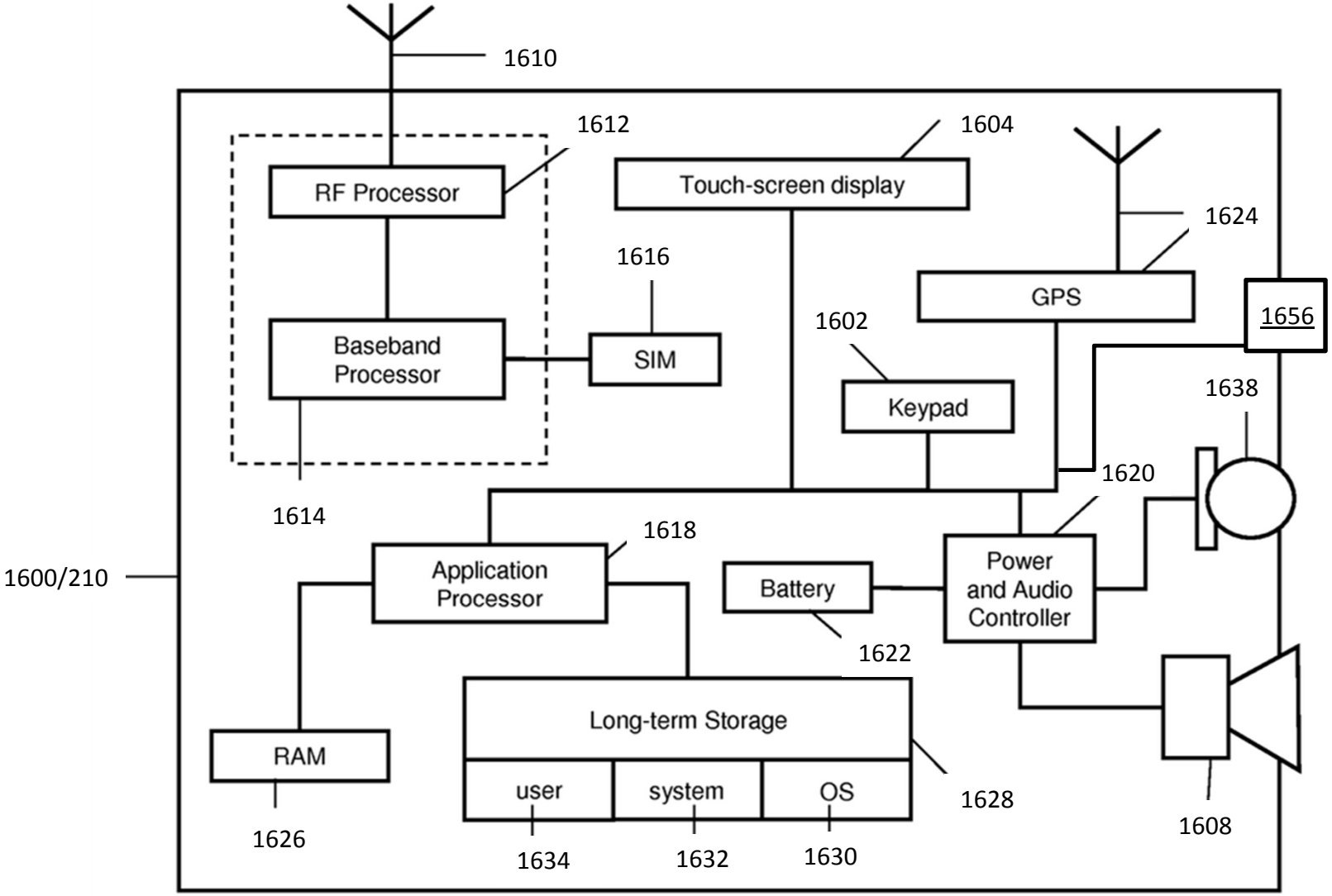

1610
1612
1604
RF Processor
Touch-screen display
1624
1616
GPS
1656
1602
Baseband Processor
SIM
Keypad
1638
1620
1614
1618
1600/210
Application Processor
Battery
Power and Audio Controller
1622
Long-term Storage
RAM
user
system
OS
1628
1608
1626
1634
1632
1630

Figure 16

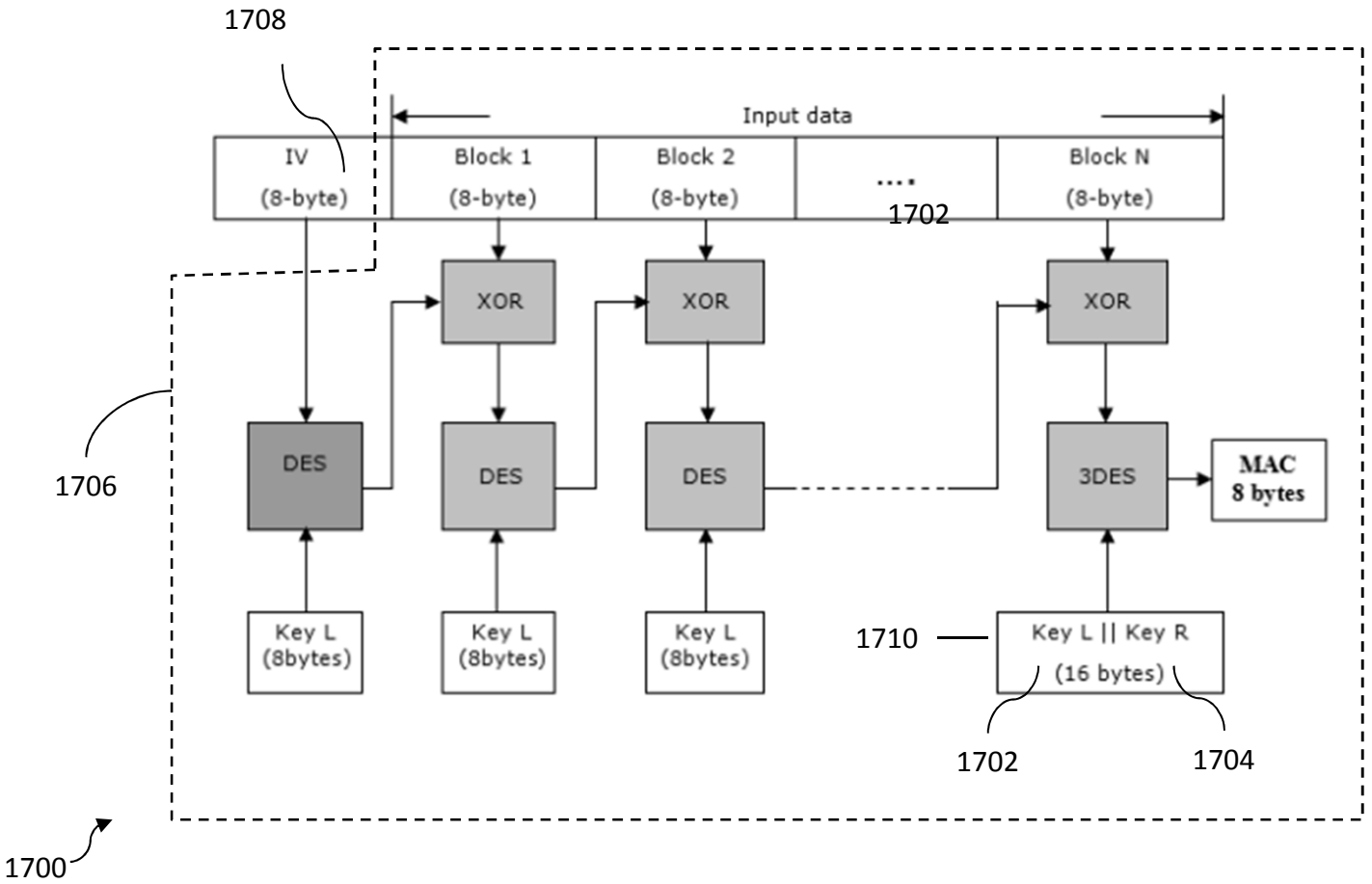

1708
Input data
IV
(8-byte)
Block 1
(8-byte)
Block 2
(8-byte)
....
Block N
(8-byte)
1702
XOR
XOR
XOR
1706
DES
DES
DES
3DES
MAC
8 bytes
Key L
(8bytes)
Key L
(8bytes)
Key L
(8bytes)
1710
Key L || Key R
(16 bytes)
1702
1704
1700

Figure 17

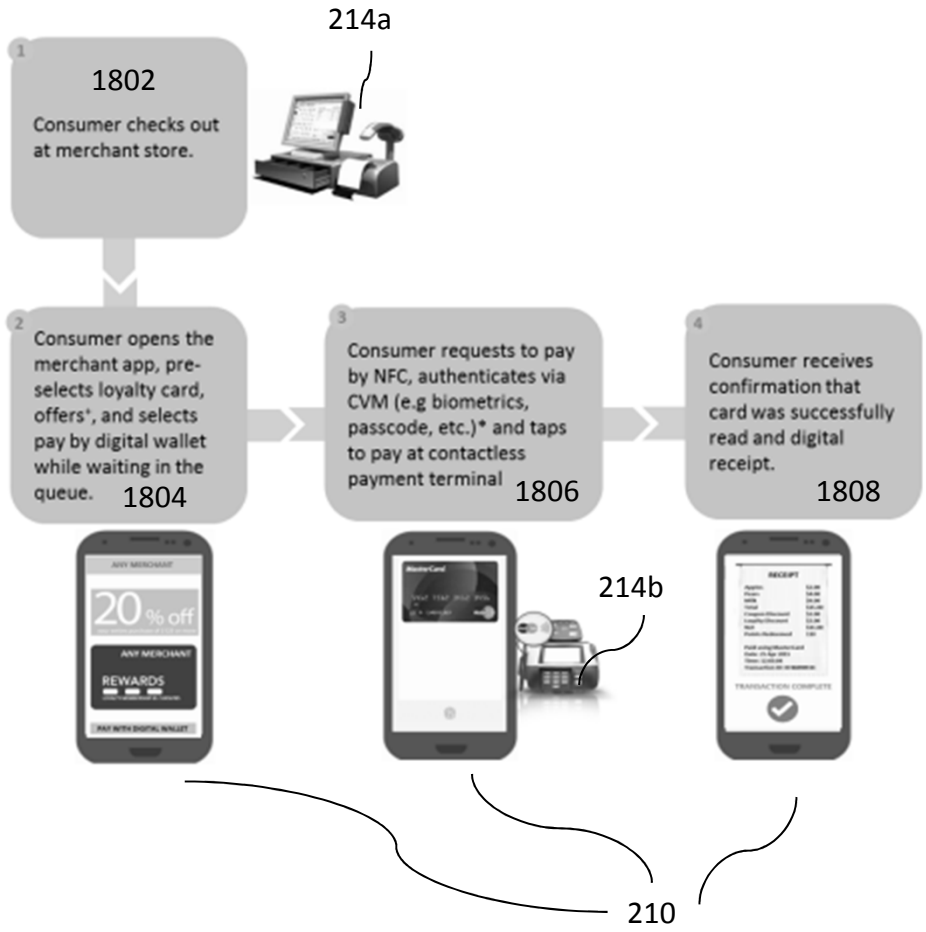

214a
1802
Consumer checks out at merchant store.
Consumer opens the merchant app, pre-selects loyalty card, offers*, and selects pay by digital wallet while waiting in the queue.
1804
Consumer requests to pay by NFC, authenticates via CVM (e.g biometrics, passcode, etc.)* and taps to pay at contactless payment terminal
1806
Consumer receives confirmation that card was successfully read and digital receipt.
1808
20% off
ANY MERCHANT
REWARDS
214b
210

Figure 18

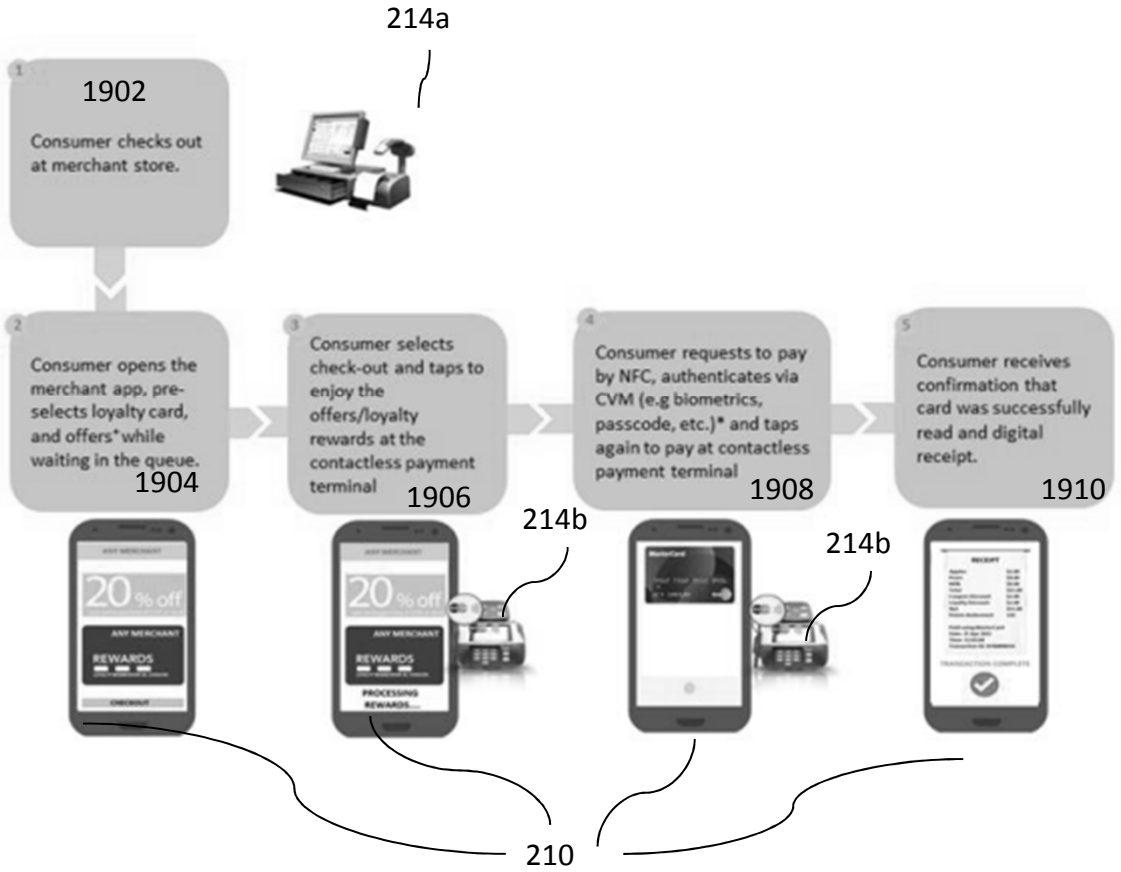

214a
1902
Consumer checks out at merchant store.
Consumer opens the merchant app, pre-selects loyalty card, and offers* while waiting in the queue.
1904
Consumer selects check-out and taps to enjoy the offers/loyalty rewards at the contactless payment terminal
1906
Consumer requests to pay by NFC, authenticates via CVM (e.g biometrics, passcode, etc.)* and taps again to pay at contactless payment terminal
1908
Consumer receives confirmation that card was successfully read and digital receipt.
1910
214b
214b
20 % off
REWARDS
210

Figure 19