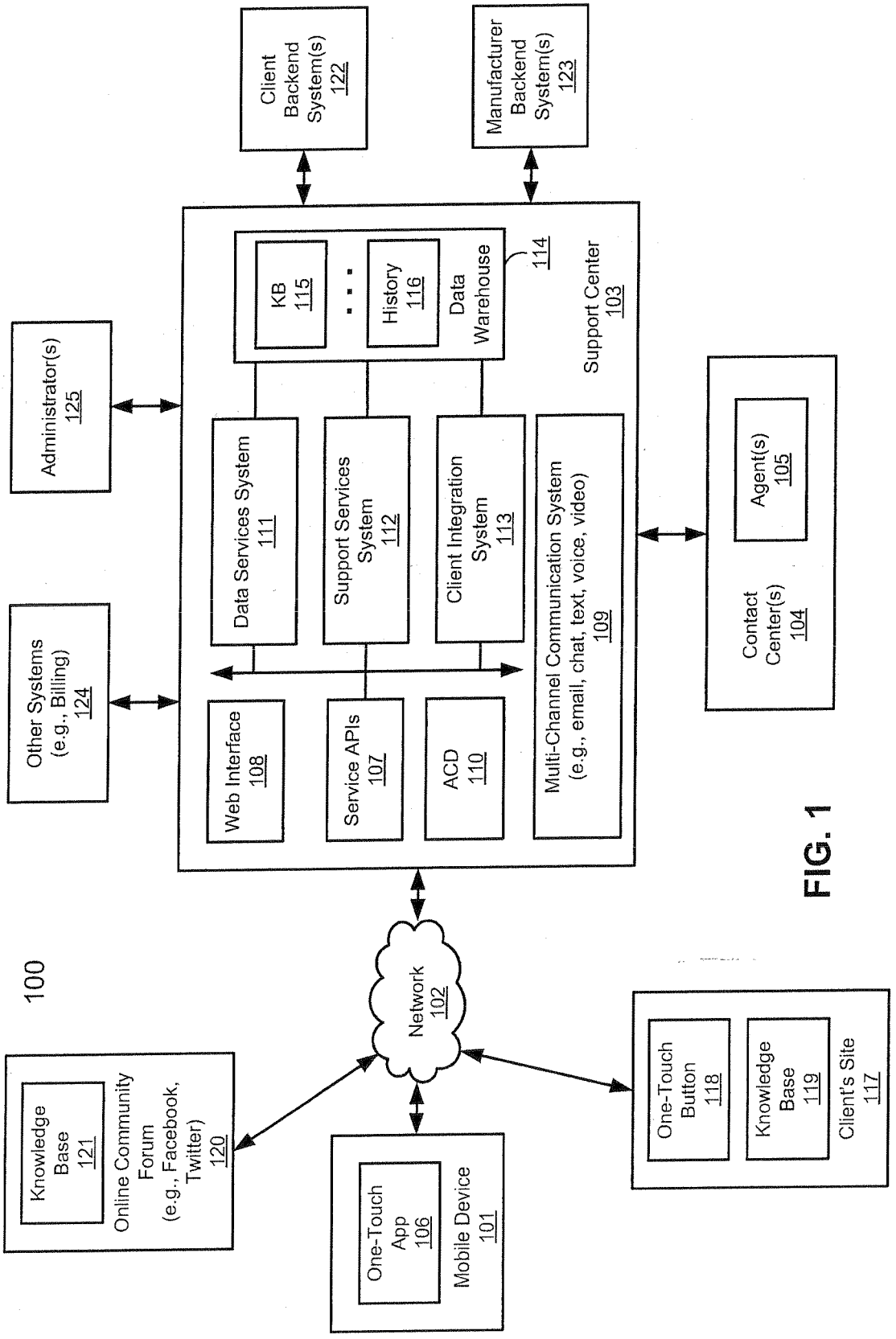
100
Client Backend System(s) 122
Manufacturer Backend System(s) 123
Administrator(s) 125
Other Systems (e.g., Billing) 124
Support Center 103
KB 115
History 116
Data Warehouse 114
Data Services System 111
Support Services System 112
Client Integration System 113
Multi-Channel Communication System (e.g., email, chat, text, voice, video) 109
Web Interface 108
Service APIs 107
ACD 110
Agent(s) 105
Contact Center(s) 104
Network 102
Knowledge Base 121
Online Community Forum (e.g., Facebook, Twitter) 120
One-Touch App 106
Mobile Device 101
One-Touch Button 118
Knowledge Base 119
Client's Site 117

FIG. 1

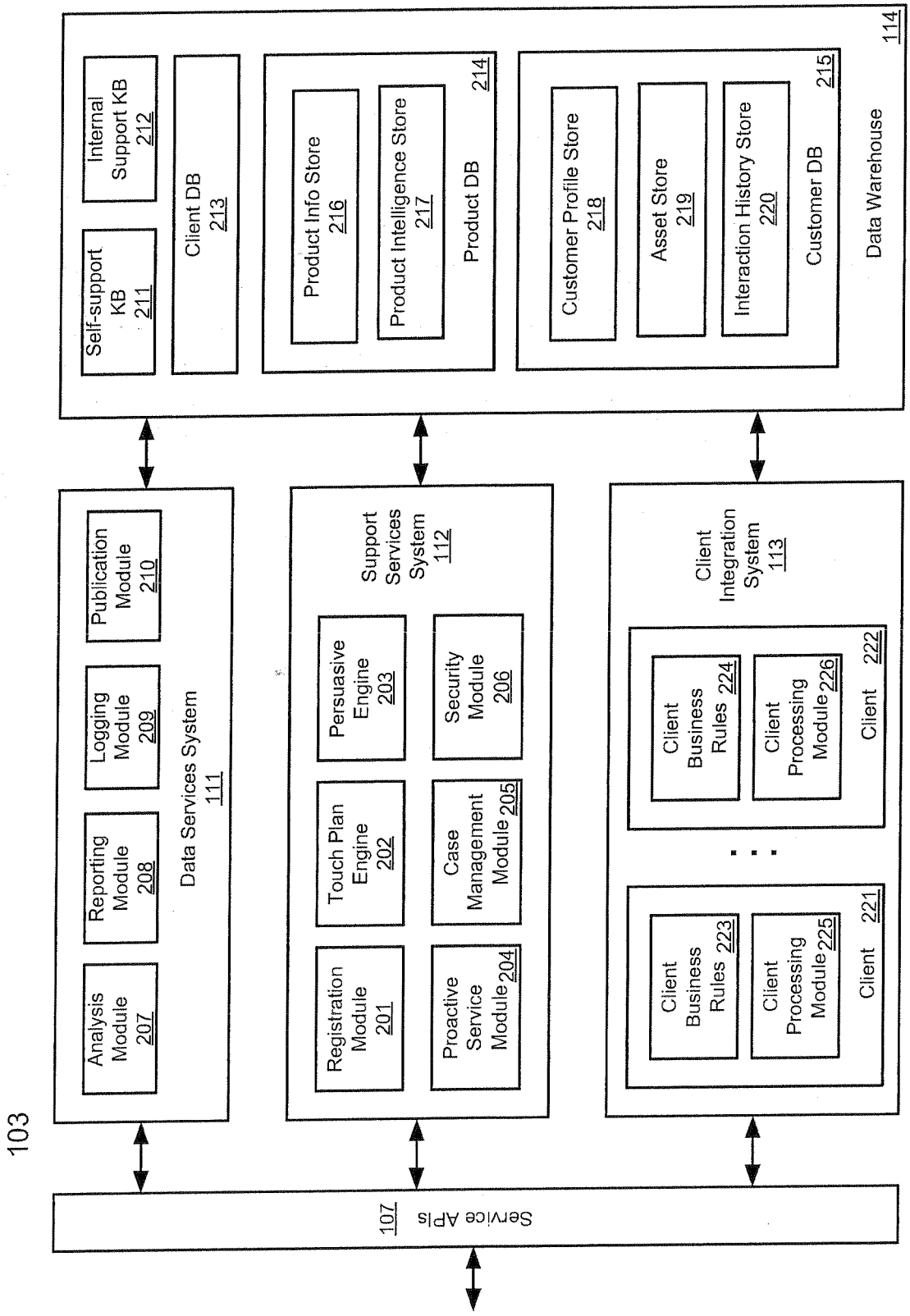
103
Data Warehouse 114
Internal Support KB 212
Client DB 213
Product DB 214
Product Info Store 216
Product Intelligence Store 217
Customer DB 215
Customer Profile Store 218
Asset Store 219
Interaction History Store 220
Self-support KB 211
Data Services System 111
Publication Module 210
Logging Module 209
Reporting Module 208
Analysis Module 207
Support Services System 112
Persuasive Engine 203
Security Module 206
Touch Plan Engine 202
Case Management Module 205
Registration Module 201
Proactive Service Module 204
Client Integration System 113
Client 222
Client Business Rules 224
Client Processing Module 226
Client 221
Client Business Rules 223
Client Processing Module 225
Service APIs 107

FIG. 2

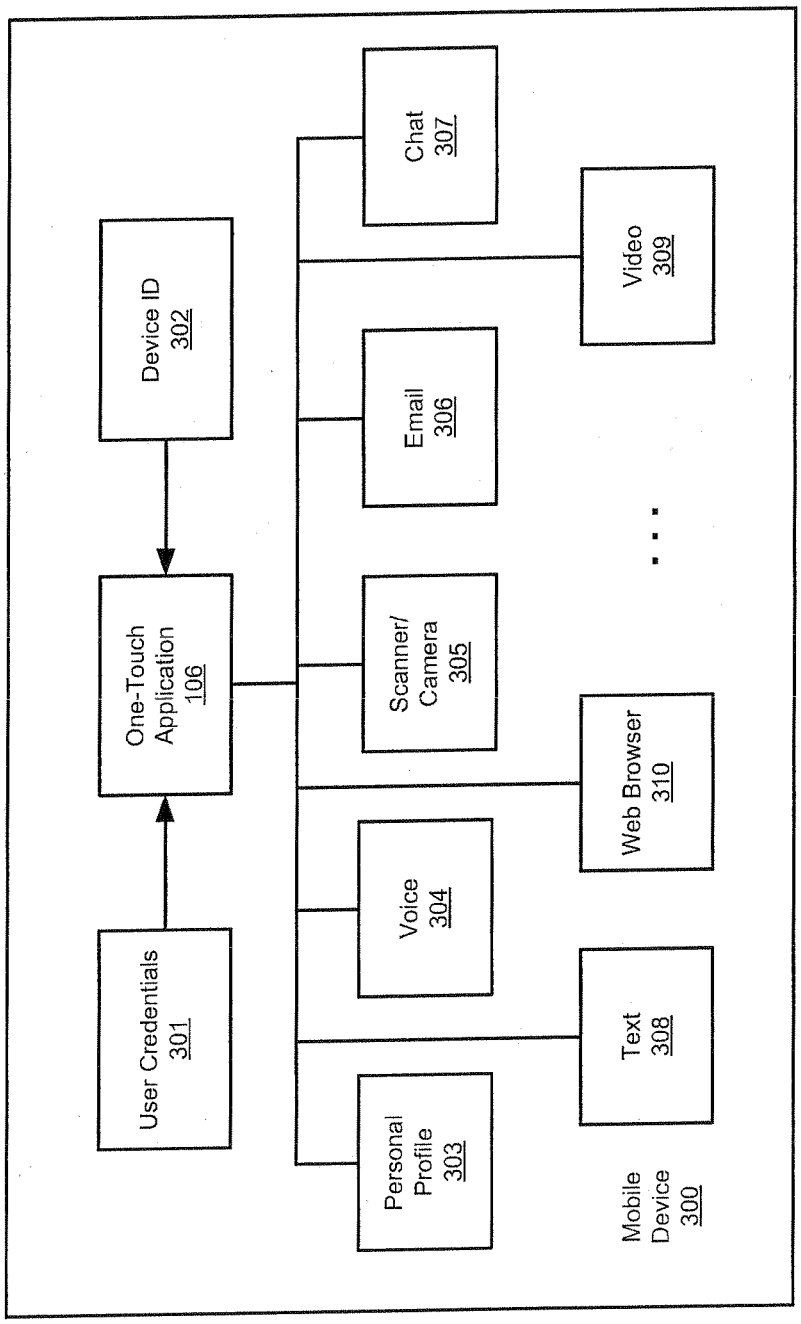
Mobile Device 300
User Credentials 301
Device ID 302
One-Touch Application 106
Personal Profile 303
Voice 304
Scanner/ Camera 305
Email 306
Chat 307
Text 308
Web Browser 310
Video 309
. . .

FIG. 3

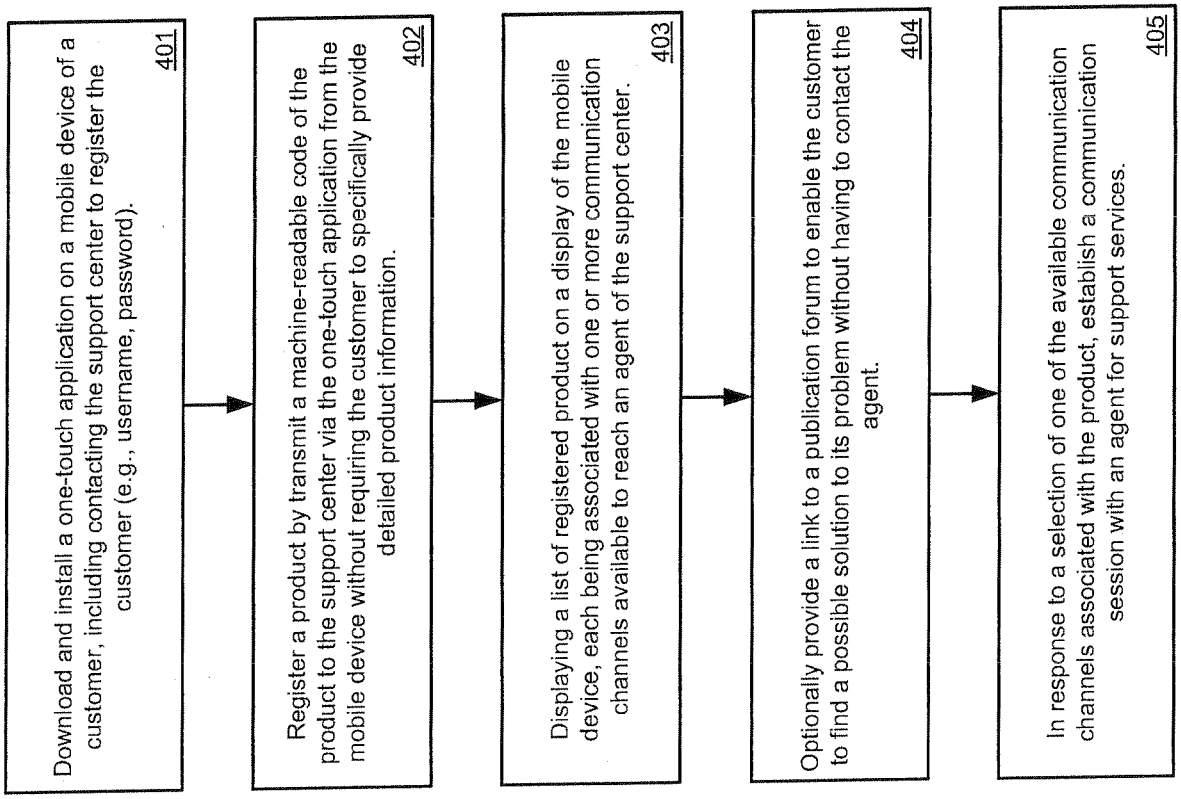
400
Download and install a one-touch application on a mobile device of a customer, including contacting the support center to register the customer (e.g., username, password). 401
Register a product by transmit a machine-readable code of the product to the support center via the one-touch application from the mobile device without requiring the customer to specifically provide detailed product information. 402
Displaying a list of registered product on a display of the mobile device, each being associated with one or more communication channels available to reach an agent of the support center. 403
Optionally provide a link to a publication forum to enable the customer to find a possible solution to its problem without having to contact the agent. 404
In response to a selection of one of the available communication channels associated with the product, establish a communication session with an agent for support services. 405

FIG. 4

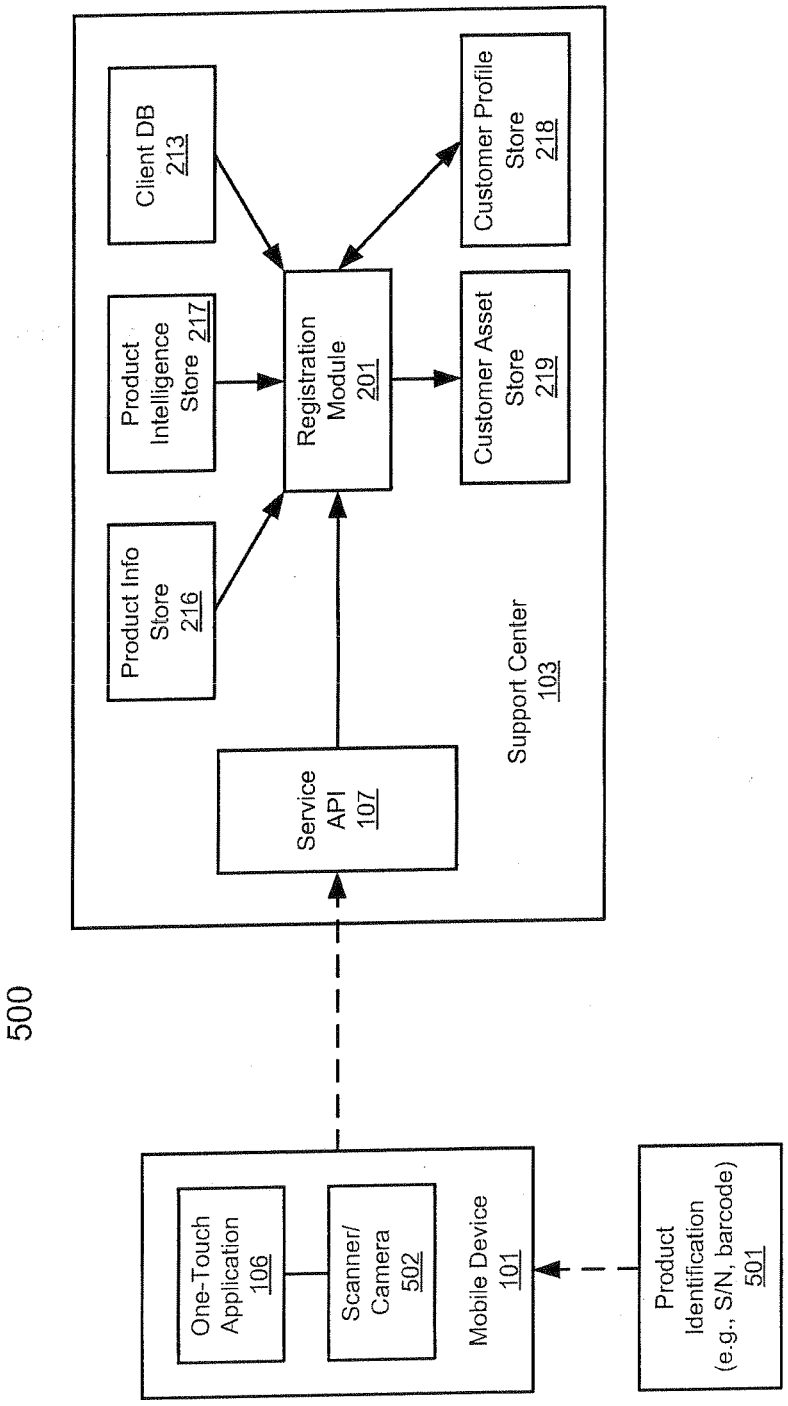
500
Support Center
103
Client DB
213
Product Intelligence Store 217
Product Info Store
216
Registration Module
201
Service API
107
Customer Profile Store
218
Customer Asset Store
219
Mobile Device
101
One-Touch Application
106
Scanner/ Camera
502
Product Identification
(e.g., S/N, barcode)
501

FIG. 5

Purchase
Retailer
601
Best Buy
Store Location
Loyalty
Department Store
123 Main Street, Denver CO 80000
113456
602
Manufacturer
LG
Sony
Loyalty
Best Buy
Loyalty
www.lg.com
www.sony.com
7329912
www.bestbuy.com
113456
603
Products
Television
Manufacturer
SKU
Serial Number
Product ID
DVD
Manufacturer
SKU
Serial Number
Product ID
Warranty
Manufacturer
Product ID
Duration
42" LCD
LG
801334662340
9991283383822
SR 00432
Blue Ray
Sony
802334669980
883838209920
SBR 7734
2 year full coverage
Best Buy
WR 02993
24 months
608
605
609
606
610
604
Receipt
Transaction ID
Payment Source
Date of Purchase
22966376
Personal CC
02/01/2011
607

FIG. 6

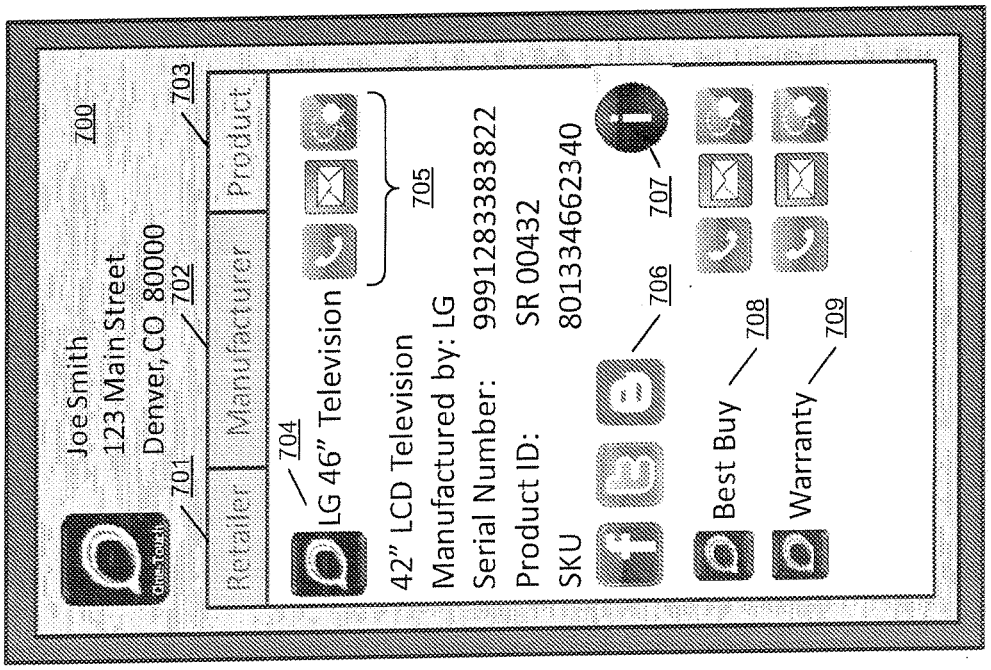
Joe Smith
123 Main Street
Denver, CO 80000
700
701
702
703
Retailer
Manufacturer
Product
704
LG 46" Television
42" LCD Television
Manufactured by: LG
Serial Number: 999128338382
Product ID: SR 00432
SKU 801334662340
705
706
707
Best Buy
708
Warranty
709

FIG. 7A

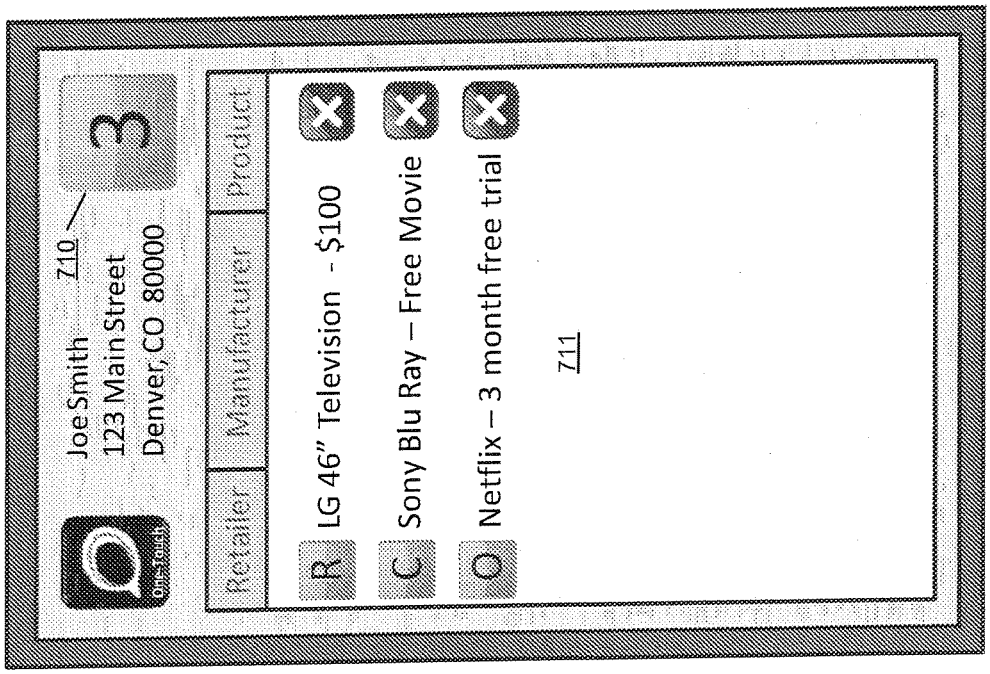
Joe Smith
123 Main Street
Denver, CO 80000
710
3
Retailer
Manufacturer
Product
R
LG 46" Television - $100
C
Sony Blu Ray – Free Movie
O
Netflix – 3 month free trial
711

FIG. 7B

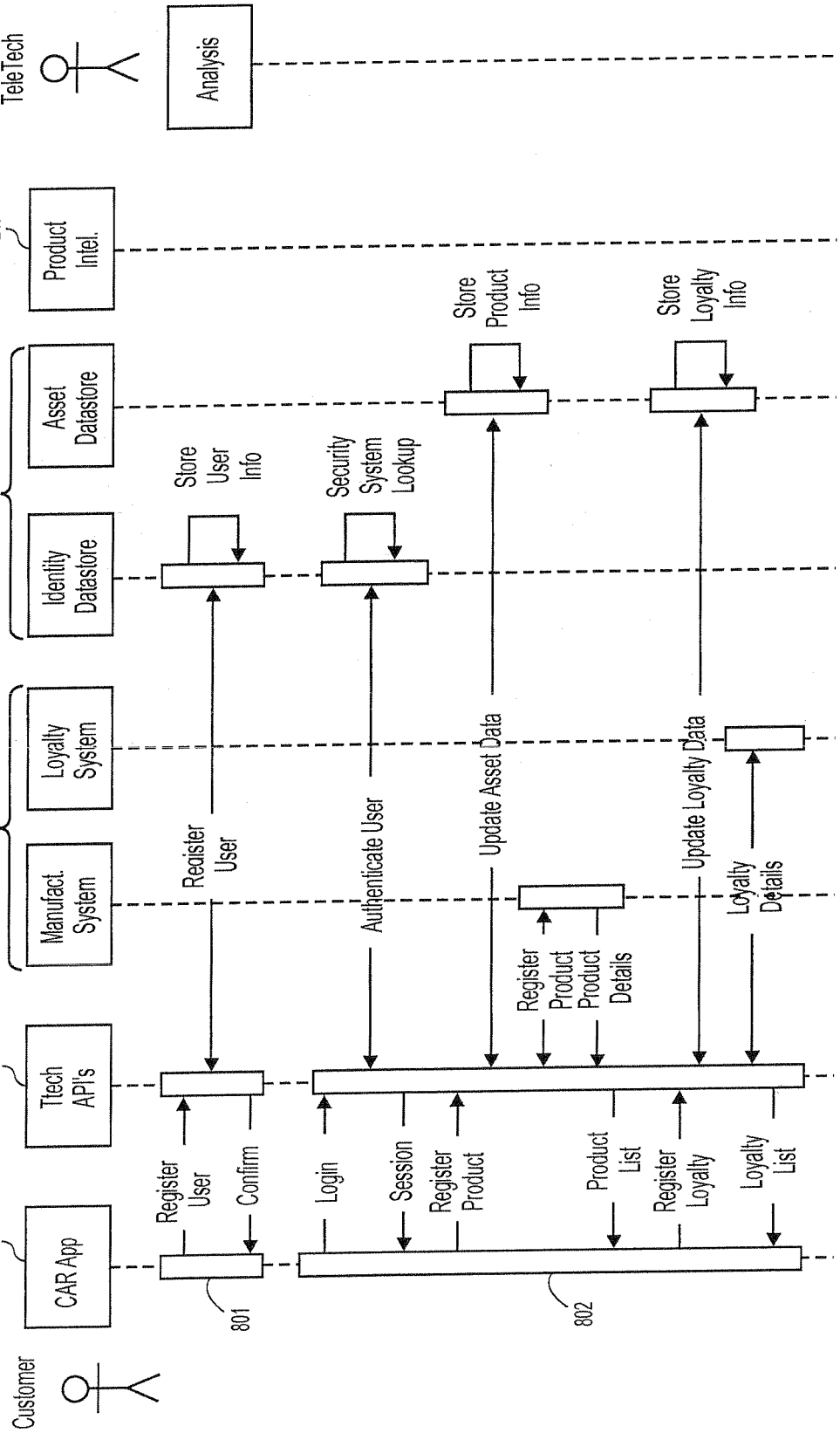
Customer
106
CAR App
107
Ttech API's
214
Manufact. System
Loyalty System
215
Identity Datastore
Asset Datastore
217
Product Intel.
105
TeleTech
Analysis
Register User
Confirm
Login
Session
Register Product
Product List
Register Loyalty
Loyalty List
Register User
Authenticate User
Update Asset Data
Register Product
Product Details
Update Loyalty Data
Loyalty Details
Store User Info
Security System Lookup
Store Product Info
Store Loyalty Info
801
802

FIG. 8

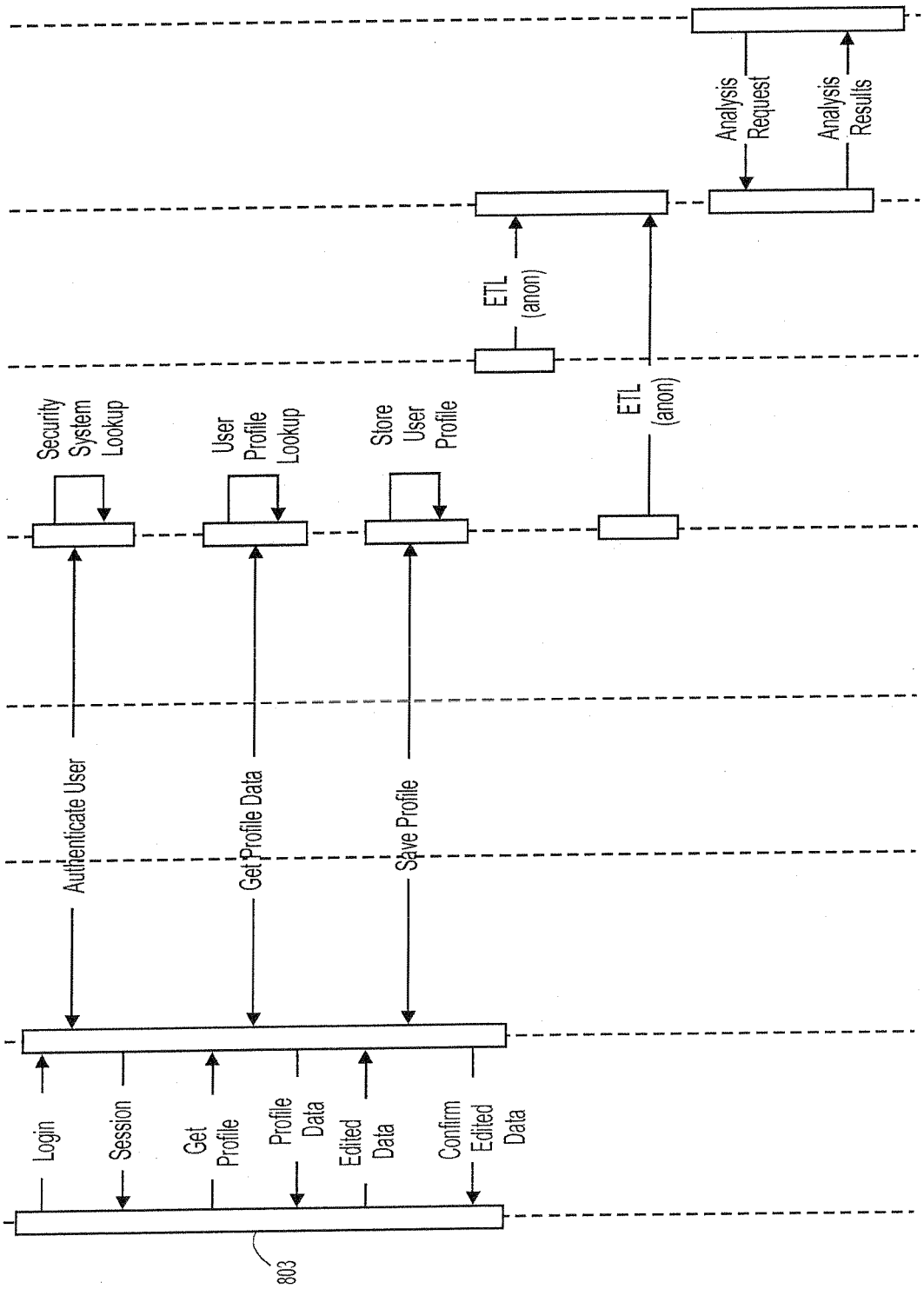
Analysis Request
Analysis Results
ETL (anon)
ETL (anon)
Security System Lookup
User Profile Lookup
Store User Profile
Authenticate User
Get Profile Data
Save Profile
Login
Session
Get Profile
Profile Data
Edited Data
Confirm Edited Data
803

FIG. 8 (CONT.)

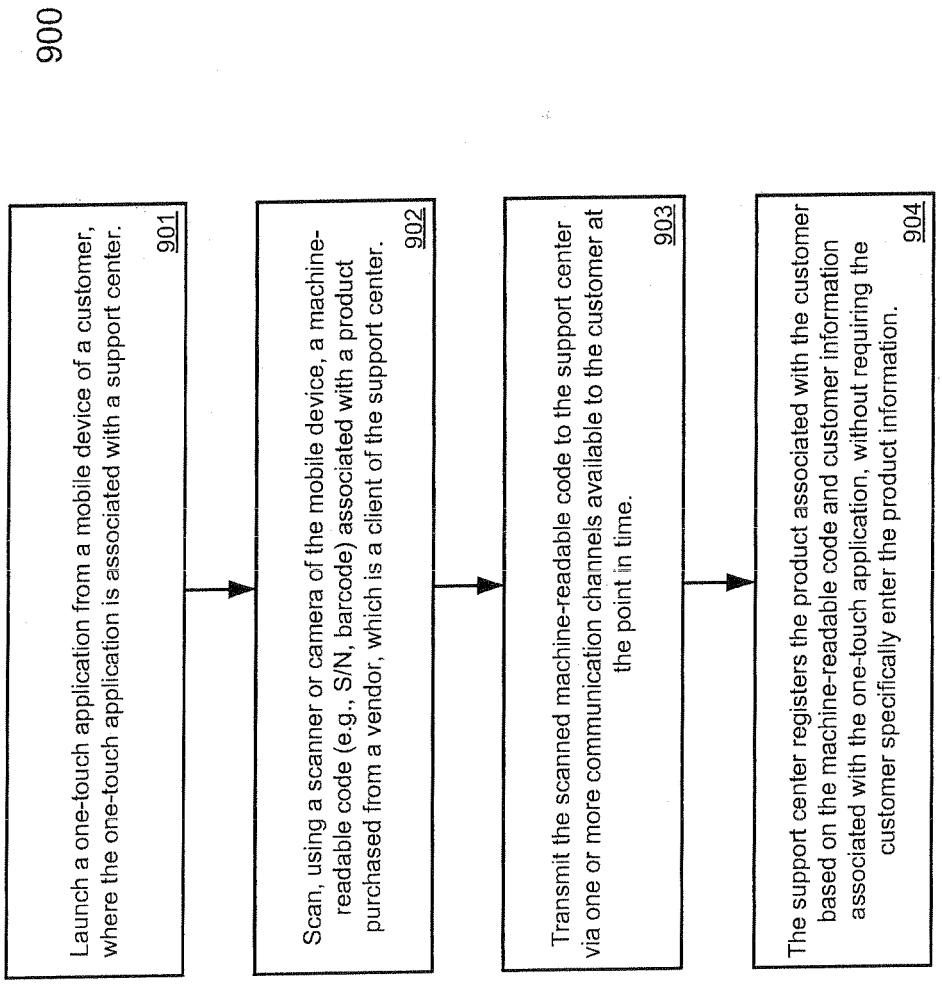
900
Launch a one-touch application from a mobile device of a customer, where the one-touch application is associated with a support center. 901
Scan, using a scanner or camera of the mobile device, a machine-readable code (e.g., S/N, barcode) associated with a product purchased from a vendor, which is a client of the support center. 902
Transmit the scanned machine-readable code to the support center via one or more communication channels available to the customer at the point in time. 903
The support center registers the product associated with the customer based on the machine-readable code and customer information associated with the one-touch application, without requiring the customer specifically enter the product information. 904

FIG. 9

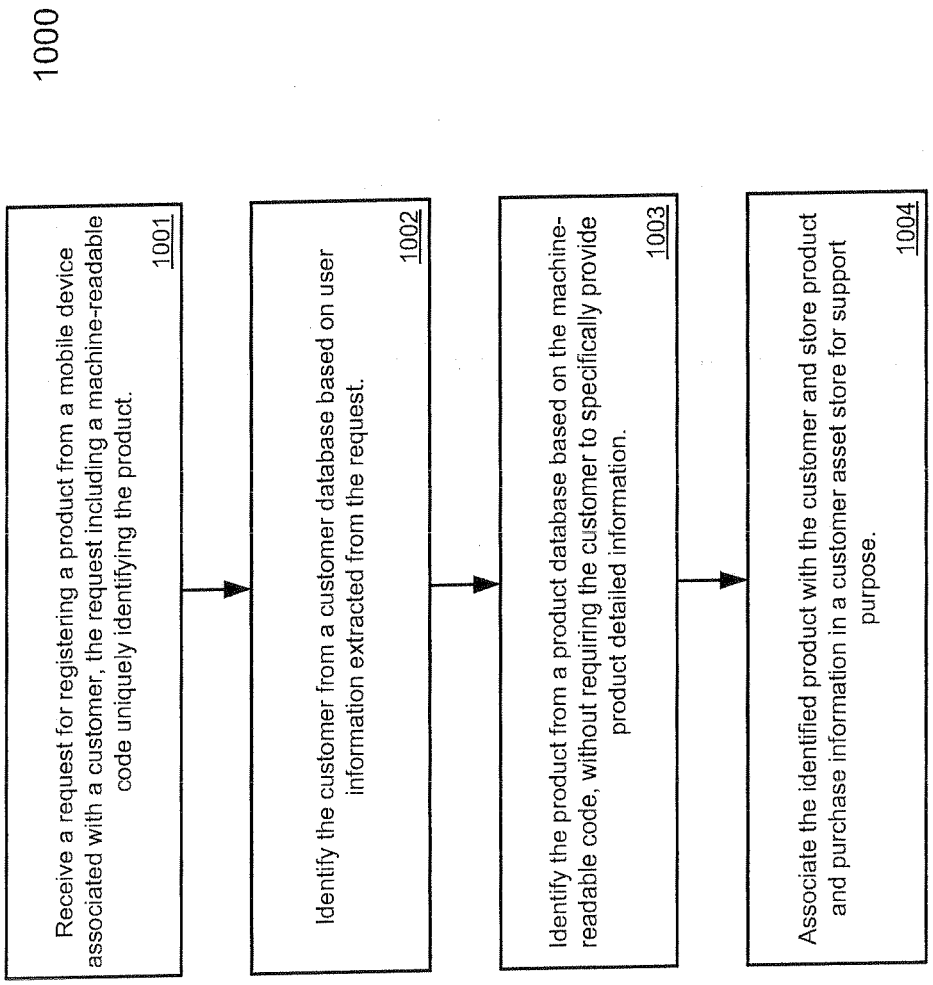
1000
Receive a request for registering a product from a mobile device associated with a customer, the request including a machine-readable code uniquely identifying the product.
1001
Identify the customer from a customer database based on user information extracted from the request.
1002
Identify the product from a product database based on the machine-readable code, without requiring the customer to specifically provide product detailed information.
1003
Associate the identified product with the customer and store product and purchase information in a customer asset store for support purpose.
1004

FIG. 10

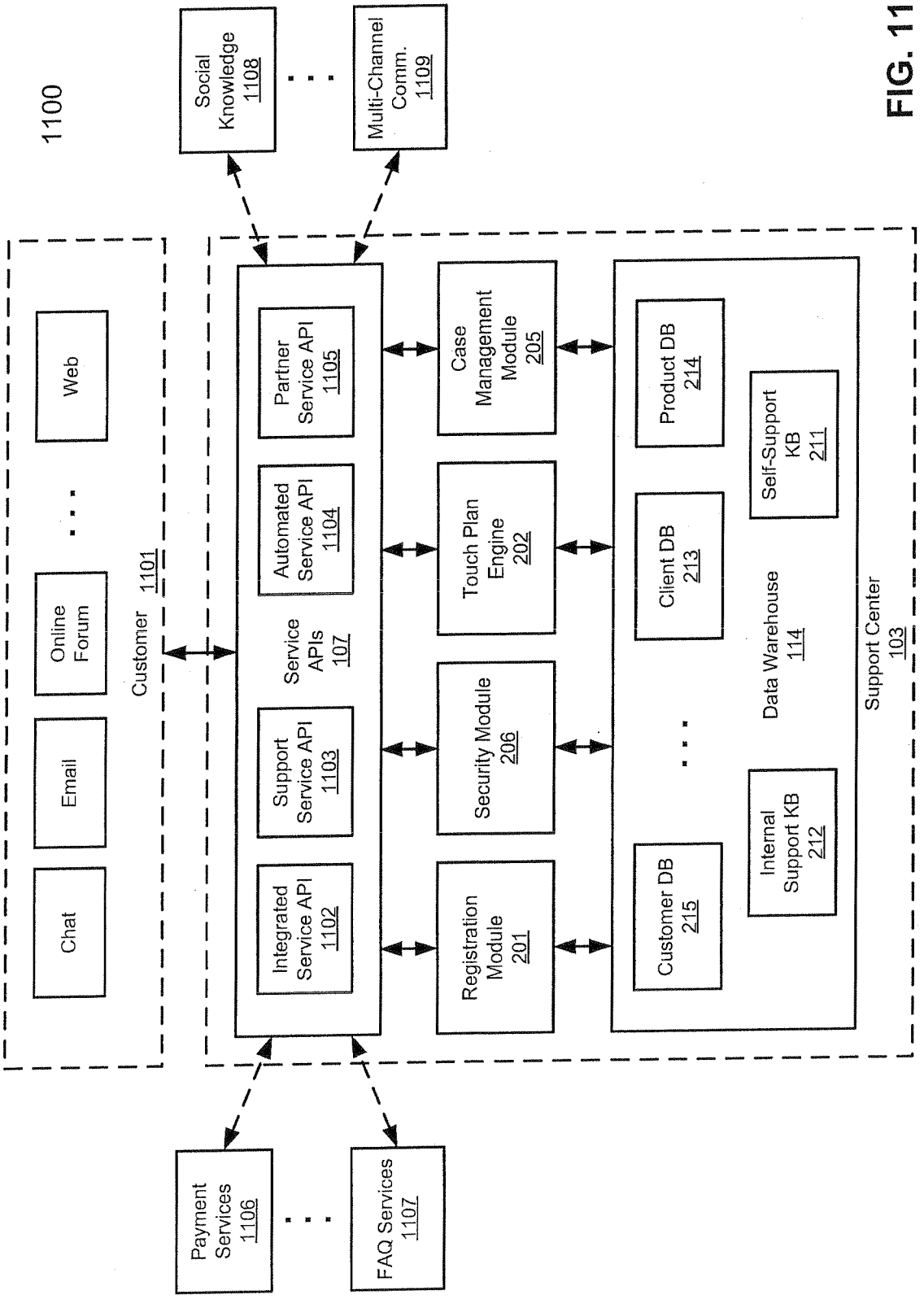
1100
Social Knowledge 1108
Multi-Channel Comm. 1109
Customer 1101
Chat
Email
Online Forum
Web
Service APIs 107
Integrated Service API 1102
Support Service API 1103
Automated Service API 1104
Partner Service API 1105
Registration Module 201
Security Module 206
Touch Plan Engine 202
Case Management Module 205
Support Center 103
Data Warehouse 114
Customer DB 215
Internal Support KB 212
Client DB 213
Product DB 214
Self-Support KB 211
Payment Services 1106
FAQ Services 1107

FIG. 11

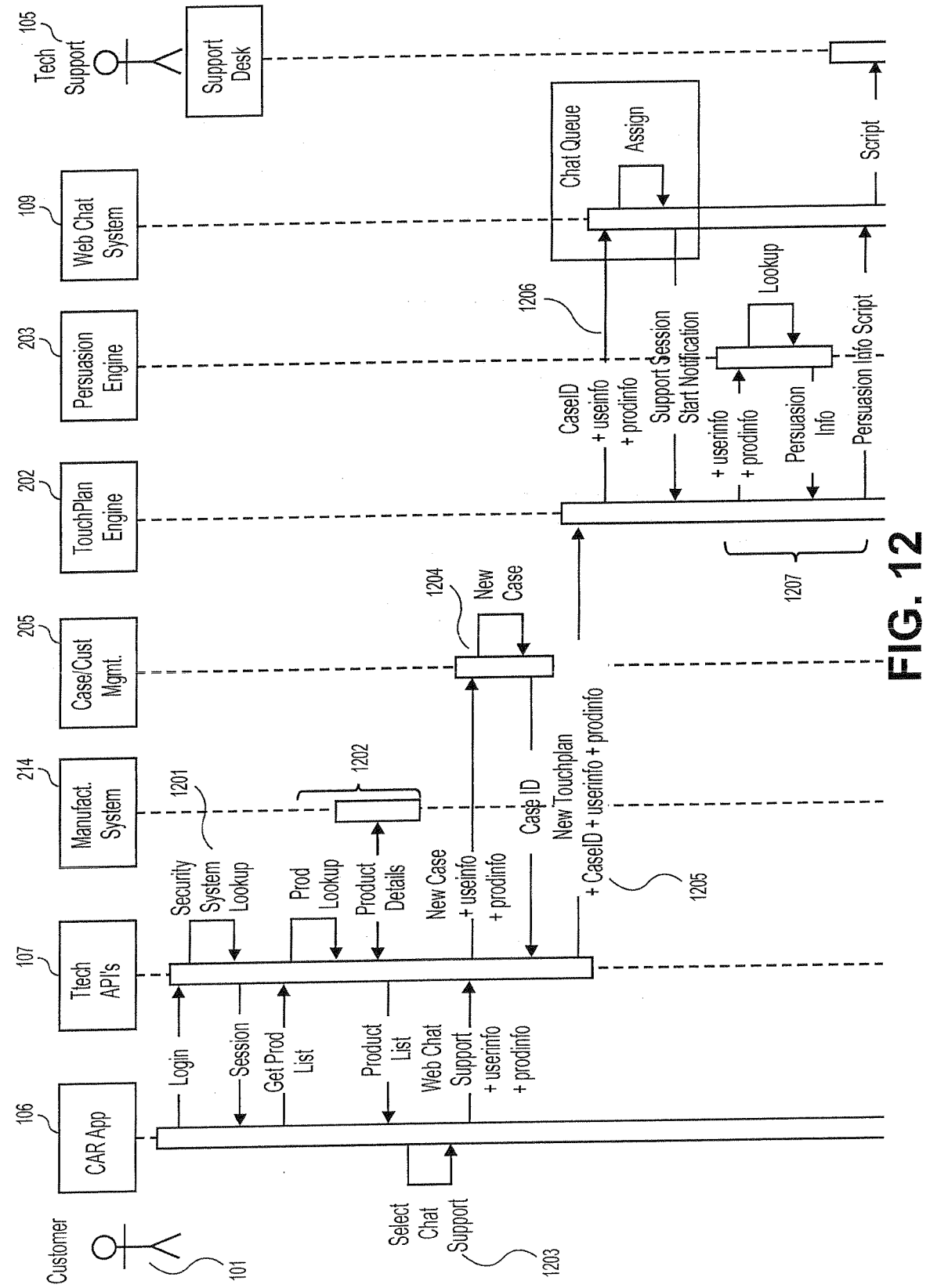
Customer
101
CAR App
106
Ttech API's
107
Manufact. System
214
Case/Cust Mgmt.
205
TouchPlan Engine
202
Persuasion Engine
203
Web Chat System
109
Tech Support
105
Support Desk
Login
Session
Get Prod List
Product List
Web Chat Support
+ userinfo
+ prodinfo
Select Chat Support
1203
Security System Lookup
Prod Lookup
Product Details
1201
1202
New Case
+ useinfo
+ prodinfo
1204
Case ID
New Touchplan
+ CaseID + userinfo + prodinfo
1205
Chat Queue
Assign
Script
1206
CaseID
+ useinfo
+ prodinfo
Support Session Start Notification
Lookup
+ userinfo
+ prodinfo
Persuasion Info
Persuasion Info Script
1207

FIG. 12

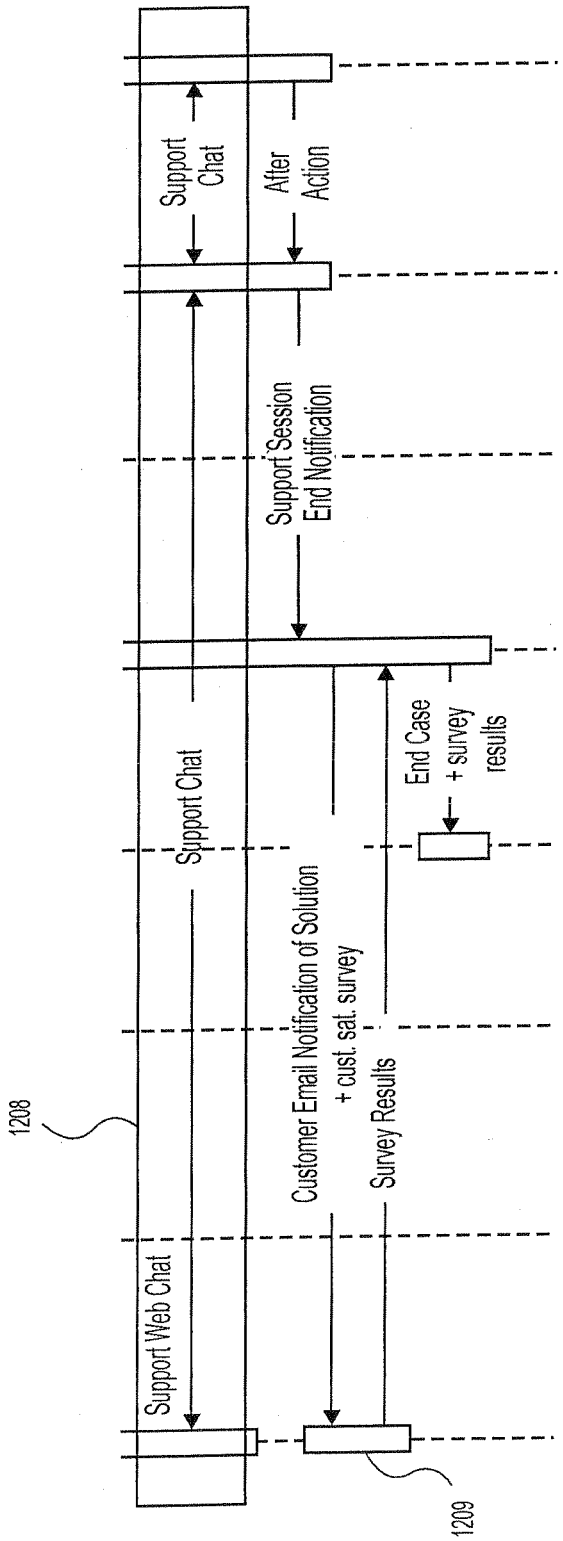
Support Chat
After Action
Support Session End Notification
End Case + survey results
Support Chat
Customer Email Notification of Solution + cust. sat. survey
Survey Results
1208
Support Web Chat
1209

FIG. 12 (CONT.)

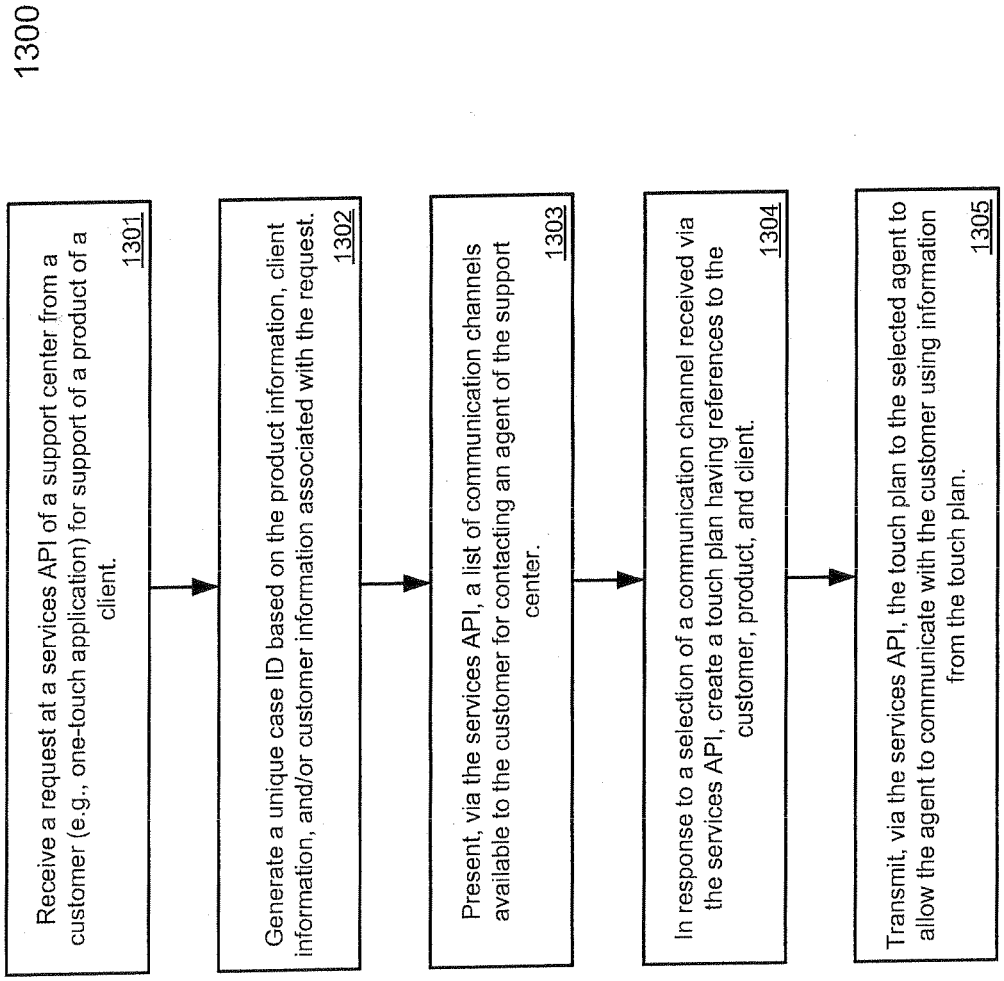
1300
Receive a request at a services API of a support center from a customer (e.g., one-touch application) for support of a product of a client. 1301
Generate a unique case ID based on the product information, client information, and/or customer information associated with the request. 1302
Present, via the services API, a list of communication channels available to the customer for contacting an agent of the support center. 1303
In response to a selection of a communication channel received via the services API, create a touch plan having references to the customer, product, and client. 1304
Transmit, via the services API, the touch plan to the selected agent to allow the agent to communicate with the customer using information from the touch plan. 1305

FIG. 13

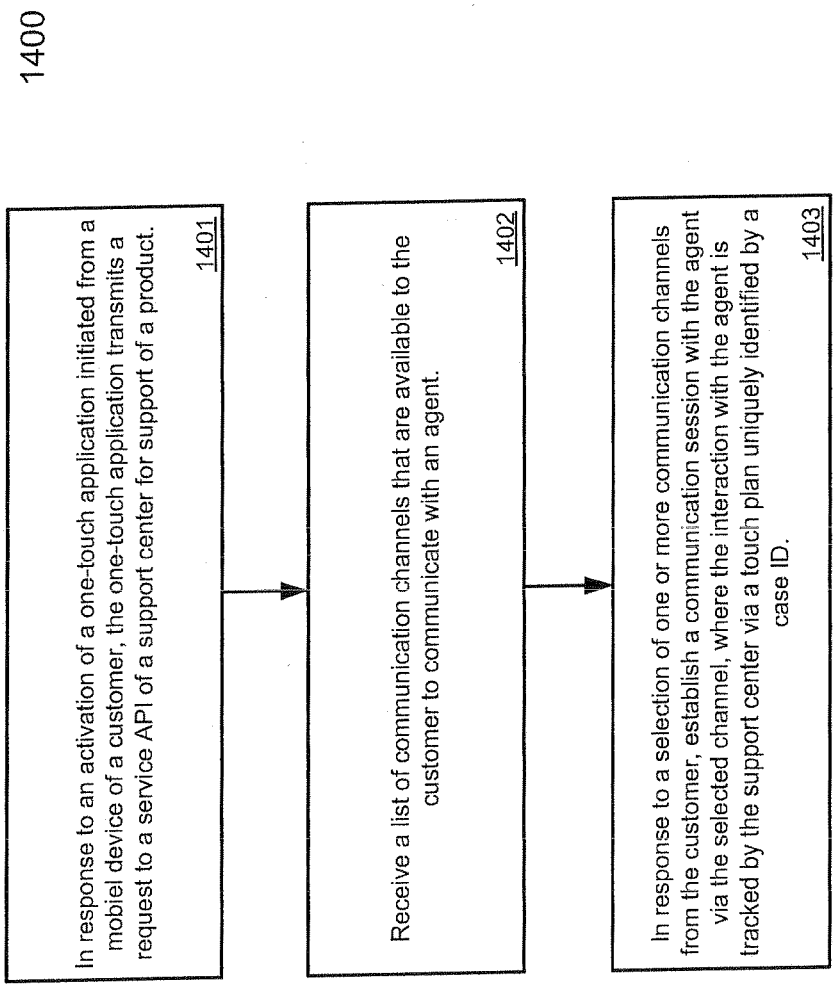
1400
In response to an activation of a one-touch application initiated from a mobiel device of a customer, the one-touch application transmits a request to a service API of a support center for support of a product.
1401
Receive a list of communication channels that are available to the customer to communicate with an agent.
1402
In response to a selection of one or more communication channels from the customer, establish a communication session with the agent via the selected channel, where the interaction with the agent is tracked by the support center via a touch plan uniquely identified by a case ID.
1403

FIG. 14

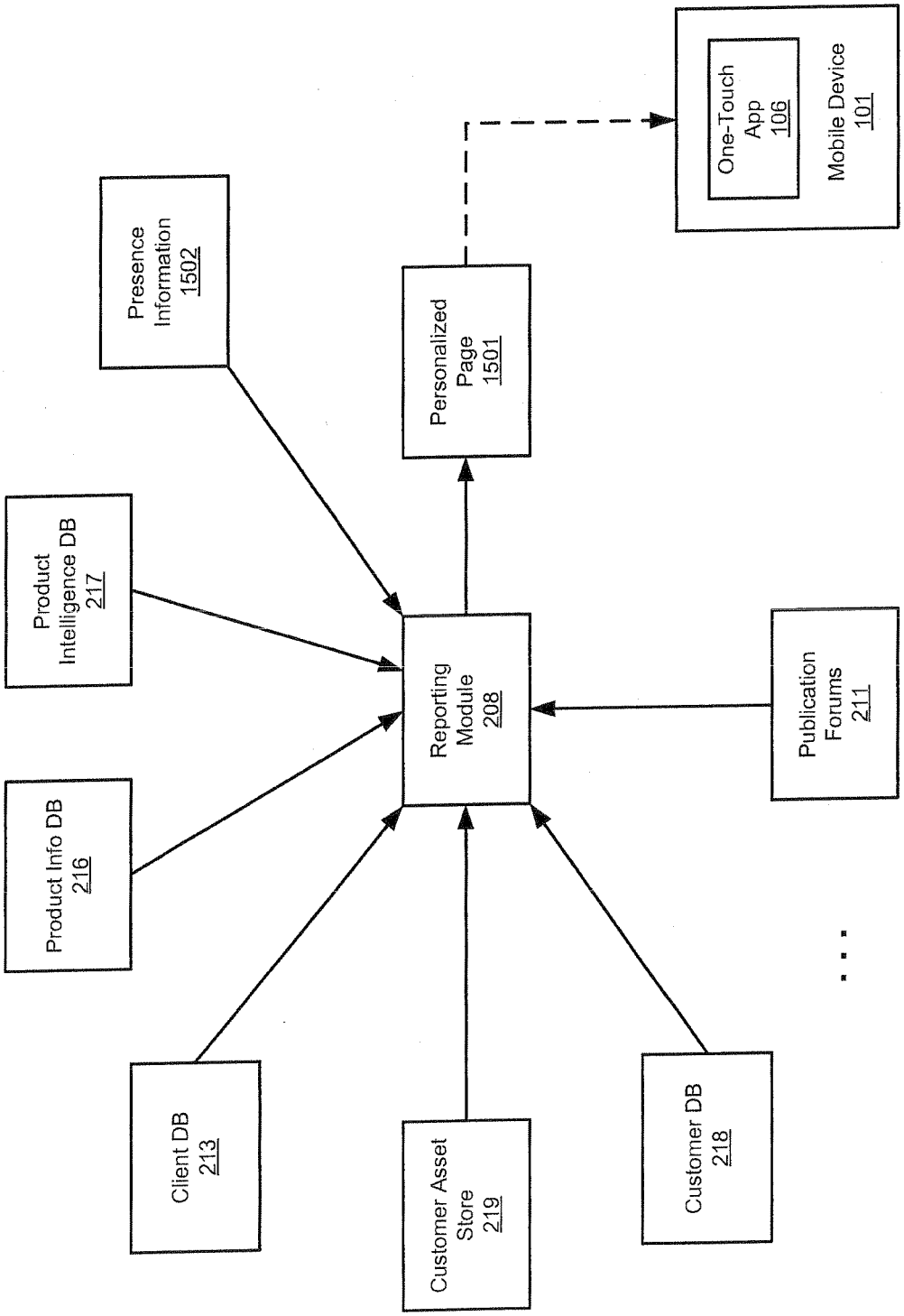
Mobile Device 101
One-Touch App 106
Personalized Page 1501
Presence Information 1502
Product Intelligence DB 217
Product Info DB 216
Reporting Module 208
Publication Forums 211
Client DB 213
Customer Asset Store 219
Customer DB 218
. . .

FIG. 15

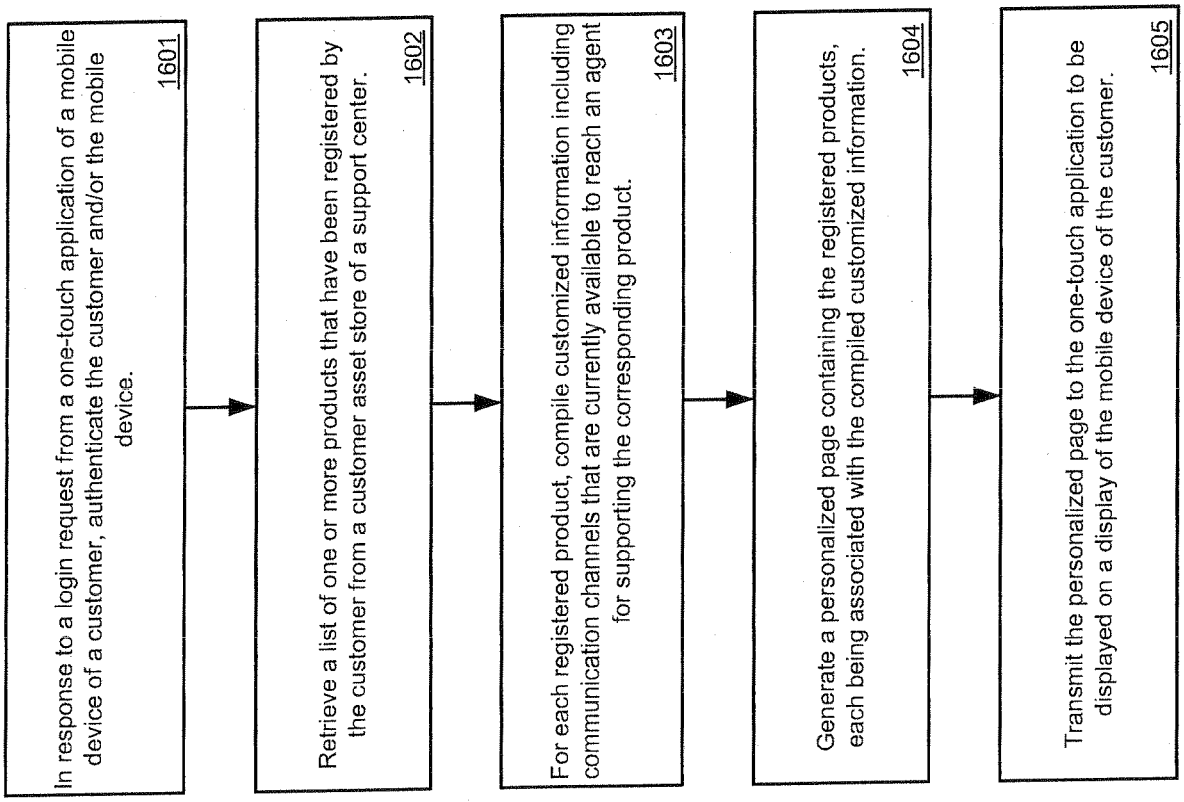
1600
In response to a login request from a one-touch application of a mobile device of a customer, authenticate the customer and/or the mobile device.
1601
Retrieve a list of one or more products that have been registered by the customer from a customer asset store of a support center.
1602
For each registered product, compile customized information including communication channels that are currently available to reach an agent for supporting the corresponding product.
1603
Generate a personalized page containing the registered products, each being associated with the compiled customized information.
1604
Transmit the personalized page to the one-touch application to be displayed on a display of the mobile device of the customer.
1605

FIG. 16

Channels / Entities	Voice	Email	Chat	...	Web
Client Preference	No	Yes	No	...	Yes
Customer Preference	Yes	Yes	Yes	...	Yes

FIG. 17

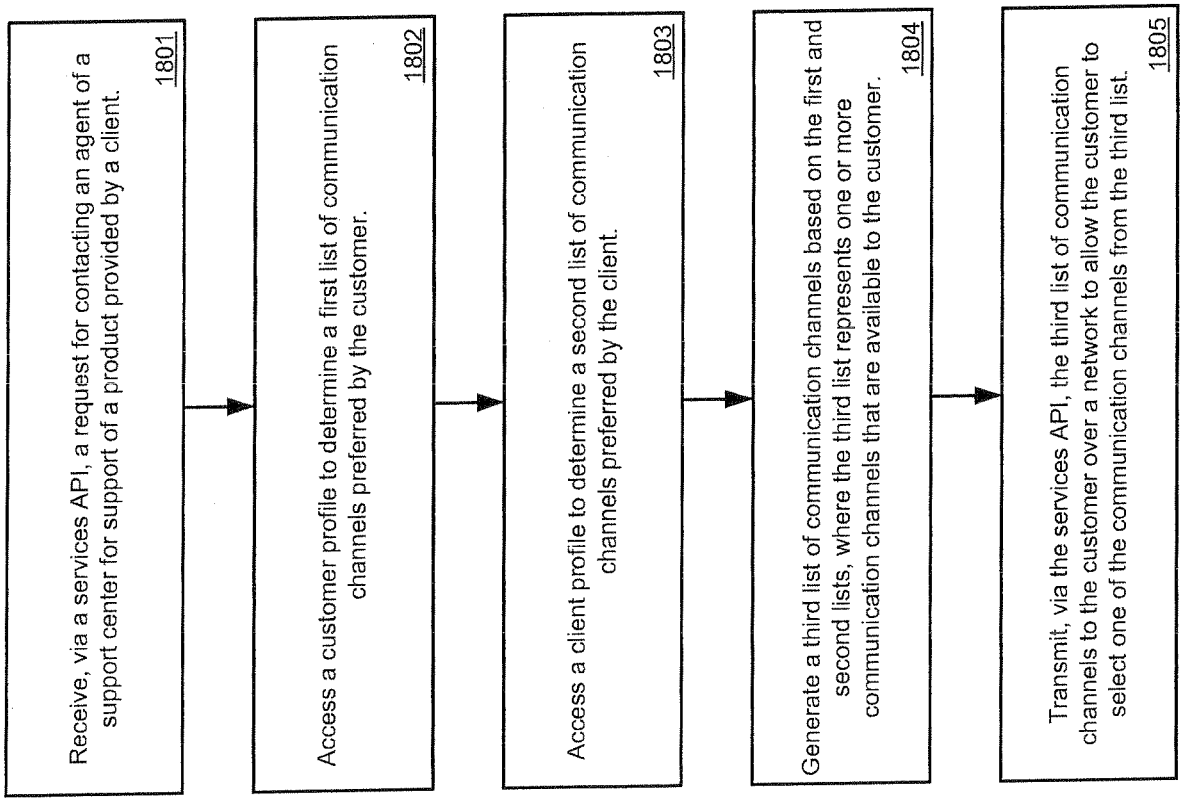
1800
Receive, via a services API, a request for contacting an agent of a support center for support of a product provided by a client.
1801
Access a customer profile to determine a first list of communication channels preferred by the customer.
1802
Access a client profile to determine a second list of communication channels preferred by the client.
1803
Generate a third list of communication channels based on the first and second lists, where the third list represents one or more communication channels that are available to the customer.
1804
Transmit, via the services API, the third list of communication channels to the customer over a network to allow the customer to select one of the communication channels from the third list.
1805

FIG. 18

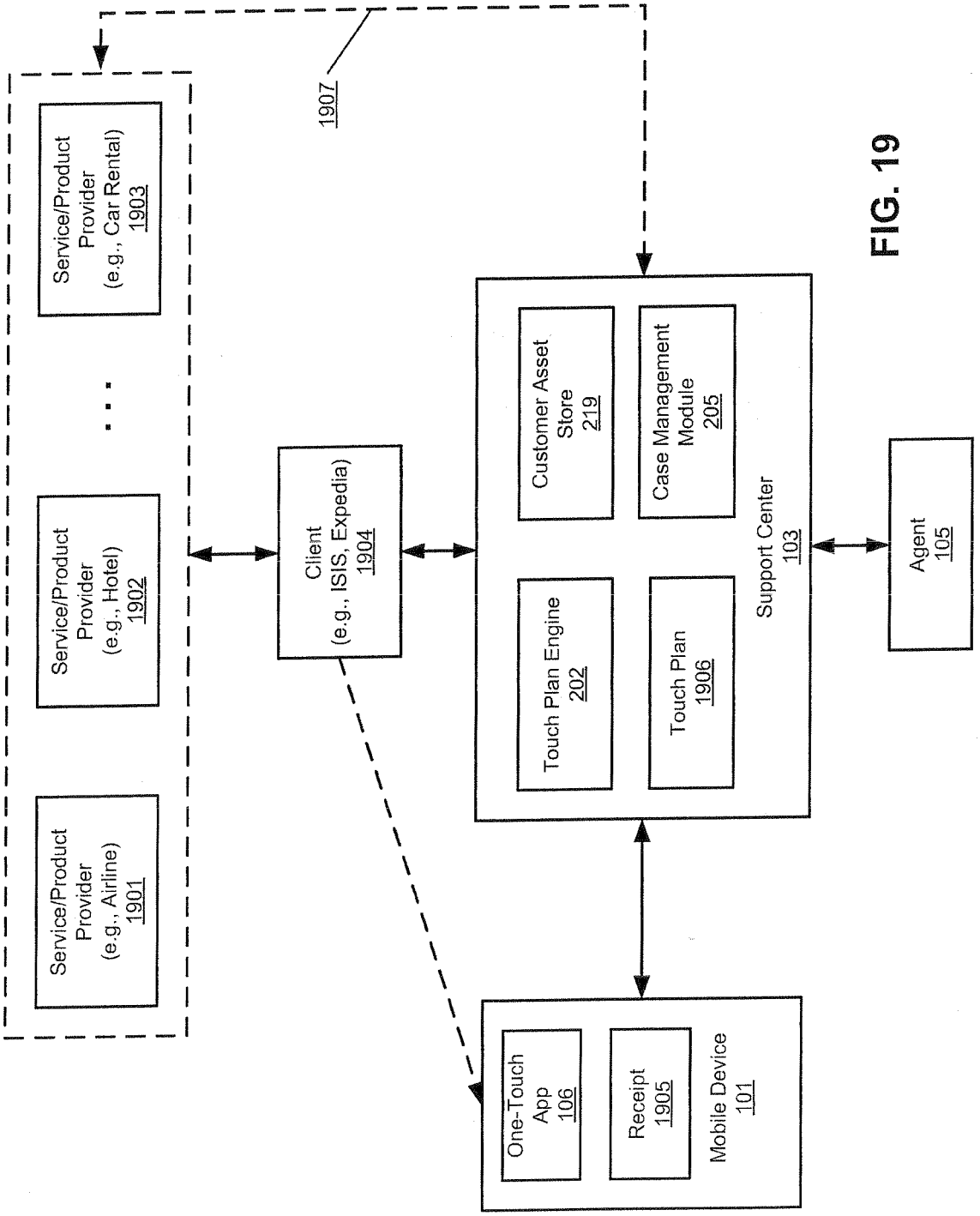
1907
Service/Product Provider (e.g., Airline) 1901
Service/Product Provider (e.g., Hotel) 1902
Service/Product Provider (e.g., Car Rental) 1903
Client (e.g., ISIS, Expedia) 1904
Support Center 103
Customer Asset Store 219
Case Management Module 205
Touch Plan Engine 202
Touch Plan 1906
Agent 105
Mobile Device 101
One-Touch App 106
Receipt 1905

FIG. 19

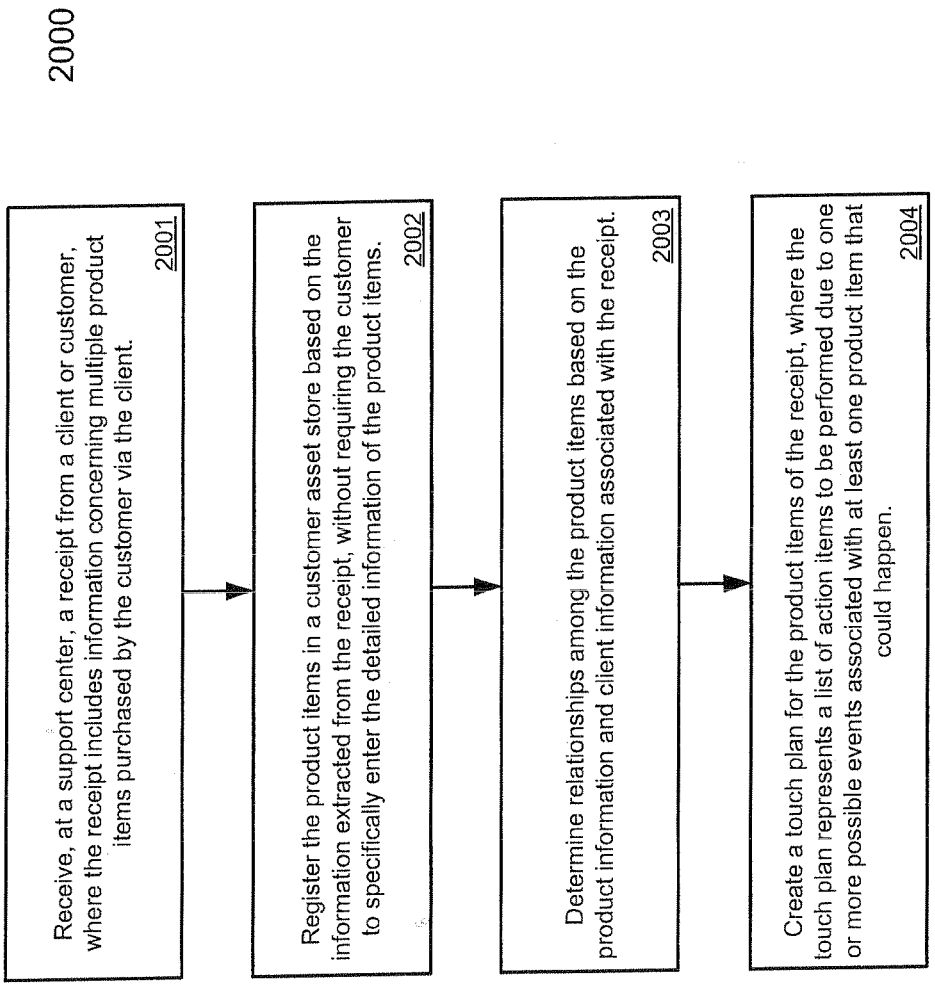
2000
Receive, at a support center, a receipt from a client or customer, where the receipt includes information concerning multiple product items purchased by the customer via the client.
2001
Register the product items in a customer asset store based on the information extracted from the receipt, without requiring the customer to specifically enter the detailed information of the product items.
2002
Determine relationships among the product items based on the product information and client information associated with the receipt.
2003
Create a touch plan for the product items of the receipt, where the touch plan represents a list of action items to be performed due to one or more possible events associated with at least one product item that could happen.
2004

FIG. 20

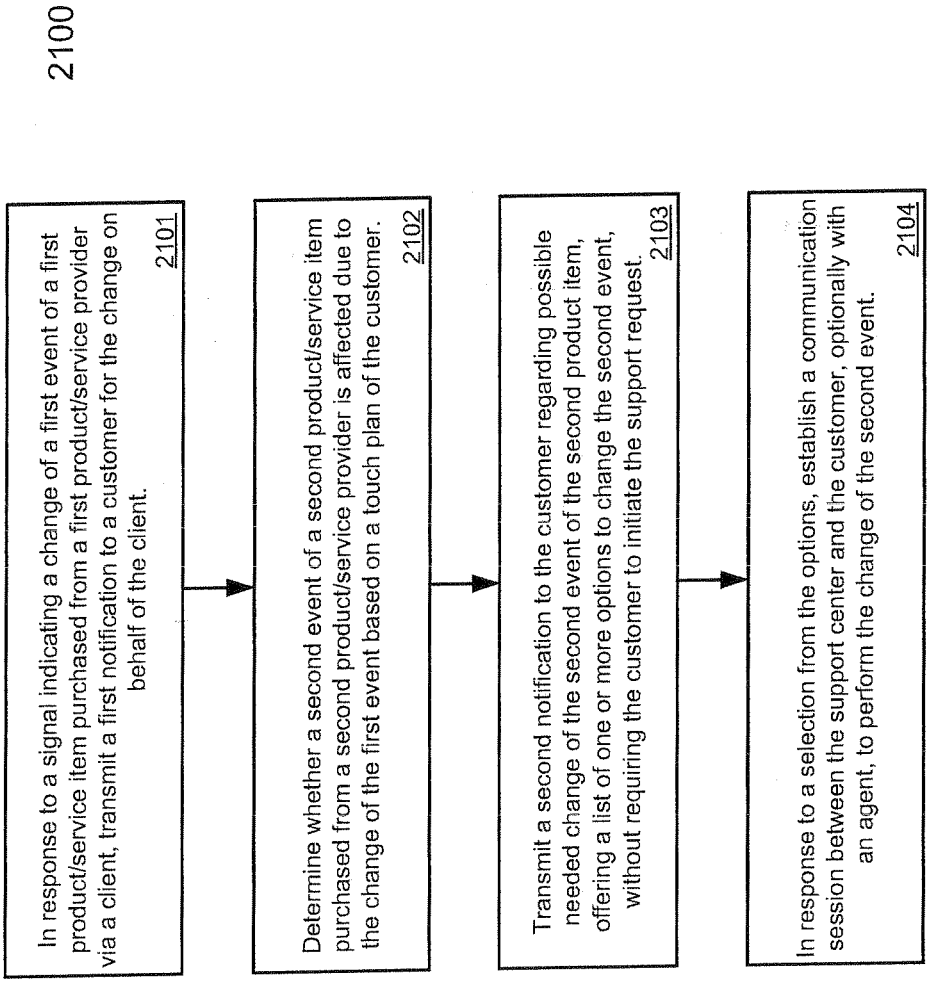
2100
In response to a signal indicating a change of a first event of a first product/service item purchased from a first product/service provider via a client, transmit a first notification to a customer for the change on behalf of the client. 2101
Determine whether a second event of a second product/service item purchased from a second product/service provider is affected due to the change of the first event based on a touch plan of the customer. 2102
Transmit a second notification to the customer regarding possible needed change of the second event of the second product item, offering a list of one or more options to change the second event, without requiring the customer to initiate the support request. 2103
In response to a selection from the options, establish a communication session between the support center and the customer, optionally with an agent, to perform the change of the second event. 2104

FIG. 21

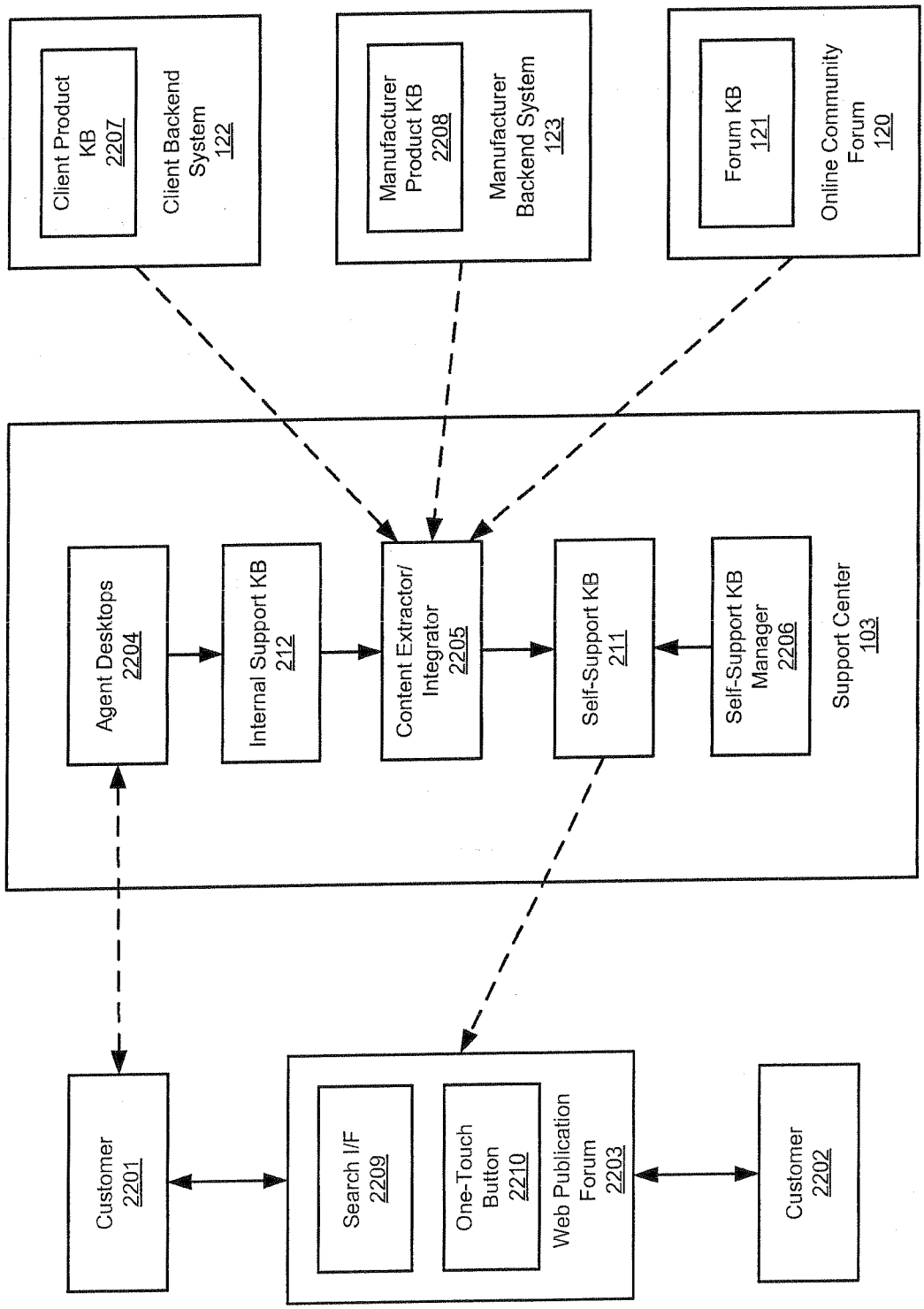
Client Product KB 2207
Client Backend System 122
Manufacturer Product KB 2208
Manufacturer Backend System 123
Forum KB 121
Online Community Forum 120
Agent Desktops 2204
Internal Support KB 212
Content Extractor/ Integrator 2205
Self-Support KB 211
Self-Support KB Manager 2206
Support Center 103
Customer 2201
Search I/F 2209
One-Touch Button 2210
Web Publication Forum 2203
Customer 2202

FIG. 22

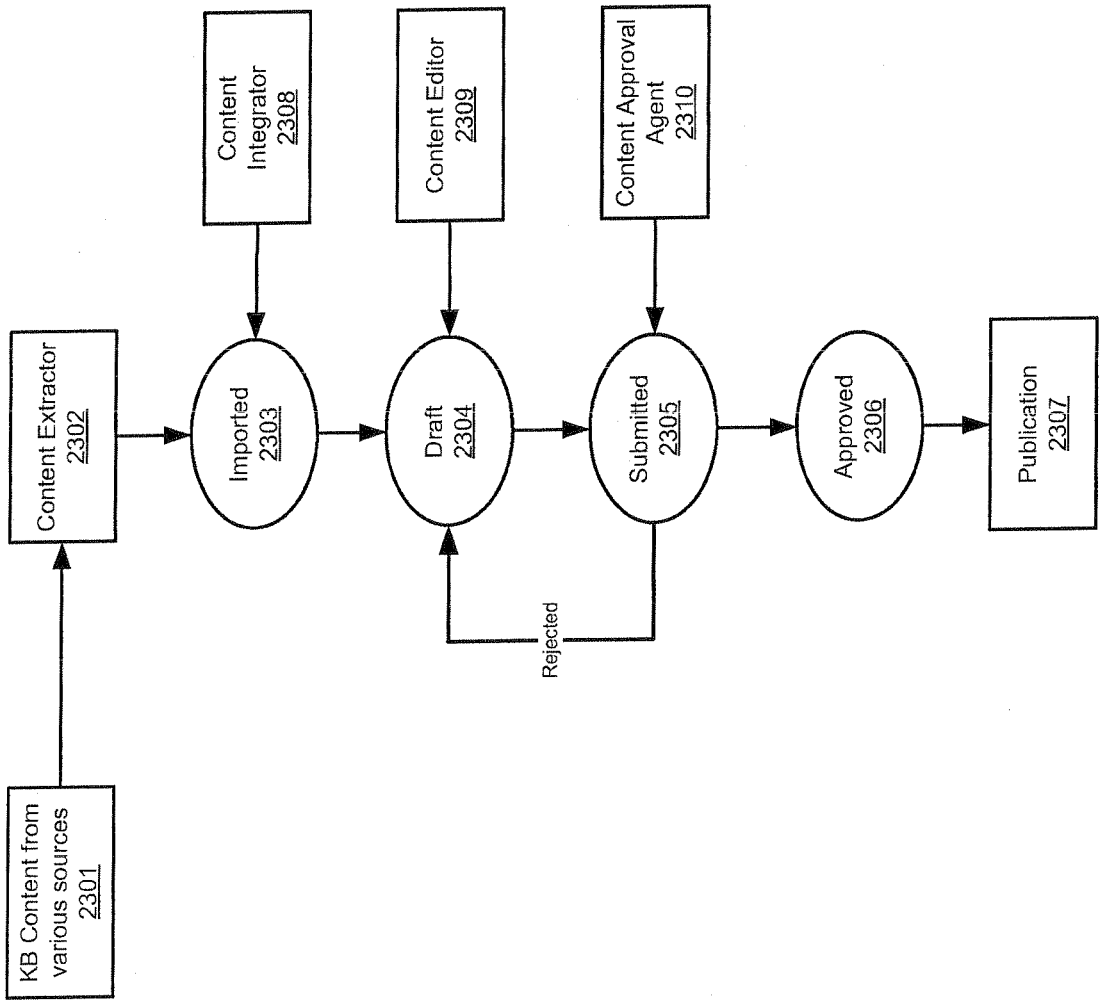
KB Content from various sources 2301
Content Extractor 2302
Imported 2303
Content Integrator 2308
Draft 2304
Content Editor 2309
Submitted 2305
Content Approval Agent 2310
Approved 2306
Publication 2307
Rejected

FIG. 23

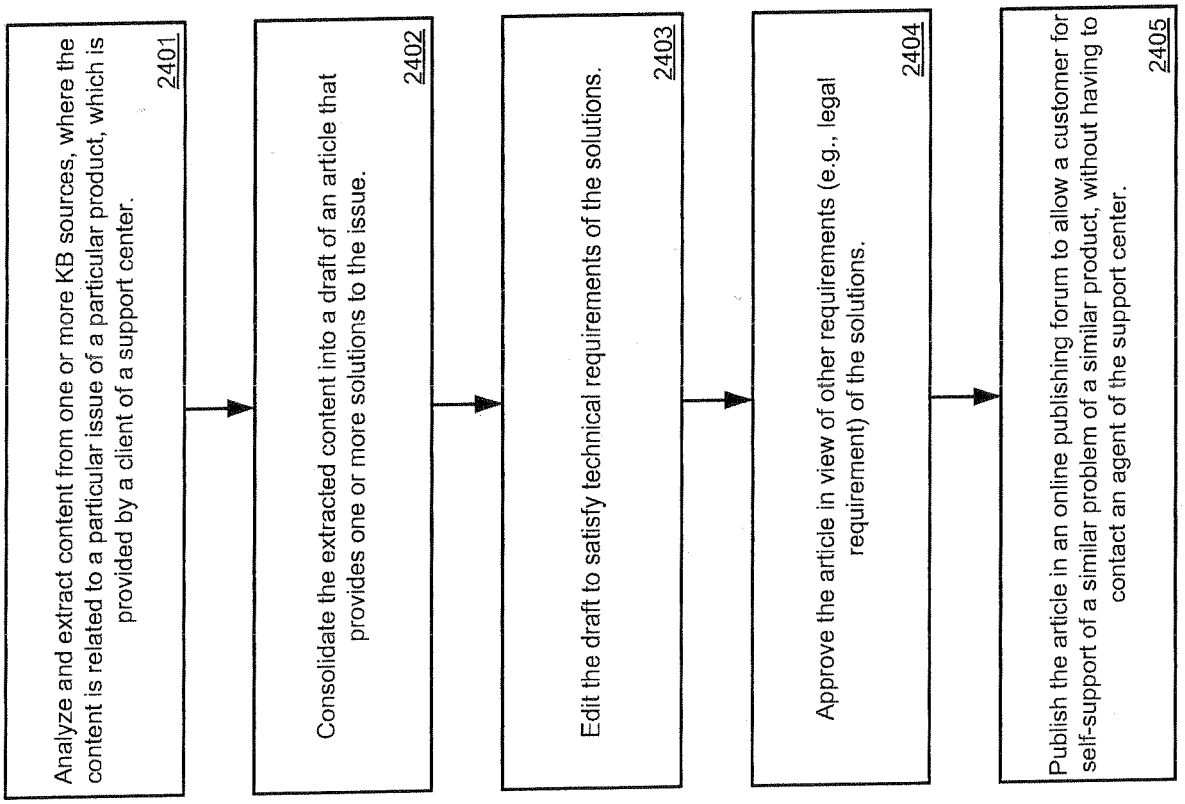
2400
Analyze and extract content from one or more KB sources, where the content is related to a particular issue of a particular product, which is provided by a client of a support center.
2401
Consolidate the extracted content into a draft of an article that provides one or more solutions to the issue.
2402
Edit the draft to satisfy technical requirements of the solutions.
2403
Approve the article in view of other requirements (e.g., legal requirement) of the solutions.
2404
Publish the article in an online publishing forum to allow a customer for self-support of a similar problem of a similar product, without having to contact an agent of the support center.
2405

FIG. 24

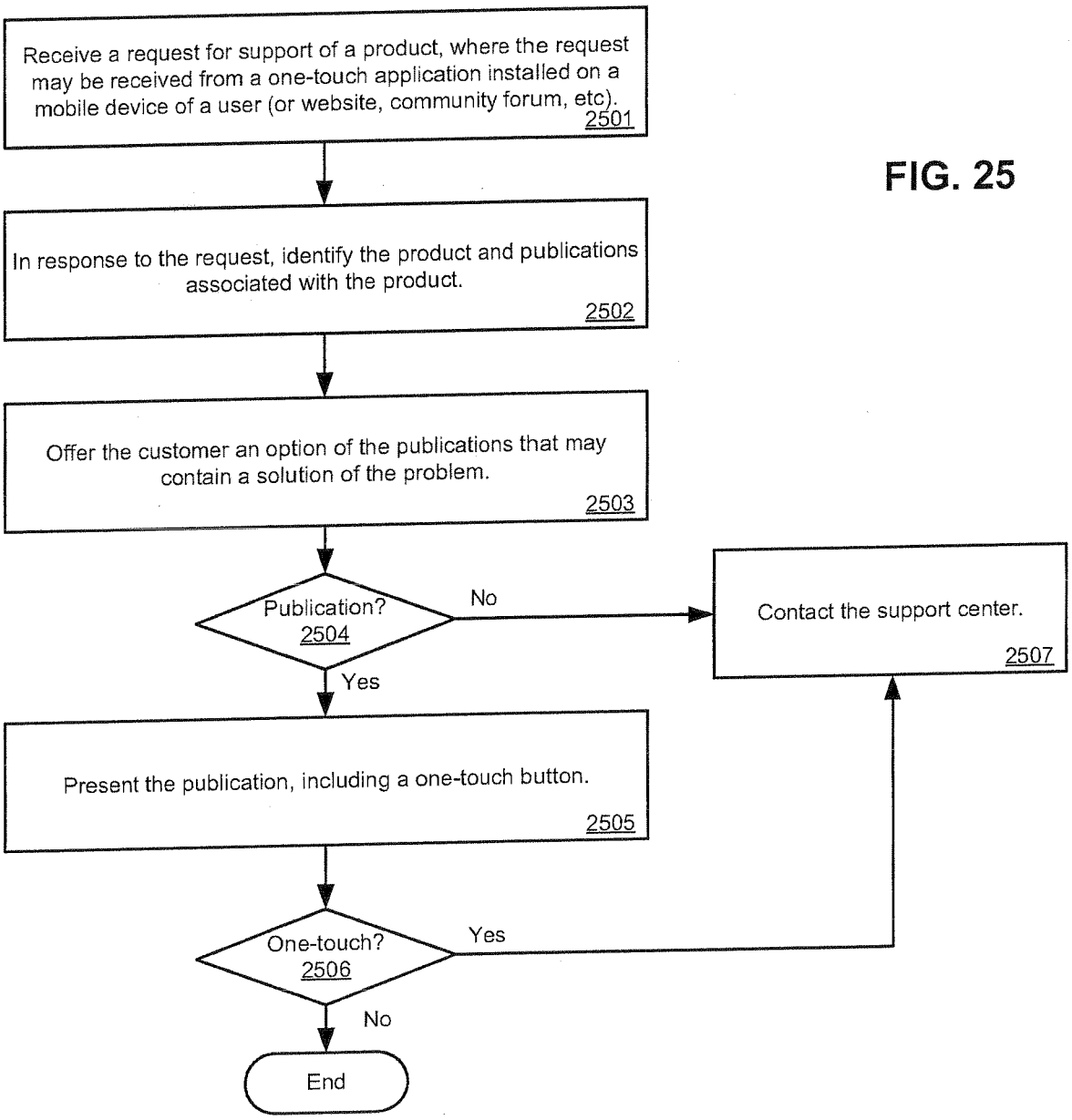
Receive a request for support of a product, where the request may be received from a one-touch application installed on a mobile device of a user (or website, community forum, etc).
2501
In response to the request, identify the product and publications associated with the product.
2502
Offer the customer an option of the publications that may contain a solution of the problem.
2503
Publication?
2504
No
Contact the support center.
2507
Yes
Present the publication, including a one-touch button.
2505
One-touch?
2506
Yes
No
End

FIG. 25

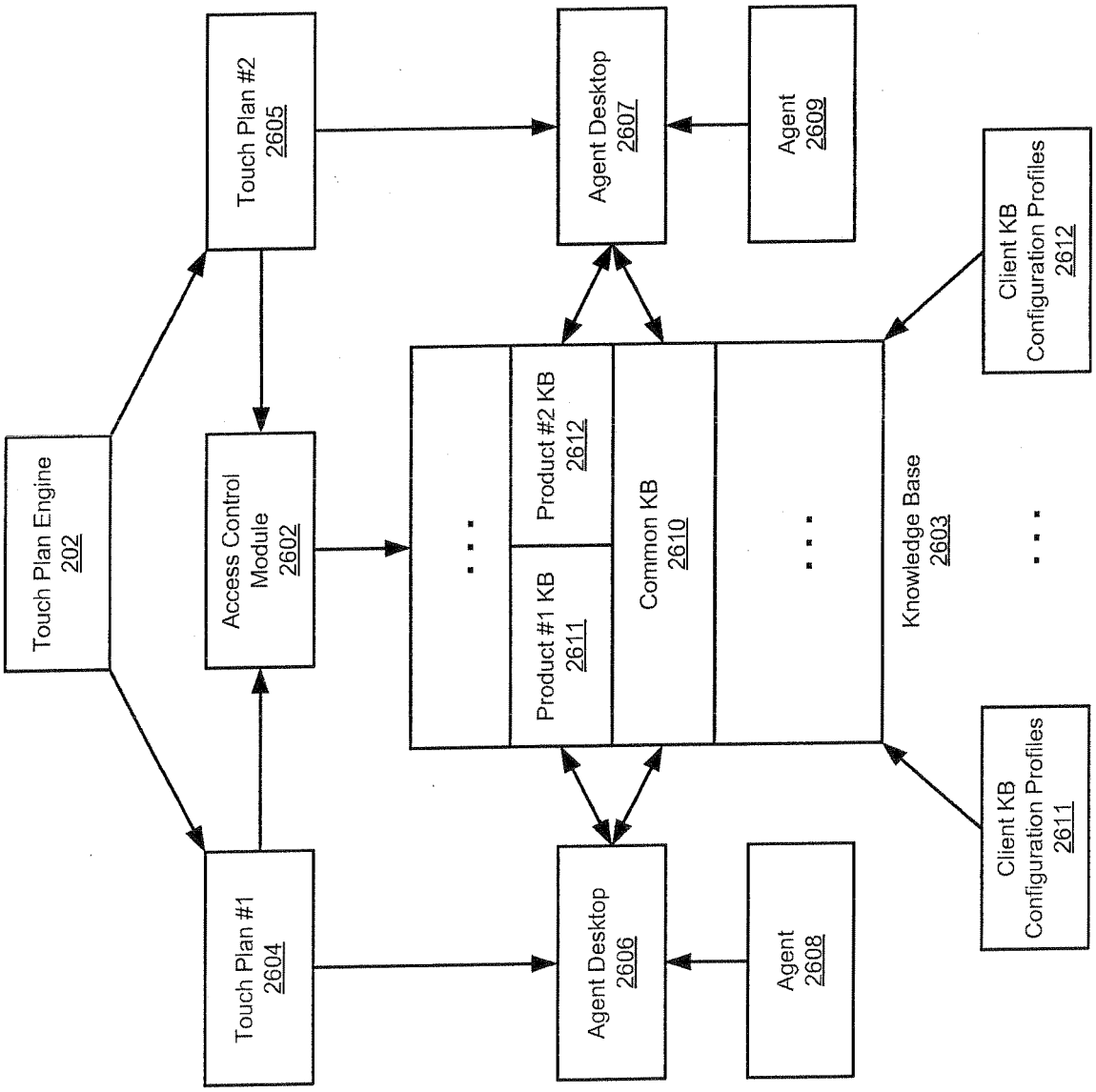
Touch Plan Engine 202
Touch Plan #2 2605
Touch Plan #1 2604
Access Control Module 2602
Agent Desktop 2607
Agent Desktop 2606
Agent 2609
Agent 2608
Product #1 KB 2611
Product #2 KB 2612
Common KB 2610
Knowledge Base 2603
Client KB Configuration Profiles 2612
Client KB Configuration Profiles 2611

FIG. 26

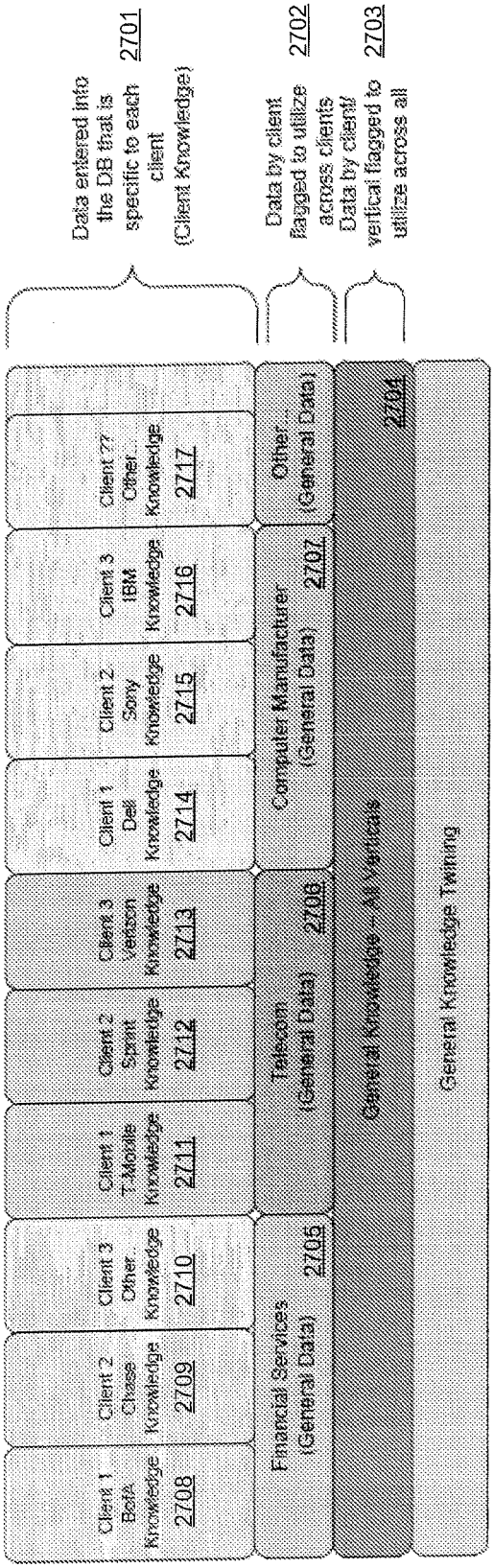
Data entered into the DB that is specific to each client (Client Knowledge) 2701
Data by client flagged to utilize across clients 2702
Data by client/ vertical flagged to utilize across all 2703
Client 1 BofA Knowledge 2708
Client 2 Chase Knowledge 2709
Client 3 Other Knowledge 2710
Client 1 T-Mobile Knowledge 2711
Client 2 Sprint Knowledge 2712
Client 3 Verizon Knowledge 2713
Client 1 Dell Knowledge 2714
Client 2 Sony Knowledge 2715
Client 3 IBM Knowledge 2716
Client 77 Other Knowledge 2717
Financial Services (General Data) 2705
Telecom (General Data) 2706
Computer Manufacturer (General Data) 2707
Other... (General Data)
General Knowledge – All Verticals 2704
General Knowledge Twining

FIG. 27

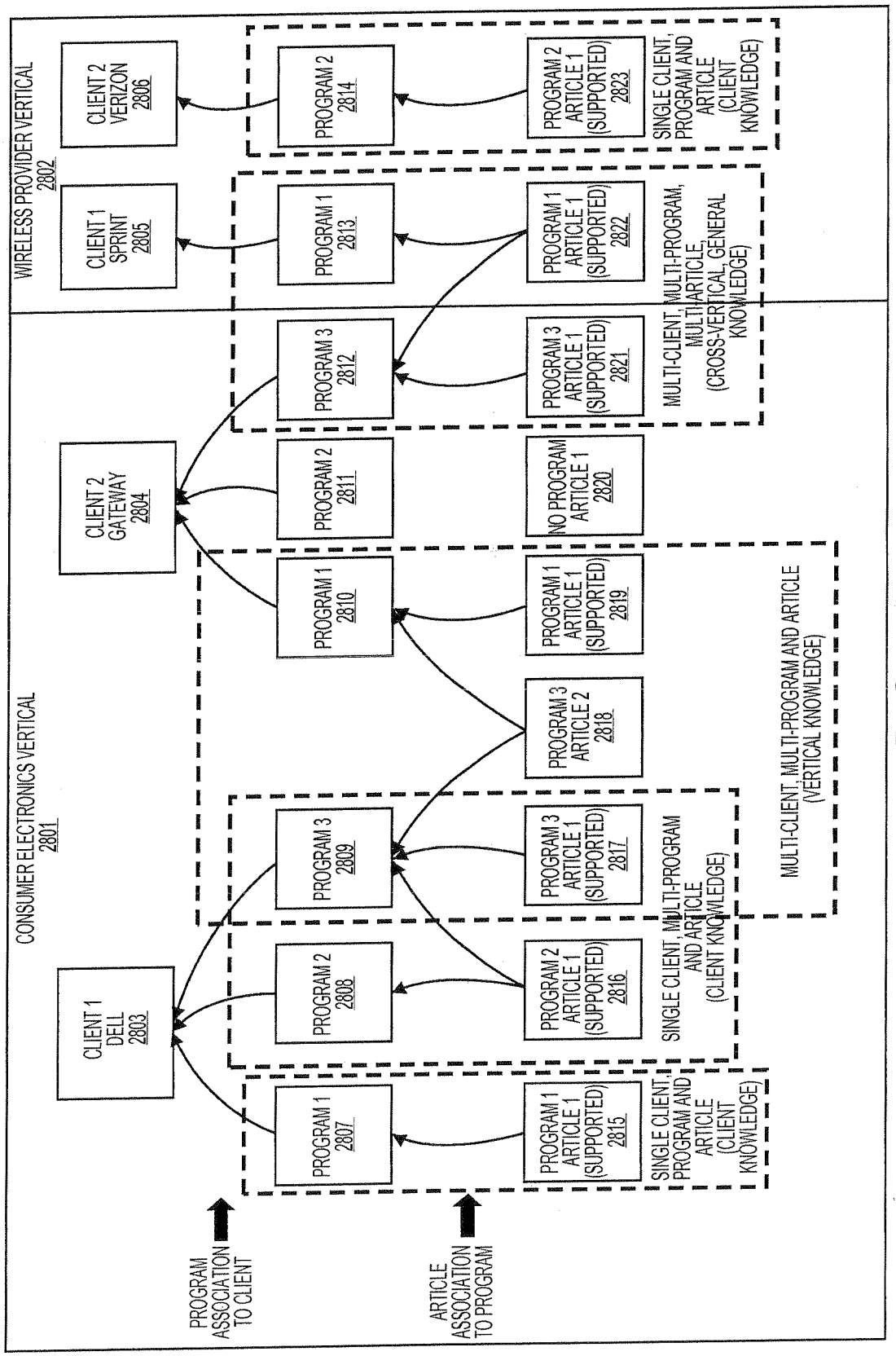
CONSUMER ELECTRONICS VERTICAL 2801
WIRELESS PROVIDER VERTICAL 2802
CLIENT 1 DELL 2803
CLIENT 2 GATEWAY 2804
CLIENT 1 SPRINT 2805
CLIENT 2 VERIZON 2806
PROGRAM 1 2807
PROGRAM 2 2808
PROGRAM 3 2809
PROGRAM 1 2810
PROGRAM 2 2811
PROGRAM 3 2812
PROGRAM 1 2813
PROGRAM 2 2814
PROGRAM 1 ARTICLE 1 (SUPPORTED) 2815
PROGRAM 2 ARTICLE 1 (SUPPORTED) 2816
PROGRAM 3 ARTICLE 1 (SUPPORTED) 2817
PROGRAM 3 ARTICLE 2 2818
PROGRAM 1 ARTICLE 1 (SUPPORTED) 2819
NO PROGRAM ARTICLE 1 2820
PROGRAM 3 ARTICLE 1 (SUPPORTED) 2821
PROGRAM 1 ARTICLE 1 (SUPPORTED) 2822
PROGRAM 2 ARTICLE 1 (SUPPORTED) 2823
SINGLE CLIENT, PROGRAM AND ARTICLE (CLIENT KNOWLEDGE)
SINGLE CLIENT, MULTI-PROGRAM AND ARTICLE (CLIENT KNOWLEDGE)
MULTI-CLIENT, MULTI-PROGRAM, MULTI-ARTICLE, (CROSS-VERTICAL, GENERAL KNOWLEDGE)
MULTI-CLIENT, MULTI-PROGRAM AND ARTICLE (VERTICAL KNOWLEDGE)
PROGRAM ASSOCIATION TO CLIENT
ARTICLE ASSOCIATION TO PROGRAM

FIG. 28

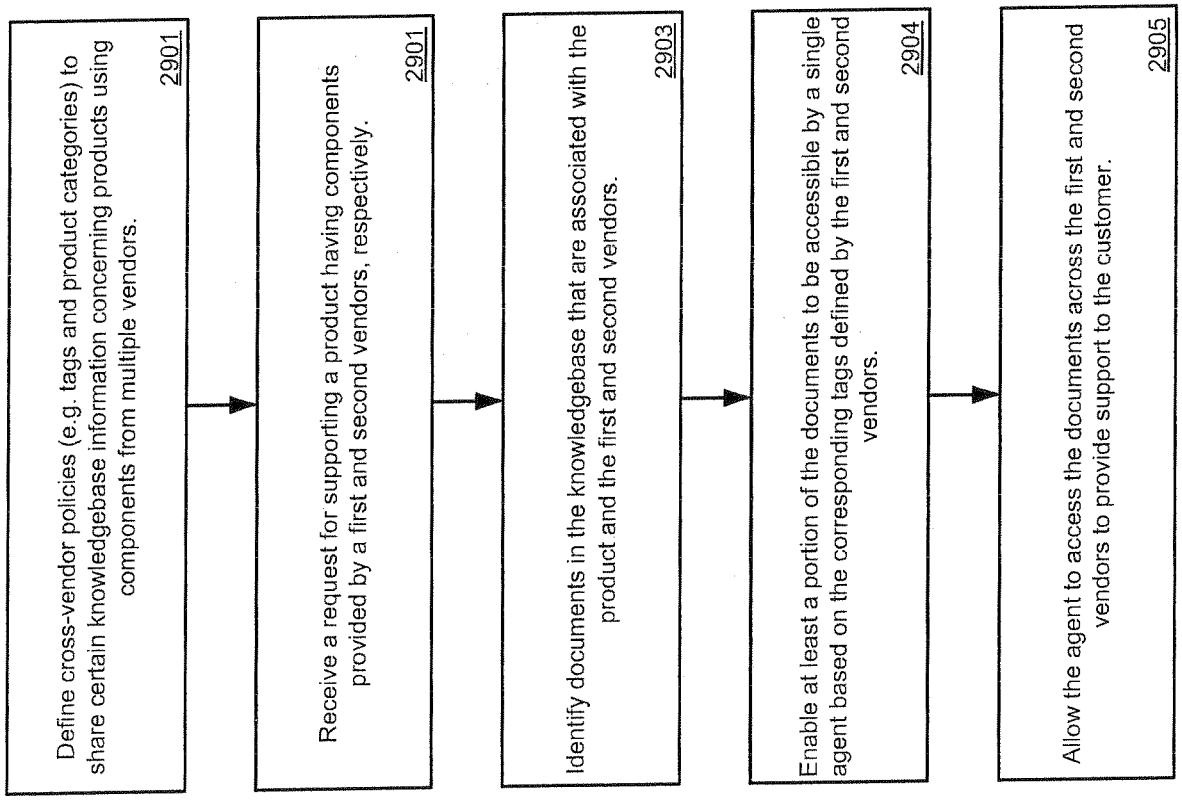
2900
Define cross-vendor policies (e.g. tags and product categories) to share certain knowledgebase information concerning products using components from multiple vendors.
2901
Receive a request for supporting a product having components provided by a first and second vendors, respectively.
2901
Identify documents in the knowledgebase that are associated with the product and the first and second vendors.
2903
Enable at least a portion of the documents to be accessible by a single agent based on the corresponding tags defined by the first and second vendors.
2904
Allow the agent to access the documents across the first and second vendors to provide support to the customer.
2905

FIG. 29

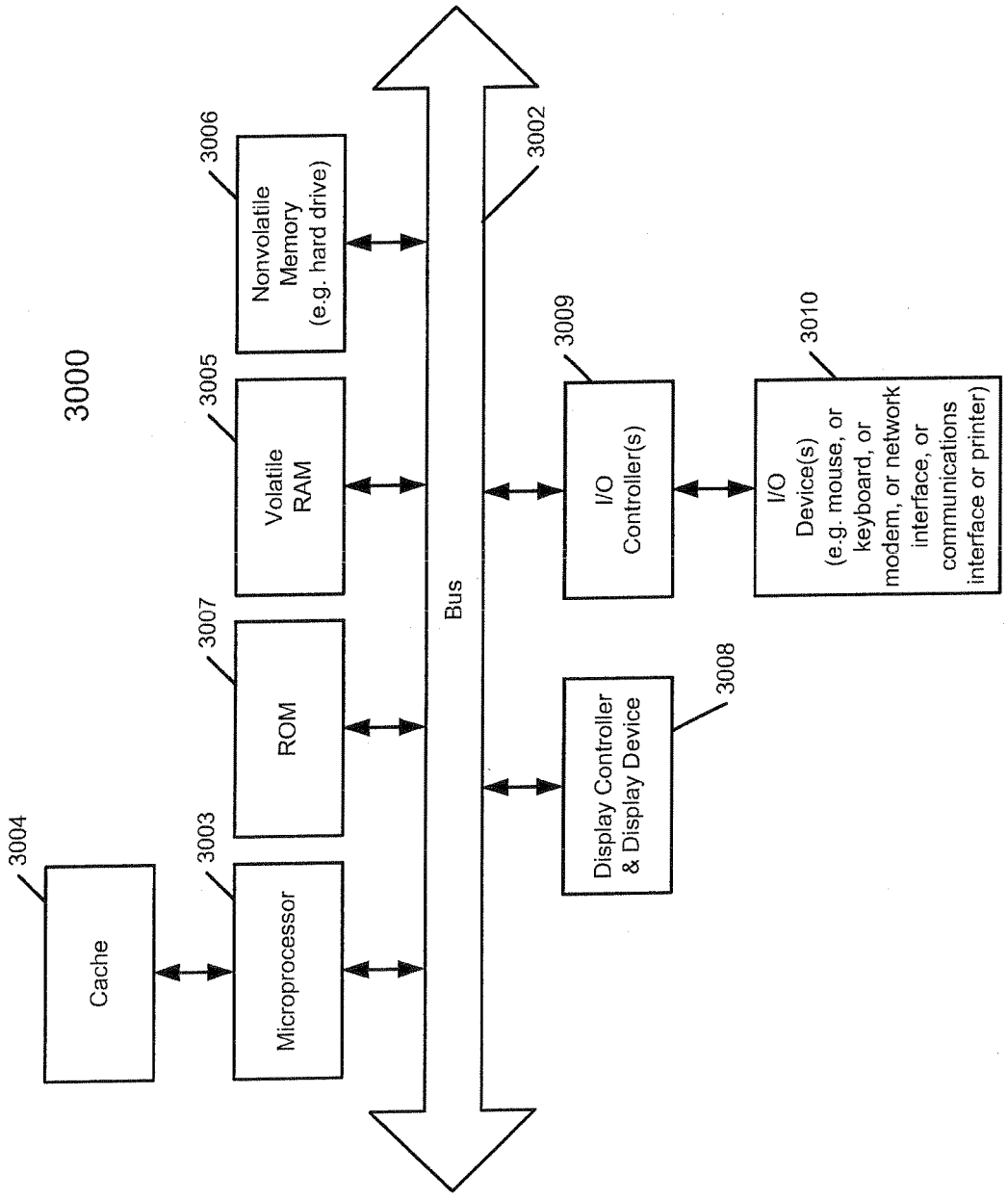
3000
3004
Cache
3003
Microprocessor
3007
ROM
3005
Volatile RAM
3006
Nonvolatile Memory (e.g. hard drive)
Bus
3002
3008
Display Controller & Display Device
3009
I/O Controller(s)
3010
I/O Device(s) (e.g. mouse, or keyboard, or modem, or network interface, or communications interface or printer)

FIG. 30

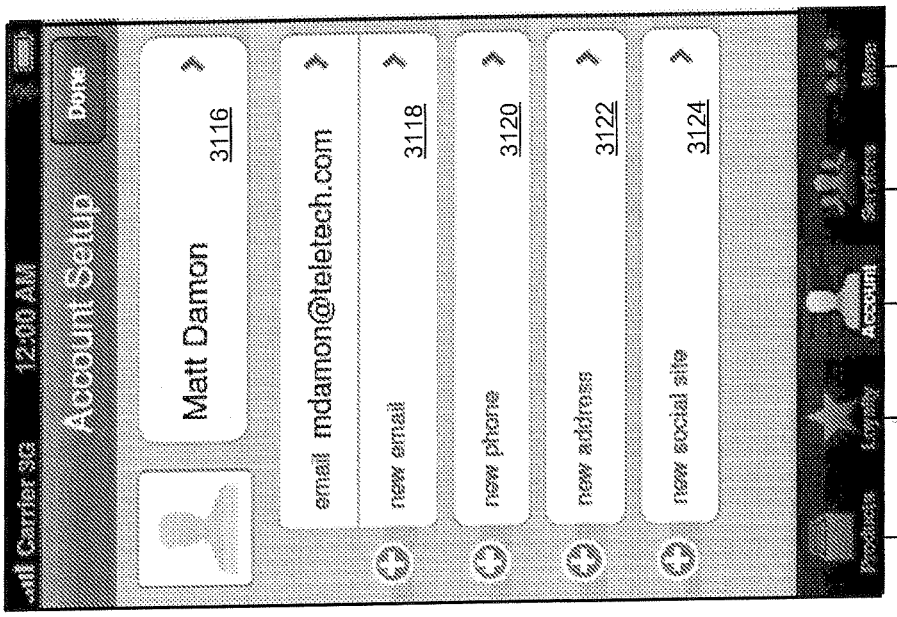

FIG. 31B

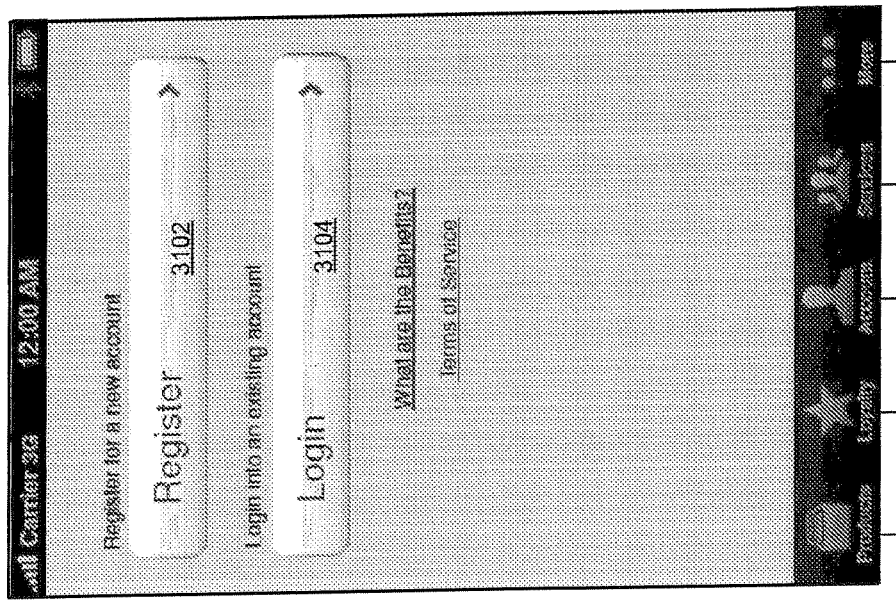

FIG. 31A

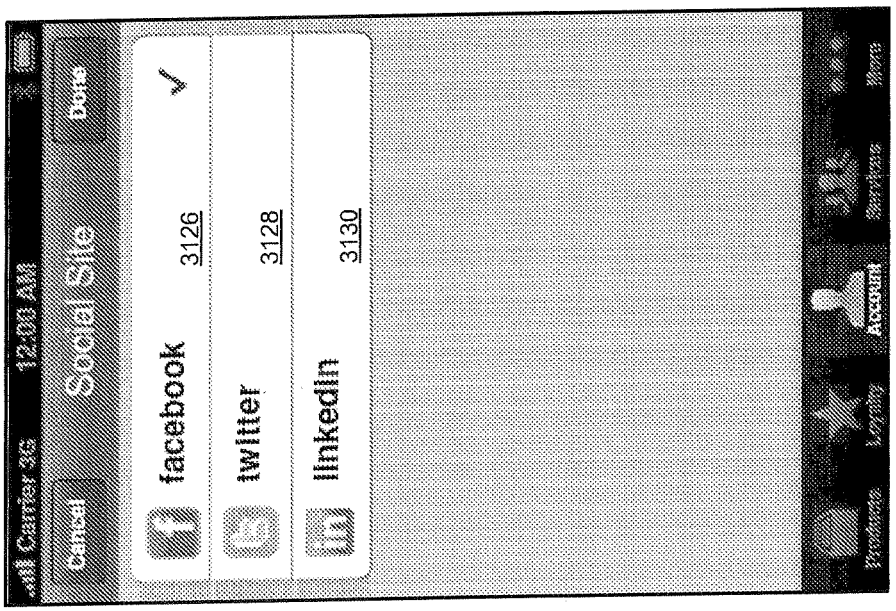

FIG. 31C

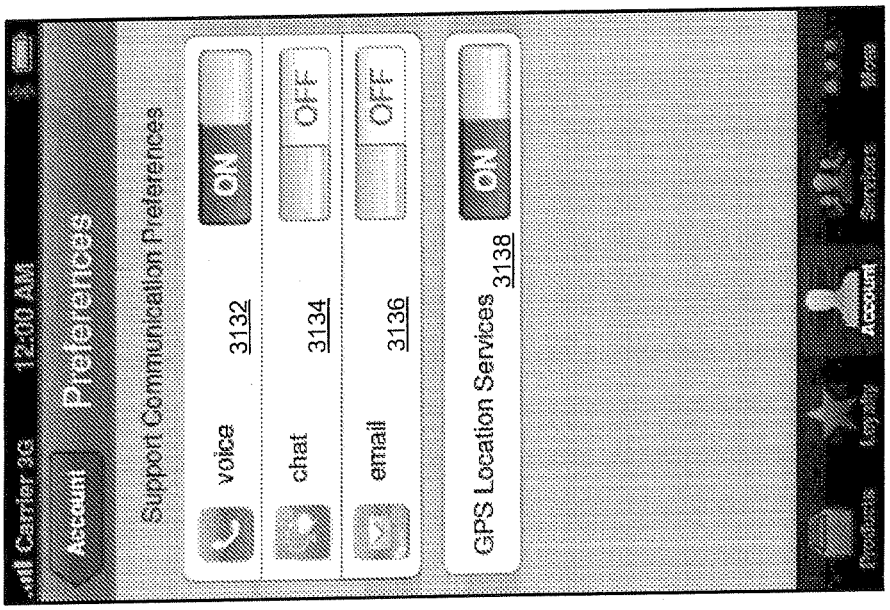

FIG. 31D

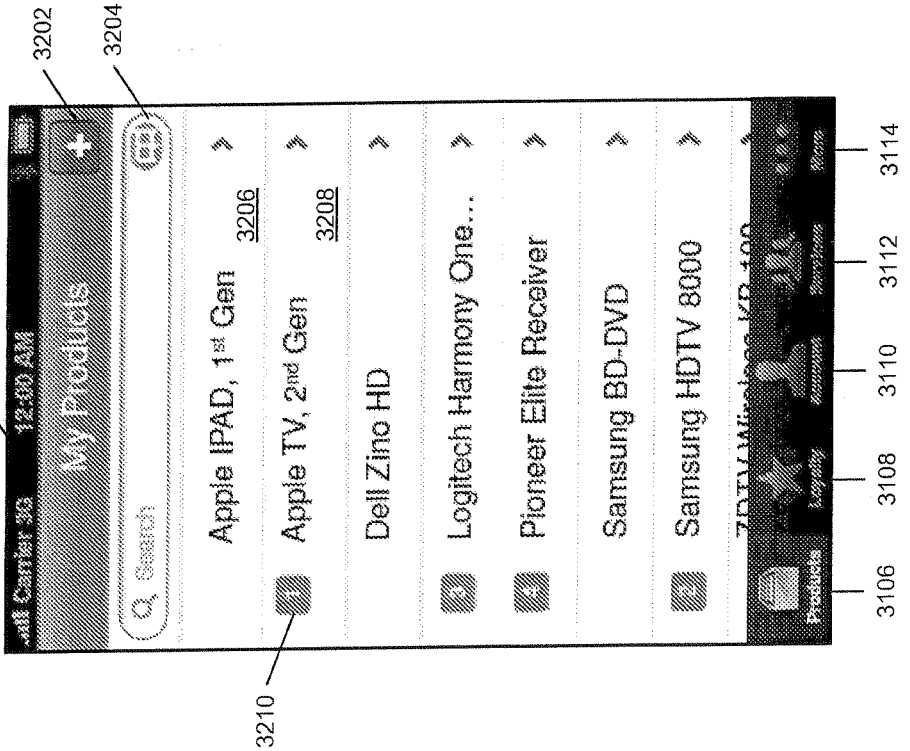

FIG. 32A

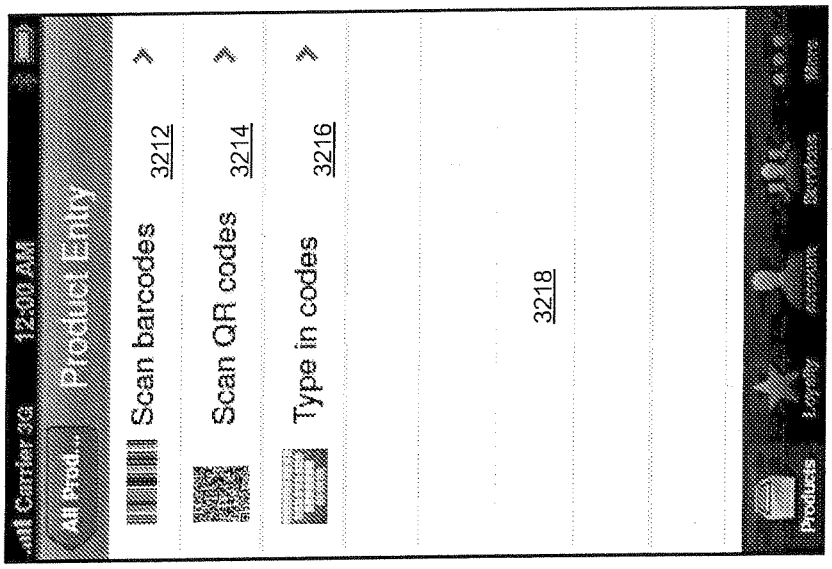

FIG. 32B

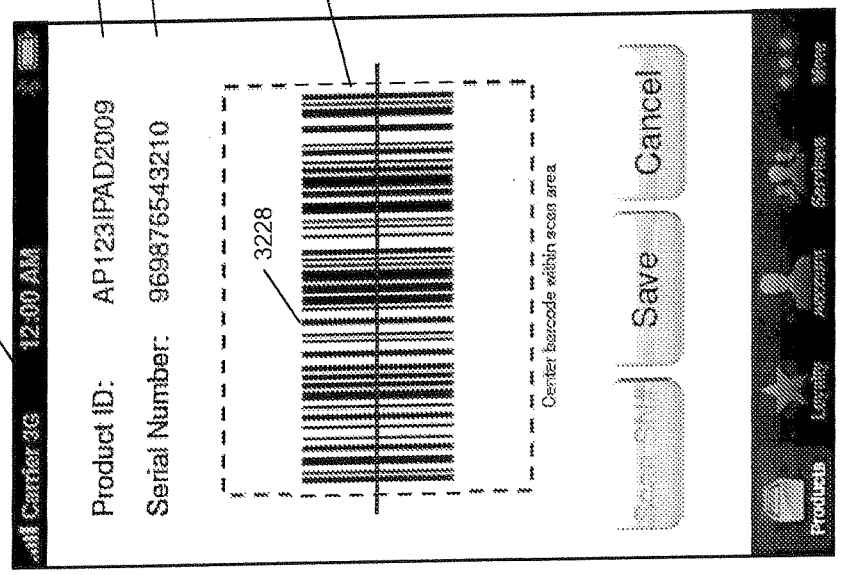

FIG. 32C

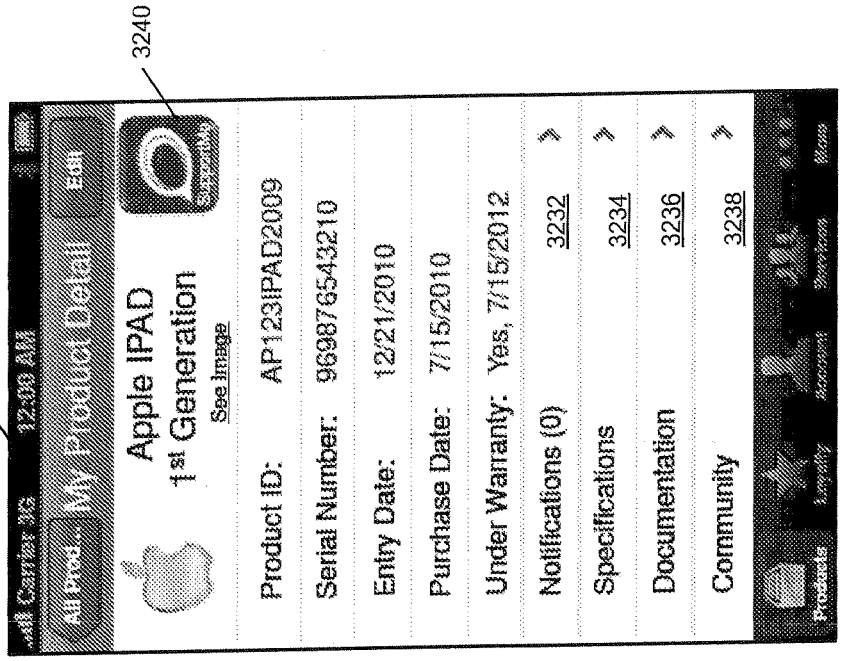

FIG. 32D

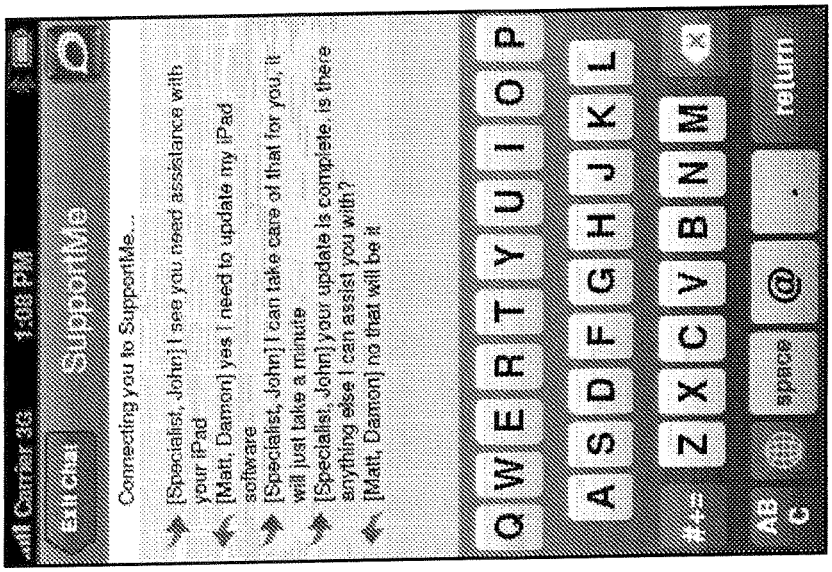

FIG. 32F

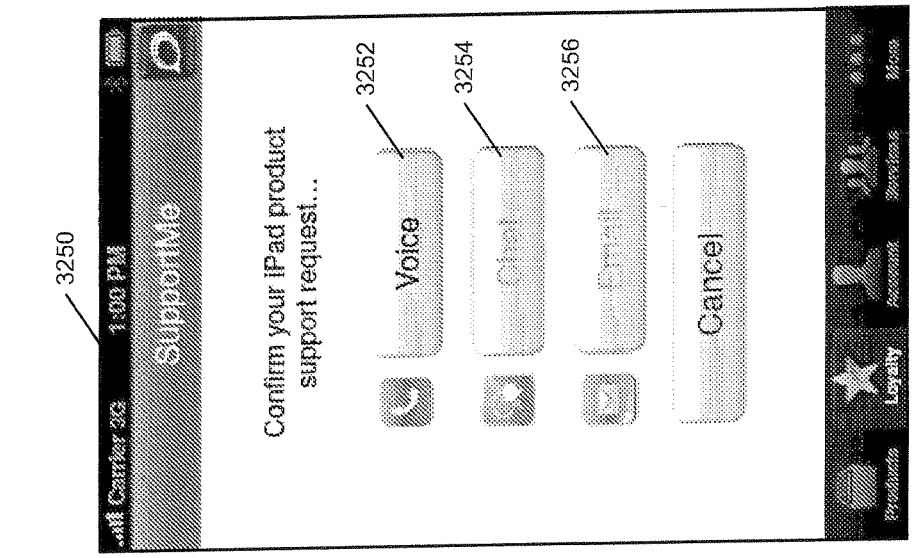

FIG. 32E

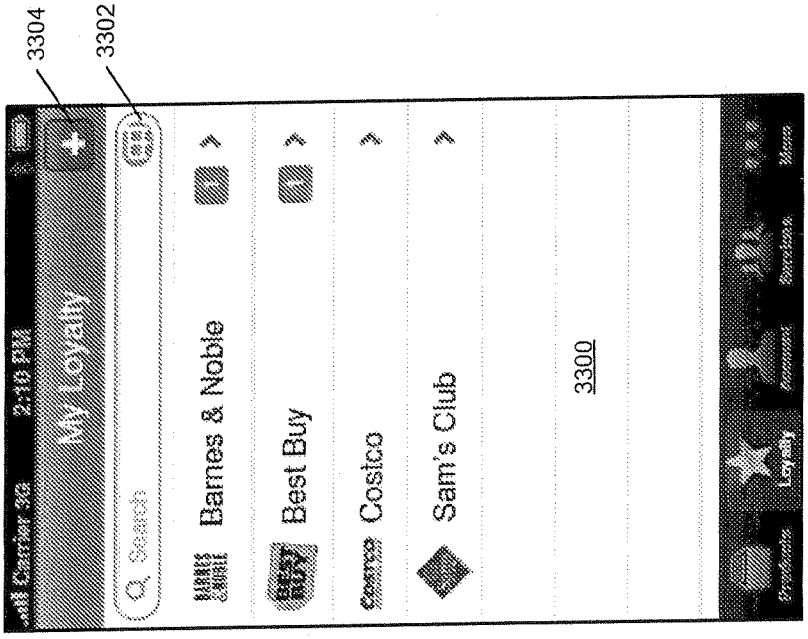

FIG. 33A

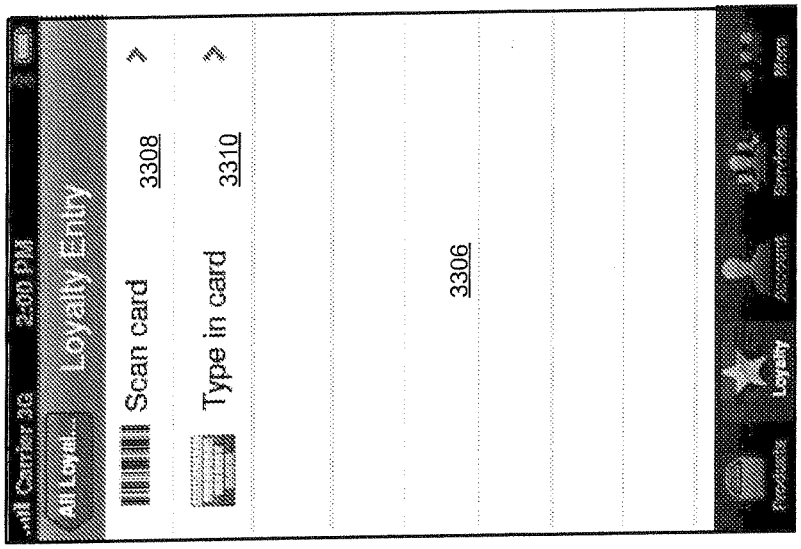

FIG. 33B

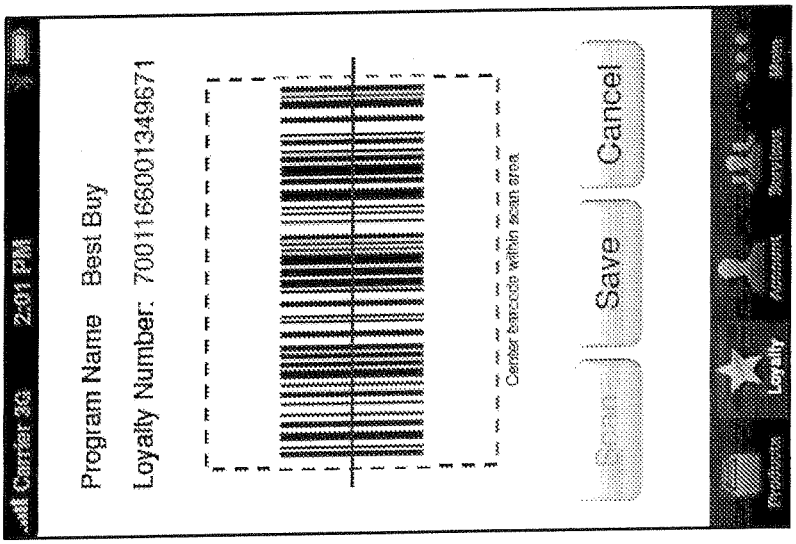

FIG. 33C

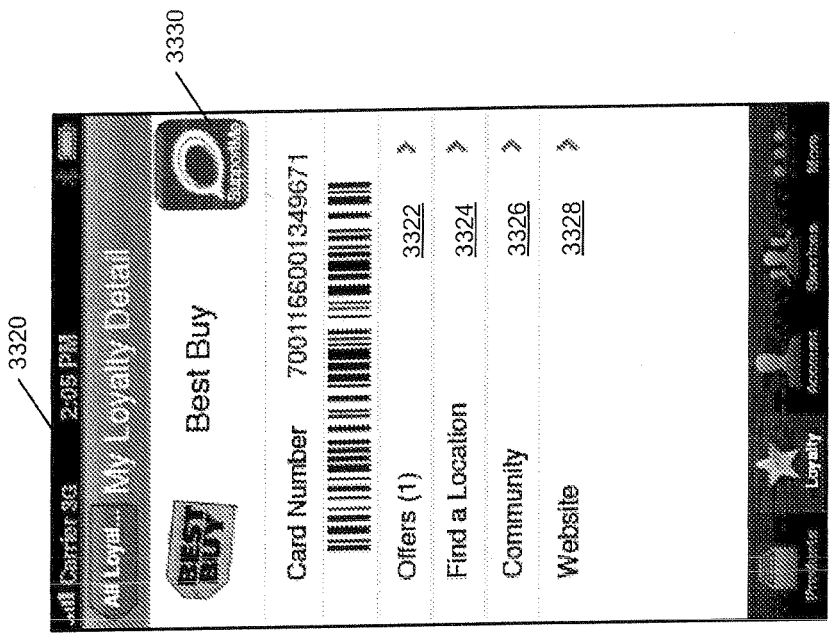

FIG. 33D

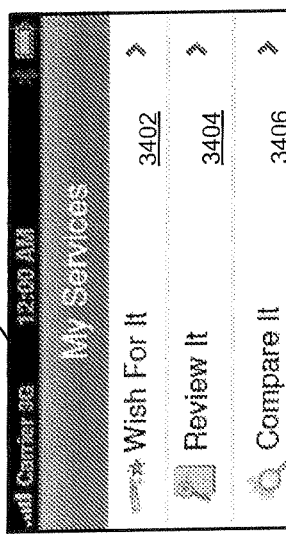

FIG. 34A

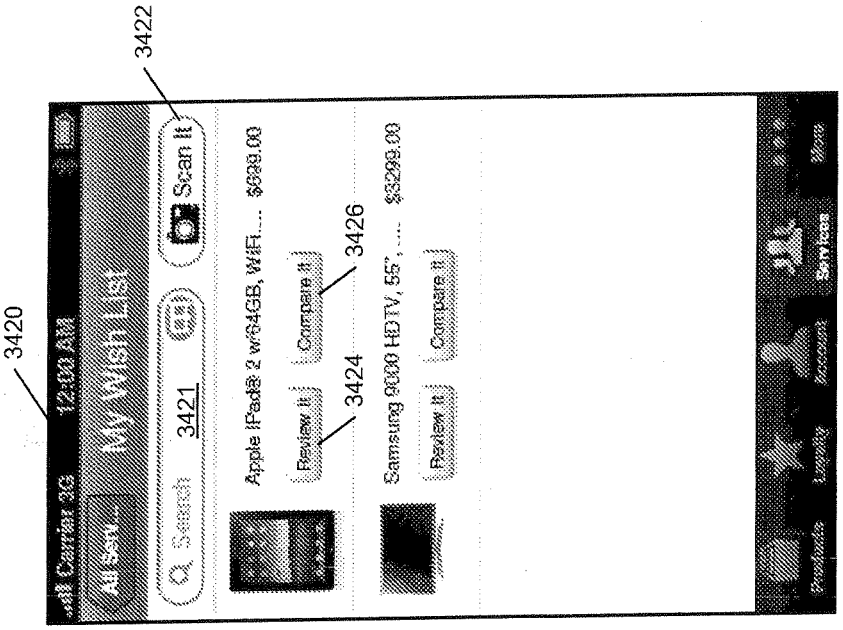

FIG. 34B

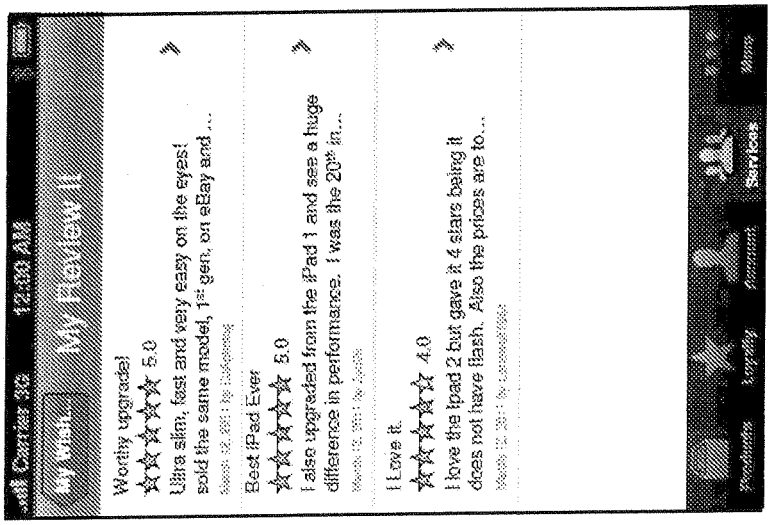

FIG. 34C

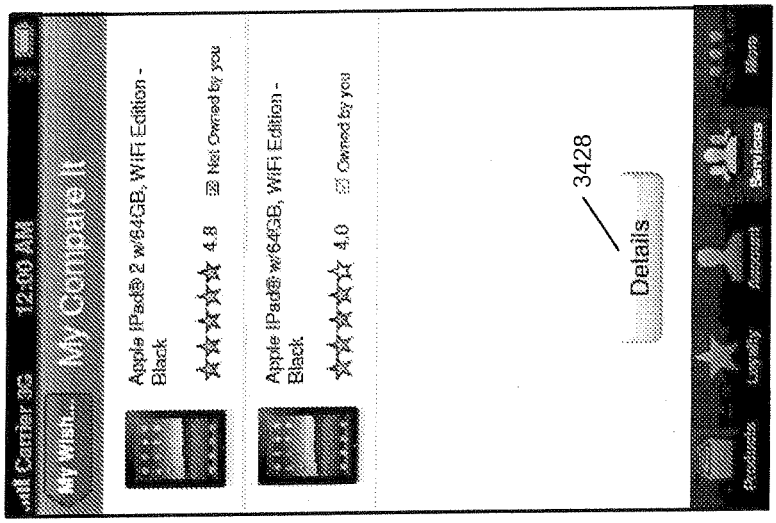

FIG. 34D

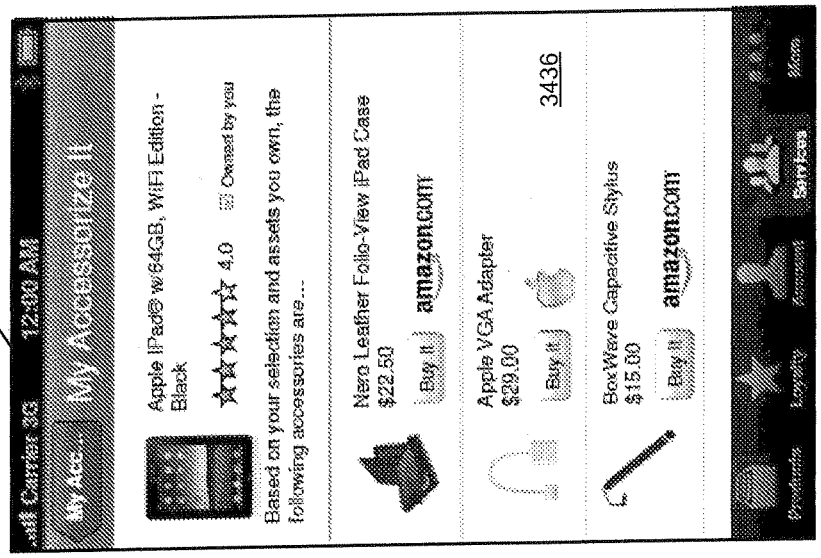

FIG. 34F

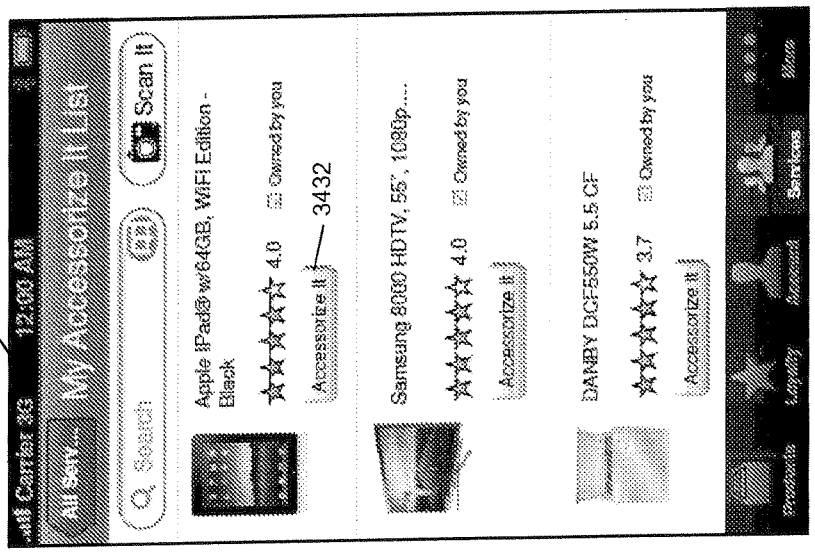

FIG. 34E

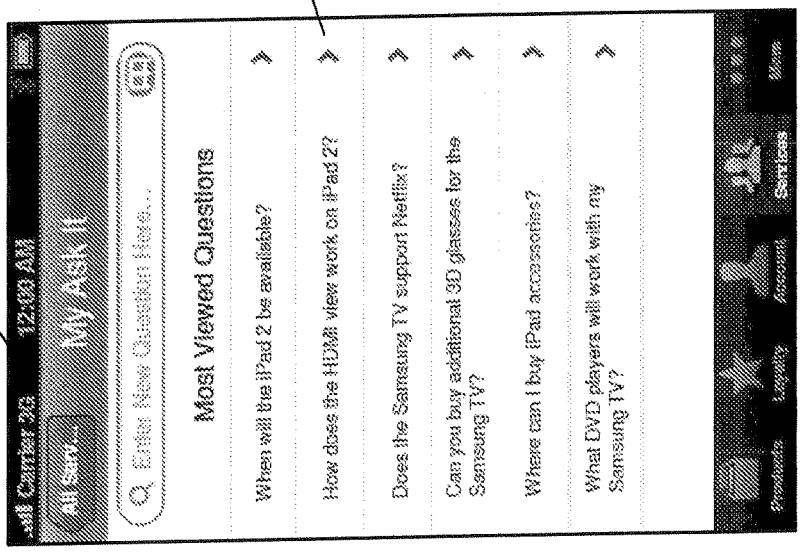

FIG. 34G

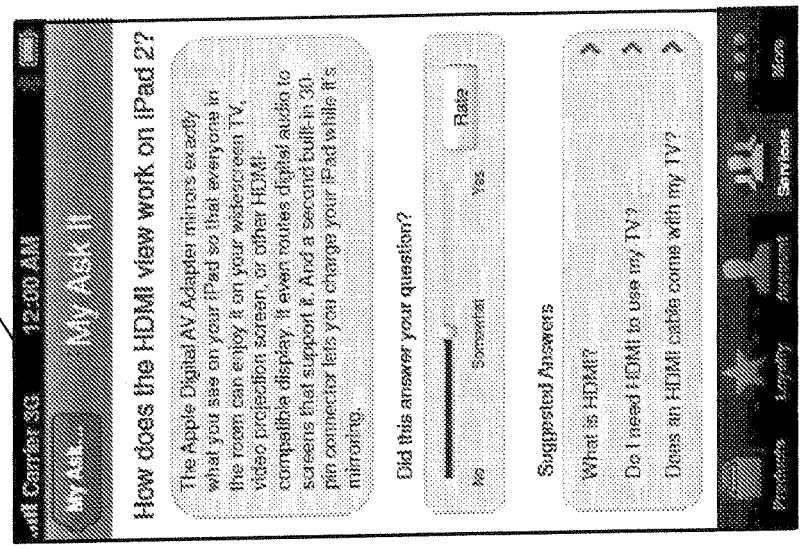

FIG. 34H

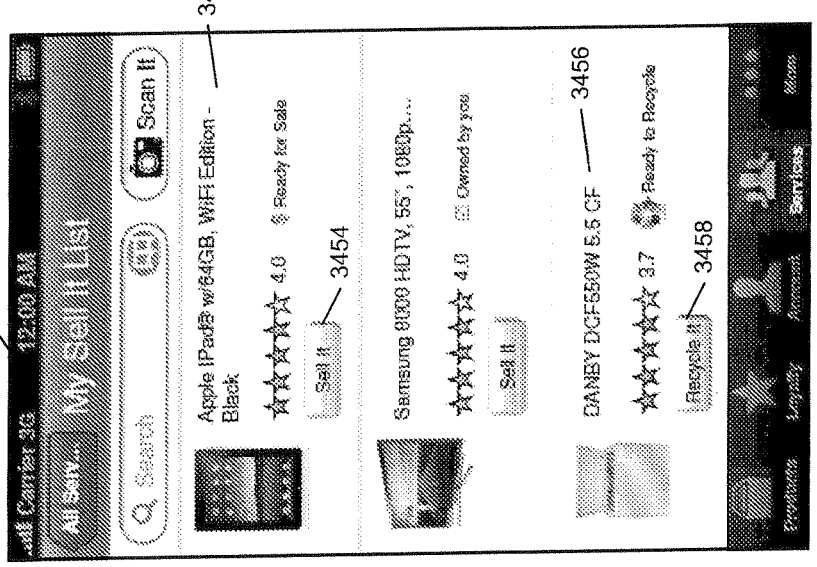

FIG. 34I

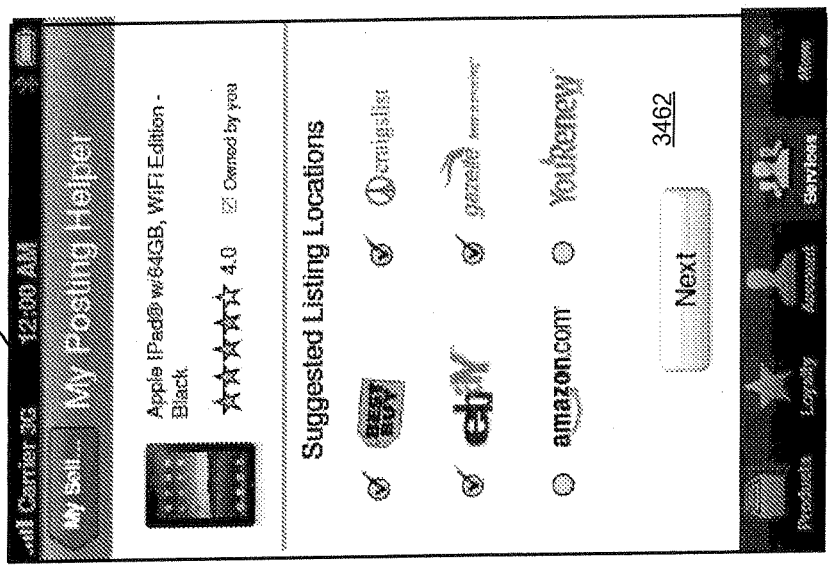

FIG. 34J

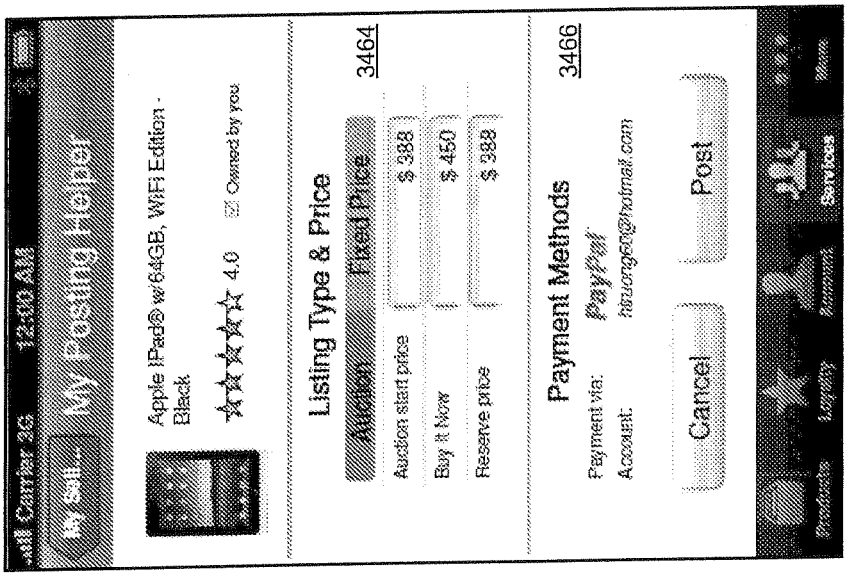

FIG. 34K

3450

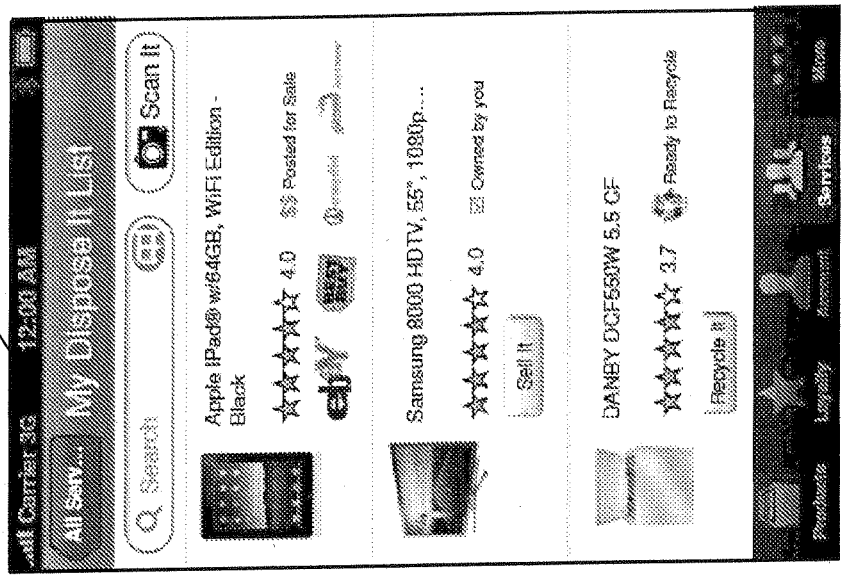

FIG. 34L