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(71) Applicant(s): L&T TECHNOLOGY SERVICES LIMITED

(72) Inventor(s): Varghese, Robin Koshy

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(54) Title: METHOD AND SYSTEM FOR PROCESSING A SHOPPING COUPON

(57) Abstract: A method (400) and a system for processing a shopping coupon is disclosed. The method (400) may include receiving a product identity associated with a product purchased by a shopper. The product identity may be obtained upon scanning of a code attached to the product. The method (400) may further include mapping the product identity with a plurality of coupons stored on a shopper device (102). The method (400) may further include identifying one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. The method (400) may further include displaying the one or more relevant coupons on a display (102C) of the shopper device (102).

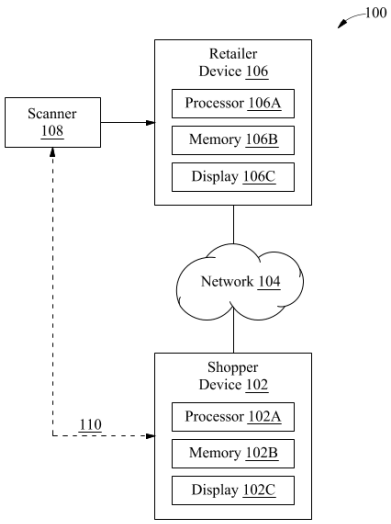

FIG. 1

FORM 2

THE PATENTS ACT 1970
(39 OF 1970)
&
The Patent Rules, 2003
Complete Specification
(See Section 10 and Rule 13)

1. TITLE OF THE INVENTION

METHOD AND SYSTEM FOR PROCESSING A SHOPPING COUPON

2. APPLICANT(S)

(a) NAME	:	**L&T TECHNOLOGY SERVICES LIMITED**
(b) NATIONALITY	:	**INDIAN**
(c) ADDRESS	:	**DLF IT SEZ Park, 2nd Floor – Block 3, 1/124, Mount Poonamallee Road, Ramapuram, Chennai – 600 089, INDIA.**

3. PREAMBLE TO THE DESCRIPTION

COMPLETE

The following specification particularly describes the invention and the manner in which it is to be performed.

DESCRIPTION

Technical Field

[001] This disclosure relates generally to product shopping experience, and more particularly to a method and a system for automatically processing shopping coupons associated with products purchased during checkout.

BACKGROUND OF THE INVENTION

[002] It is a common business strategy of sellers to provide customers (shoppers) with coupons offering discounts, for multiple reasons like encouraging repeat purchases by the shoppers. Mobile coupons may be rewarded to the shoppers while making digital payments and as gift cards that can be redeemed later. For example, such mobile coupons can be redeemed at cash counters of retail stores at the time of billing.

[003] However, the shoppers may often be not able to recollect or not even aware of the mobile coupons, at the time of paying the bill. Further, sometimes, a product that the shopper is looking to purchase may have certain product or category specific restrictions. Furthermore, many a times, the shopper may have a large number of coupon codes stored on their mobile devices that it becomes difficult to pick a relevant coupon or a coupon that has the highest benefit associated with it. All the above problems may eventually hinder an effective utilization of the mobile coupons available with the shoppers.

[004] Moreover, majority of grocery stores and retail consumer merchandisers have come to rely on barcode technology to improve the efficiency and reliability of their operations. Many retailers have individually applied price tags to their wares in favor of relying on code symbols applied to product packaging or to the product at the manufacturing stage. However, the traditional handheld barcode scanners along with Point of Sale (POS) device do not to allow a user (e.g., a customer) to choose an appropriate coupon that he/she wants to redeem as per convenience and to maximize the savings. The inflexibility of such check out stations limit their possible uses at checkout.

[005] Therefore, a need exists for a shopping system that provides flexibility to the user to enhance the shopping experience and to maximize the savings while check out of the purchased products.

SUMMARY OF THE INVENTION

[006] In an embodiment, a method of processing a shopping coupon is disclosed. The method may include receiving a product identity associated with a product purchased by a shopper. The product identity may be obtained upon scanning of a code attached to the product. The method may further include mapping the product identity with a plurality of coupons stored on a shopper device, and identifying one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. The method may further include displaying the one or more relevant coupons on a display of a shopper device.

[007] In another embodiment, a system for processing a shopping coupon is disclosed. The system may include a scanner, a processor, and a memory which stores a plurality of instructions. The plurality of instructions, upon execution by the processor, may cause the processor to obtain a product identity associated with a product purchased by a shopper. The product identity associated with the product may be obtained by scanning of a code attached to the product using the scanner. The plurality of instructions may further cause the processor to transmit the product identity to a shopper device. The shopper device may be configured to map the product identity with a plurality of coupons stored on a shopper device, and identify one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. The shopper device may be further configured to display the one or more relevant coupons on a display of a shopper device, and receive a selection of one of the one or more relevant coupons. The plurality of instructions may further cause the processor to receive the selection from the shopper device and apply a benefit associated with the selected coupon to a bill associated with the product purchased.

[008] In another embodiment, another method of processing a shopping coupon is disclosed. The method may include receiving a product identity associated with a product purchased by a shopper, wherein the product identity is obtained upon scanning of a code attached to the product, and mapping the product identity with a plurality of coupons stored on the shopper device. The plurality of coupons may be displayed on a display of the shopper device. The method may further include identifying one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. The method may further include highlighting the one or more relevant coupons from the plurality of coupons on the display, via an augmented reality overlay over an image associated with the purchased product.

[009] In another exemplary embodiment, the shopping system includes a mobile computer device for maintaining a list of acquired merchandise. The mobile computer device includes a scanner (e.g., a code reader) that is configured for reading indicia (e.g., code symbols) associated with the product. The shopping system also includes a point-of-sale (POS) terminal configured to wirelessly communicate with the mobile computer device. The shopping system is configured to transmit the list of acquired products from the mobile computer device to the POS terminal.

[010] In an exemplary embodiment, the mobile computer device and the point-of-sale terminal are configured to exchange information associated with the purchase of products in response to a user action.

[011] In another exemplary embodiment, the mobile computer device and the POS terminal are configured to exchange information associated with the purchase of product in response to a user (i) selecting an option to checkout on the mobile computer device, (ii) using the scanner to identify checkout indicia, and/or (iii) leaving the vicinity of the POS terminal.

[012] In yet another exemplary embodiment, the mobile computer device's scanner includes an RFID reader that is configured to read RFID tags associated with the products.

BRIEF DESCRIPTION OF THE DRAWINGS

[013] The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate exemplary embodiments and, together with the description, serve to explain the disclosed principles.

[014] **FIG. 1** illustrates a block diagram of an environment comprising a shopper device, a retailer device, and a scanner for processing a shopping coupon, in accordance with an embodiment of the present disclosure;

[015] **FIG. 2** illustrates a functional block diagram of a shopper device, in accordance with an embodiment of the present disclosure;

[016] **FIG. 3** illustrates a functional block diagram of a retailer device, in accordance with an embodiment of the present disclosure;

[017] **FIG. 4** is a flowchart of a method of processing a shopping coupon, in accordance with an embodiment of the present disclosure; and

[018] **FIG. 5** illustrates a schematic view of a mobile computing device implementing an augmented reality (AR) overlay, in accordance with some embodiments of the present disclosure.

DETAILED DESCRIPTION OF THE DRAWINGS

[019] Exemplary embodiments are described with reference to the accompanying drawings. Wherever convenient, the same reference numbers are used throughout the drawings to refer to the same or like parts. While examples and features of disclosed principles are described herein, modifications, adaptations, and other implementations are possible without departing from the spirit and scope of the disclosed embodiments. It is intended that the following detailed description be considered as exemplary only, with the true scope and spirit being indicated by the following claims. Additional illustrative embodiments are list.

[020] In an embodiment, a method of processing a shopping coupon is disclosed. At the time of billing, product identities of products purchased by a shopper are obtained by scanning an identification code (for example, a bar code or a QR code) which may be usually provided on a tag attached to the product. In some embodiments, the identification code may be scanned using a scanner which may be coupled to a retailer device. The retailer device may include a Point of Sale (POS) station including a desktop computing system provided at a retailer cash counter that may interact, over a communication network, with a shopper device like a mobile phone belonging to the shopper. In one embodiment, the retailer device may provide the product identities to the shopper device. As such, the retailer device may provide the product identities to the shopper device upon click of a button by the retailer.

[021] In another embodiment, the scanner may directly interact with the shopper device, over a communication network, for example a near filed communication (NFC) channel, or any other radio frequency (RF) communication channel such as Wi-Fi, Bluetooth, Bluetooth Low Energy, BLE, and ZigBee. The shopper device of the shopper may have a mobile application installed on the shopper device. The scanner may transmit the identities of all the products which are purchased by the shopper to the shopping device.

[022] In a yet another embodiment, the shopper device itself may be used to obtain the product identities of products purchased by the shopper. To this end, for example, the identification codes associated with the purchased products may be scanned using the camera of the shopper device, and an application installed on the shopper device may fetch the product identities and the selling price of the products. As such, the shopper device may obtain identities and selling price of the products purchased, collate a list of all the products purchased, and then then generate a bill.

[023] Once the product identities are received by the shopper device (from the retailer device or directly from the scanner), the shopper device may map the product identities with a plurality of

coupons which may be already stored on the shopper device. As will be understood, the coupons may be provided to the customer by the retail store or a third party like Banks, credit card merchants, payment gateways (e.g. Cred, Paytm, etc.), and so on. As these coupons may be stored via multiple mobile applications and it may be difficult to access the coupons from these multiple applications, a separate mobile application may be installed on the shopper device that is capable of interacting with these different mobile applications and collecting them on this application. The relevant coupons may be identified based on the mapping that are applicable for the products associated with those product identities, and displayed on a display screen of the shopper device. A user (i.e. the shopper or the relater) may select one of the relevant coupons and this selection may be transmitted to the retailer device, where benefits associated with the selected coupon are applied to the bill associated with the products purchased.

[024] By way of an example, a shopper may have multiple mobile coupons in Near field communication (NFC) compatible format. However, scrolling through all the coupons to identify ones that can be used for the purchased product may be too tiring and therefore unfeasible. Further, during the check-out, the cash register system (i..e the retailer system) might not have the capability to display multiple mobile coupons to the shopper for selection. During the payment process, after items are scanned, for example, by an NFC-enabled scanner, the scanner may transmit a list of purchased products to the shopper device which also may be NFC-enabled, by pressing a button either by the cashier or the shopper. Alternatively, the list of items can be transmitted from the scanner to shopper device by an NFC request sent from the shopper device. The shopper device may will have an application that captures this list and screens these items purchased to the multiple coupons, and highlights or selects the relevant coupons awaiting the shopper’s action to transmit them for redemption. Further, this application may highlight multiple coupons for a single item purchased so the shopper can select which ones to apply, for example, by overlaying the savings related information on the screen by way of augmented reality (AR) or any other similar technique. The application may further analyze the purchased items and correlate the available coupons and overlay details like coupon value, validity dates, discounts etc. If there is more than one coupon available for the same product, the application may overlay the augmented details for all the coupons and wait for user's response.

[025] Referring to **FIG. 1**, a block diagram of an environment 100 is illustrated, in accordance with an embodiment of the present disclosure. As shown in FIG. 1, the environment 100 may include a shopper device 102, a retailer device 106, and a scanner 108 for processing a shopping coupon. The

shopper device 102 may be communicatively coupled to the retailer device 106 over a first communication channel 104. By way of an example, the shopper device 102 may be a high-speed mobile phone, a tablet, or a smart watch associated with a shopper who has purchased a product, however, the shopper device 102 may alternatively include, but are not limited to, a server, a desktop, a laptop, a notebook, a netbook, or the like.

[026] The shopper device may be configured to receive a product identity associated with a product purchased by a shopper. The product identity may be obtained upon scanning of a code attached to the product, using the scanner 108. In some embodiments, the scanner 108, upon scanning the code attached to the product, may transmit the product identity to the retailer device 106, and the retailer device 106 may transmit the product identity to the shopper device 102 over the first communication channel 104. In alternate embodiments, the scanner 108, upon scanning the code attached to the product, may directly transmit the product identity to the shopper device 102 over the second communication channel 110, for example via NFC, or any other radio frequency (RF) communication channel such as Wi-Fi, Bluetooth, Bluetooth Low Energy, BLE, and ZigBee.

[027] The shopper device 102 may be further configured to map the product identity with a plurality of coupons stored on a shopper device 102. It should be noted that the shopper device 102 may already store the plurality of coupons which the shopper might have collected over a period of time. Further, in some embodiments, the shopper device 102 may include a mobile application installed which may be able to access the plurality of coupons. The shopper device 102 may be further configured to identify one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. In other words, the one or more relevant coupons may be the ones which are applicable on the products purchased by the shopper, while the remaining coupons may not be applicable. The shopper device 102 may be further configured to display the one or more relevant coupons on the display 102C of the shopper device 102.

[028] In order to perform the above discussed functionalities, the shopper device 102 may include a processor 102A and a memory 102B. The memory 102B may store instructions that, when executed by the processor 102A, cause the processor 102A to process the shopping coupon, as discussed in greater detail in FIG. 2 to FIG. 4. The memory 102B may be a non-volatile memory or a volatile memory. Examples of non-volatile memory, may include, but are not limited to a flash memory, a Read Only Memory (ROM), a Programmable ROM (PROM), Erasable PROM (EPROM), and Electrically EPROM (EEPROM) memory. Examples of volatile memory may include, but are not

limited to Dynamic Random-Access Memory (DRAM), and Static Random-Access memory (SRAM). The memory 102B may also store various data that may be captured, processed, and/or required by the system. The shopper device 102 may further include a display 102C which may be configured to display coupon codes and receive input of a selection of a code from a user. In some embodiments, the shopper device 102 may include an inbuilt scanner (e.g., a code reader) that is configured for reading indicia (e.g., code symbols) associated with a product. Further, in another exemplary embodiment, the inbuilt scanner of the shopper device 102 may include an RFID reader that is configured to read RFID tags associated with the products. The shopper device 102 may be further configured to transmit a list of acquired product identities to the retailer device 106.

[029] By way of an example, the retailer device 106 may be a computing system provided at a cash counter of a retail store from where the shopper has purchased the product. By way of an example, the retailer device 106 may include, but is not limited to, a server, a desktop, a laptop, a notebook, a netbook, a mobile phone, a tablet, a smart watch, or the like.

[030] The retailer device 106 may be configured to receive the product identity associated with the product purchased by the shopper upon scanning of the code attached to the product. As mentioned above, in some embodiments, the retailer device 106 may be further configured to transmit the product identity to the shopper device 102. However, in alternate embodiments, the scanner 108 may directly transmit the product identity to the shopper device 102. Upon receiving the product identity, the shopper device 102, as mentioned above, may map the product identity with the plurality of coupons stored on the shopper device 102, and identify one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. The shopper device 102 may further display the one or more relevant coupons on a display of a shopper device, and receive a selection of one of the one or more relevant coupons. By way of an example, a user (the shopper or a retail personnel) may provide the selection by pressing of a button on the shopper device or manipulating the touchscreen of shopper device. The retailer device 106 may be further configured to receive the selection from the shopper device 102, and accordingly apply a benefit associated with the selected coupon to a bill associated with the product purchased.

[031] In some embodiments, the shopper device 102 and the retailer device 106 may be configured to exchange information associated with the purchase of products in response to a user action. To this end, the retailer device 106 may be configured to wirelessly communicate with the shopper device 102. The shopper device 102 and the retailer device 106 may be configured to exchange information

associated with the purchase of product in response to a user selecting an option to checkout on the shopper device 102, or using the scanner 108 to identify checkout indicia, or leaving the vicinity of the retailer device 106.

[032] In order to perform the above discussed functionalities, the retailer device 106 may include a processor 106A and a memory 106B. The memory 106B may store instructions that, when executed by the processor 106A, cause the processor 106A to process the shopping coupon, as discussed in greater detail in FIG. 2 to FIG. 4. The memory 106B may be a non-volatile memory or a volatile memory. Examples of non-volatile memory, may include, but are not limited to a flash memory, a Read Only Memory (ROM), a Programmable ROM (PROM), Erasable PROM (EPROM), and Electrically EPROM (EEPROM) memory. Examples of volatile memory may include, but are not limited to Dynamic Random-Access Memory (DRAM), and Static Random-Access memory (SRAM). The memory 106B may also store various data that may be captured, processed, and/or required by the system. The retailer device 106 may further a display 106C which may be configured to display the product information, bill associated with the product purchased, etc.

[033] The scanner 108 may include any image scanning device capable of scanning a code provided on a tag attached to the product purchased by the shopper. By way of an example, the code may be either a one dimensional code or a two dimension code, but not limited to, a UPC bar codes or a QR code. In some embodiments, the scanner 108 may be communicatively coupled to the retailer device 106, for example via a wired communication channel. In alternate embodiments, the scanner 108 may be built within the retailer device 106. Further, in some embodiments, the scanner 108 may be configured to communicatively couple with the shopper device 102 over the second communication channel 110. The second communication channel 110 may define one or more communication protocols for communication between the shopper device 102 and the scanner 108. For example, the one or more protocols may be for sending a request from the shopper device for obtaining the product identity of the product purchased, sending the identity of the product purchased from the scanner to the shopper device, or sending the one or more relevant coupons and the coupon data associated with the one or more relevant coupons in relation to the product purchased from the shopper device to the scanner.

[034] The first communication channel 104 may be a wired or a wireless network and the examples may include, but are not limited to the Internet, Wireless Local Area Network (WLAN), Wi-Fi, Long Term Evolution (LTE), Worldwide Interoperability for Microwave Access (WiMAX), and General Packet Radio Service (GPRS).

[035] The second communication channel 110, in some embodiments, may be a two-way Near Field Communication (NFC) channel. As will be appreciated by those skilled in the art, NFC is a communication protocol that allows mobile electronic devices such as smartphones to establish wireless communications with each other using electromagnetic radio fields instead of conventional radio communications typically utilized in similar communication networks (e.g., Wi-Fi, BLUETOOTH, etc.). The NFC communication channel may be initiated when two NFC-capable devices touch or are otherwise brought into proximity with each other. It will be appreciated by a person of ordinary skill in the art that NFC devices are in proximity to each other when they are either (i) physically contacting each other or (ii) within the maximum range that NFC transmissions may successfully be exchanged. In alternate embodiments, the second communication channel 110 may be based on any other radio frequency (RF) communication channel which includes, but is not limited to Wi-Fi, Bluetooth, Bluetooth Low Energy (BLE), and ZigBee.

[036] Referring now to **FIG. 2**, functional block diagram 200 of the shopper device 102 is illustrated, in accordance with an embodiment of the present disclosure. The shopper device 102 may include a product identity receiving module 202, a mapping module 204, a relevant coupon identifying module 206, a display module 208, an input module 210, and a transmission module 212.

[037] The product identity receiving module 202 may receive the product identity associated with the product purchased by the shopper. The product identity may be obtained upon scanning of a code attached to the product, for example using the scanner 108. The mapping module 204 may map the product identity with the plurality of coupons stored on the shopper device 102. The relevant coupon identifying module 206 may identify one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable (i.e. applicable) for the product identity.

[038] The display module 208 may display the one or more relevant coupons on the display 102C of the shopper device 102. In some embodiments, the display module 208 may further display, along with each of the one or more relevant coupons, coupon data associated with each of the one or more relevant coupons in relation to the product. By way of an example, the coupon data may include a benefit (for example, a percentage value of discount) that can be provided by the respective coupon and a validity date of the coupon.

[039] In some embodiments, the shopper device 102 may further include an augmented reality (AR) module 214. The AR module 214 may communicate with the display module 208 to display the coupon data by overlaying the coupon data on the display 102C via augmented reality.

[040] The input module 210 may receive, from a user (the shopper or the retail personnel), a selection of one of the one or more relevant coupons. The transmission module 212 may the transmit the selection to the retailer device 106. The retailer device 106 may be configured to apply the benefit associated with the selected coupon to the bill associated with the product purchased.

[041] Referring now to **FIG. 3**, a functional block diagram 300 of the retailer device 106 is illustrated, in accordance with an embodiment of the present disclosure. The retailer device 106 may include a product identity receiving module 302, a transmission module 304, selection receiving module 306, and a benefit application module 308.

[042] The product identity receiving module 302 may receive the product identity associated with the product purchased by the shopper upon scanning of the code attached to the product. The transmission module 304 may transmit the product identity to the shopper device 102. As mentioned above, the shopper device 102, upon receiving the product identity, may map the product identity with the plurality of coupons stored on the shopper device 102, and identify one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. The shopper device 102 may further display the one or more relevant coupons on the display 102C of the shopper device 102, and receive the selection of one of the one or more relevant coupons from the user. The selection receiving module 306 may receive the selection from the shopper device 102. The benefit application module 308 may apply the benefit associated with the selected coupon to the bill associated with the product purchased.

[043] Referring now to **FIG. 4**, a flowchart of the method 400 of processing a shopping coupon is illustrated, in accordance with an embodiment of the present disclosure. By way of an example, the method 400 may be performed by the shopper device 102.

[044] At step 402, the product identity associated with the product purchased by the shopper may be received. The product identity may be obtained upon scanning of the code attached to the product, using the scanner 108. The scanner 108 may be communicatively coupled to the retailer device 106, for example, via a wired connection. In some embodiments, the retailer device 106 may receive the product identity associated with the product purchased by the shopper from the scanner 108. The and the retailer device 106 may then transmit the product identity to the shopper device 102, over the first communication channel 104 which may be an Internet-enabled communication channel.

[045] In some alternate embodiments, the scanner 108 may directly transmit the product identity to the shopper device 102. To this end, the scanner may be communicatively coupled to the shopper device 102 via the two-way communication channel 110 (the terms second communication channel

110 and two-way communication channel 110 may have been used interchangeably in this disclosure). This two-way communication channel 110 may be a Near Field Communication (NFC) channel. As such, the NFC channel (i.e. the two-way communication channel 110) may define one or more communication protocols for communication between the shopper device 102 and the scanner 108. The one or more communication protocols may be for sending a request from the shopper device 102 for obtaining the product identity of the product purchased, sending the identity of the product purchased from the scanner 108 to the shopper device 102, or sending the one or more relevant coupons and the coupon data associated with the one or more relevant coupons in relation to the product purchased from the shopper device 102 to the scanner 108.

[046] At step 404, the product identity may be mapped with a plurality of coupons stored on the shopper device 102. At step 406, one or more relevant coupons may be identified from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. At step 408, the one or more relevant coupons may be displayed on the display 102C of the shopper device 102. By way of an example, the product may be a grocery item, a clothing article, an electronics item, a pharmacy item, or a food item. In some embodiments, along with each of the one or more relevant coupons, coupon data associated with each of the one or more relevant coupons in relation to the product may be displayed on the display 102C. The coupon data may include a benefit and a validity date. Further, in some embodiments, the coupon data may be displayed by overlaying the coupon data on the display 102C via augmented reality (AR) overlay. This is further explained later in conjunction with FIG. 5.

[047] Additionally, at step 410, a selection of one of the one or more relevant coupons may be received from a user. At step 412, the selection may be transmitted to the retailer device 106. The retailer device 106 may be configured to apply the benefit associated with the selected coupon to the bill associated with the product purchased.

[048] Referring now to FIG. 5, a schematic view 500 of a mobile computing device 502 (i.e. corresponding to the shopper device 102) implementing an augmented reality (AR) overlay 508 is illustrated, in accordance with some embodiments of the present disclosure. As shown in FIG. 5, one or more coupons 506 stored in the mobile computing device 502 may be displayed on a display 504 of the mobile computing device 502. Further, in some embodiments, one or more relevant coupons 506A (i.e. coupons activable on the purchases products) may be highlighted (marked in the rectangular box) from the one or more coupons 506. For example, the relevant coupons may be highlighted by displaying these in a different color in comparison to the rest of the coupons.

[049] In some embodiments, along with each of the one or more relevant coupons 506A, coupon data associated with each of the one or more relevant coupons in relation to the product may be displayed on the display 504. The coupon data may include a possible saving (in terms of a current such as Indian National rupee (INR)) in association with the purchased product and a validity date for the coupon. Further, in some embodiments, the coupon data may be displayed by overlaying the coupon data on the display 504 via the AR overlay 508. As such, the one or more relevant coupons 506A from the plurality of coupons 506 may be displayed on the display 504, via the augmented reality overlay 508 over an image associated with the purchased product. By way of an example, as shown in FIG. 5, the information related to the purchased product (e.g. category name of the product "Levi's Jeans 501 Blue"), the savings obtainable on purchase of the product using the relevant coupon 506A ("Save INR 305.00 using this coupon"), and the validity/expiry date associated with the relevant coupon 506A ("Coupon valid until 31 December 2021") may be displayed via the AR overlay 508.

[050] The above disclosure provides one or more techniques for processing shopping coupons for enhancing shopping experience for the users. The techniques provide for automatically identifying and highlighting relevant coupons which can be redeemed based on the products purchased. Further, the techniques provide for applying Augmented Reality (AR) for displaying the coupon codes on the shopper device. Furthermore, the techniques provide for a two-way communication channel, for example, NFC channel, between a scanner and the shopper device for directly transmitting a list of products to the shopper device. The techniques are able to overcome the problems mentioned above to thereby provide an enhanced shopping experience to the shoppers, therefore allowing the shoppers to use the mobile coupons in a more effective manner.

[051] It is intended that the disclosure and examples be considered as exemplary only, with a true scope and spirit of disclosed embodiments being indicated by the following claims.

CLAIMS

We claim:

1. A method (400) of processing a shopping coupon, the method (400) comprising:

receiving, by a shopper device (102), a product identity associated with a product purchased by a shopper, wherein the product identity is obtained upon scanning of a code attached to the product;

mapping, by the shopper device (102), the product identity with a plurality of coupons stored on the shopper device;

identifying, by the shopper device (102), one or more relevant coupons from the plurality of coupons based on the mapping, wherein each of the one or more relevant coupons is activable for the product identity; and

displaying, by the shopper device (102), the one or more relevant coupons on a display (102C) of the shopper device (102).

2. The method (400) as claimed in claim 1, wherein the displaying comprises:

displaying, along with each of the one or more relevant coupons, coupon data associated with each of the one or more relevant coupons in relation to the product, wherein the coupon data comprises a benefit and a validity date,

wherein the product is selected from a grocery item, a clothing article, an electronics item, a pharmacy item, and a food item.

3. The method (400) as claimed in claim 1, further comprising:

receiving, from a user, a selection of one of the one or more relevant coupons; and

transmitting the selection to a retailer device (106), wherein the retailer device (106) is configured to apply the benefit associated with the selected coupon to the bill associated with the product purchased.

4. The method (400) as claimed in claim 3, wherein the product identity is obtained using a scanner (108), wherein the scanner (108) is communicatively coupled to the retailer device (106).

5. The method (400) as claimed in claim 4, wherein the product identity associated with the product purchased by the shopper is received from the retailer device (106), via first a first communication channel (104), wherein the first communication channel (104) is an Internet-enabled communication channel.

6. The method (400) as claimed in claim 1, wherein the product identity associated with the product purchased by the shopper is received from the scanner (108).

7. The method (400) as claimed in claim 1, wherein the scanner (108) is communicatively coupled to the shopper device (102) via a two-way communication channel (110), wherein the two-way communication channel (110) is based on one of Near Field Communication (NFC), Wi-Fi, Bluetooth, Bluetooth Low Energy (BLE), and ZigBee.

8. A method of processing a shopping coupon, the method (400) comprising:

receiving, by a shopper device (502), a product identity associated with a product purchased by a shopper, wherein the product identity is obtained upon scanning of a code attached to the product;

mapping, by the shopper device (502), the product identity with a plurality of coupons (506) stored on the shopper device, wherein the plurality of coupons (506) are displayed on a display (504) of the shopper device (502);

identifying, by the shopper device (502), one or more relevant coupons (506A) from the plurality of coupons (506) based on the mapping, wherein each of the one or more relevant coupons (506A) is activable for the product identity; and

highlighting, by the shopper device (502), the one or more relevant coupons (506A) from the plurality of coupons (506) on the display (504), via an augmented reality overlay (508) over an image associated with the purchased product.

9. The method (400) as claimed in claim 8, wherein the displaying comprises:

displaying, along with each of the one or more relevant coupons (506A), coupon data associated with each of the one or more relevant coupons (506A) in relation to the product, wherein the coupon data comprises a benefit and a validity date, and wherein displaying the coupon data comprises overlaying the coupon data on the display (102C) via the AR overlay (508).

10. A system comprising:

a scanner (108);

a processor (106A) coupled to the scanner (108); and

a memory (106B) coupled to the processor (106A), wherein the memory (106B) stores a plurality of processor-executable instructions, wherein the plurality of processor-executable instructions, upon execution by the processor (106A), cause the processor (106A) to:

obtain, by the scanner (108), a product identity associated with a product purchased by a shopper upon scanning of a code attached to the product;

transmit the product identity to a shopper device (102), wherein the shopper device (102) is configured to:

map the product identity with a plurality of coupons stored on the shopper device (102);

identify one or more relevant coupons from the plurality of coupons based on the mapping, wherein each of the one or more relevant coupons is activable for the product identity;

display the one or more relevant coupons on a display (102C) of the shopper device (102); and

receive a selection of one of the one or more relevant coupons;

receive the selection from the shopper device (102); and

apply a benefit associated with the selected coupon to a bill associated with the product purchased.

Dated this 26th Day of November 2021

Robin Koshy Varghese (INPA No: 3705)
Head, IPR Dept.
L&T Technology Services Ltd.
DLF 3rd Block, 2nd Floor,
Manapakkam, Chennai - 600089.

METHOD AND SYSTEM FOR PROCESSING A SHOPPING COUPON

ABSTRACT

A method (400) and a system for processing a shopping coupon is disclosed. The method (400) may include receiving a product identity associated with a product purchased by a shopper. The product identity may be obtained upon scanning of a code attached to the product. The method (400) may further include mapping the product identity with a plurality of coupons stored on a shopper device (102). The method (400) may further include identifying one or more relevant coupons from the plurality of coupons based on the mapping. Each of the one or more relevant coupons may be activable for the product identity. The method (400) may further include displaying the one or more relevant coupons on a display (102C) of the shopper device (102).

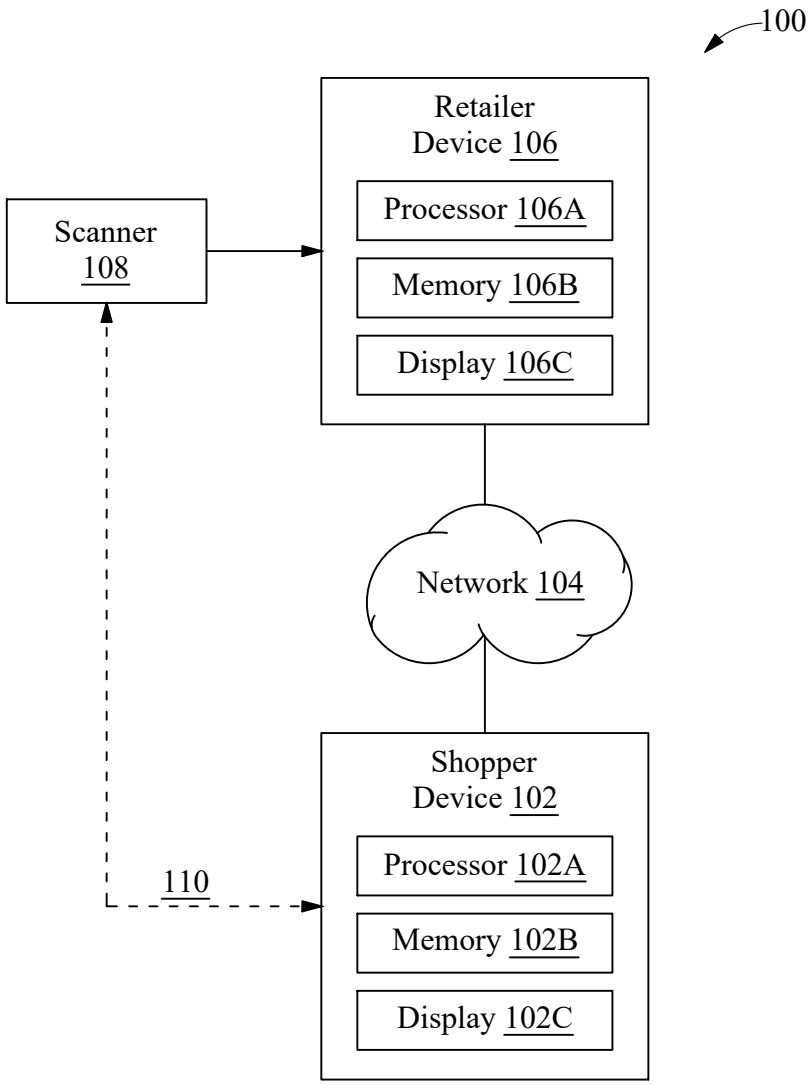

FIG. 1

Robin Koshy Varghese (INPA No: 3705)
Head, IPR Dept.,
L&T Technology Services Limited,
DLF 3rd Block, 2nd Floor,
Manapakkam, Chennai - 600089.

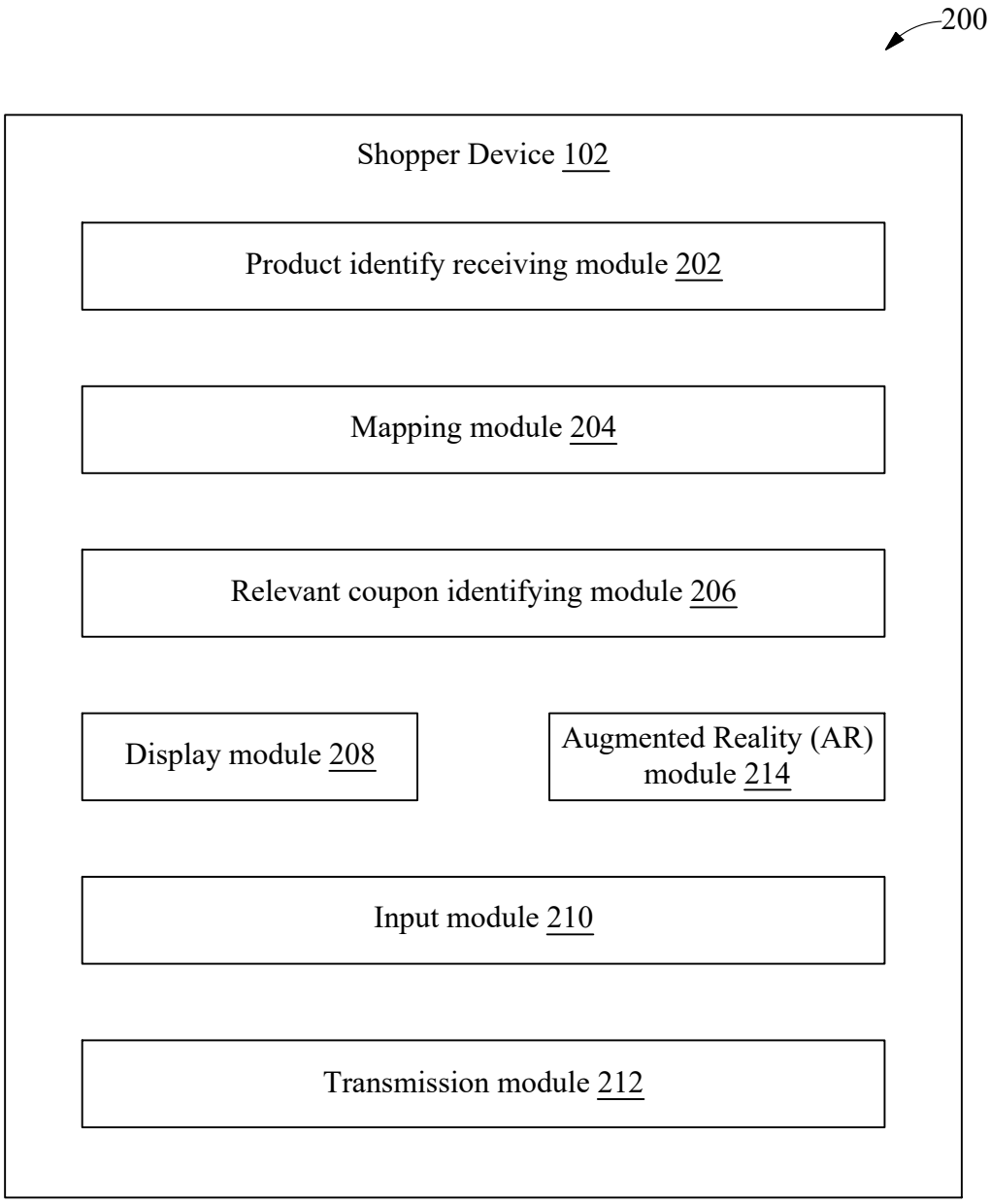

FIG. 2

Robin Koshy Varghese (INPA No: 3705)
Head, IPR Dept.,
L&T Technology Services Limited,
DLF 3rd Block, 2nd Floor,
Manapakkam, Chennai - 600089.

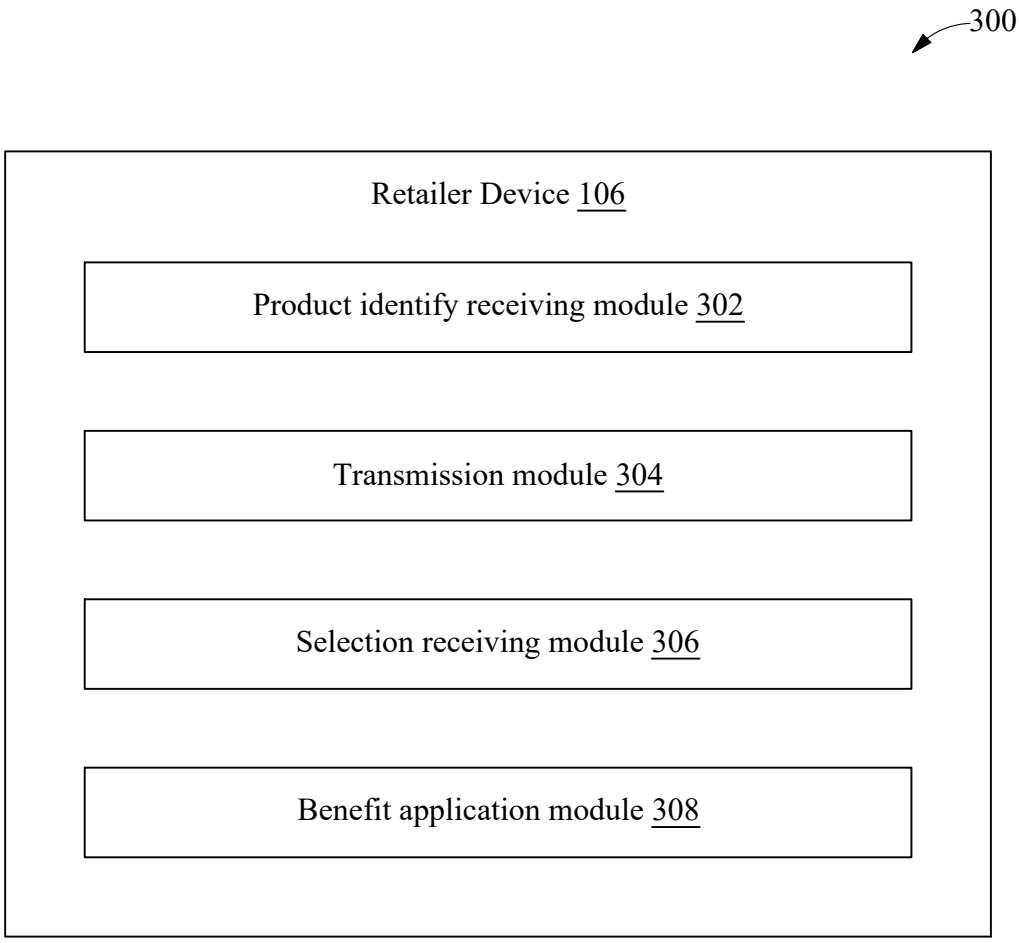

FIG. 3

Robin Koshy Varghese (INPA No: 3705)
Head, IPR Dept.,
L&T Technology Services Limited,
DLF 3rd Block, 2nd Floor,
Manapakkam, Chennai - 600089.

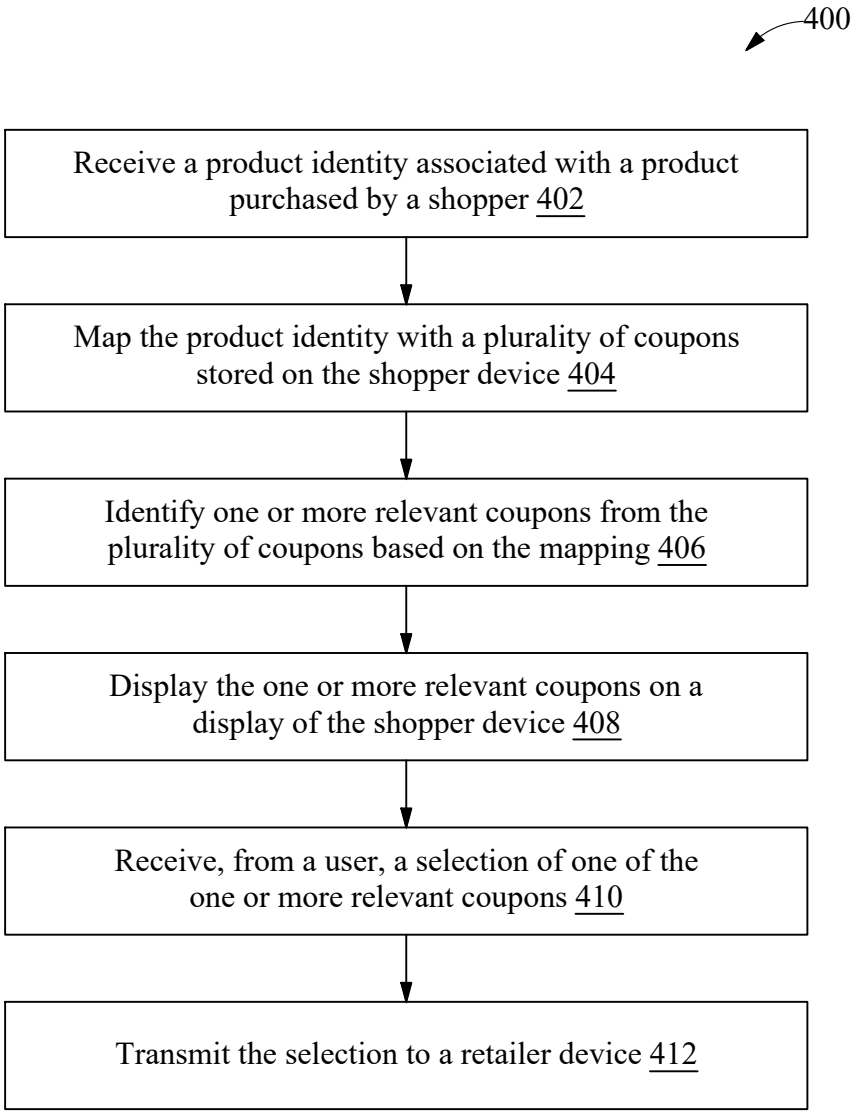

FIG. 4

Robin Koshy Varghese (INPA No: 3705)
Head, IPR Dept.,
L&T Technology Services Limited,
DLF 3rd Block, 2nd Floor,
Manapakkam, Chennai - 600089.

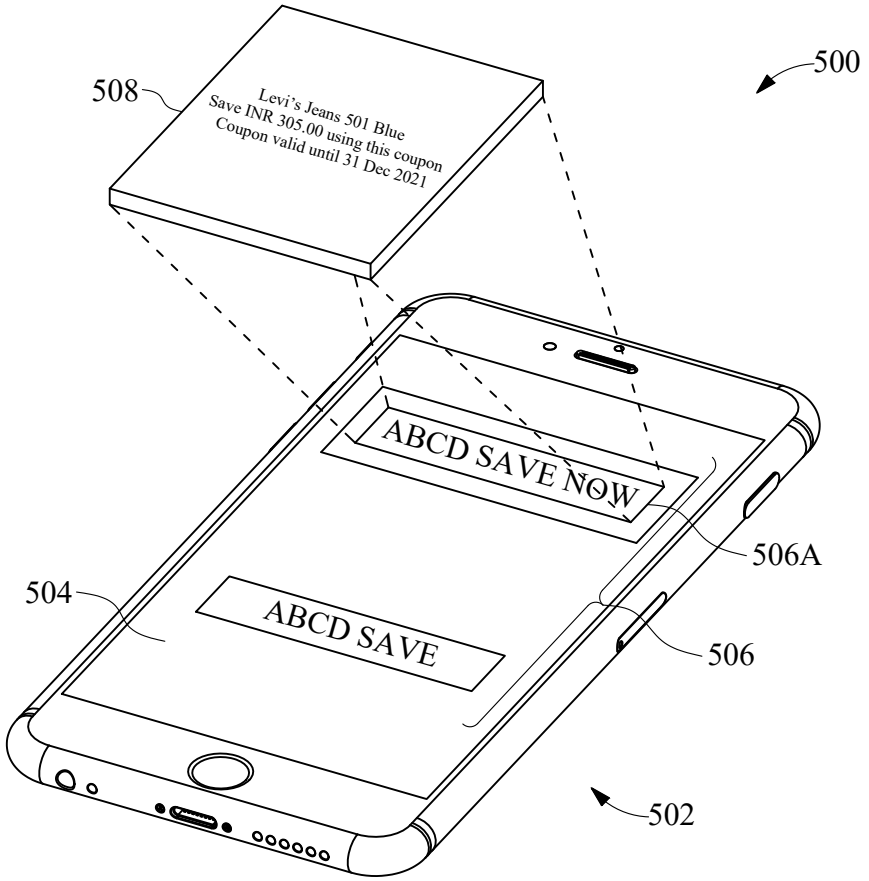

FIG. 5

Robin Koshy Varghese (INPA No: 3705)
Head, IPR Dept.,
L&T Technology Services Limited,
DLF 3rd Block, 2nd Floor,
Manapakkam, Chennai - 600089.