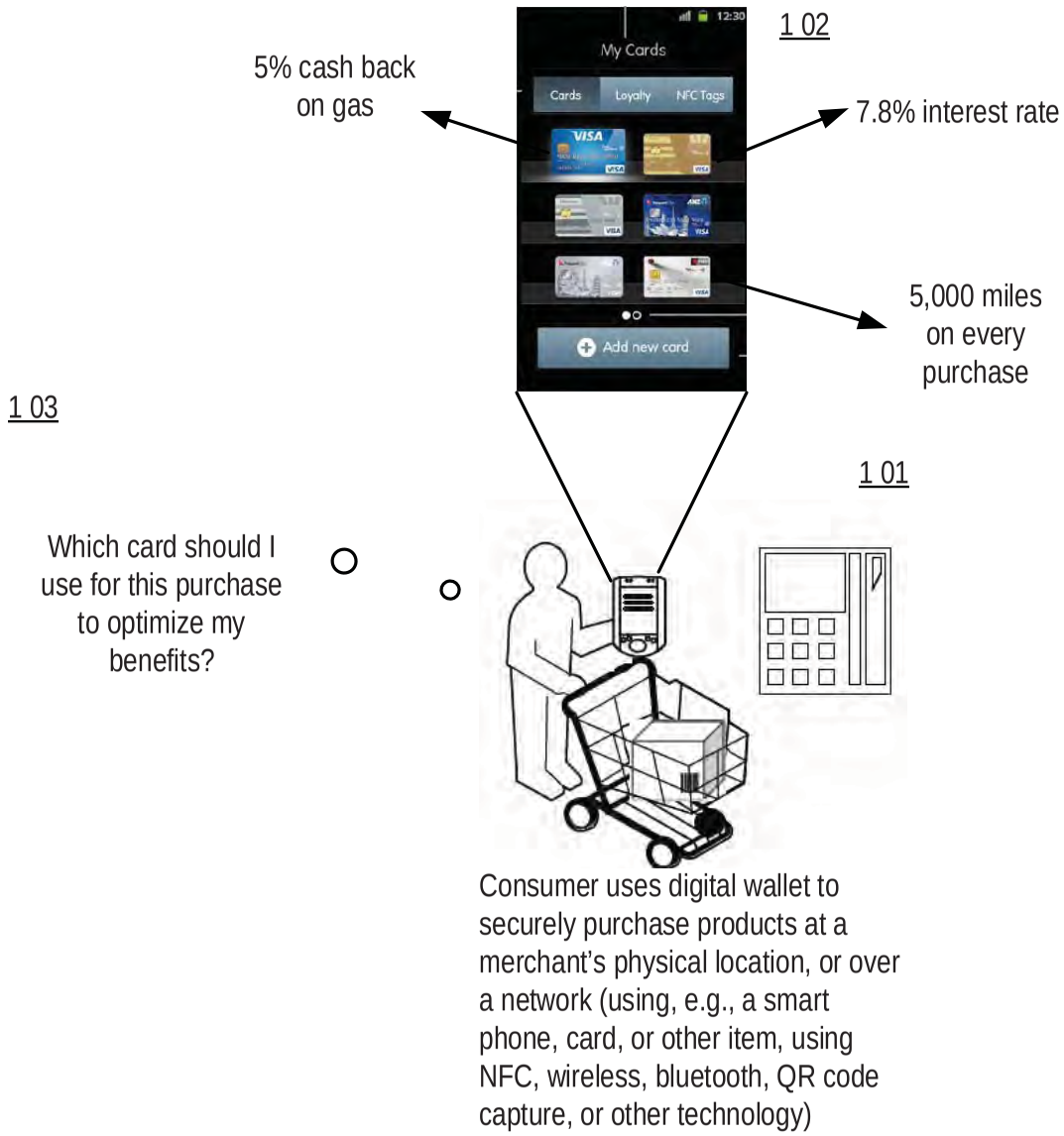


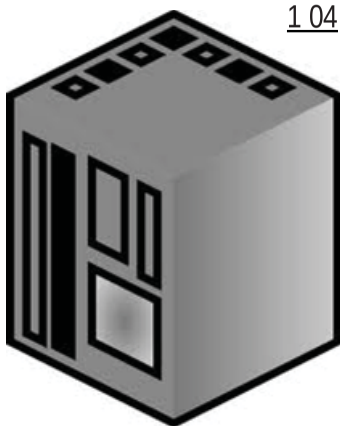


FIGURE 1A

Example: Payment Card Selector

VISA EXHIBIT - 1054
Visa Inc. v. Cortex MCP, Inc.
IPR2024-00488

FIGURE 1B

Example: Card Addition via Snap Mobile

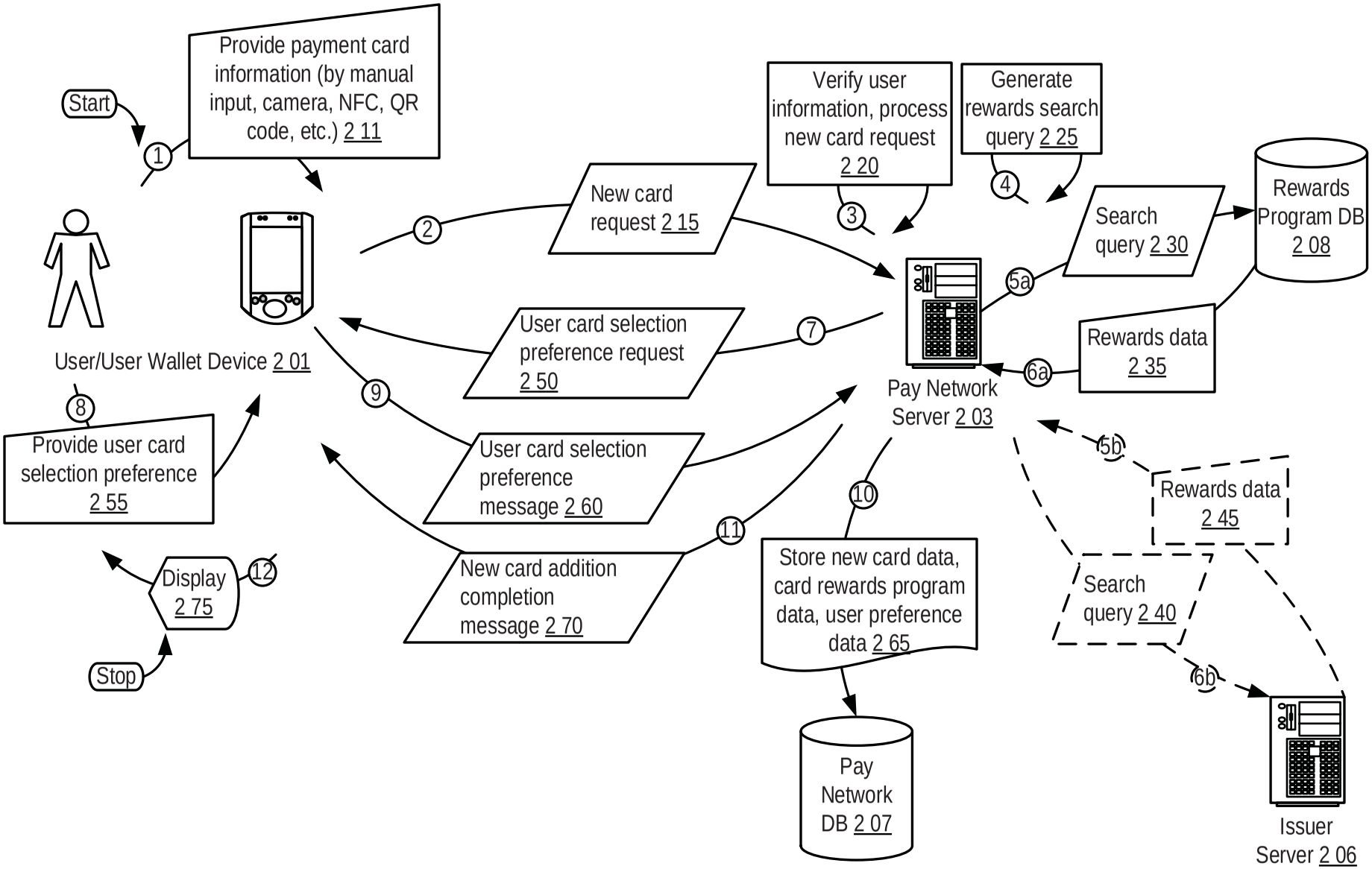


FIGURE 2

Example Data Flow: New Card Authorization

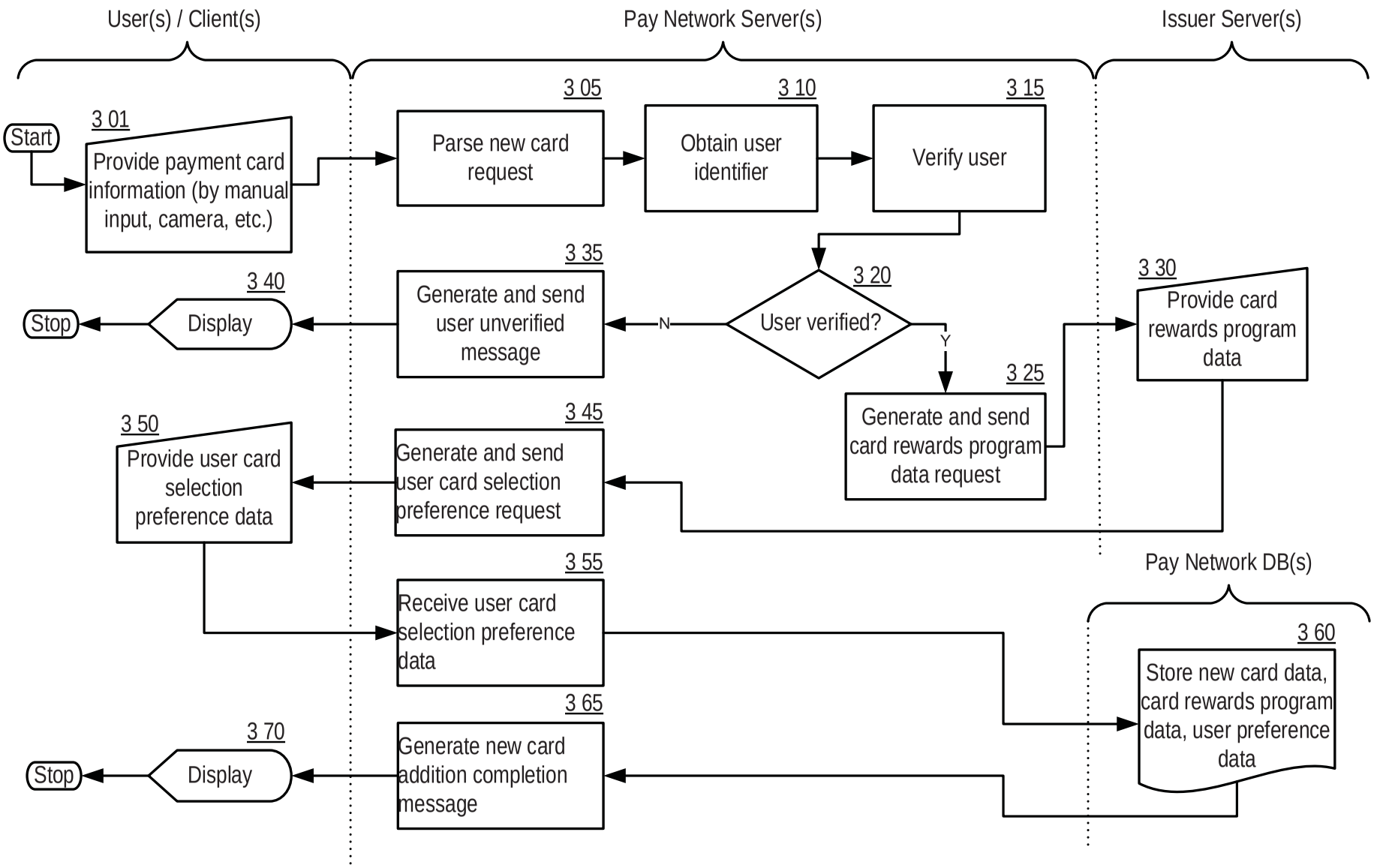


FIGURE 3

Example Flow Chart: New Card Authorization

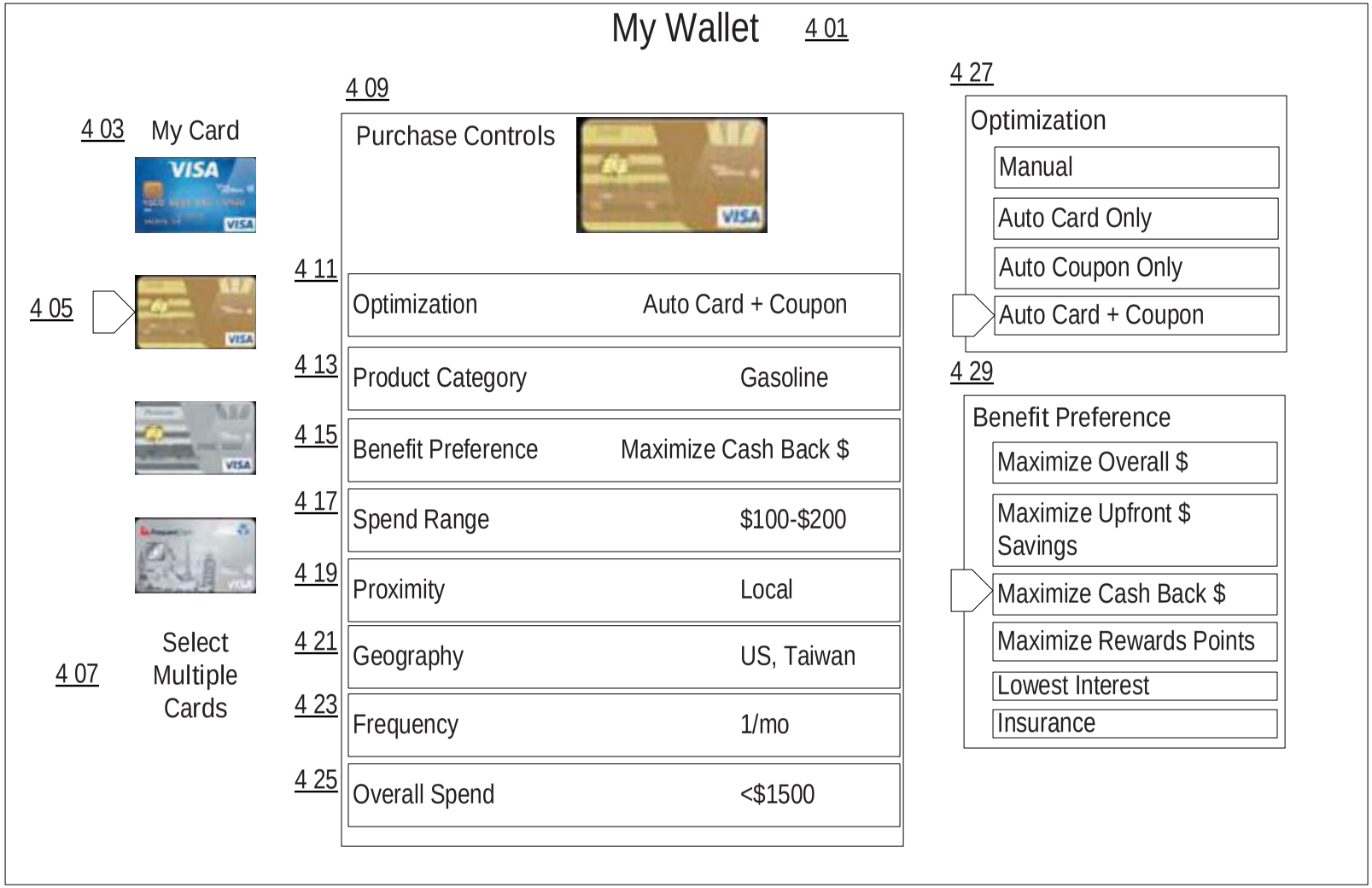


FIGURE 4A

Example: EOOR Application Embodiment

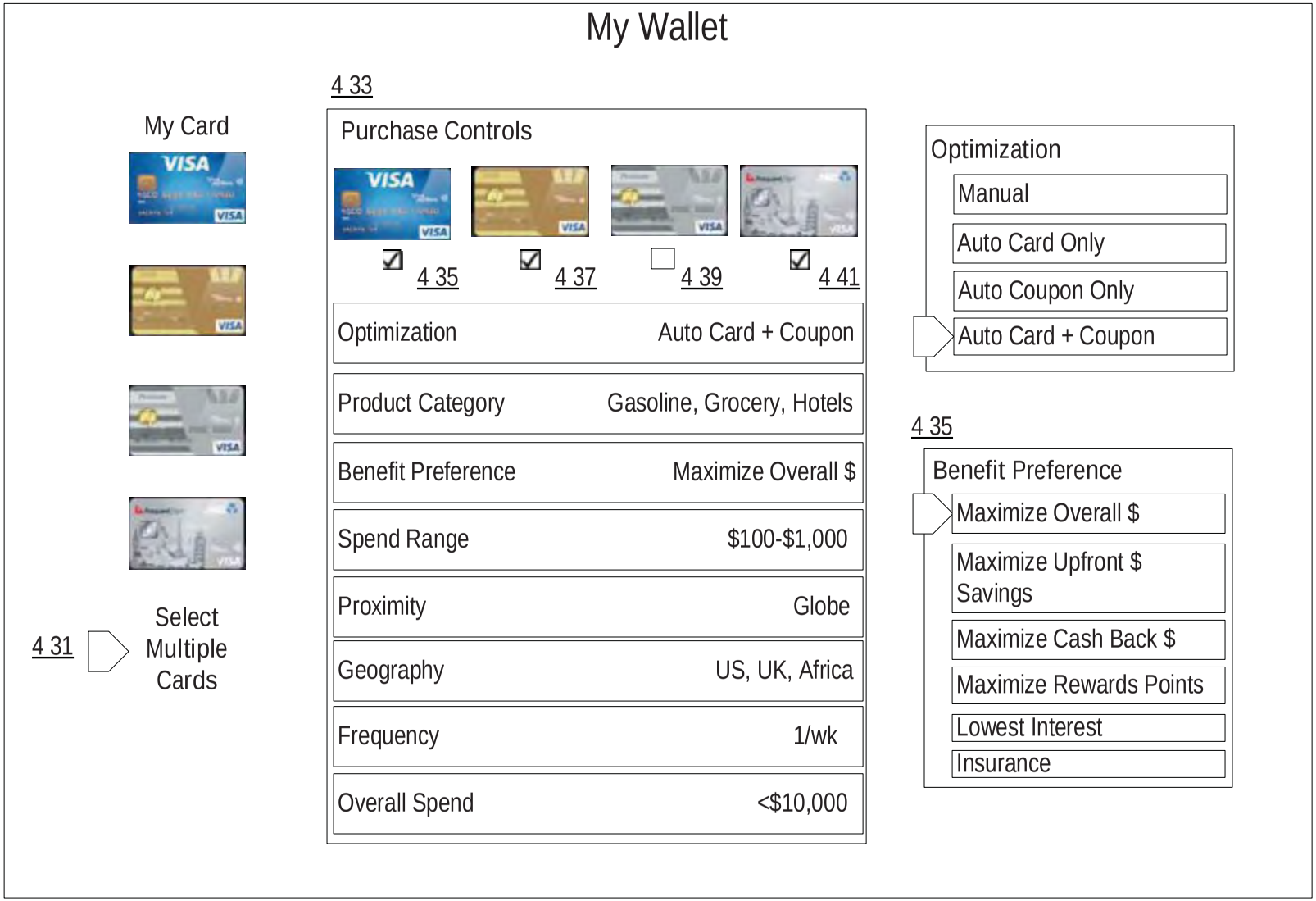


FIGURE 4B

Example: EOOR Application Embodiment

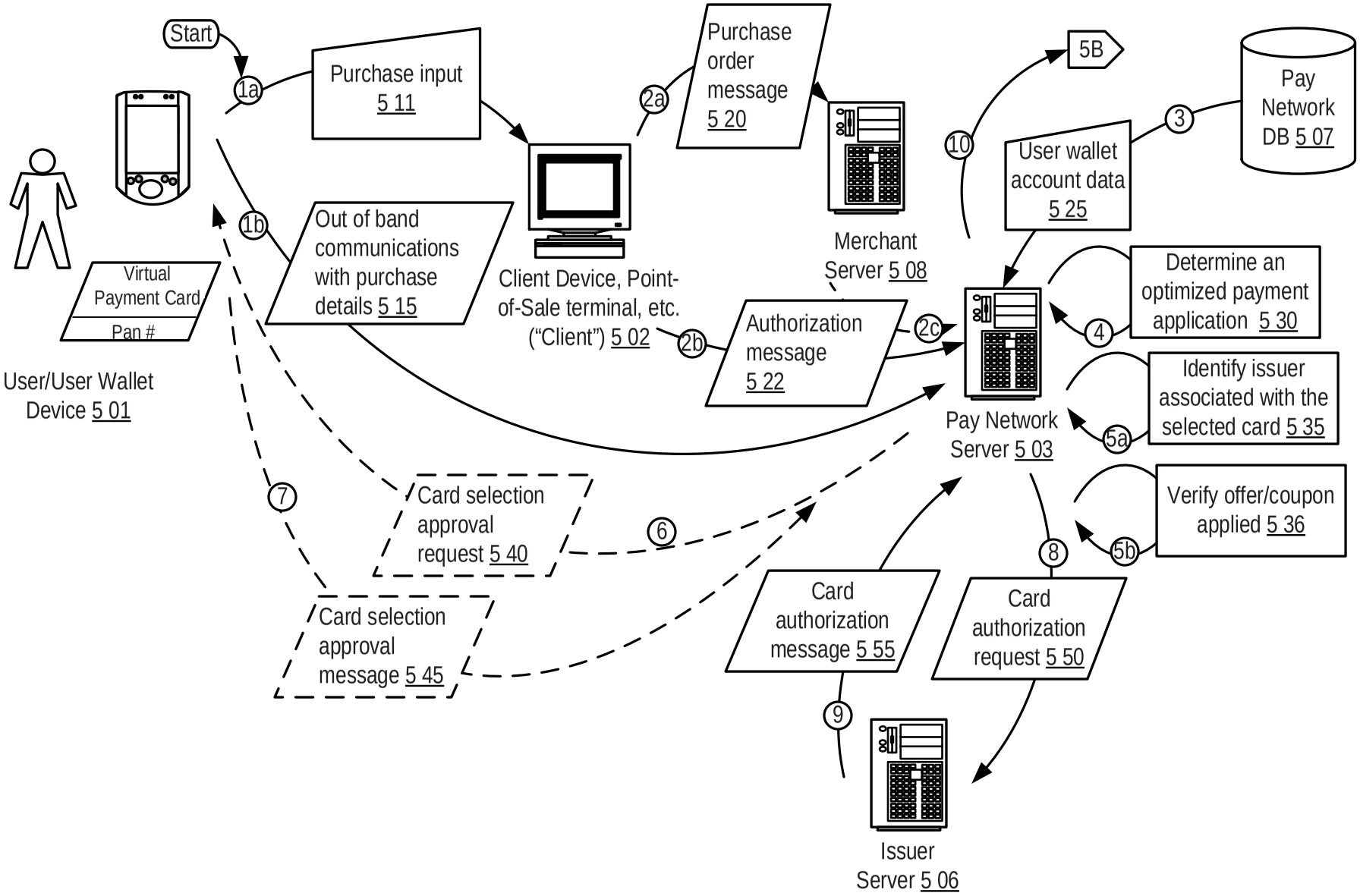


FIGURE 5A

Example Data Flow: Payment Card Selector

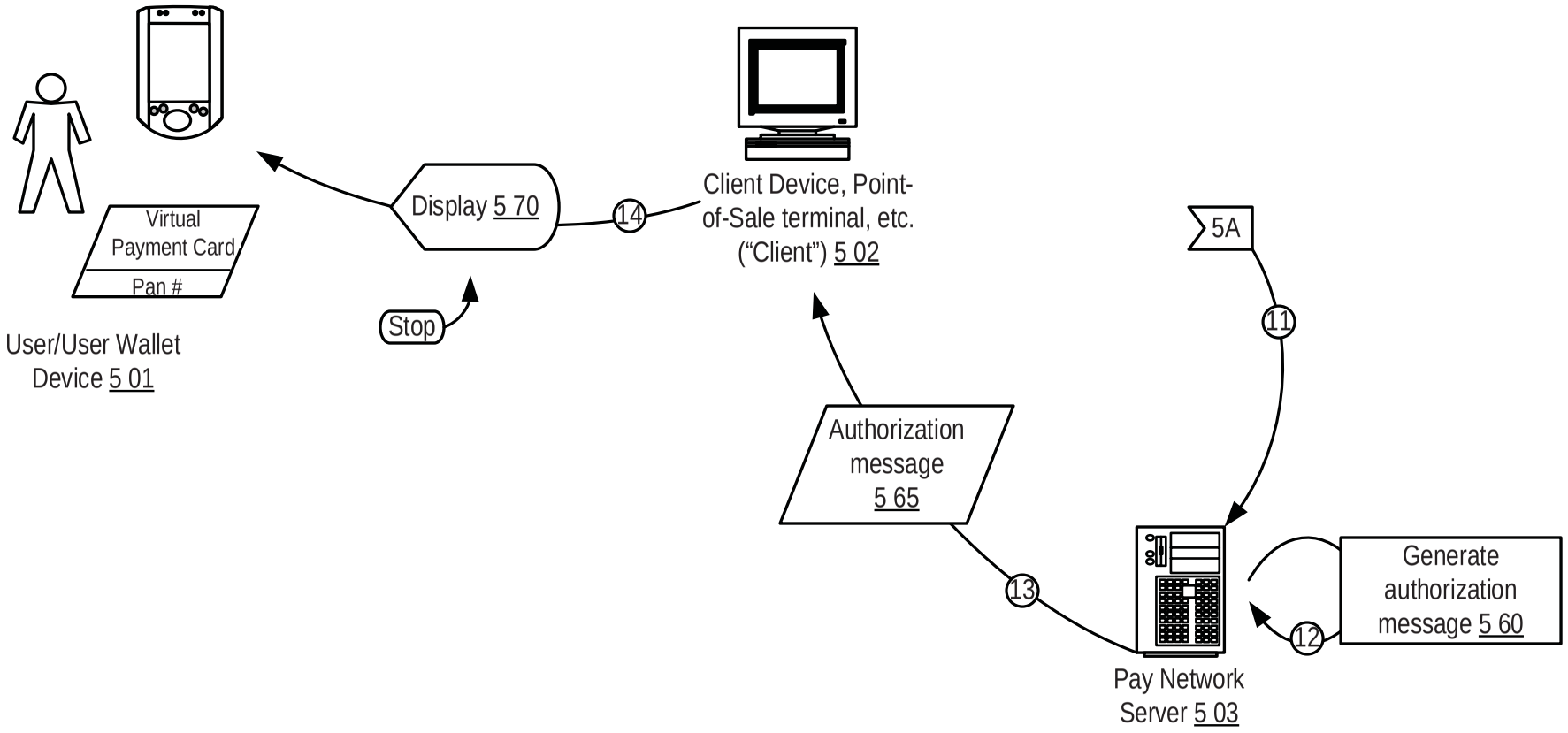


FIGURE 5B

Example Data Flow: Payment Card Selector

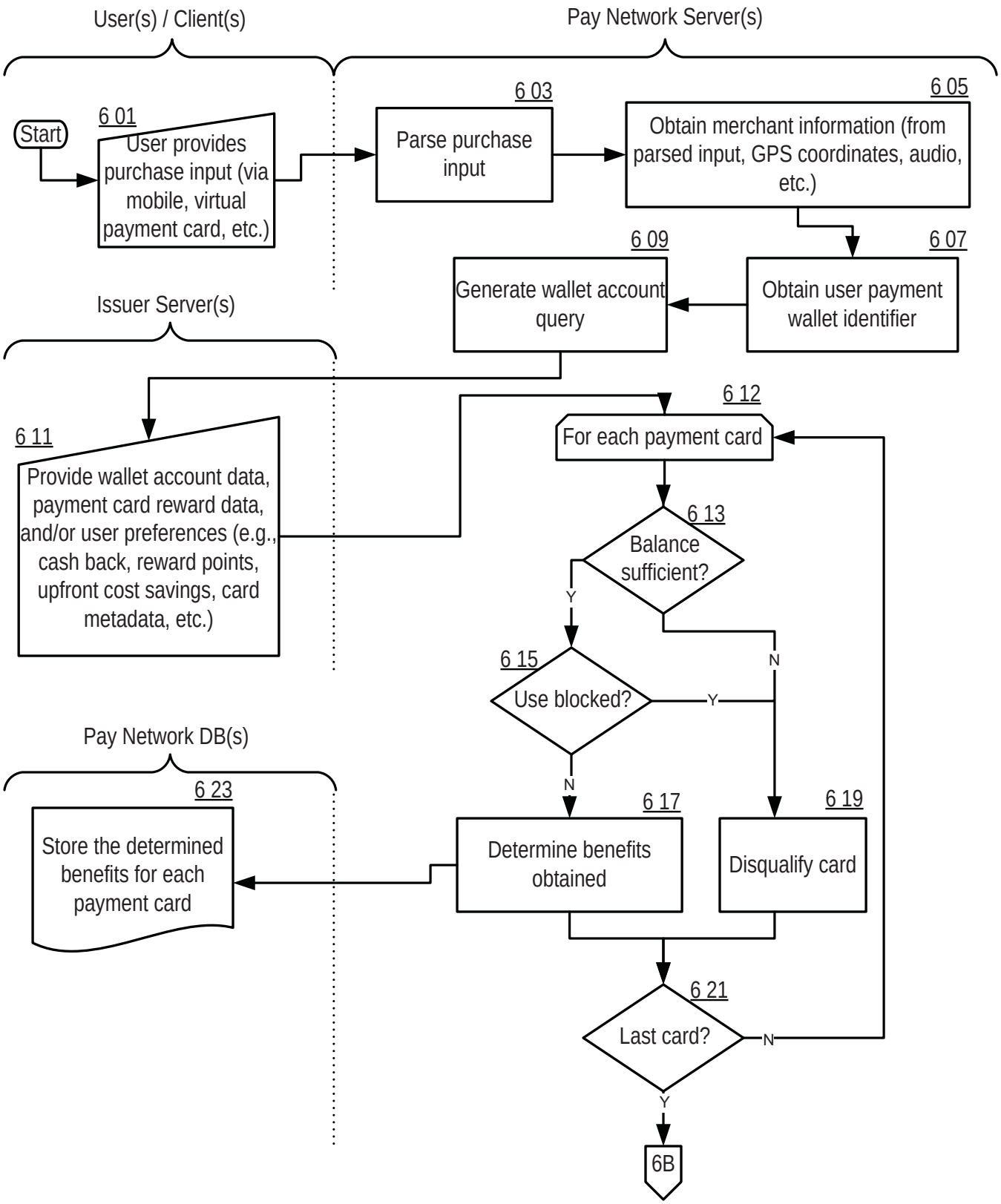


FIGURE 6A

Example Flow Chart: Payment Card Selector

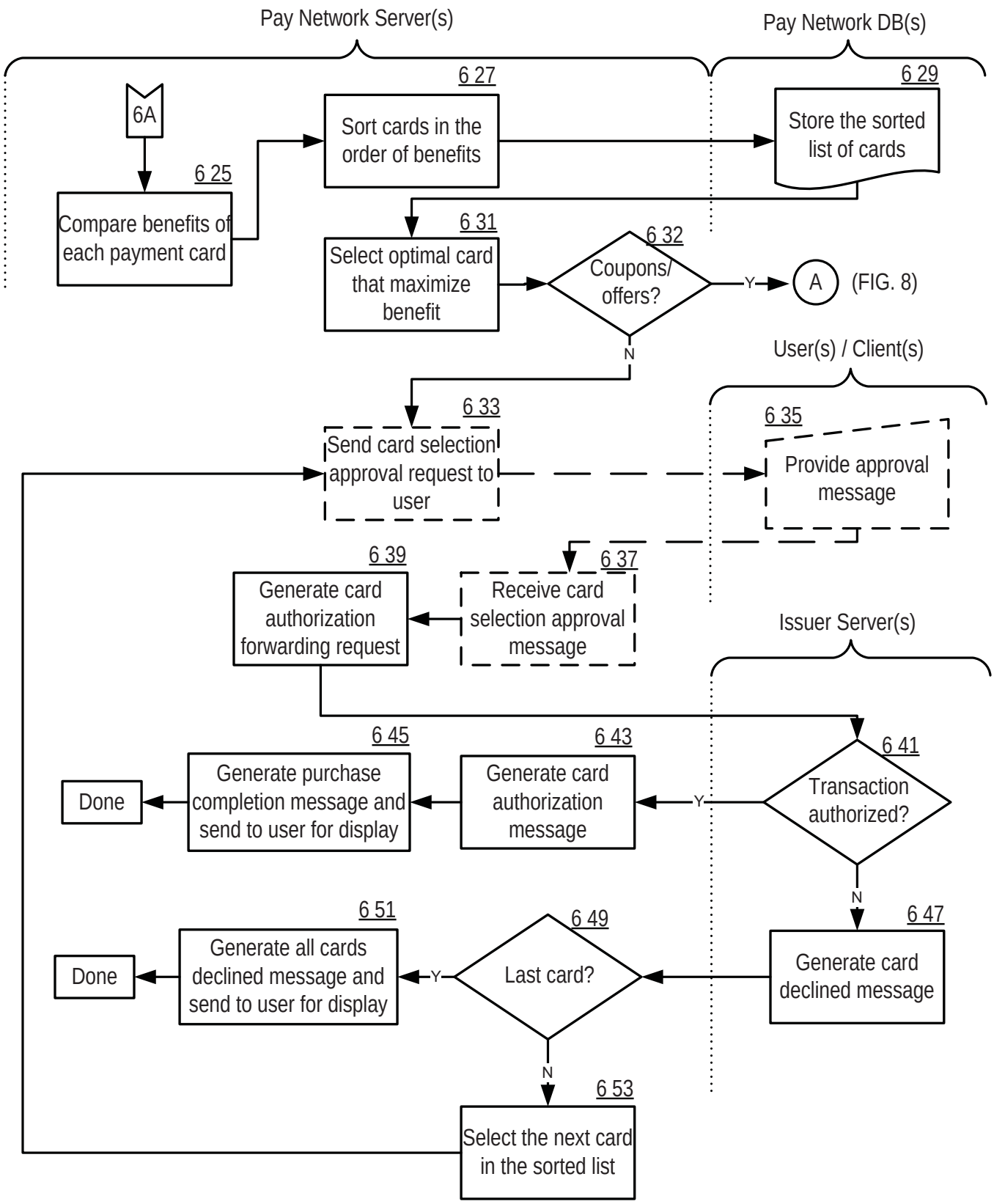


FIGURE 6B

Example Flow Chart: Payment Card Selector

6 61

6 63

6 65

	Rewards Params												Benefits Obtained							
	Gasoline ($80.00)			Grocery ($150.00)			Hotels (0)			Else ($250)										
	Cash Back	Rewards Points	Interest	Cash Back	Rewards Points	Interest	Cash Back	Rewards Points	Interest	Cash Back	Rewards Points	Interest	Overall $ Savings	Upfront $ Savings	Cash Back $ Savings	Rewards Points	Interest Charge	Warranty	Insurance	Airport Louge Access
Card 1	5%	0	7.80%	1%	0	7.80%	1%	0	7.80%	1%	0	7.80%	$4	0	$4	0	$37.44	extra 1 yr	0	N
Card 2	1%	1 pts	6.50%	5%	0	6.50%	1%	1 pts	6.50%	1%	1 pts	6.50%	$15.80	$5	$10.80	330 pts	$31.20	0	theft damage	Y
Card 3	2%	100 miles	5%	1%	0	5%	1%	0	5%	1%	0	5%	$15.60	$10	$5.60	80000 miles	$24	extra 5 yrs	0	Y

6 70

		Benefits Obtained	
		Overall $ Savings	Upfront $ Savings
Offer 1	$60 for a Italian Cooking Class	$50	$40
Offer 2	10% off Scuba Diving	$25	$25
Offer 3	15% off at Bloomingdale's	0	$0

6 75

		Benefits Obtained	
		Overall $ Savings	Upfront $ Savings
Coupon 1	Free Fries After a Burger Purchase	$2.50	$2.50
Coupon 2	Free shipping when order is more than $50	$10	$10
Coupon 3	Free soda after 10th soda	$1.50	$1.50

FIGURE 6C

Example: Payment Card Selector

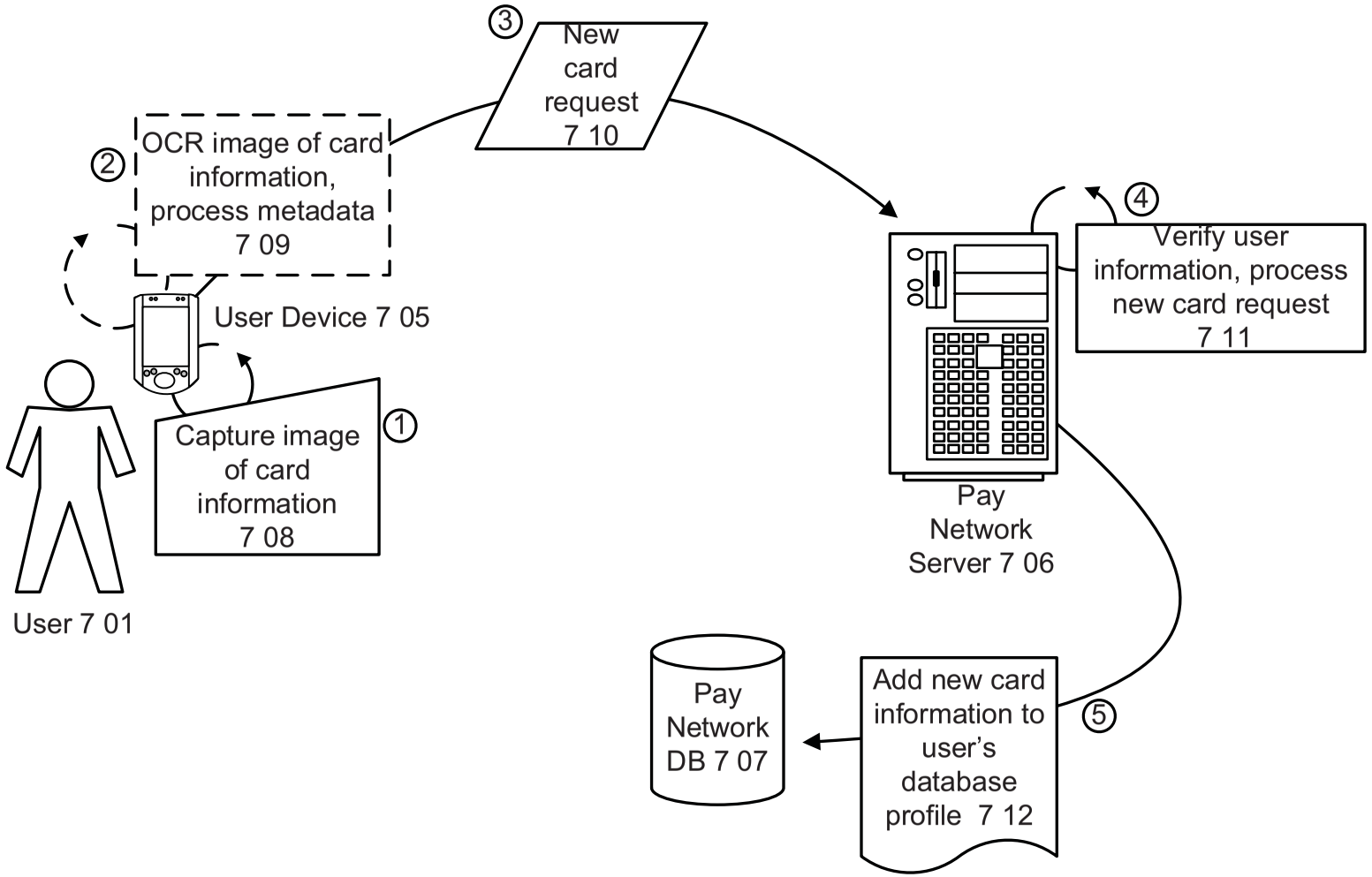


FIGURE 7A

Example Data Flow: Application of captured coupon discount

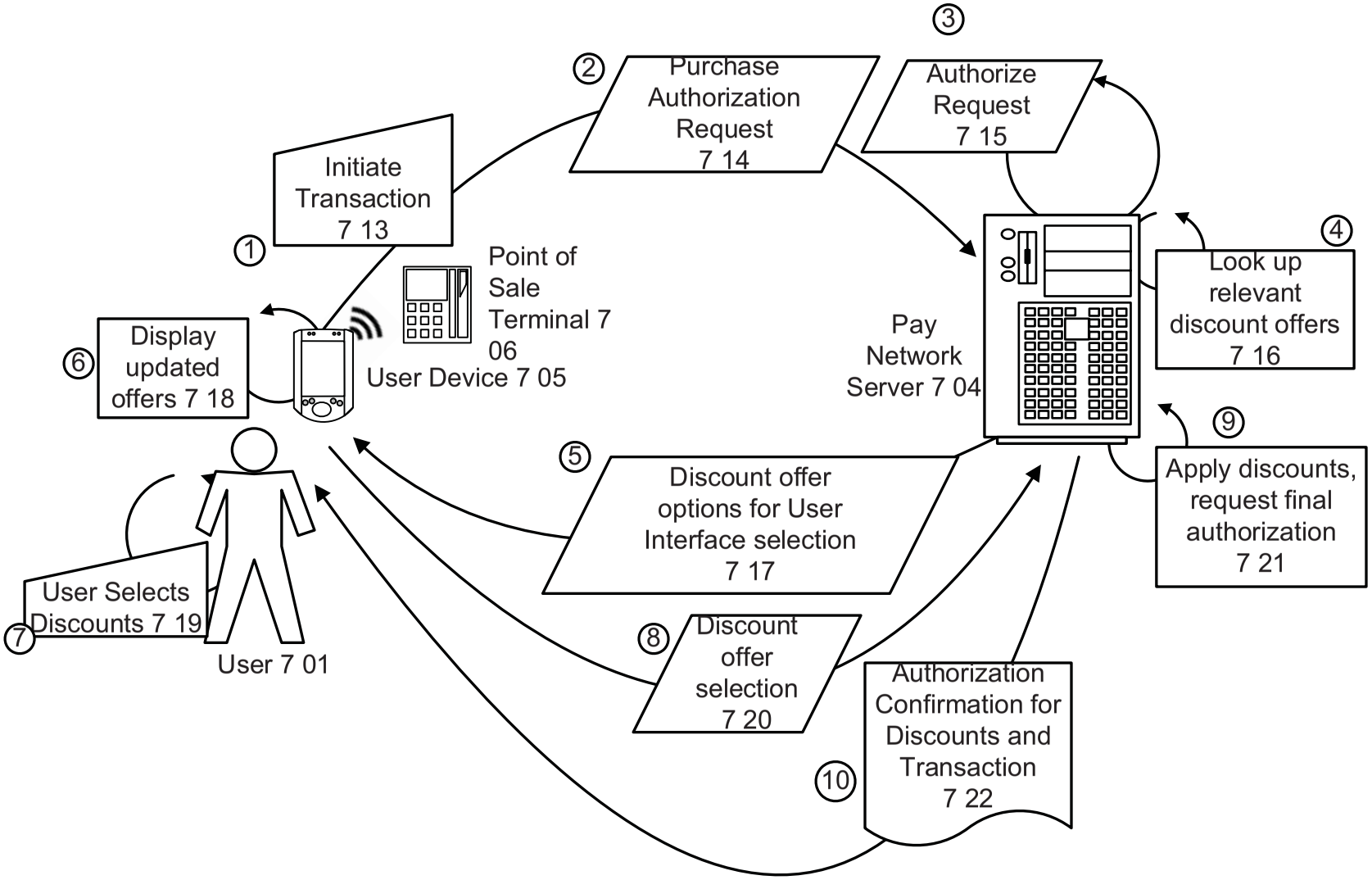


FIGURE 7B

Example Data Flow: Application of captured coupon discount

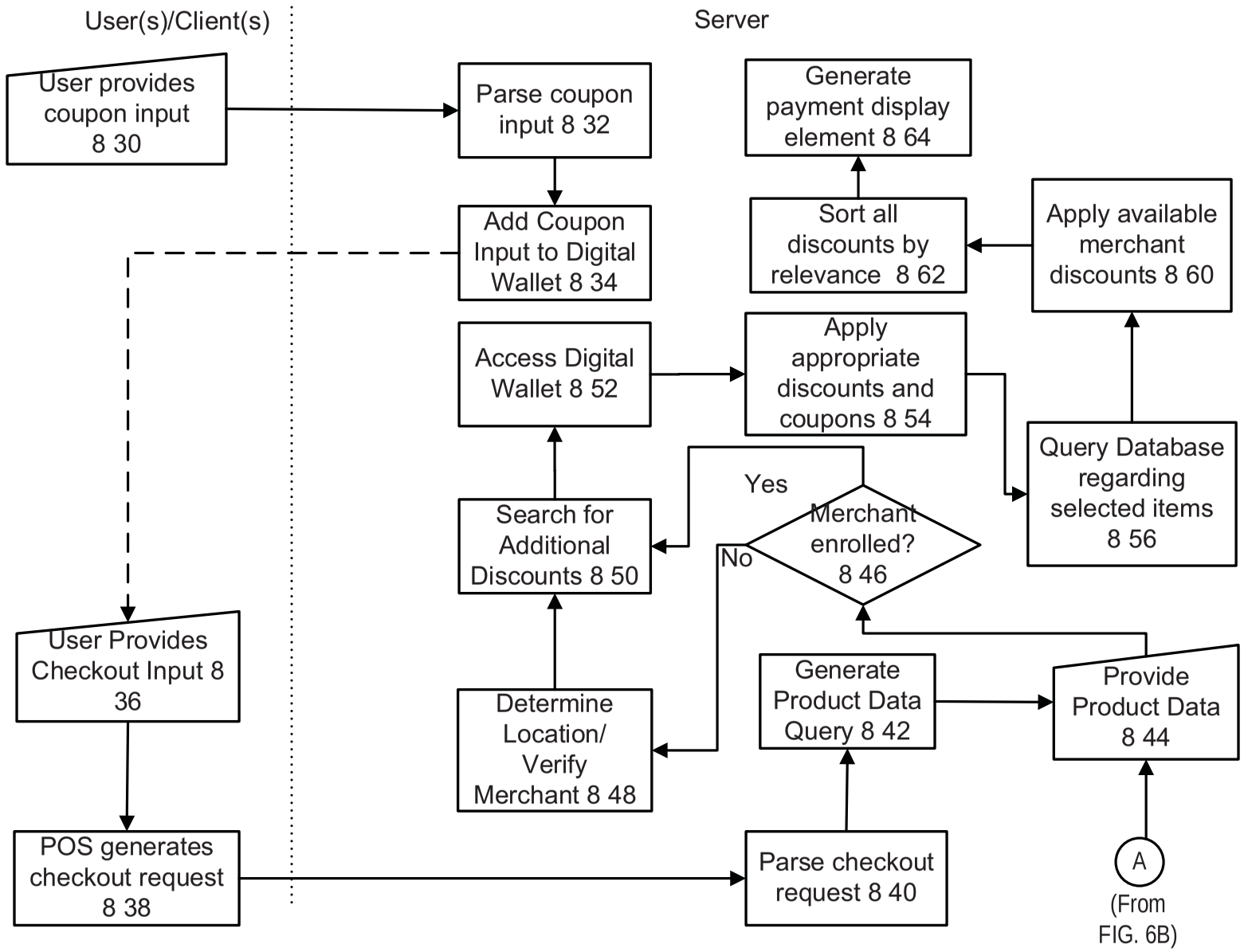


FIGURE 8

Example Flow Chart: Coupon Selector Payment Execution component

9 01

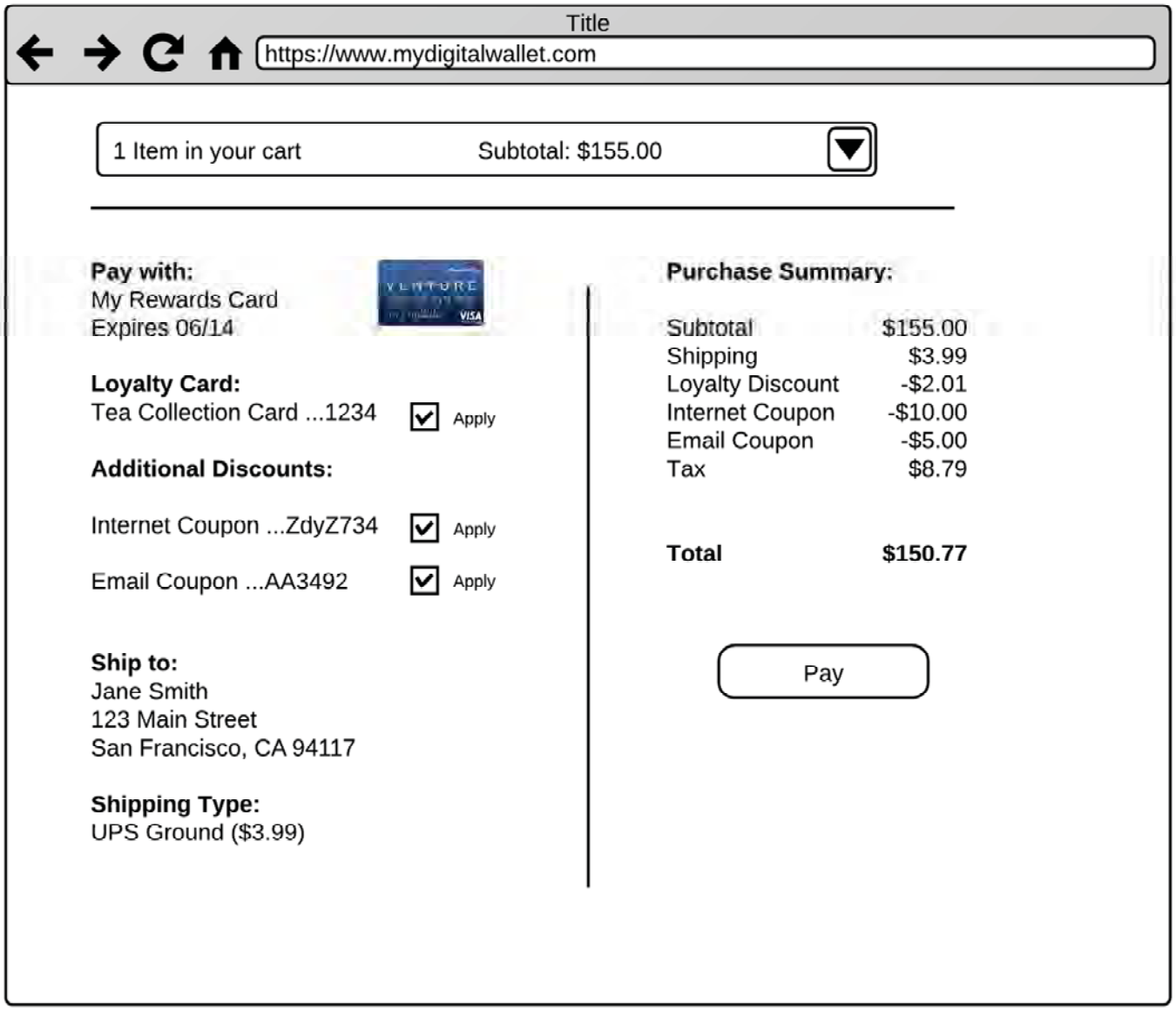


FIGURE 9A

Example UI: Coupon Selector

9 10

Title

https://www.mydigitalwallet.com

1 Item in your cart Subtotal: $155.00

Pay with:
My Rewards Card
Expires 06/14

		Stackable
Loyalty Card:		
Tea Collection Card ...1234	☐ Apply	Yes
Additional Discounts:		
Internet Coupon ...ZdyZ734	☐ Apply	Yes
Email Coupon ...AA3492	☑ Apply	No

Ship to:
Jane Smith
123 Main Street
San Francisco, CA 94117

Shipping Type:
UPS Ground ($3.99)

Purchase Summary:

Subtotal	$155.00
Shipping	$3.99
Loyalty Discount	-$2.01
Internet Coupon	-$10.00
Email Coupon	-$5.00
Tax	$8.79
Total	**$150.77**

Pay

FIGURE 9B

Example UI: Coupon Selector

9 20

Title

https://www.mydigitalwallet.com

1 Item in your cart Subtotal: $155.00

Pay with:
My Rewar Visa Credit Card *1349
Expires 06 Expires 09/15

9 30

Loyalty Card:
Tea Collection Card ...1234 ☐ Apply Stackable Yes

Additional Discounts:

Internet Coupon ...ZdyZ734 ☐ Apply Yes

Email Coupon ...AA3492 ☑ Apply No

Ship to:
Jane Smith
123 Main Street
San Francisco, CA 94117

Shipping Type:
UPS Ground ($3.99)

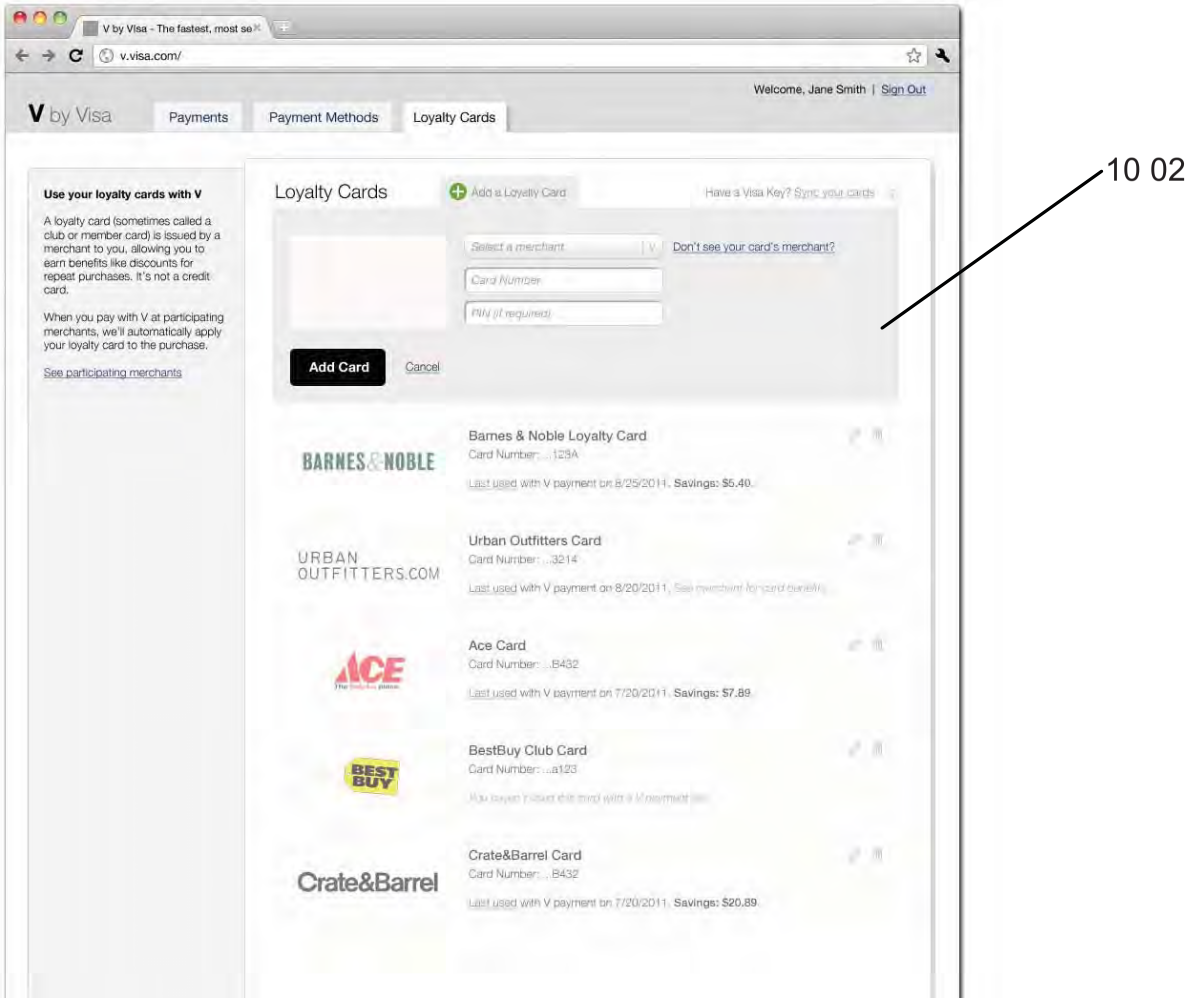
Purchase Summary:

Subtotal	$155.00
Shipping	$3.99
Loyalty Discount	-$2.01
Internet Coupon	-$10.00
Email Coupon	-$5.00
Tax	$8.79
Total	**$150.77**

Pay

FIGURE 9C

Example UI: Card and Coupon Selector



10 02

FIGURE 10A

Example UI: Card and Coupon Selector

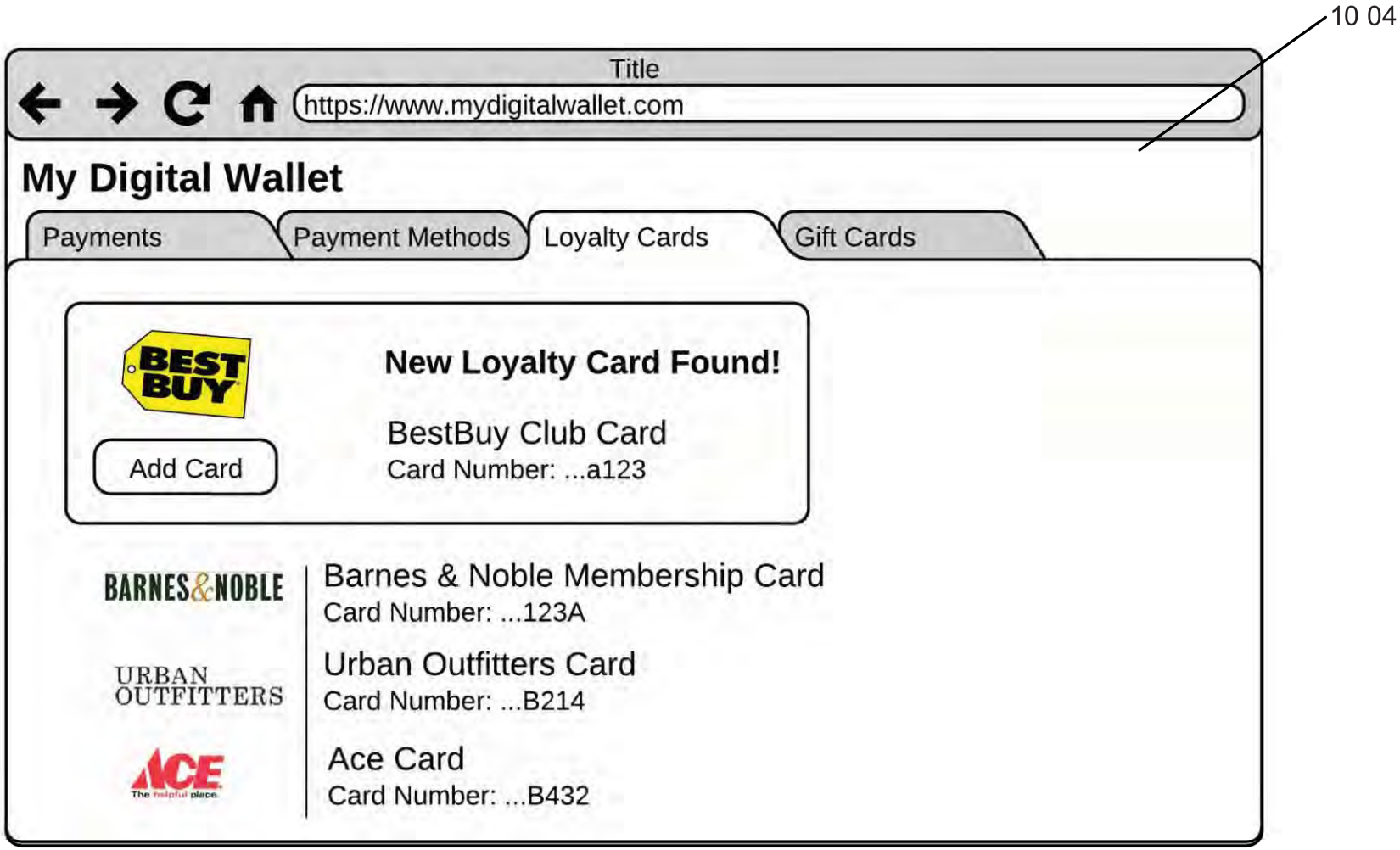


FIGURE 10B

Example UI: Card and Coupon Selector

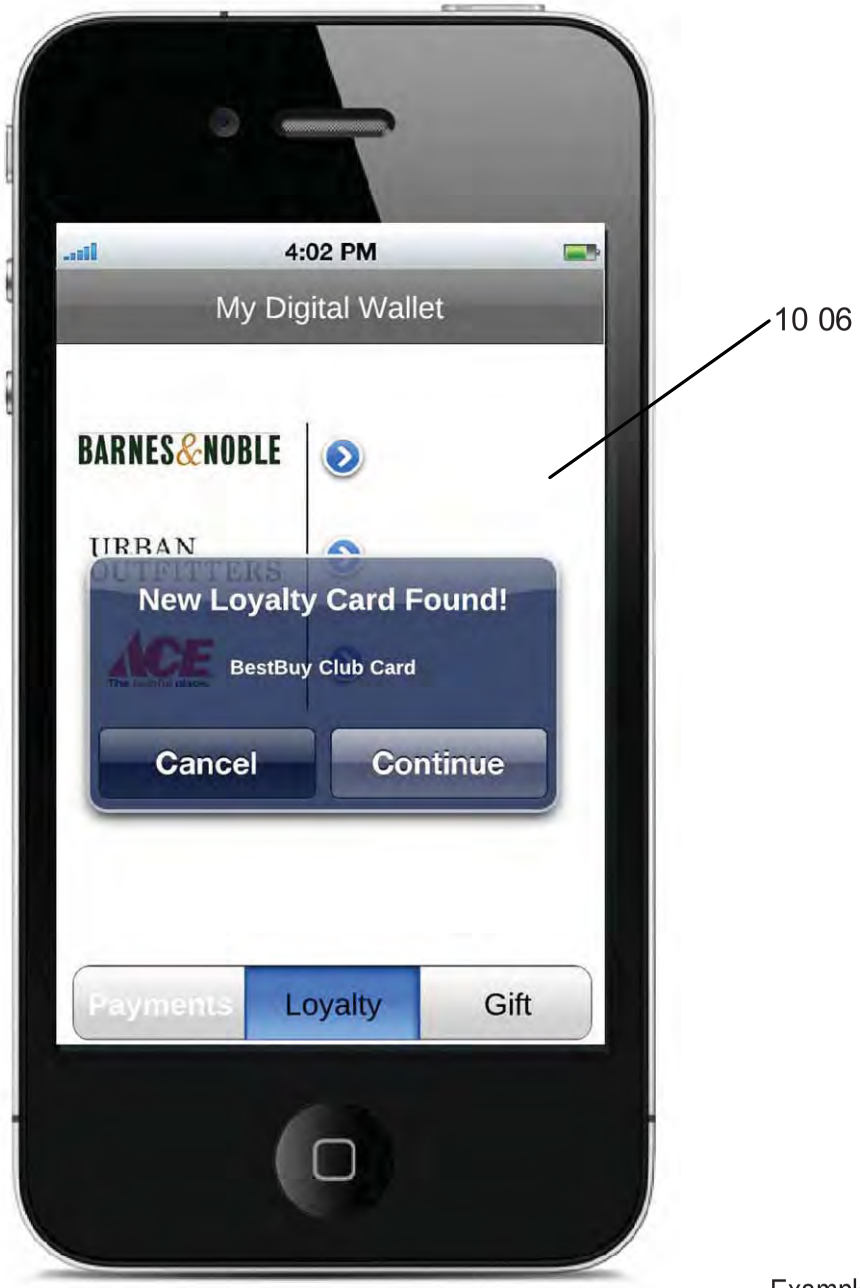


FIGURE 10C

Example UI: Card and Coupon Selector

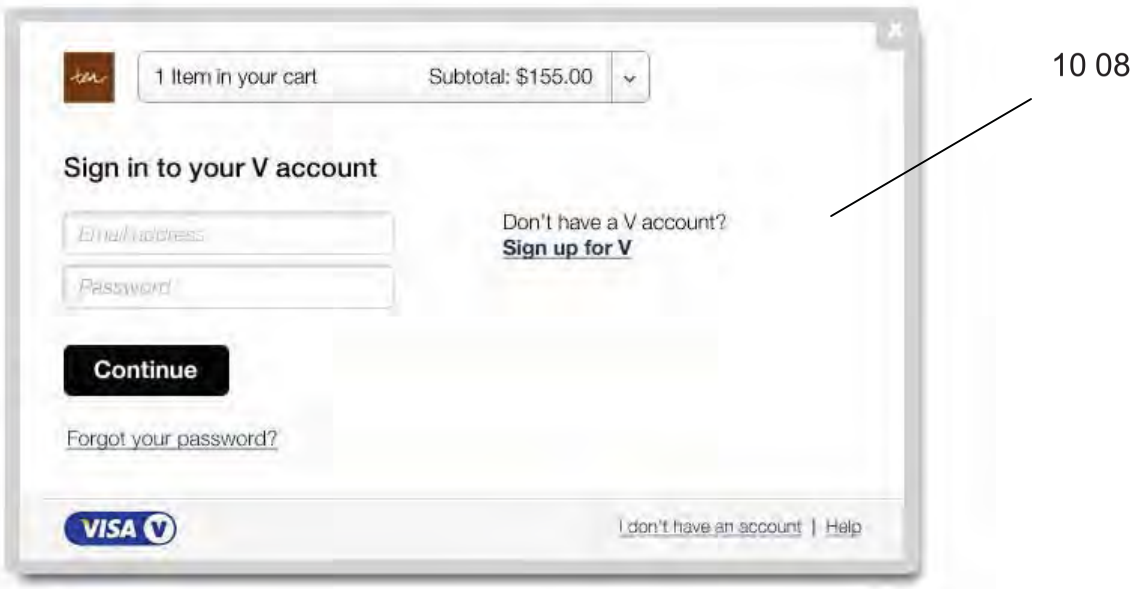


FIGURE 10D

Example UI: Card and Coupon Selector

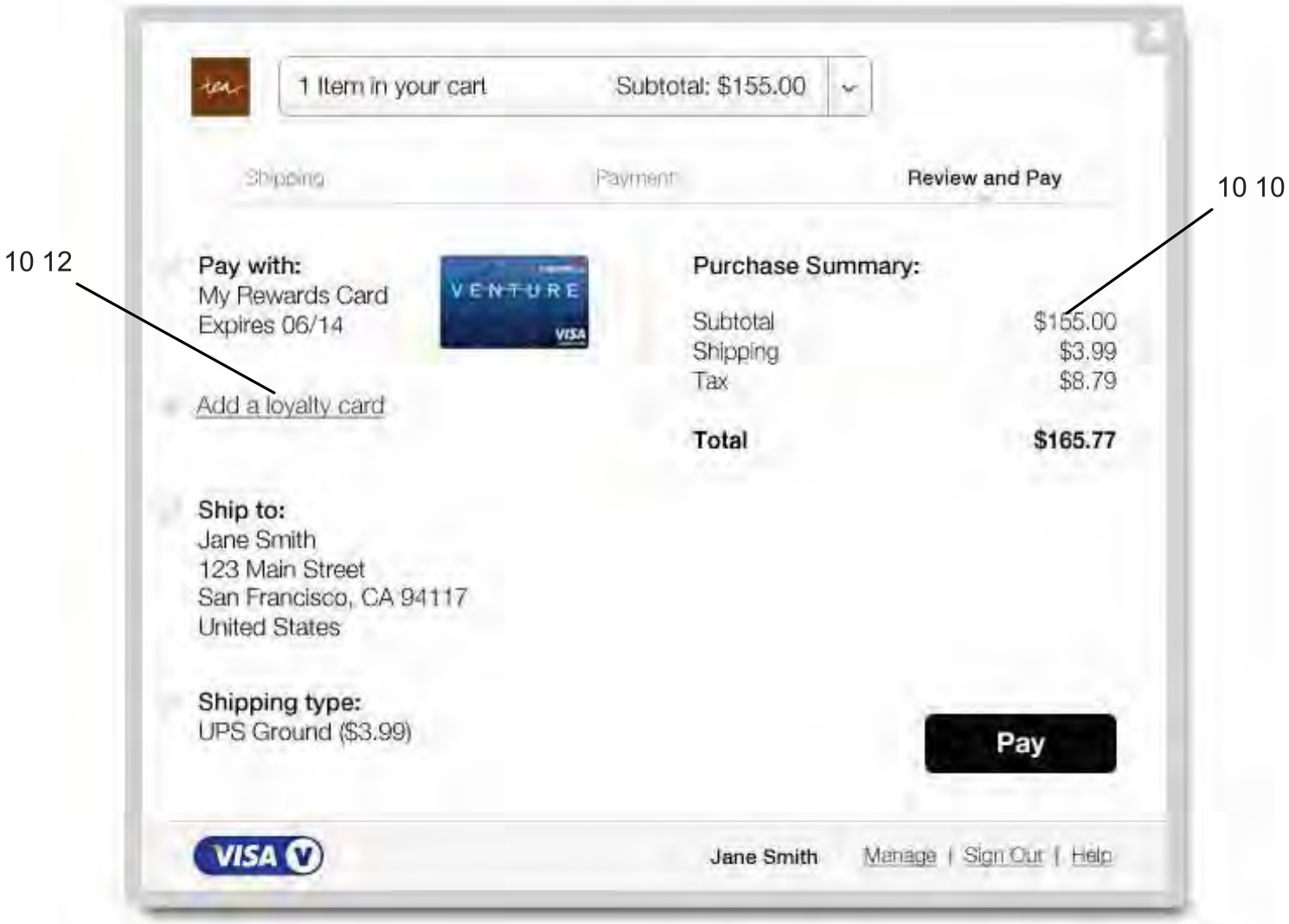


FIGURE 10E

Example UI: Card and Coupon Selector

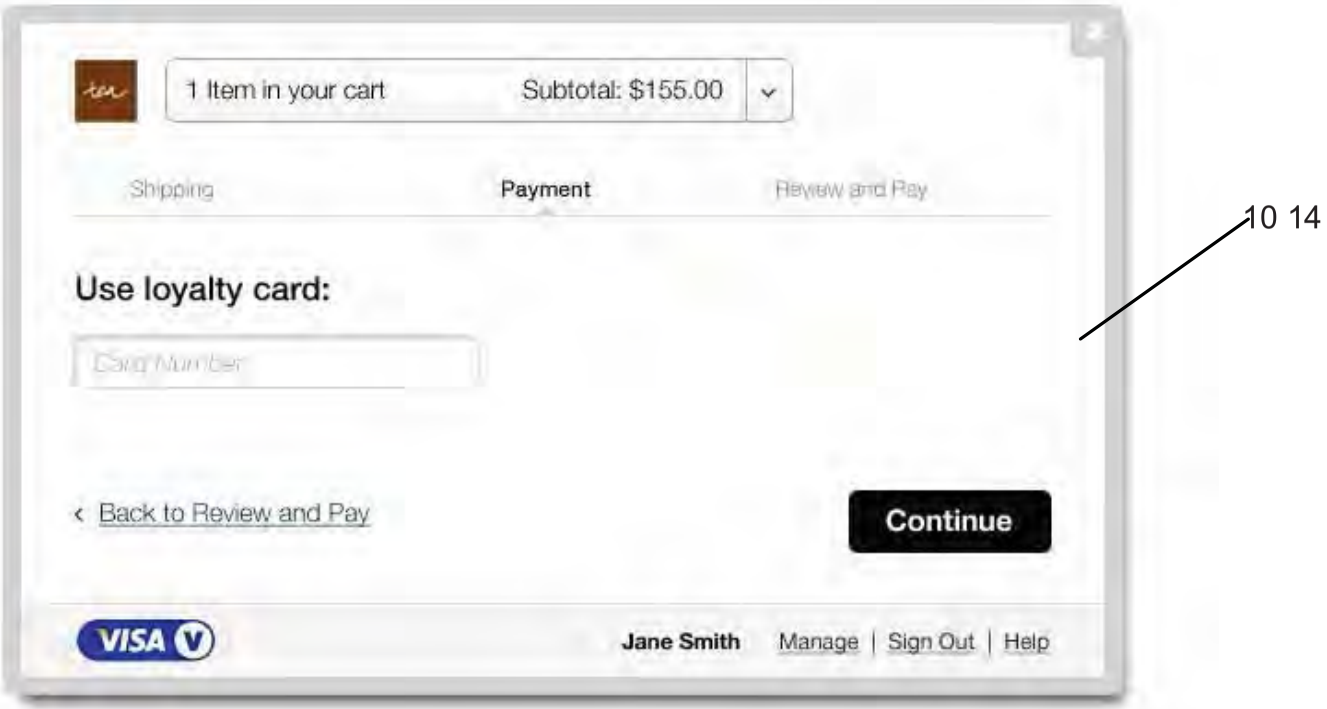


FIGURE 10F

Example UI: Card and Coupon Selector

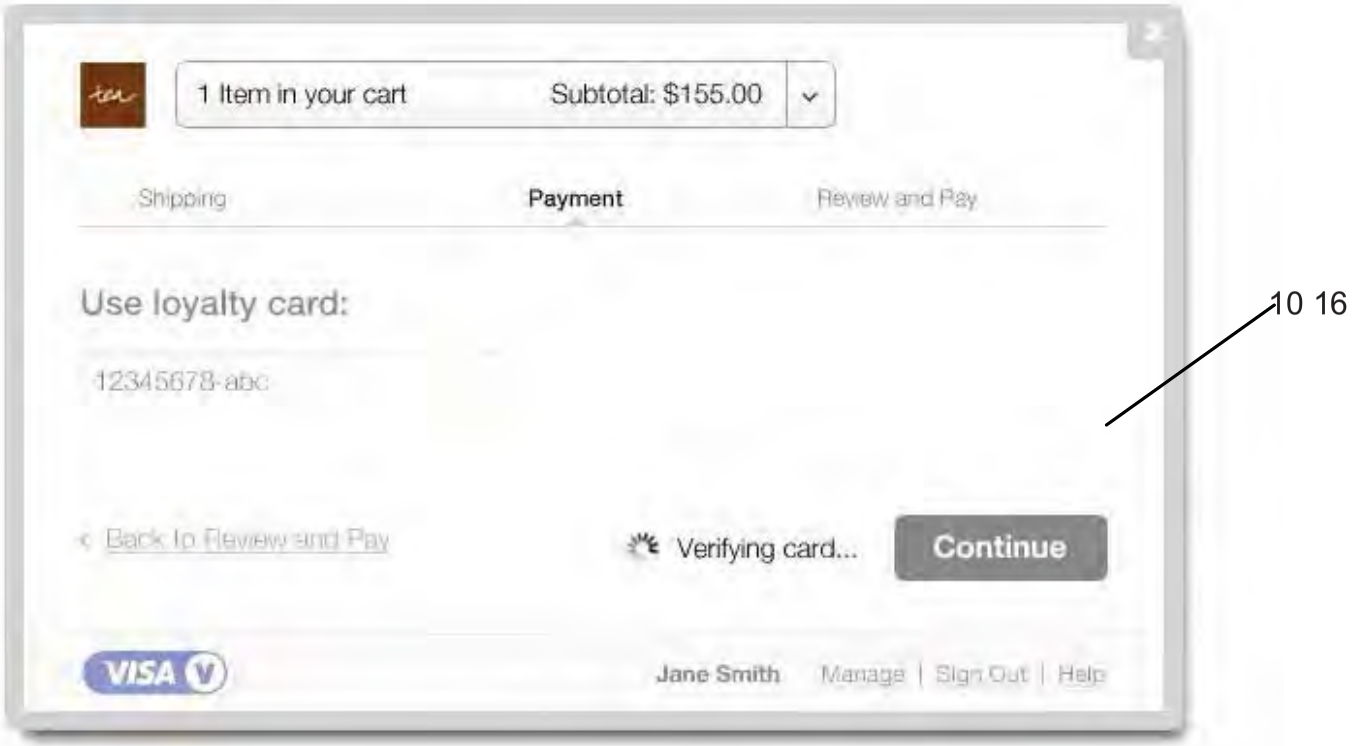


FIGURE 10G

Example UI: Card and Coupon Selector

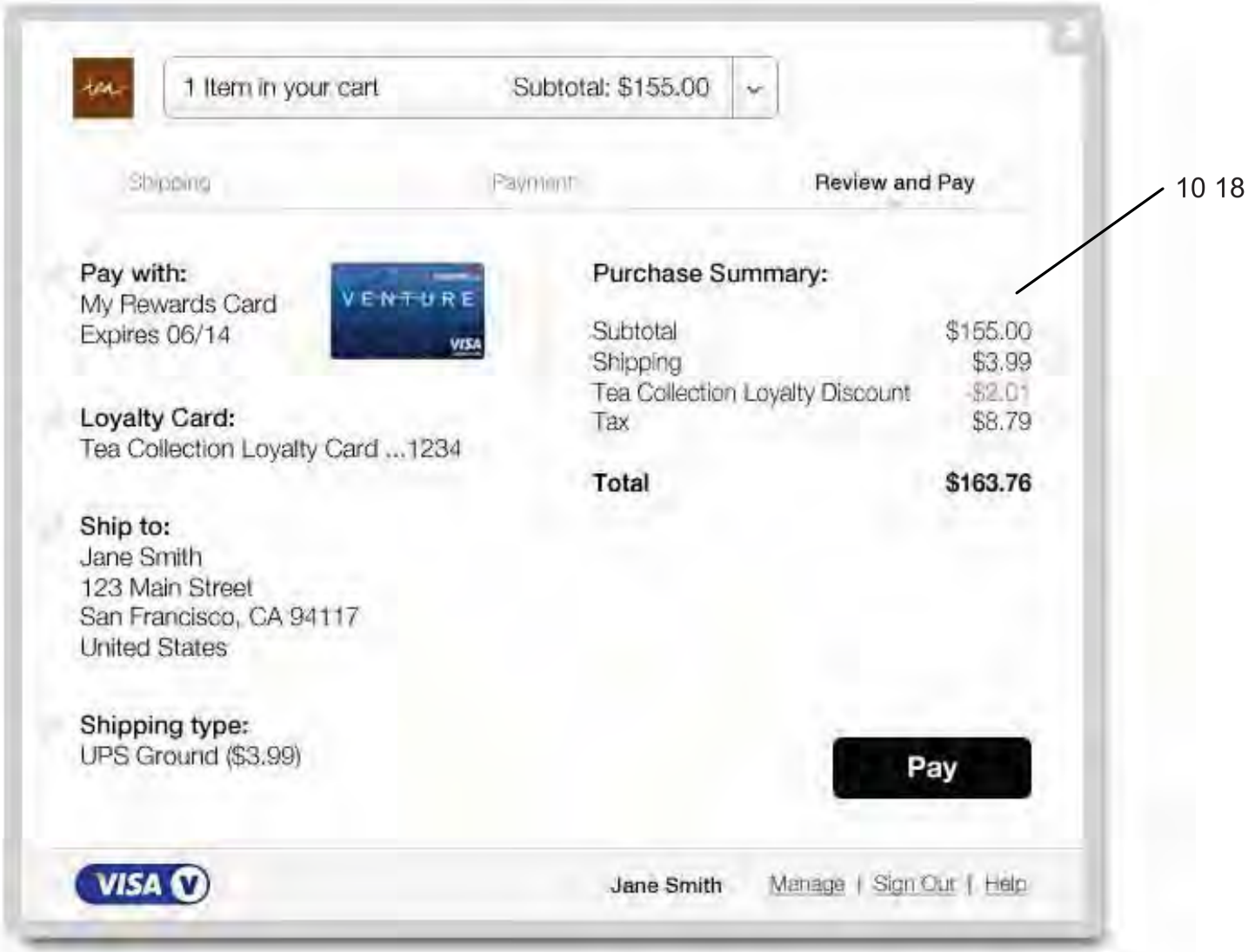
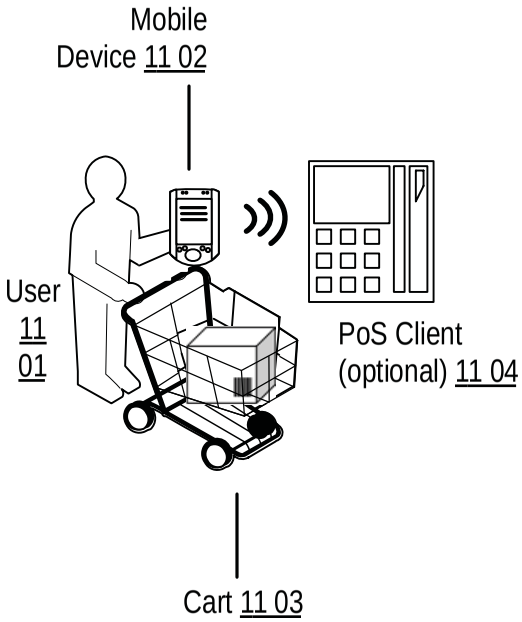


FIGURE 10H

Example UI: Card and Coupon Selector



Virtual Wallet Purchasing 11 00

FIGURE 11

Example: Universal Electronic Payment ("UEP")

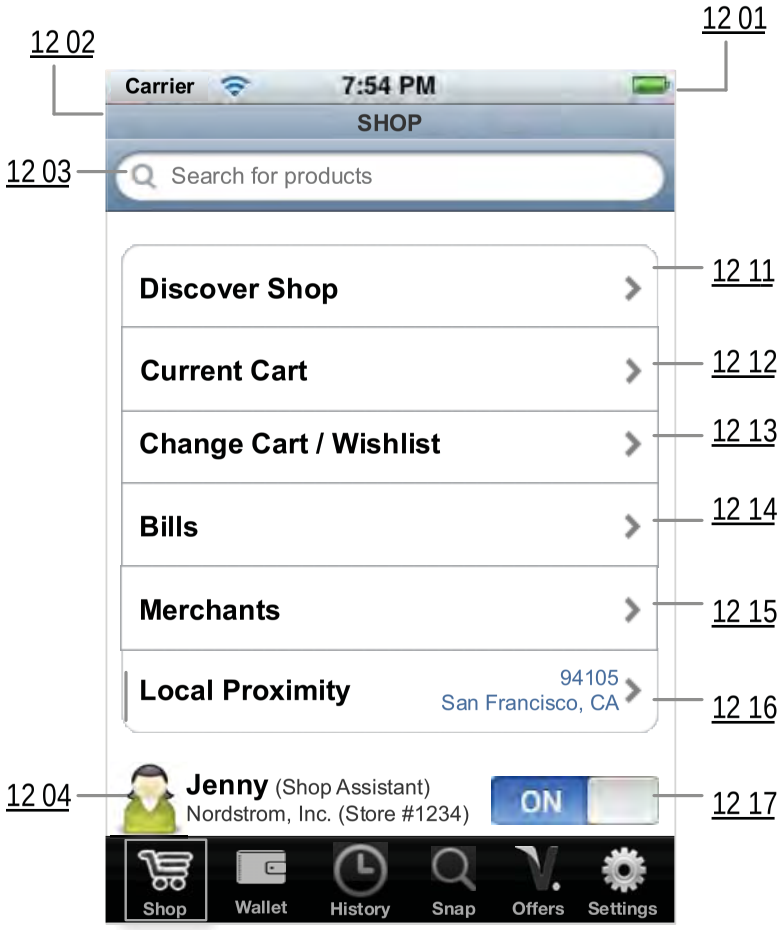


FIGURE 12A

Example: UEP Application Embodiment - Shop Mode

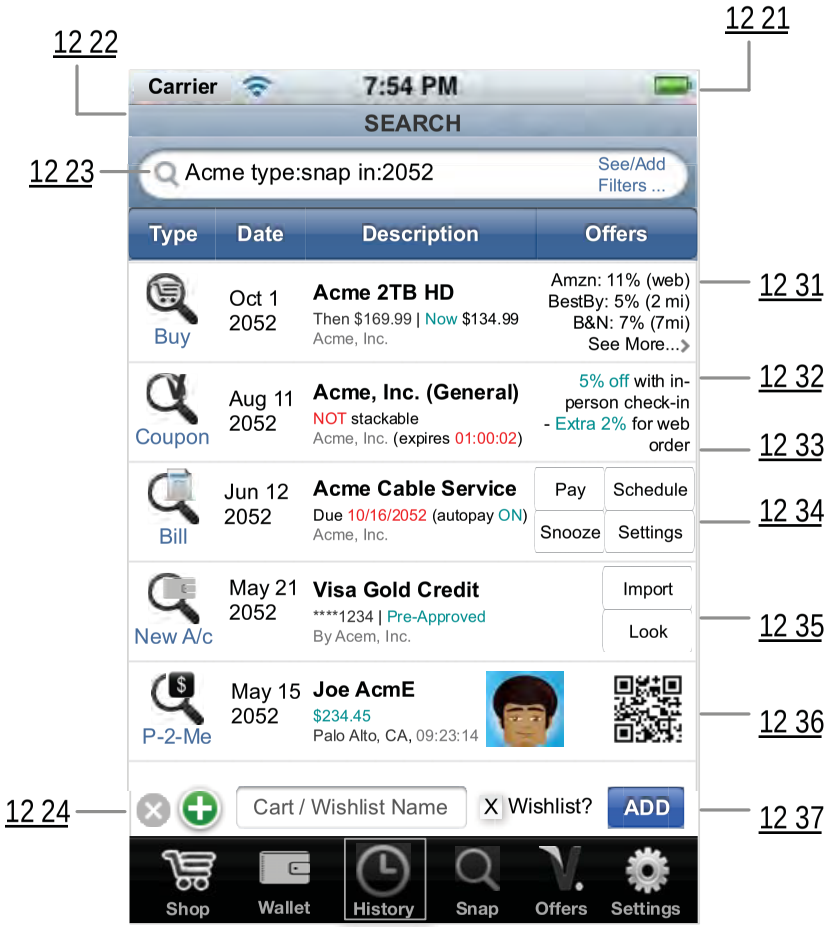
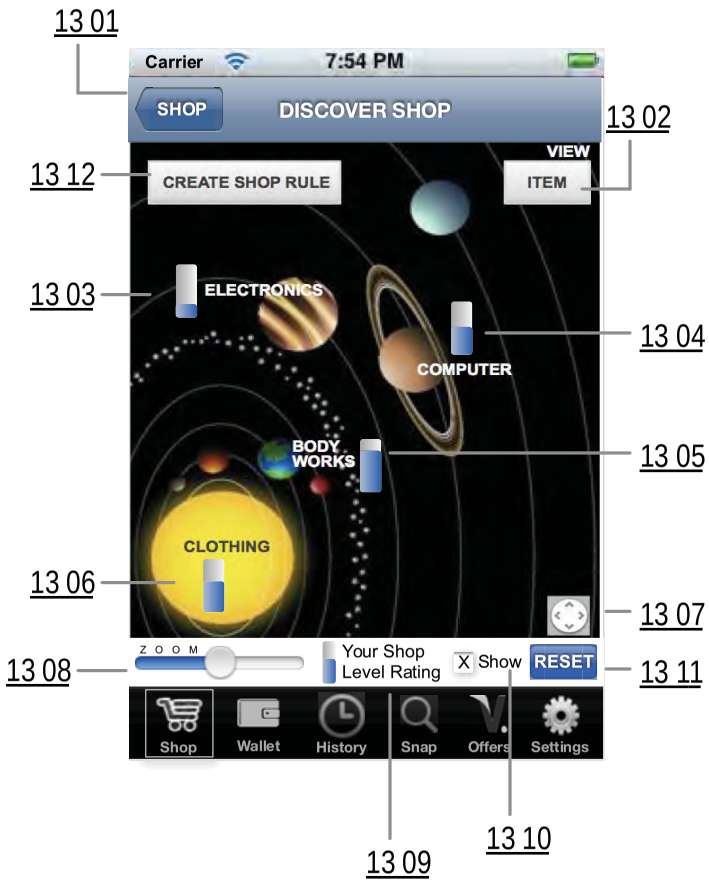


FIGURE 12B

Example: UEP Application Embodiment - Shop Mode



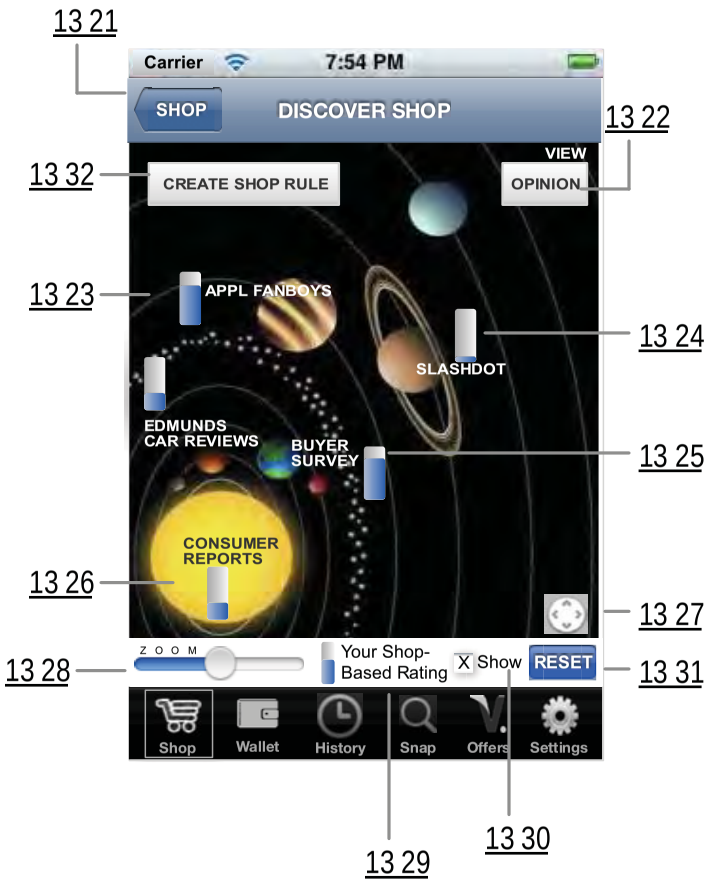


FIGURE 13A

Example: UEP Application Embodiment - Discovery Shopping Mode

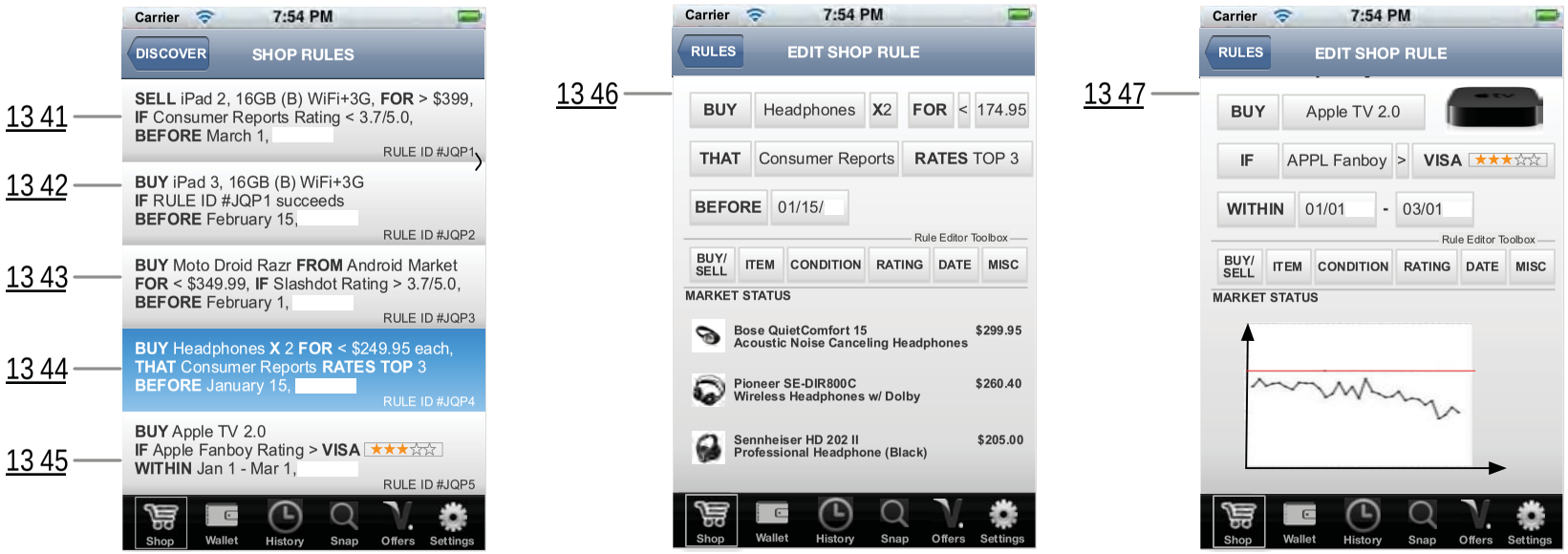


FIGURE 13B

Example: UEP Application Embodiment - Discovery Shopping Mode

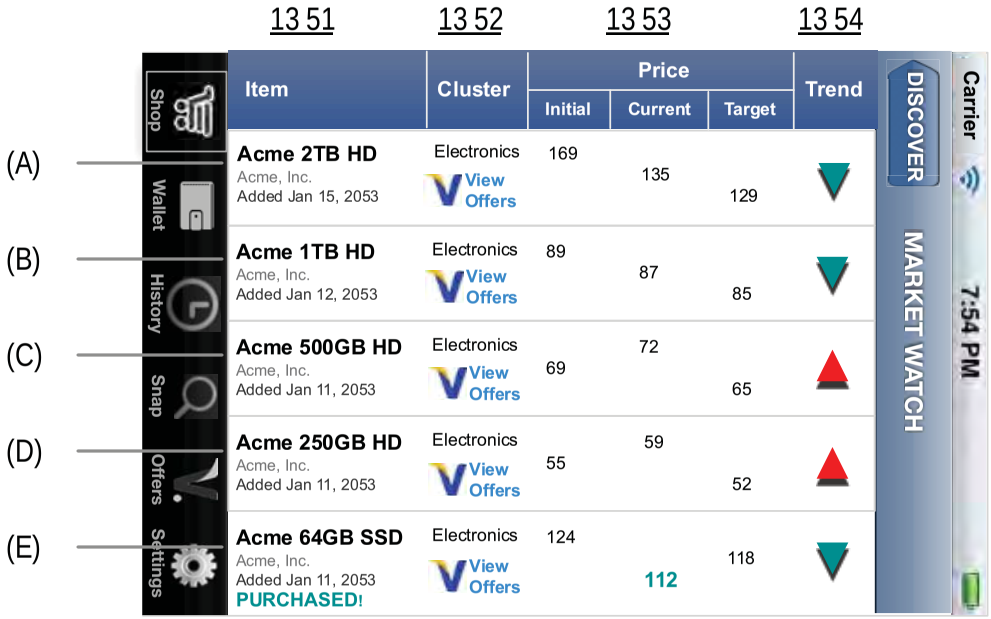


FIGURE 13C

Example: UEP Application Embodiment - Discovery Shopping Mode

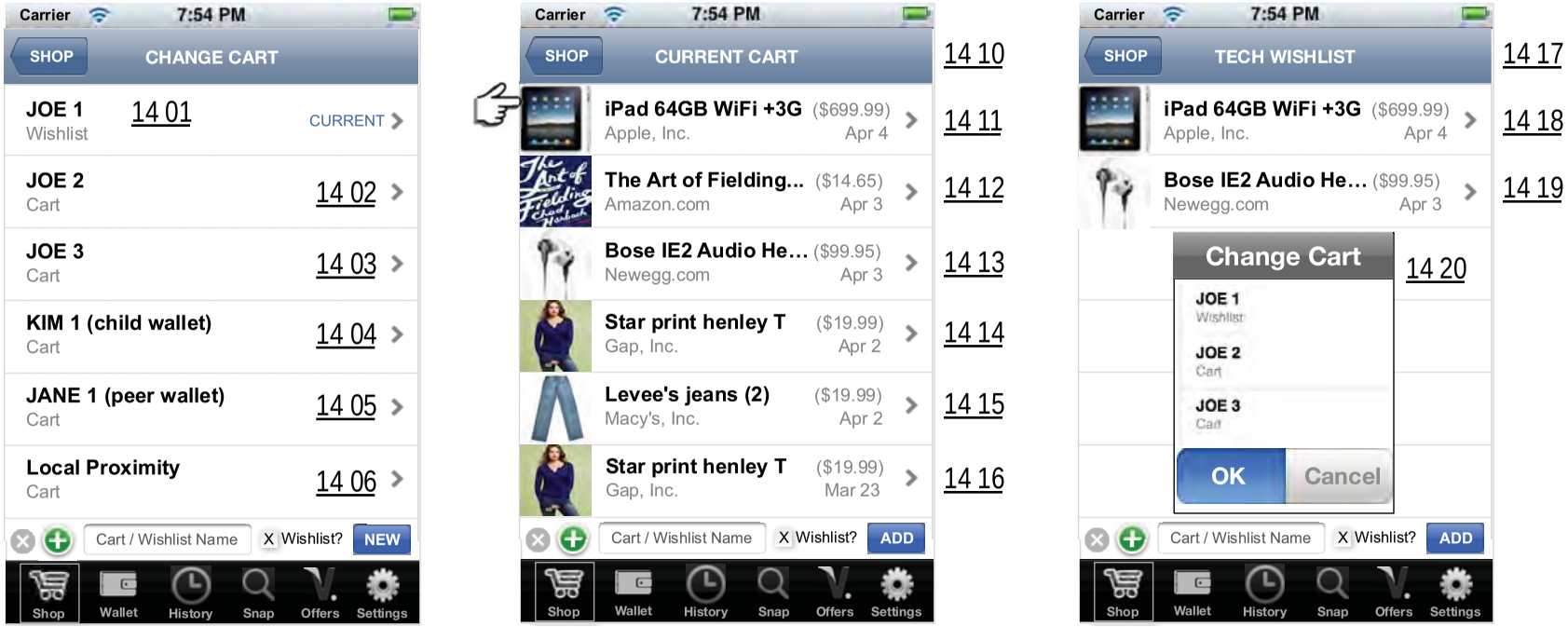


FIGURE 14A

Example: UEP Application Embodiment - Shop Cart Mode

FIGURE 14B

Example: UEP Application Embodiment - Shop Cart Mode

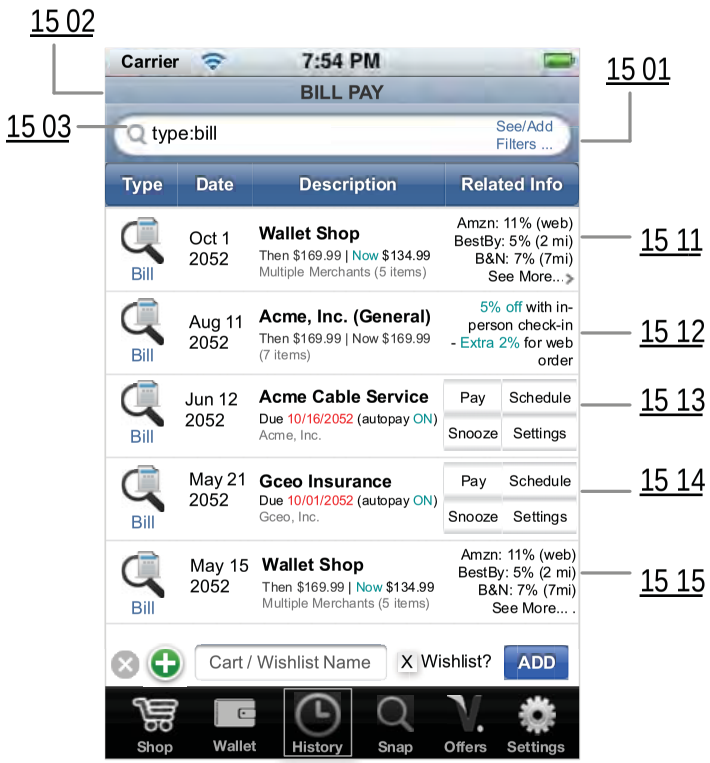


FIGURE 15

Example: UEP Application Embodiment - Bill Pay Mode

FIGURE 16A

Example: UEP Application Embodiment - (Local) Merchant Shopping Mode

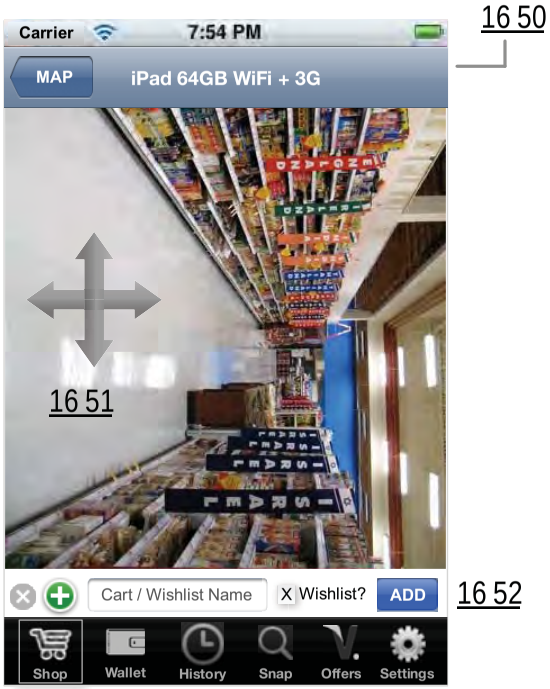


FIGURE 16B

Example: UEP Application Embodiment - (Local) Merchant Shopping Mode: Virtual Store Injection

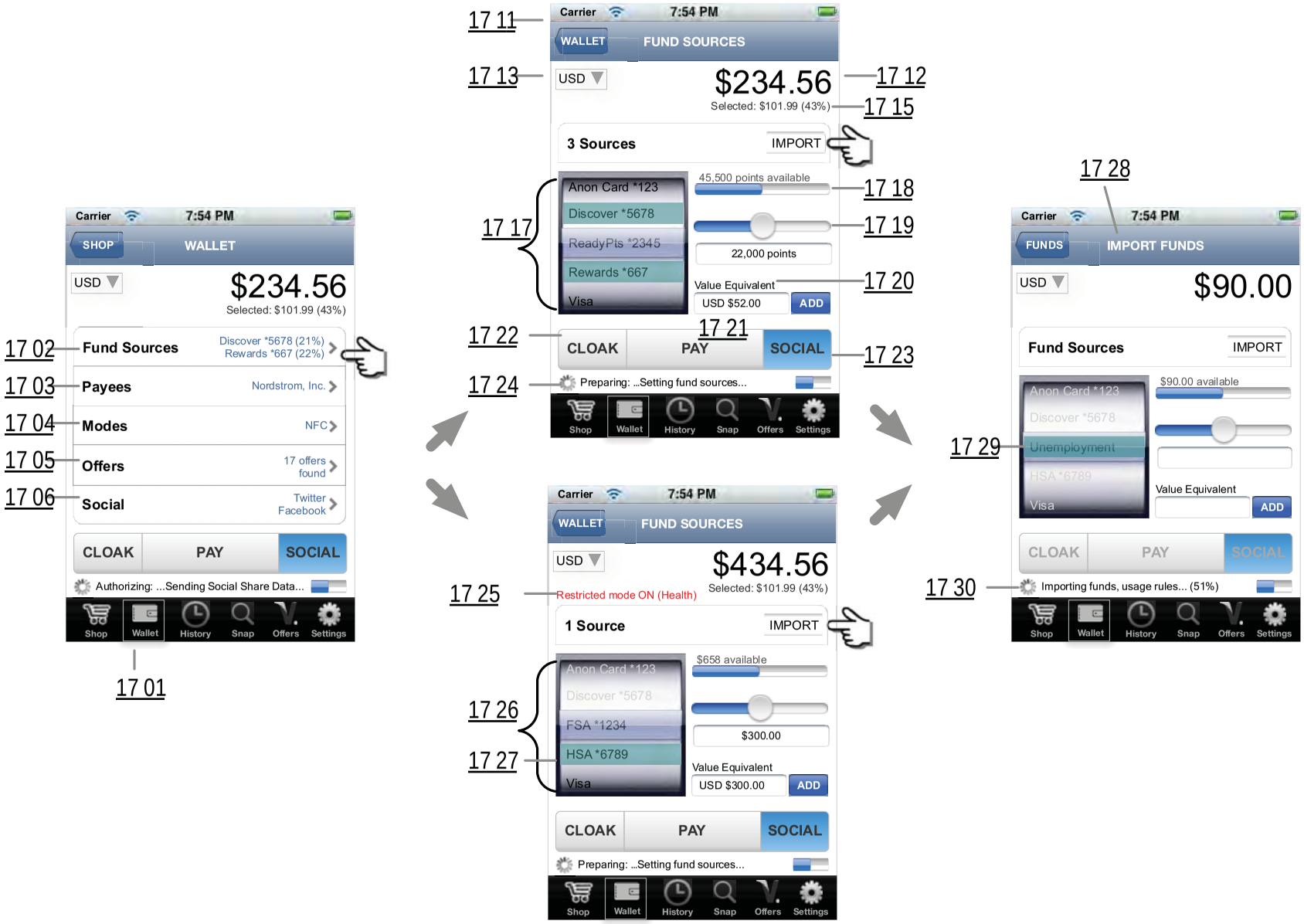


Figure 17

Example: UEP Application Embodiment - Wallet Funds Mode

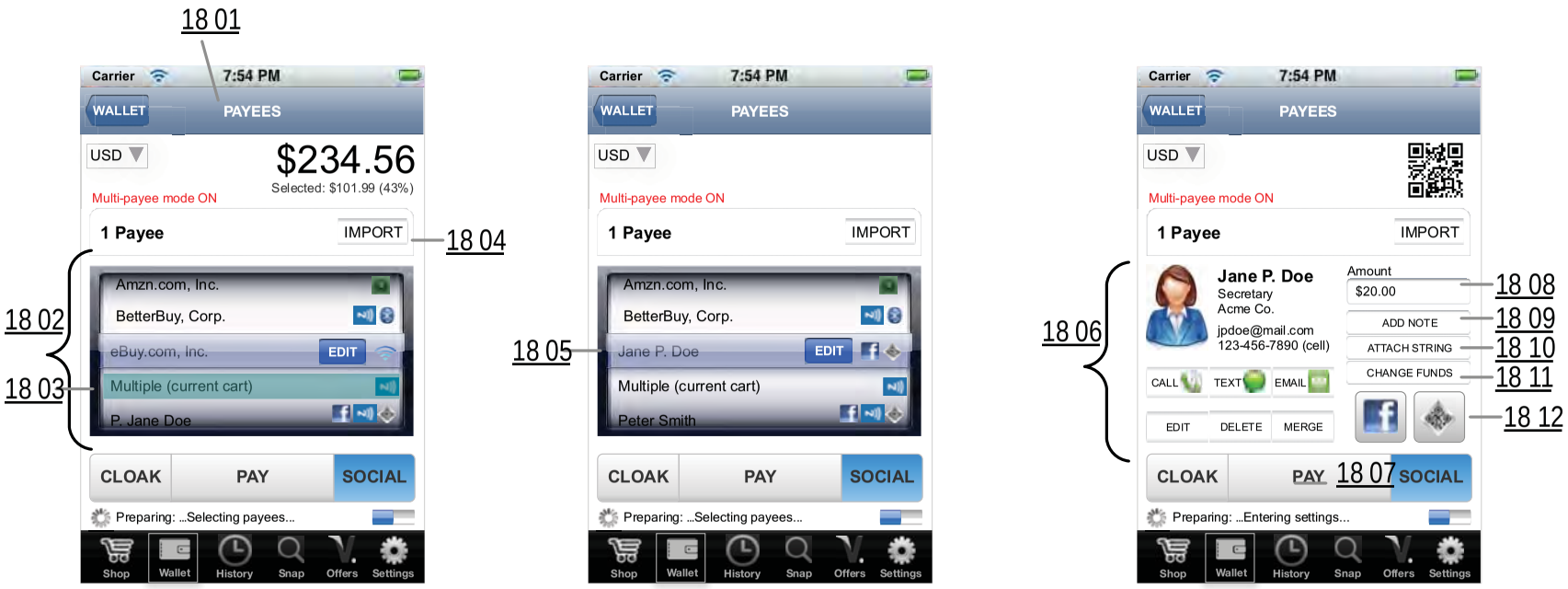


FIGURE 18

Example: UEP Application Embodiment - Wallet Payee Mode

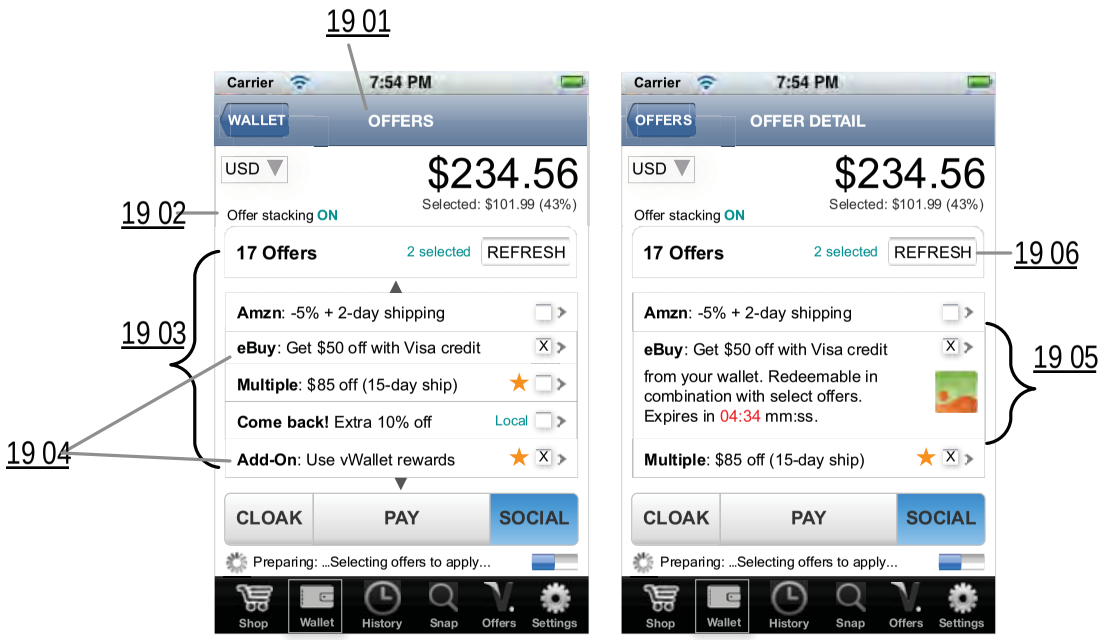


FIGURE 19A

Example: UEP Application Embodiment - Additional Wallet Features: Real-time Offers

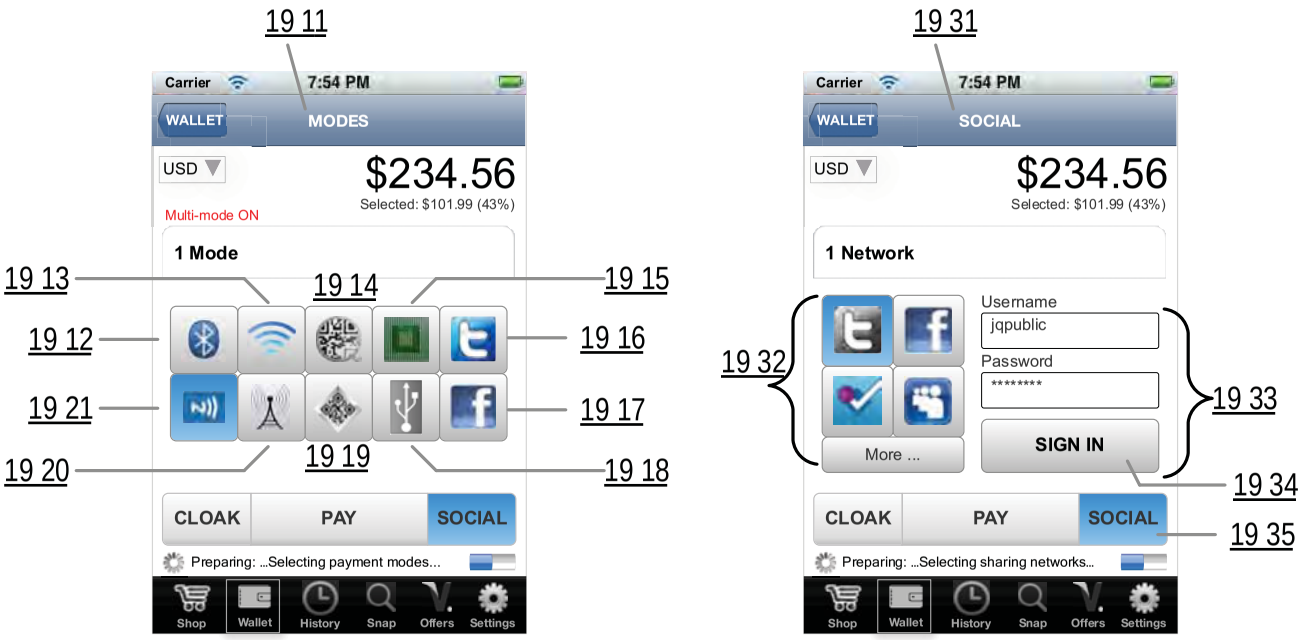


FIGURE 19B

Example: UEP Application Embodiment - Additional Wallet Features: Payment Mechanisms

Figure 20A

Example: RUAP Application Embodiment - History Mode

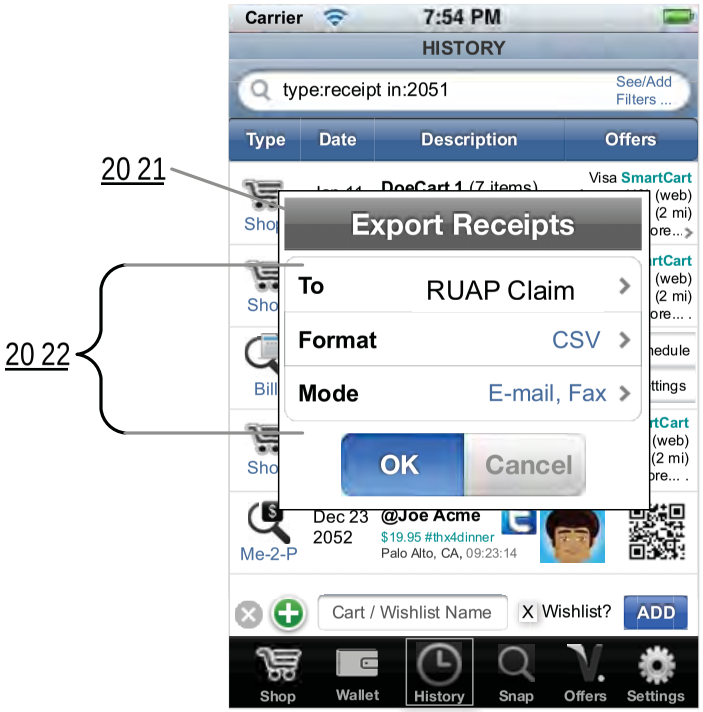


Figure 20B

Example: RUAP Application Embodiment - History Mode

Figure 21A

Example: RUAP Application Embodiment - History Shopping Trail Mode

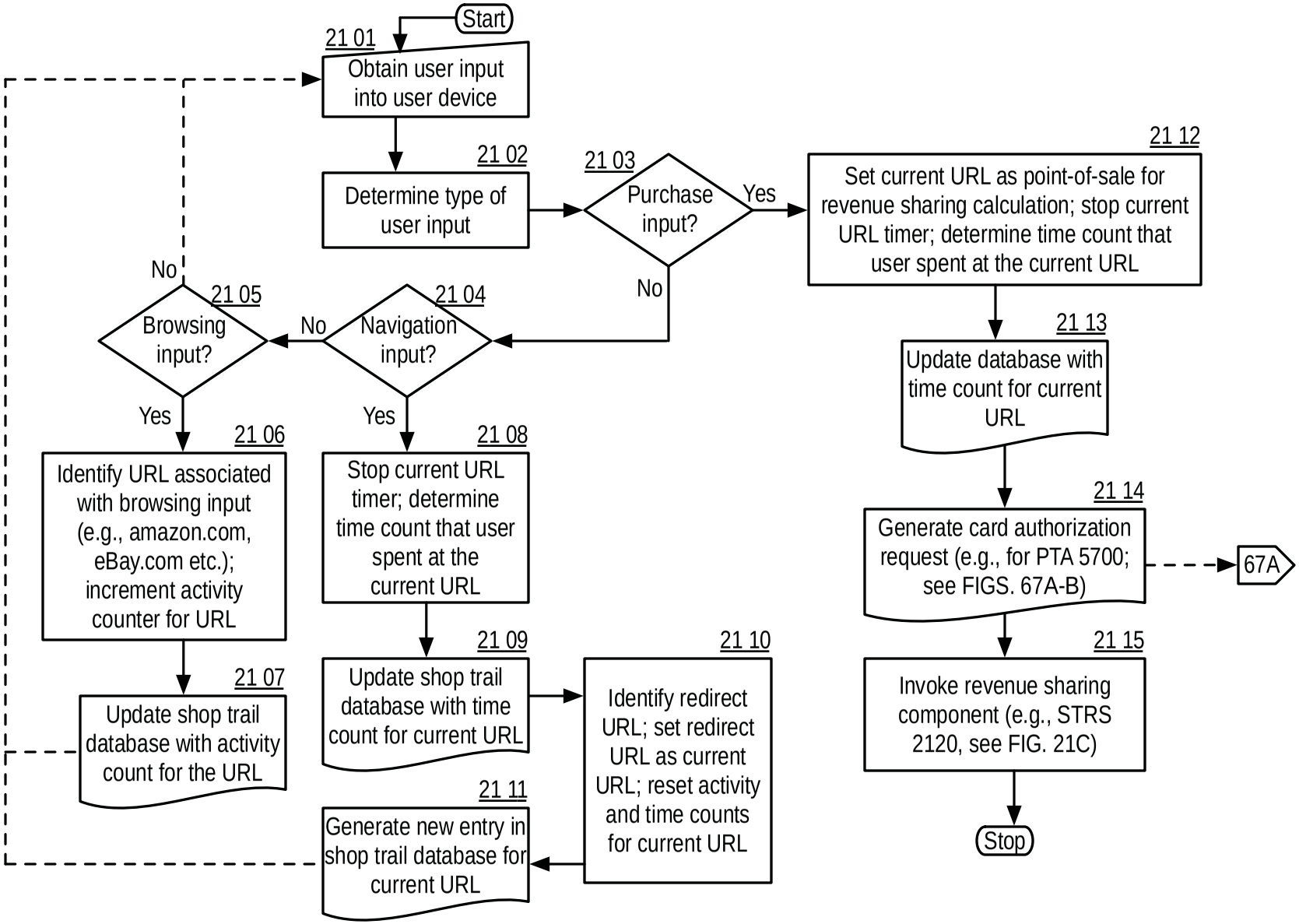


FIGURE 21B

Example: User Shopping Trail Generation ("USTG") component 2100

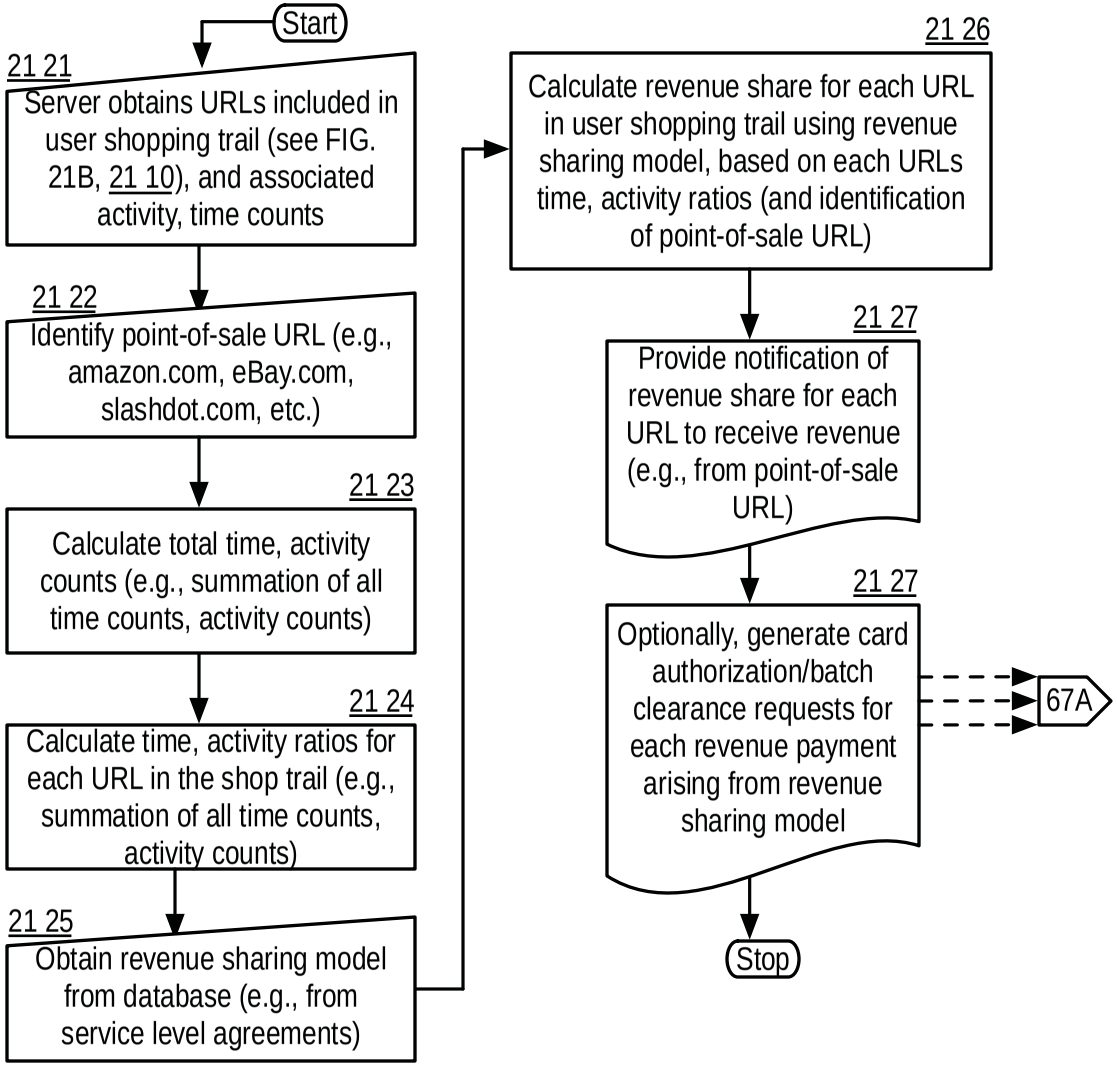


FIGURE 21C

Example: Shopping Trail Revenue Sharing ("STRS") component 2120

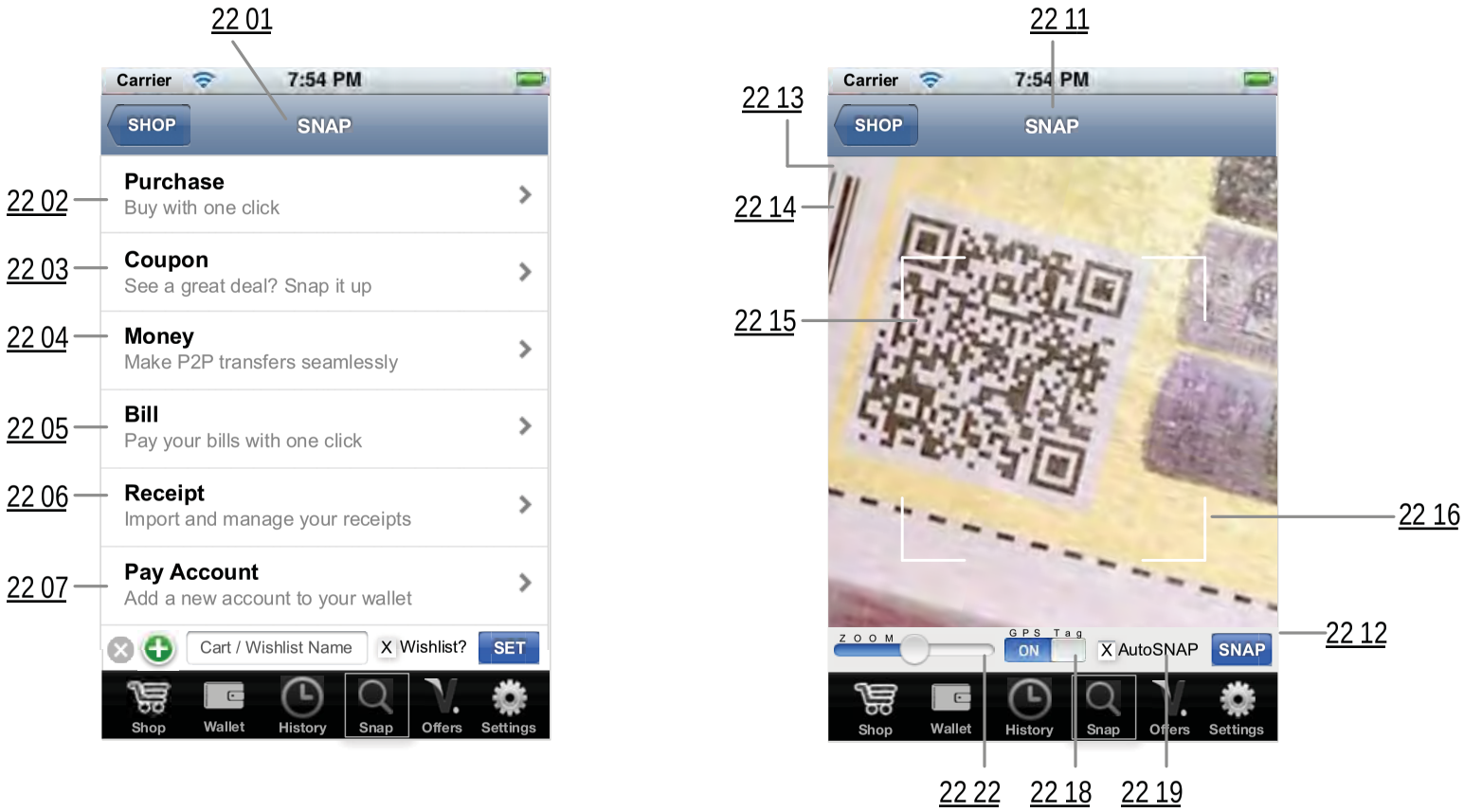


FIGURE 22A

Example: UEP Application Embodiment - Snap Mode

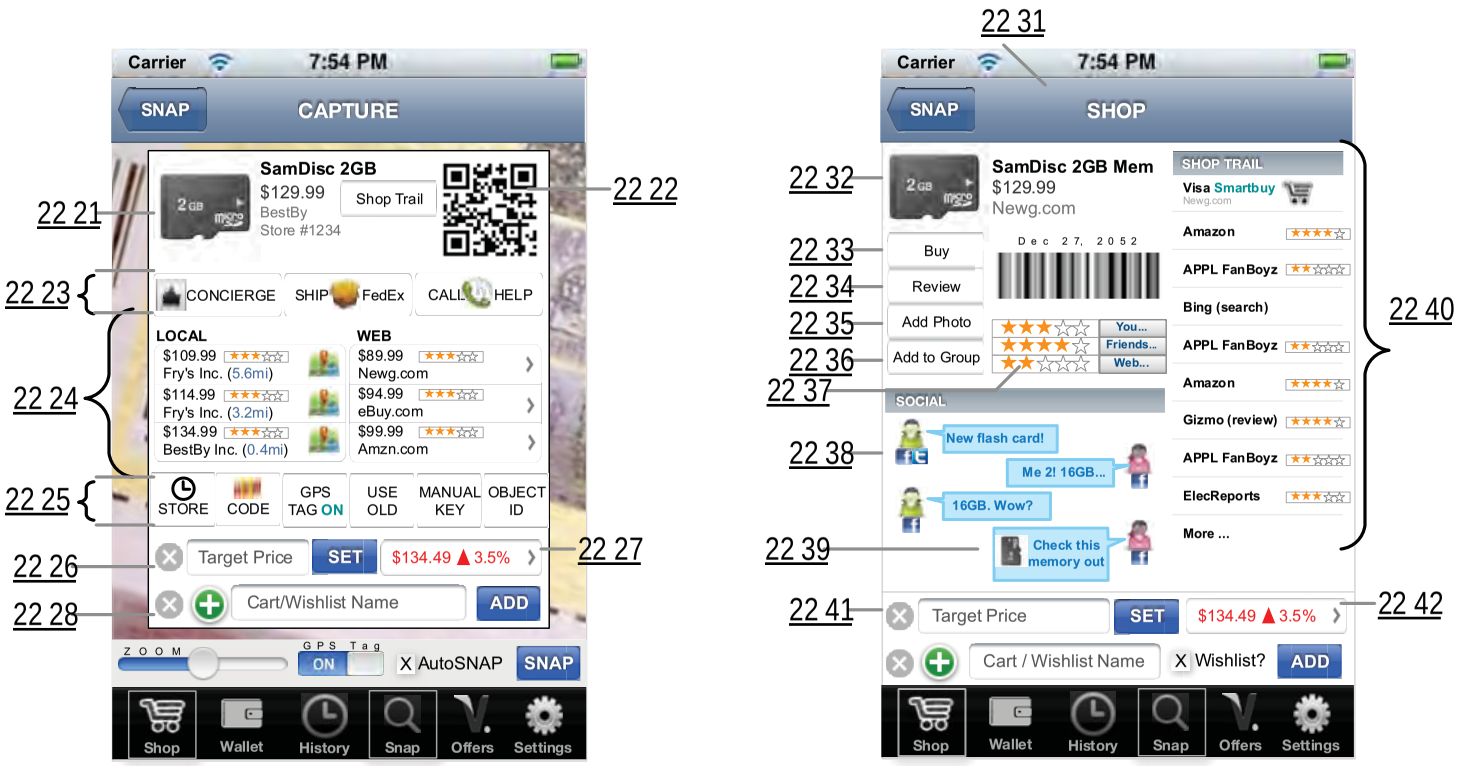


FIGURE 22B

Example: EOOR Application Embodiment - Snap Mode

FIGURE 22C

Example: UEP Application Embodiment - Snap Mode

FIGURE 22D

Example: UEP Application Embodiment - Snap Mode

FIGURE 22E

Example: UEP Application Embodiment - Snap Mode

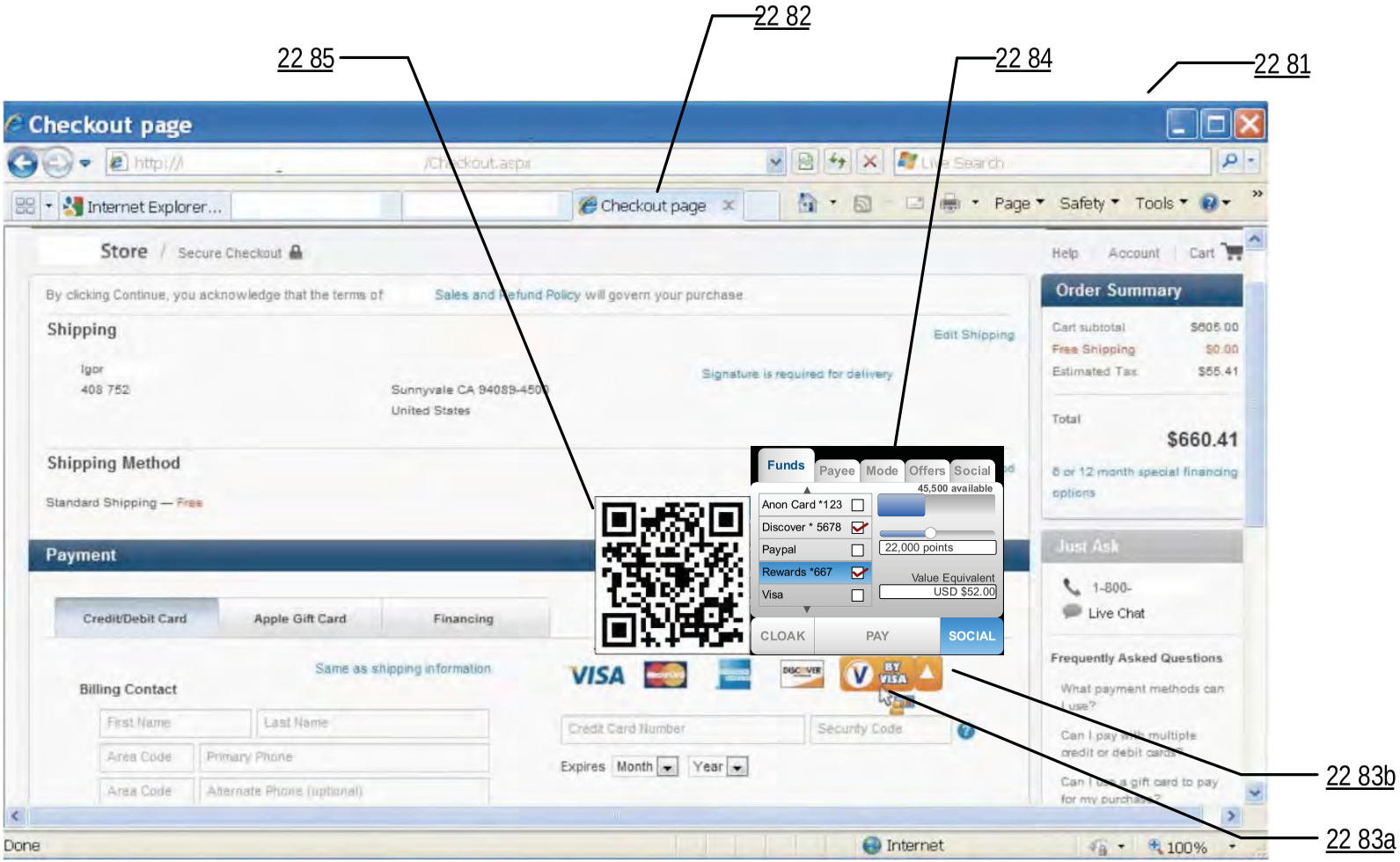


FIGURE 22F

Example: UEP Application Embodiment - Snap Mode: Web

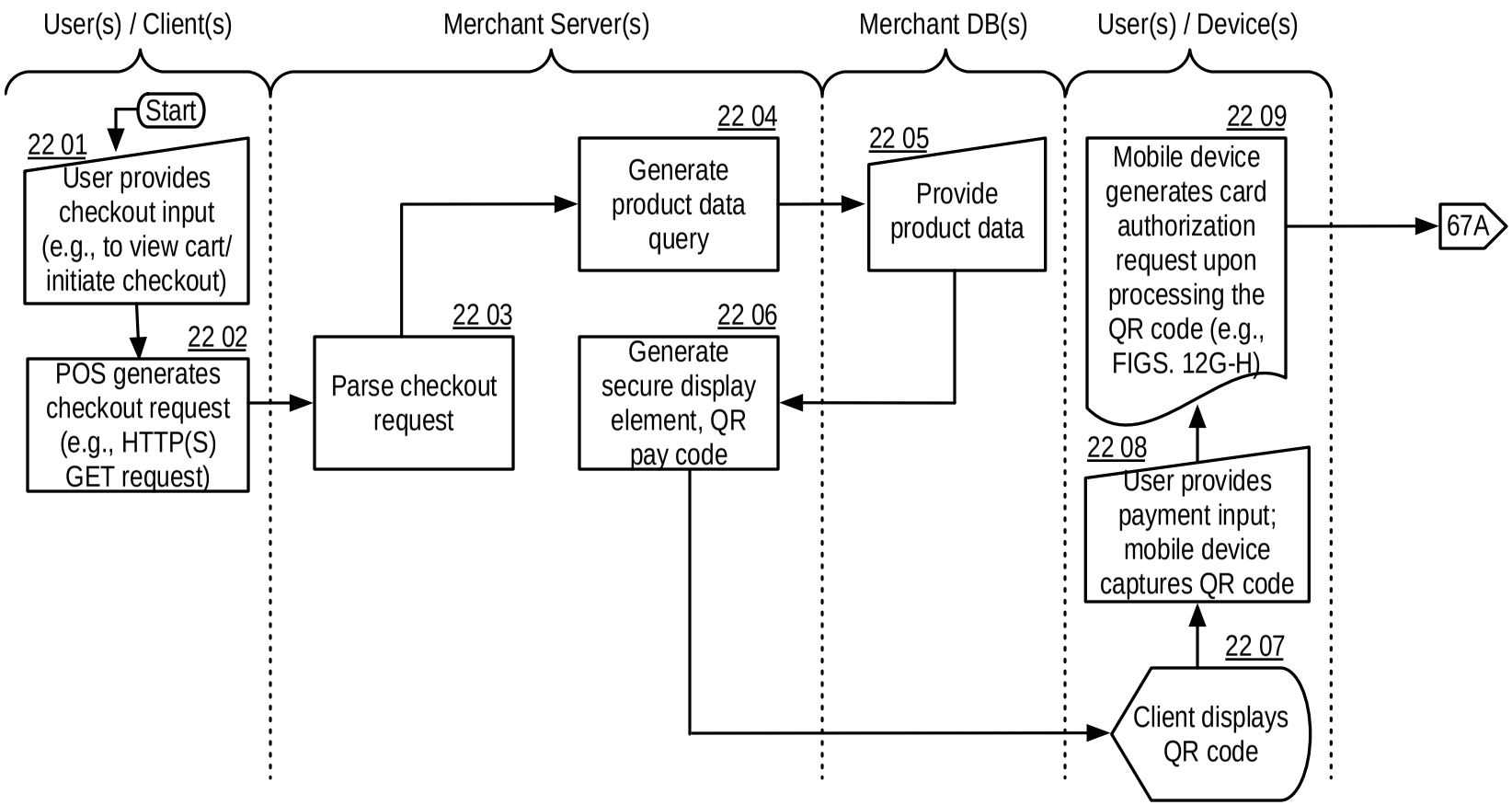


FIGURE 22G

Example: Snap Mobile Payment Execution ("SMPE") component 2200

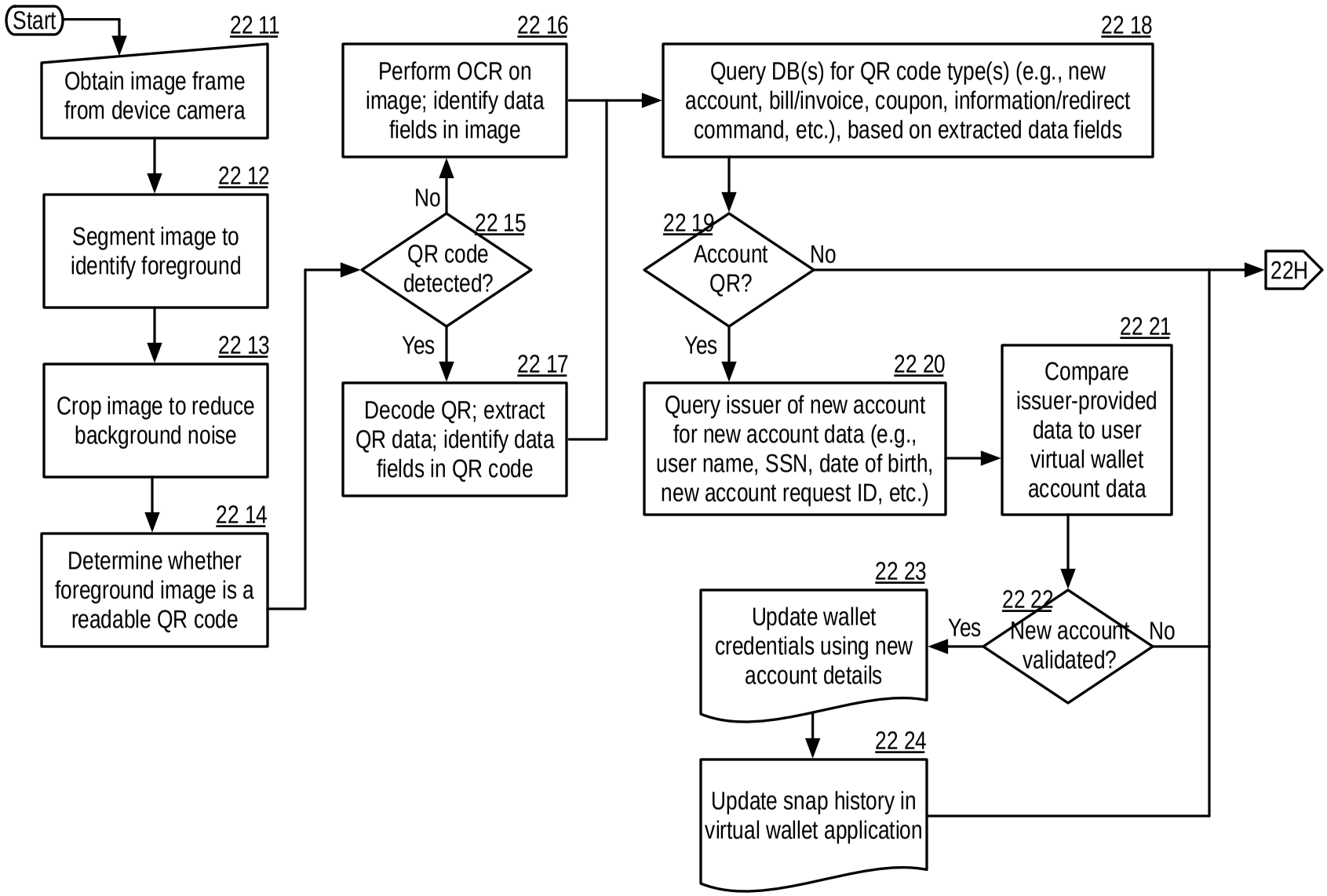


FIGURE 22H

Example: Quick Response Code Processing ("QRCP") component 2210

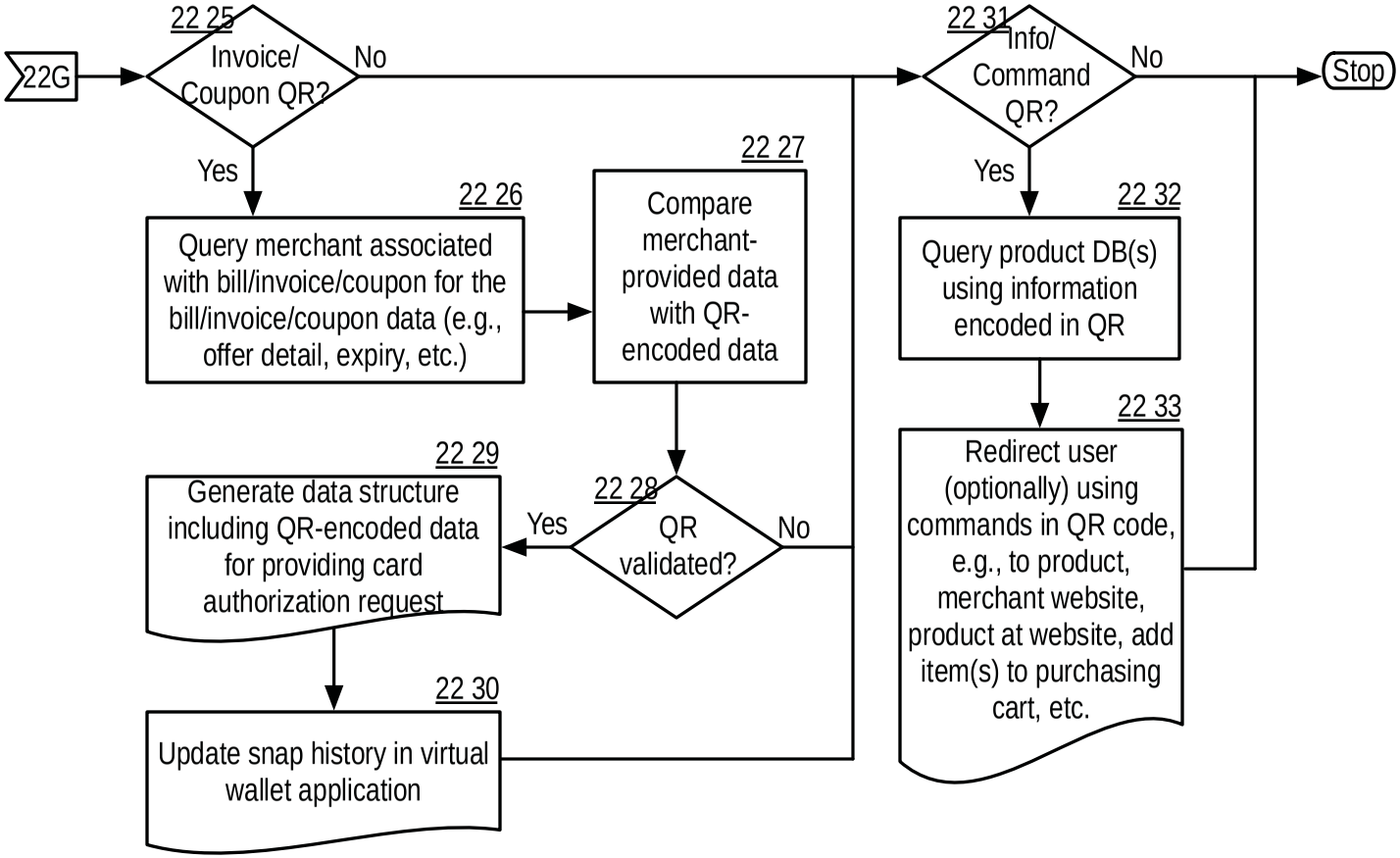


FIGURE 22I

Example: Quick Response Code Processing ("QRCP") component 2220

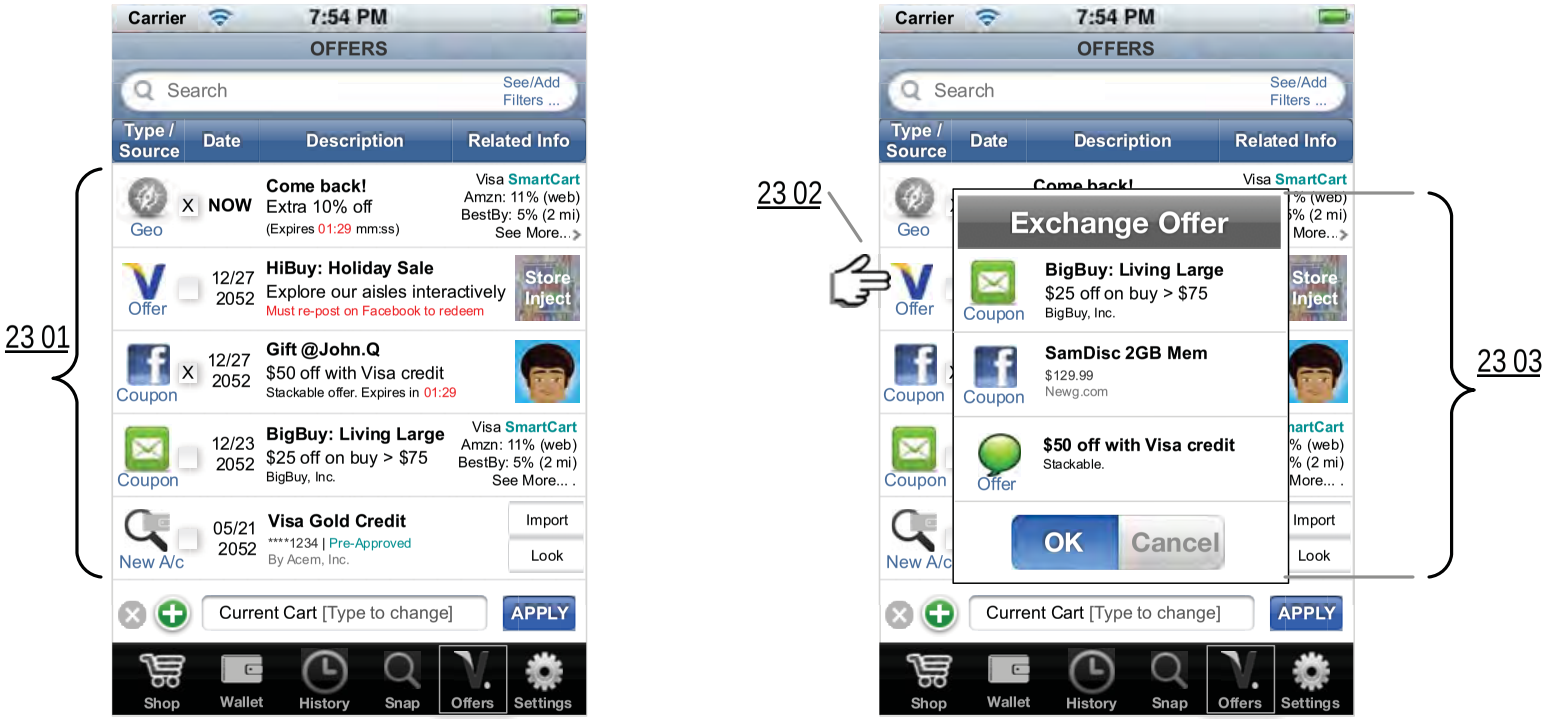


FIGURE 23A

Example: UEP Application Embodiment - Offers Mode

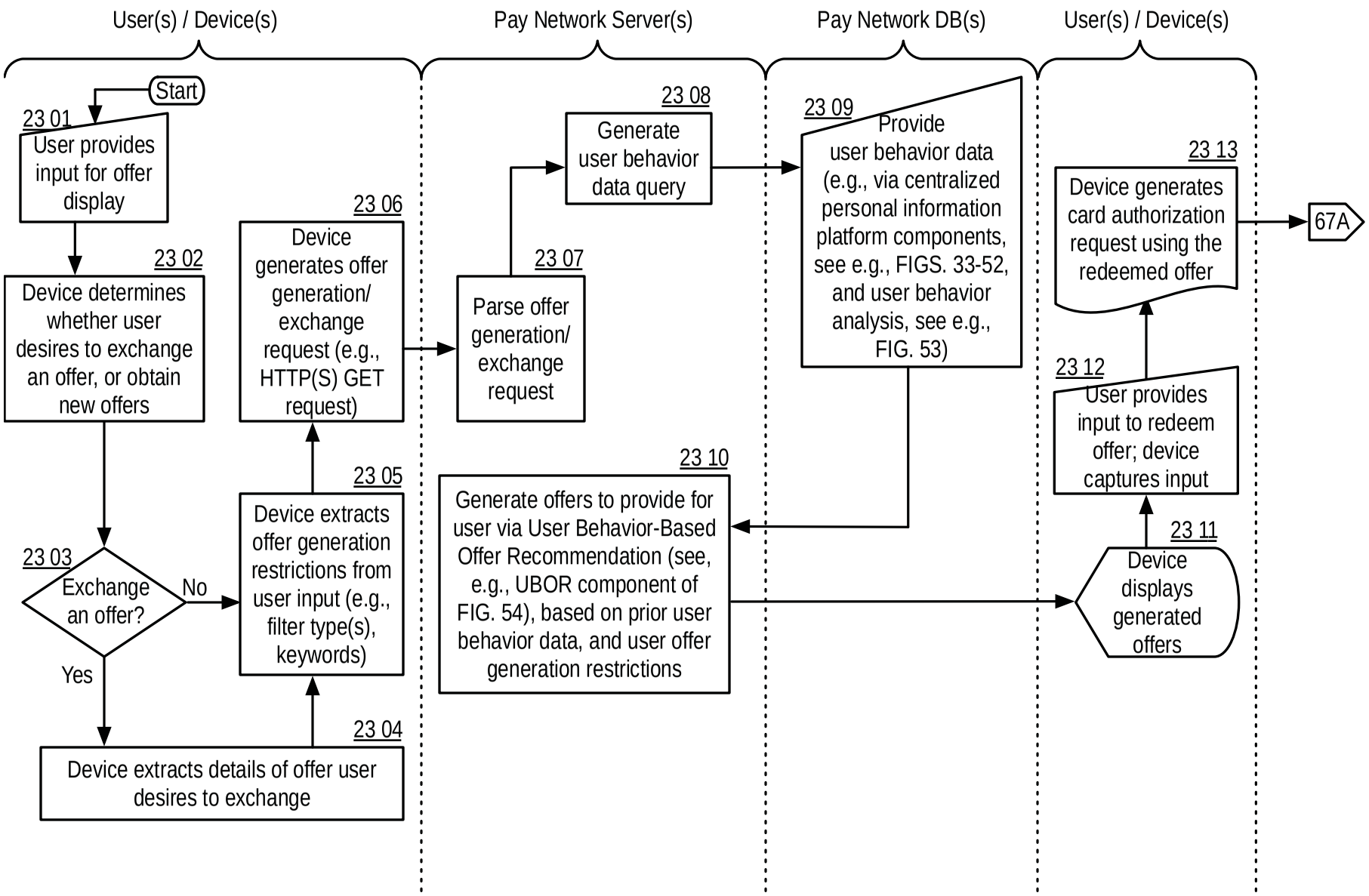
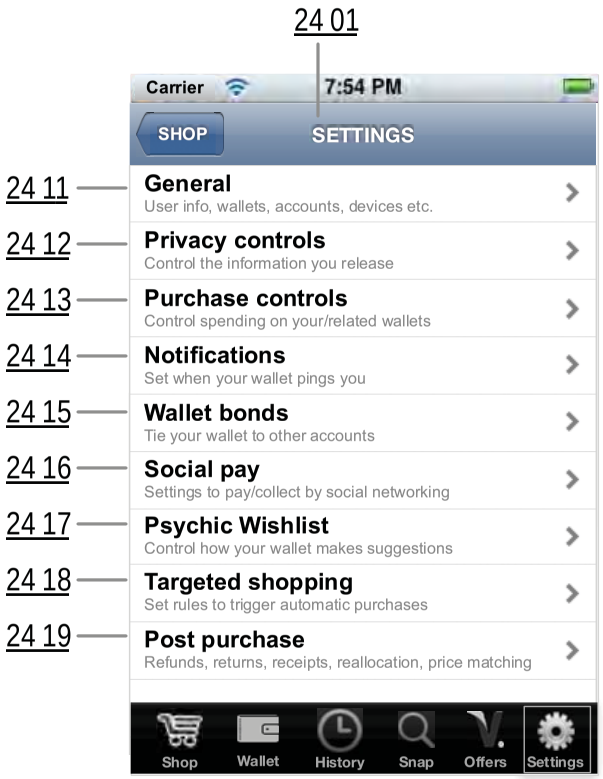


FIGURE 23B

Example: Offer Recommendation and Exchange ("ORE") component 2300



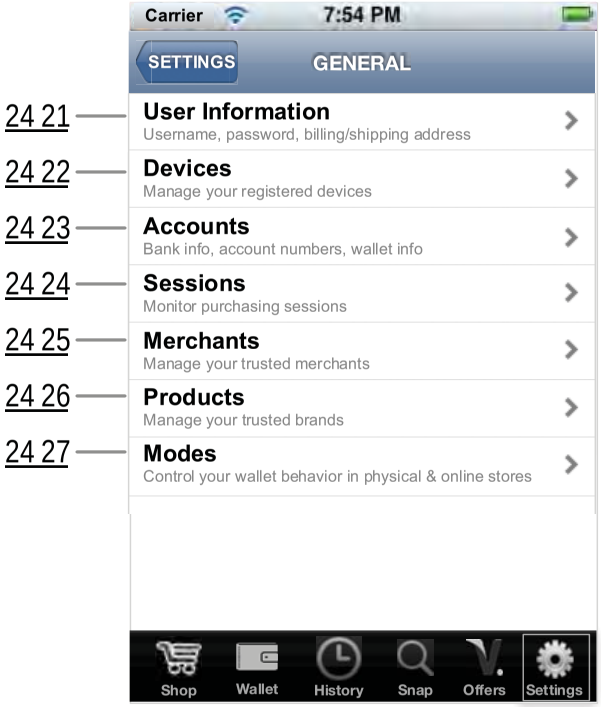


FIGURE 24

Example: UEP Application Embodiment - General Settings Mode

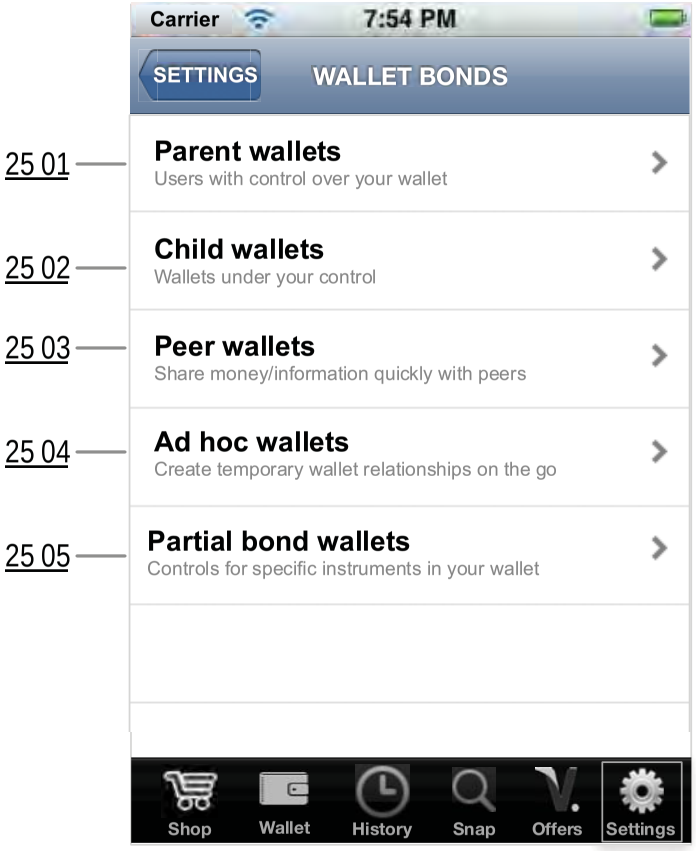


FIGURE 25

Example: UEP Application Embodiment - Wallet Bonds Settings Mode

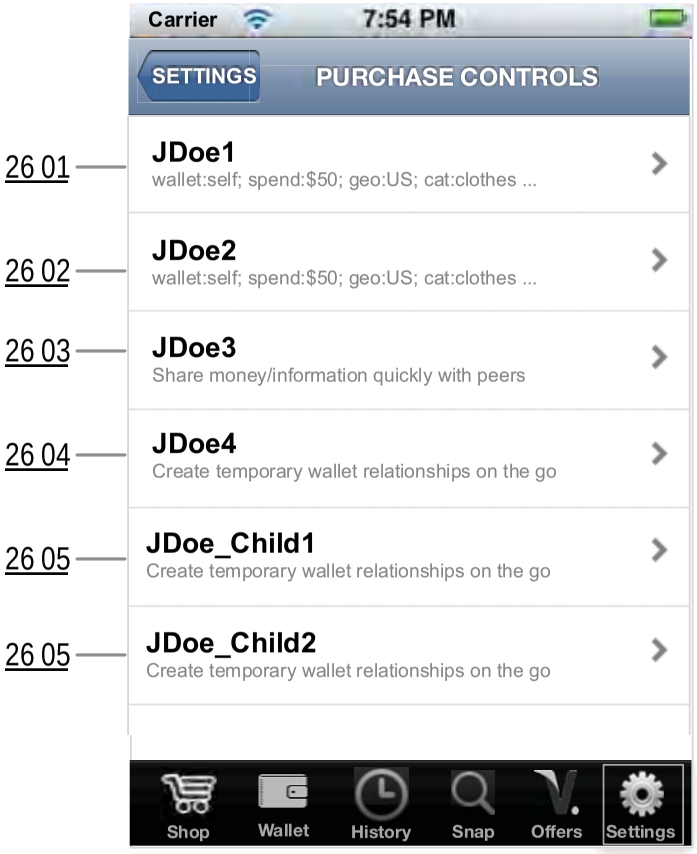


FIGURE 26A

Example: UEP Application Embodiment - Purchase Controls Settings Mode

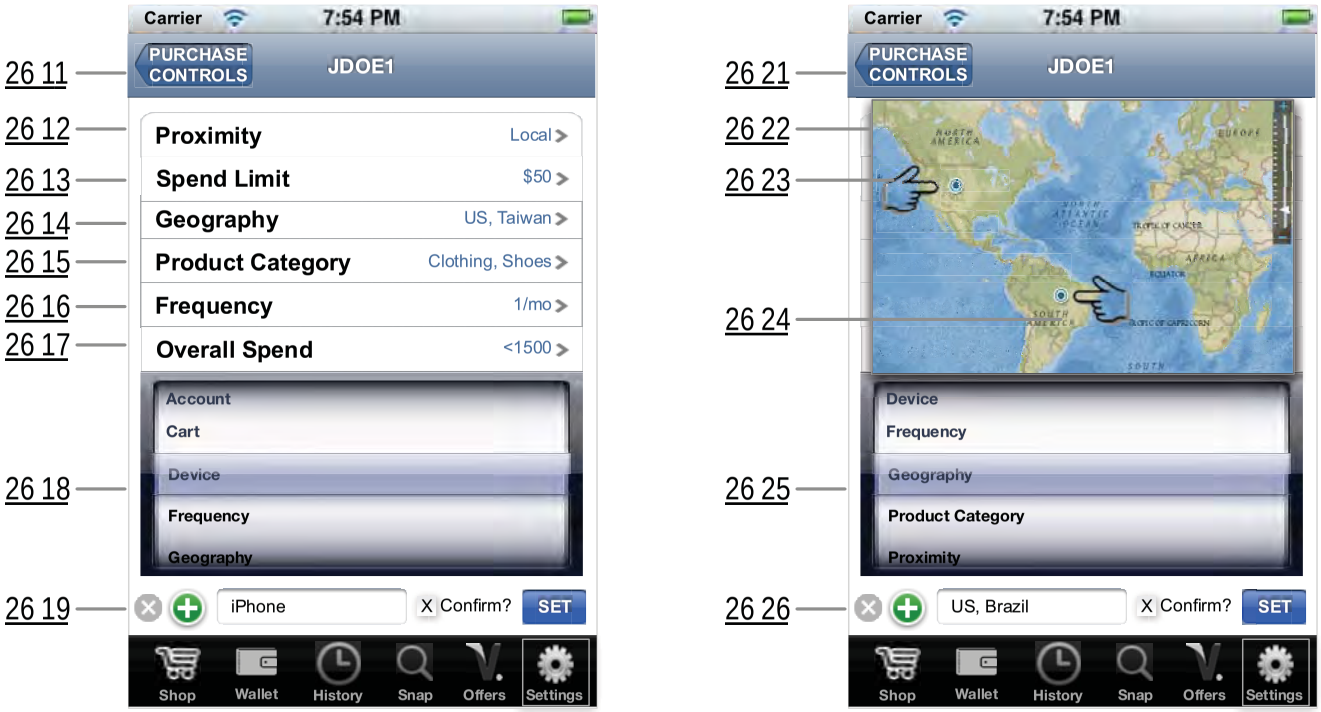


FIGURE 26B

Example: UEP Application Embodiment - Purchase Controls Settings Mode

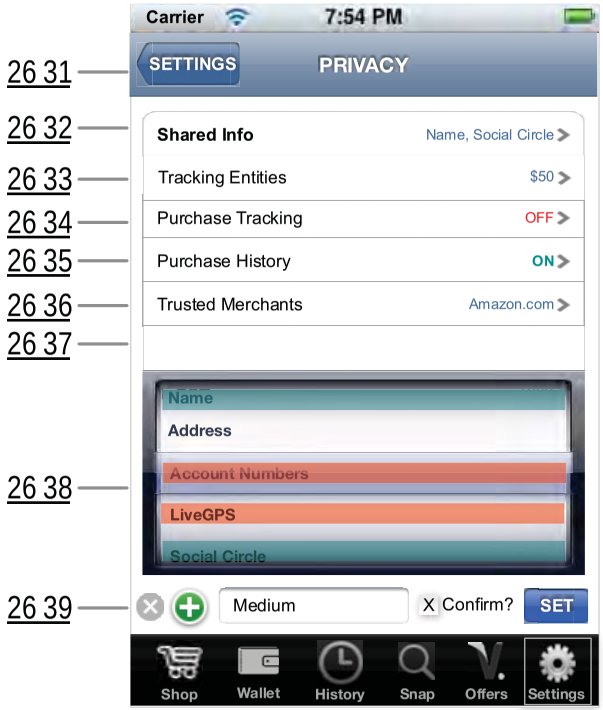


FIGURE 26C

Example: UEP Application Embodiment - Purchase Controls Settings Mode

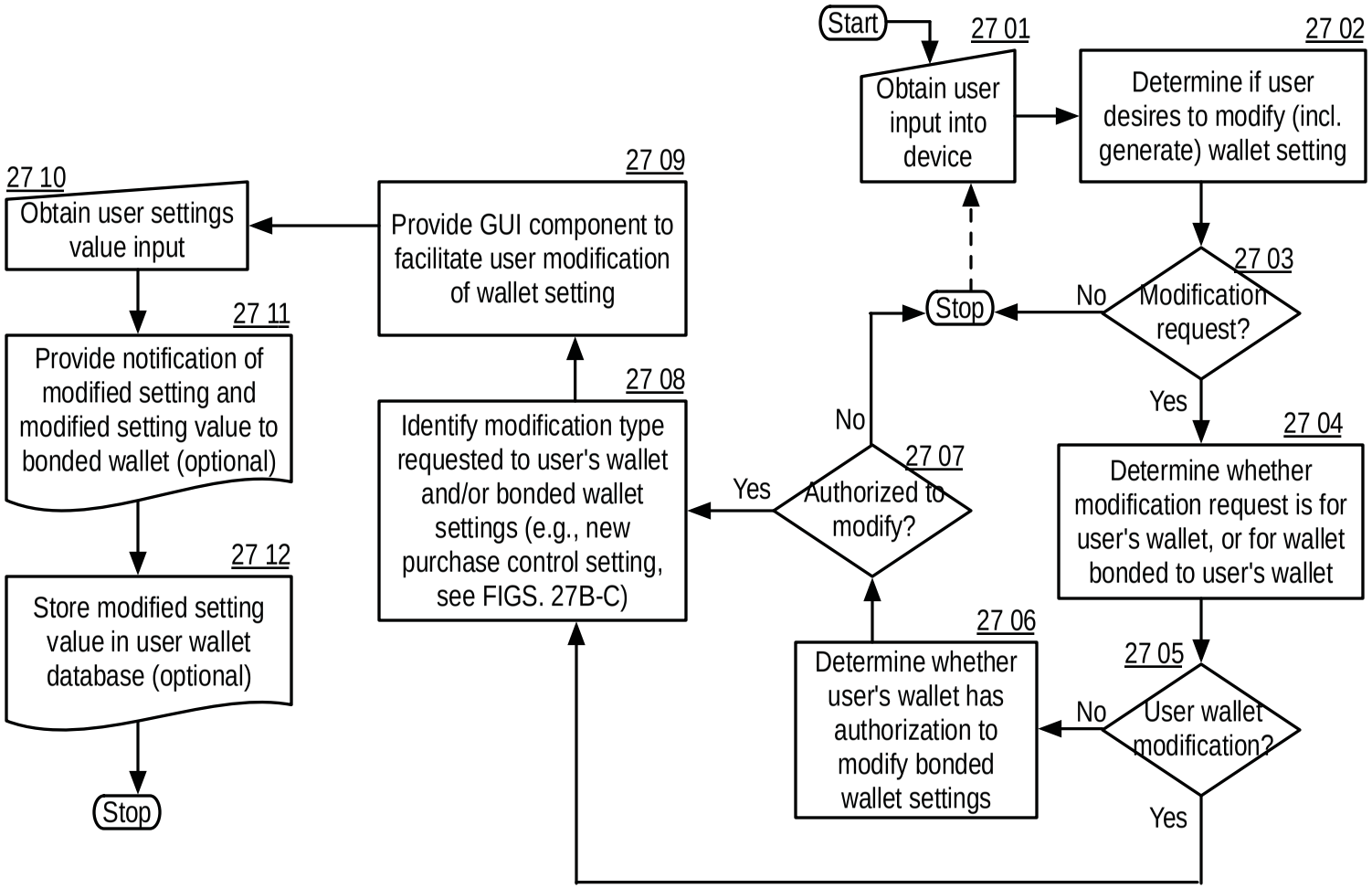


FIGURE 27A

Example: Virtual Wallet Settings Configuration ("VWSC") component 2700

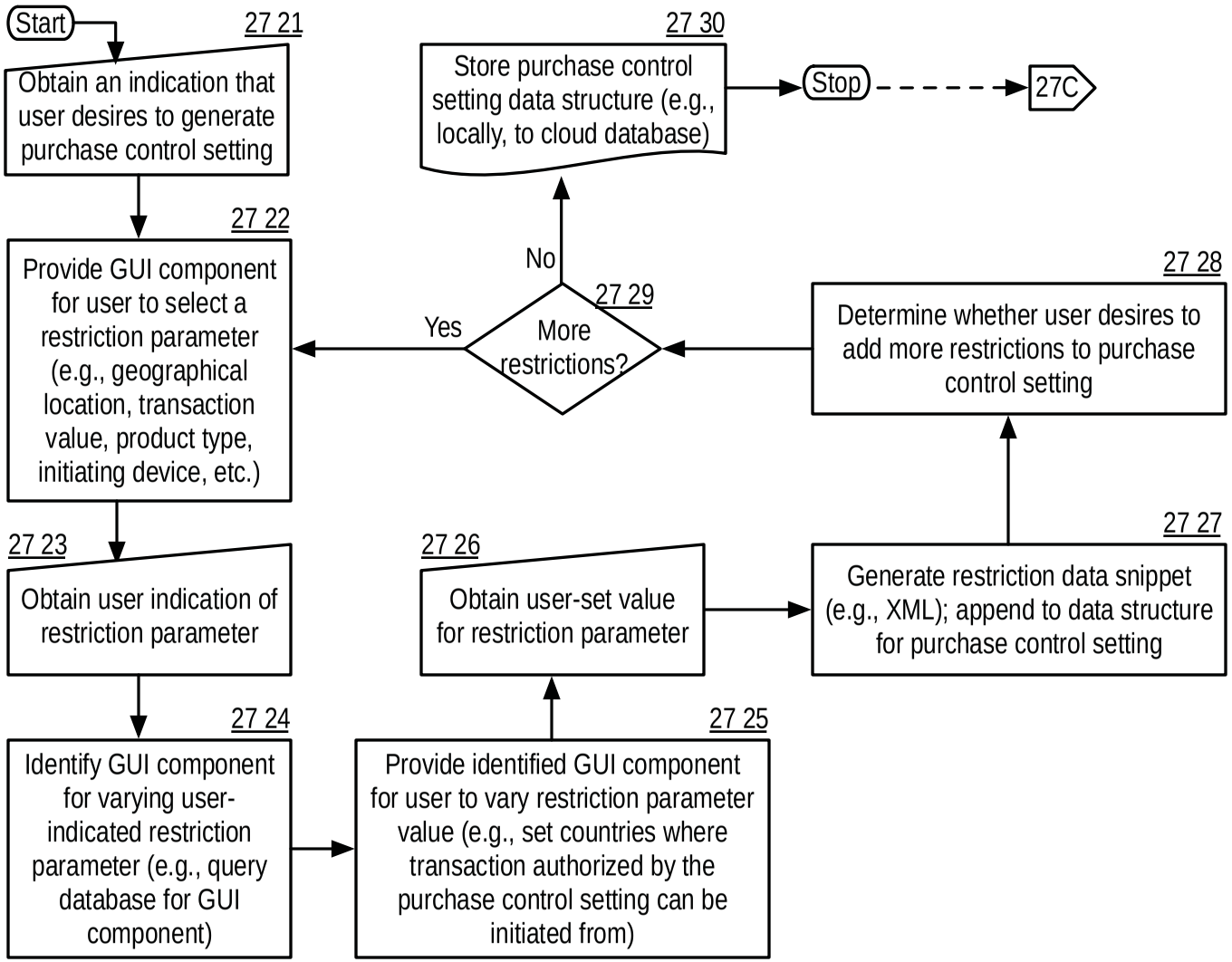


FIGURE 27B

Example: Purchase Controls Settings ("PCS") component 2720

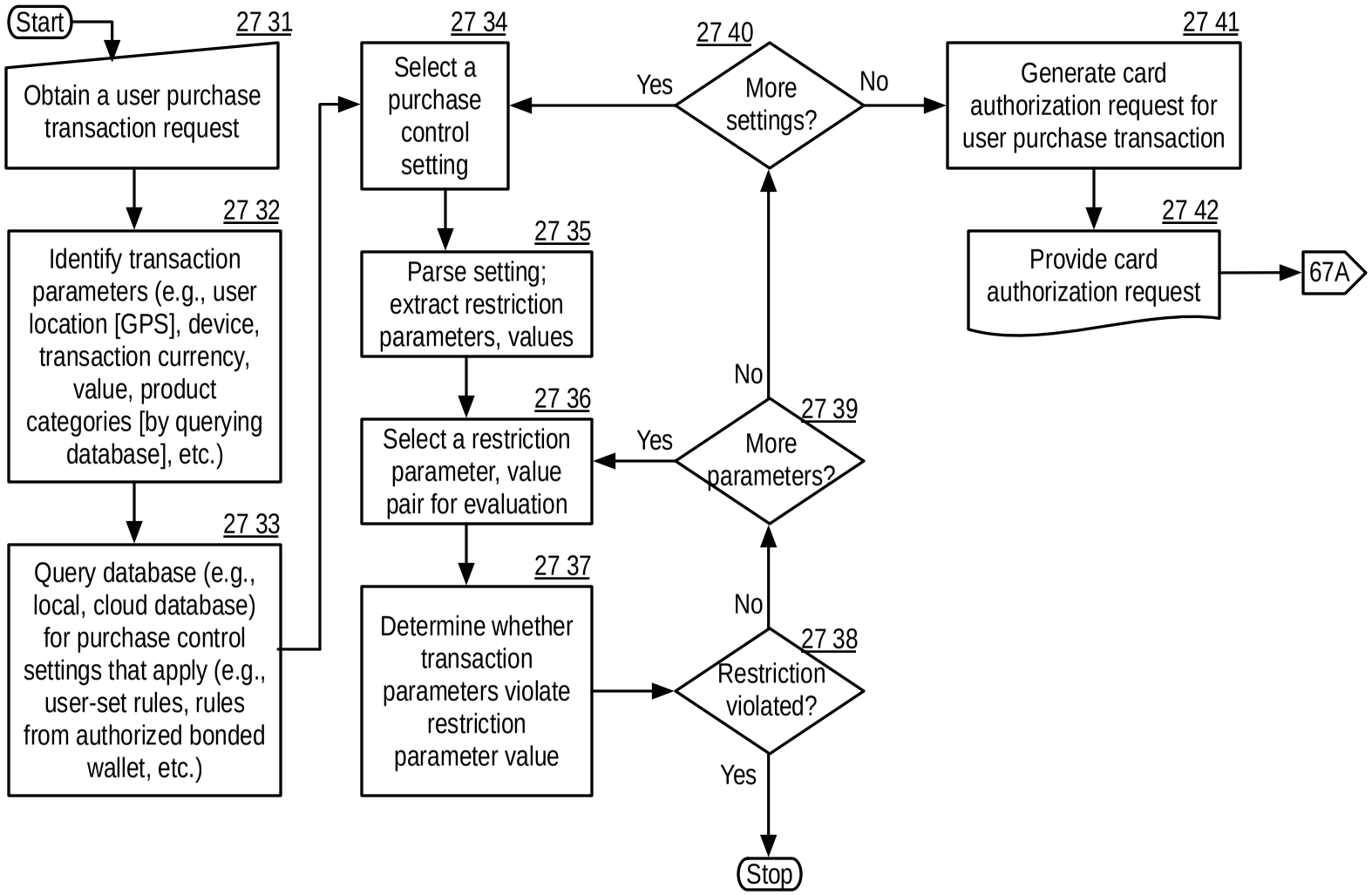


FIGURE 27C

Example: Purchase Controls Settings ("PCS") component 2720

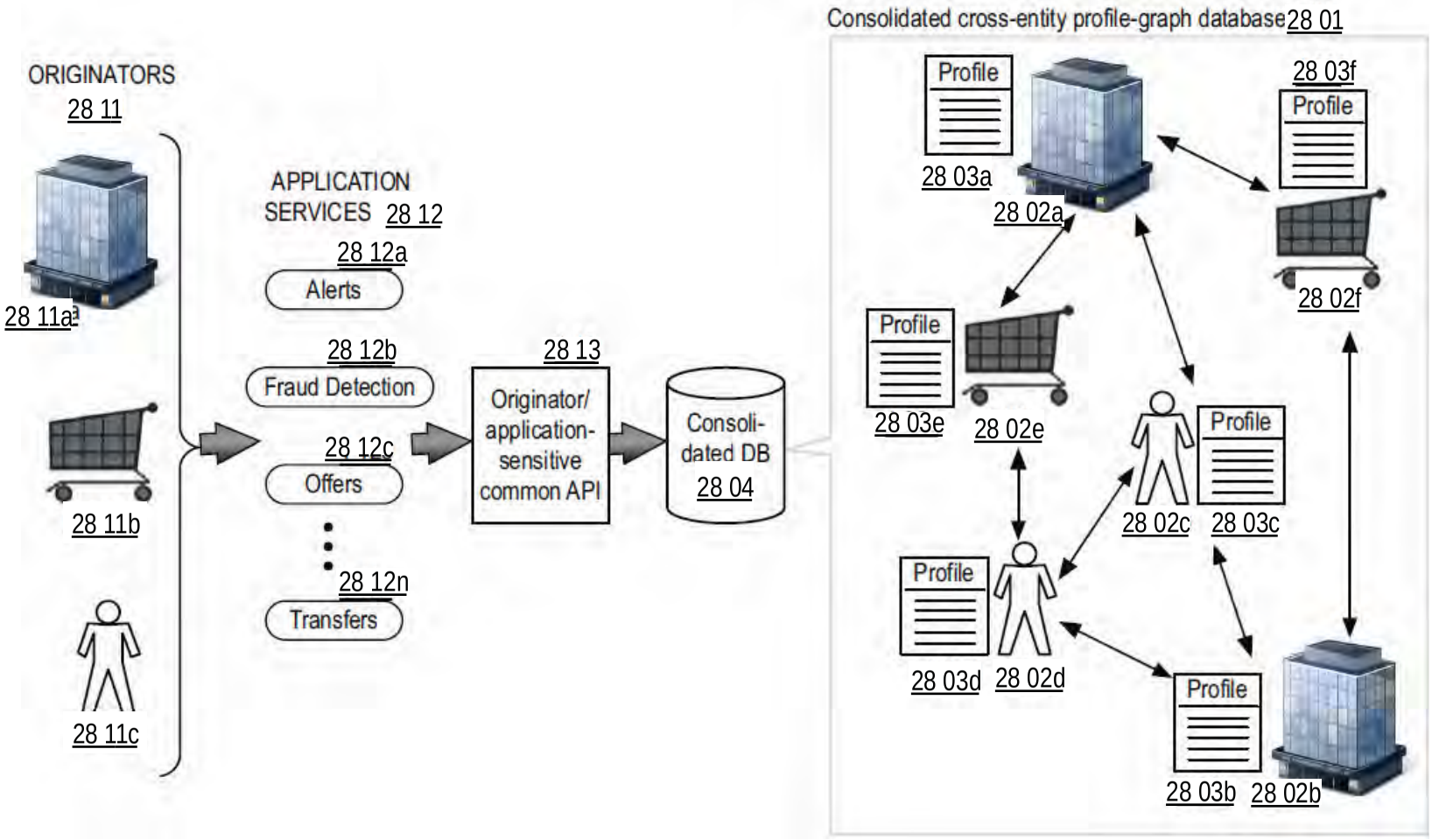


FIGURE 28

Example: Centralized Personal Information Platform

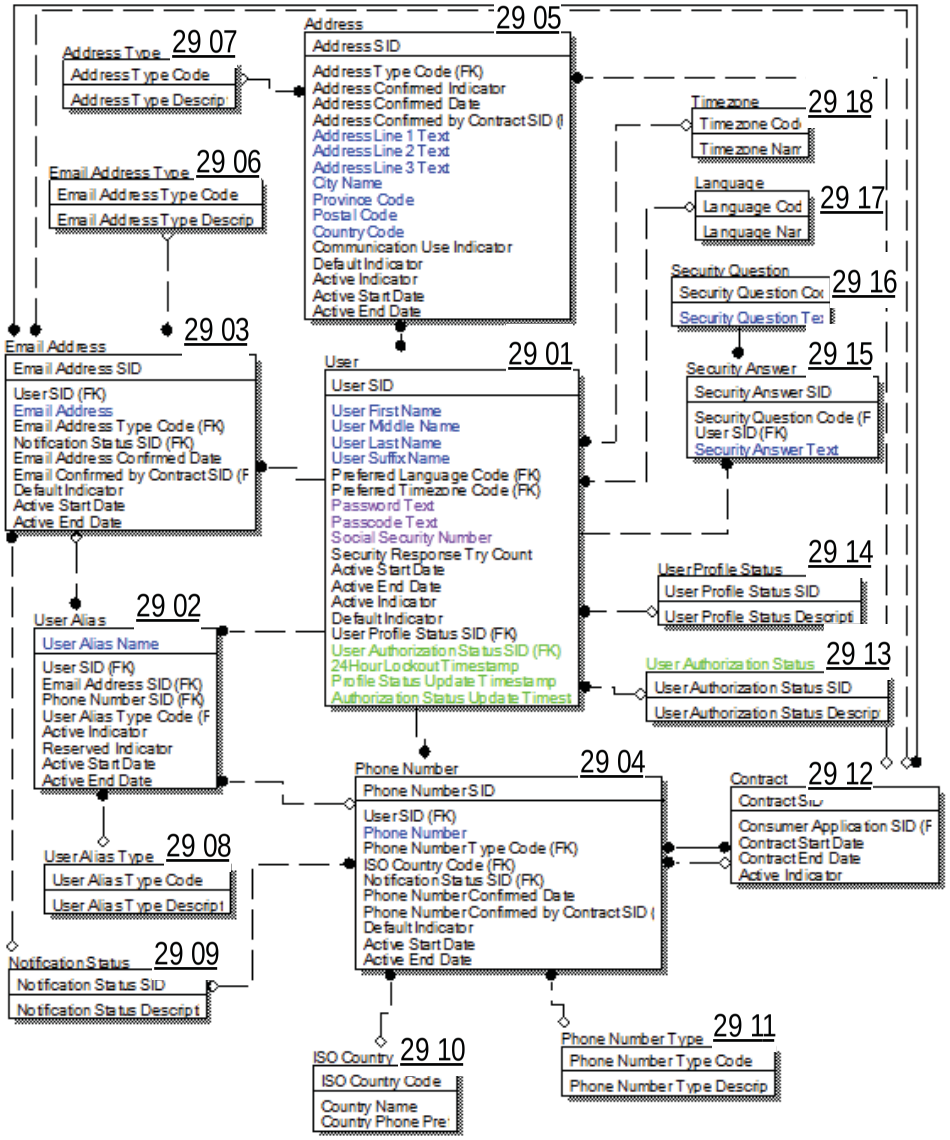


FIGURE 29A

Example: User Profile Attributes Data Model

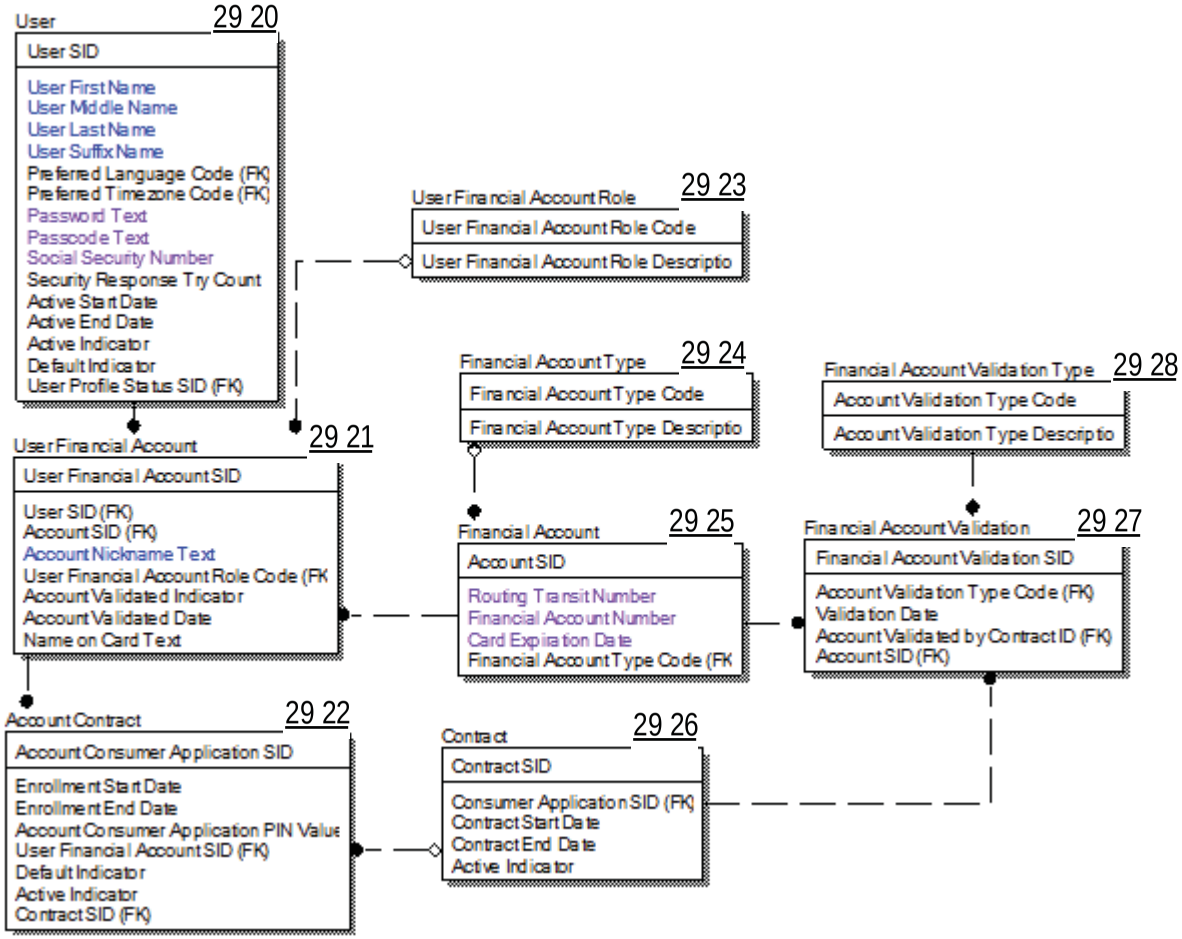


FIGURE 29B

Example: User Profile Attributes Data Model

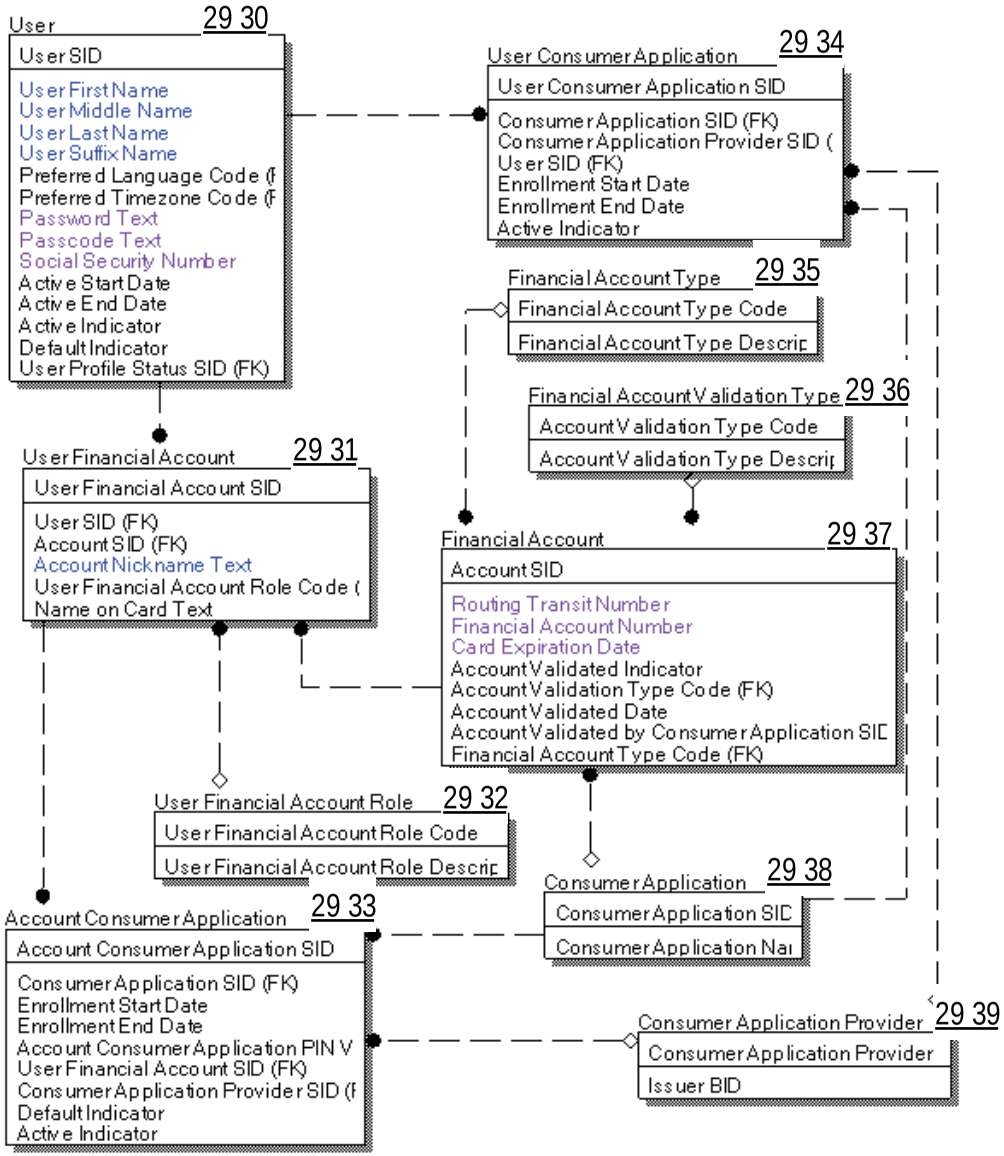


FIGURE 29C

Example: User Profile Attributes Data Model

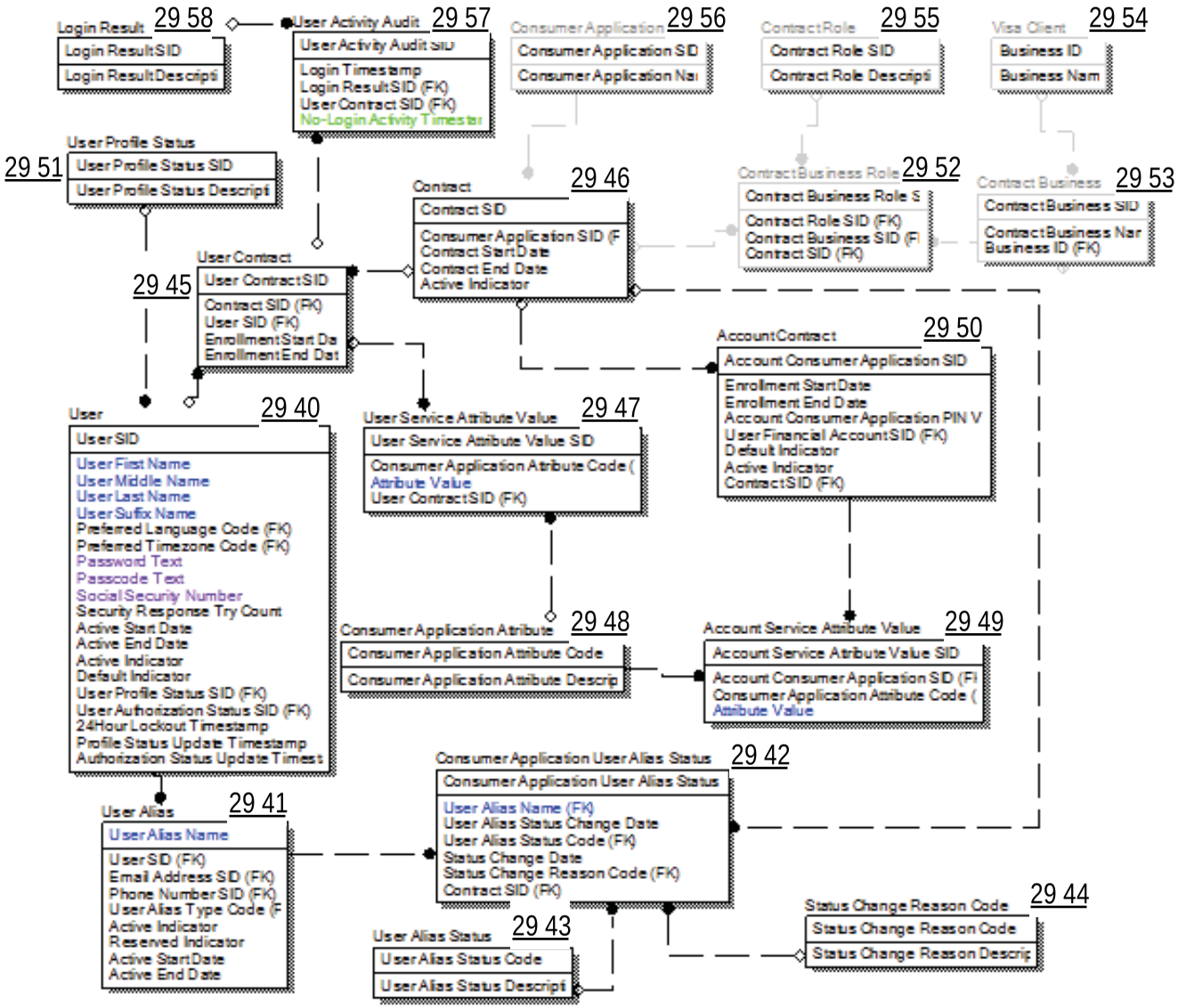


FIGURE 29D

Example: User Profile Attributes Data Model

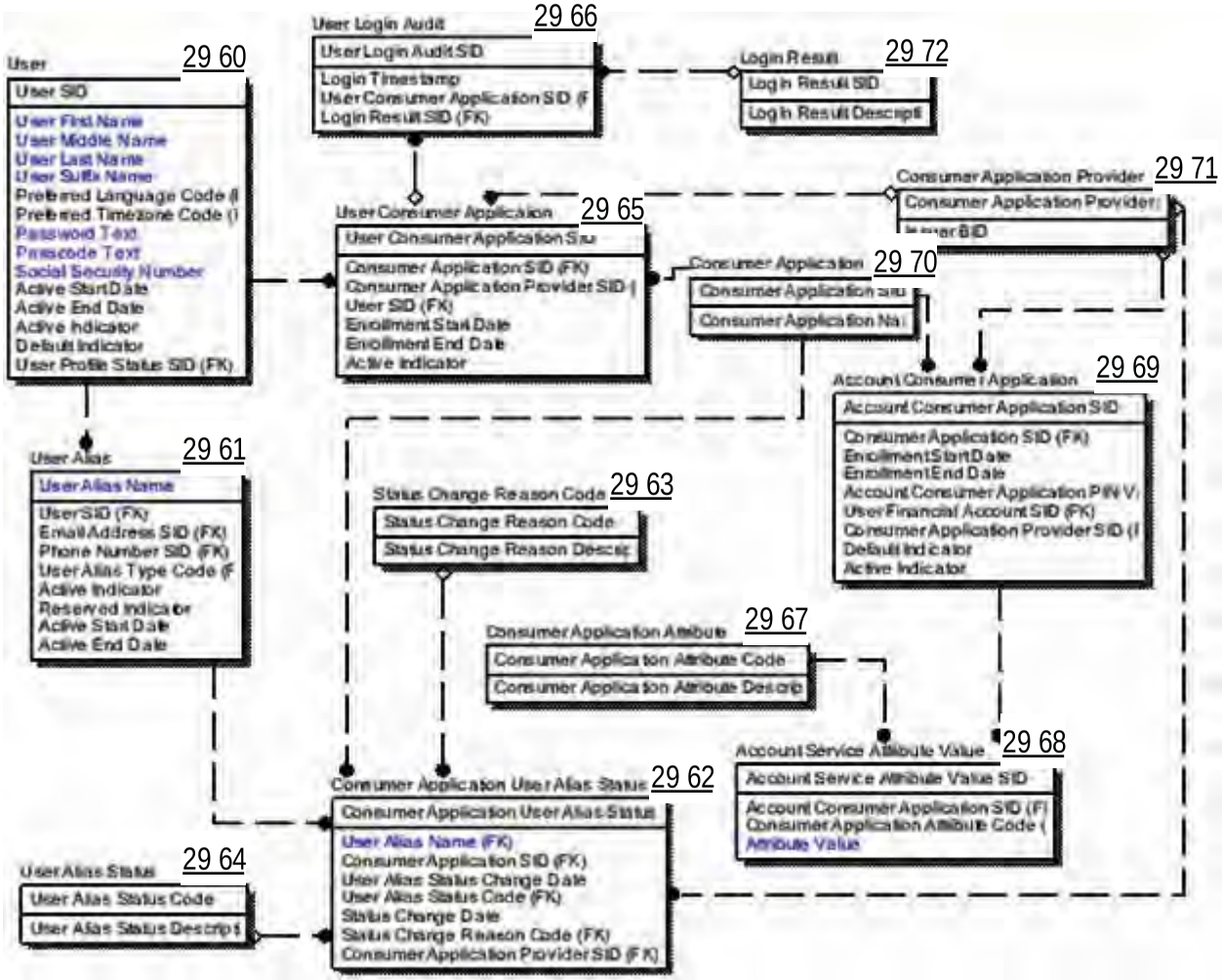


FIGURE 29E

Example: User Profile Attributes Data Model

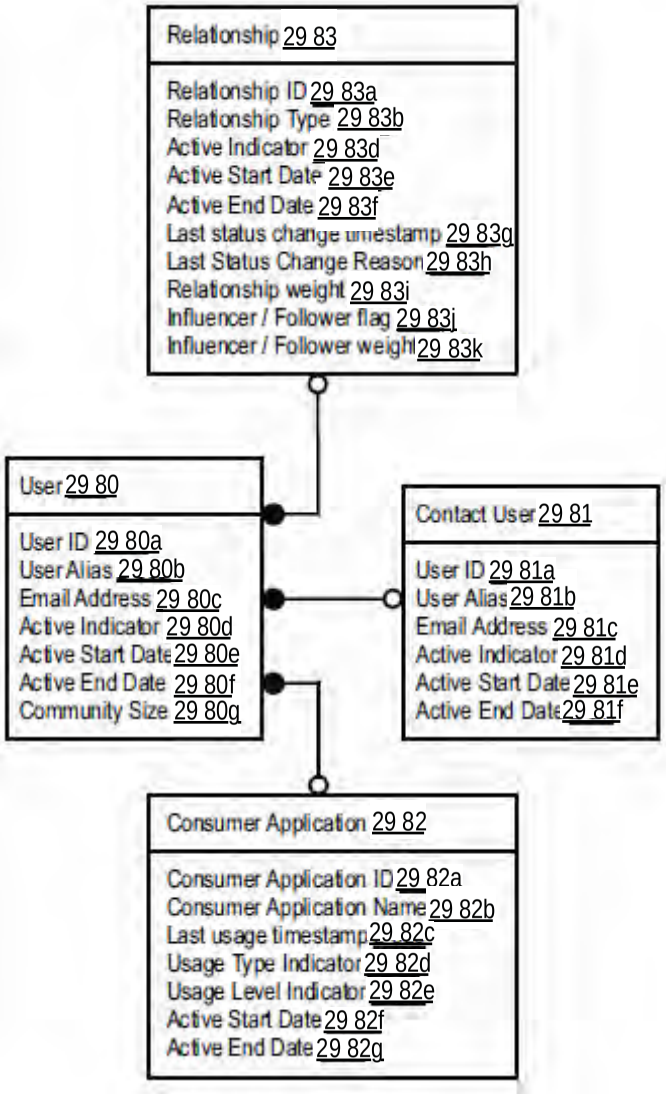


FIGURE 29F

Example: User Profile Attributes Data Model

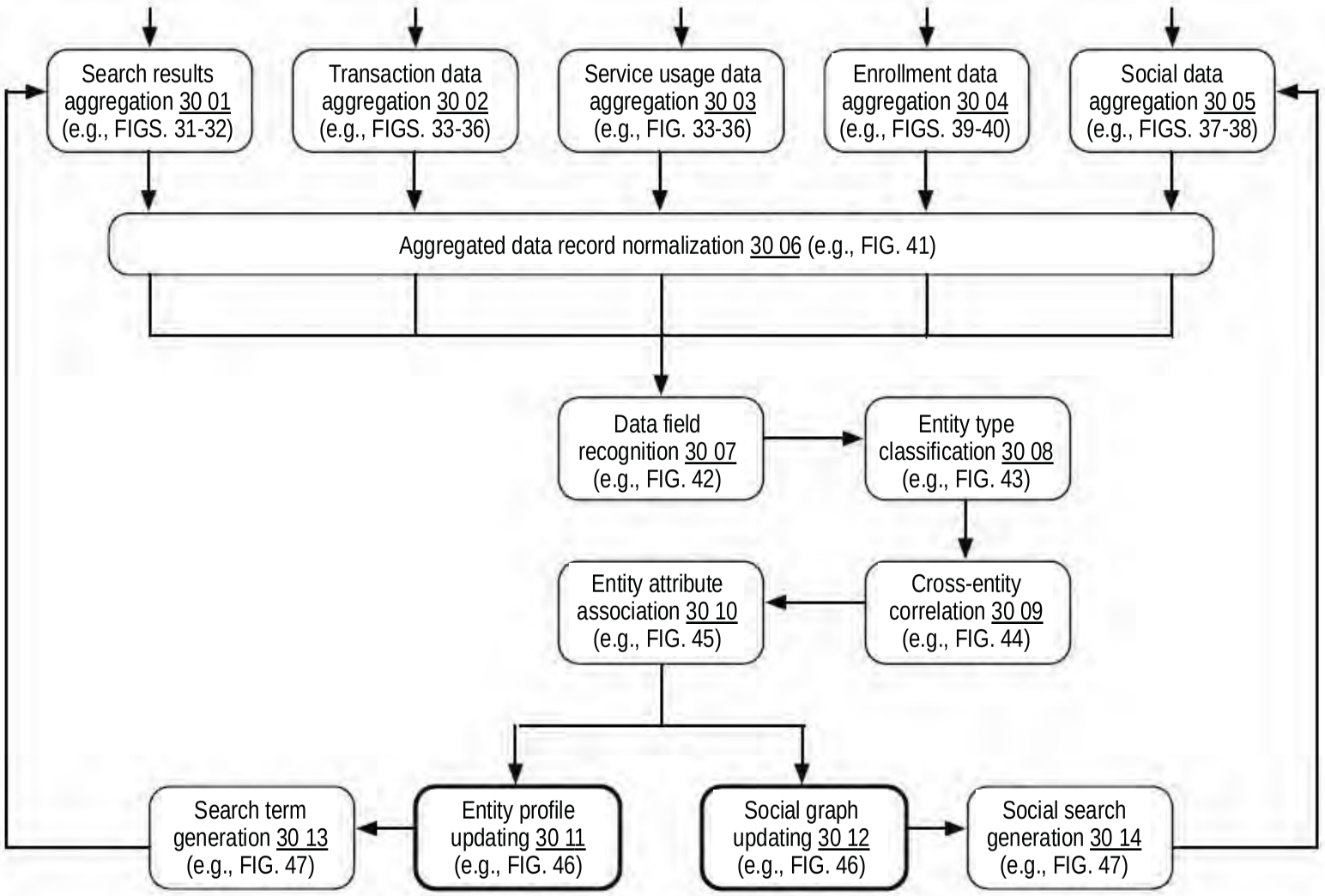


FIGURE 30

Example: Centralized Personal Information Platform Components

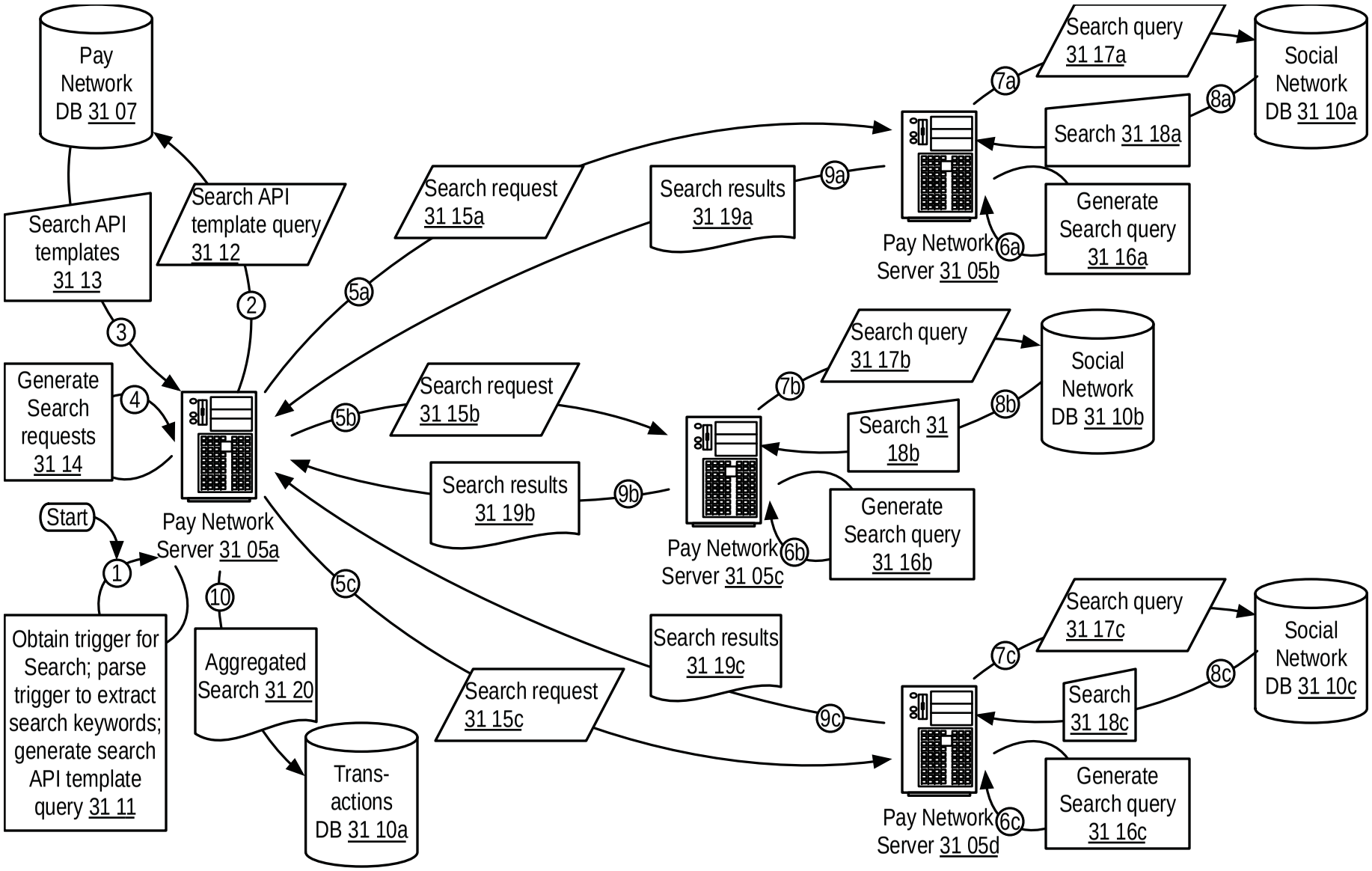


FIGURE 31

Example: Search Results Aggregation

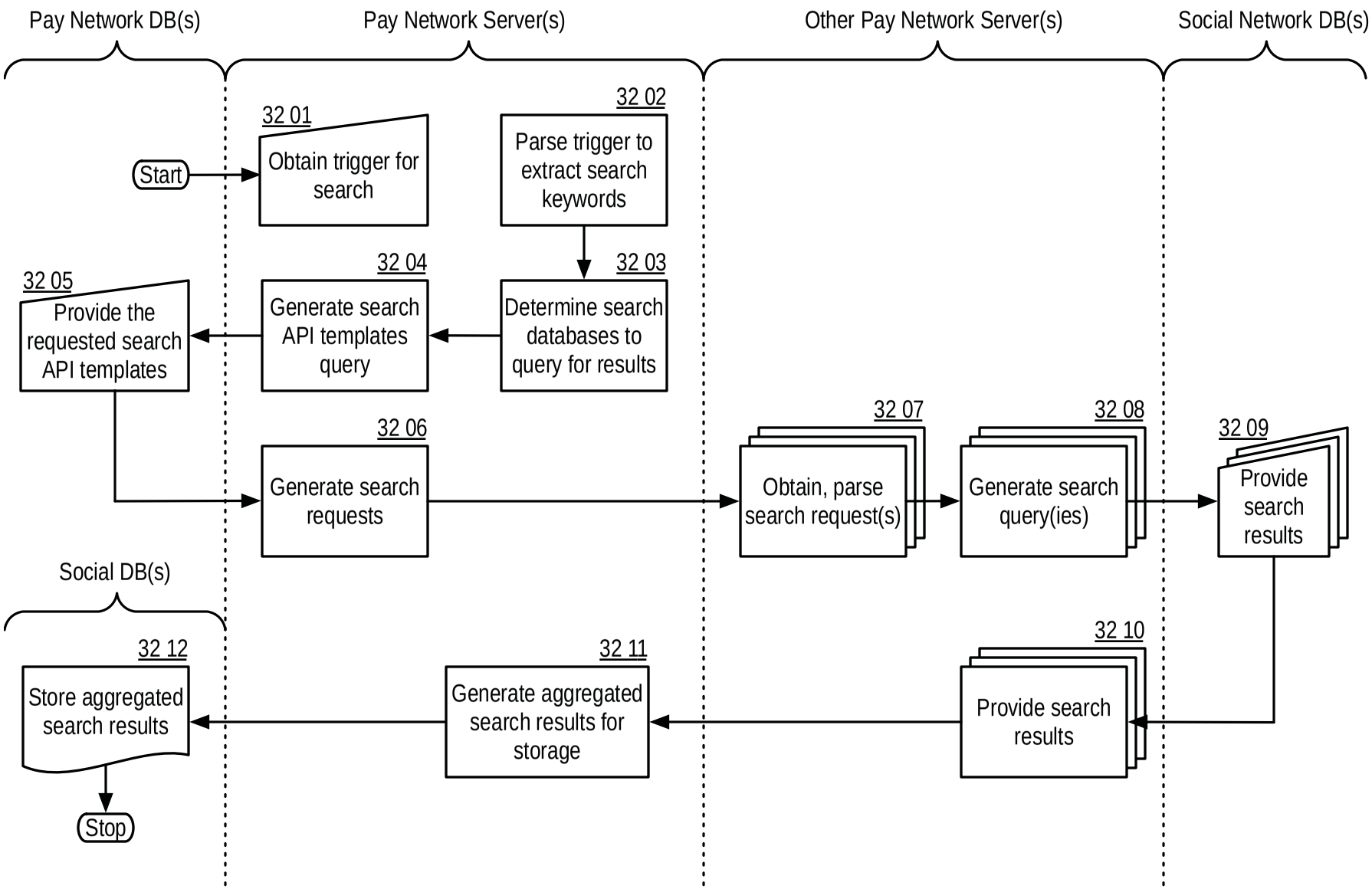


FIGURE 32

Example: Search Results Aggregation ("SRA") component 3200

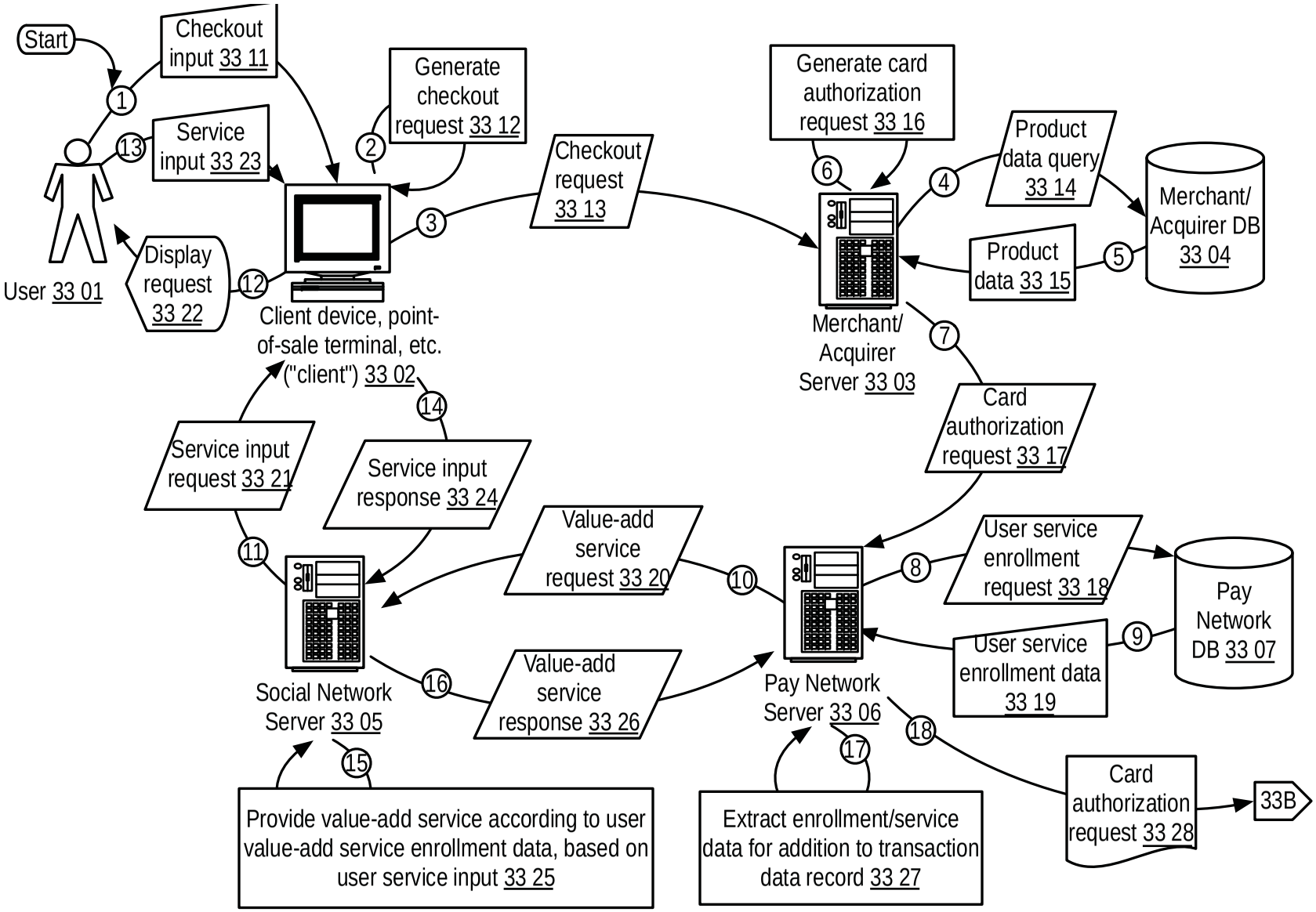


FIGURE 33A

Example: Card-Based Transaction Execution

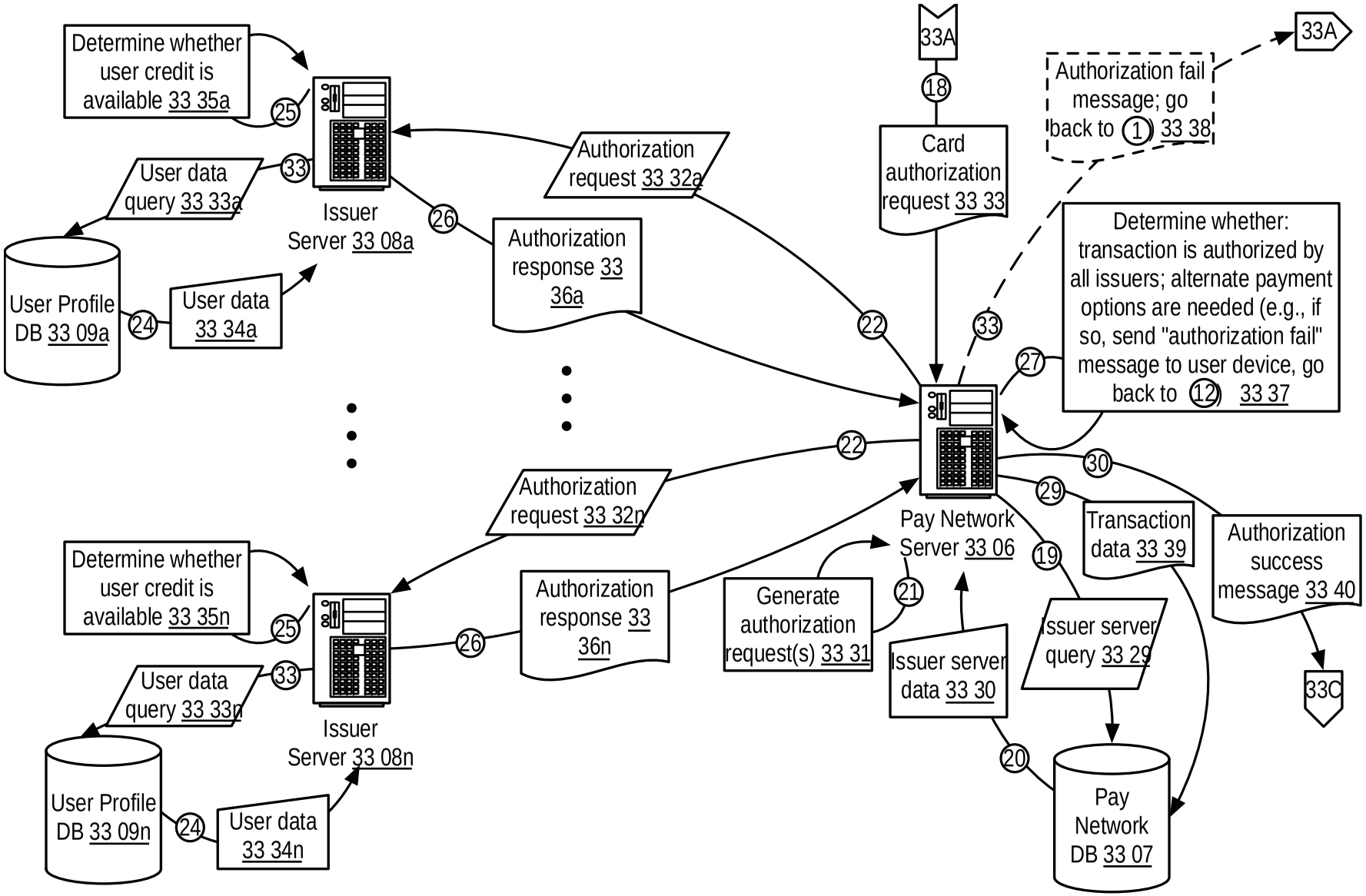


FIGURE 33B

Example: Card-Based Transaction Execution

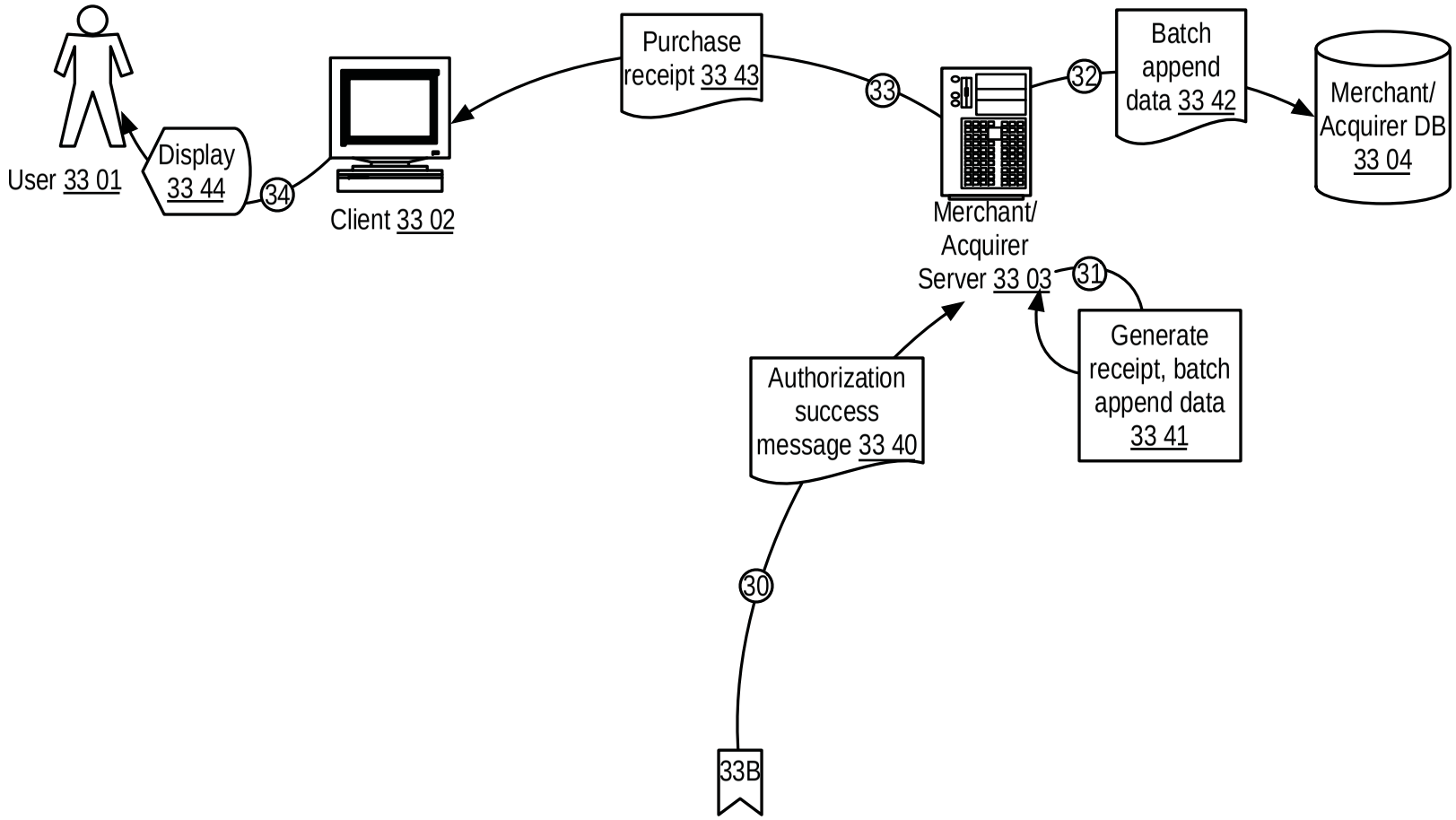


FIGURE 33C

Example: Card-Based Transaction Execution

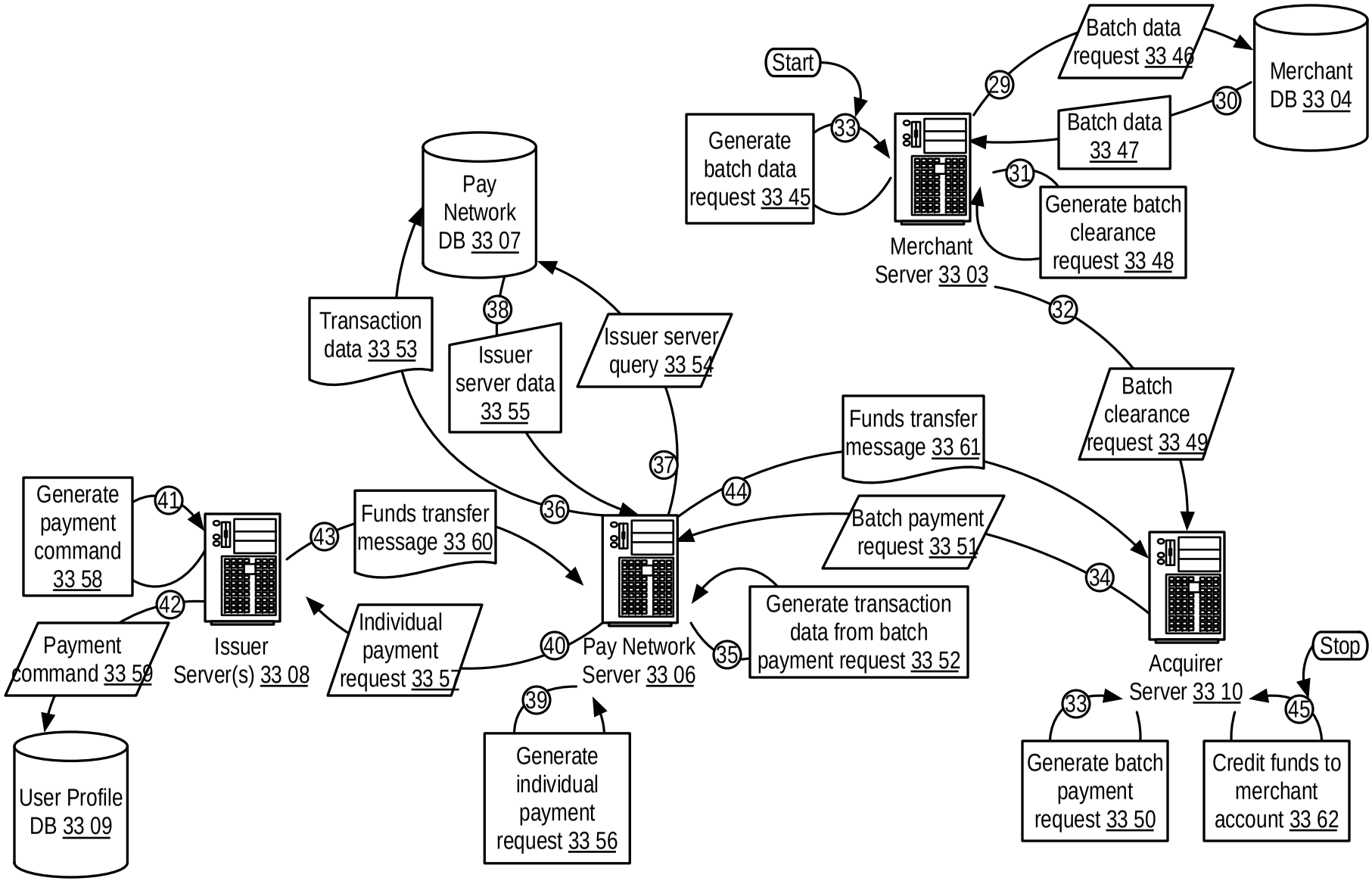


FIGURE 33D

Example: Card-Based Transaction Execution

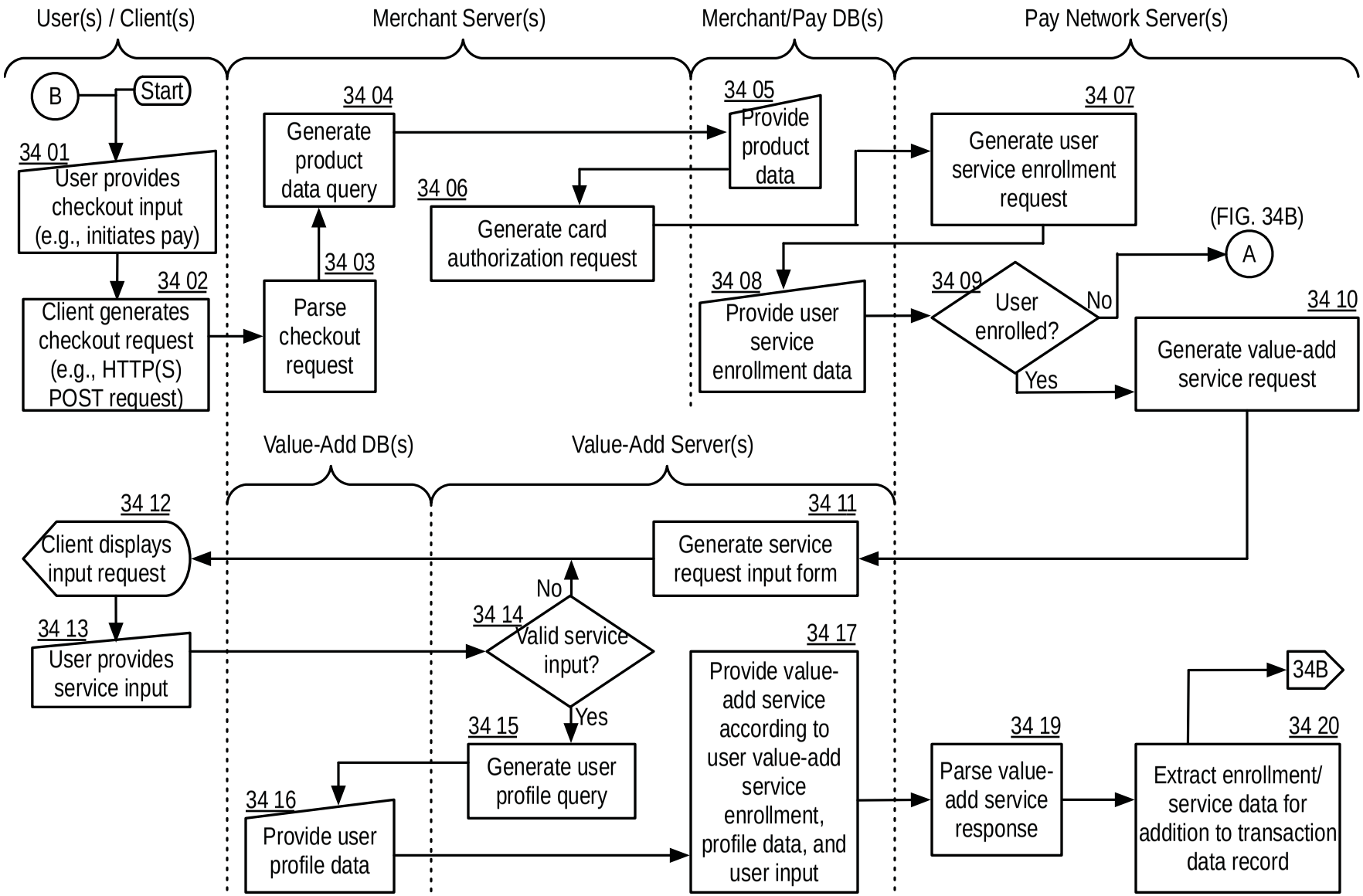


FIGURE 34A

Example: Card-Based Transaction Data Acquisition ("CTDA") component 3400

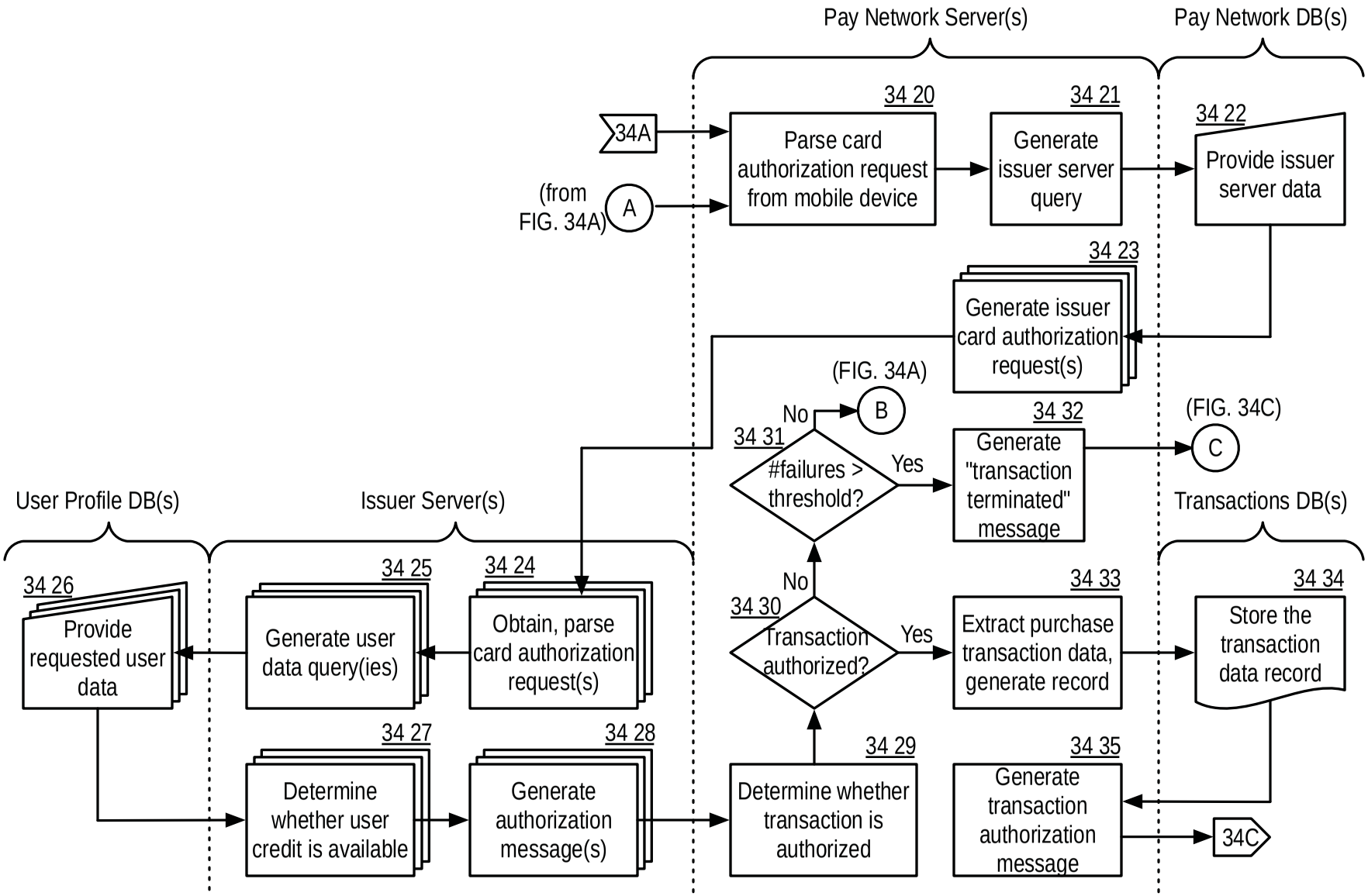


FIGURE 34B

Example: Card-Based Transaction Data Acquisition ("CTDA") component 3400

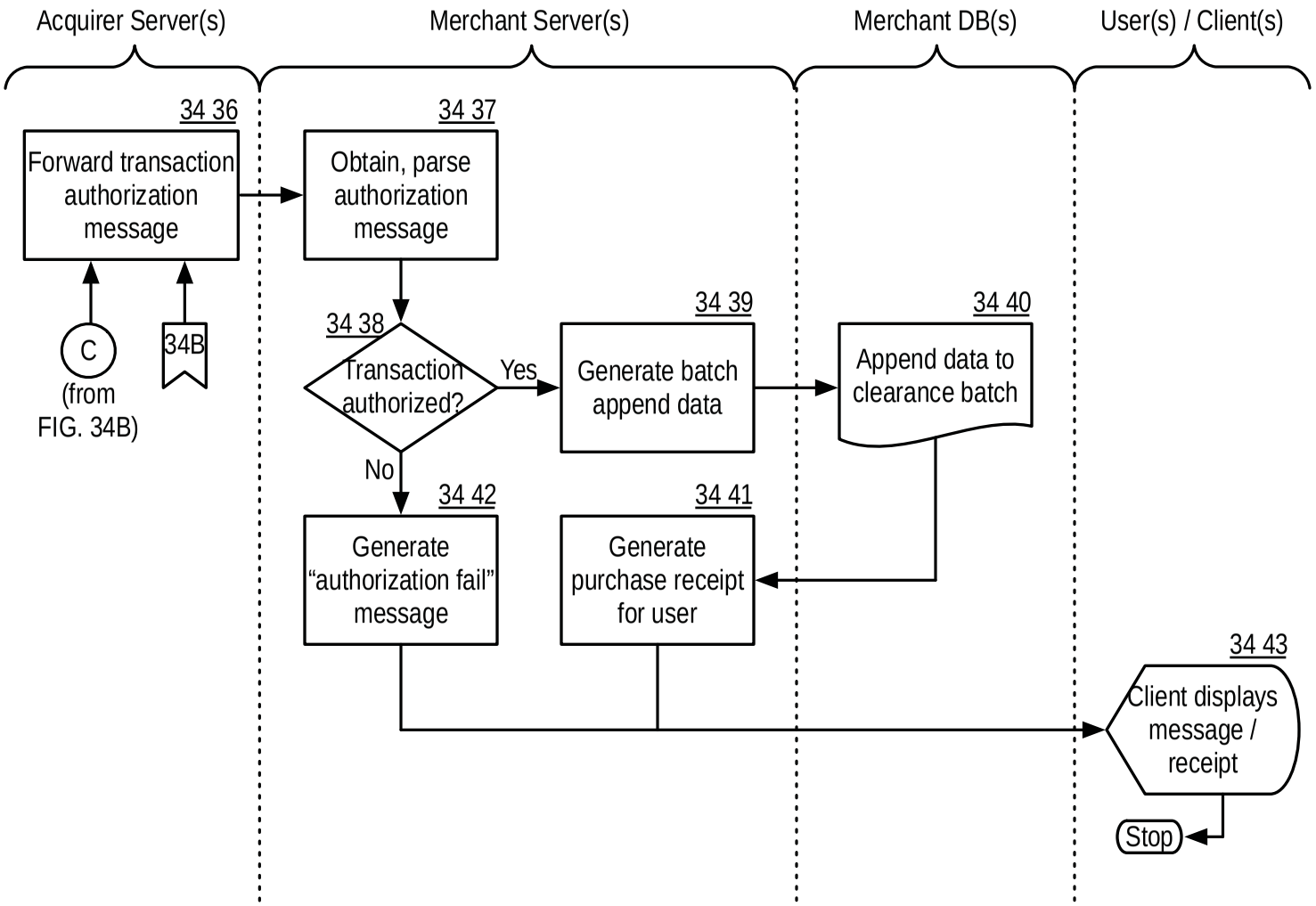


FIGURE 34C

Example: Card-Based Transaction Data Acquisition ("CTDA") component 3400

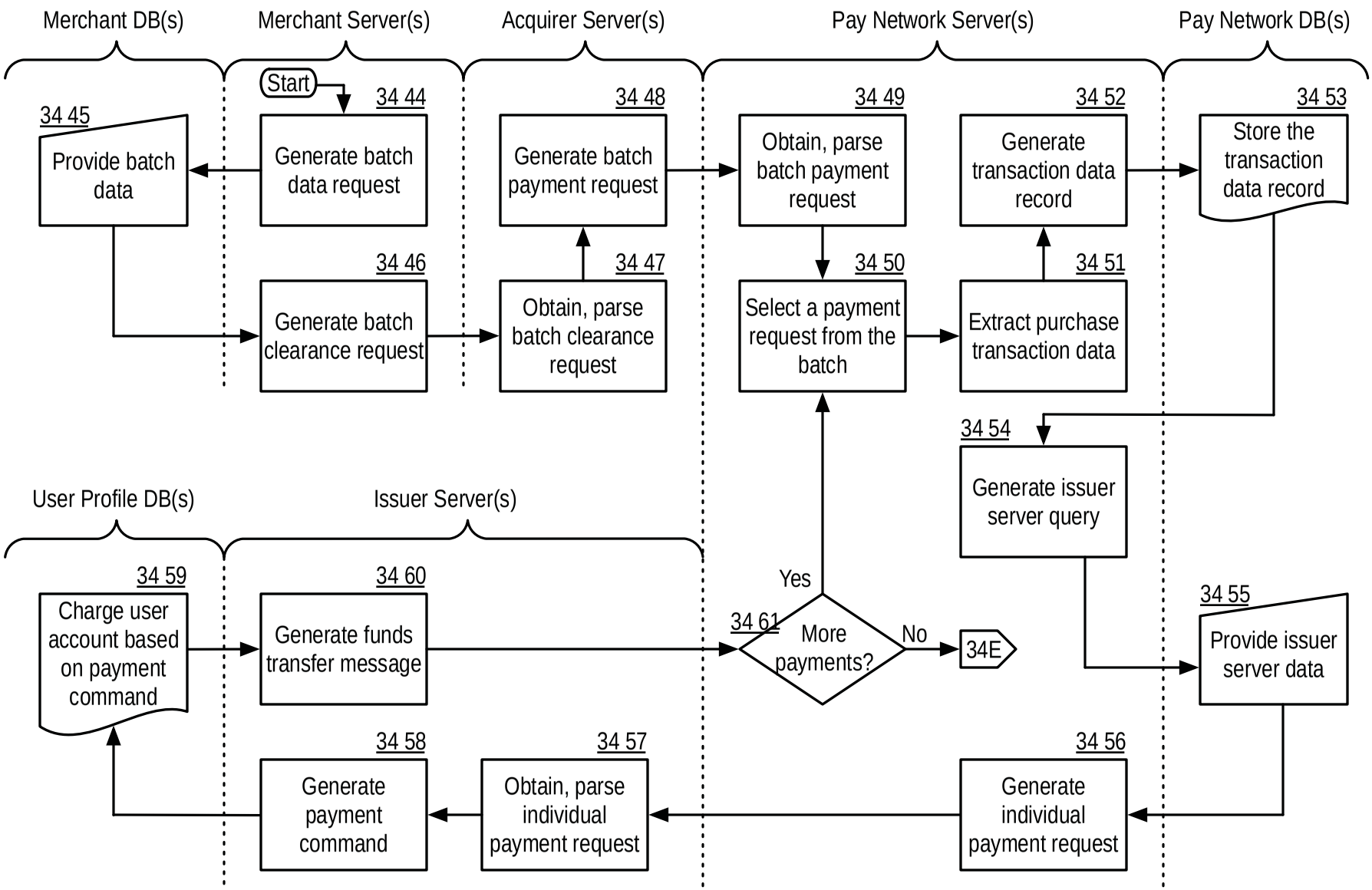


FIGURE 34D

Example: Card-Based Transaction Data Acquisition ("CTDA") component 3400

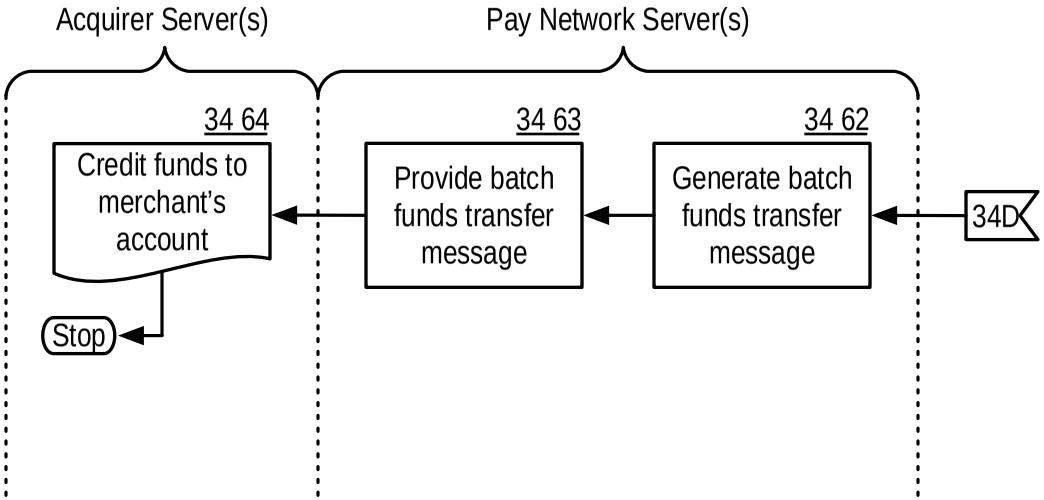


FIGURE 34E

Example: Card-Based Transaction Data Acquisition ("CTDA") component 3400

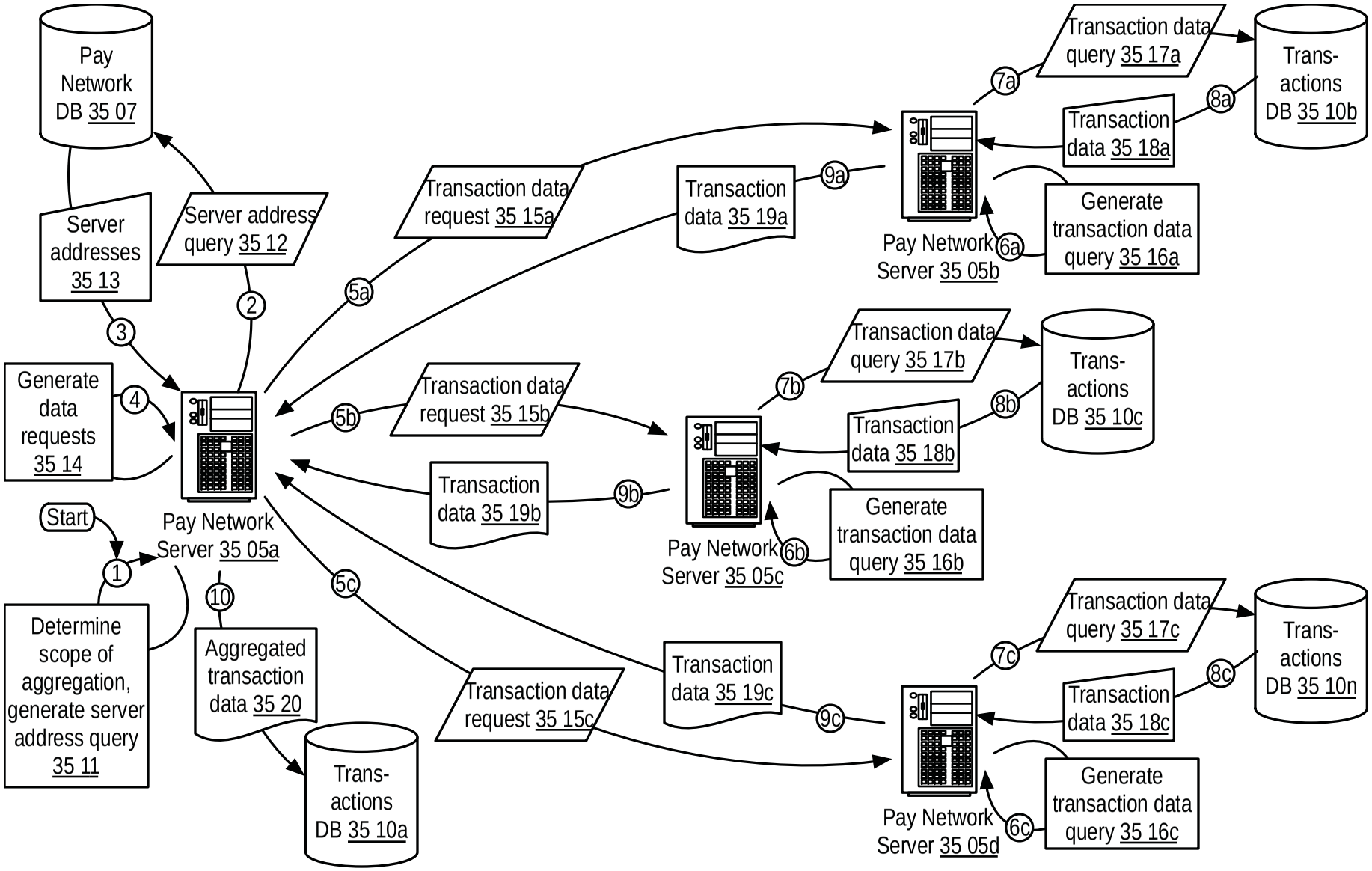


FIGURE 35

Example: Transaction Data Aggregation

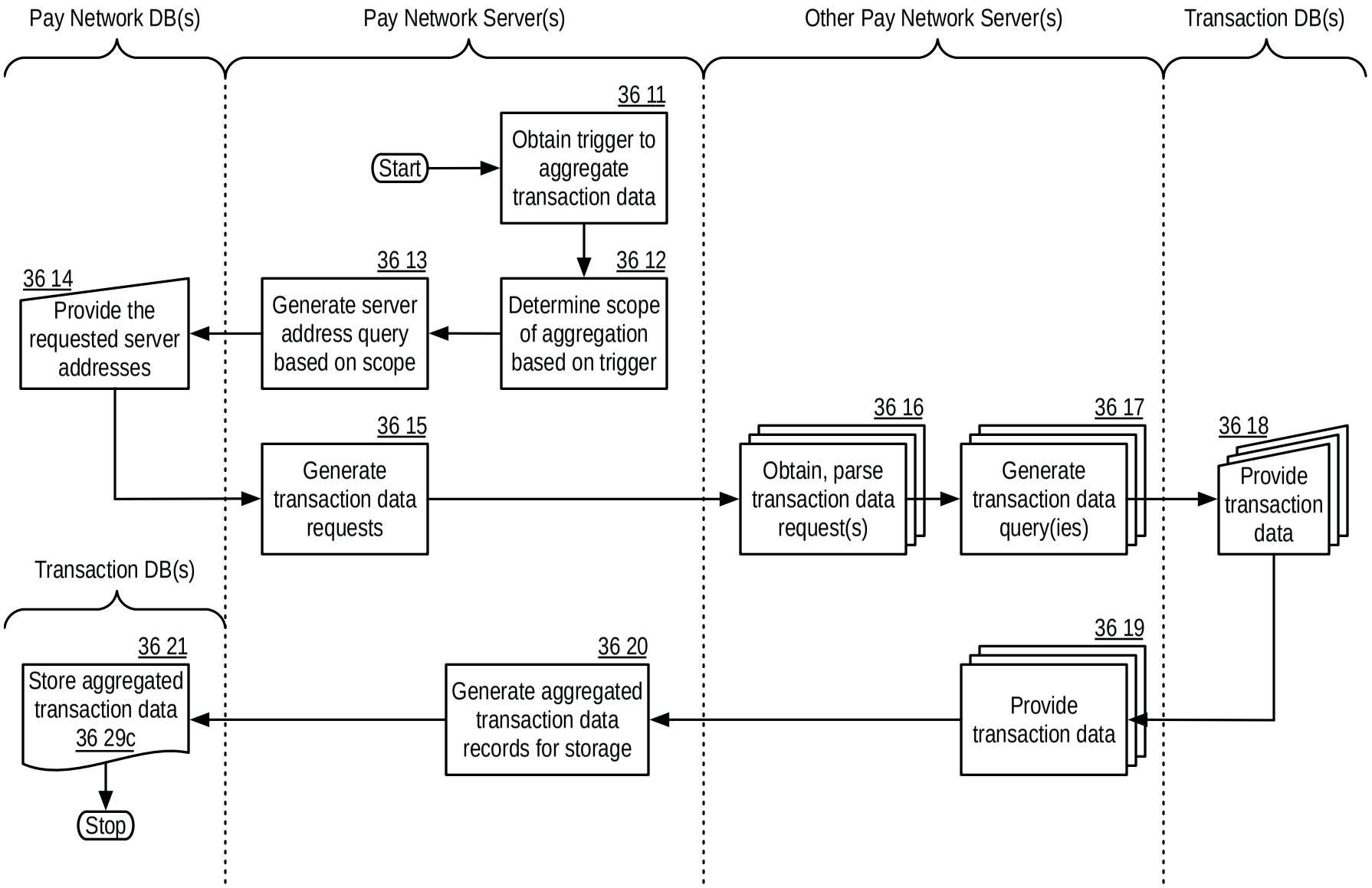


FIGURE 36

Example: Transaction Data Aggregation (TDA) component 3600

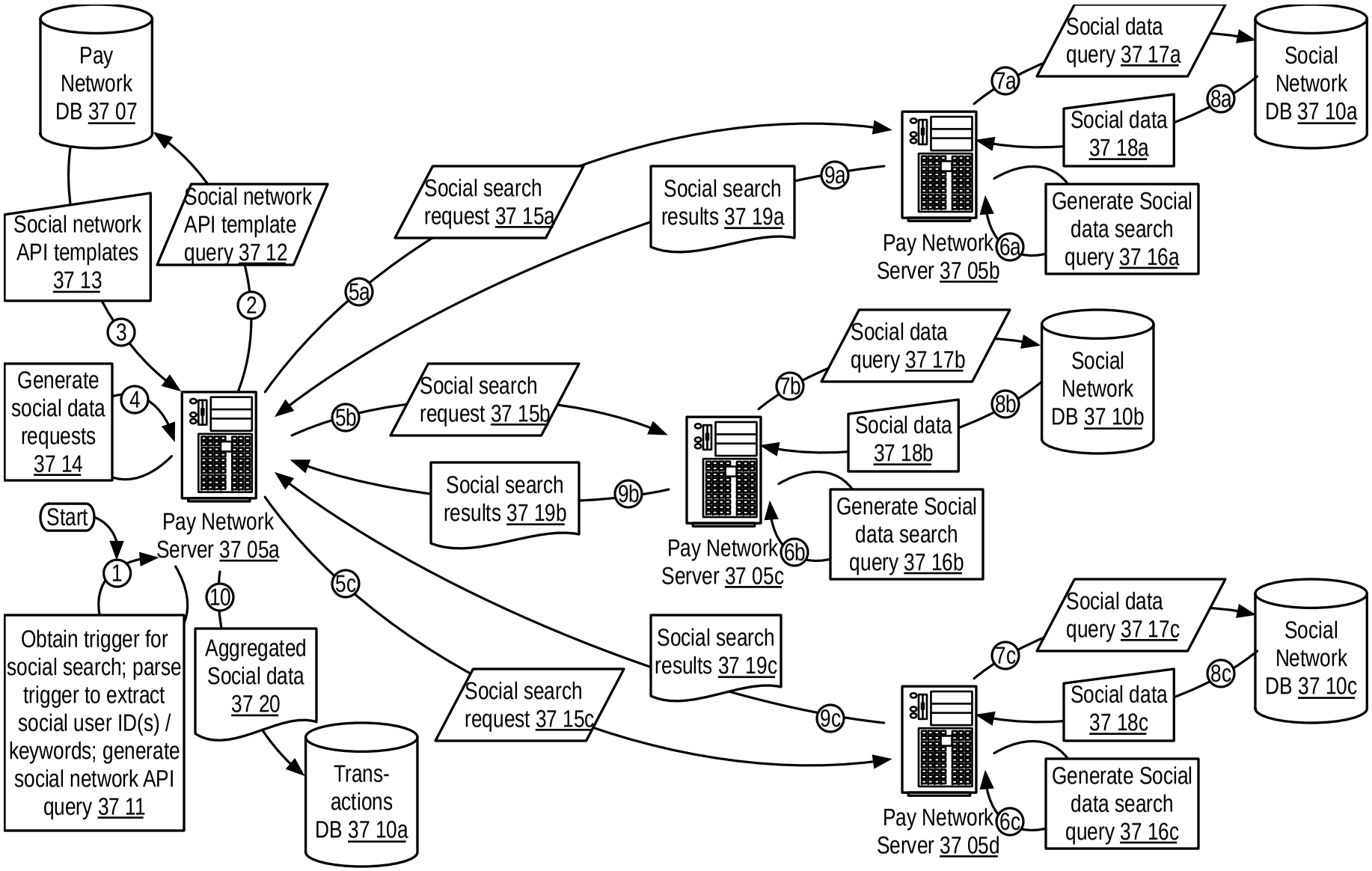


FIGURE 37

Example: Social Data Aggregation

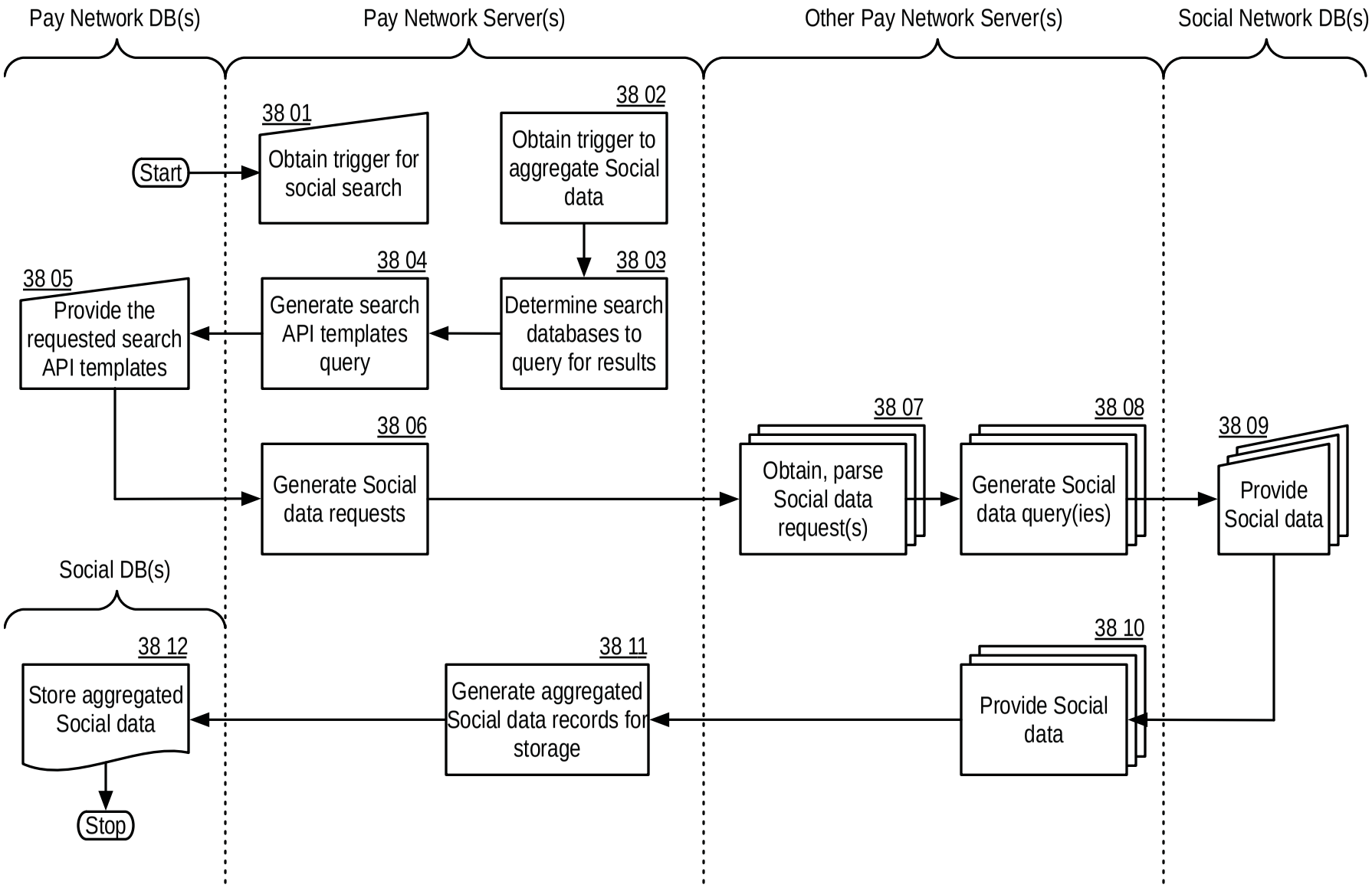


FIGURE 38

Example: Social Data Aggregation ("SDA") component 3800

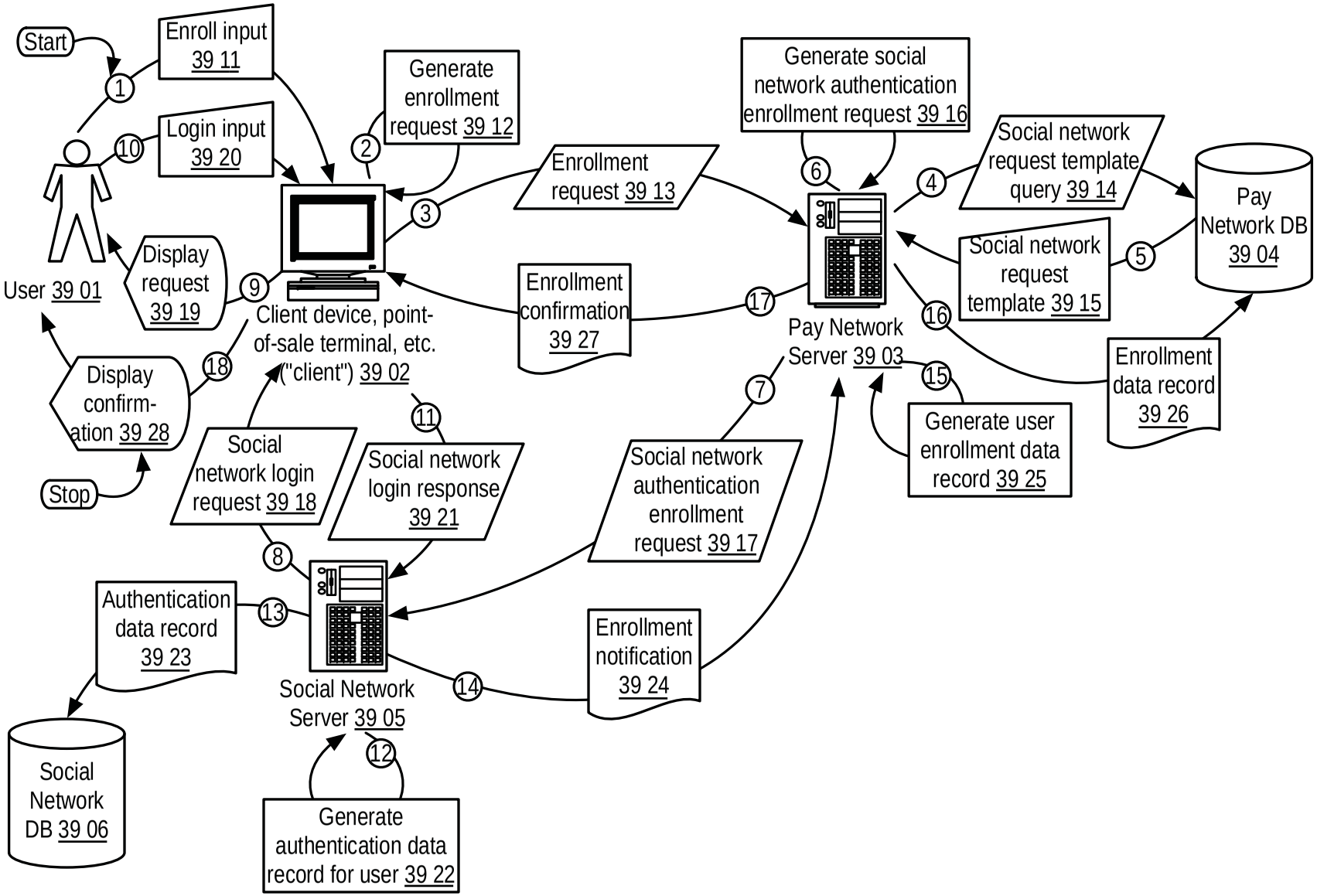


FIGURE 39

Example: Value-Add Service Enrollment

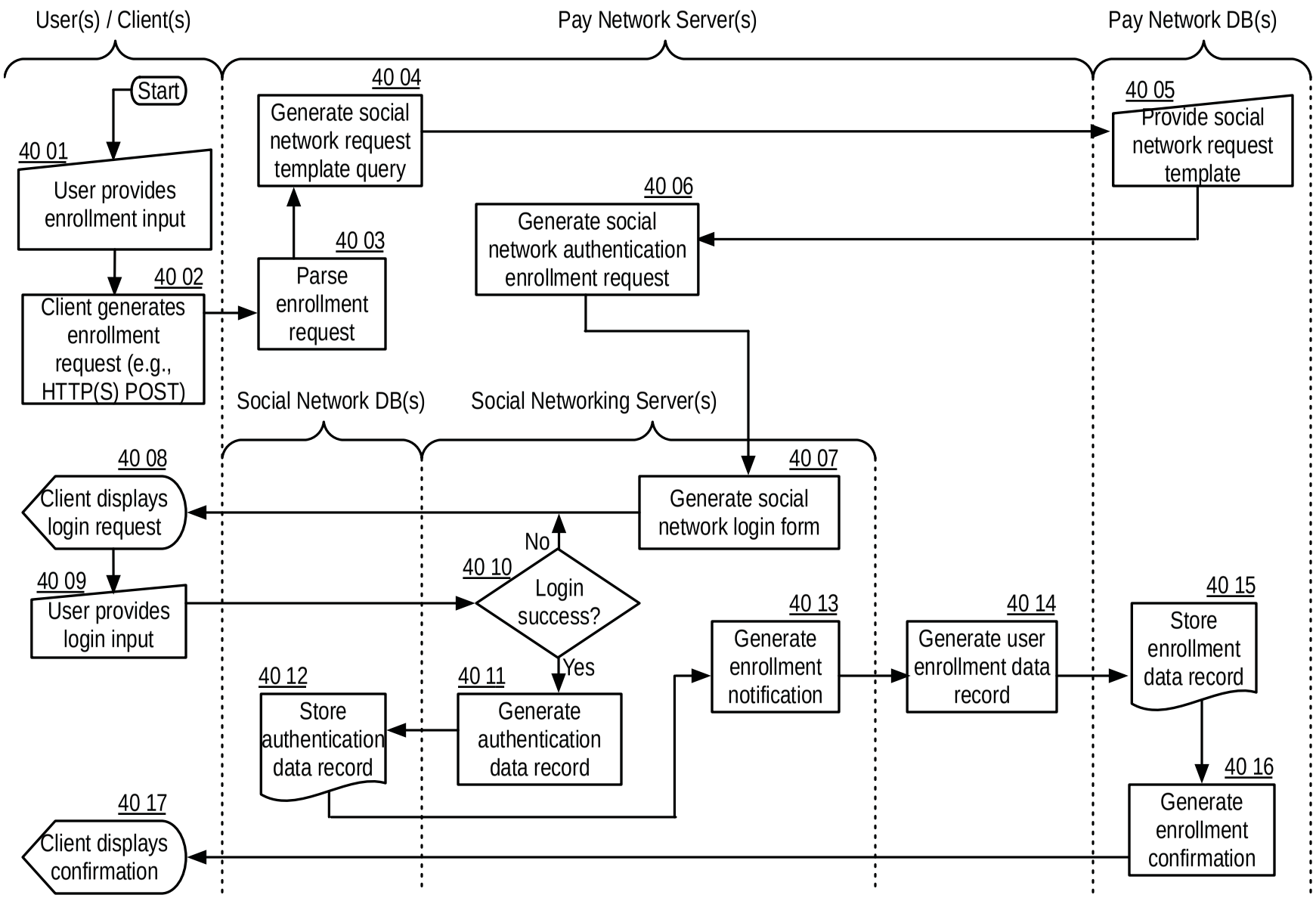


FIGURE 40

Example: Value-Add Service Enrollment ("VASE") component 4000

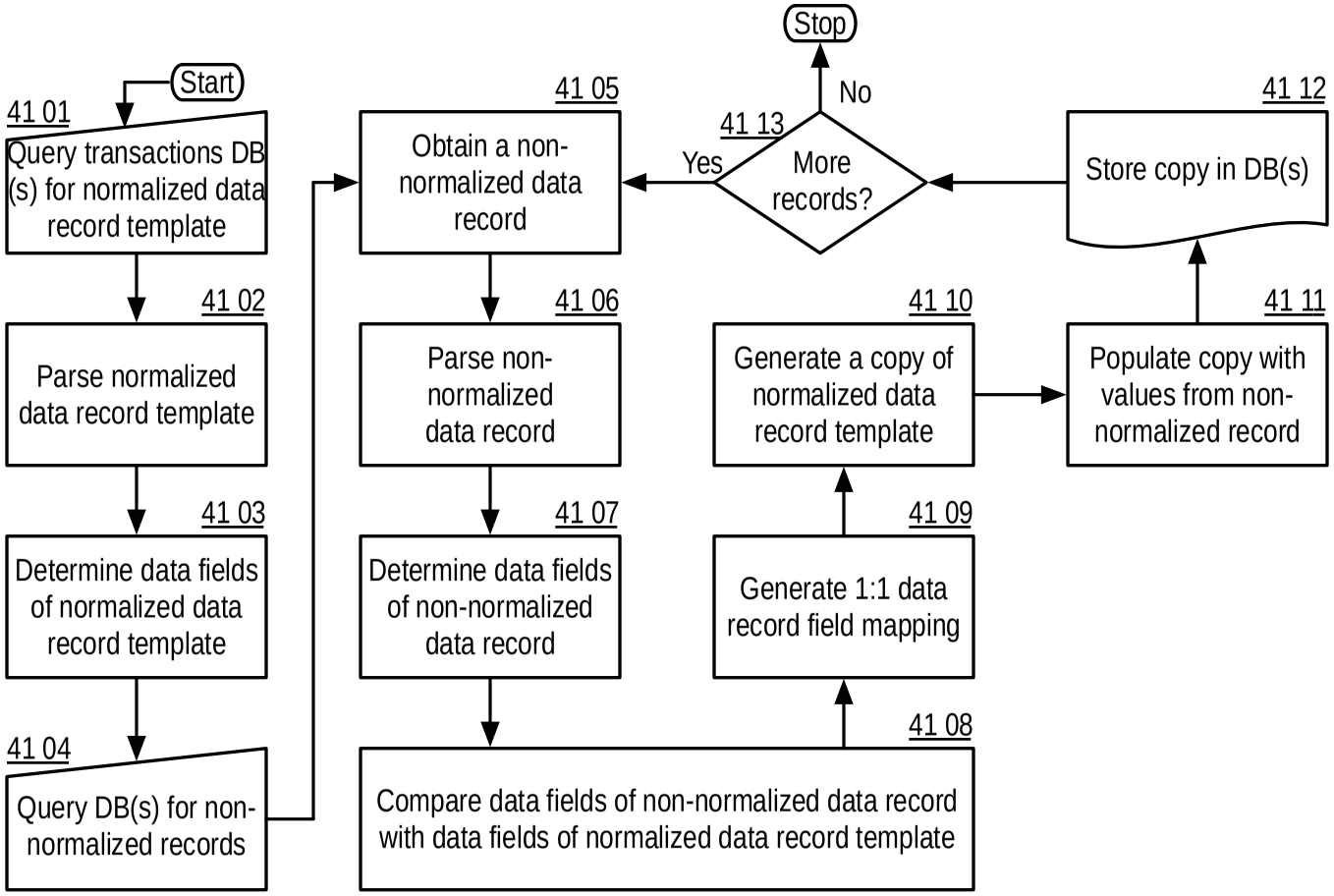
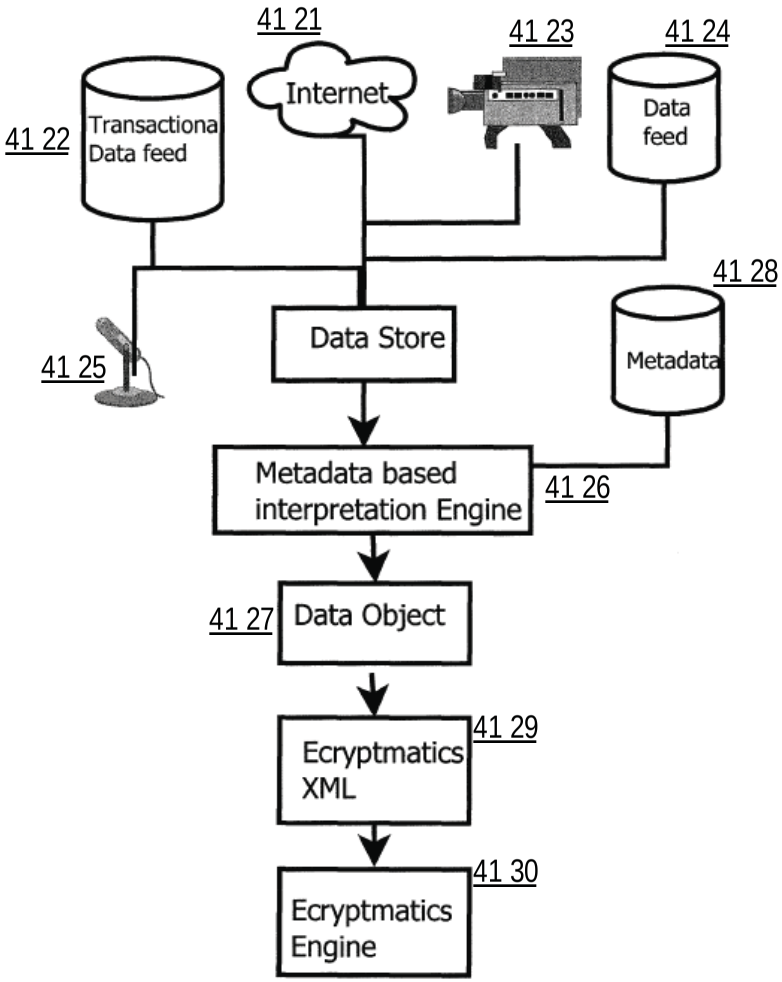


FIGURE 41A

Example: Aggregated Data Record Normalization ("ADRN") component 4100



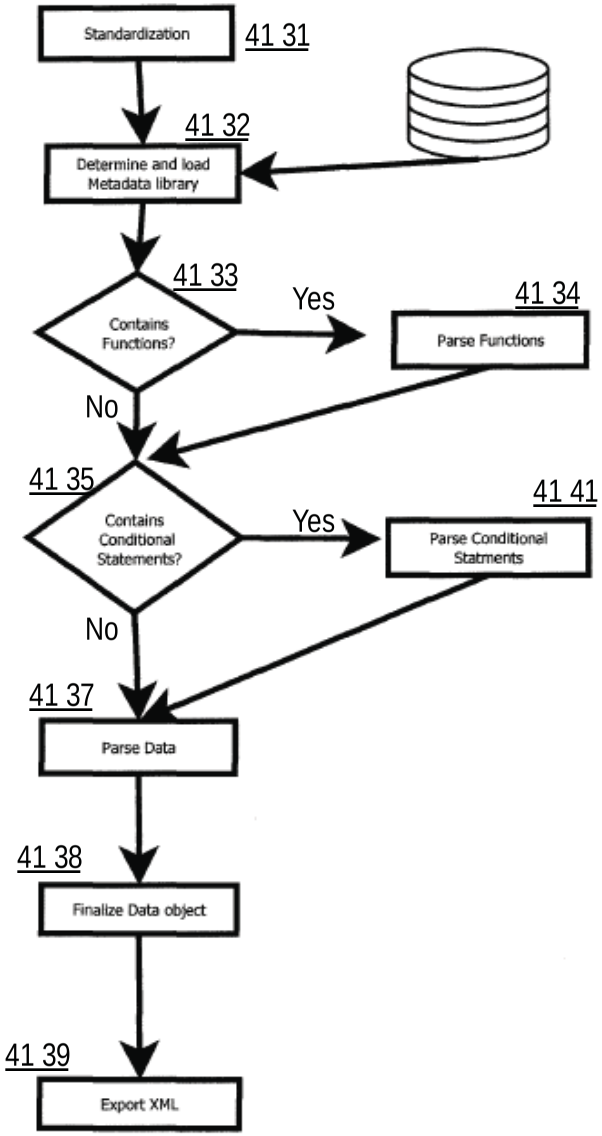


FIGURE 41B

Example: Aggregated Data Record Normalization ("ADRN") component 4100

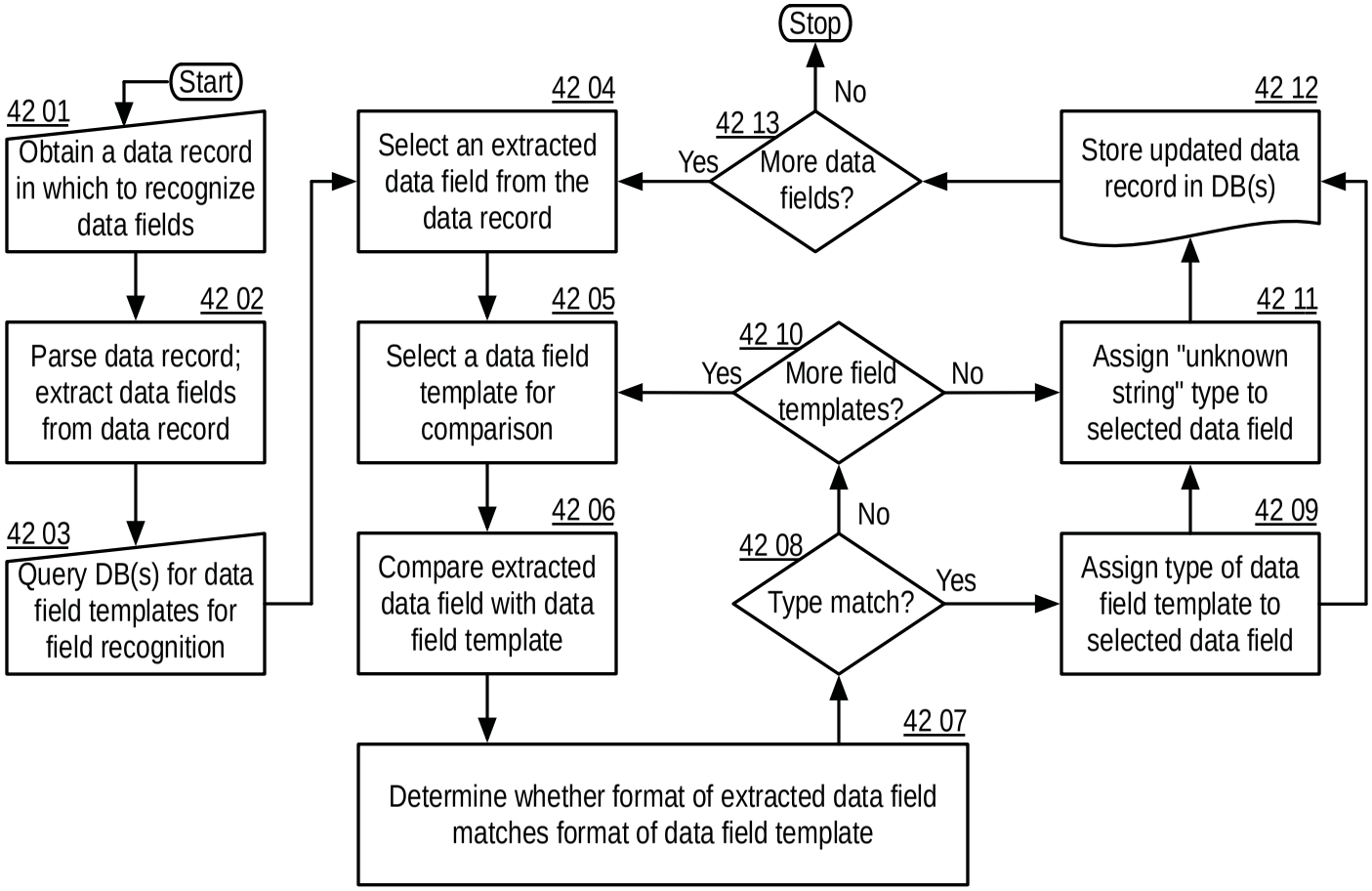


FIGURE 42

Example: Data Field Recognition ("DFR") component 4200

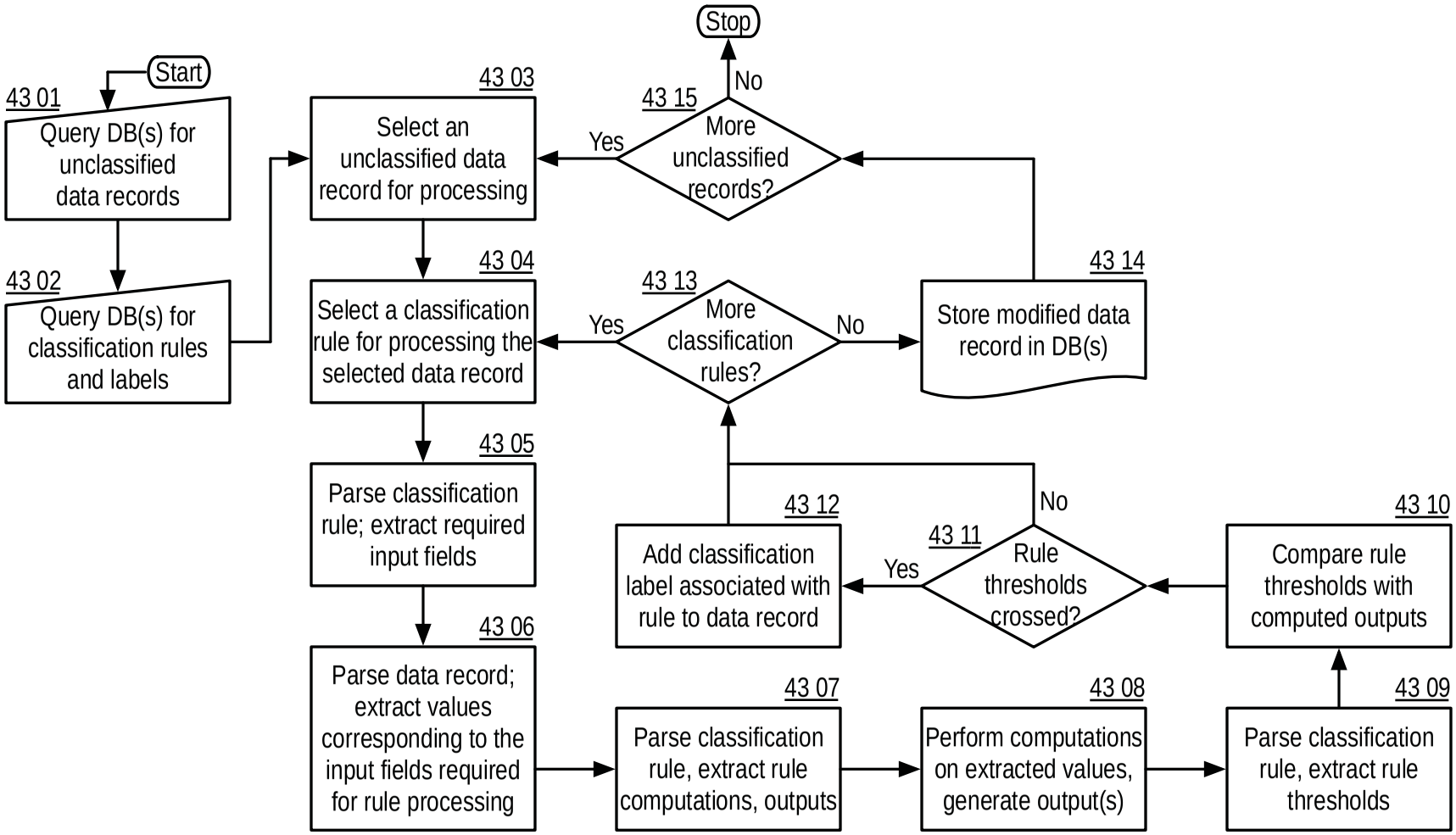


FIGURE 43

Example: Entity Type Classification ("ETC") component 4300

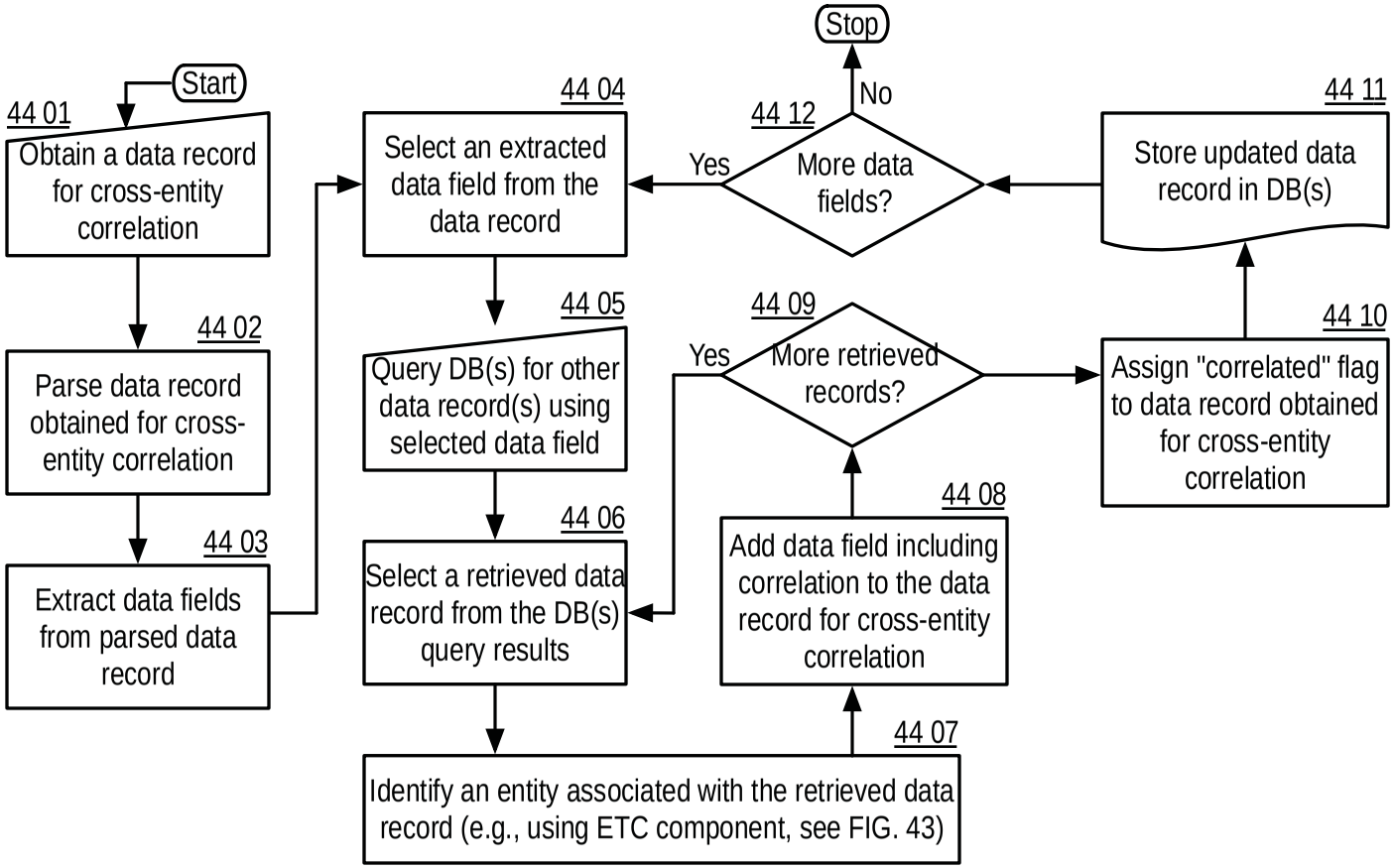


FIGURE 44

Example: Cross-Entity Correlation ("CEC") component 4400

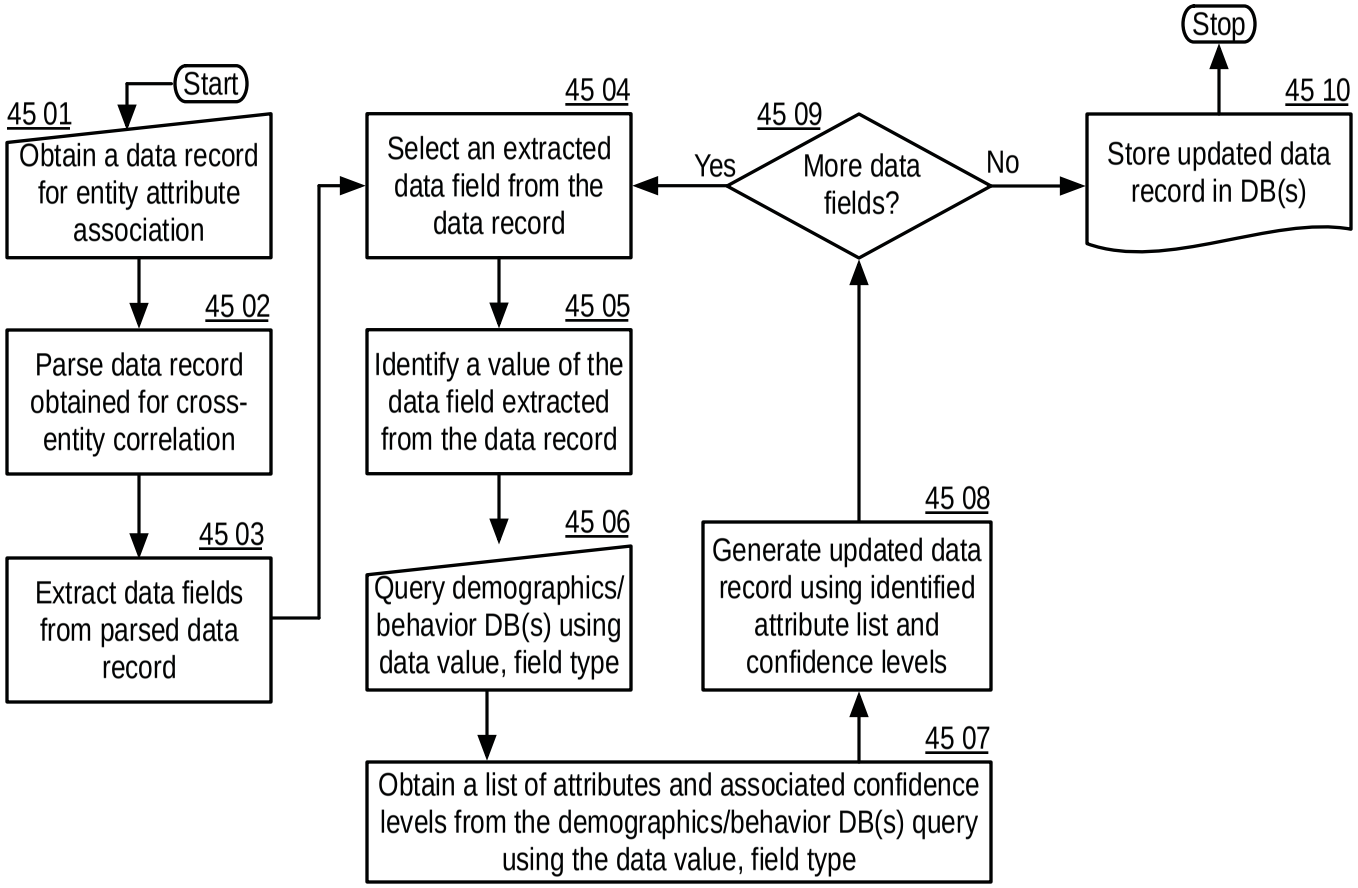


FIGURE 45

Example: Entity Attribute Association ("EAA") component 4500

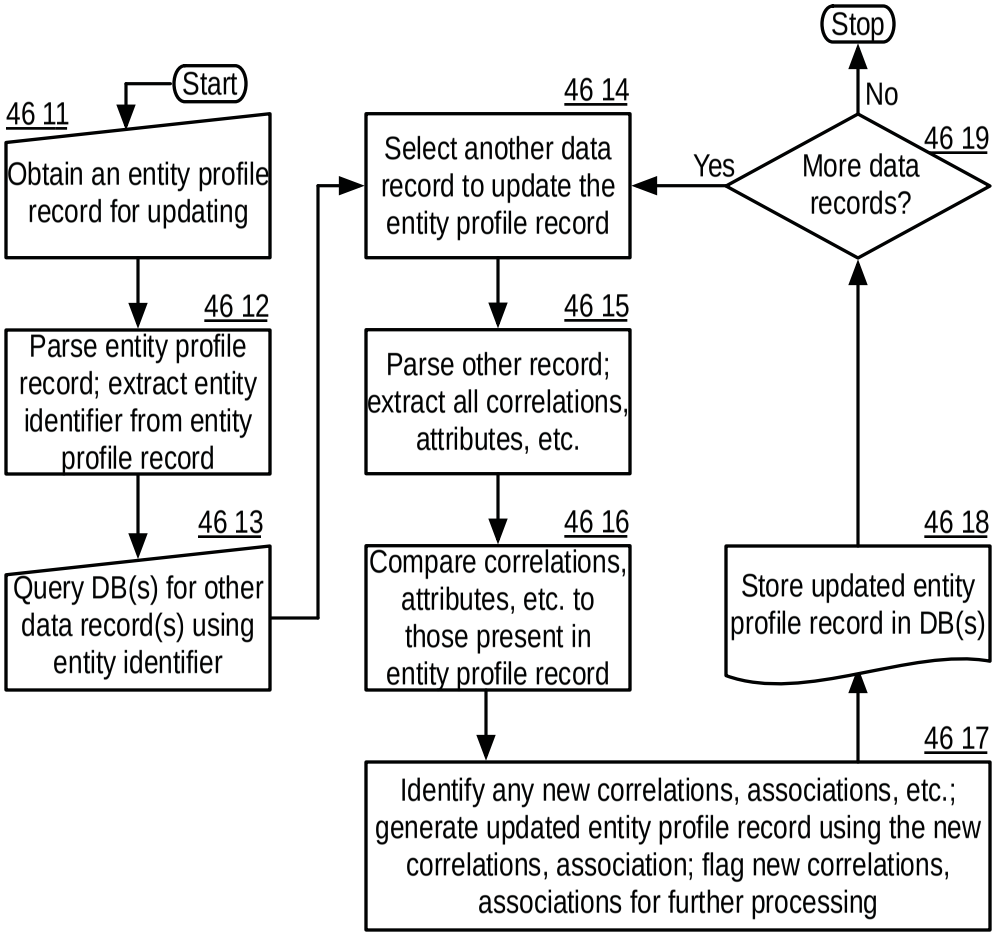


FIGURE 46

Example: Entity Profile-Graph Updating ("EPGU") component 4600

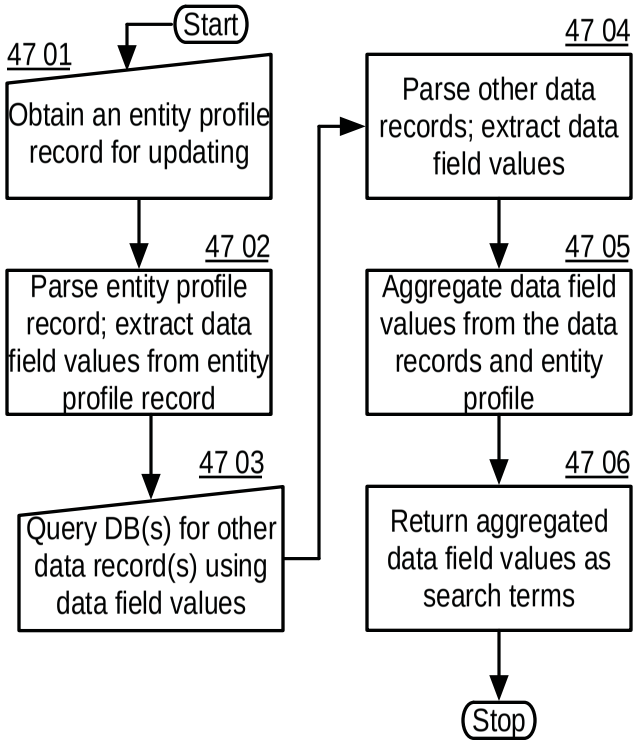


FIGURE 47

Example: Search Term Generation ("STG") component 4700

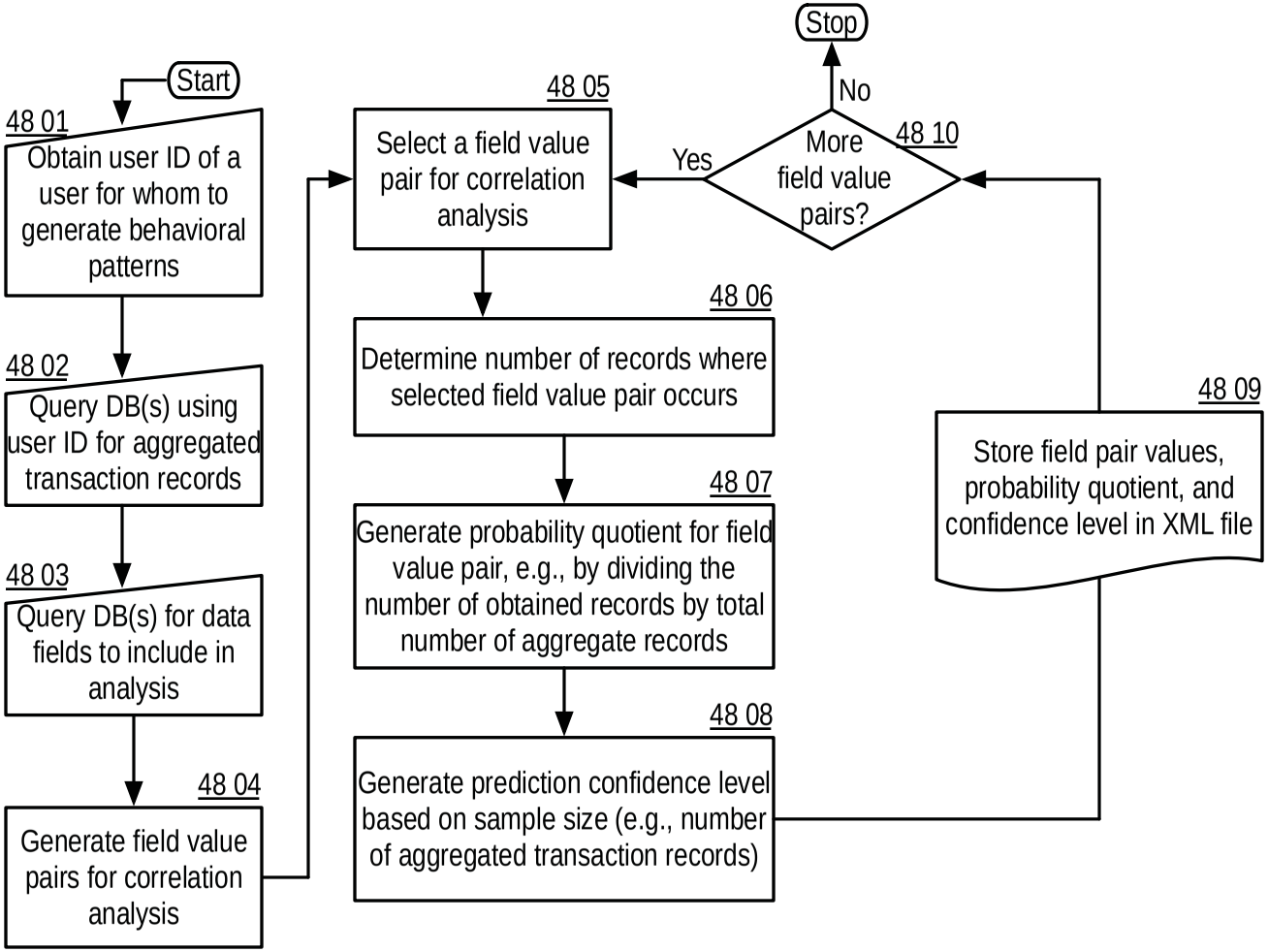


FIGURE 48

Example: User Behavior Analysis ("UBA") component 4800

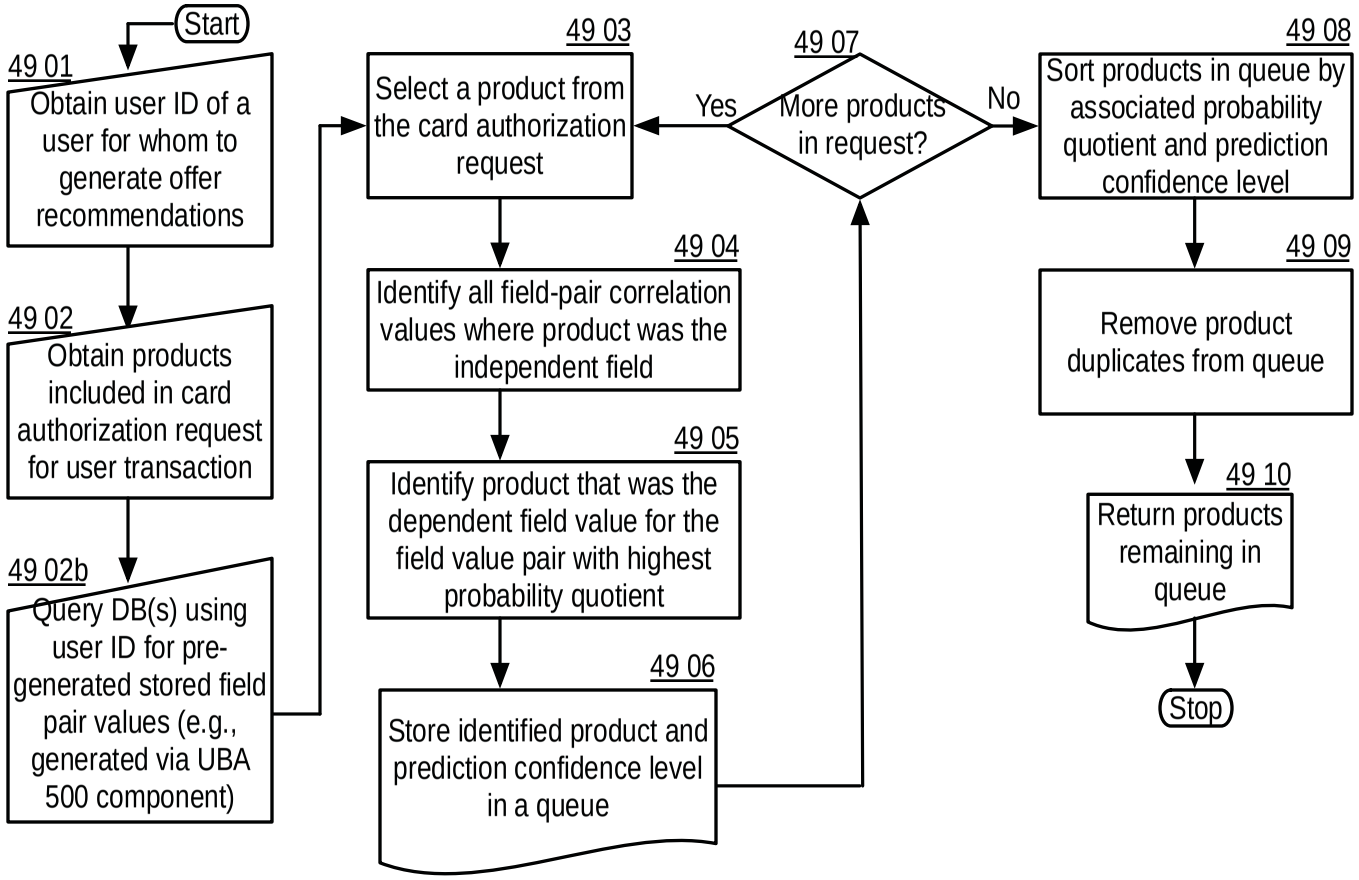
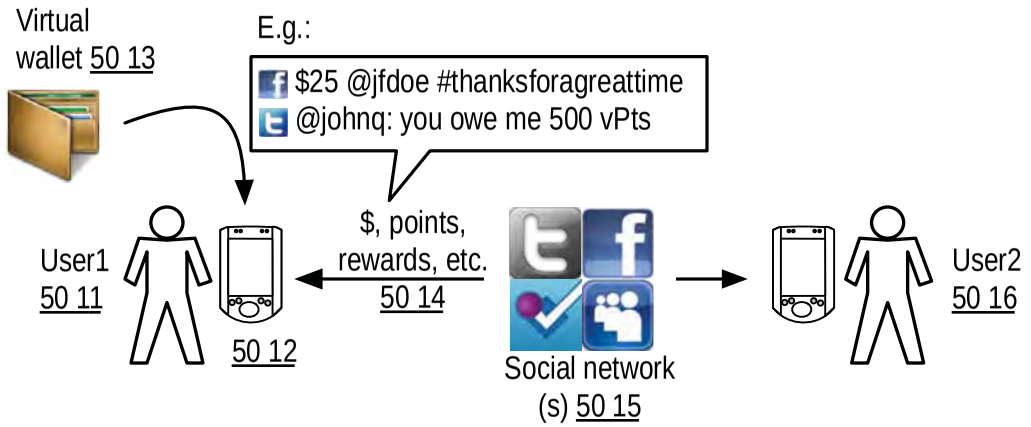
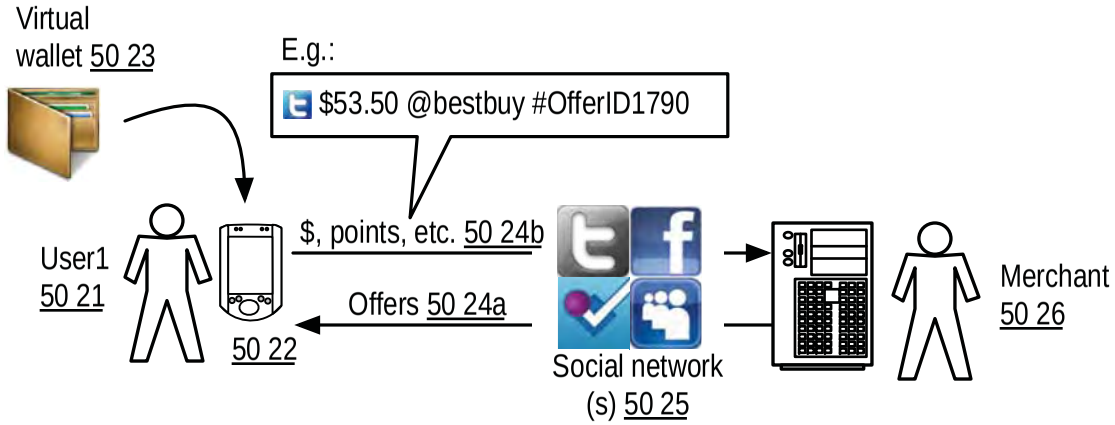


FIGURE 49

Example: User Behavior-Based Offer Recommendation ("UBOR") component 4900



Person-2-Person transfers via social networks 50 10



Merchant-consumer bridging via social networks 50 20

FIGURE 50

Example: SocialPay

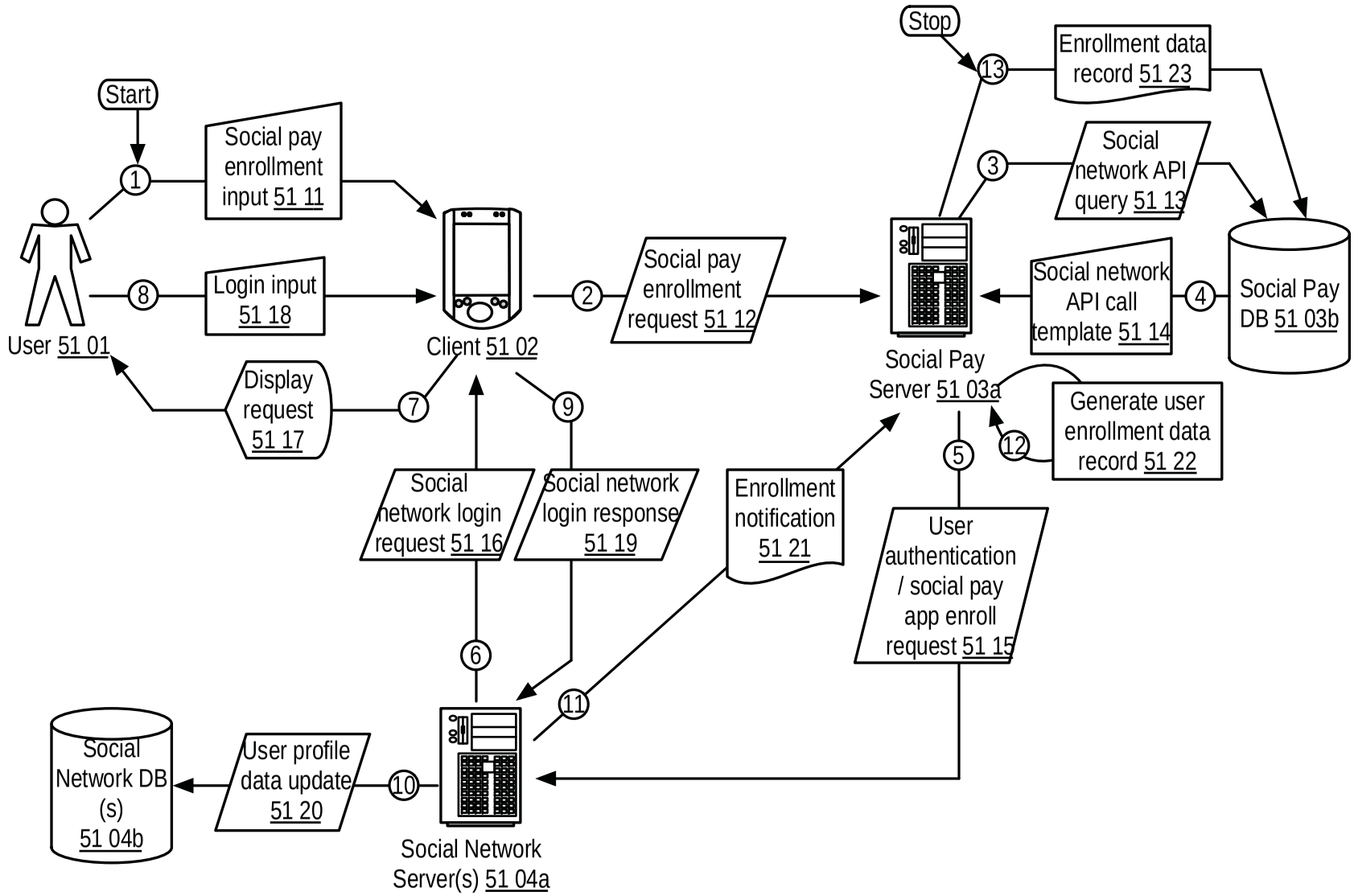


FIGURE 51

Example Data Flow: Social Pay Enrollment

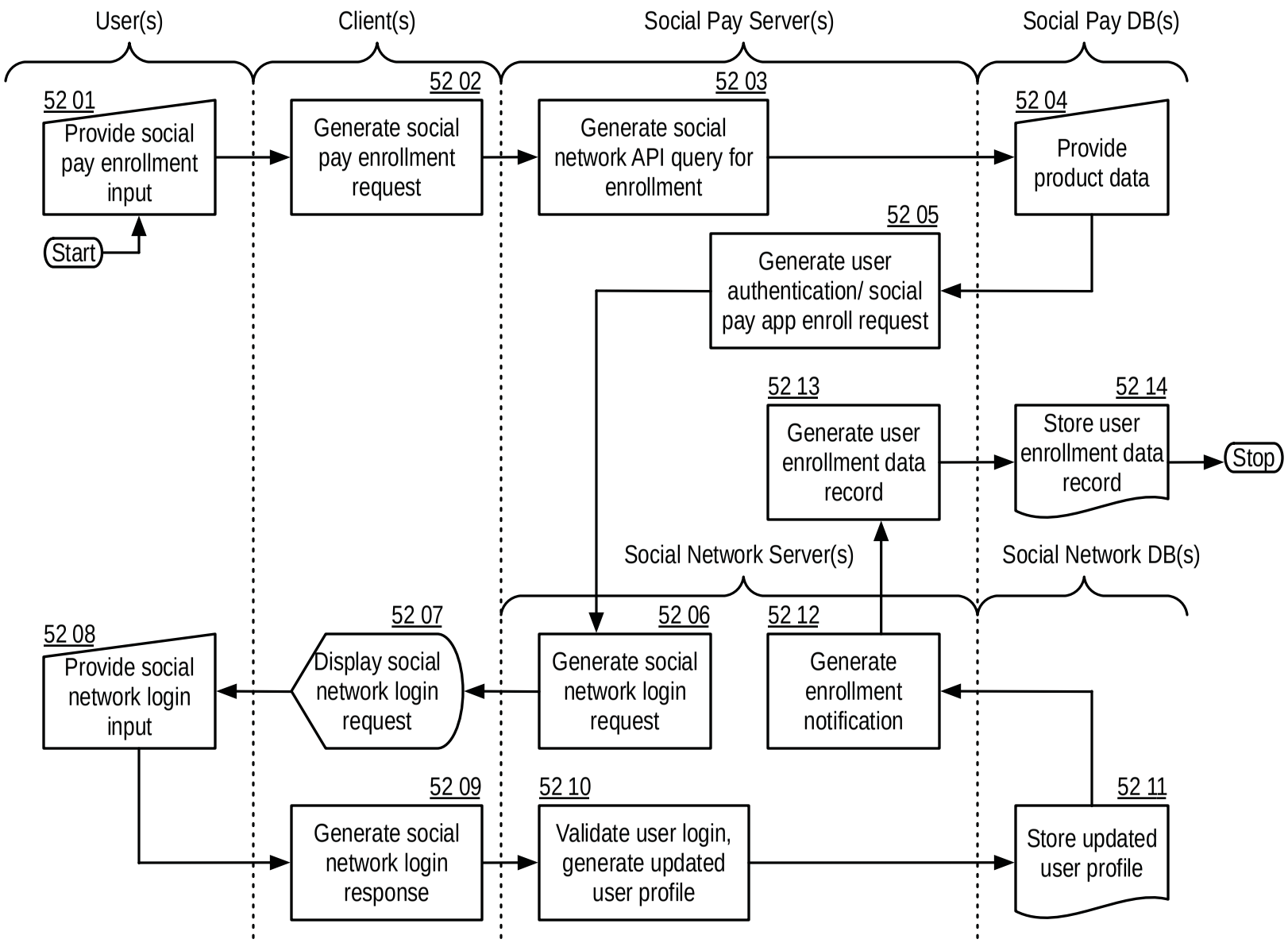


FIGURE 52

Example Logic Flow: Social Pay Enrollment ("SPE") component 5200

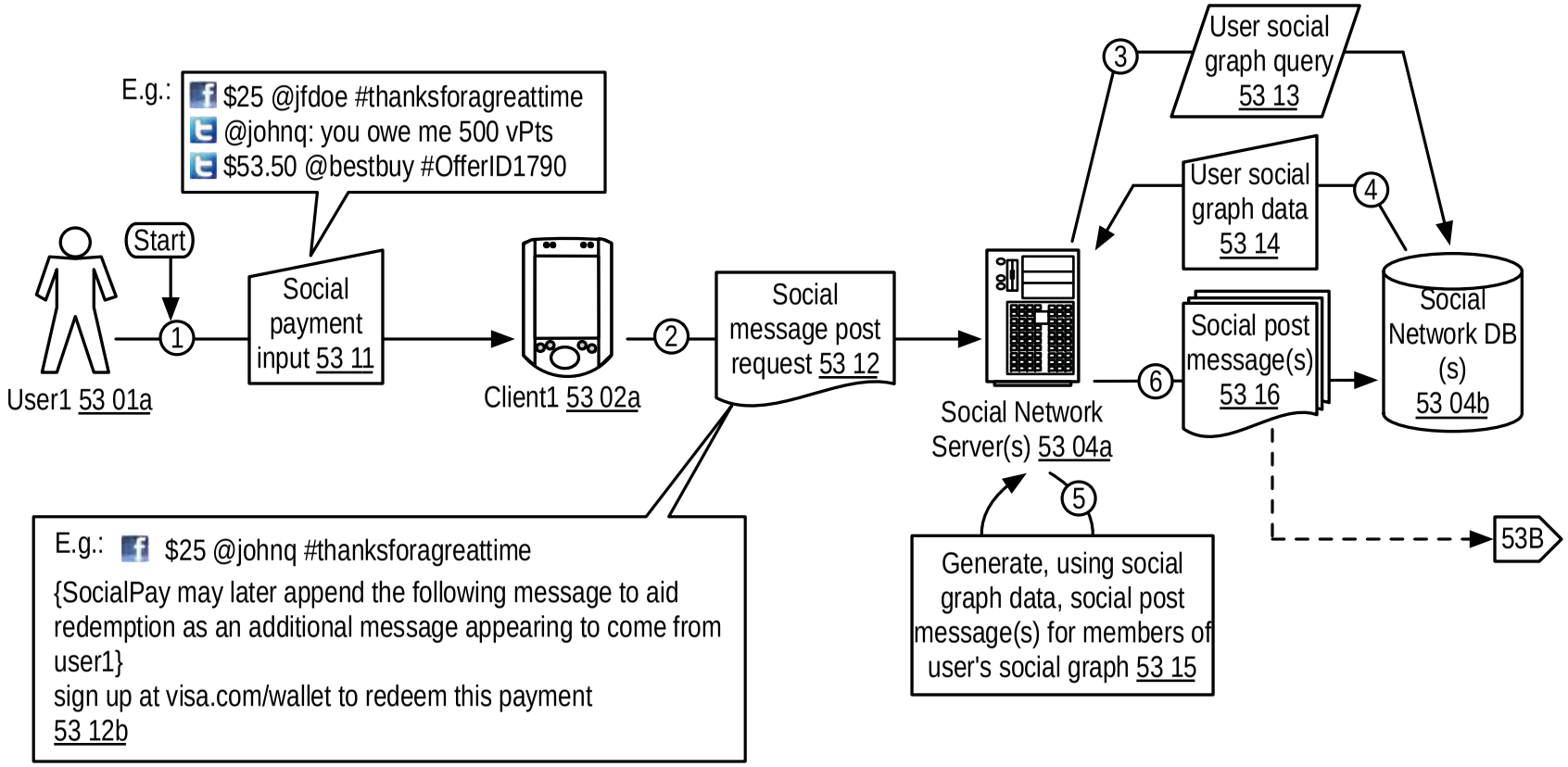


FIGURE 53A

Example Data Flow: Social Payment Triggering

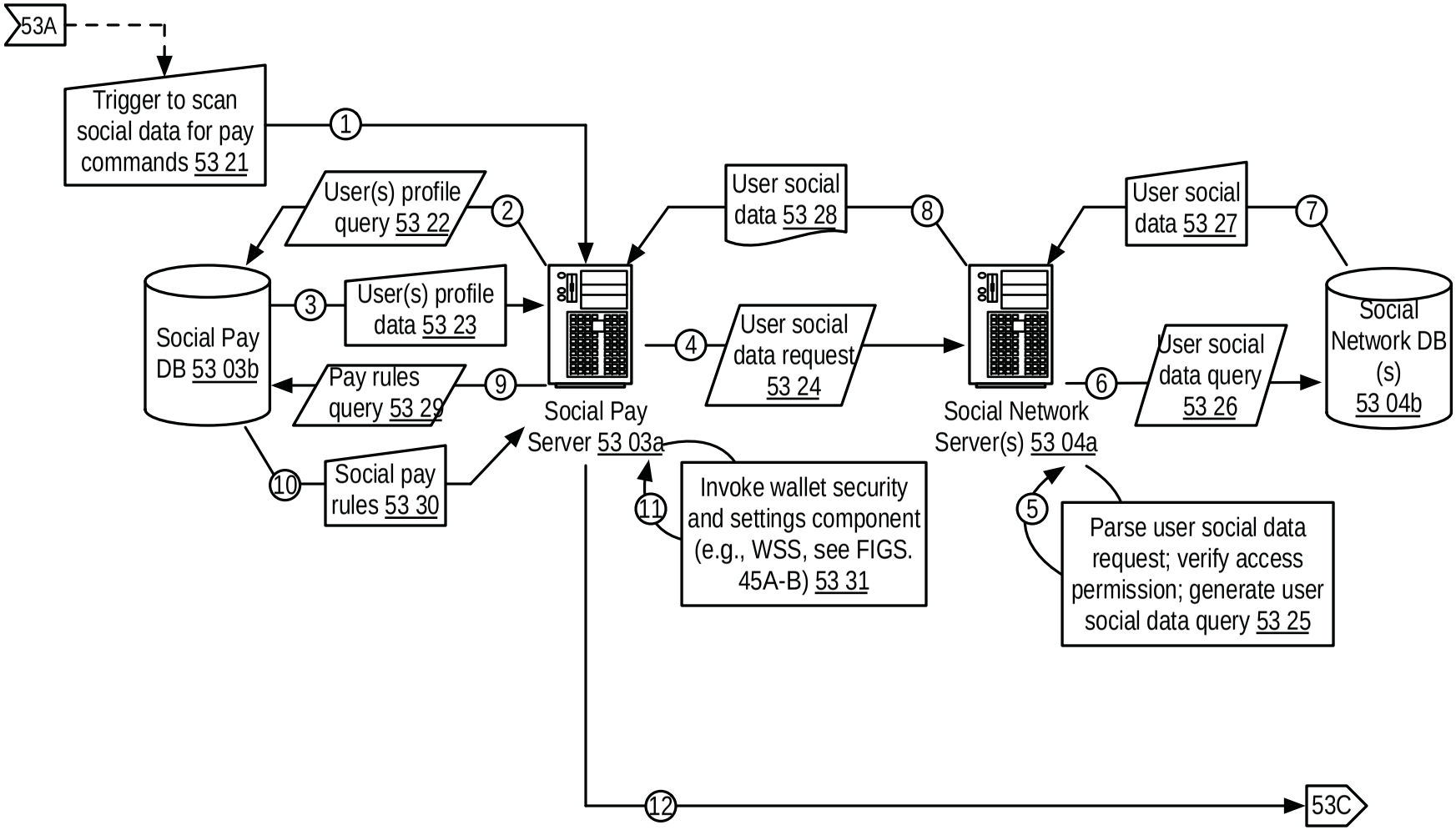


FIGURE 53B

Example Data Flow: Social Payment Triggering

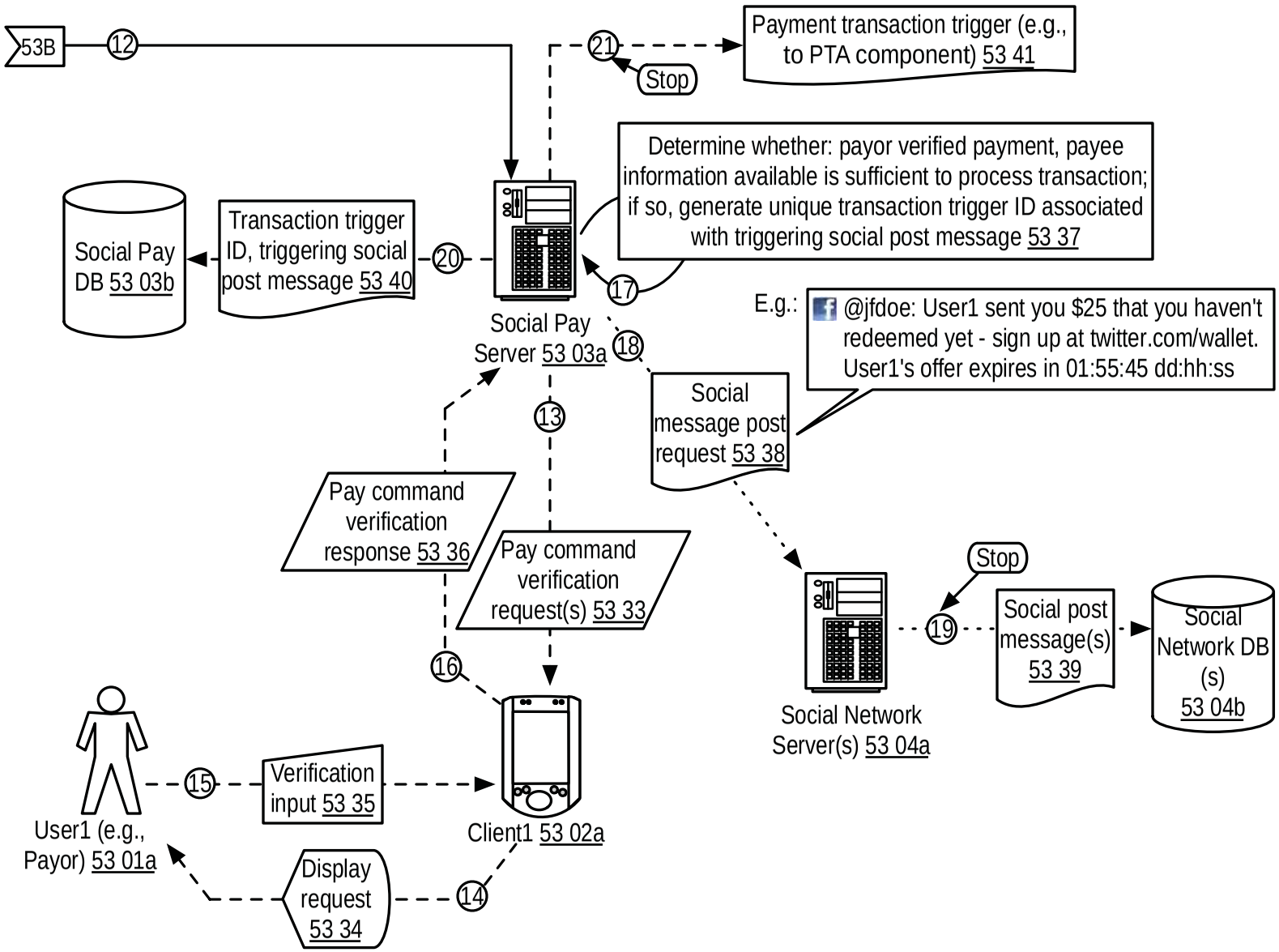


FIGURE 53C

Example Data Flow: Social Payment Triggering

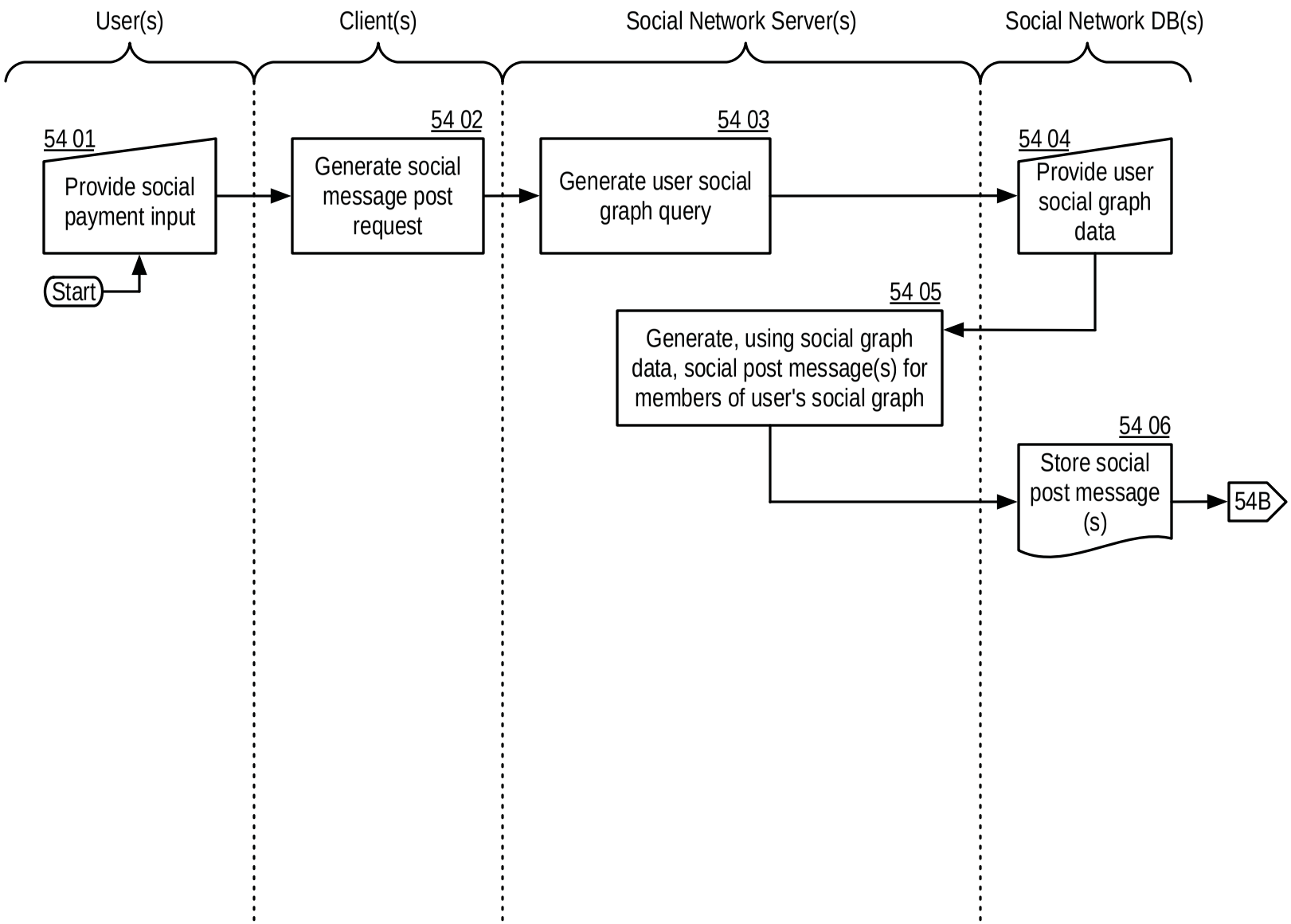


FIGURE 54A

Example Logic Flow: Social Payment Triggering ("SPT") component 5400

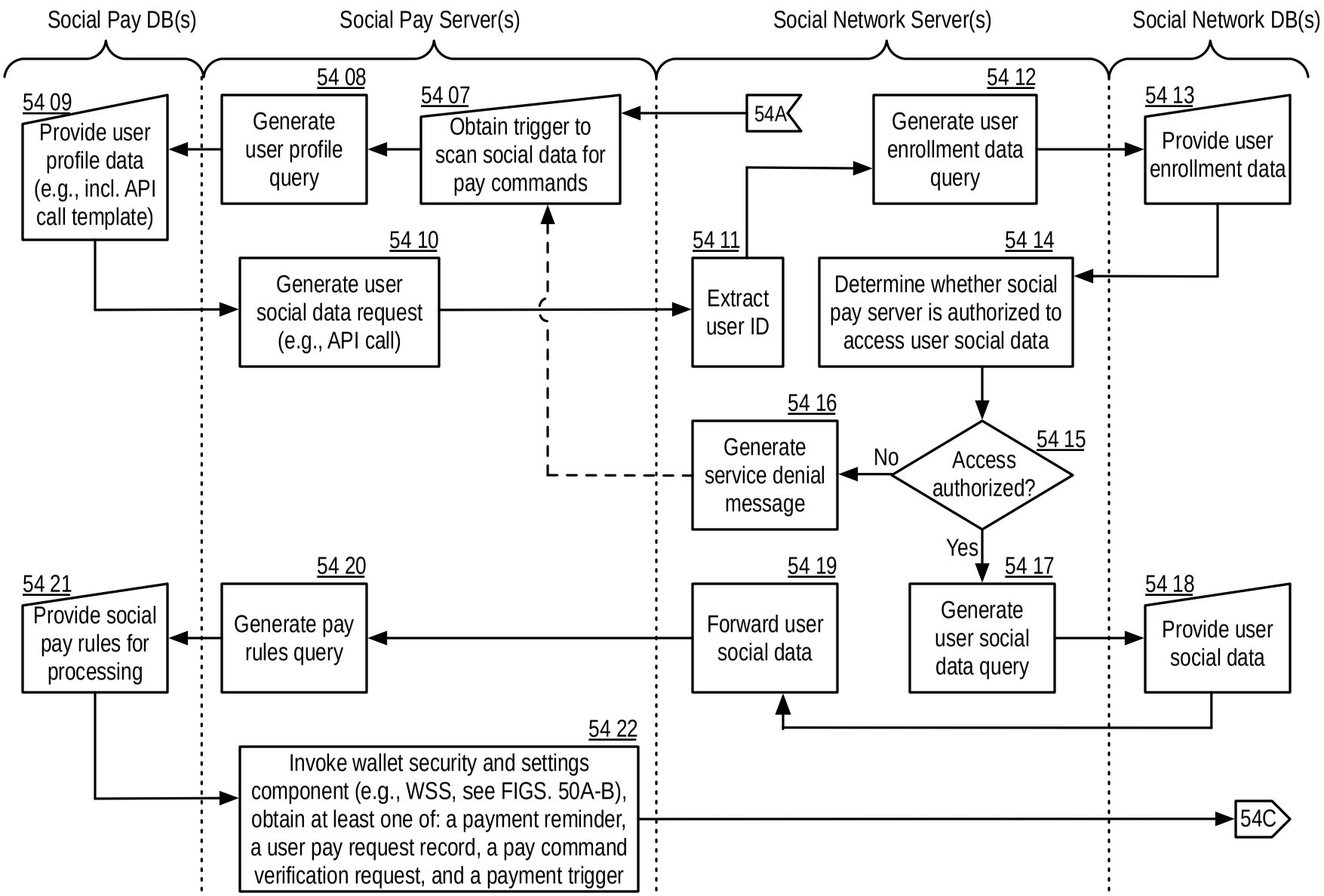


FIGURE 54B

Example Logic Flow: Social Payment Triggering ("SPT") component 5400

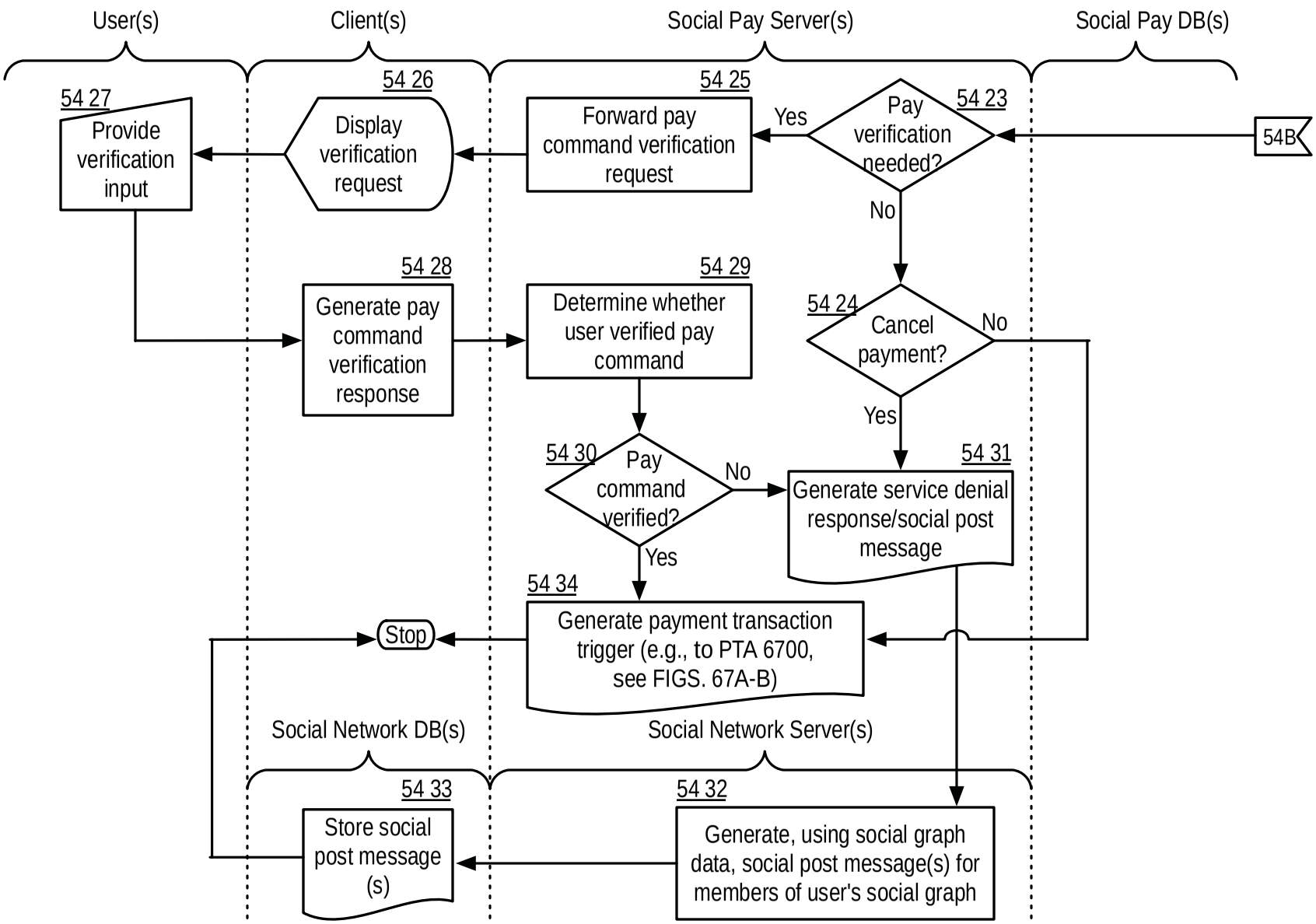


FIGURE 54C

Example Logic Flow: Social Payment Triggering ("SPT") component 5400

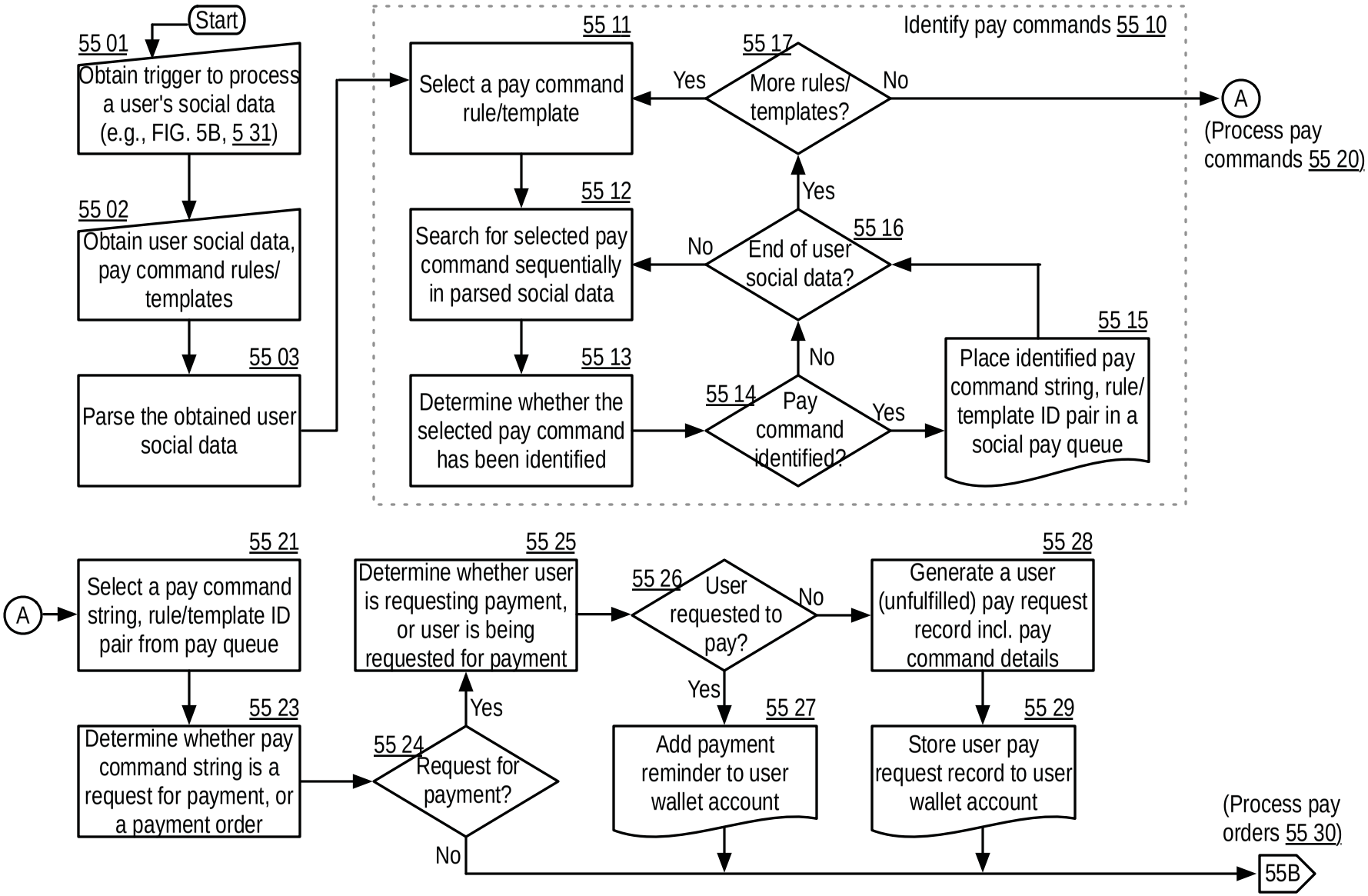


FIGURE 55A

Example Logic Flow: Wallet Security and Settings ("WSS") component 5500

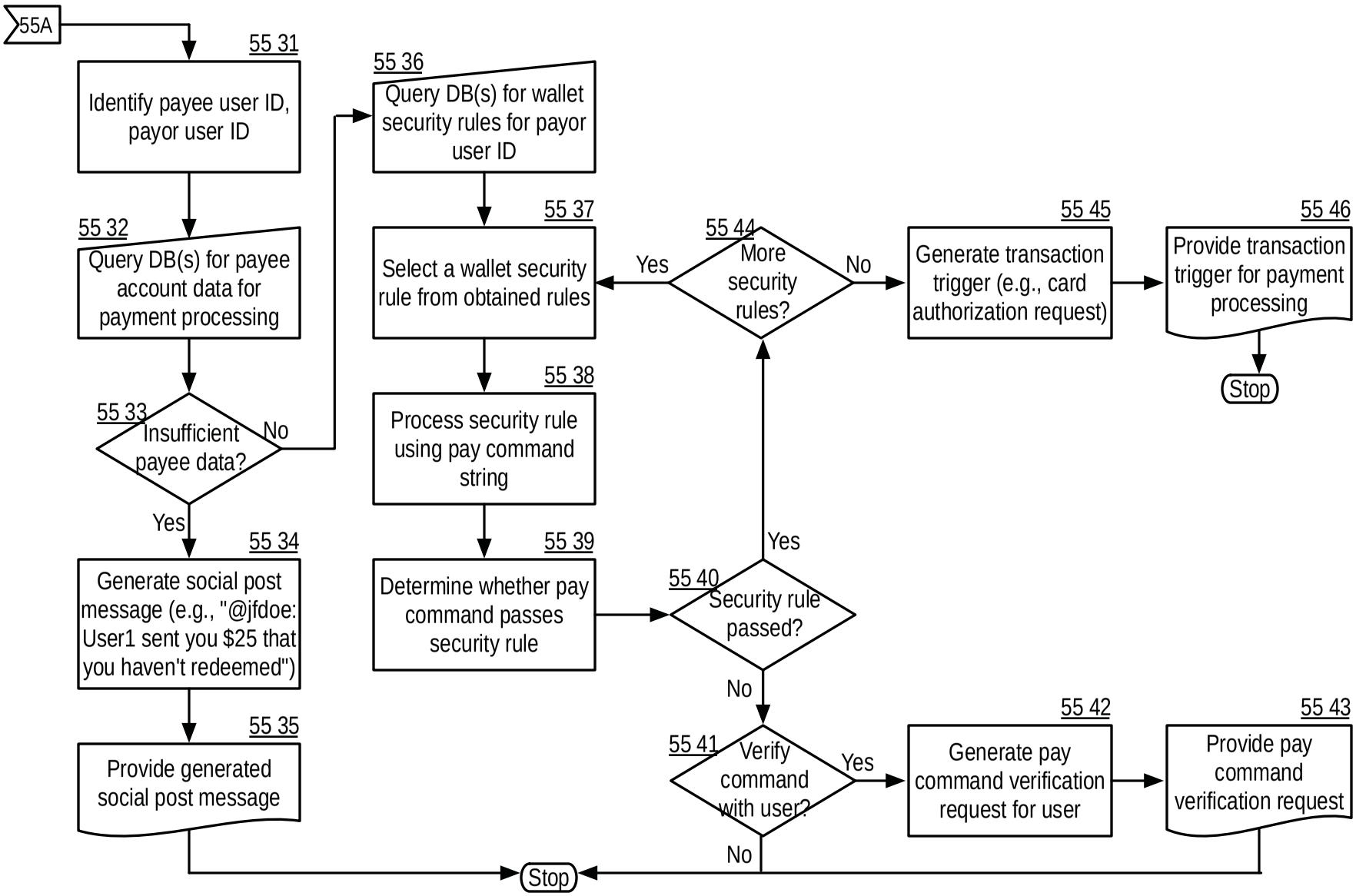


FIGURE 55B

Example Logic Flow: Wallet Security and Settings ("WSS") component 5500

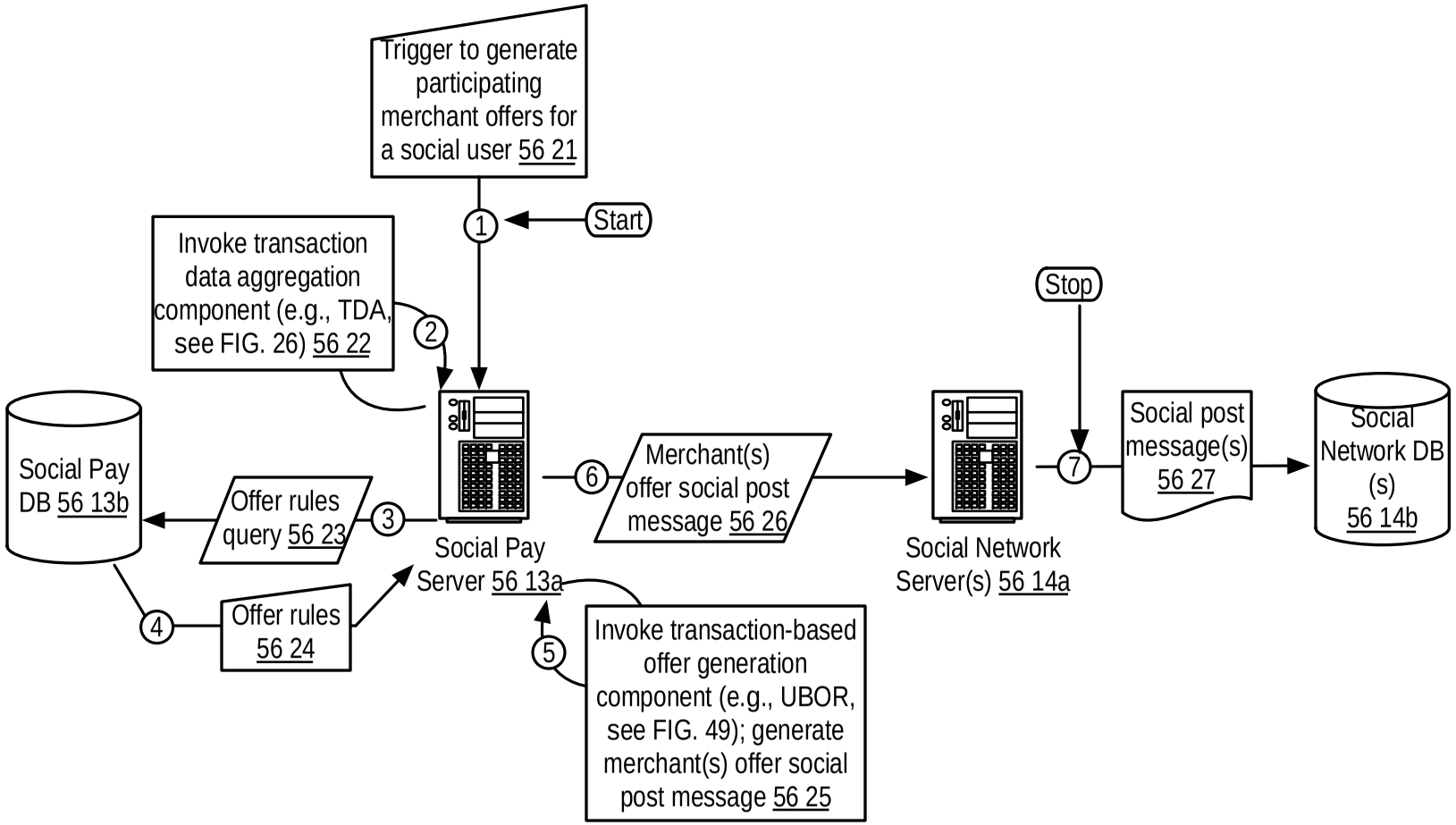


FIGURE 56

Example Data Flow: Social Merchant Consumer Bridging

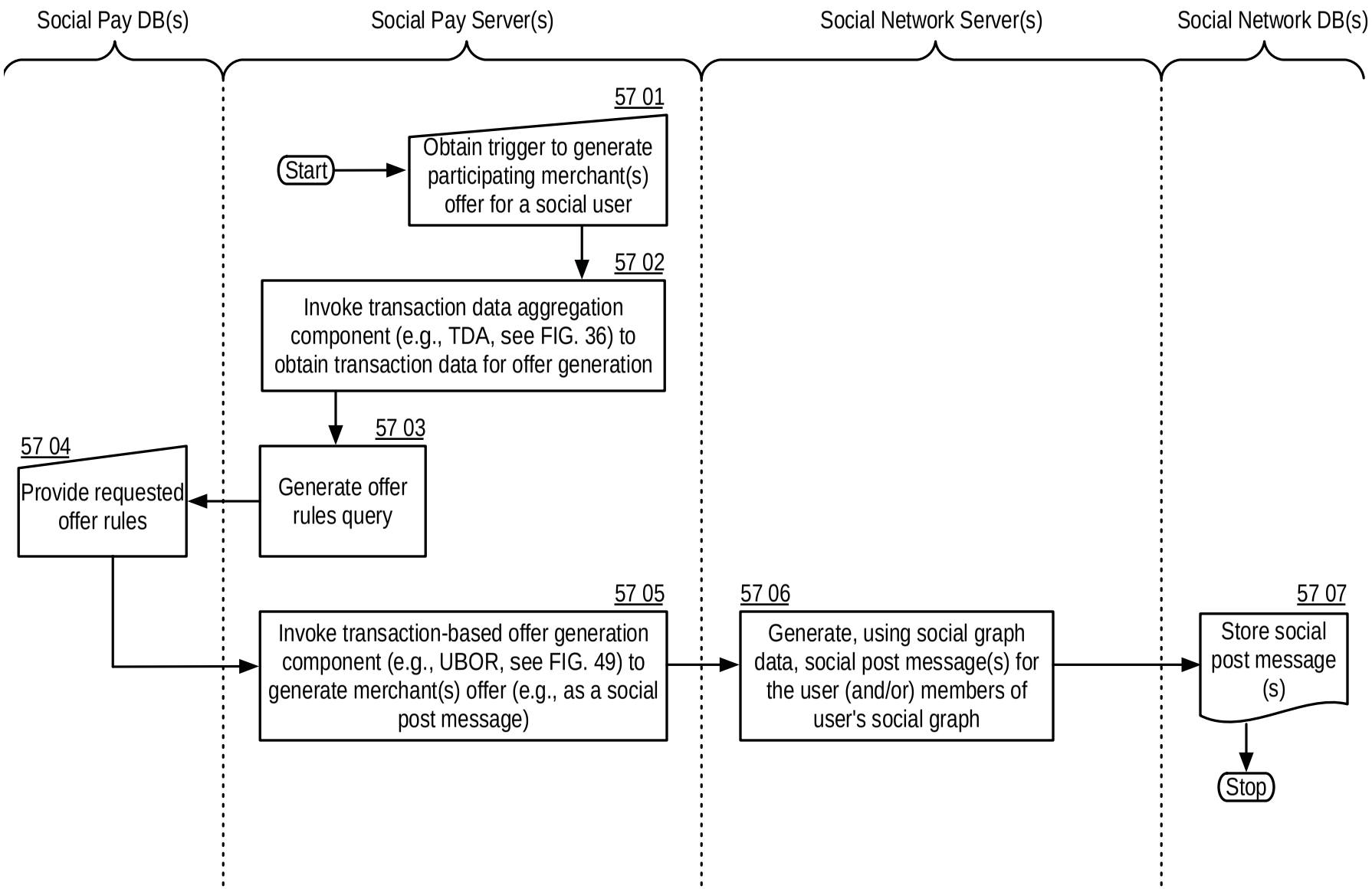


FIGURE 57

Example Logic Flow: Social Merchant Consumer Bridging ("SMCB") component 5700

FIGURE 58

Example: Virtual Wallet Mobile App - Feature Overview

FIGURE 59A

Example: Virtual Wallet Mobile App - Shopping Mode

FIGURE 59B

Example: Virtual Wallet Mobile App - Shopping Mode

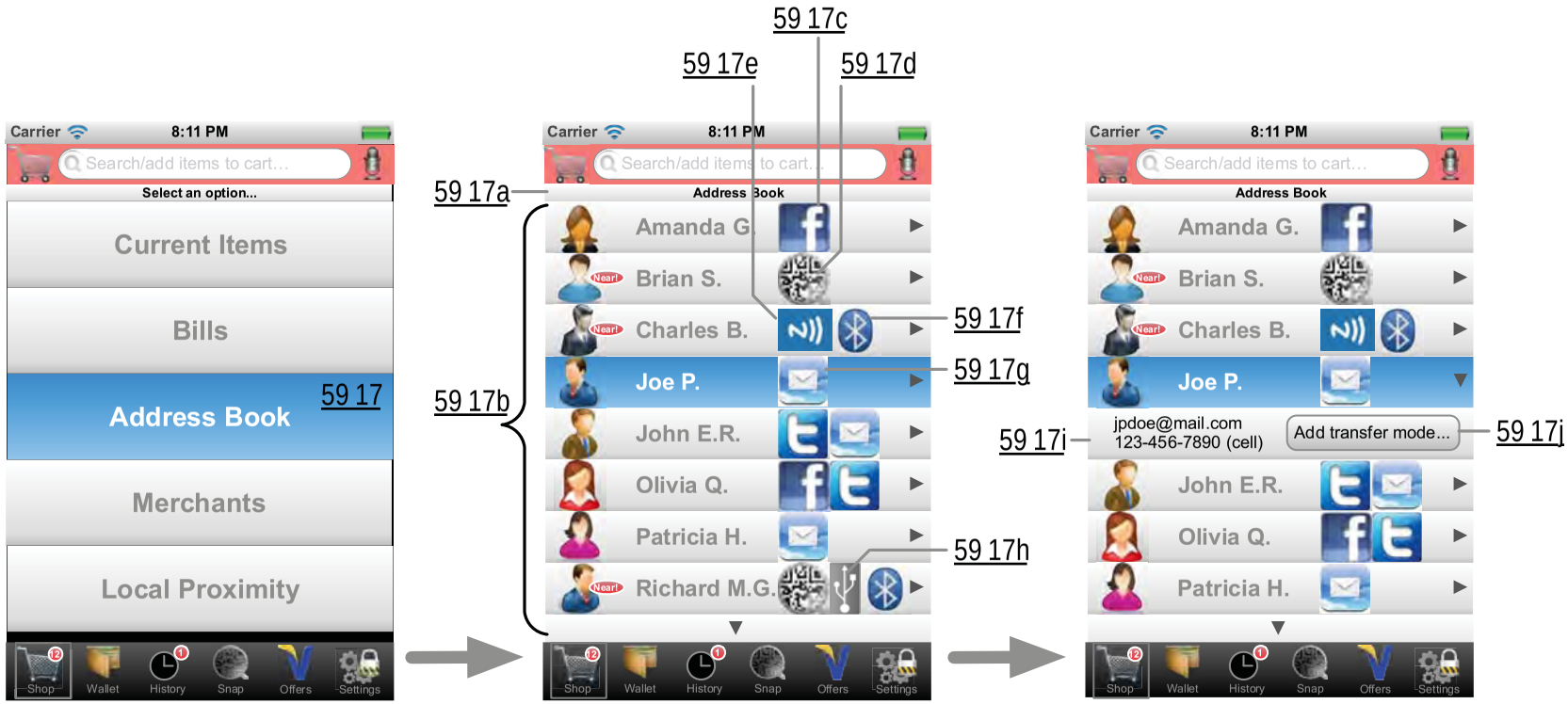


FIGURE 59C

Example: Virtual Wallet Mobile App - Shopping Mode

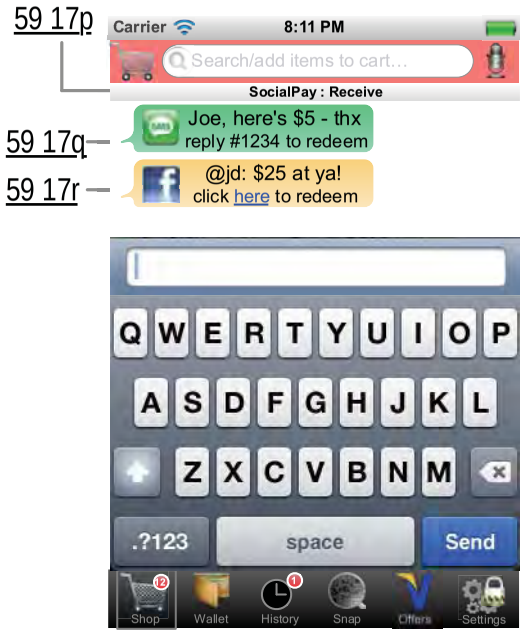


FIGURE 59D

Example: Virtual Wallet Mobile App - SocialPay Mode

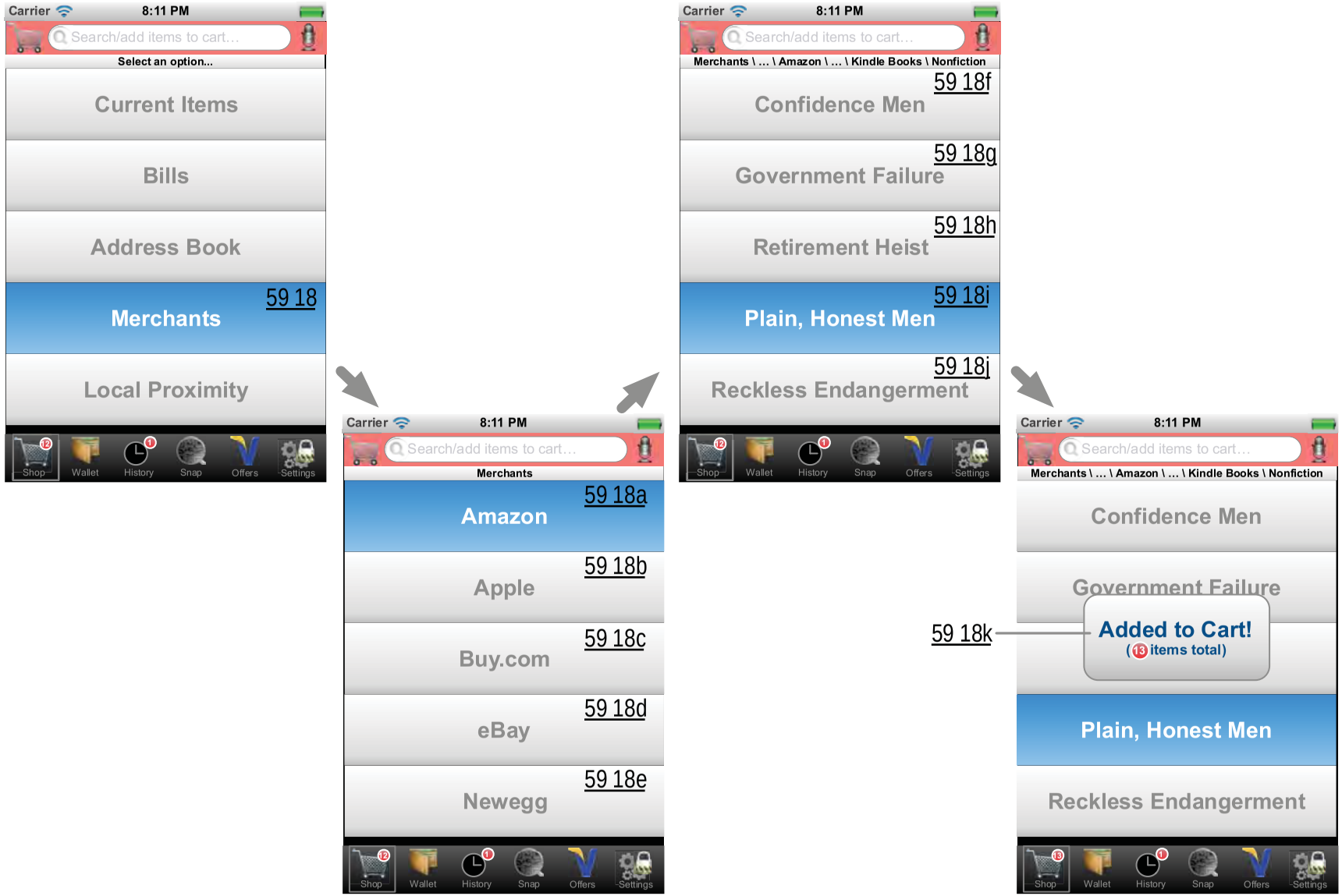


FIGURE 59E

Example: Virtual Wallet Mobile App - Shopping Mode

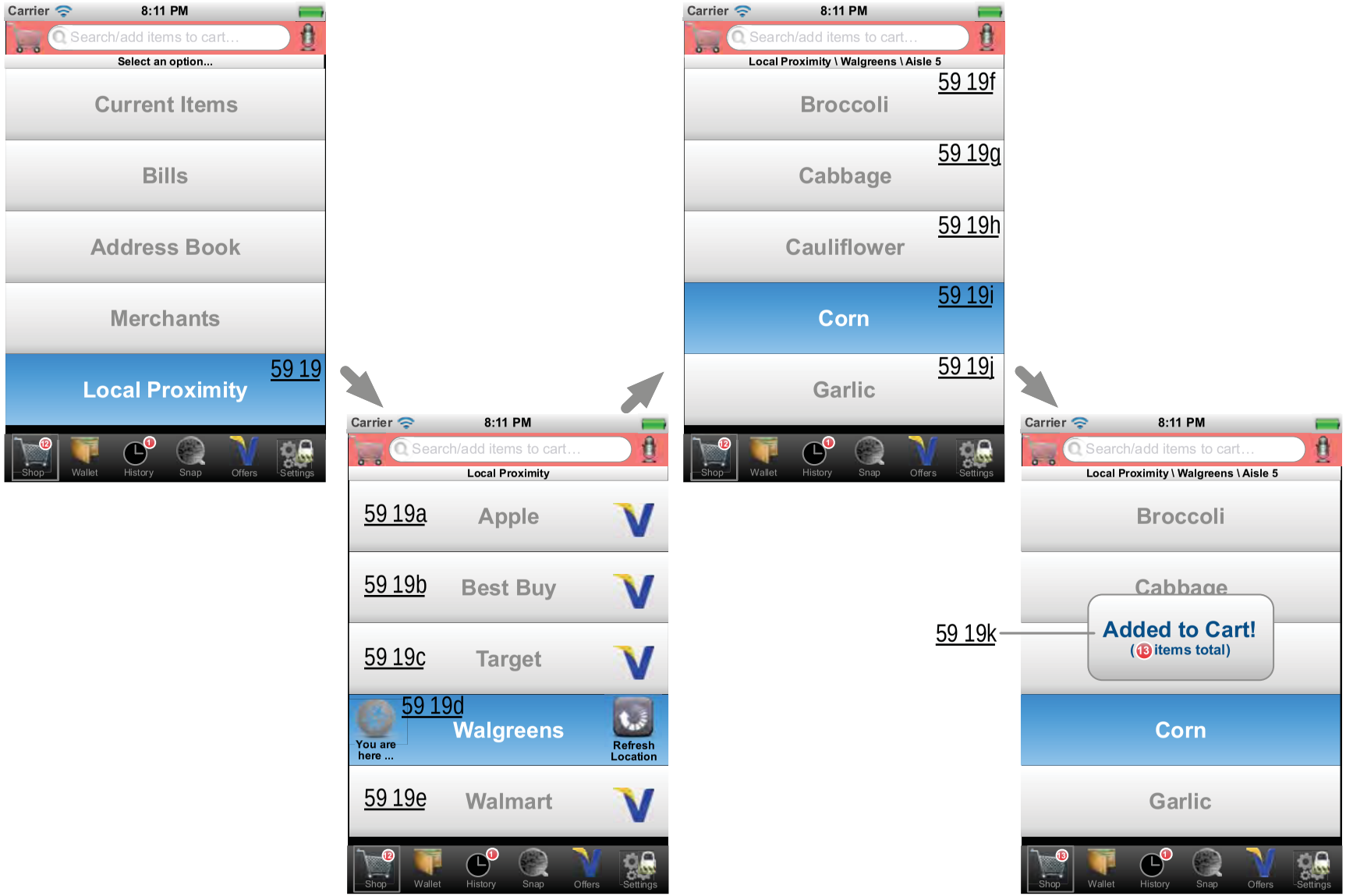


FIGURE 59F

Example: Virtual Wallet Mobile App - Shopping Mode

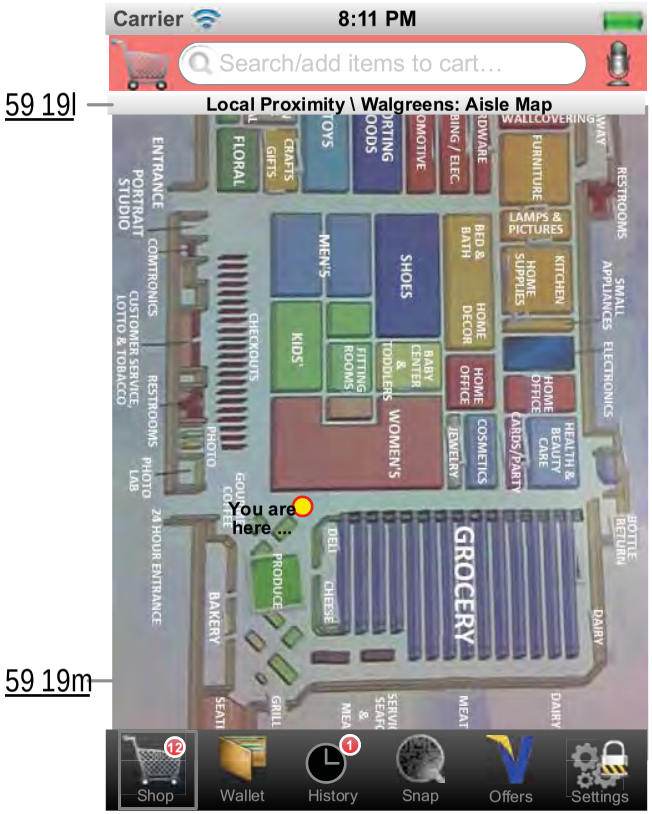


FIGURE 59G

Example: Virtual Wallet Mobile App - Shopping Mode

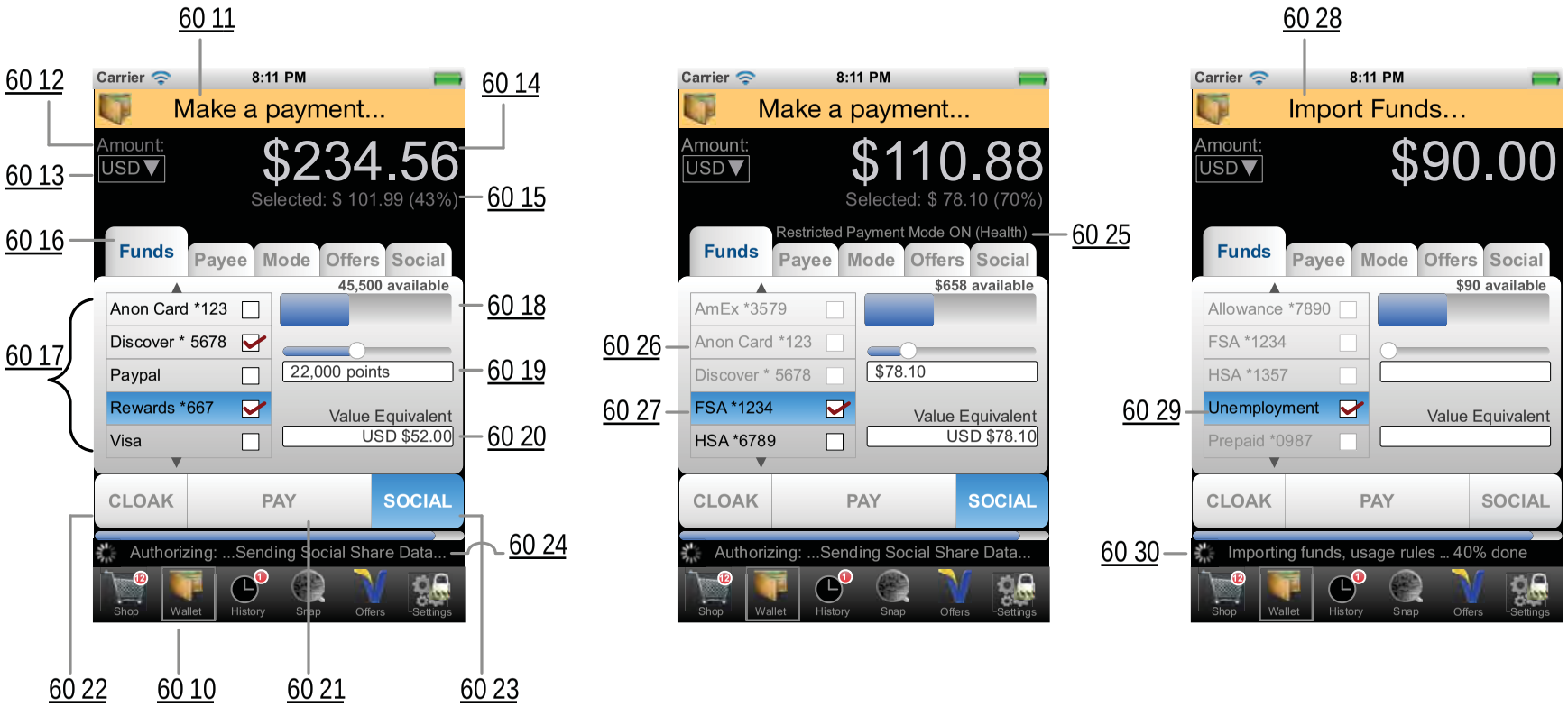
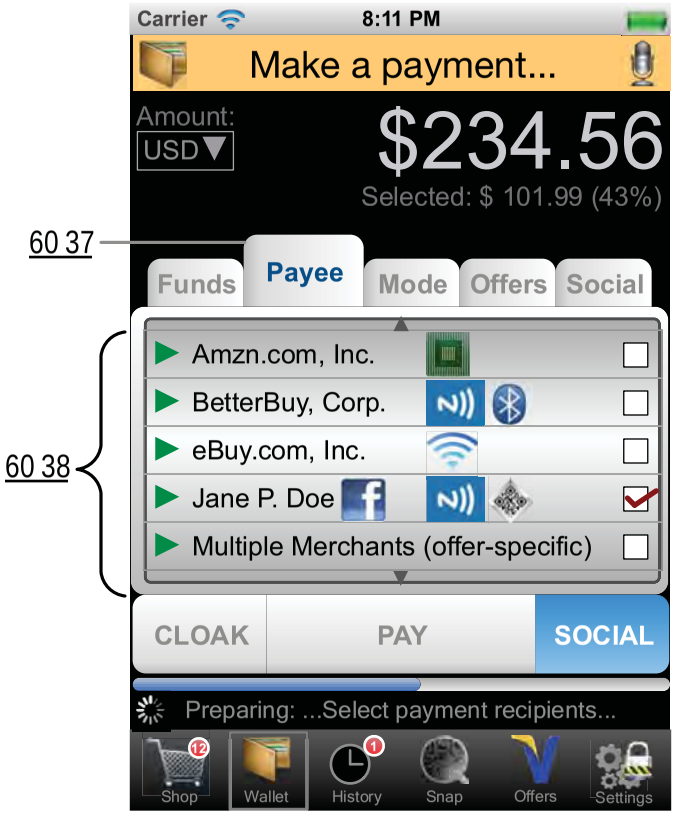


FIGURE 60A

Example: Virtual Wallet Mobile App - Payment Mode

FIGURE 60B

Example: Virtual Wallet Mobile App - Dynamic Payment Optimization



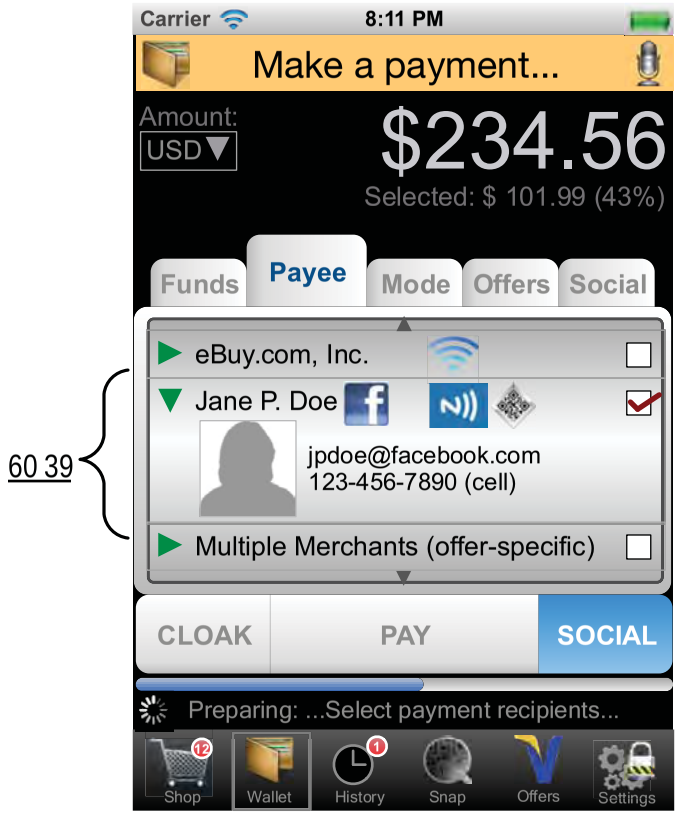


FIGURE 60C

Example: Virtual Wallet Mobile App

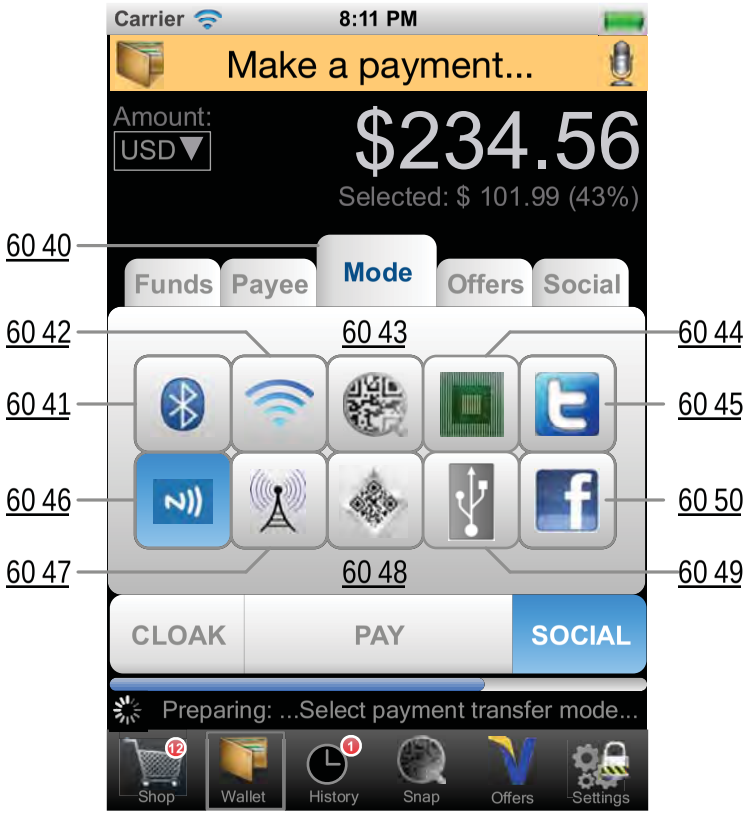
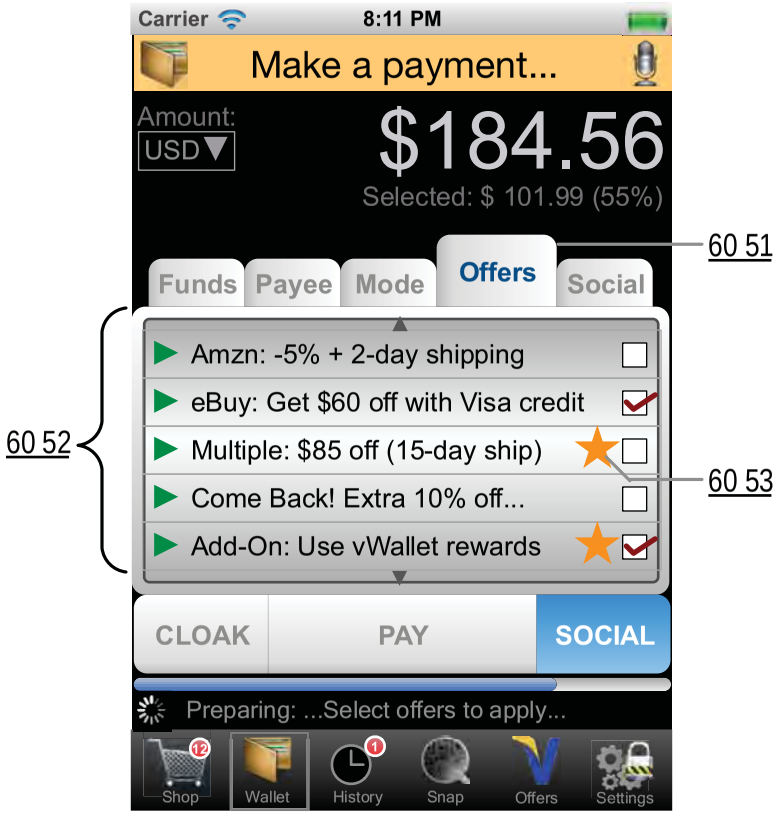


FIGURE 60D

Example: Virtual Wallet Mobile App



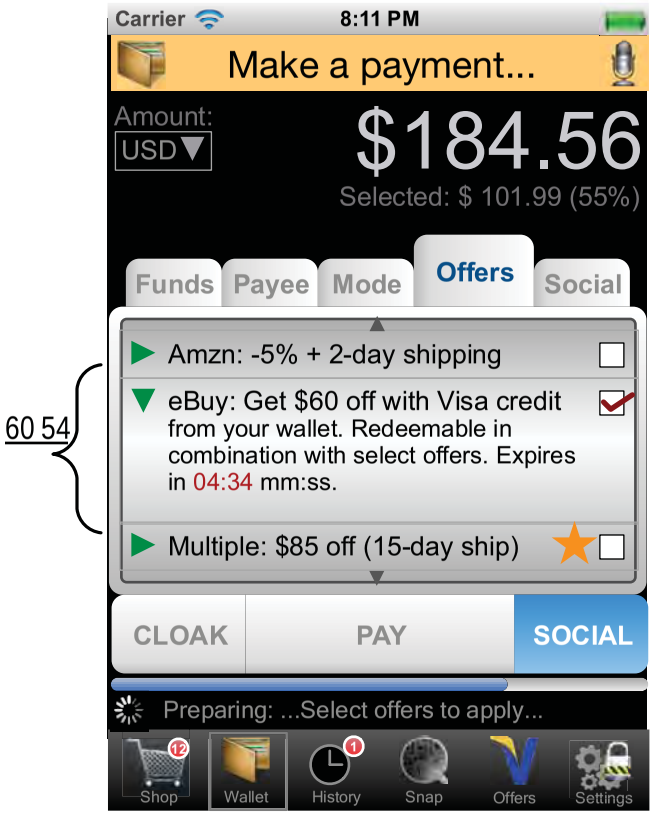


FIGURE 60E

Example: Virtual Wallet Mobile App

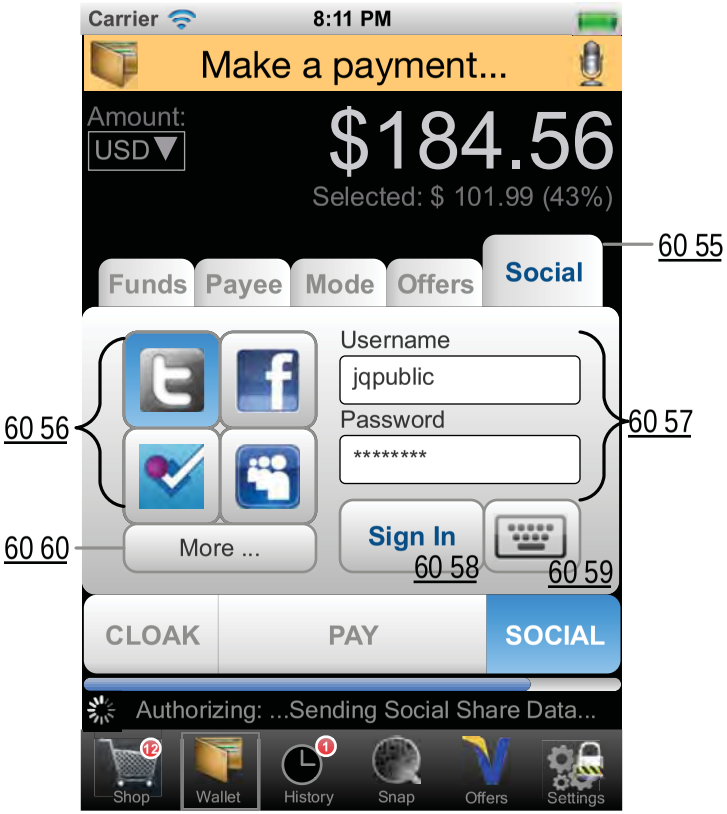
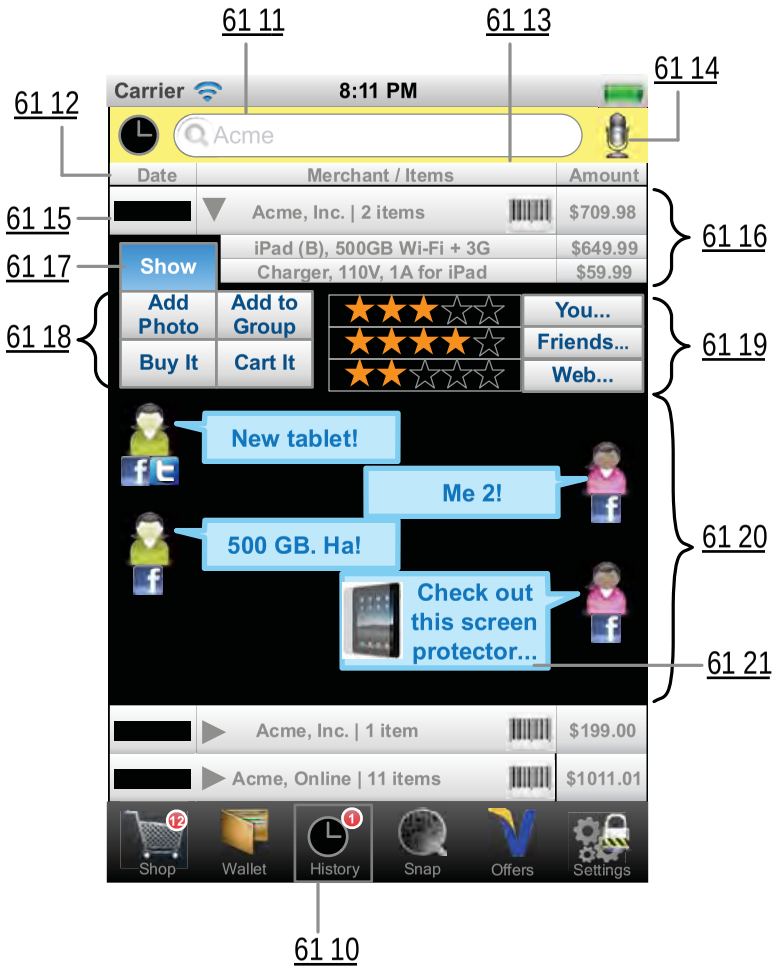


FIGURE 60F

Example: Virtual Wallet Mobile App



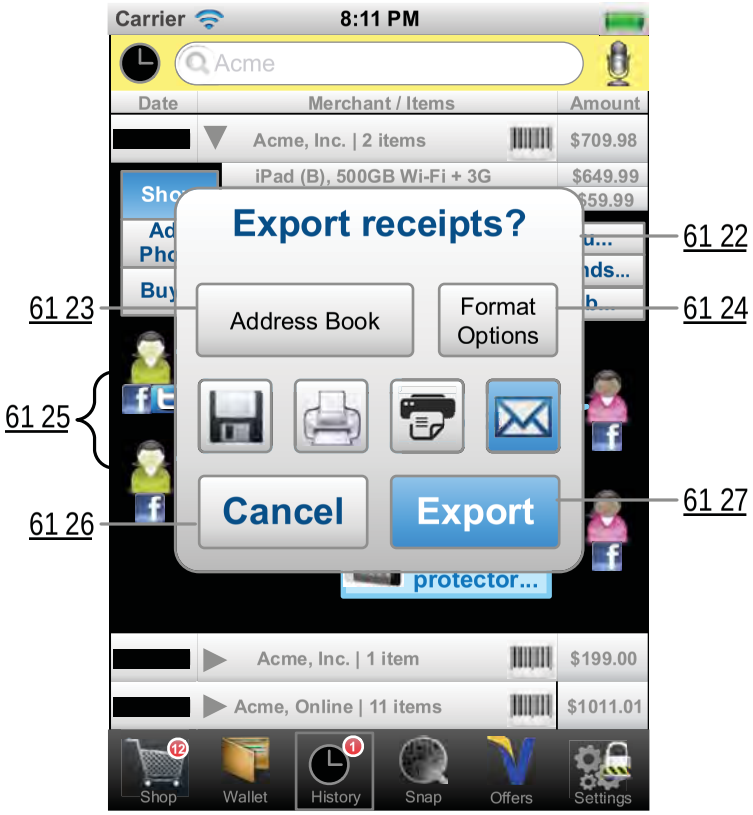


FIGURE 61

Example: Virtual Wallet Mobile App - History

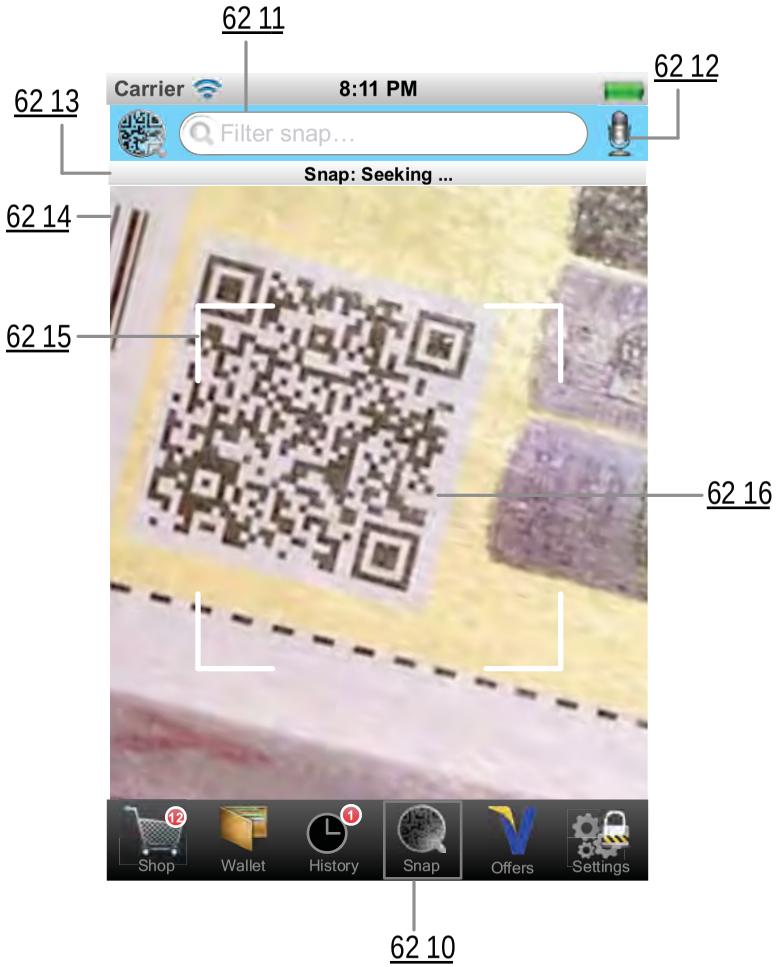


FIGURE 62A

Example: Virtual Wallet Mobile App - Snap Mode

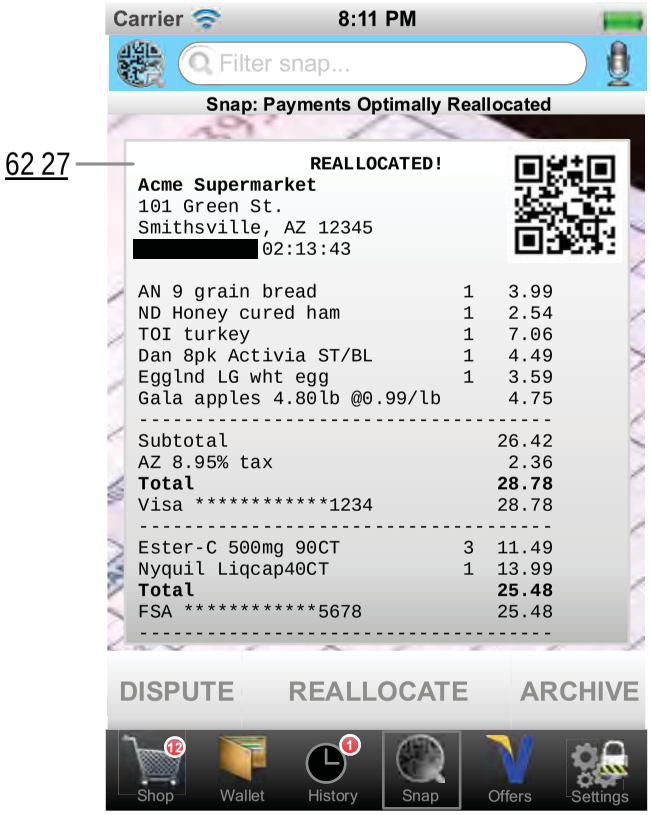
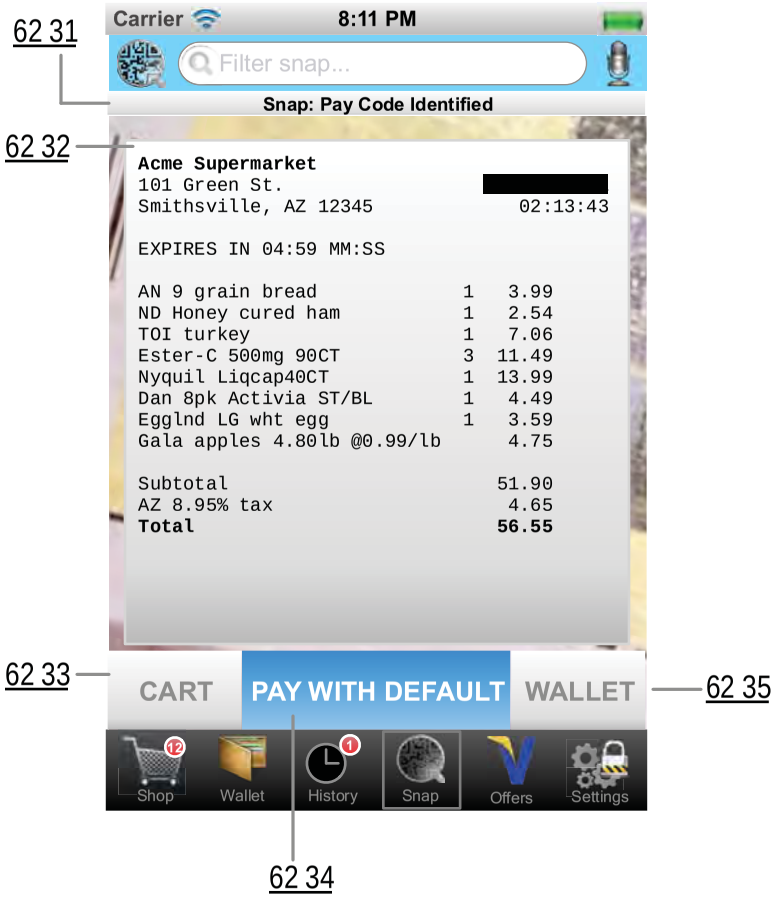


FIGURE 62B

Example: Virtual Wallet Mobile App - Snap Mode



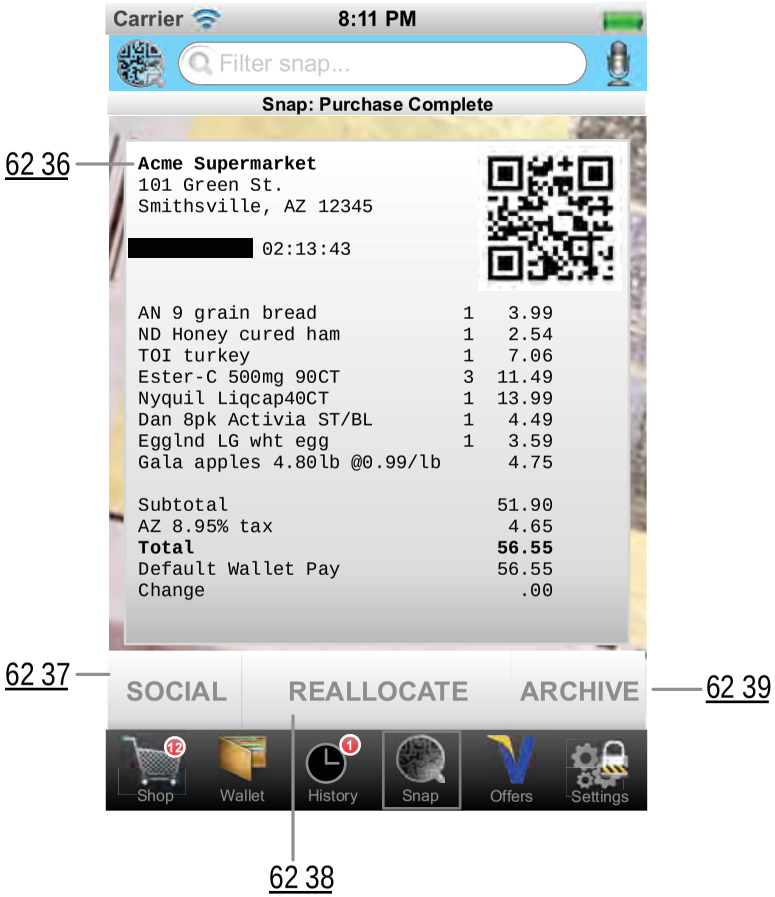
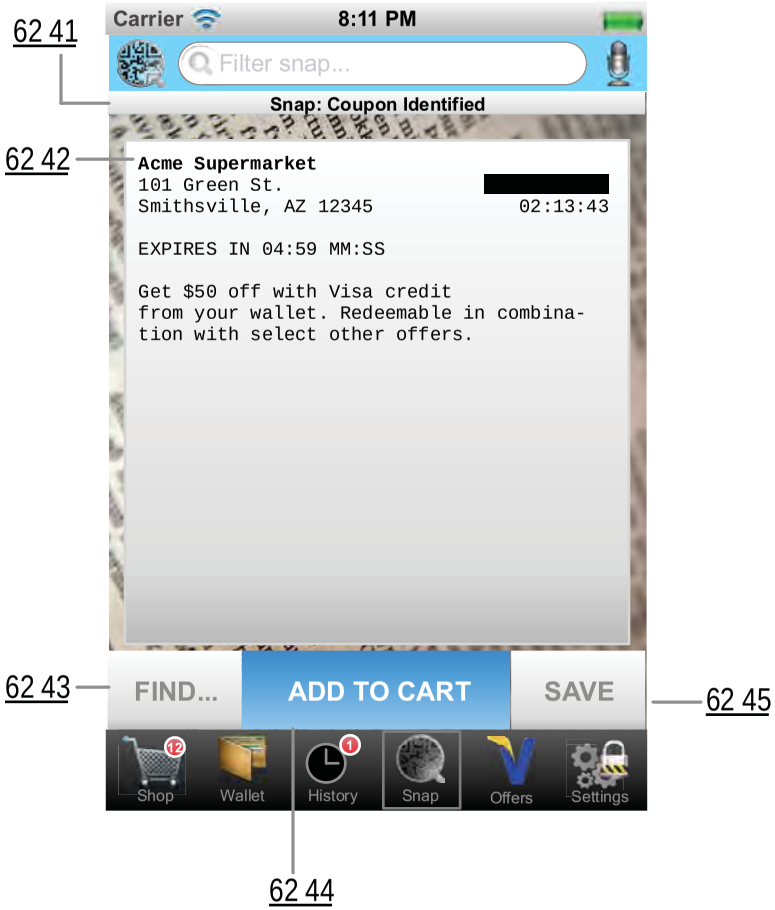


FIGURE 62C

Example: Virtual Wallet Mobile App - Snap Mode



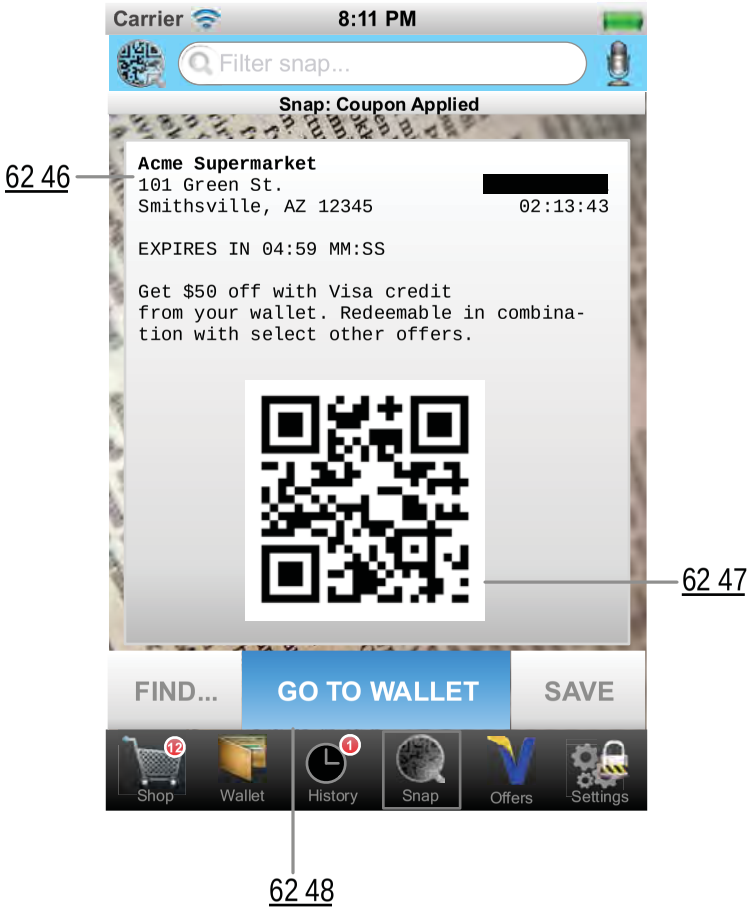
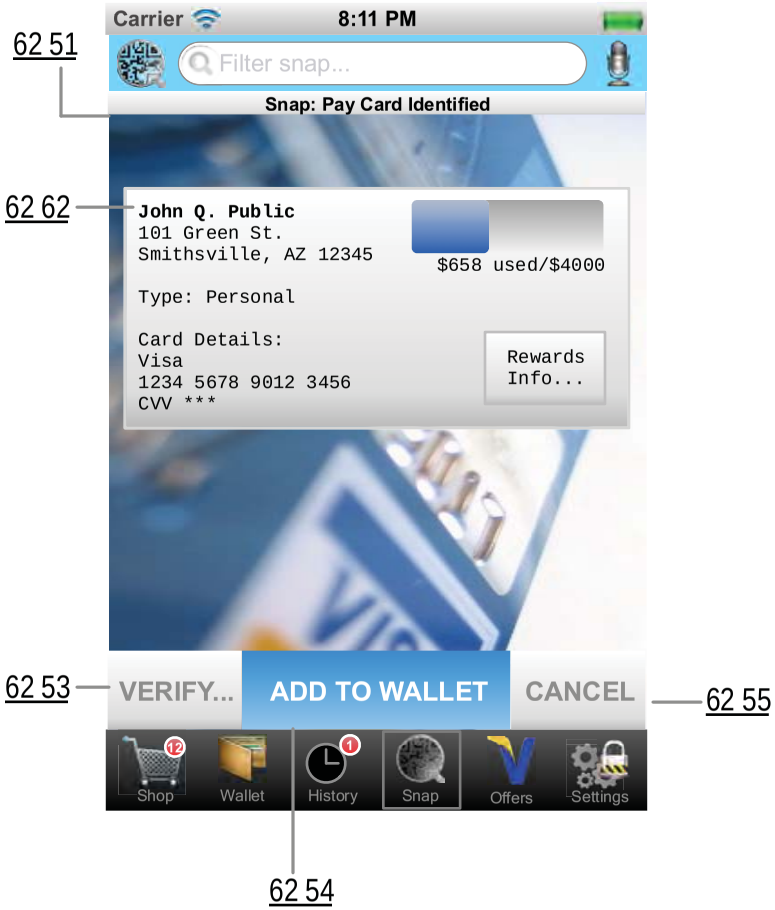


FIGURE 62D

Example: Virtual Wallet Mobile App - Snap Mode



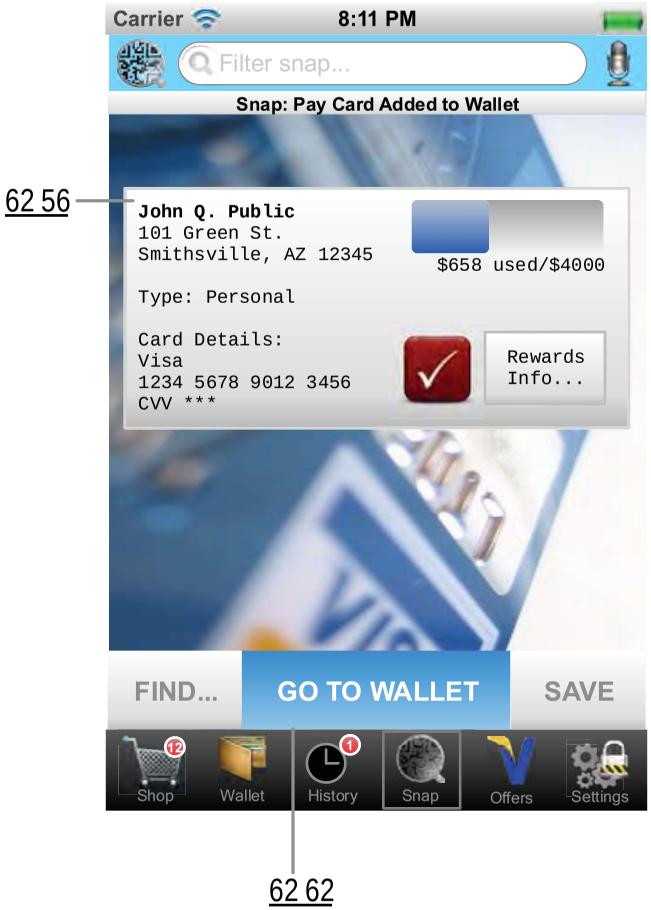


FIGURE 62E

Example: Virtual Wallet Mobile App - Snap Mode

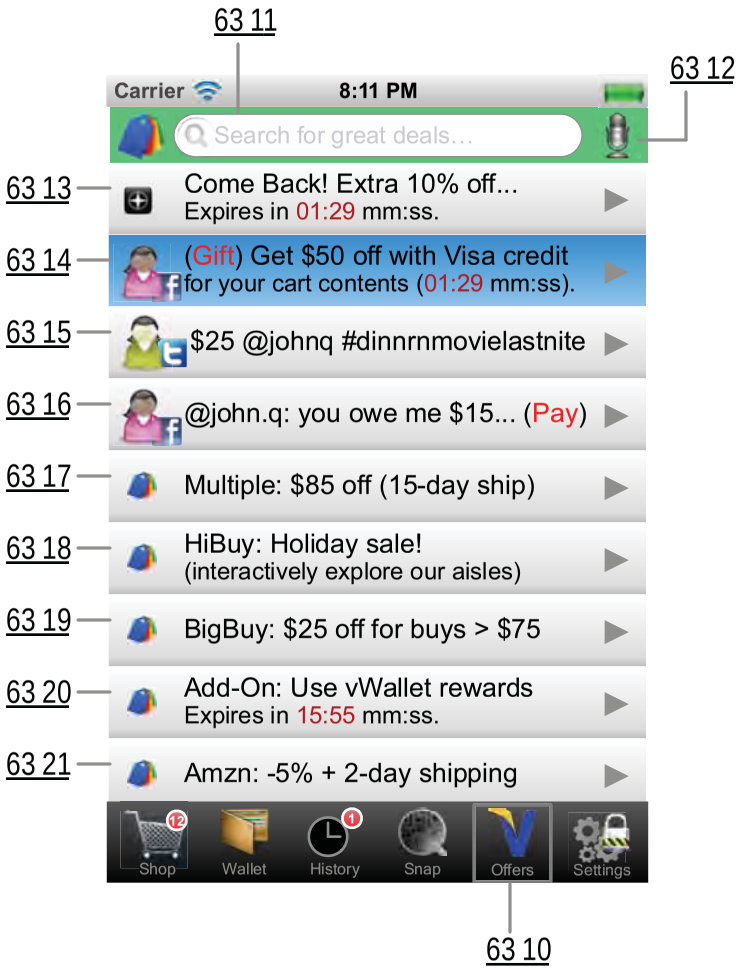


FIGURE 63

Example: Virtual Wallet Mobile App - Offers

FIGURE 64A

Example: Virtual Wallet Mobile App

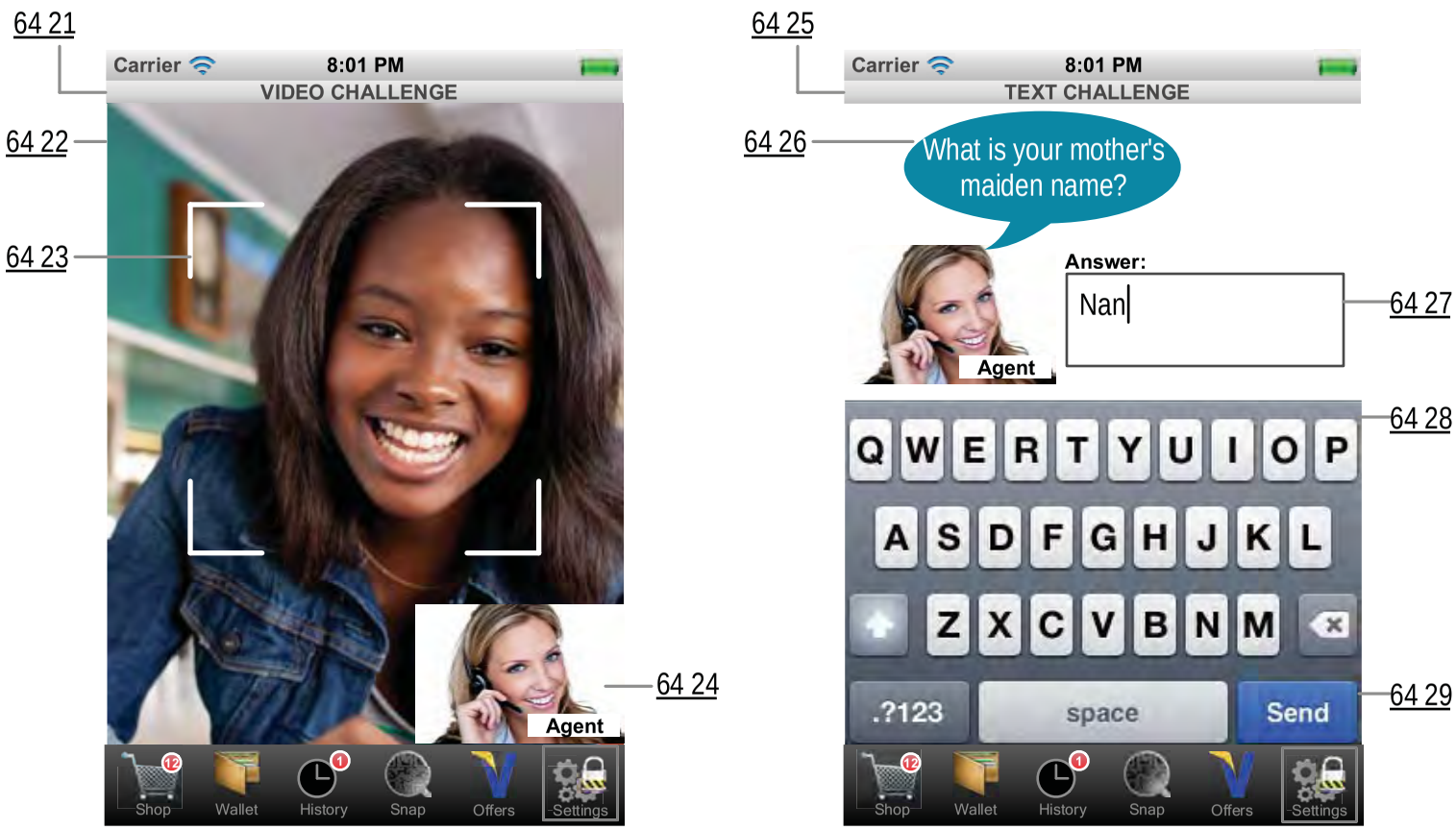


FIGURE 64B

Example: Virtual Wallet Mobile App

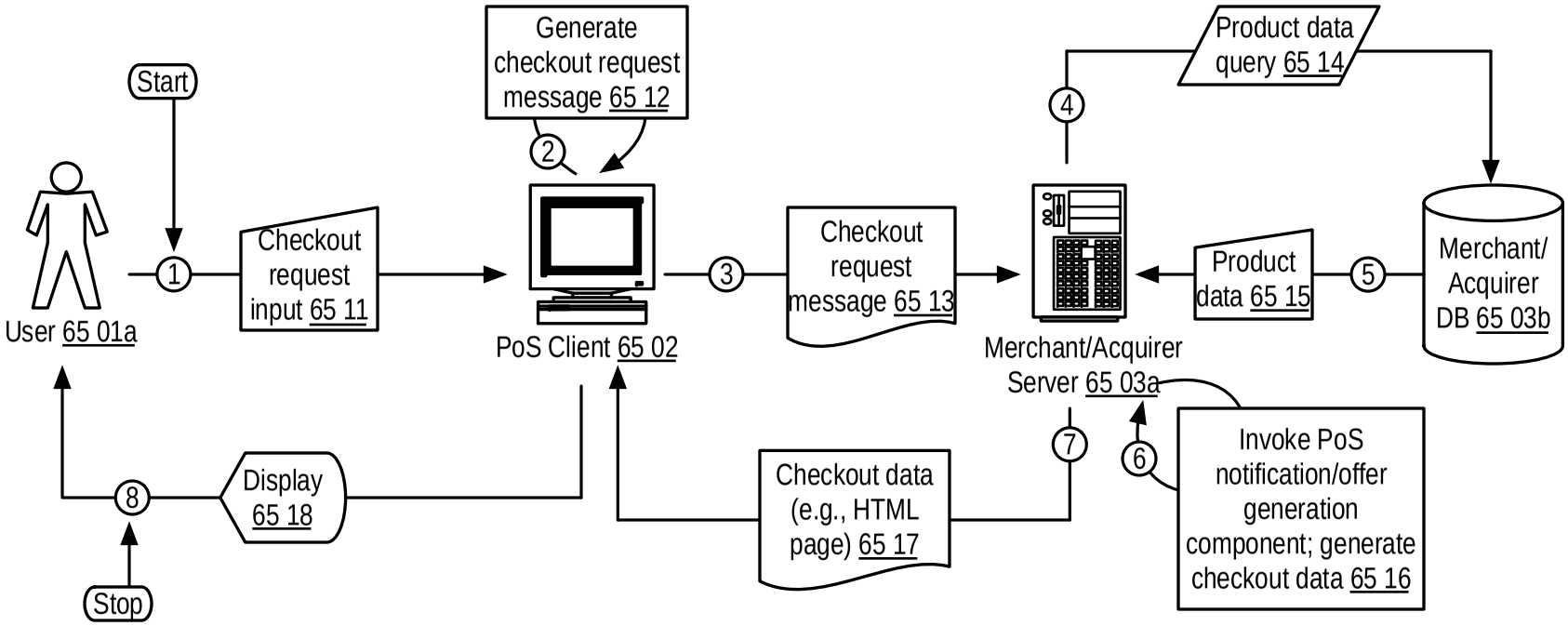


FIGURE 65

Example Data Flow: User Purchase Checkout

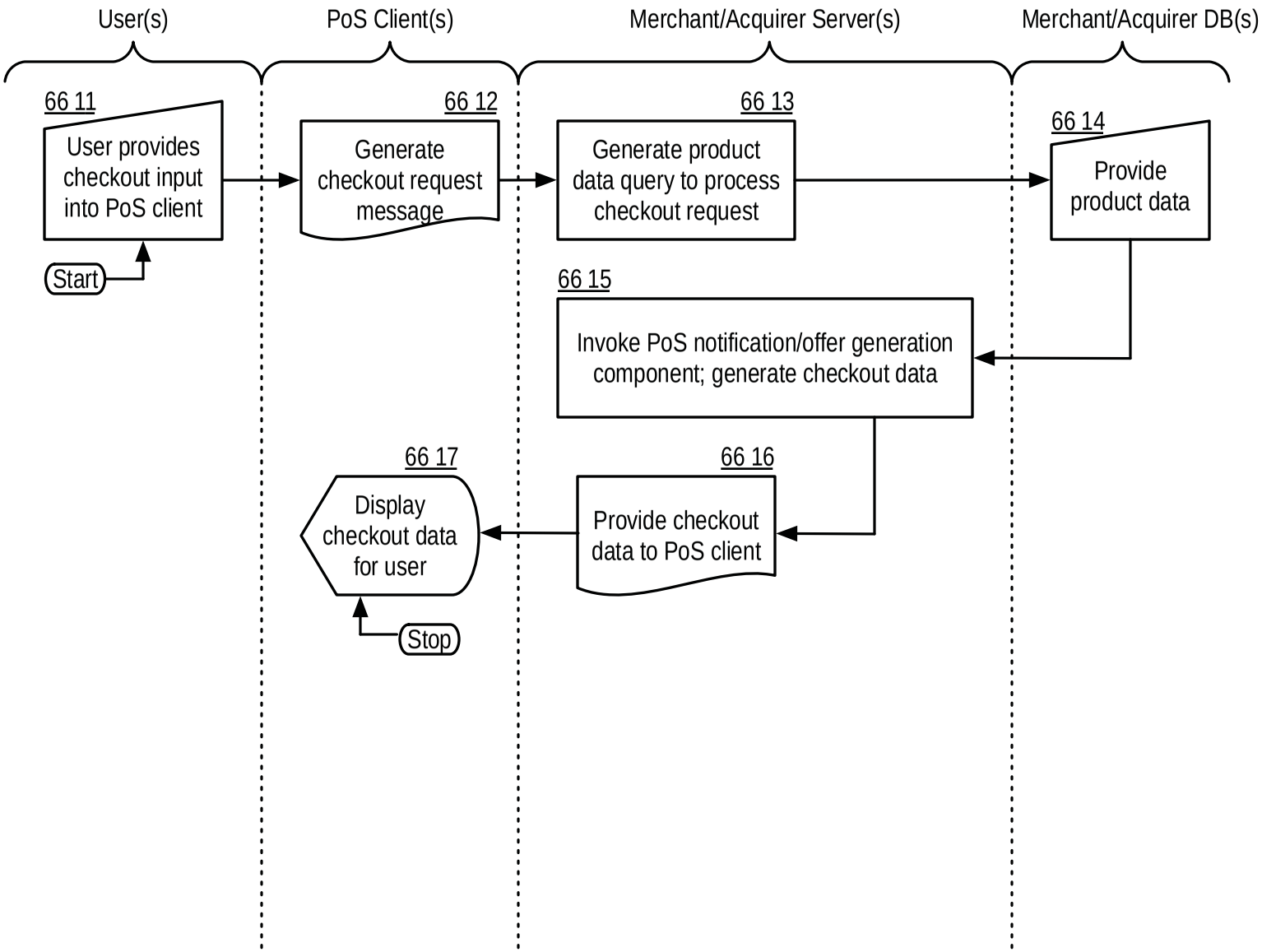


FIGURE 66

Example Logic Flow: User Purchase Checkout ("UPC") component 6600

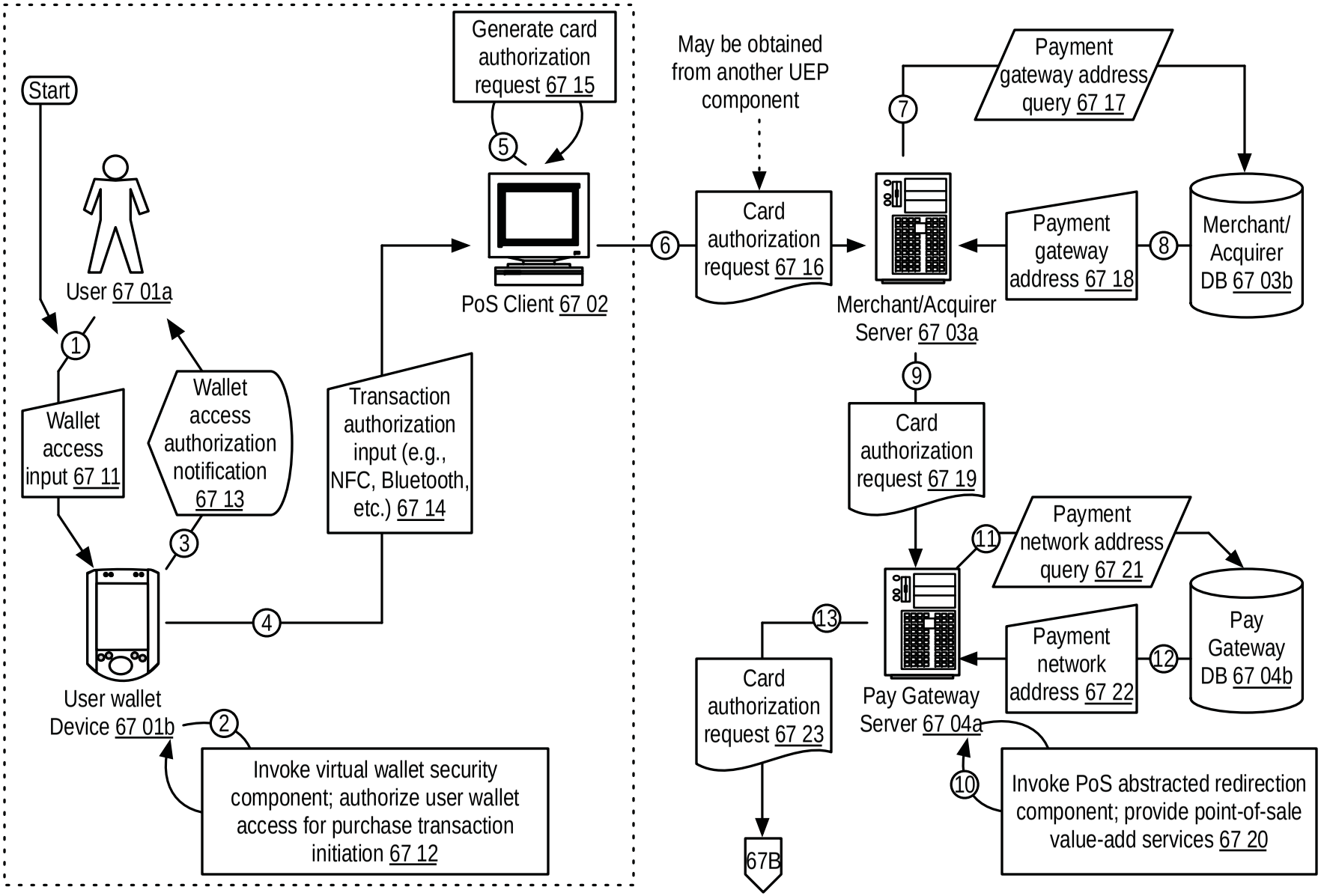


FIGURE 67A

Example Data Flow: Purchase Transaction Authorization

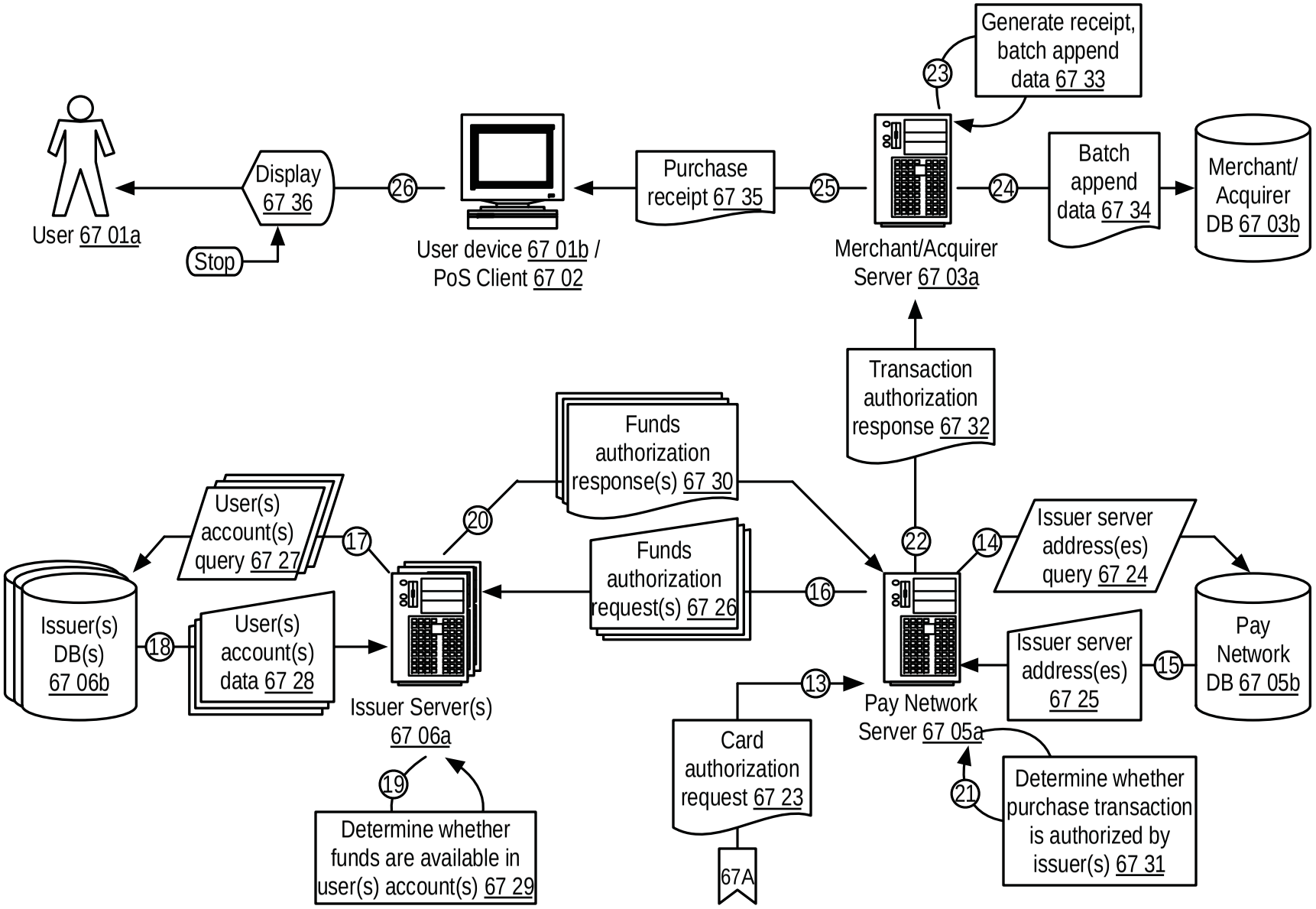


FIGURE 67B

Example Data Flow: Purchase Transaction Authorization

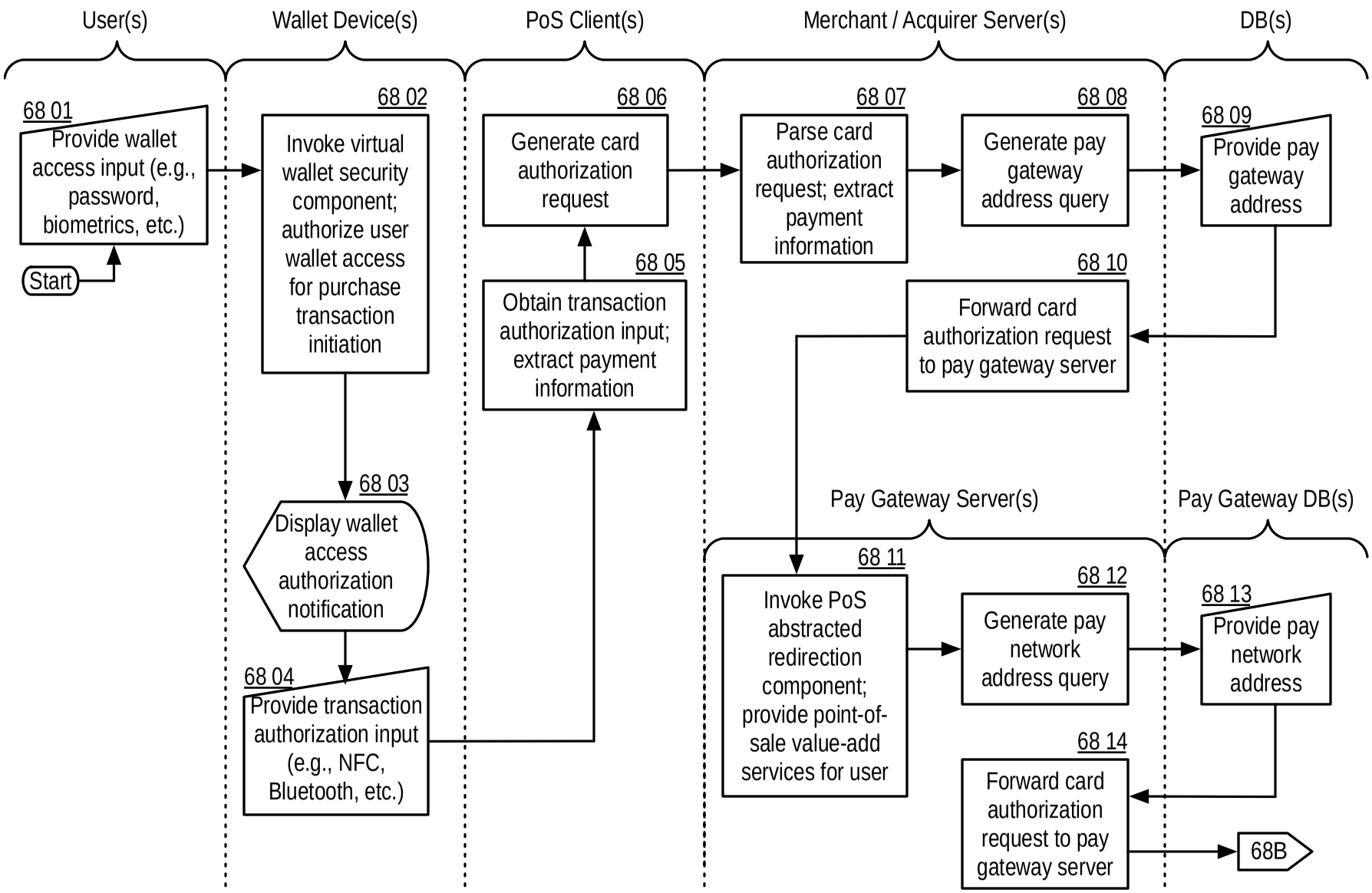


FIGURE 68A

Example: Purchase Transaction Authorization ("PTA") component 6800

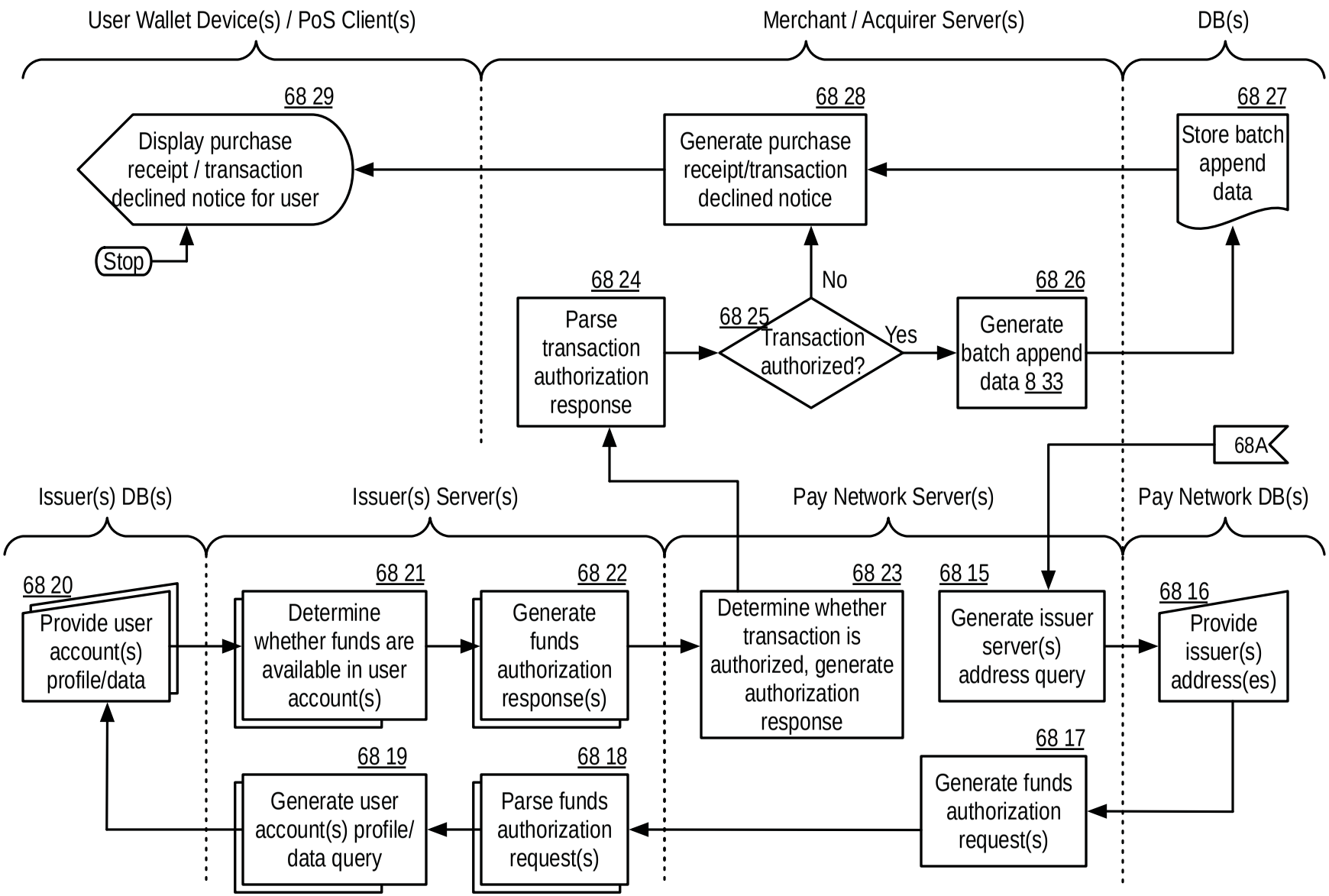


FIGURE 68B

Example: Purchase Transaction Authorization ("PTA") component 6800

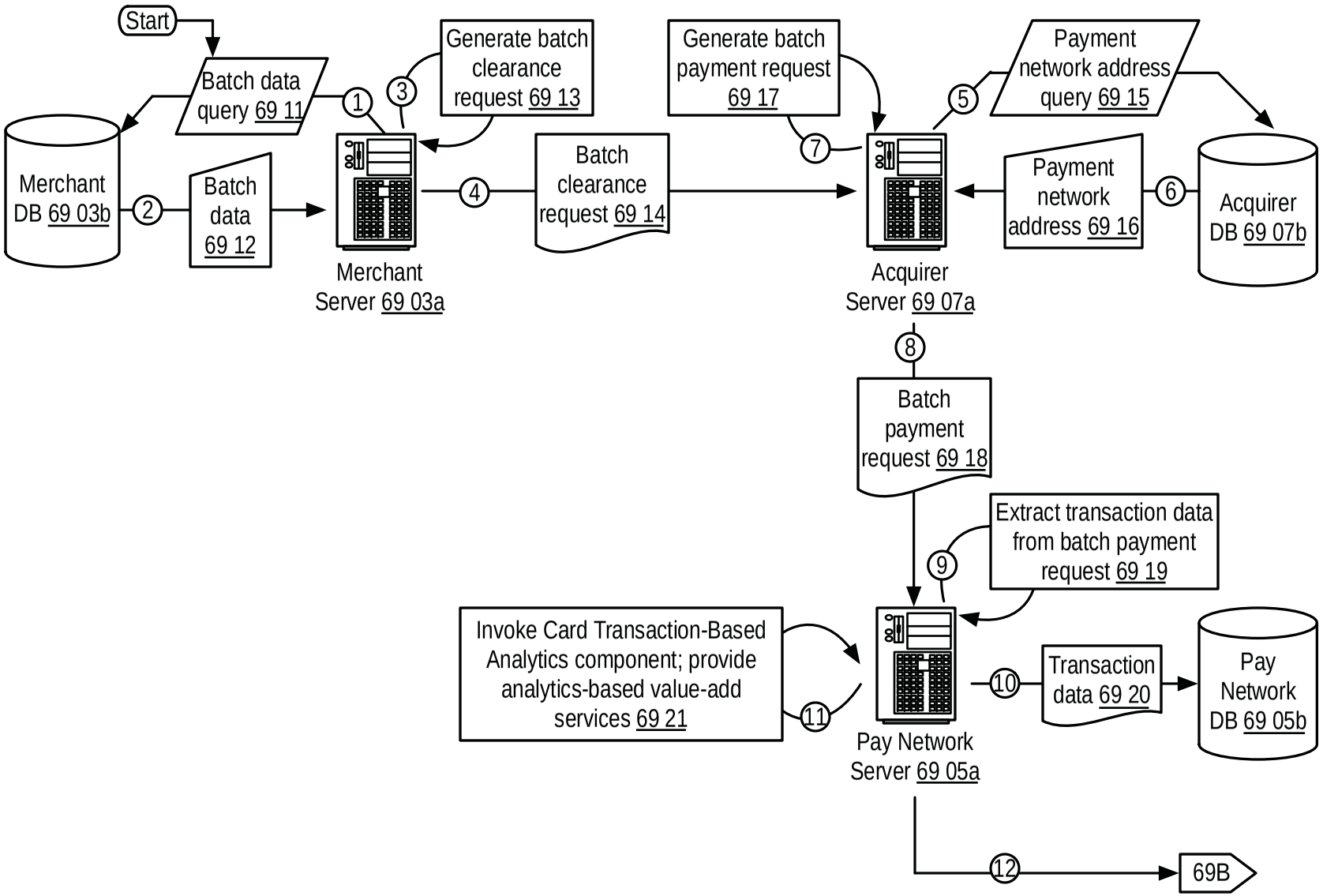


FIGURE 69A

Example Data Flow: Purchase Transaction Clearance

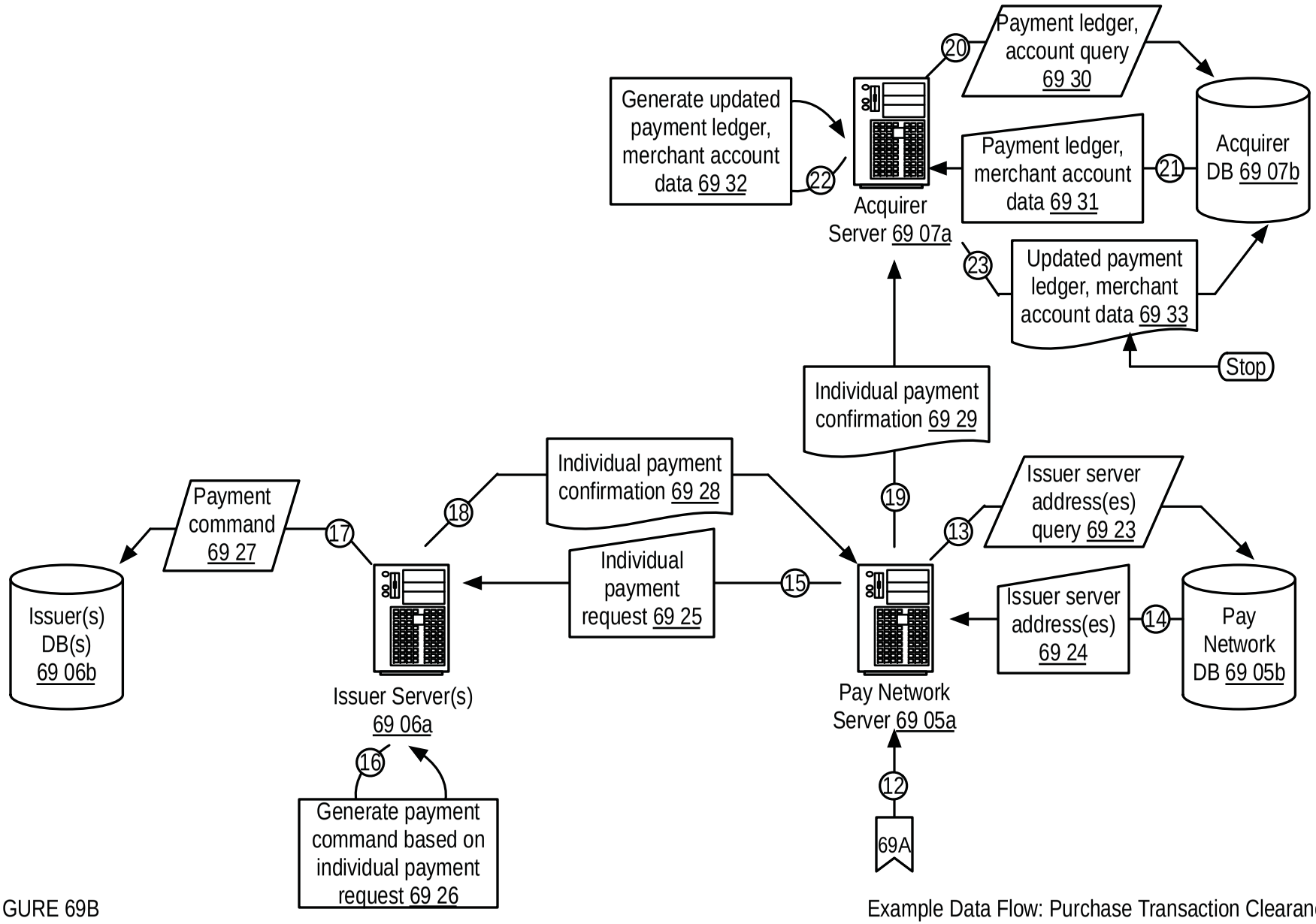


FIGURE 69B

Example Data Flow: Purchase Transaction Clearance

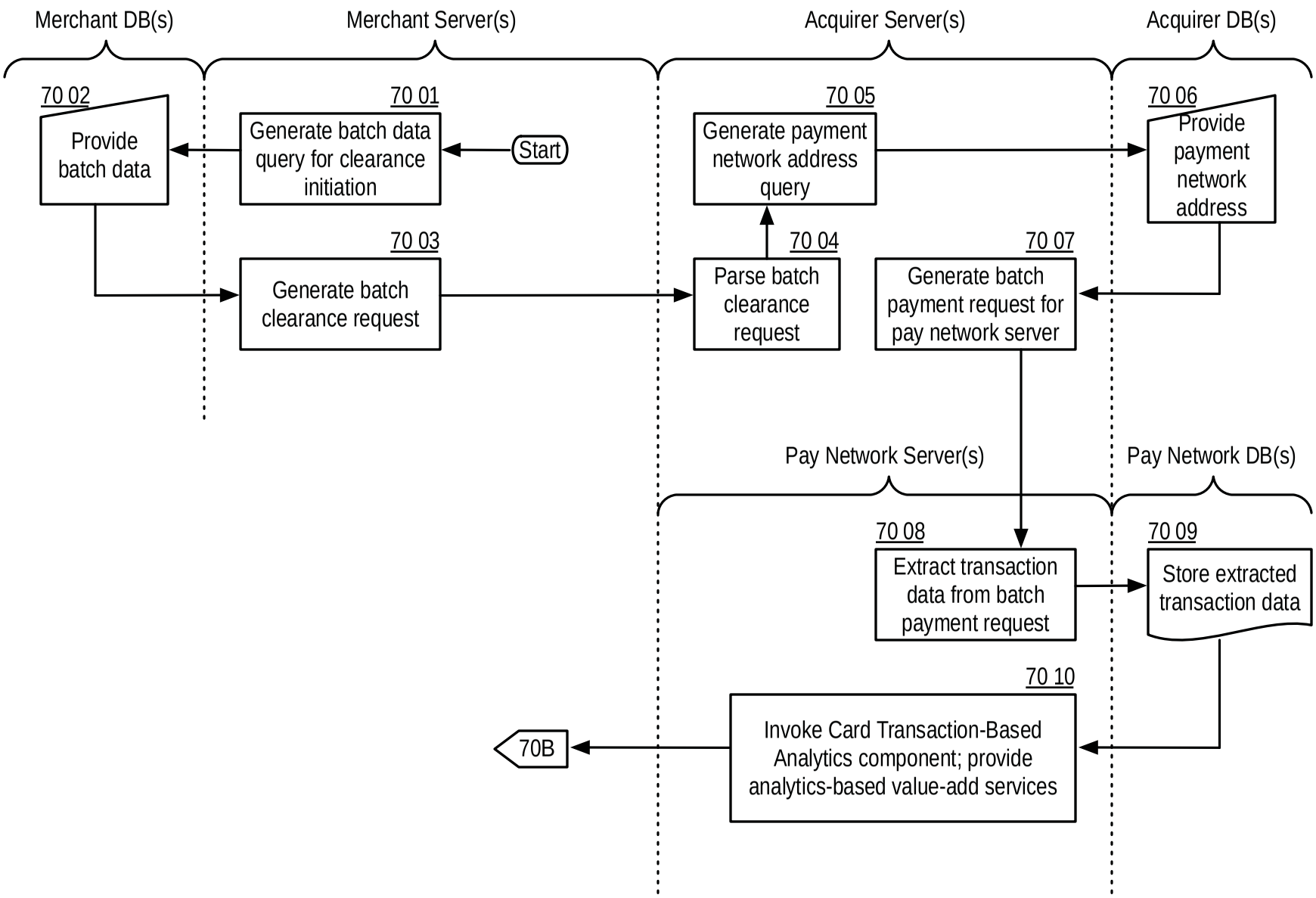


FIGURE 70A

Example Logic Flow: Purchase Transaction Clearance ("PTC") component 7000

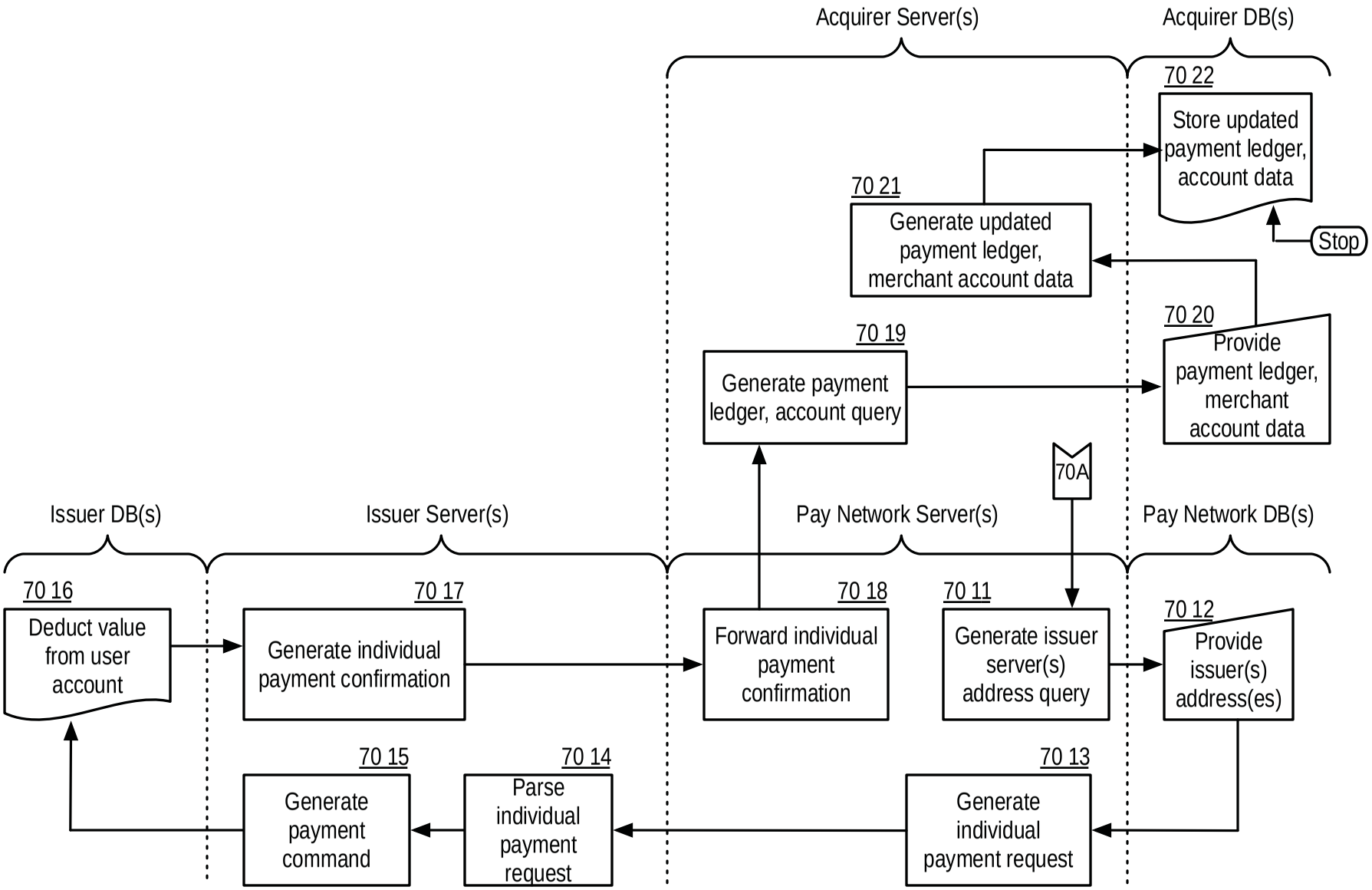
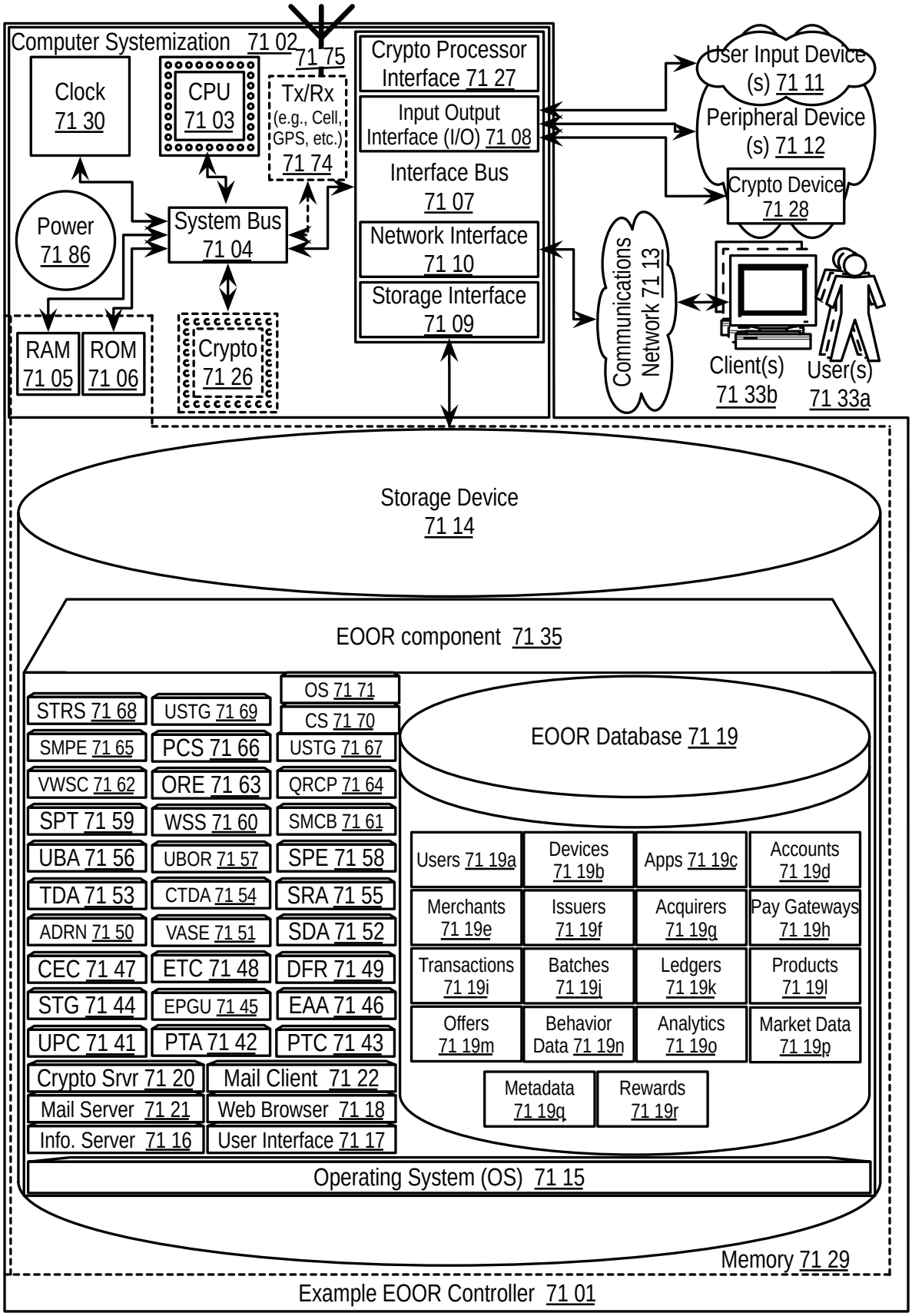


FIGURE 70B

Example Logic Flow: Purchase Transaction Clearance ("PTC") component 7000

FIGURE 71


Computer Systemization 71 02
71 75
Clock 71 30
CPU 71 03
Tx/Rx (e.g., Cell, GPS, etc.) 71 74
Crypto Processor Interface 71 27
Input Output Interface (I/O) 71 08
Interface Bus 71 07
Network Interface 71 10
Storage Interface 71 09
User Input Device (s) 71 11
Peripheral Device (s) 71 12
Crypto Device 71 28
Power 71 86
System Bus 71 04
RAM 71 05
ROM 71 06
Crypto 71 26
Communications Network 71 13
Client(s) 71 33b
User(s) 71 33a
Storage Device 71 14
EOOR component 71 35
STRS 71 68
USTG 71 69
OS 71 71
CS 71 70
SMPE 71 65
PCS 71 66
USTG 71 67
VWSC 71 62
ORE 71 63
QRCP 71 64
SPT 71 59
WSS 71 60
SMCB 71 61
UBA 71 56
UBOR 71 57
SPE 71 58
TDA 71 53
CTDA 71 54
SRA 71 55
ADRN 71 50
VASE 71 51
SDA 71 52
CEC 71 47
ETC 71 48
DFR 71 49
STG 71 44
EPGU 71 45
EAA 71 46
UPC 71 41
PTA 71 42
PTC 71 43
Crypto Srvr 71 20
Mail Client 71 22
Mail Server 71 21
Web Browser 71 18
Info. Server 71 16
User Interface 71 17
EOOR Database 71 19
Users 71 19a
Devices 71 19b
Apps 71 19c
Accounts 71 19d
Merchants 71 19e
Issuers 71 19f
Acquirers 71 19g
Pay Gateways 71 19h
Transactions 71 19i
Batches 71 19j
Ledgers 71 19k
Products 71 19l
Offers 71 19m
Behavior Data 71 19n
Analytics 71 19o
Market Data 71 19p
Metadata 71 19q
Rewards 71 19r
Operating System (OS) 71 15
Memory 71 29
Example EOOR Controller 71 01