(54) Title: A COMPUTING DEVICE, SYSTEM, METHOD, COMPUTER PROGRAM AND DATA SIGNAL ARRANGED TO FACILITATE THE TRANSFER OF VALUE

Figure 2

(57) Abstract: A system for generating a unique code to denote a transaction, comprising: a communications module arranged to re-
ceive first transaction information from a first entity and provide the information to a processor arranged to utilise the transaction in-
formation to generate a first unique code; and associate the unique code with the first transaction information and store the first
transaction information and the first unique code in a database; wherein the communications module provides the first unique code
to the first entity.

A COMPUTING DEVICE, SYSTEM, METHOD, COMPUTER PROGRAM AND DATA SIGNAL ARRANGED TO FACILITATE THE TRANSFER OF VALUE

Technical Field

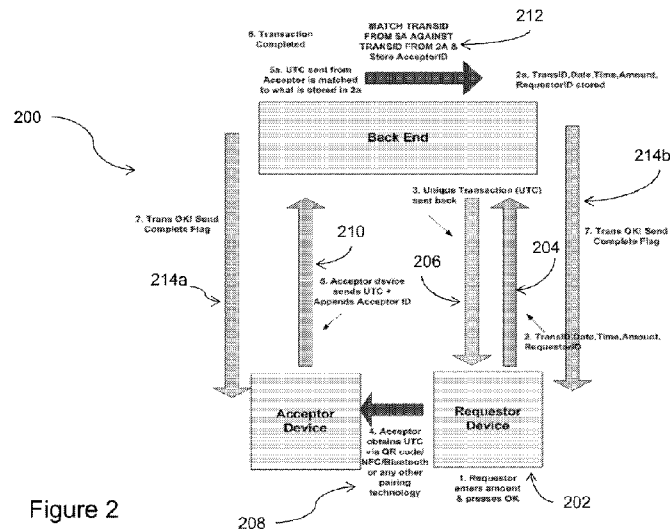[0001] The present invention relates to a computing device, system, method computer program and data signal arranged to facilitate the transfer of value. Embodiments of the invention find particular, but not exclusive, use in the field of providing a payment system for Point of Sale (POS) or remote payment services.

Background Art

[0002] Electronic payment systems are now ubiquitous. Payment system providers, such as banks and credit unions, have provided Point of Sale payment systems for many years, utilising credit and debit cards and/or charge cards such as MasterCard, VISA and American Express as the principal means of effecting a transaction between a consumer (customer) and a merchant (retailer).

[0003] More recently, with the advent of the Internet and online selling, electronic payment systems have been developed which allow consumers to use credit and/or charge cards via an online interface. Other payment methods have also been implemented, such as the creation of *"virtual"* currencies and the use of intermediaries (such as PayPal) to effect electronic payments.

[0004] The term *"electronic payment"* has come to encompass any type of electronic funds transfer, including Point of Sale terminals in retail stores (and the associated charge/credit card system) through to e-commerce systems—broadly any electronic payment system which is accessed and utilised via the Internet or a telecommunications network. Fundamentally, however, most electronic payment systems require the consumer to possess some form of physical media (commonly a plastic *'card'*) which acts as a mechanism for exchanging account information by manual entry or electronic means—whether credit and charge cards, or Electronic Funds Transfer (EFT) cards.

[0005] With the ubiquitous uptake of mobile communication devices (i.e. mobile, cell and/or *'smart'* phones) consumers are now seeking ways to transfer value (e.g. pay for goods and services) via their mobile phone. Existing payment infrastructures rely almost entirely on a separate, plastic card, which have legacy security issues as they

clearly display an imprinted card number, have an unencrypted and easily read magnetic strip that contains private consumer information, and also contain an expiry date and security code, all of which potentially allow any third party to utilise the card. Newer cards include an embedded *"chip"* with encrypted information and usually require a Personal Identification Number (PIN) in order to finalise a transaction. However, such security measures are sub-optimal and do not ameliorate the issues that can arise from the existence of unsecure elements on the card.

[0006] Existing solutions that utilise mobile or smart phones rely on similar secure elements to be secured on the device with which they are being used and adding more security layers to the phone (hardware, software or both). Adding more components adds cost to the transaction stream and limits take-up of mobile payment options for consumers and merchants.

[0007] There is a need to provide a cost-effective, easy to use and efficient electronic payment system which ameliorates the security concerns of consumers and provides a system that seeks to reduce losses experienced by the financial institutions that participate in the global financial system.

Summary of the Invention

[0008] In a first aspect, there is provided a system for generating a unique code to denote a transaction, comprising:

a communications module arranged to receive first transaction information from a first entity and provide the information to a processor arranged to utilise the transaction information to generate a first unique code; and

associate the unique code with the first transaction information and store the first transaction information and the first unique code in a database;

wherein the communications module provides the first unique code to the first entity.

[0009] In one embodiment, the communications module receives a second unique code and second transaction information from a second entity, and the processor compares the second unique code to the first unique code in the database, wherein if the first and second unique codes match, a transaction module utilises the first and

second transaction information to effect a transfer of value from the second entity to the first entity.

[0010] In one embodiment, the unique code is a generated code that contains no identifying information regarding the transaction.

[0011] In one embodiment, the identifying information may be one of information identifying at least one of the first entity and the second entity.

[0012] In one embodiment, the identifying information may be information identifying details of the transaction.

[0013] In one embodiment, the processor is located in a remote computing system.

[0014] The transfer of value may be effected by electronically communicating with one or more financial institutions.

[0015] The first entity may be one of a point of sale terminal, mobile or cellular communications device or internet page presented to the second entity and the second entity may be a mobile or cellular communications device.

[0016] The store of value may represent a real world currency, or may be a virtual currency.

[0017] In one embodiment, the store of value in the rewards database is the virtual currency.

[0018] The communications module may be further arranged to interface with at least one external computing system, to effect the transfer of value.

[0019] In one embodiment, the first unique code is a QR code.

[0020] At least one of the first or second transaction information or the first or second unique codes may be encrypted.

[0021] In a second aspect, there is provided an electronic mobile device arranged to effect a transfer of value, comprising an interface arranged to receive a first unique transaction code from a first transaction device and, upon authorisation by a user, provide the first unique transaction code to a system to effect the transfer of value.

[0022] In a third aspect, the present invention provides an electronic method for facilitating the transfer of value, comprising the steps of:

receiving first transaction information from a first entity and utilising the transaction information to generate a first unique code;

associate the unique code with the first transaction information; and

store the first transaction information and the first unique code in a database;

wherein the first unique code is provided to the first entity.

[0023] In one embodiment, the method comprises the further steps of:

receiving a second unique code and second transaction information from a second entity; and

comparing the second unique code to the first unique code in the database;

wherein if the first and second unique codes match, the first and second transaction information are used to effect a transfer of value from the second entity to the first entity.

[0024] In a fourth aspect, there is provided a computer program, including at least one instruction capable of being executed by a computing system, which implements a method in accordance with the third aspect of the invention.

[0025] In a fifth aspect, there is provided a computer readable medium including a computer program in accordance with the fourth aspect of the invention.

[0026] In a sixth aspect, there is provided a data signal including at least one instruction being capable of being received and interpreted by a computing system, wherein the one instruction, on being interpreted by the computing system, implements a method in accordance with the third aspect of the invention.

Brief Description of the Drawings

[0027] Further features of the present invention are more fully described in the following description of several non-limiting embodiments thereof. This description is included solely for the purposes of exemplifying the present invention. It should not be understood as a restriction on the broad summary, disclosure or description of the invention as set out above. The description will be made with reference to the accompanying drawings in which:

Figure 1 is an example computing system which is capable of operating a device, system, method and/or computer program in accordance with an embodiment of the present invention;

Figure 2 is a schematic diagram illustrating a process for transferring value in accordance with an embodiment of the present invention;

Figure 3 is a schematic diagram illustrating the interaction between a system in accordance with an embodiment of the present invention and external financial institutions;

Figures 4 to 23 are screenshots illustrating various input screens utilised by a user (consumer) when interacting with an embodiment of the present invention; and

Figures 24 to 30 are screenshots illustrating various input screens utilised by a user (merchant) when interacting with an embodiment of the present invention.

Description of Embodiments

General Overview

[0028] Referring to Figure 1, there is shown an example computing system which is capable of facilitating transactions in accordance with an embodiment of the present invention.

[0029] In Figure 1 there is shown a schematic diagram of a computing system, which in this embodiment is a server 100 suitable for use with an embodiment of the present invention. The server 100 may be used to execute application and/or system services such as a system and method for facilitating the transfer of value (i.e. an electronic financial transaction) in accordance with an embodiment of the present invention.

[0030] With reference to Figure 1, the server 100 may comprise suitable components necessary to receive, store and execute appropriate computer instructions. The components may include a processor 102, read only memory (ROM) 104, random access memory (RAM) 106, an input/output devices such as disc drives 108, remote or connected input devices 110 (such as a mobile computing device, a smartphone or a 'desktop' personal computer), and one or more communications link(s) 114.

[0031] The server 100 includes instructions that may be installed in ROM 104, RAM 106 or disc drives 112 and may be executed by the processor 102. There may be provided a plurality of communication links 114 which may variously connect to one or more computing devices 110 such as servers, personal computers, terminals, wireless or handheld computing devices, or mobile communication devices such as a mobile (cell) telephone. At least one of a plurality of communications link 114 may be connected to an external computing network through a telecommunications network.

[0032] In one particular embodiment the device may include a database 116 which may reside on the storage device 112. It will be understood that the database may reside on any suitable storage device, which may encompass solid state drives, hard disc drives, optical drives or magnetic tape drives. The database 116 may reside on a single physical storage device or may be spread across multiple storage devices.

[0033] The server 100 includes a suitable operating system 118 which may also reside on a storage device or in the ROM of the server 100. The operating system is arranged to interact with the database and with one or more computer programs to cause the server to carry out the steps, functions and/or procedures in accordance with the embodiments of the invention described herein.

[0034] Broadly, the invention relates to a computing device and system arranged to interact with one or more remote devices via a communications network. The system, in one embodiment, comprises a server including a database arranged to facilitate a transfer of value from one entity to another (e.g. a consumer to a retailer). The database is arranged to receive and transmit information via the communications network from the one or more remote devices.

[0035] Other aspects of the broad inventive concept relate to a corresponding method and data signal. The method facilitates the transfer of value between two or more entities via one or more remote devices and a centralized database. The centralized database receives a request from the remote devices to facilitate the transfer of value, and utilises a communications network to transfer value via the one or more remote devices. The requests may be sent in the form of a data signal which includes, in part or in whole, encoded information which provides one or more commands to the centralized database and/or the remote devices, to implement the aforementioned method.

[0036] The database is arranged to contain various types of information. In more detail, the database is arranged to hold information regarding a store of value for the one or more entities.

Definitions

[0037] Before describing the system and method in more detail, it is instructive to provide some definitions that are helpful to clarify the components of the embodiment to be described with reference to Figures 2 and 3. It will be understood that the definitions are provided solely to allow the reader to better understand the embodiment described herein, and are not intended to be limiting on the broader inventive concept.

[0038] *Requestor:* The person or system that wishes to receive a payment of value.

[0039] *Acceptor:* The person or system that wishes to make a payment of value to a requestor.

[0040] *Backend/Backend System:* The computing system 100 generally described with reference to Figure 1 that enables the recording and tracking of transactions between requestors and acceptors.

[0041] *Unique Transaction Code (UTC):* A unique string of characters that identifies a single transaction without any identifying information and which may, in some embodiments, be encoded into a data signal.

[0042] *Transmission Code:* Any form of pairing technology that allows the transfer of data between two devices (utilizing a network and sent, in some embodiments, as a data signal), including but not limited to a Quick Response (QR) code, a 1-dimensional, 2-dimensional or multi-dimensional barcode, an encoded signal delivered via a Bluetooth technology, a Near Field Communication (NFC) technology or any other device *'pairing'* technology.

[0043] *Redy:* A trade mark name for one embodiment of a system, method, computer program and associated data signals in accordance with the invention described herein.

System Overview

[0044] Referring now to Figure 2, there is shown a schematic diagram of a system 200 for the transfer of value in accordance with an embodiment of the present invention. It

will be understood that in the ensuing description, the system 200 will be referred to as a *"payment system"*.

[0045] Where a requestor wishes to receive a payment for an item, the requestor initiates the transaction by entering the amount of the transaction into their Redy requestor app (Merchant) at step 202 or electronically passing the transaction value from the Merchant online or offline billing system.

[0046] At step 204, the Redy requestor app transmits the purchase amount, the merchant ID, the date and the time (and optionally any other transaction specific details as required in any specific embodiment of the system) to the backend as a single encrypted transaction code as a string of unreadable characters.

[0047] The transmitted transaction code is then received by the backend and is decrypted and stored in the database. At step 206, the backend subsequently generates a Unique Transaction Code (UTC) specific to the transaction. It will be understood that the UTC is associated with the transaction (in the database), but the Code itself does not encode any information regarding the transaction. The UTC is transmitted to the requestor device. Subsequently, at step 208 the UTC is also transmitted to the Acceptor to accept by way of a pairing technology. In one embodiment, the requestor device includes a screen which displays the UTC as a QR code.

[0048] The Acceptor then scans the QR code with their smart or mobile device utilising their Redy App and then appends an Acceptor ID to the UTC, encrypts the combined ID/UTC, and sends the resultant data to the backend system at step 210.

[0049] The UTC from the acceptor App is matched against the transaction code originally sent by the Redy requestor app at the backend system at step 212. If the UTC matches the transaction code then the transaction is effected. If the codes do not match, the transaction is declined, as it is assumed that the transaction request was either corrupted or is fraudulent.

[0050] Once the transaction is completed in the backend system, a transaction complete message is sent to both the acceptor and requestor with a completed flag at steps 214a and 214b respectively.

[0051] Referring now to Figure 3, there is shown another example of a Redy payment system in accordance with an embodiment of the invention. The Redy payment system 300 encompasses the consumer app/device 302 and the merchant app/device 304. As is represented diagrammatically in Figure 3, the ready payment system 300 (also previously referred to as the *"backend"* in Figure 2) transmits data through the merchant device 304 and the consumer app/device 302 as required.

[0052] The system 300 also transacts with financial institutions, generally denoted by numerals 306 and 308. In the diagram of Figure 3, financial institutions 306 represent financial institutions utilised by the consumer to load credit onto the consumers account. It will be understood that the consumer device 302 does not transact directly with financial institutions 306, but rather, financial institutions 306 receive a request from system consumer app 302 via system 300. Similarly, merchant 304 does not transact directly with financial institution 308, but rather, merchant 304 interacts indirectly with financial institution 308 via system 300. In other words, system 300 represents a closed system, such that consumer app 302 and merchant app 304 only interact via system 300. That is, consumer app 302 and merchant app 304 never communicate directly except for step 208 (as illustrated in Figure 2), where the consumer app obtains the unique transaction code from the merchant app through an appropriate pairing technology.

[0053] In this way personal and private details of the consumer are never revealed to the merchant device 304 and merchant details are never revealed to the consumer device 302, nor are they revealed to third party institutions such as financial institution 308 directly from the devices (as the devices never directly receive transaction information).

[0054] While the consumer app does receive information regarding a financial institution utilised by the consumer (e.g. financial institution 306), such information is held in system 300 and presented to the consumer app 302 but never transmitted directly to merchant 304 or financial institution 308 directly from the consumer device. As such, all information held regarding the consumers financial transactions are held in the system 300 and are not available to merchants.

[0055] Referring now to Figure 4, there is shown an example screen shot of a consumer app (equivalent to the consumer app 302 described with reference to

Figure 3). The consumer app shown in Figure 4 operates on a conventional *"smartphone"*, such as an iPhone manufactured by Apple Corporation, or an android based smartphone or any other mobile device.

[0056] Screen 400 generally denotes a registration screen which allows a user to insert their email address 402 and a password 404 and also to setup a personal identification number (PIN) 406. Once the user has established an account using the screen 400 and completed the verification steps outlined in Figures 5 to 7, the user may then utilise the Redy system.

[0057] Optionally, with reference to Figure 5, the user may be required to verify their email by entering a security code that is sent to their nominated email. This is achieved through entering the security code in screen 500 at input box 502.

[0058] The user is then taken to input screen 600 at Figure 6. The user is asked to input various personal details including *'first name'* 602; *'last name'* 604; *'date of birth'* 606; *'gender'* 608 and their *'mobile (cellphone) number'* 610.

[0059] At input screen 700 at Figure 7, the user is then asked to enter their address details generally at input boxes 702.

[0060] The user's information input is verified against government certified identification databases. The user is verified immediately (i.e. *'on the fly'*). It will be understood that the example given above is a simplified example based on legal and regulatory requirements in the country of Australia. The process described generally with reference to Figures 5 to 7 are therefore to be taken as illustrative of a process which may be commonly followed, but should not be taken to be restrictive or essential to the broader inventive concept.

[0061] Referring now to Figure 8, at input screen 800, the user is presented with an input interface which allows the user to add a bank account or a credit card from which future payments or credit may be deducted. The user selects a payment option using input buttons 802, which takes the user to another input screen 900 at (Figure 9) so that the user can input account details, as generally denoted at 902.

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[0062] Similarly, at Figure 10, input screen 1000 shows an example input interface for inputting credit card details. The user inputs credit card generally at input boxes denoted by numeral 1002.

[0063] Referring now to Figure 11, there is shown an input screen 1100, which allows for the capture of a QR code to accept a payment request from a Merchant as shown generally at 1102. Once the QR code is captured, if the user does not have any funds in their redy account, the user is then taken to a screen at Figure 12. Referring to Figure 12, at 1200 there is shown generally an input screen which allows a user to top up value to their wallet their *"reds"*. By directly accessing the previously inputted accounts generally denoted by numerals 1202 and 1204.

[0064] Once a user scans a QR code and is ready to make a purchase, the purchase amount can be confirmed at simplified screen 1300 shown at Figure 13. Alternatively, and with reference to Figure 14 where the total purchase 1402 is made up of a top-up of reds from a traditional payment source such as a credit card (numeral 1404) and an existing reds balance already in the wallet (i.e. reds 1406). The user is further provided with some information regarding the purchase such as the name of the store (shown generally at 1408). The user accepts the purchase by tapping button 1410, or alternatively cancels the purchase by tapping button 1412.

[0065] If the user wishes to change the payment method for topping up their reds balance, the user is taken to Figure 15 and input screen 1500 where the user can select from the account they wish to use to affect payment as denoted generally at area 1502.

[0066] Once the purchase is finalized, the user is taken to Figure 16 as denoted by input screen 1600. A receipt 1602 is provided to the user, the receipt including all relevant information to easily identify the nature of the purchase.

[0067] Figures 17 and 18 denote refund screens, which operate in manner analogous to purchase screens. Input screen 1700 shows the refund amount 1702 and provides the user with the option to accept the refund by tapping button 1704 or cancel the refund by tapping button 1706.

[0068] If the user accepts the refund, the user is taken to screen 1800 shown at Figure 18 and is provided with a receipt 1802 as a record of the refund.

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[0069] Turning now to Figure 19, there is shown an input screen 1900, which represents a virtual *"wallet"* and includes information on the amount of credit held by a user denoted generally at numeral 1904, the amount of reward points available as denoted by numeral 1902 and also provides the user with access to options for payment at 1906 and the option to access past receipts 1908.

[0070] The system optionally includes a screen denoted by screen 2000 in Figure 20 which allows a user to contribute to charities or causes which are presented in the app and are registered through a separate process by the app provider.

[0071] In more detail, the system in the embodiment that includes a rewards system provides a merchant interface which is described with reference to Figures 20A to 20E, which illustrate screen shots of an in App or alternately a web interface for interacting with the rewards system. This is a merchant interface which allows the merchant to design and operate their own reward system, utilising the infrastructure of the Redy rewards system.

[0072] At Figure 20A, there is shown an initial *'home page'* 2000a, which allows the merchant to activate their rewards system. The user may activate a special *'first time'* reward for new customers by clicking in the area denoted by 2002a, provide extra rewards to customers who regularly purchase through their store by clicking in the area denoted by 2004a, set up a loyalty card by clicking in the area denoted by 2006a, or start a community campaign by clicking in the area denoted by 2008a.

[0073] When the user clicks on area 2002a, they are taken to the webpage illustrated at Figure 20B, where options are provided to the merchant (generally denoted by 2000b) for the merchant to customize the parameters of the system.

[0074] When the user clicks on area 2004a, they are taken to the webpage illustrated at Figure 20C where options are provided to the merchant (generally denoted by 2000c) for the merchant to customize the parameters of the system.

[0075] When the user clicks on area 2006a, they are taken to the webpage illustrated at Figure 20D where options are provided to the merchant (generally denoted by 2000d) for the merchant to customize the parameters of the system.

[0076] When the user clicks on area 2008a, they are taken to the webpage illustrated at Figure 20E where options are provided to the merchant (generally denoted by 2000e) for the merchant to customize the parameters of the system.

[0077] The user may also access past receipts as shown generally by input screen 2100 at Figure 21. The user may store the receipts in folders generally denoted by 2102 and may search past receipts by date utilising input box 2104.

[0078] Referring now to Figures 22 and 23, the user may be provided with summary screens as shown generally at 2200 and 2202, which provide information on all transactions (as shown at input screen 2200), or just purchase transactions (as shown generally at input 2202).

[0079] Referring now to Figure 24, there is shown an example input screen for a merchant terminal. The merchant terminal allows the merchant to input information regarding a transaction. This is done via input screen 2400 and in particular, by input boxes generally denoted by 2402.

[0080] Once information has been input, a new input screen 2500 as shown in Figure 25, is displayed including a QR code 2502 the customer or user then scans the QR code as previously described.

[0081] Referring now to Figures 26 and 27, there are shown report screens 2600 and 2700 which generally denote information regarding total sales refunds and other transactions. Such screens provide information to the merchant to allow settlement and to also allow the merchant to collect data or statistics on total sales. That is, the merchant app provides all information generally required for the merchant to operate their business.

[0082] Referring now to Figure 28, there is shown a screen 2800 which represents an online shopping cart application showing redy as a payment method (as shown by the provision of an icon 2802). Referring now to Figure 29, where a consumer wishes to use Redy as a payment method, the user selects the Redy icon (shown as 2802 in Figure 28) and a QR code 2902 is provided on payment screen 2900. The user can then utilise their mobile or smartphone 2904 to capture the QR code.

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[0083]   Referring to Figure 30, once acceptance of the offer for payment is accepted by the user on their mobile or smartphone, the transaction is completed with messages to both the screen 3000 and the screen on the user's device 3002.   As the transaction is completed via secure channels (without use of the keyboard) to the shopping cart engine, no identifying information is exchanged between the user and the merchant.

Advantages and Industrial Applicability

[0084]   The embodiments and broader inventive concept provide a number of advantages.   Firstly, all information is transmitted direct to the back end by the party to which that stage of the transaction applies.   In contrast, existing systems involve the merchant and bank systems passing private or confidential consumer information between them or consumer and bank systems passing private or confidential merchant information between them.

[0085]   Moreover, the system provides one to one matching of a request for payment and acceptance of a request in a back end system required for every transaction.

[0086]   This allows tracking of both requestor and acceptor at the time of transaction for dispute resolution and verification.

[0087]   In addition, the process enforces reconciliation of activity in the payment system.   That is, if the unique transaction code is tampered with, the transaction is simply declined.

[0088]   Importantly, the security of exchange between the requesting device and acceptance device does not need to be secure.   That is, no secure elements are required on the consumer device as no personal information is stored on the consumer's device and the exchange between the requestor and acceptor is a unique code, not useful for any other purpose.

[0089]   The system, method, computer program and data signal in accordance with the embodiment described herein finds use in any situation where an electronic exchange of value is required.

Variations and Modifications

[0090] It will be understood that the embodiments and broader invention described herein are provided via an *'App'*, namely a software application arranged to operate on a mobile device, such as a smartphone. However, the embodiments and broader invention may also be encoded in firmware or integrated into an operating system for a device, as required for any particular use. For example, a dedicated Point of Sale terminal may be utilized to display the QR code in accordance with an embodiment of the invention. The use of hardware devices (as opposed to software devices) may provide particular advantages, such as the ability to better secure communication channels and/or the ability to perform transactions more quickly (which may be important in a busy environment). Such variations are encompassed by the broader inventive concept described herein.

[0091] Although not required, the embodiments described with reference to the figures can be implemented via an application programming interface (API), an application development kit (ADK) or as a series of libraries, for use by a developer, for the creation of software applications which are to be used on any one or more computing platforms or devices, such as a terminal or personal computer operating system or a portable computing device, such as a smartphone or a tablet computing system operating system, or within a larger server structure, such as a *'data farm'* or within a larger transaction processing system.

[0092] Generally, as program modules include routines, programs, objects, components and data files that perform or assist in the performance of particular functions, it will be understood that the functionality of the software application may be distributed across a number of routines, programs, objects or components to achieve the same functionality as the embodiment and the broader invention claimed herein. Such variations and modifications are within the purview of those skilled in the art.

[0093] It will also be appreciated that where methods and systems of the present invention and/or embodiments are implemented by computing systems or partly implemented by computing systems then any appropriate computing system architecture may be utilised. This includes standalone computers, network computers and dedicated computing devices (such as field-programmable gate arrays).

[0094] Where the terms *"computer"*, *"computing system"* and *"computing device"* are used in the specification, these terms are intended to cover any appropriate arrangement of computer hardware for implementing the inventive concept and/or embodiments described herein.

CLAIMS:

1.   A system for generating a unique code to denote a transaction, comprising:

a communications module arranged to receive first transaction information from a first entity and provide the information to a processor arranged to utilise the transaction information to generate a first unique code; and

associate the unique code with the first transaction information and store the first transaction information and the first unique code in a database;

wherein the communications module provides the first unique code to the first entity.

2.   A system in accordance with Claim 1, wherein the communications module receives a second unique code and second transaction information from a second entity, and the processor compares the second unique code to the first unique code in the database, wherein if the first and second unique codes match, a transaction module utilises the first and second transaction information to effect a transfer of value from the second entity to the first entity.

3.   A system in accordance with Claim 2, wherein the transfer of value is effected by electronically communicating with one or more financial institutions.

4.   A system in accordance with any one of the preceding claims, wherein the unique code is a generated code that contains no identifying information regarding the transaction.

5.   A system in accordance with Claim 4, wherein the identifying information is information identifying at least one of the first entity and the second entity.

6.   A system in accordance with Claim 4 or Claim 5, wherein the identifying information is information identifying details of the transaction.

7.   A system in accordance with any one of the preceding claims, wherein the processor is located in a remote computing system.

8.   A system in accordance with any one of the preceding claims, further including a rewards database arranged to provide a repository for a store of value.

9.   A system in accordance with any one of the preceding claims, wherein the first entity is one of a point of sale terminal, a web portal and a software application.

10.   A system in accordance with any one of the preceding claims, wherein the second entity is a mobile or cellular communications device.

11.   A system in accordance with any one of the preceding claims, wherein the value is a store of value that represents a real world currency.

12.   A system in accordance with any one of the preceding claims, wherein the value is a virtual currency.

13.   A system in accordance with Claim 10 when dependent on Claim 6, wherein the store of value in the rewards database is the virtual currency.

14.   A system in accordance with any one of Claims 2 to 11, wherein the communications module is further arranged to interface with at least one external computing system, to effect the transfer of value.

15.   A system in accordance with any one of the preceding claims, wherein the first unique code is a QR code.

16.   A system in accordance with any one of the preceding claims, wherein at least one of the first or second transaction information or the first or second unique codes is encrypted.

17.   An electronic mobile device arranged to effect a transfer of value, comprising an interface arranged to receive a first unique transaction code from a first transaction device and, upon authorisation by a user, provide the first unique transaction code to a system to effect the transfer of value.

18.   An electronic method for facilitating the transfer of value, comprising the steps of:

        receiving first transaction information from a first entity and utilising the transaction information to generate a first unique code;
        associate the unique code with the first transaction information; and
        store the first transaction information and the first unique code in a database;
        wherein the first unique code is provided to the first entity.

19.   An electronic method for facilitating the transfer of value, comprising the steps of:

receiving a second unique code and second transaction information from a second entity; and

comparing the second unique code to the first unique code in the database;

wherein if the first and second unique codes match, the first and second transaction information are used to effect a transfer of value from the second entity to the first entity.

20.   A computer program, including at least one instruction capable of being executed by a computing system, which implements a method in accordance with Claim 16 or Claim 17.

21.   A computer readable medium including a computer program in accordance with Claim 18.

22.   A data signal including at least one instruction being capable of being received and interpreted by a computing system, wherein the one instruction, on being interpreted by the computing system, implements a method in accordance with Claim 16 or Claim 17.
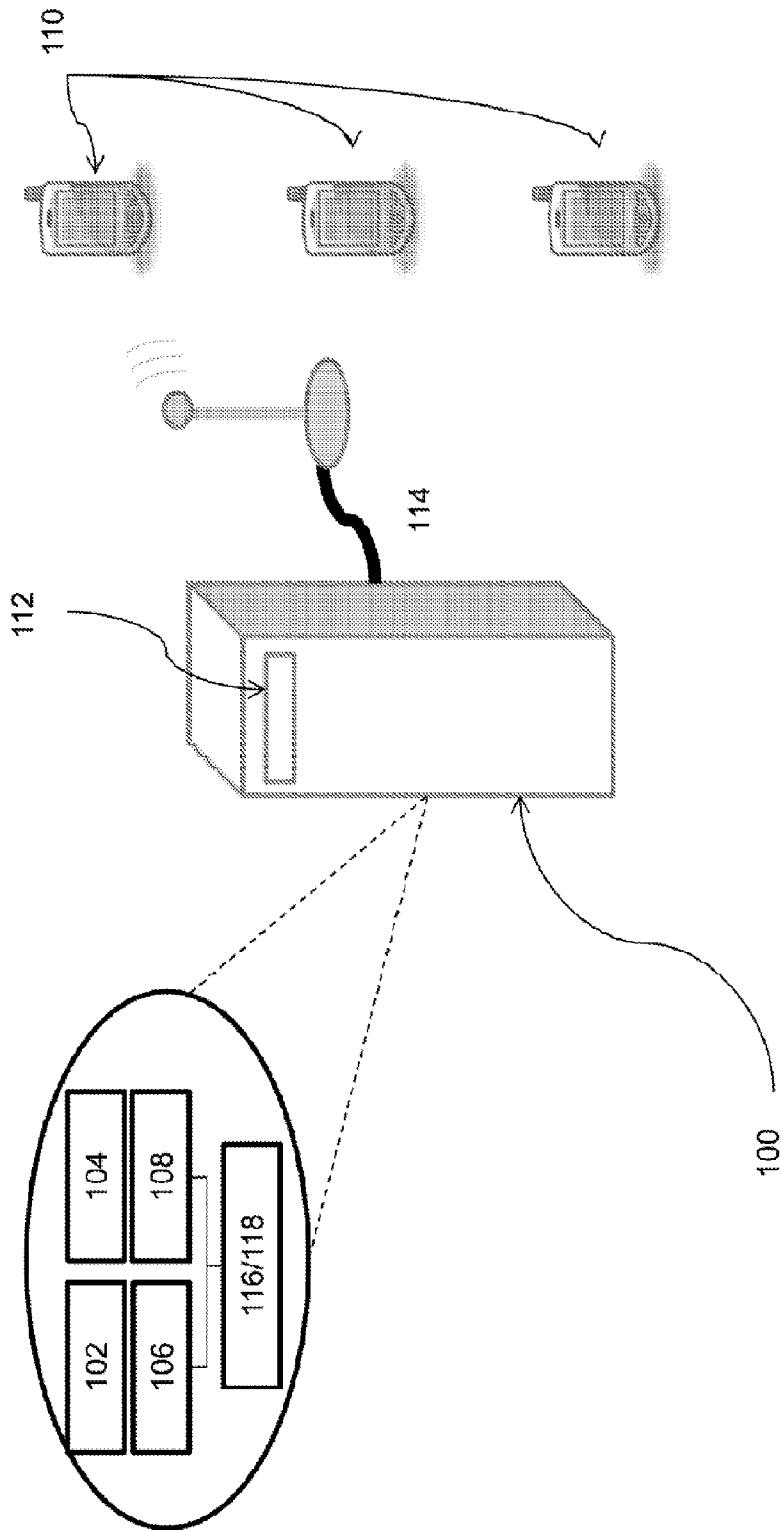
Figure 1
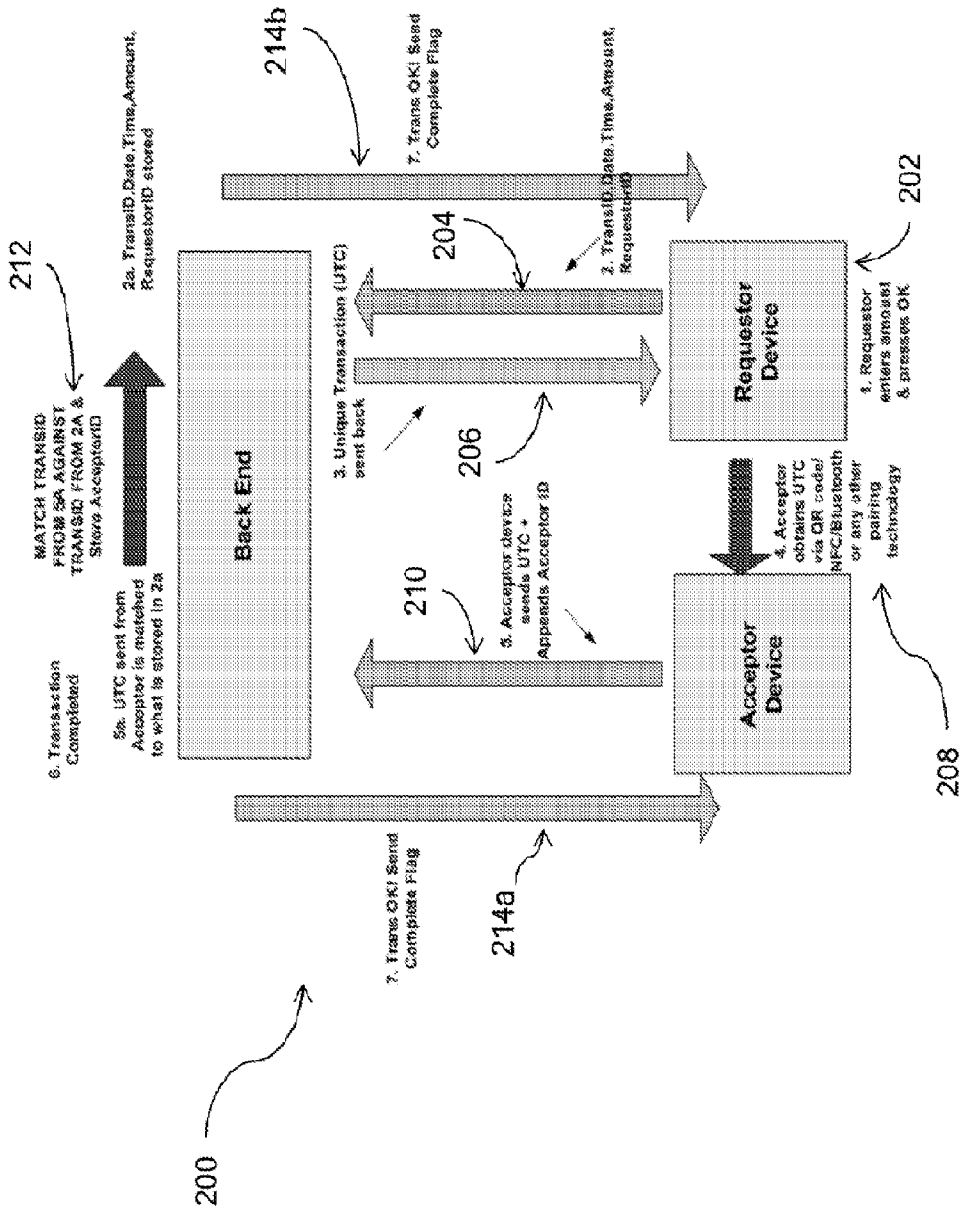
Figure 2
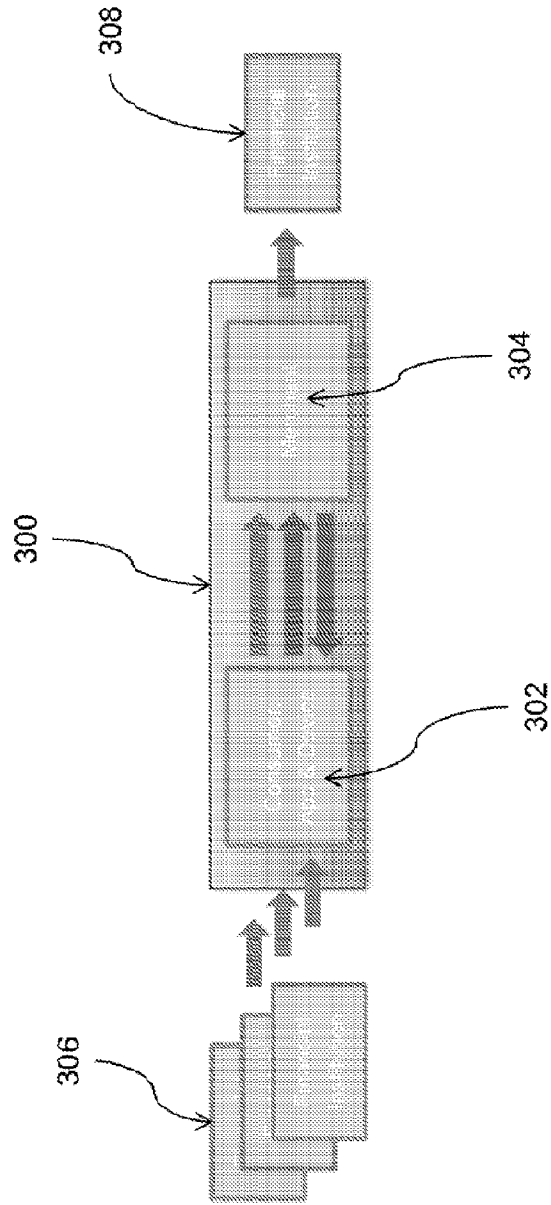
Figure 3
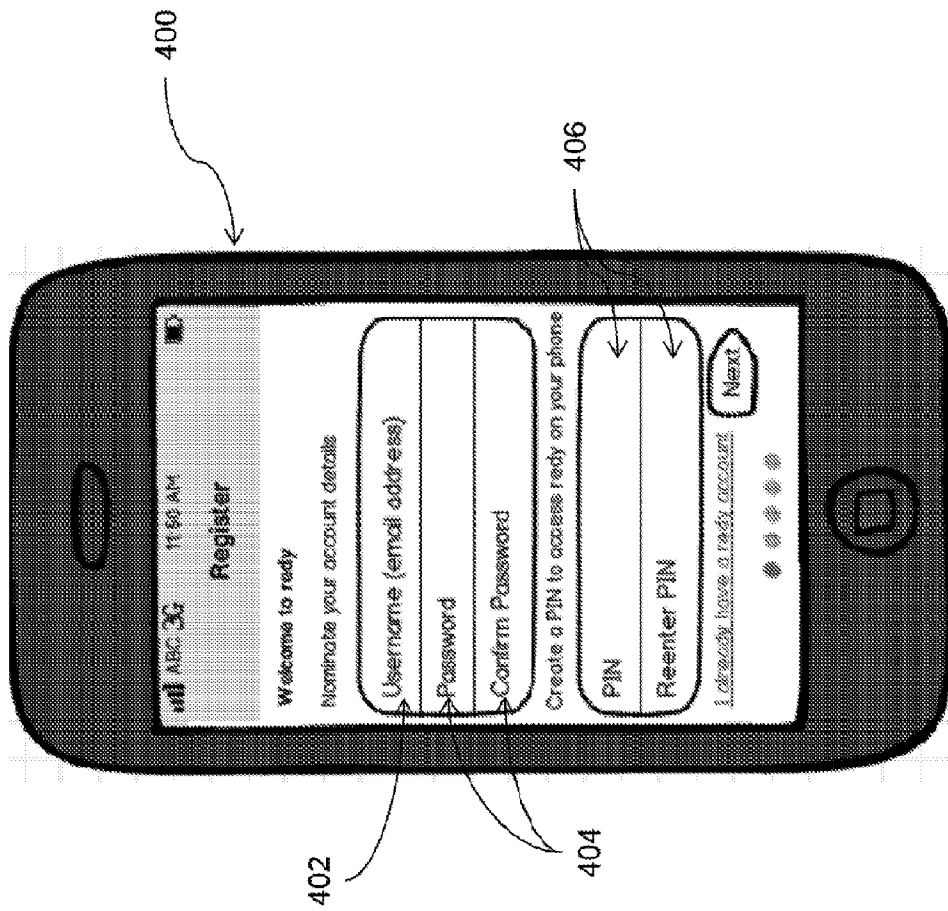
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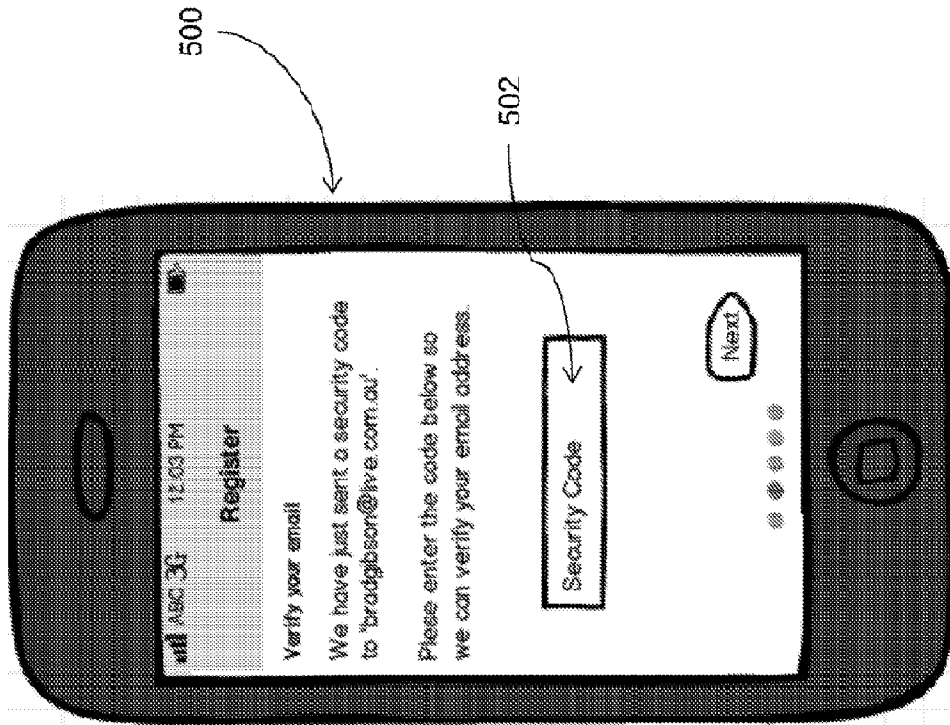
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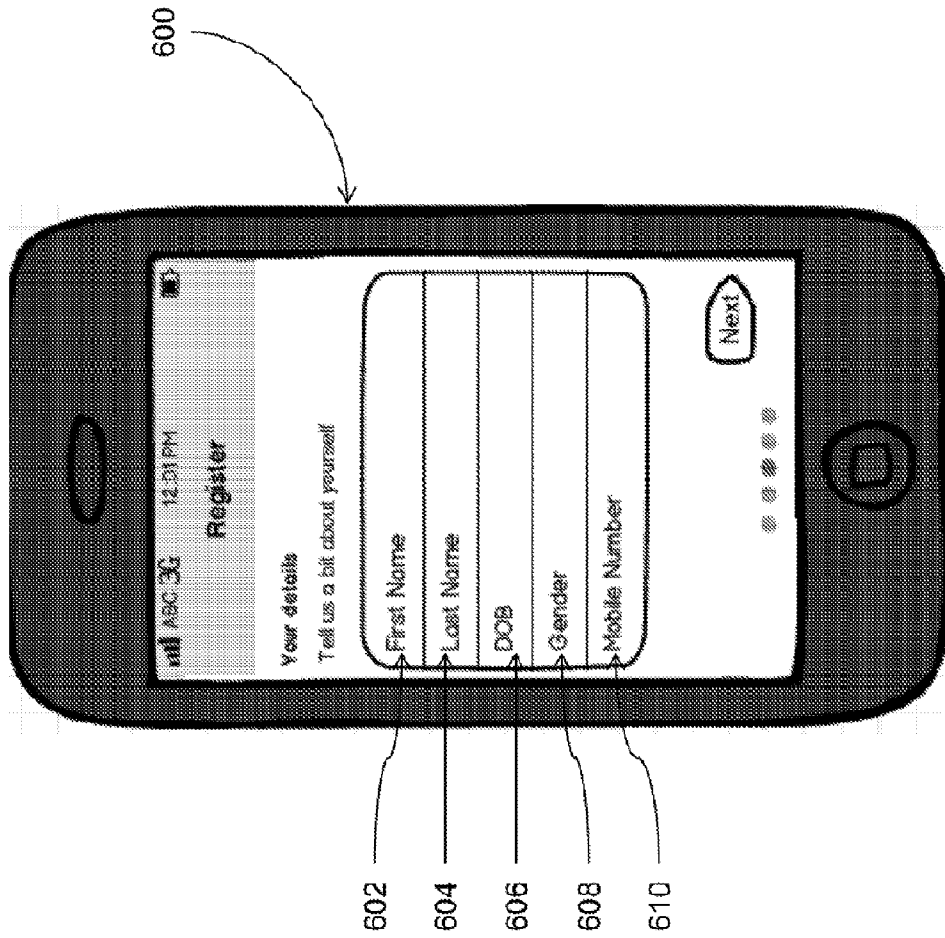
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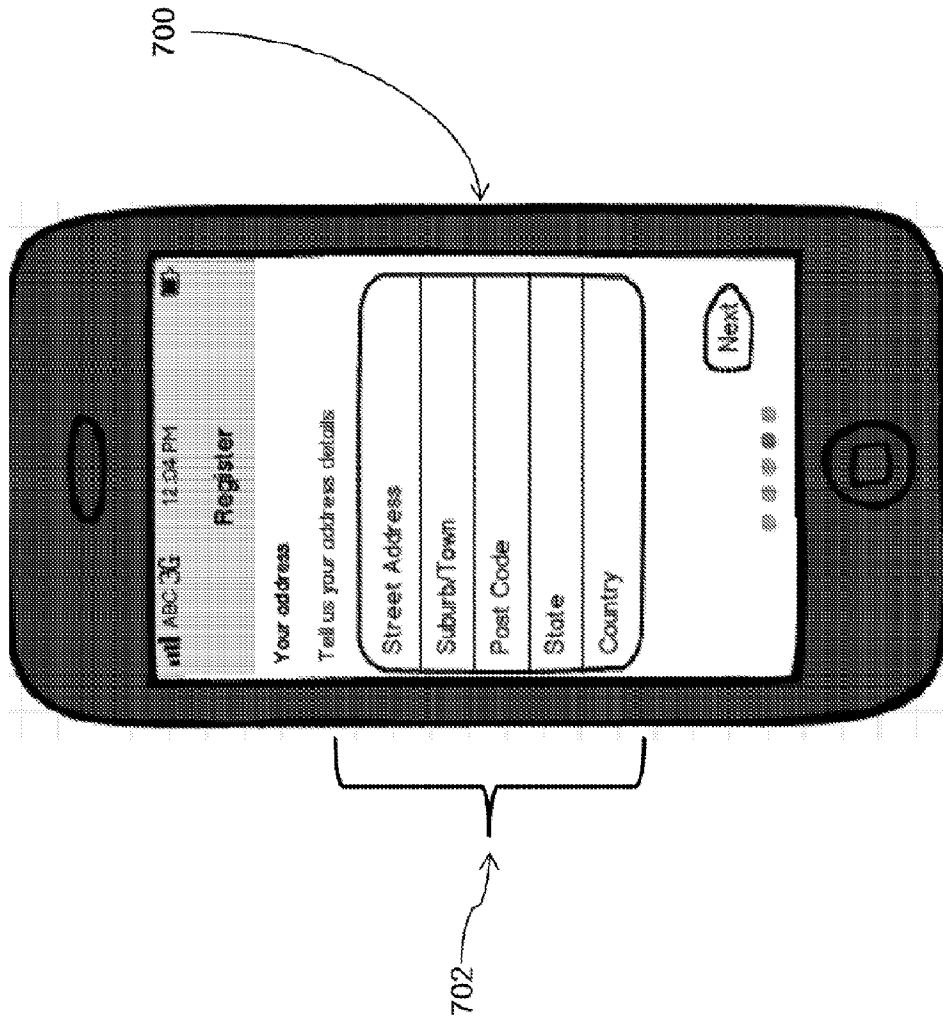
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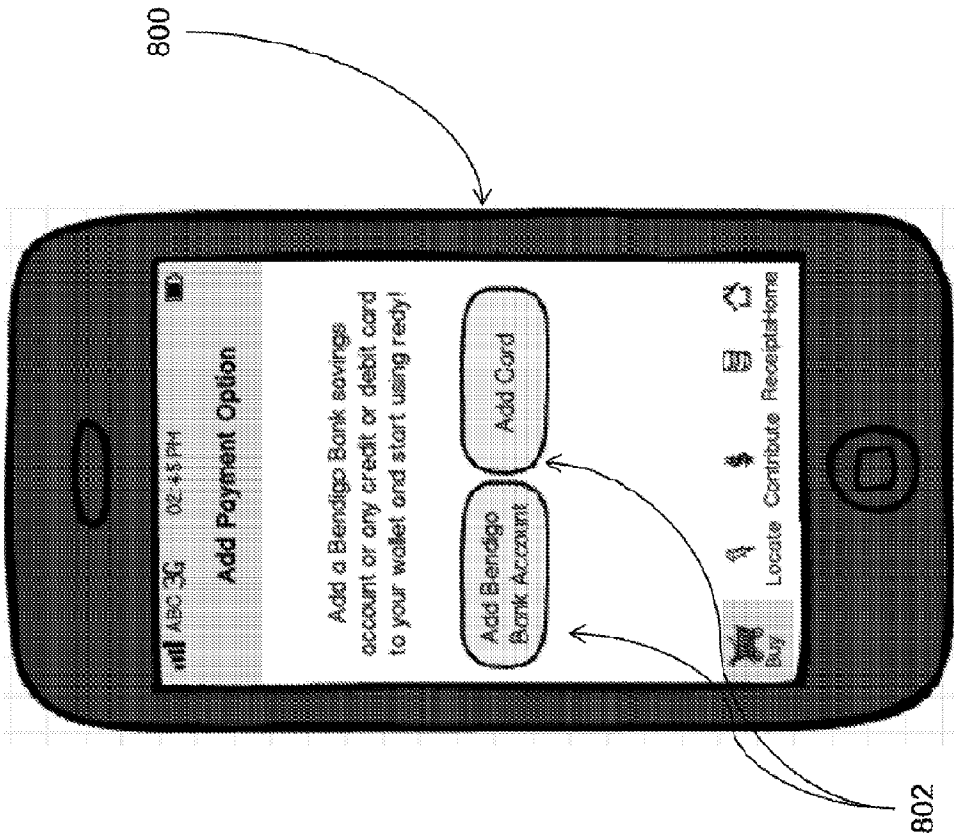
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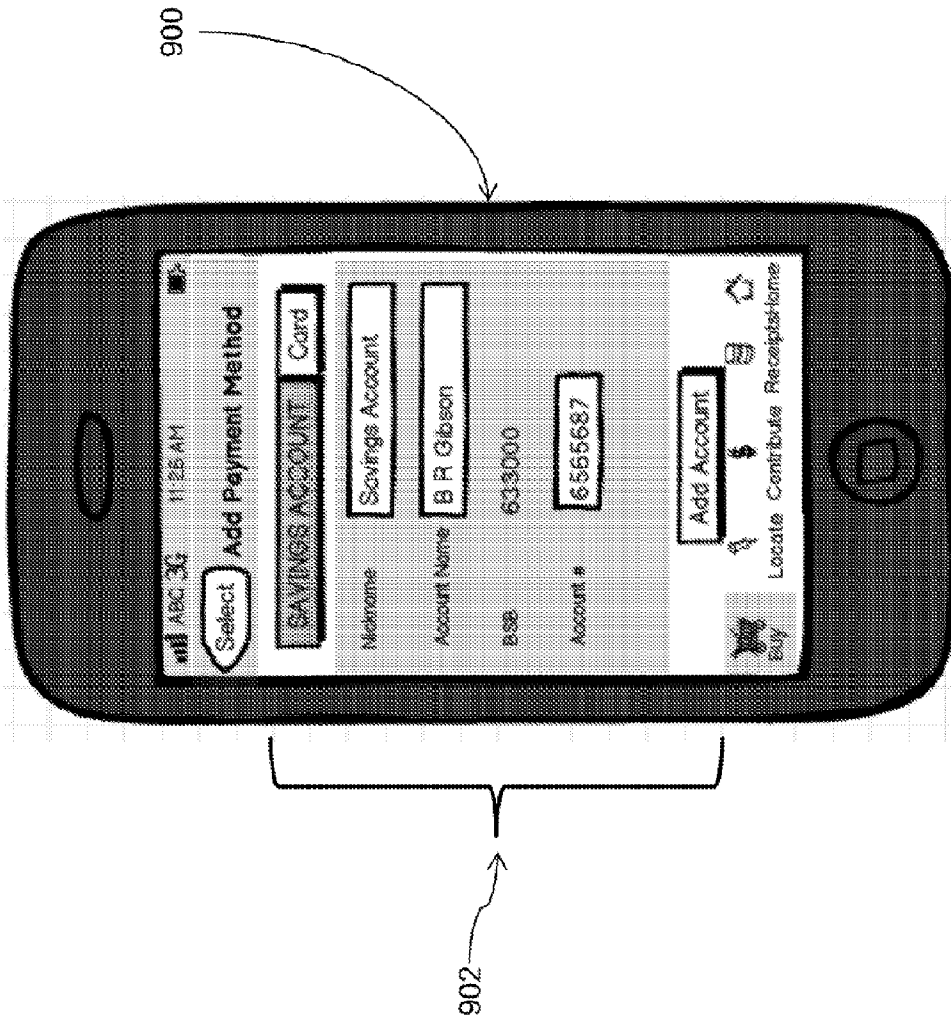
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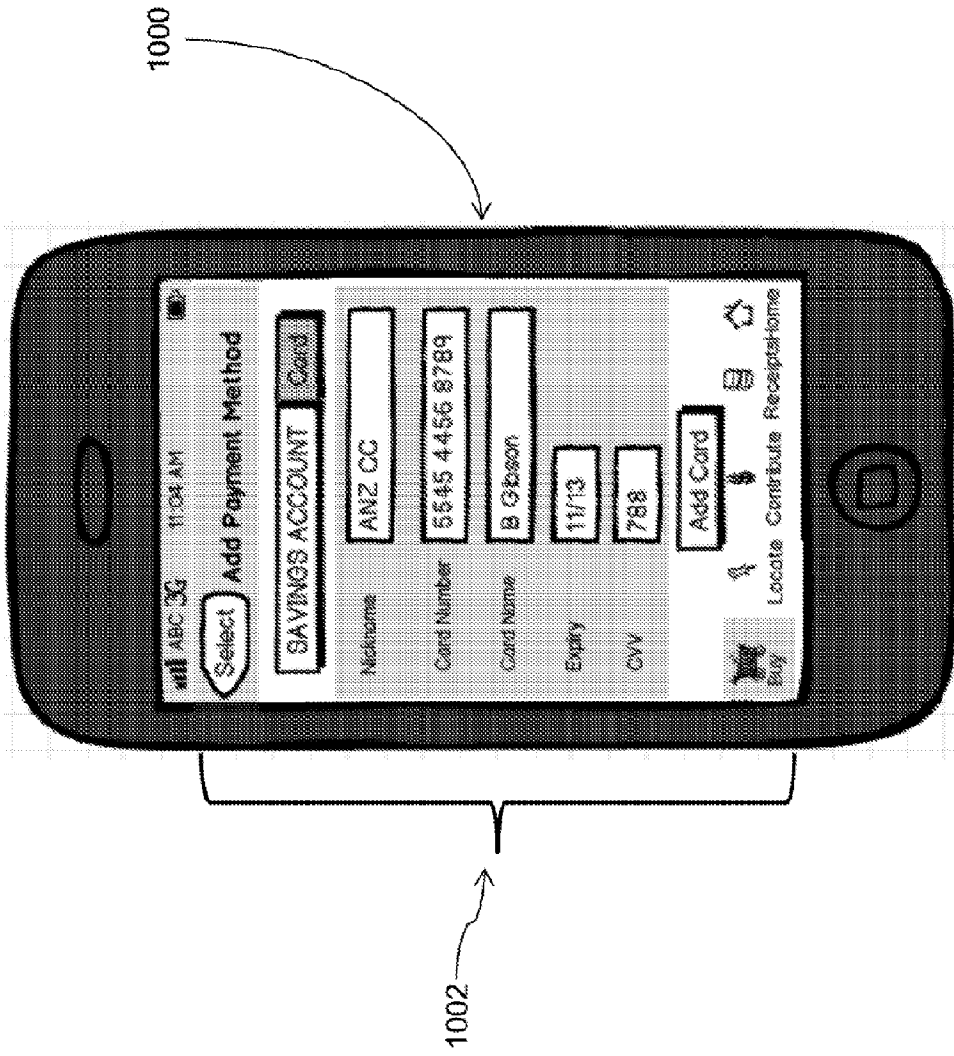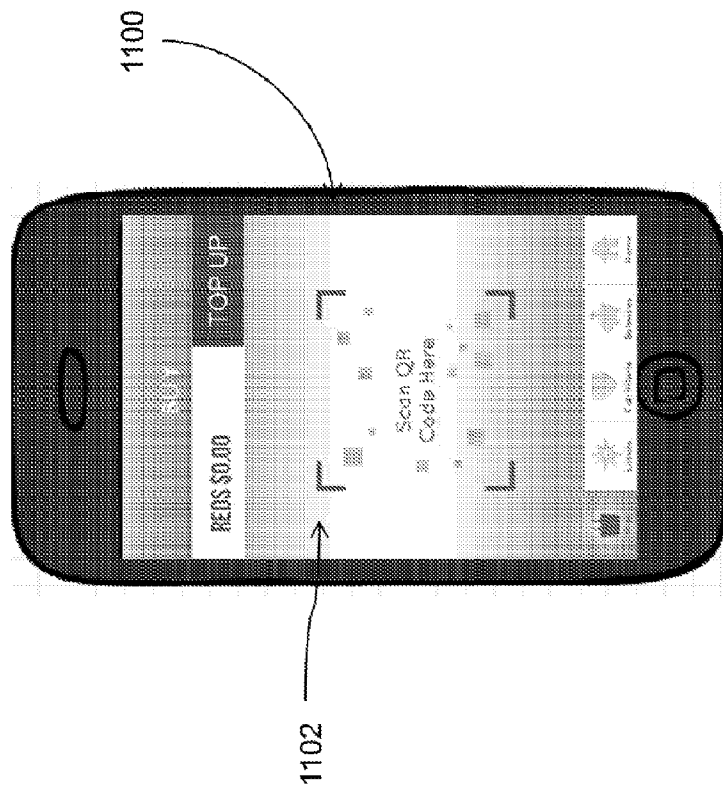
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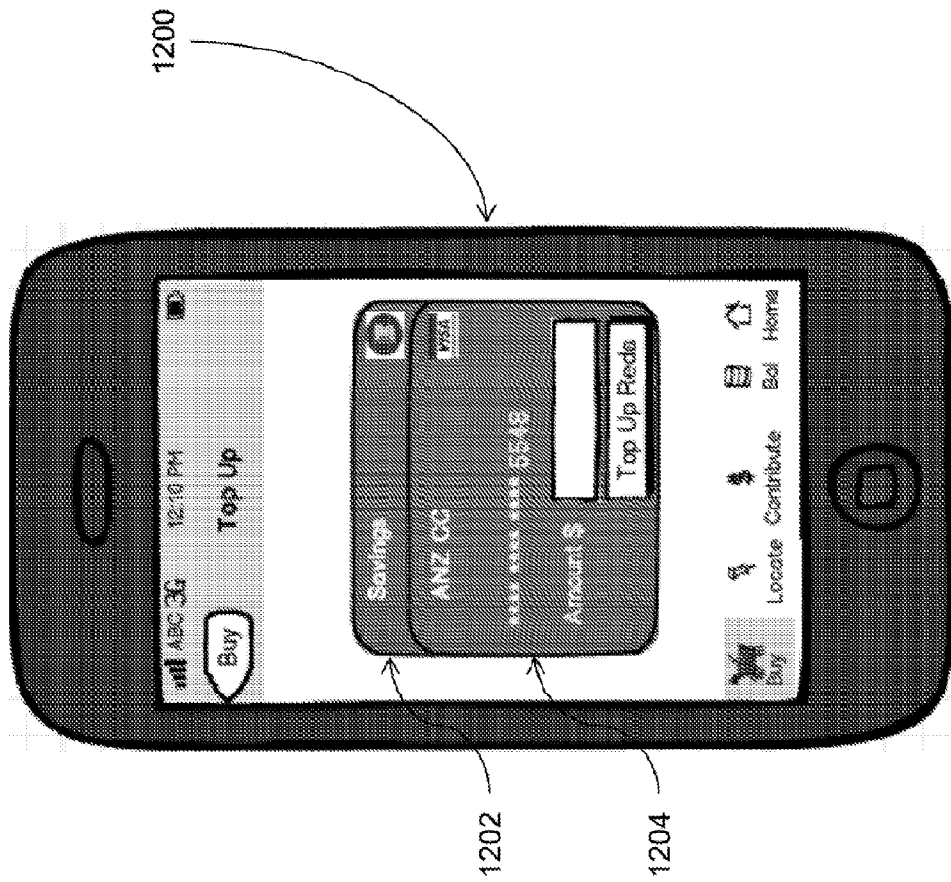
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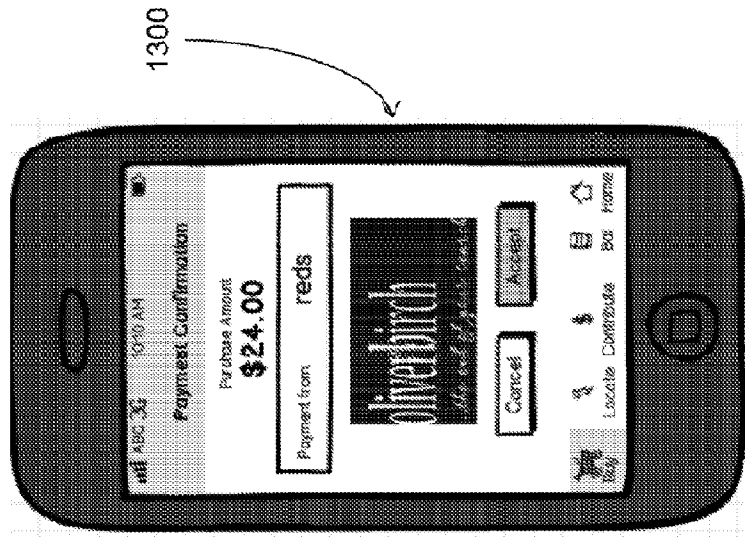
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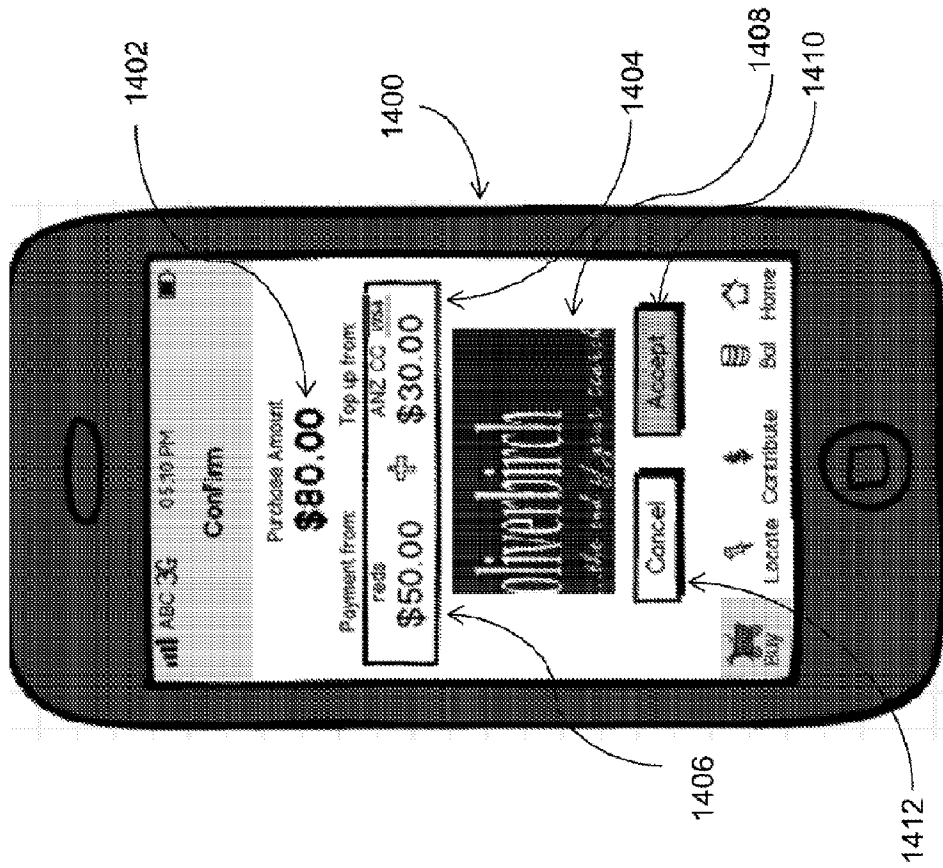
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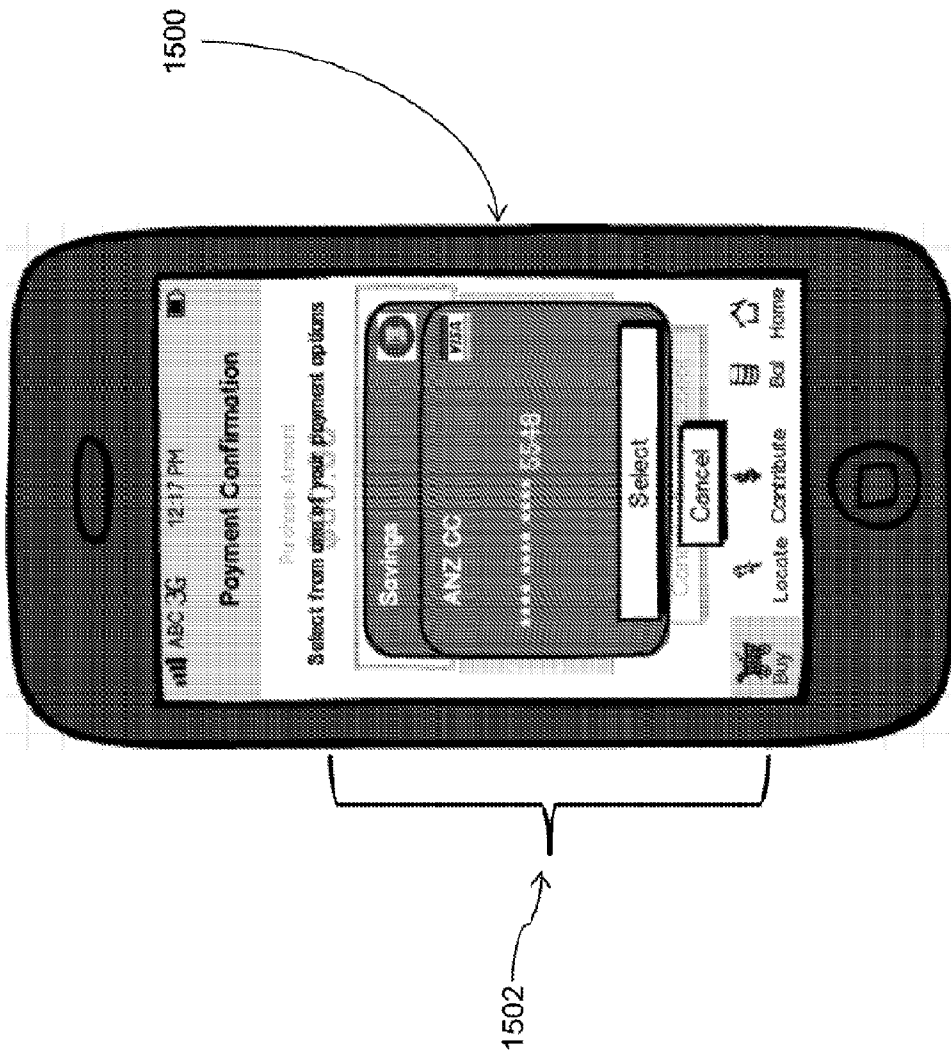
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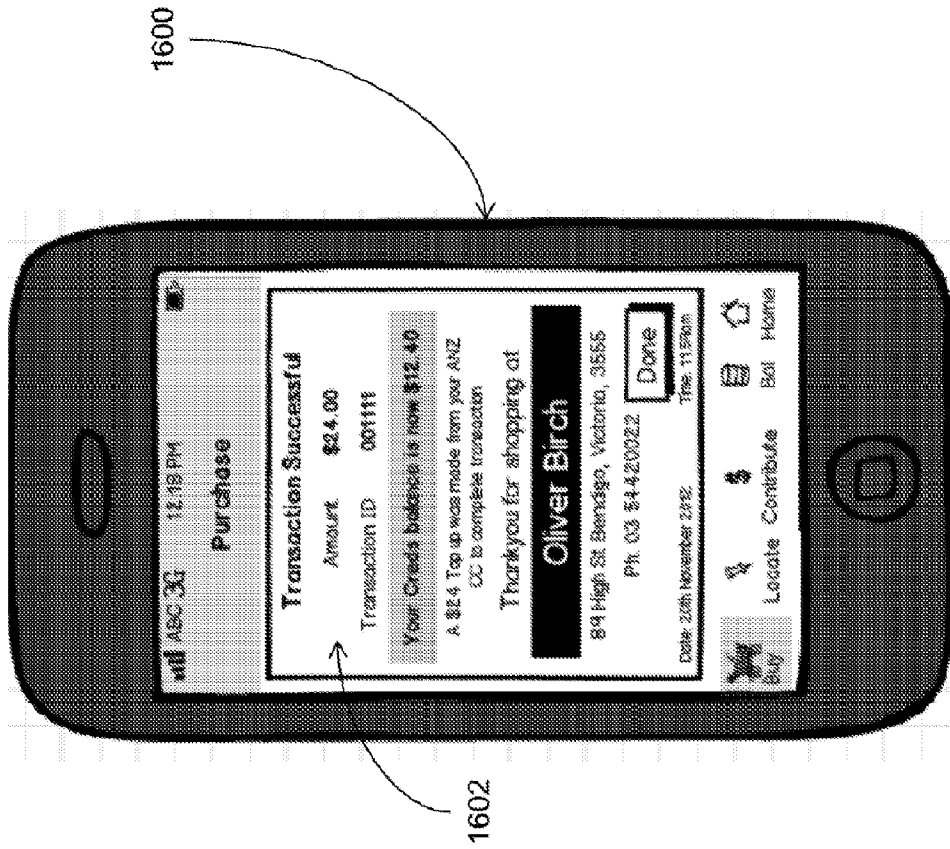
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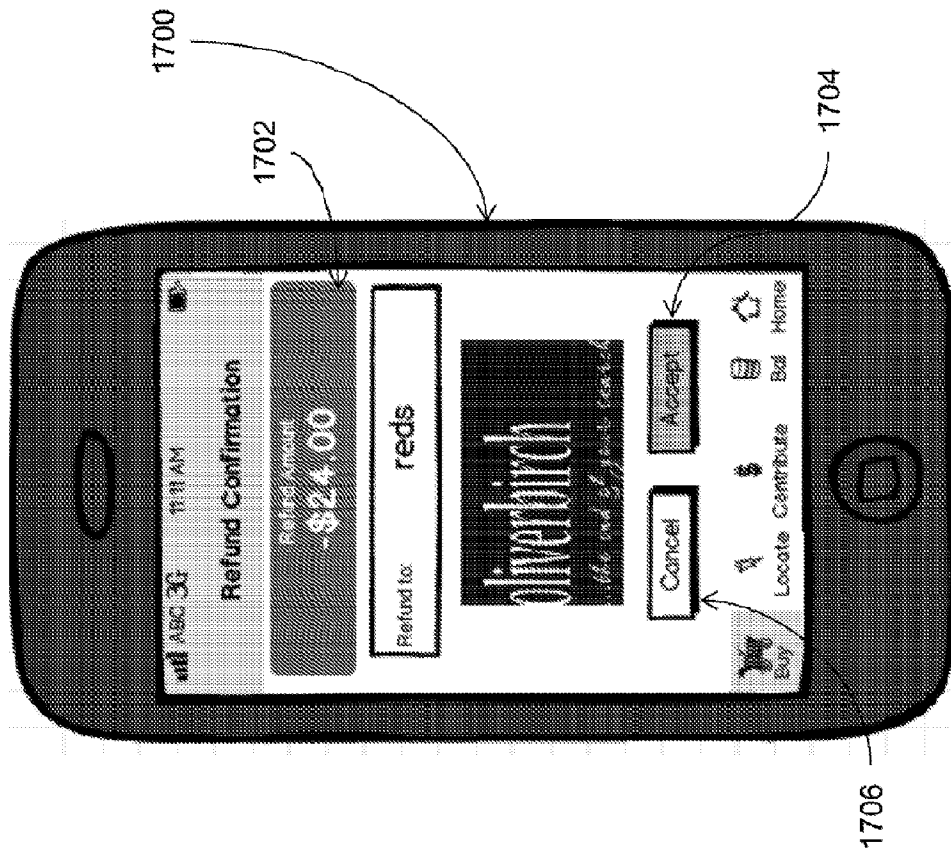
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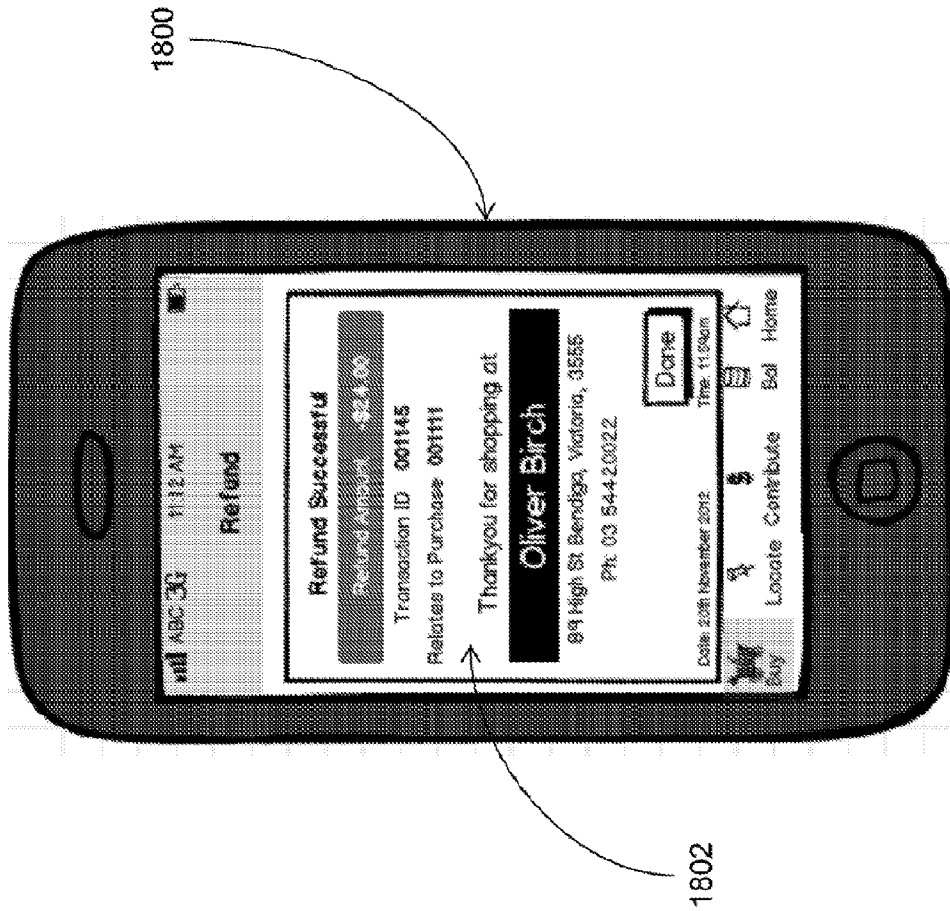
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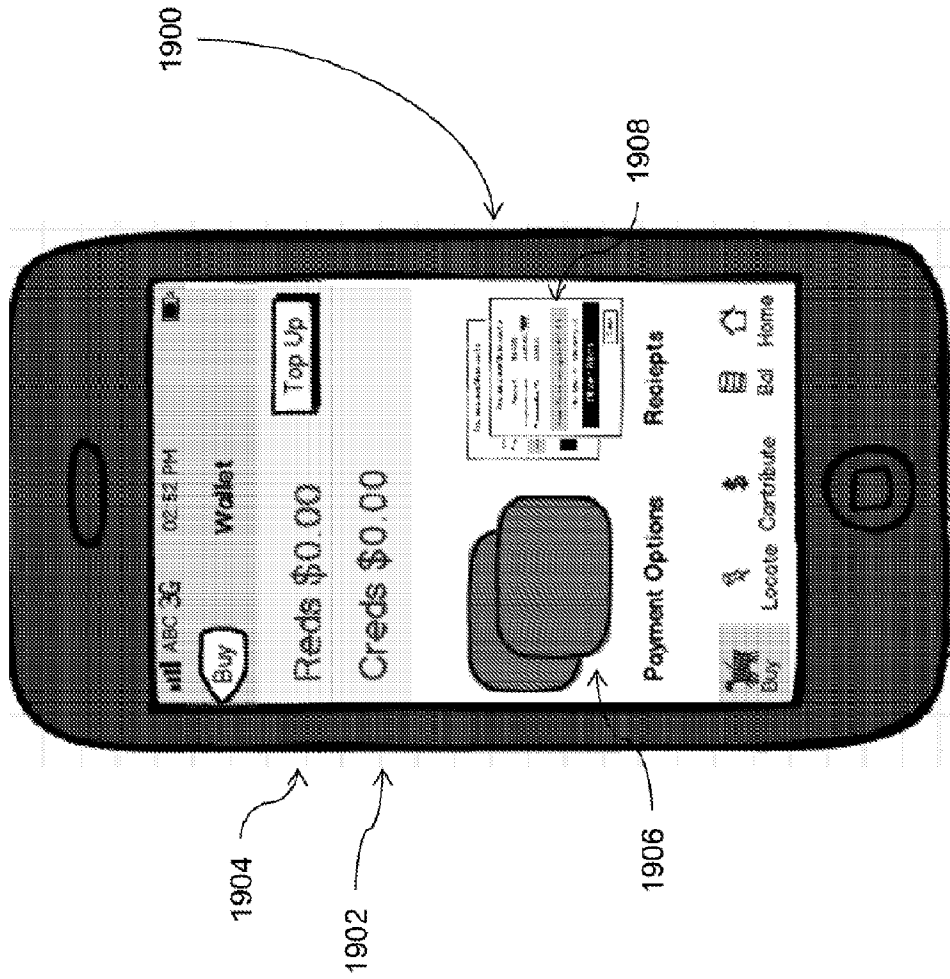
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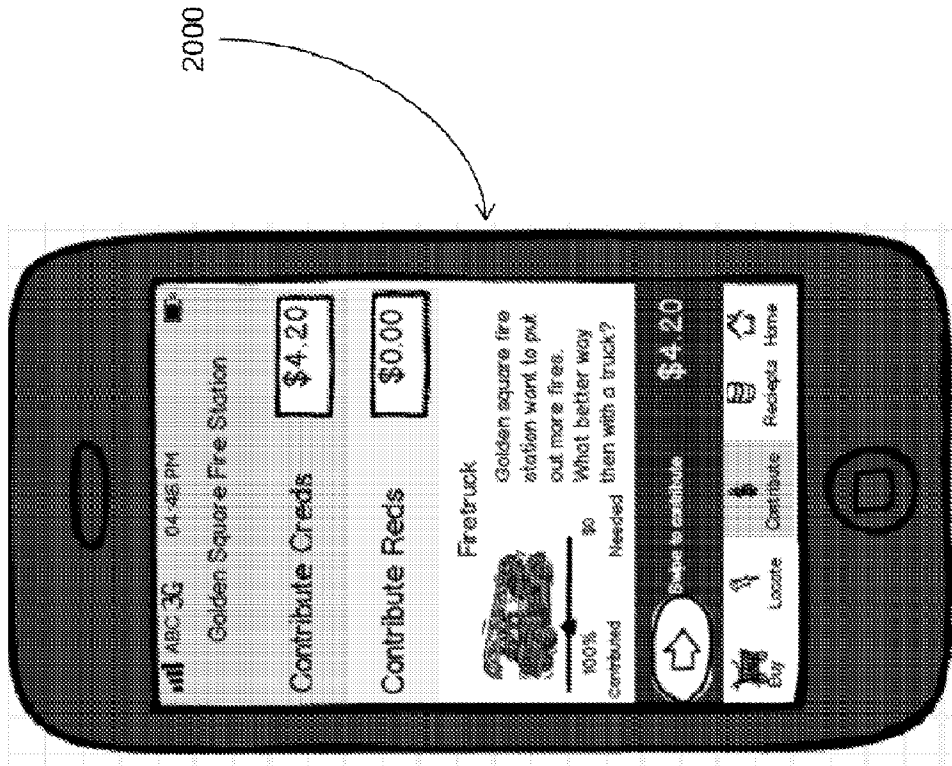
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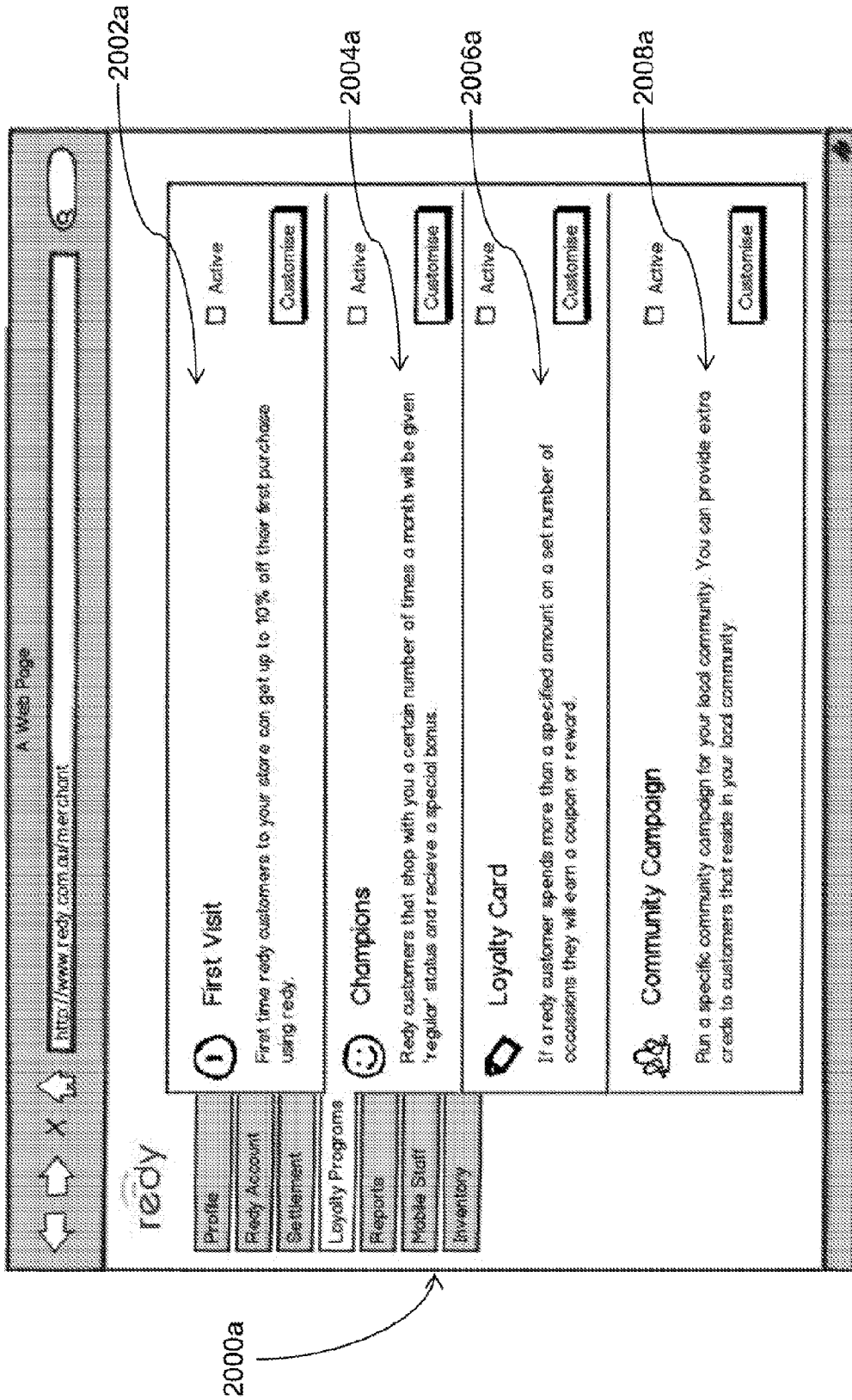
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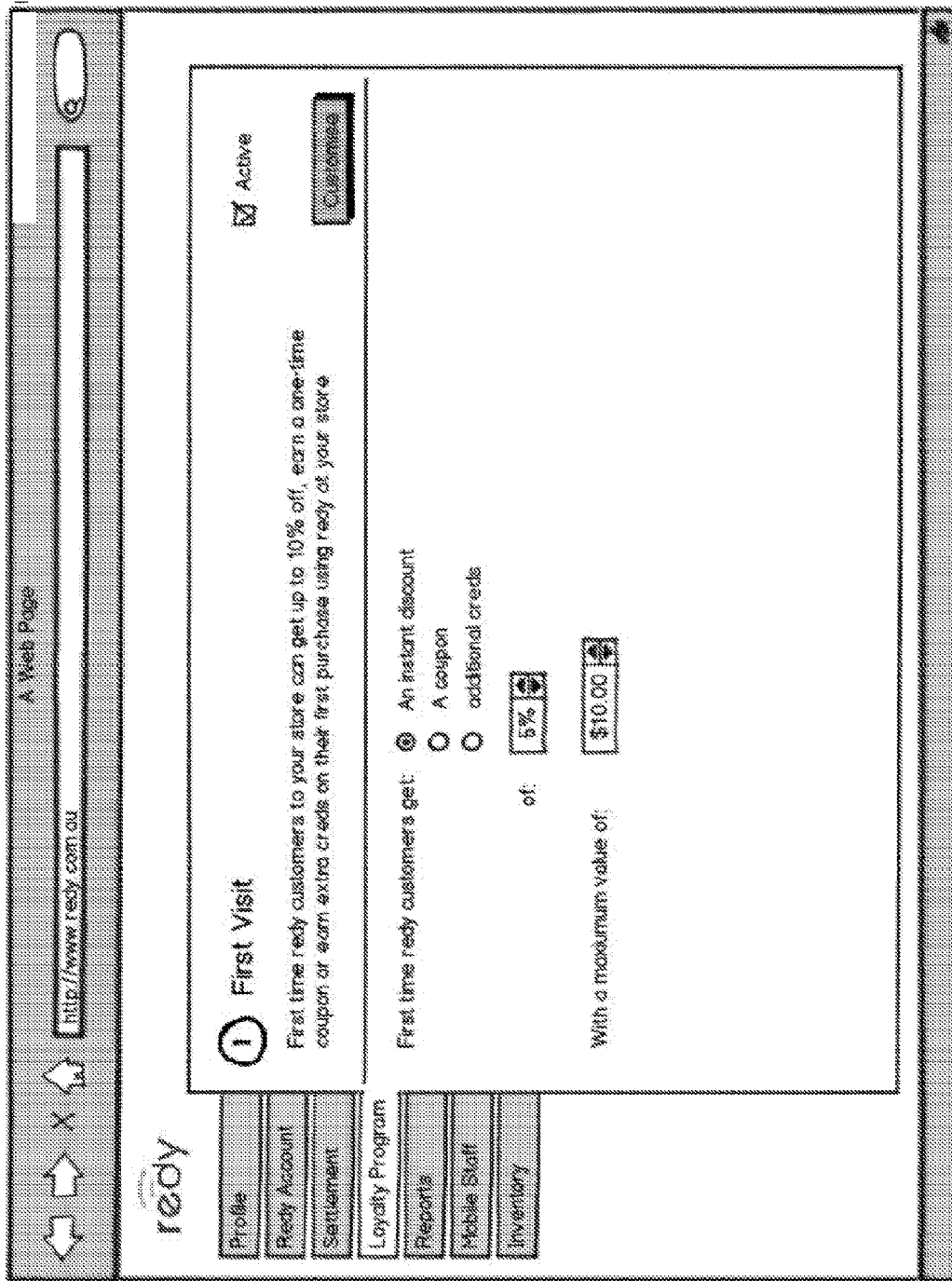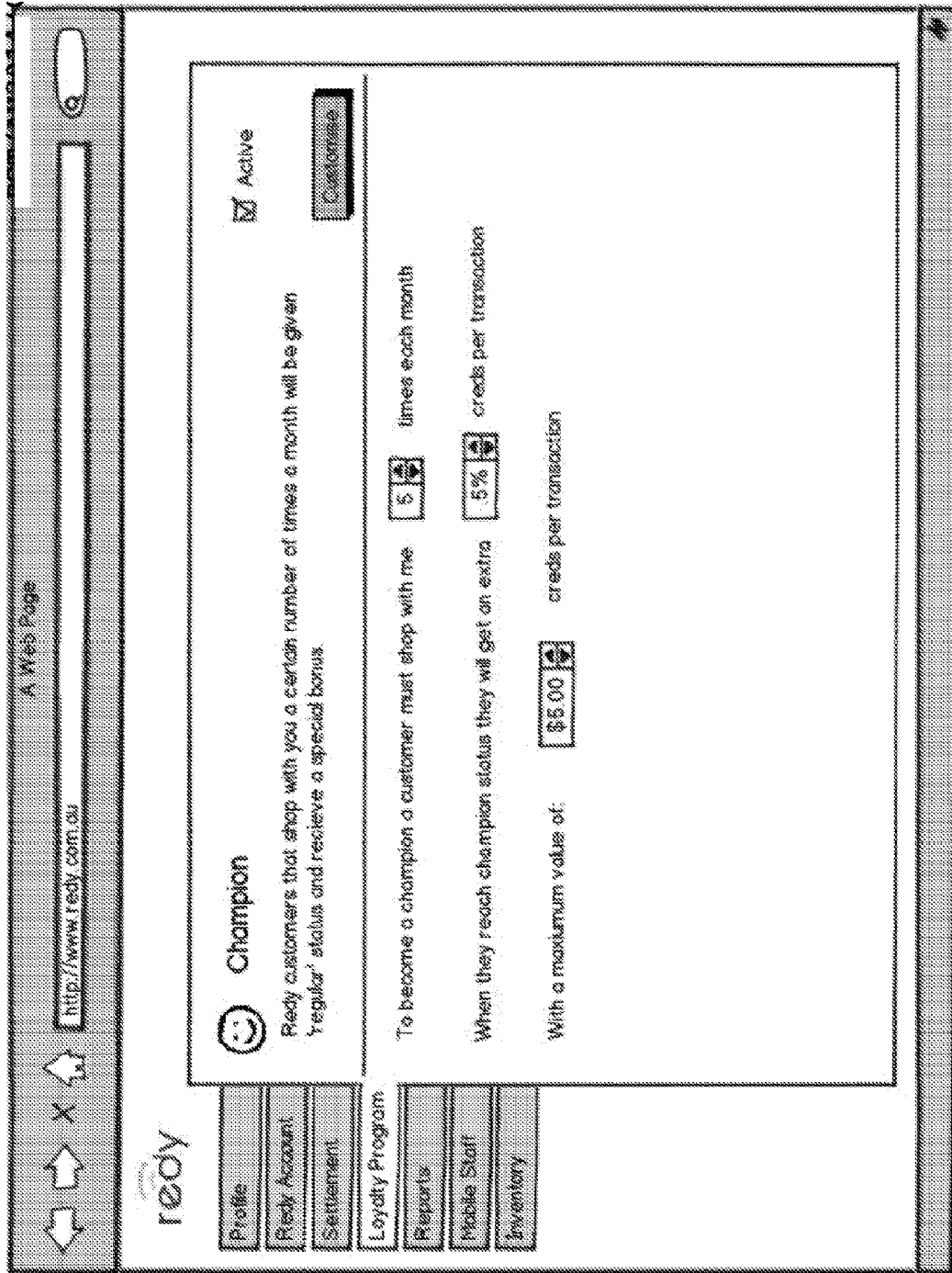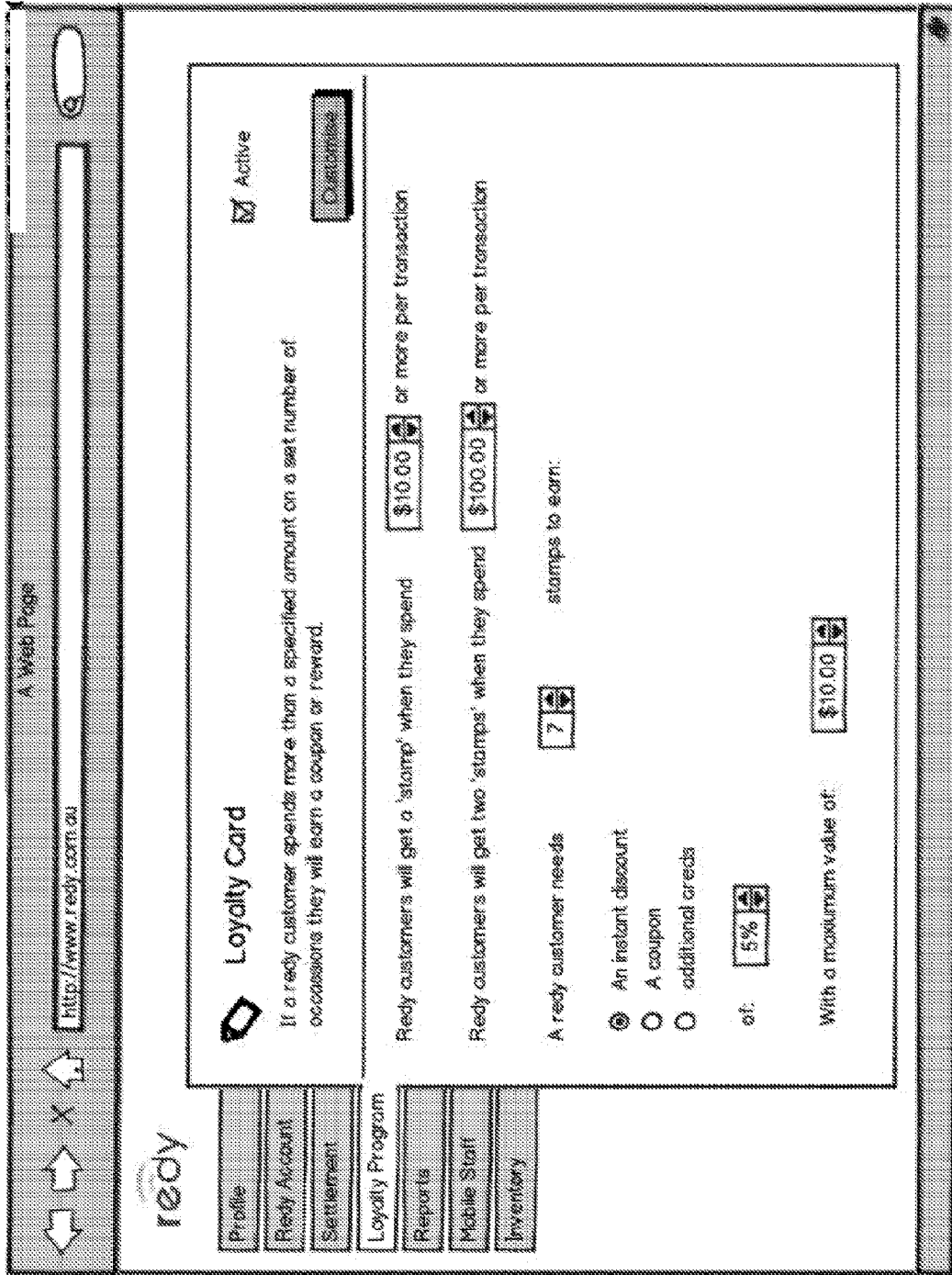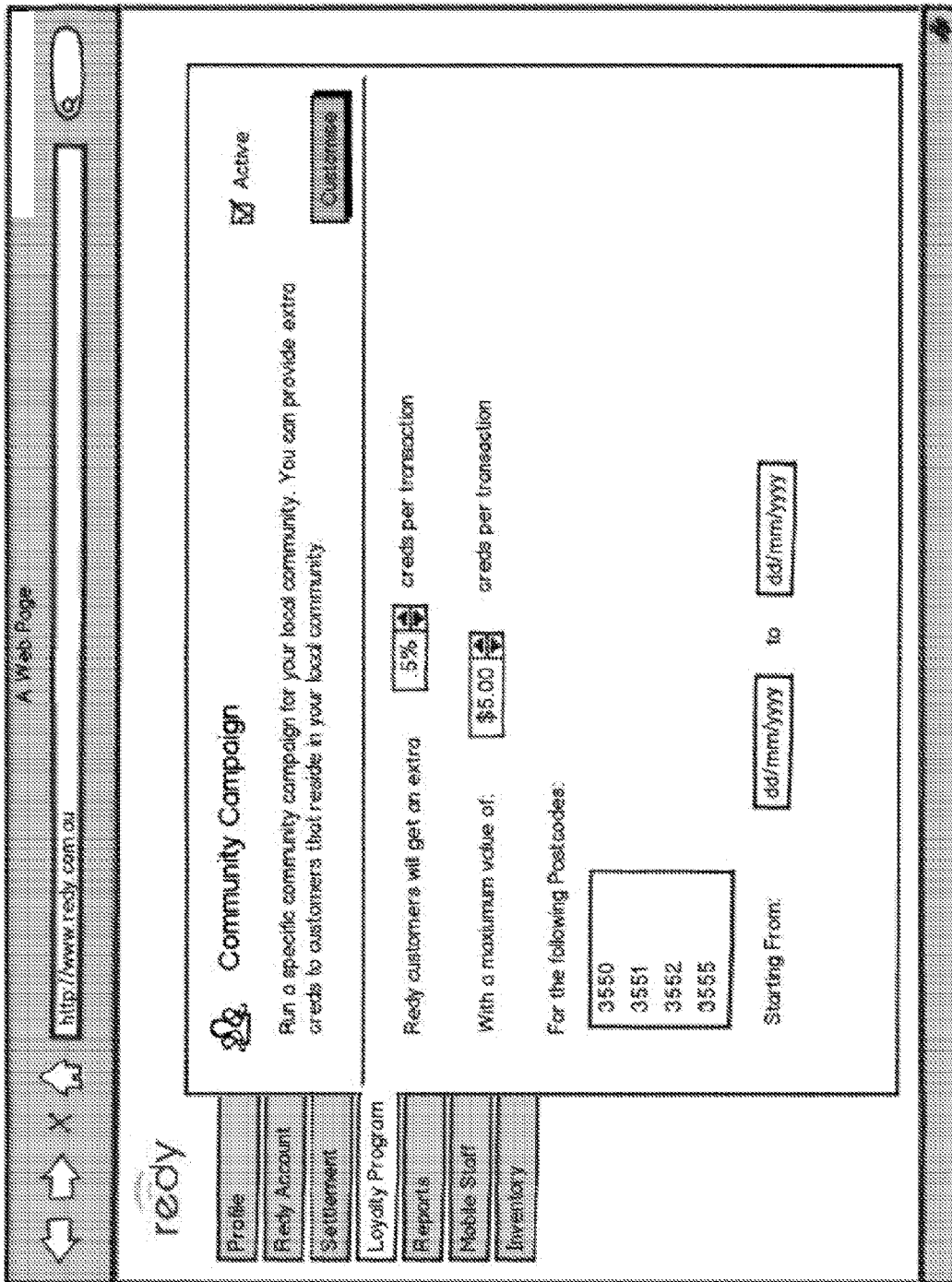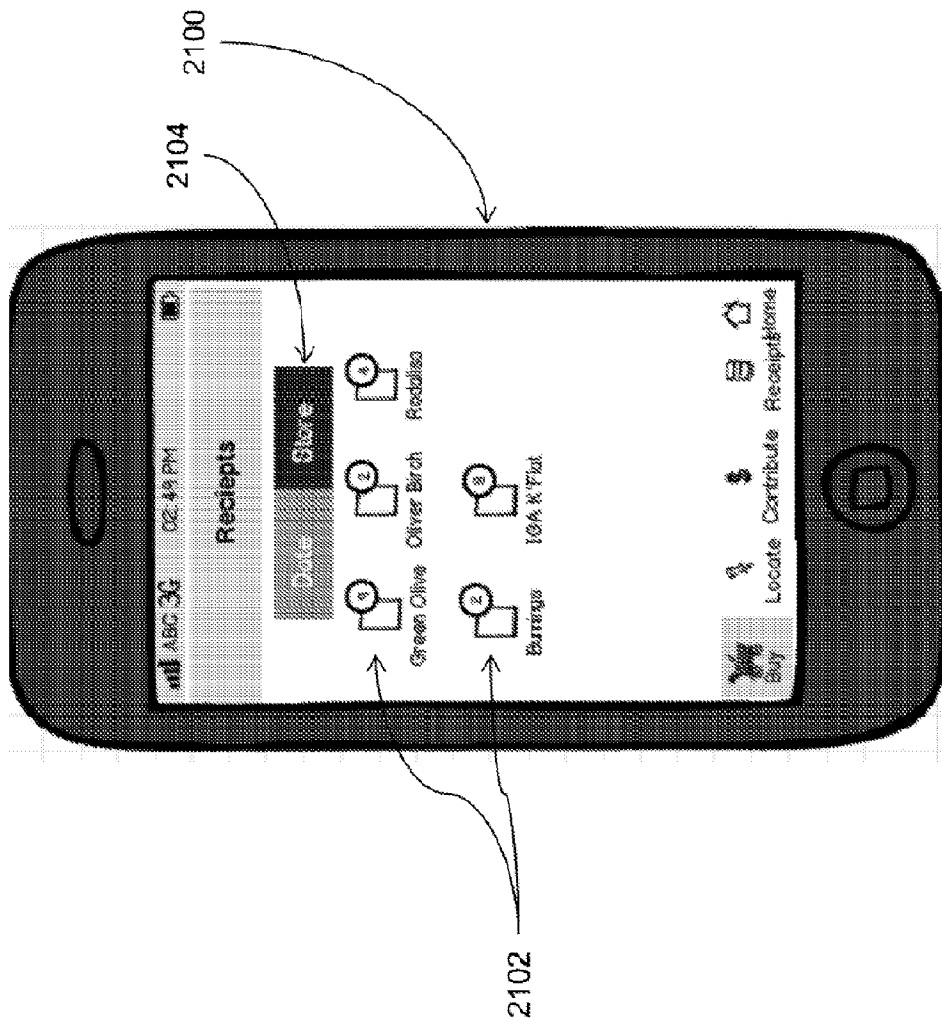
Figure 20B

Figure 20C

Figure 20D

Figure 20E

Figure 21
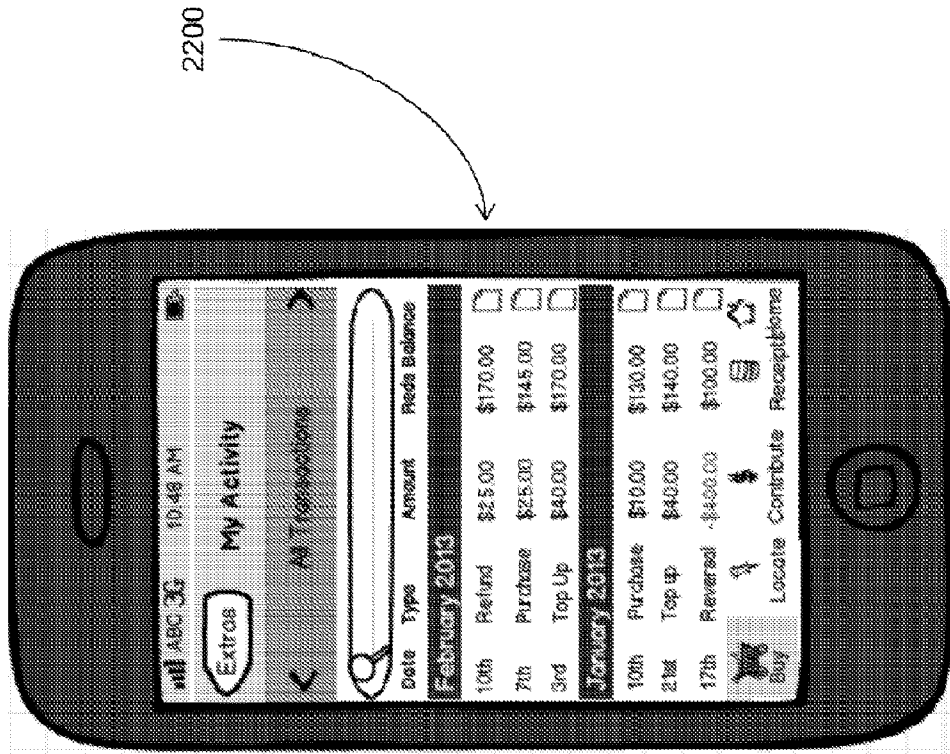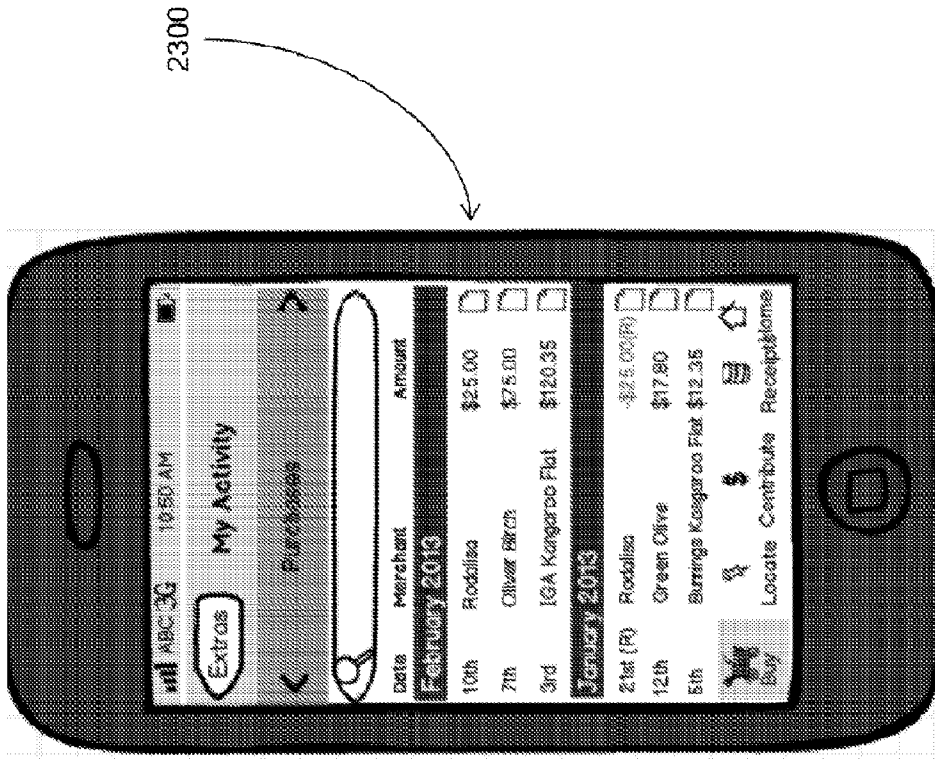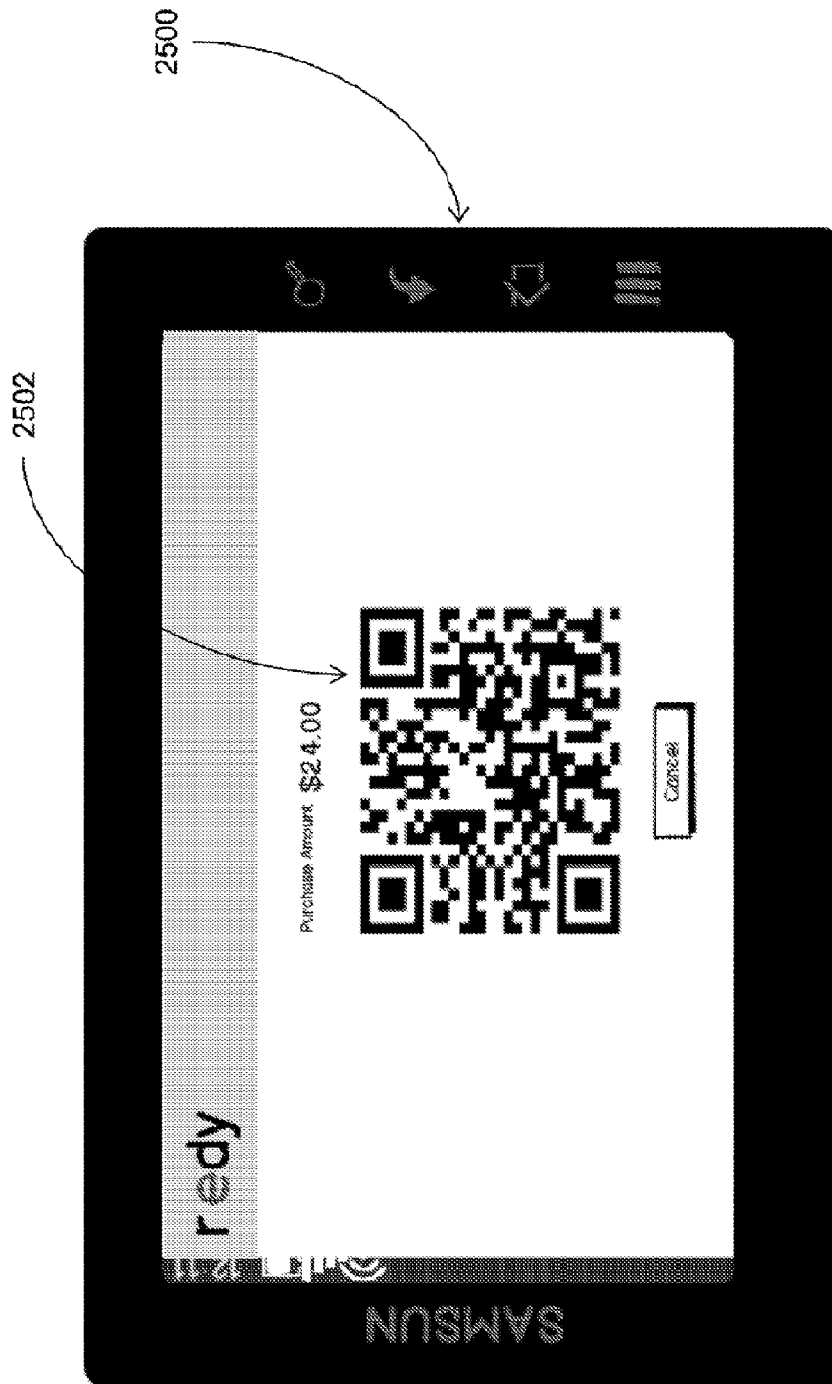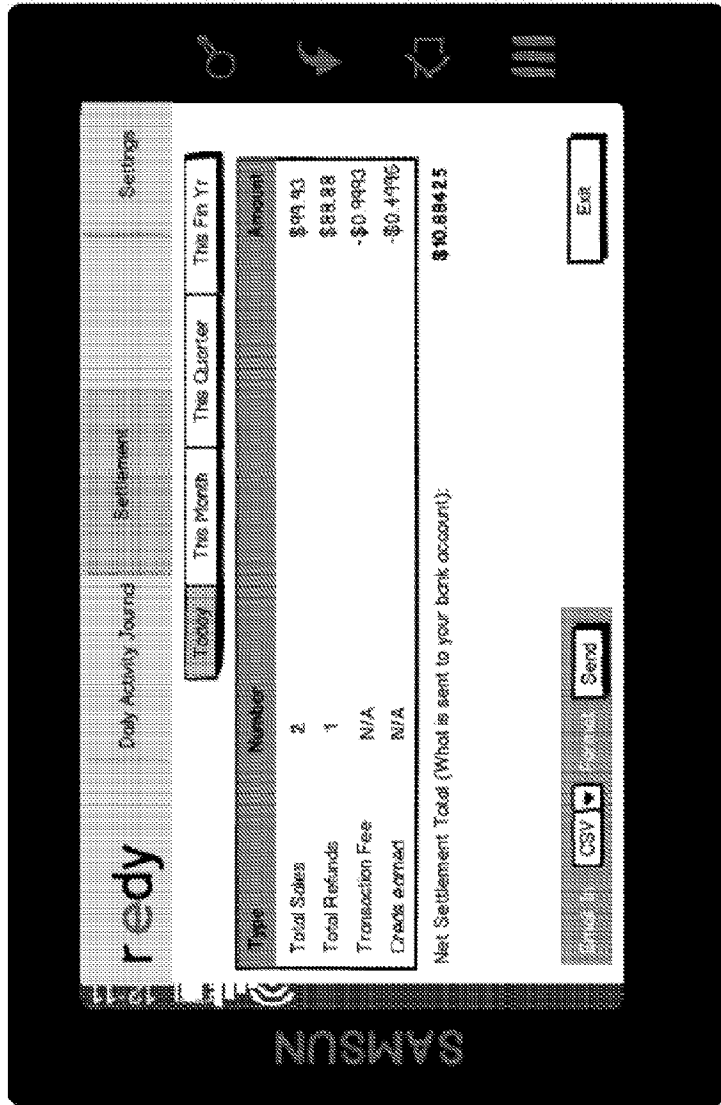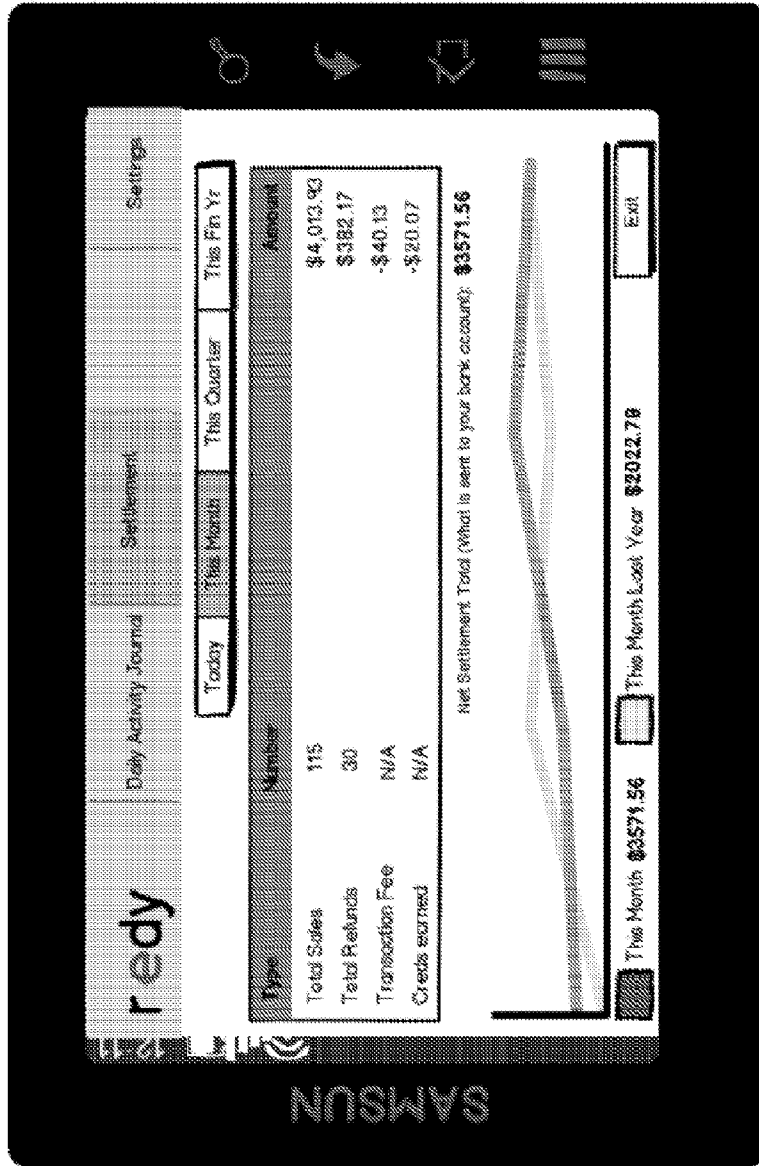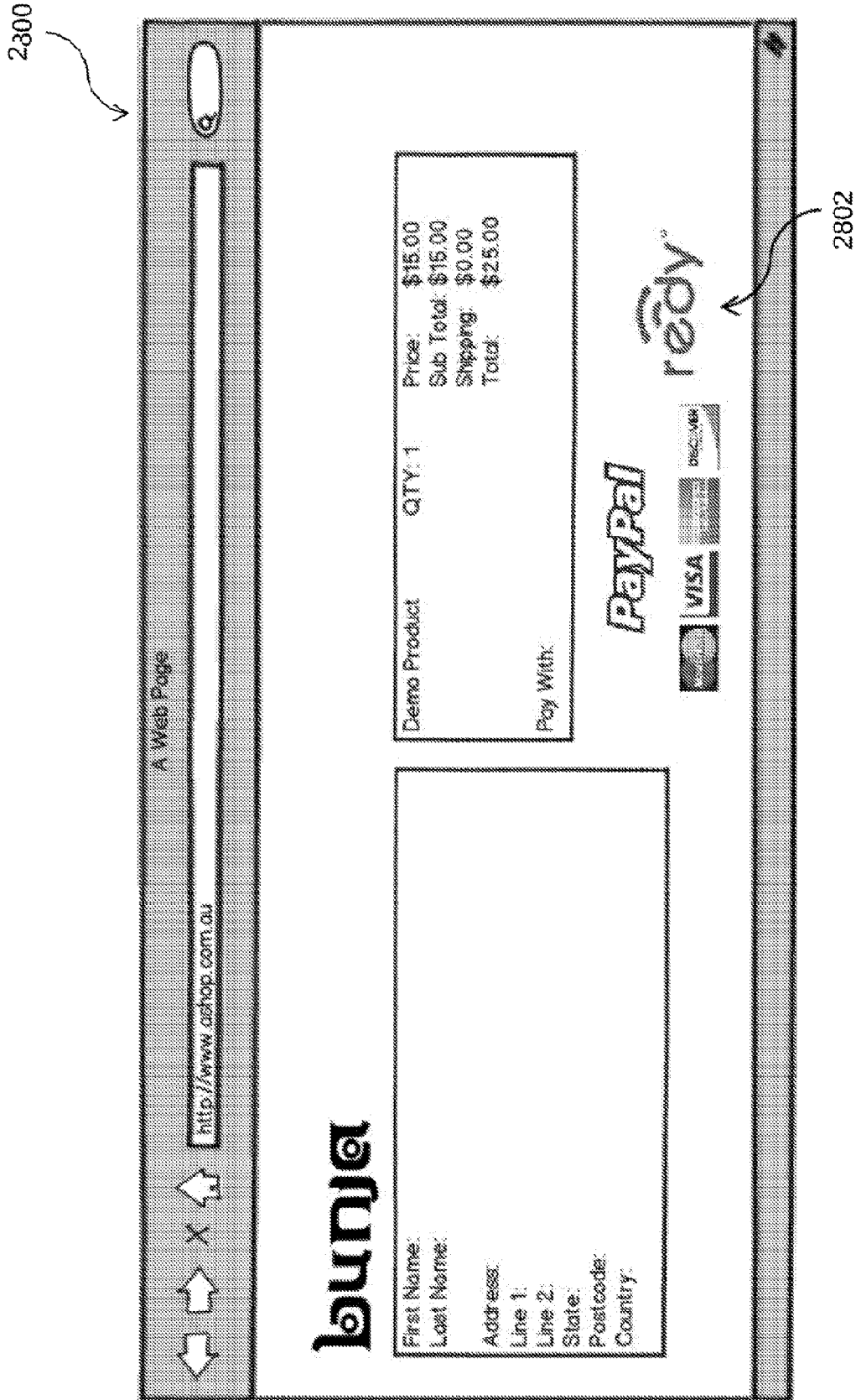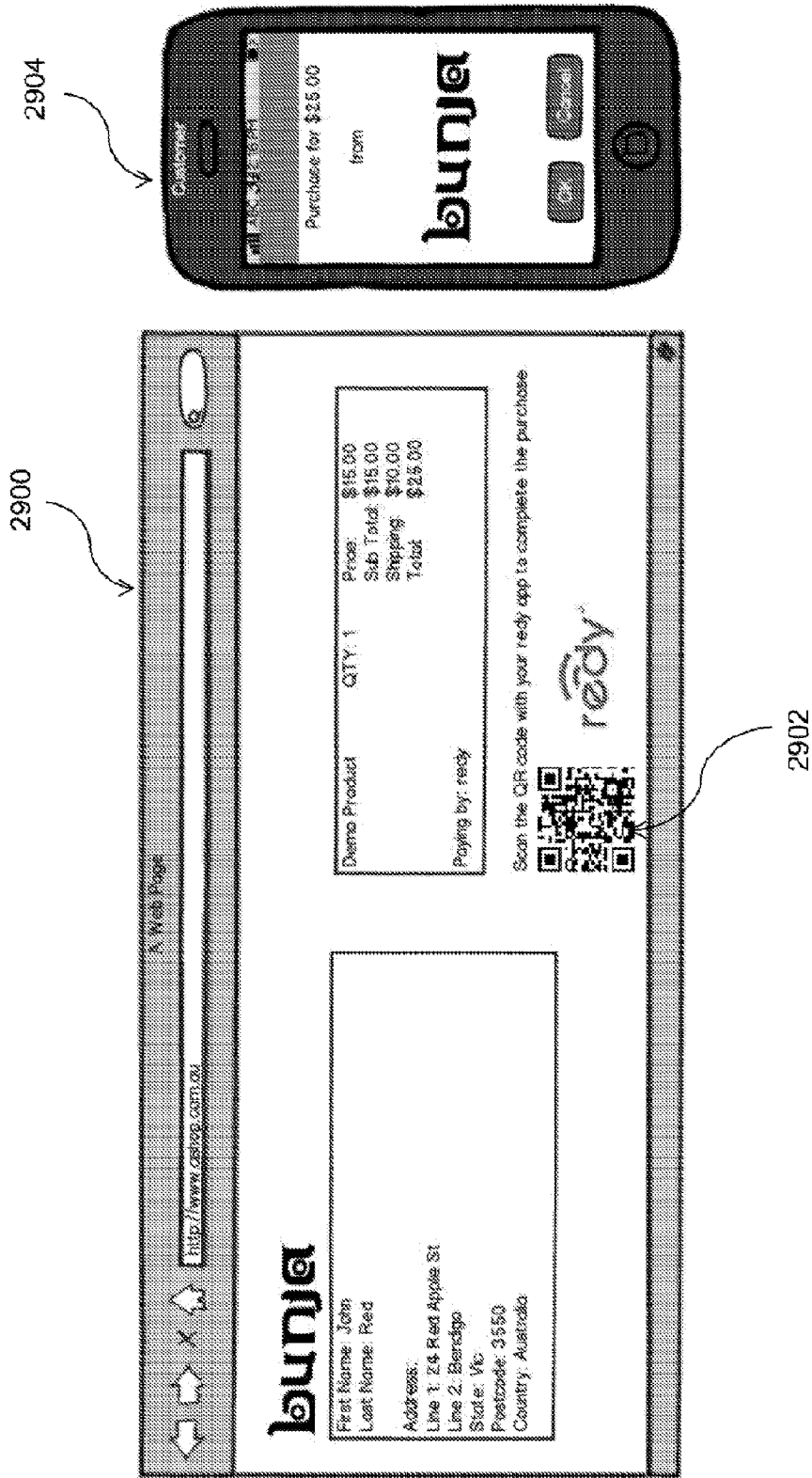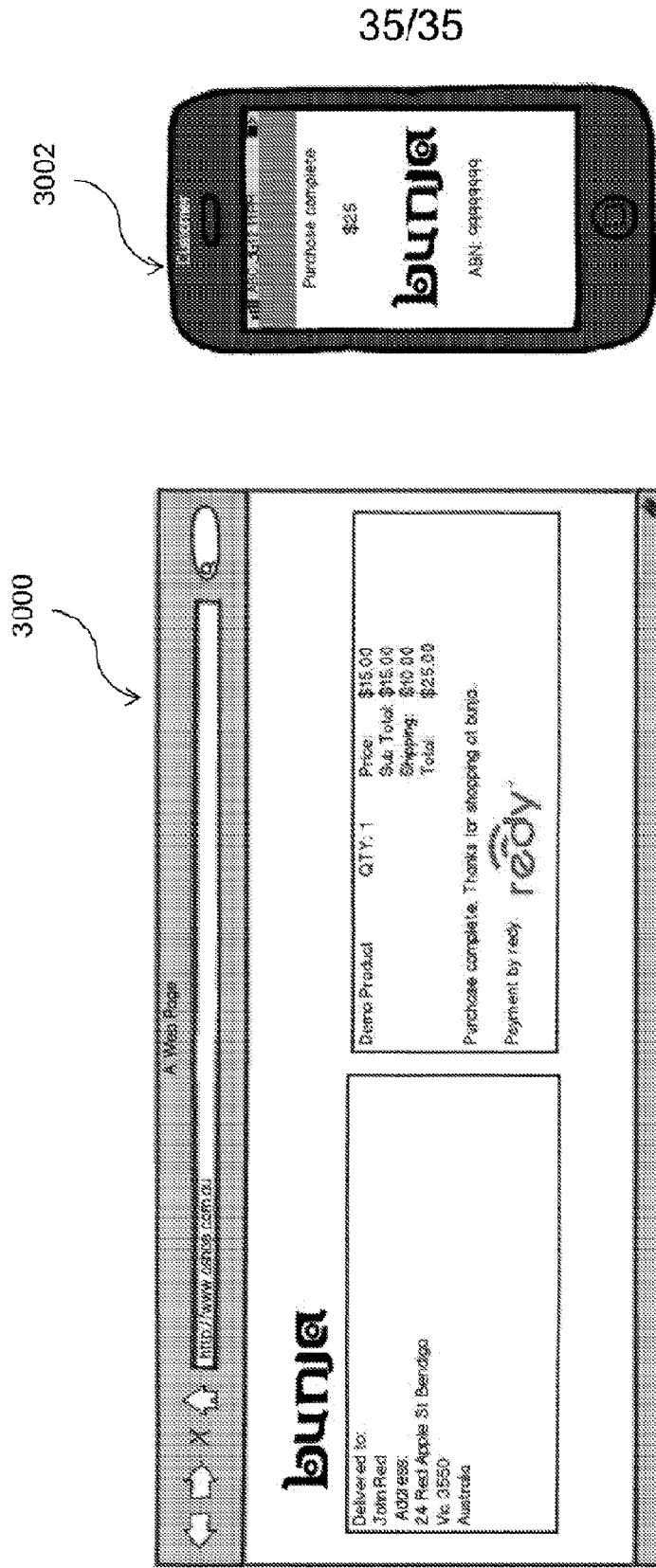
Figure 22

Figure 23

Figure 24
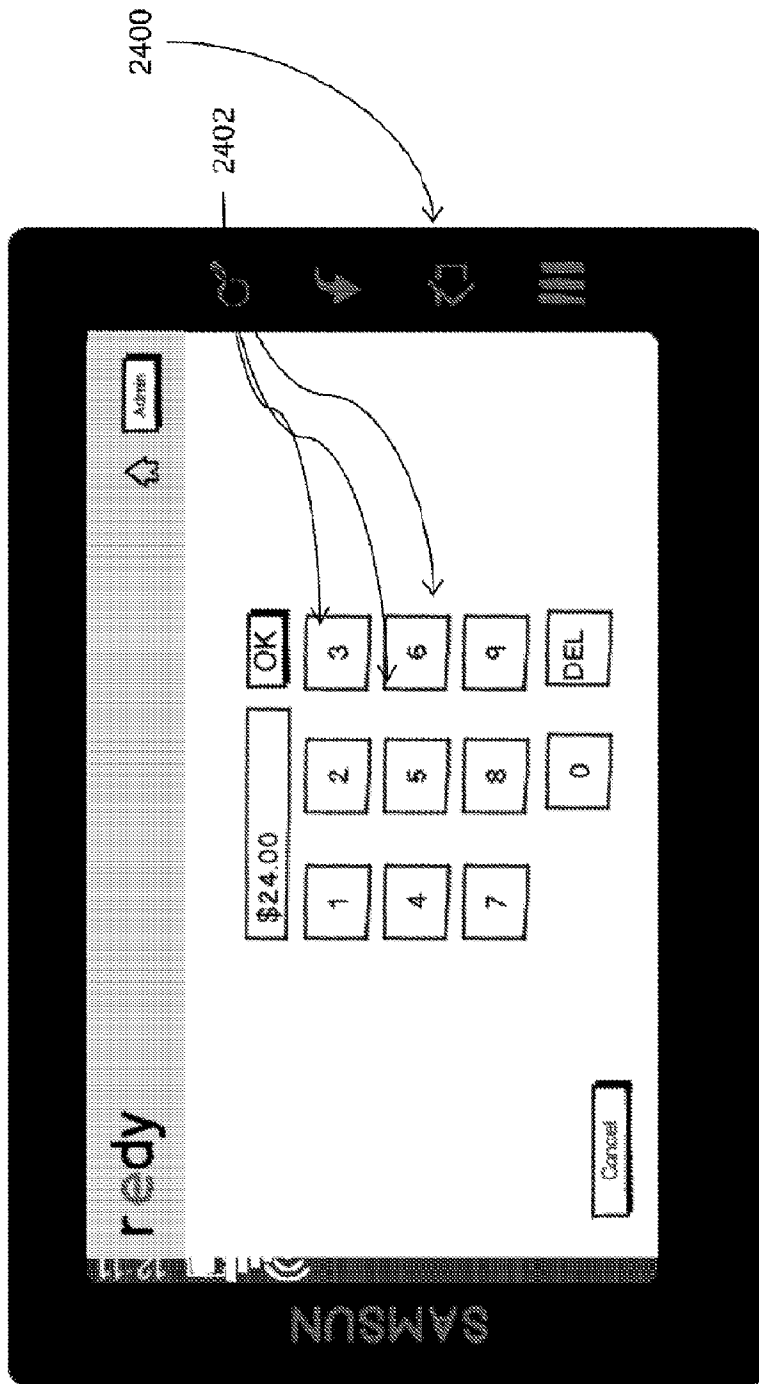
Figure 25

Figure 26

Figure 27

Figure 28

Figure 29

Figure 30

A. CLASSIFICATION OF SUBJECT MATTER

G06Q 20/40 (2012.01)   G06Q 30/06 (2012.01)   G06F 19/00 (2011.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

GOOGLE PATENTS, THE LENS, WPI, EPODOC; (QR Code, smartphone, transaction, payment, etc...)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	

| X | Further documents are listed in the continuation of Box C | X | See patent family annex |

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"O"	document referring to an oral disclosure, use, exhibition or other means
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Date of the actual completion of the international search	Date of mailing of the international search report
1 August 2014	01 August 2014

Name and mailing address of the ISA/AU	Authorised officer
AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA Email address: pct@ipaustralia.gov.au	Andrew Ellett AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No. 0262256120

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/0209749 A1 (HAMMAD et al.) 16 August 2012 Figure 1A; Paragraphs [0021], [0036], [0041], [0045], [0060], [0064], [0097]	1-22
X	US 2012/0209630 A1 (IHM et al.) 16 August 2012 Figure 1; Paragraphs [0008], [0010], [0014], [0018], [0024]	1-22
A	US 2013/0024379 A1 (DI TUCCI et al.) 24 January 2013	

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Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

INTERNATIONAL SEARCH REPORT	International application No.
Information on patent family members	**PCT/AU2014/000567**

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End of Annex