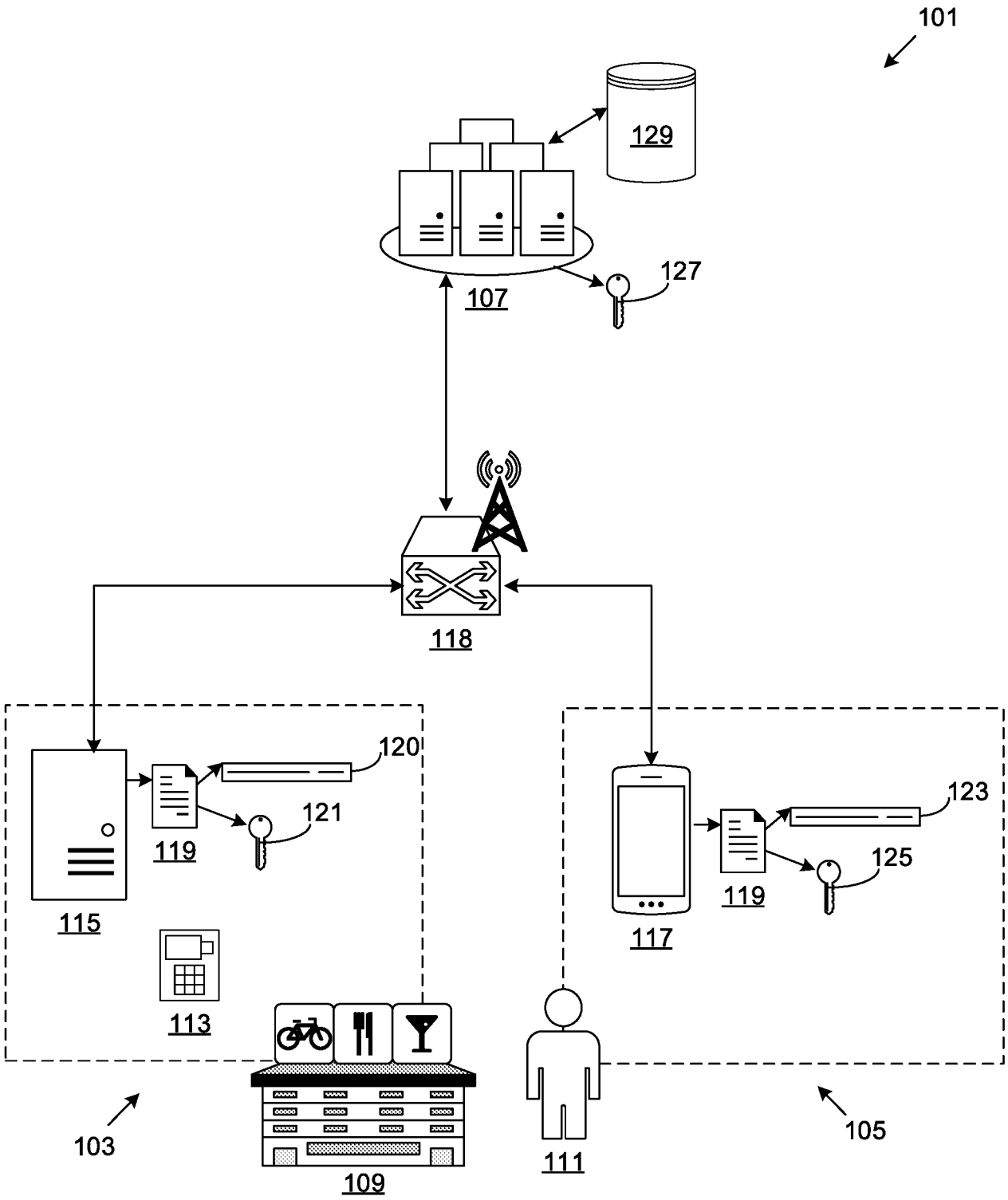

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Figure 1

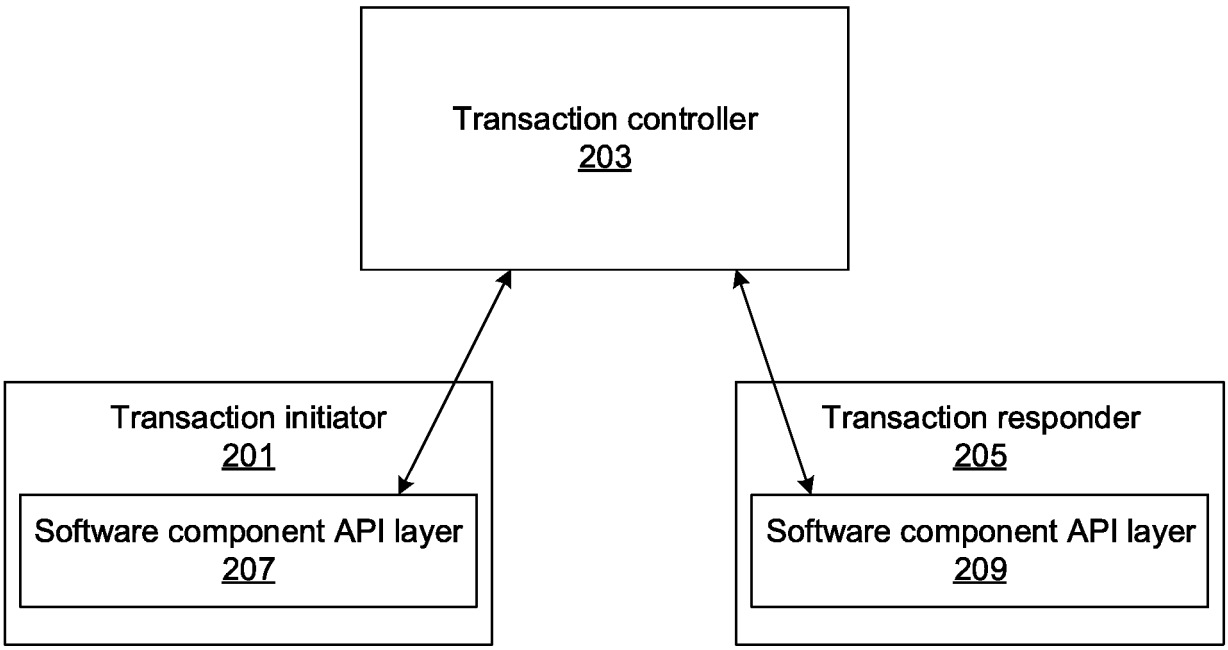

Transaction controller
203
Transaction initiator
201
Software component API layer
207
Transaction responder
205
Software component API layer
209

Figure 2

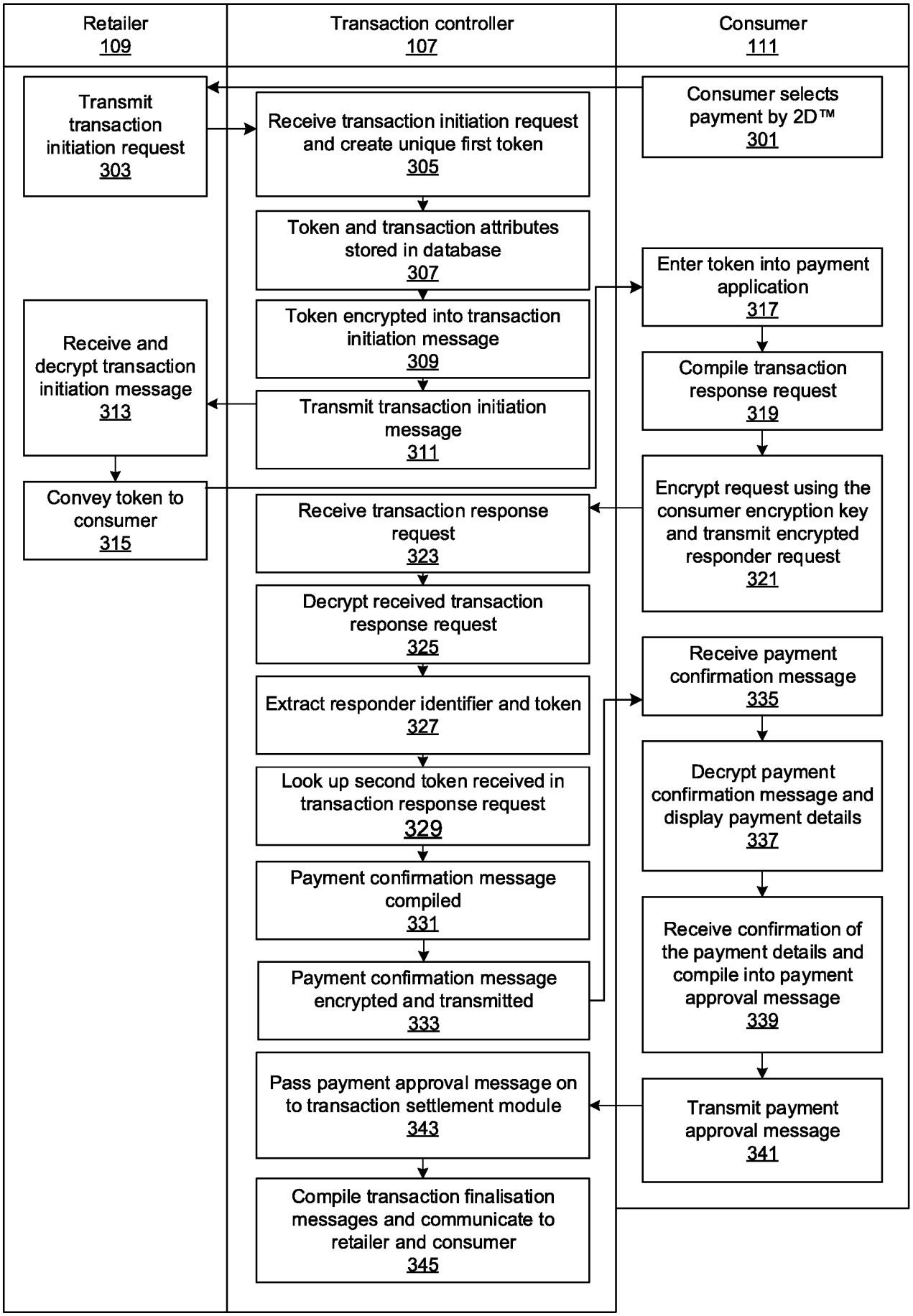

Retailer
109
Transaction controller
107
Consumer
111
Transmit transaction initiation request
303
Receive transaction initiation request and create unique first token
305
Consumer selects payment by 2D™
301
Token and transaction attributes stored in database
307
Enter token into payment application
317
Token encrypted into transaction initiation message
309
Compile transaction response request
319
Receive and decrypt transaction initiation message
313
Transmit transaction initiation message
311
Convey token to consumer
315
Encrypt request using the consumer encryption key and transmit encrypted responder request
321
Receive transaction response request
323
Decrypt received transaction response request
325
Receive payment confirmation message
335
Extract responder identifier and token
327
Look up second token received in transaction response request
329
Decrypt payment confirmation message and display payment details
337
Payment confirmation message compiled
331
Receive confirmation of the payment details and compile into payment approval message
339
Payment confirmation message encrypted and transmitted
333
Pass payment approval message on to transaction settlement module
343
Transmit payment approval message
341
Compile transaction finalisation messages and communicate to retailer and consumer
345

Figure 3

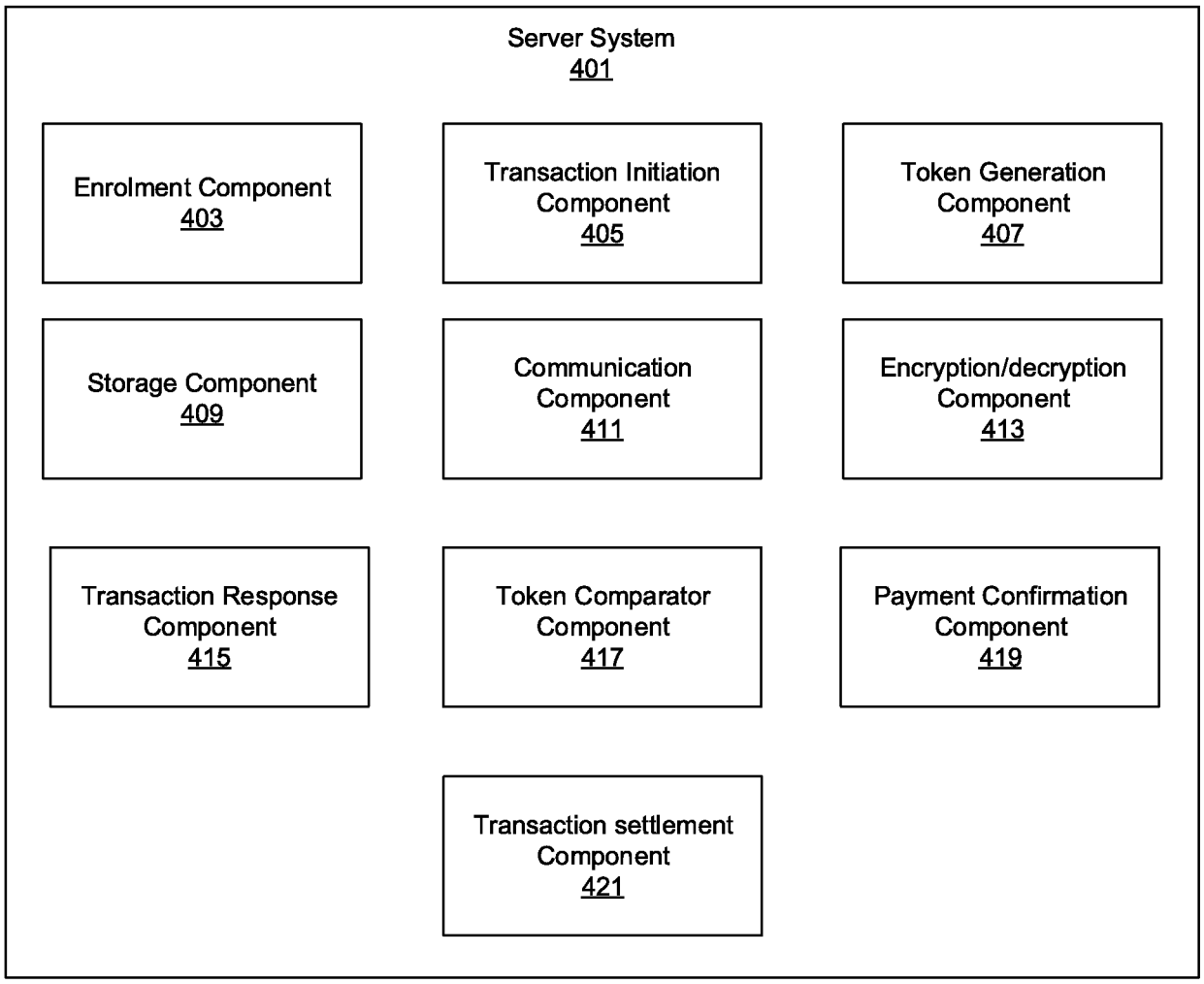

Server System
401
Enrolment Component
403
Transaction Initiation Component
405
Token Generation Component
407
Storage Component
409
Communication Component
411
Encryption/decryption Component
413
Transaction Response Component
415
Token Comparator Component
417
Payment Confirmation Component
419
Transaction settlement Component
421

Figure 4

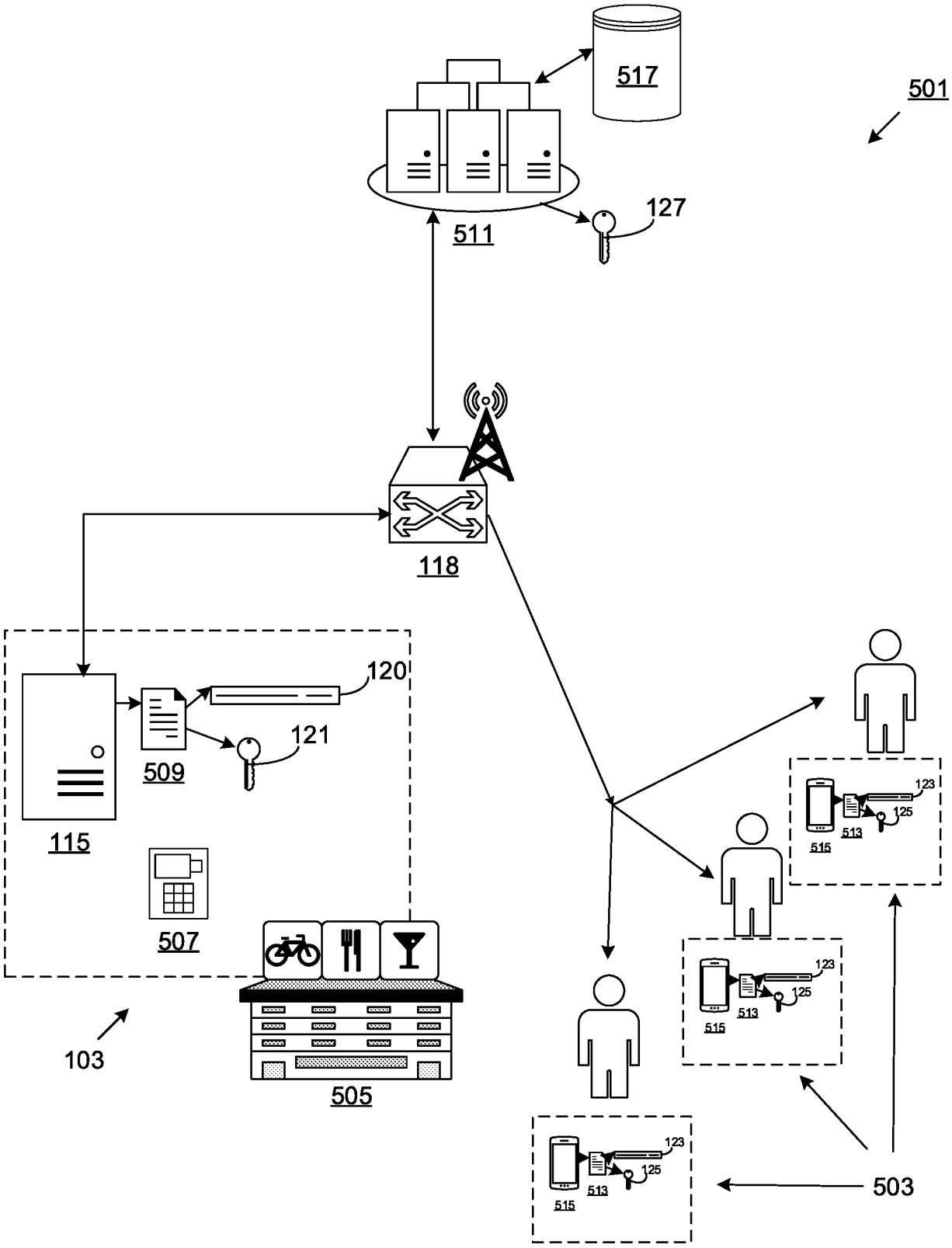

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Figure 5

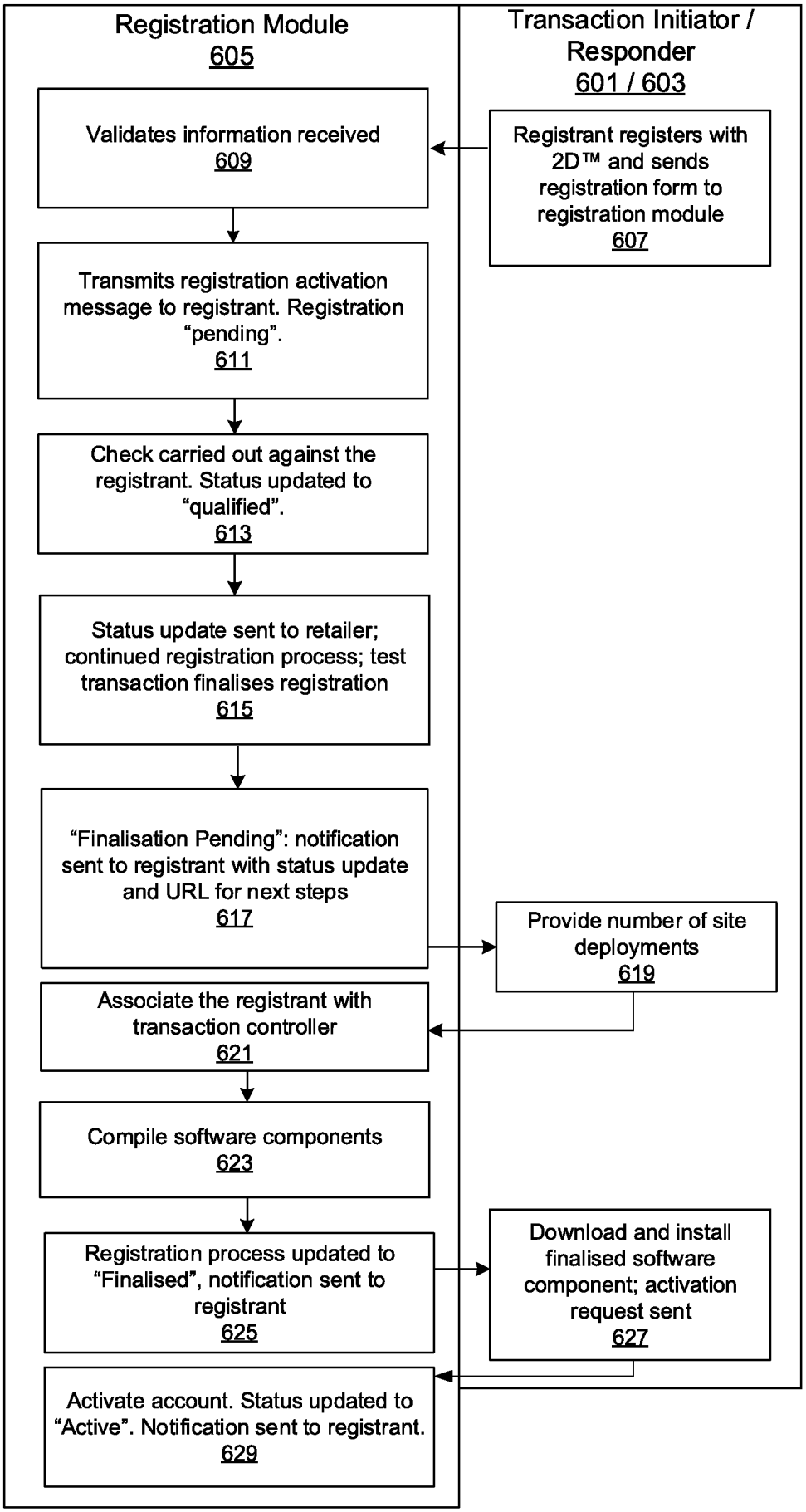

Registration Module
605
Transaction Initiator / Responder
601 / 603
Validates information received
609
Registrant registers with 2D™ and sends registration form to registration module
607
Transmits registration activation message to registrant. Registration "pending".
611
Check carried out against the registrant. Status updated to "qualified".
613
Status update sent to retailer; continued registration process; test transaction finalises registration
615
"Finalisation Pending": notification sent to registrant with status update and URL for next steps
617
Provide number of site deployments
619
Associate the registrant with transaction controller
621
Compile software components
623
Registration process updated to "Finalised", notification sent to registrant
625
Download and install finalised software component; activation request sent
627
Activate account. Status updated to "Active". Notification sent to registrant.
629

Figure 6

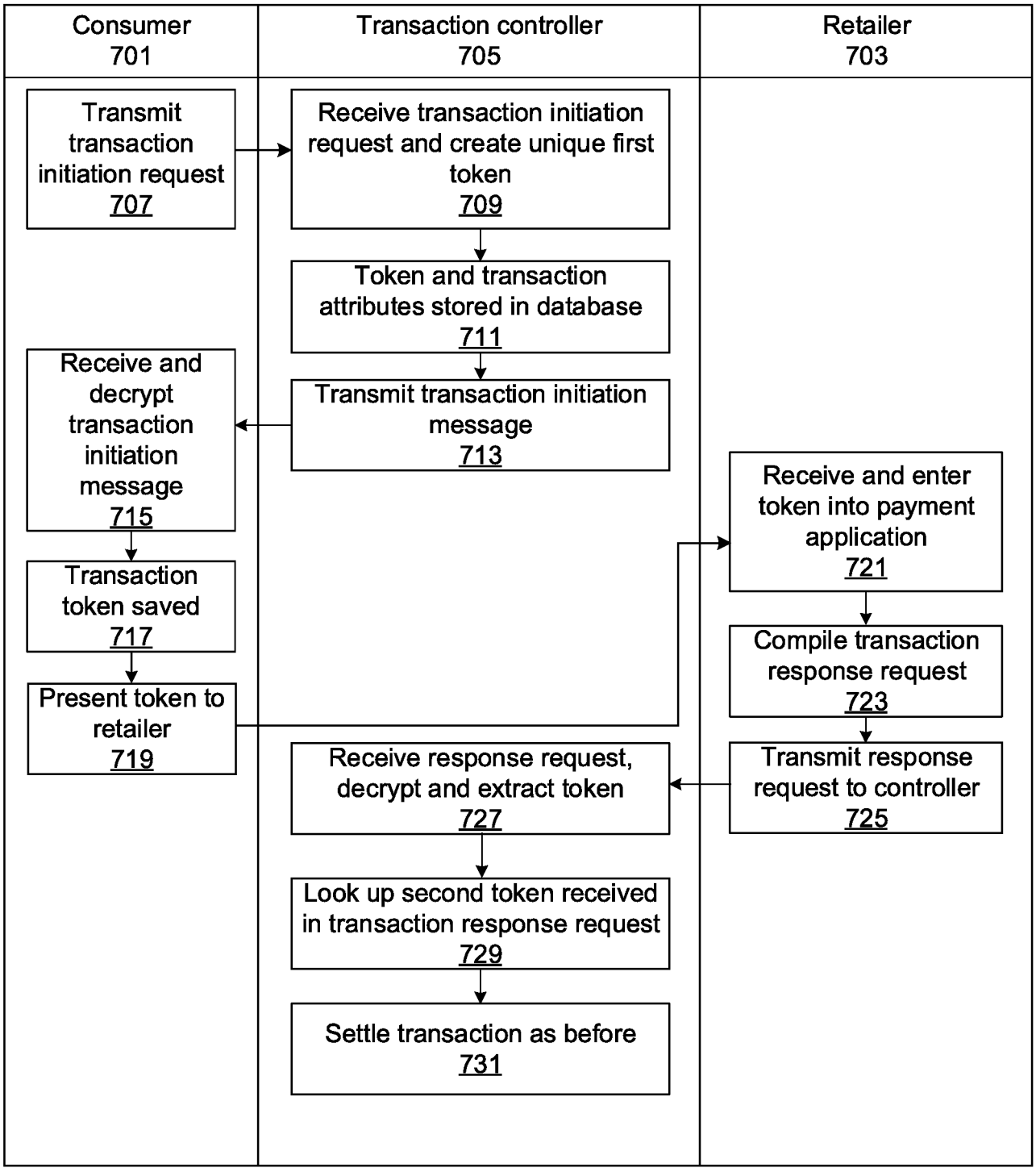

Consumer
701
Transaction controller
705
Retailer
703
Transmit transaction initiation request
707
Receive transaction initiation request and create unique first token
709
Token and transaction attributes stored in database
711
Transmit transaction initiation message
713
Receive and decrypt transaction initiation message
715
Transaction token saved
717
Present token to retailer
719
Receive and enter token into payment application
721
Compile transaction response request
723
Transmit response request to controller
725
Receive response request, decrypt and extract token
727
Look up second token received in transaction response request
729
Settle transaction as before
731

Figure 7

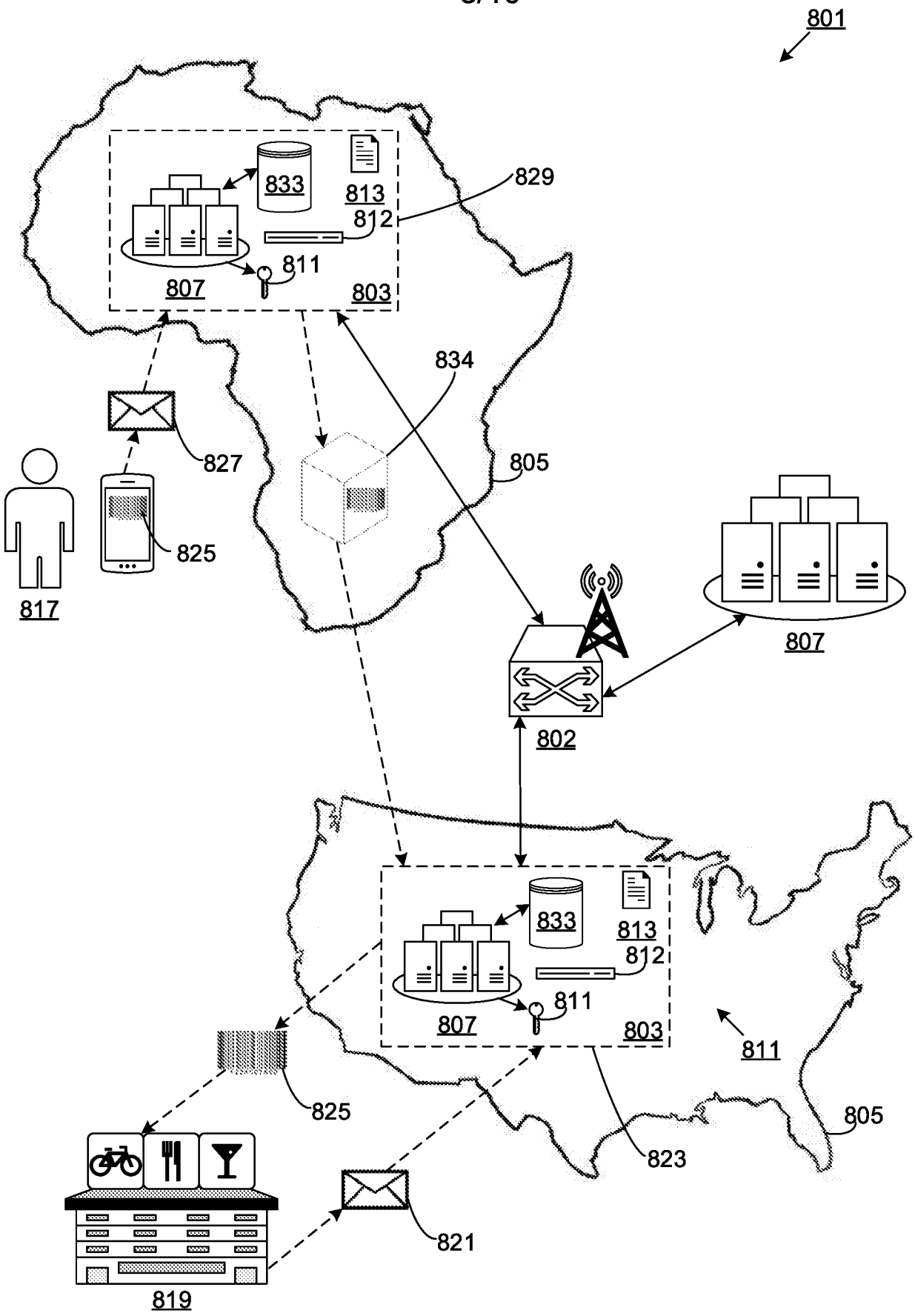

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Figure 8

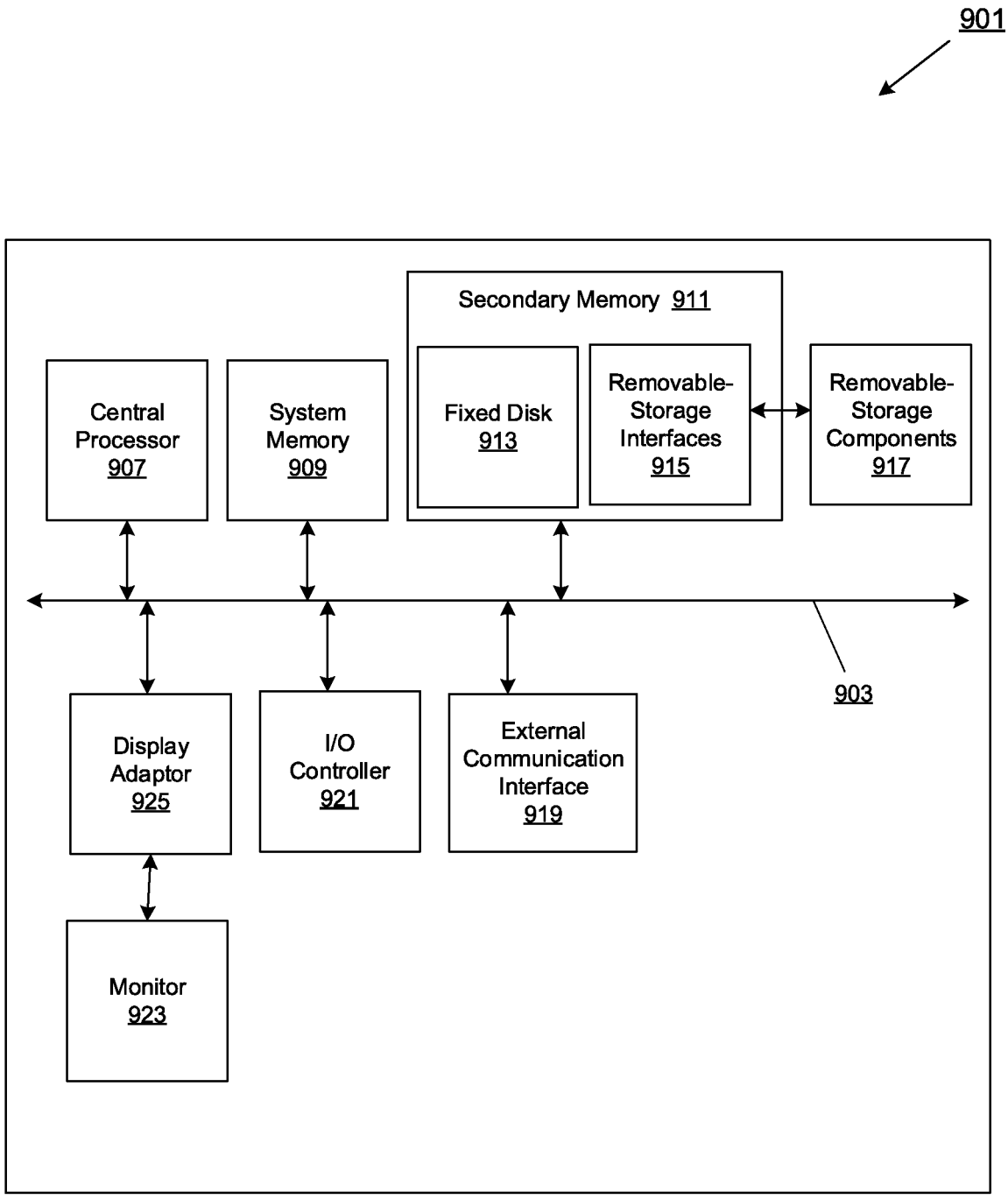

901
Secondary Memory 911
Central Processor 907
System Memory 909
Fixed Disk 913
Removable-Storage Interfaces 915
Removable-Storage Components 917
903
Display Adaptor 925
I/O Controller 921
External Communication Interface 919
Monitor 923

Figure 9

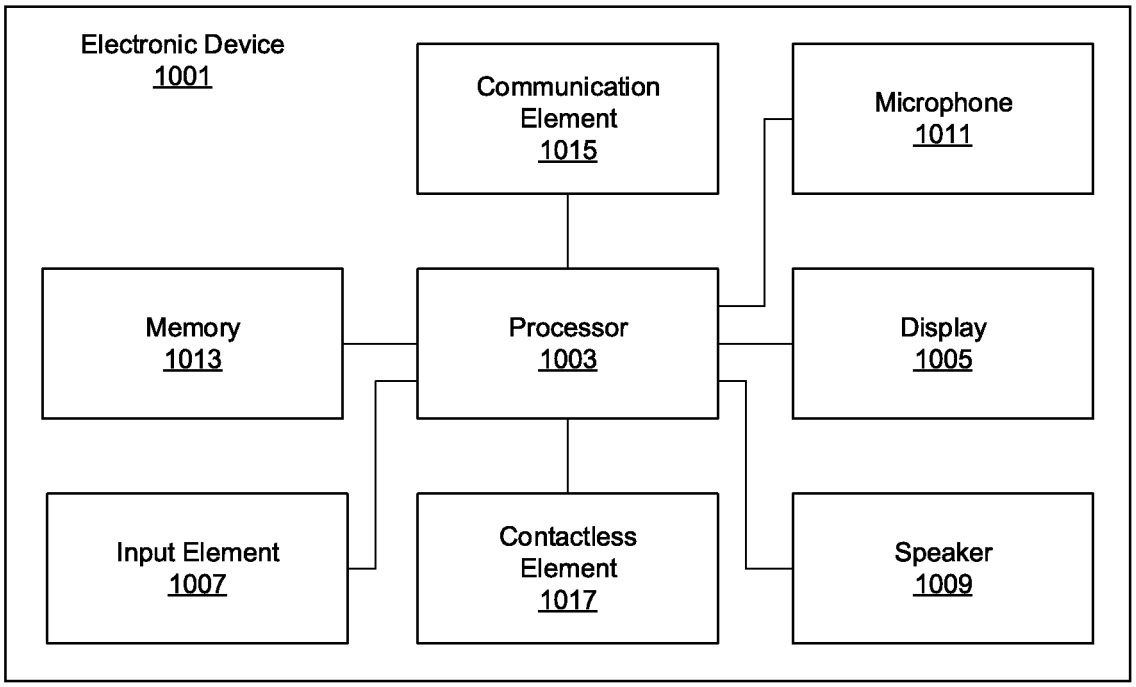

Electronic Device
1001
Communication Element
1015
Microphone
1011
Memory
1013
Processor
1003
Display
1005
Input Element
1007
Contactless Element
1017
Speaker
1009

Figure 10