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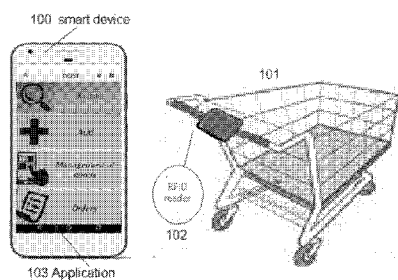
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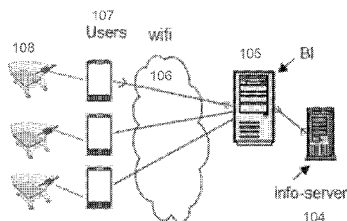
- with international search report (Art. 21(3))
- with amended claims (Art. 19(1))

(54) Title: SMART SHOPPING SYSTEM WITH SMART ADS

[Fig. 1]



1A



1B

(57) Abstract: Smart shopping system to search for products and to locate goods in the store is easy to use. The store's map with the location of goods is specified for the customer and the system directs the customer to the desired product and display relevant promotional video. When the customer puts the goods in the shopping cart, he sees the price and all the relevant features of that product on his mobile phone. With each item added, finally, the total price and the bill will be ready after the completion of the purchase. When the customer goes to the exit door, there is no other queue for checking because his bill is ready and he needs just to pay the purchases bill before leaving the phone.



Description

Title of Invention : Smart Shopping System with smart ads

[0001]

Technical Field

[0002] The invention generally relates to a smart shopping system and the way of using a smart advertising.

Background Art

[0003] Over the recent years, retail has been transformed by technology several times. Its starting point was the sales the point of sale (POS) terminal and barcode scanning, which allowed companies to integrate and automate their sales for the first time. The second wave was the change in the new ways of data mining and customer relationship management or CRM.

[0004] The new wave seems to be happening now is the use of smart technology instead of the barcode by employing smart systems and RFID tags.

[0005] Another problem for manufacturers and stores is the issue of marketing and advertising; however, producing effective and lasting advertising is a very difficult task. Perhaps, the most important part of advertising is to find the target community as the target community cannot be precisely determined in most of the advertising and marketing processes. Therefore, advertising should generally take a high cost so they can find their own audience.

While the same ads for the specific audience and the shopping location will definitely be very effective and the costs will be very lower.

Summary of Invention

[0006] Smart Shopping System is a great system to help customers reduce their purchase time and display the list of purchased products and costs of the sales without a queue along with intelligent advertising, and ultimately, it helps in selling and managing the store.

[0007] With this technology, you take your goods and will be out of the store with no need to stand in long queues or even to show the purchased items to the cashier or the guardian.

The system can also advertise to the customer about the goods they need and intend to buy.

Technical Problem

[0008] Imagine that you have entered a chain store and put your items into the cart. The cashier checks the price of goods by the barcode reader to make your purchase invoice. This will create the queue at the store.

[0009] Sometimes, the distortion of the barcode prevents the reading of information, which leads to more problems.

[0010] Also confusion at large shops to find the required goods.

[0011] The customers' inability to manage their shopping expenses and estimate the value of the purchase.

[0012] Confusion among different goods due to diversity and failure to make proper decisions in choosing the right goods.

[0013] Creating lots of costs for the store to hire manpower for the sales and cashier units.

[0014] There is also the possibility of fraud in the goods or theft and loss of the goods.

[0015] Another issue in marketing and selling is powerful and effective advertising. But what is the scope of this impact?

Can an effective ad-set resolve all marketing and sales problems?

Another important issue is to advertise in the target community to get more feedback and reduce the costs. Thus, the major questions is: Can we make the ads purposeful and smart?

The ideal is to produce advertisements for the purchasers at the place of purchase regarding their target goods.

Solution to Problem

[0016] The system is a tool that not only solves all these problems simultaneously, but it is also a great way to help customers reduce the time spent on purchasing and displaying product lists and costs. It also assist in selling and managing the store system.

[0017] The smart shopping system has two hardware and software components.

The hardware part includes an RFID reader (installed on the Trolley handle) and the RFID tags installed on the goods as well as the corresponding server equipment inside the store to store the information needed.

[0018] The software component includes business intelligence, data mining, and application software, which are connected wirelessly over the Internet and are as follows:

[0019] The system software installs the client-side on the smartphone when it comes to hypermarket via Bluetooth or the Internet.

[0020] The business intelligence system analyzes the users' requests and gathers the information on their needs. The information sent to each customer on his phone is completely different from other customers, and this information is tailored to their needs.

[0021] After installing the program on the smartphone, the user first connects to the RFID reader via Bluetooth, and then, he can enter the product name in the application's search field.

[0022] At this time, the information has been transmitted to the business intelligence via the Internet. After the request is analyzed, the user will receive the necessary information from the relevant servers provided for the user.

[0023] It then starts to show an advertisement about the requested cargo and new products in this regard. (The peak of this type of advertising is then displayed specifically for every user as required, which can be called the smart ads).

[0024] In this system, when the user places the product in his cart, he sees all the product specifications on the phone including, the quality of the goods, the country of manufacture, the production, date and the term, the price of the item, etc.

[0025] It also offers some tips on the three similar items to the user in order to make the best purchase by comparing them. It consists of three visual icons that represent the relevant commodity image together with commodity prices. When the user clicks on it, the specification of that product will be displayed. This system can then provide consultation to the client when buying.

[0026] Also, here is a video tutorial on how to use the item you are looking for, so the users not familiar with that product can easily get familiar with how to use it.

[0027] Now with this smart system, if a user passes through a large store from any corridor without a goal, the advertisement for the products in those shelves can be advertised to the user on his mobile device.

[0028] At the end of the purchase, the user views the amount of goods added to his shopping cart, and he can pay the purchase bill from the phone or point of sale (POS) terminal, and go out of the store without any queue.

Smart Advertising

[0029] Most of the ads are made public and cannot fully determine the target community, and yet it costs a lot, and there is no system to guide people and customers in large complexes such as hypermarkets.

[0030] This system, in addition to the guidance of the client, can exclusively show ads for each customer, which are required and followed by the product. This type of advertising can be called smart advertising.

[0031] With this smart system, if a non-target user visits and goes to a hypermarket or at a business center, he or she will be able to navigate through, and an advertisement for the products in that location can be made available to the user on his mobile device.

[0032] Like in the shopping centers or international airports, passenger terminals, and sports stadium, these types of smart ads can be used to guide the passengers and simultaneously present the advertisements related to their destination and requirements.

Benefits of Invention

[0033] Observation of commodity prices and all specifications associated with that product in smartphone monitors, such as the date of production and expiry date.

[0034] Teaching the different applications of that product, for example, on food, recipes different foods with that product.

[0035] Searching for the location of goods on this system, guidance and location of that product.

[0036] Running the ads or discounts announced for your phone on the phone.

[0037] Creating and running a new type of advertising at the smart point of purchase.

[0038] This system can act as a consultant in the purchase for the best choice by the customer because it is sufficient the customer will do a search among similar products and choose from the most suitable offers available to him.

[0039] Finally, after completing the purchase, the customer can click on the end button to view his bills and pay the bills with the phone and get out of the box without any queues.

Brief Description of Drawings

[0040] The above and further advantages of this invention may be better understood by referring to the following description in conjunction with the accompanying drawings, in which numerals indicate the structural elements and features in various figures. The drawings are not necessarily fit to the scale, but there is an emphasis instead being placed upon illustrating the principles of the invention.

Fig.1

[0041] [Fig.1] is an illustrative overhead view of a smart shopping system according to the invention. Fig. 1 includes 1A and 1B, the upper portion of smart shopping system 100 is smart devices 101 shopping cart 102 RFID reader 103 applications and Fig. 1B illustrates how this system works when 107 customers search the goods on the smartphone. Information has been transmitted to 105 business intelligence through 106 wifi, and has been requested from 104 servers, and is characterized using data analysis tailored to the customer's need for transmission when the item is passed near 108, its features are visible on the smartphone.

Fig.2

[0042] [Fig.2] is an illustrated side view of a smart shopping system according to the invention. In Fig. 2 includes 2A and 2B, the upper portion 200 is the RFID reader 201 goods 202 shopping cart 203 smartphone. As we pass goods through of near RFID reader, the specification of the goods is seen in the smartphone. The lower product 204 is RFID Security Gate 205 shopping cart. When we pass the shopping cart of Security Gate, all goods are checked and the possibility of all errors and theft is lost.

Fig.3

[0043] [Fig.3] is an illustrative view of composite drawing RFID reader according to the invention.

Fig.4

[0044] [Fig.4] is an illustrative view of schematic prints RFID reader according to the invention.

Fig.5

[0045] [Fig.5] illustrates a block diagram of a method of using a Smart shopping system according to the invention. In this system, 501 we install the first software on smart devices, 502 smartphones are connected to RFID reader via Bluetooth. 503 Search for the goods on the smartphone 504 Get information from the server. 505 Data analysis required by business intelligence 506 Product selection from the system's proposed items. 507 View the location of the product to the client. 508 Display relevant promotional video. 509 Show product specifications to customers 510 Show product training. 511 invoice. 512 Security Gate, all goods are checked 513 Pay the Mobile Billing.

Description of Embodiments

[0046] The smart purchase system brings the ability to provide many new services and convenience in the retail environment for buyers, and this smart system has two hard-core and software components: The hardware component includes an RFID reader (installed on the shopping carts) and RFID tags that are installed of barcodes on the goods, as well as the corresponding server equipment that is needed inside the store to store information. And the software component includes business intelligence, data mining, and application software, which are connected wirelessly over the Internet and are as follows:

[0047] The system software is installed on a smartphone when entering a complex like a hypermarket via Bluetooth or the Internet.

[0048] The business intelligence system analyzes the user's needs and the timing of his information needs. The information sent to each client on his phone is completely different from other customers because this information is in accordance with his needs. This system it also analyzes the user's behavior .

[0049] In this system, after installing the corresponding application on the smartphone, the user first connects to the RFID reader via Bluetooth. Then, the user can enter the product name when searching for the application and view all the features of goods on the phone's monitor. In this case, the user enters into the business intelligence when the name of the product is entered into the application's search field. At that time, the information is transmitted to the business intelligence via the Internet. Then, the users receives the information they need from the relevant servers provided for them.

[0050] In this case, the system begins to show the location of the goods to the user by displaying a video or other methods of locating. Then, it begins to show an instruction about the item the user is asking for and introduces him to new products.

The best function of this kind of advertising is when it specifically broadcast an ad for each user on a product he needs, which can be called the smart ads.

[0051] Once we choose the goods and want to put it in the basket, we must pass it in front of the RFID reader and put it inside the basket to see its profile inside the smartphone. In this system, when the user places the product in his cart, he sees all the product specifications including, the quality of the goods, the country of manufacture, the production date and, the term, the price of the item ... on the monitor of the phone.

[0052] It also offers suggestions for three similar products to the user to choose the best of them by comparing. It contains three image icons that represent the relevant product image with the price of the item. When the user clicks on it, the profile of that product is displayed. So this system can advise the customer when buying.

[0053] Also, here is a video tutorial on how to use the item you are looking for; so users not familiar with that product can easily get familiar with how to use it.

[0054] With this intelligent system, if a user navigates without a goal in a large store from any corridor, the advertisement for the products in those shelves can be advertised to the user on his mobile device.

[0055] At the end of the user's purchase, the monitor will display the total amount of goods added to the cart at the bottom of the monitor. Thus, he can pay the bills through the phone and without a queue.

Examples

An Implementation Technique for Applicability

[0056] At arrival of a client in a hypermarket, the client can download this application via the Internet and then the RFID reader is connected to the shopping cart via Bluetooth to the device.

[0057] All these steps are taught to a client with a short video tutorial on how to work with it.

[0058] The user needs to enter the name of each item in the software search field. The location of that item will be displayed to the user and it will be displayed on the phone by placing it in the cart.

[0059] The software also has a consulting and training section for the user.

[0060] In the end, the user can pay his bills through the mobile phone and get out of the store without a queue.

Industrial Applicability

[0061] Using the smart purchase system can be the best alternative to the barcode system and manual sales system in the hypermarkets, which will both solve other problems and improve the entire system of sales.

Claims

- [Claim 1] The smart purchase system brings the ability to provide many new services and convenience in the retail environment for buyers. This smart system has two hard-core and software components: The hardware component includes an RFID reader (installed on the shopping carts handle) and the RFID tags installed as barcodes on the goods, as well as the corresponding server equipment needed inside the store to store the information. The software component includes business intelligence, data mining, and the application software, which are connected wirelessly over the Internet and are as follows:
- [Claim 2] According to claim No. 1: System software installed on a smartphone when entering a set like a hypermarket via Bluetooth or the Internet
- [Claim 3] According to number 1: The business intelligence system, which has an analysis of the user's demands and information needs, is quite different for each customer on the phone because it fits into the customer's needs. The user's behaviors are also analyzed by this system.
- [Claim 4] According to Claim 1: In this system, after installing the corresponding application on the smartphone, the user first connects to the RFID reader via Bluetooth and the user can enter the product name when searching for the application. All the features of goods can be viewed on the phone's monitor. At that time, the information is transmitted to the business intelligence via the Internet, following which, the users receives the information they need from the relevant servers provided for them.
- [Claim 5] According to number 1: In this first case, the system starts to show the location of the goods desired by the user via a video or other finding methods. It then starts to show an advertisement about the item of the requested goods and the new products in this regard.
- [Claim 6] According to claim number 5: The peak of this kind of advertising is when each user specially distributes an advertisement that he needs, followed by a product that can be called smart ads.

- [Claim 7] According to number 1: When we take the product and want to go into the shopping cart, first, we need to pass the goods from vicinity of the RFID reader connected to the shopping cart bundles to see the specifications for the item on the smartphone.
- [Claim 8] According to number 6: The smart shopping system, while being a system for managing customer purchases, is also a system for implementing smart advertising.
- [Claim 9] According to claim number 8: The client can control and manage the entire process of shopping with the system.
- [Claim 10] According to claim number 8, The customer can easily see his product with all the specifications on the phone's monitor.
- [Claim 11] According to claim number 8: The customer can use the system as a consultant to buy and choose the best goods.
- [Claim 12] According to claim number 8: The customer can use this system to find the location of a particular item.
- [Claim 13] According to claim No. 8: The customer can use this system to learn the use of new goods and products.
- [Claim 14] According to claim number 8: After the customer's purchase, he can see his shopping bill on the phone.
- [Claim 15] According to number 14: Given the customer's billing, the payment amount can be paid via smart phone or the point of sale (POS) terminal, without any queue only by passing the output gate equipped with the device to check the RFID tags. to check all the goods purchased.
- [Claim 16] According to number 11 and 12: With respect to the guidance of the client in finding the cargo location, the system will help in reducing time and budget in the hypermarkets and shopping centers so that the client will get a better purchase at the minimum time.
- [Claim 17] Intelligent shopping system, while being a very simple user-friendly system, at the same time, it's a fully-controllable and well-planned system

that can be controlled by the central and commercial servers and used for analysis of customer behavior and data mining.

[Claim 18] According to claim No. 15: This system has a complete protection system that prevents any theft and fraud.

[Claim 19] According to number 6: This system can spread smart ads for every user as it broadcasts exclusively for goods required by the costumers that they are looking for.

[Claim 20] According to number 6 and 19: Given that such propaganda is not present until now, one can say the use of this system can create a new type of advertising, called "smart advertising".

[Claim 21] The smart advertising system apart from the smart shopping system can be used in hypermarkets and malls, airports, sports terminals, etc. to guide the user when the user searches for the cargo or location. After directing your client to its goal, it just leaves a short advertisement associated with the matter for him.

AMENDED CLAIMS

received by the International Bureau on 01 October 2018 (01.10.2018)

[Claim 1] The smart shopping system brings the ability to provide many new services and convenience in the retail environment for buyers. Includes shopping without cashier and customer guide and individual promotions.

[Claim 2] delete

[Claim 3] According to number 1: The system, which analyzes user desires and information needs, is completely different for each customer on the phone because the customer's information is for the moment the purchase is made.

[Claim 4] delete

[Claim 5] According to number 1: The user enter the product name when searching for the application. In this first case, the system starts to show the location of the goods desired by the user via a video or other finding methods. It then starts to show an advertisement about the item of the requested goods and the new products in this regard.

[Claim 6] According to claim number 1 and 5: In fact, most of the ads are either in groups or based on their purchase history or age group and or their interest in search of them in search engines for them. While this kind of ads run for the moment when a customer searches for a particular item at a particular location. And if the customer's opinion changes, the new ad will be released, that is, the ad will be broadcast at the moment when the customer needs a certain item, not on from his search records. The peak of this kind of advertising is when each user specially distributes an advertisement that he needs, followed by a product that can be called Individual advertising.

[Claim 7] According to number 1: When we take the product and want to go into the shopping cart, first, we need to pass the goods from vicinity of the RFID reader connected to the shopping cart. Do not interfere the goods in the adjacent shopping cart.

[Claim 8] According to number 6: The smart shopping system, while being a system for managing customer purchases, is also a system for implementing Individual advertising.

[Claim 9] Delete

[Claim 10] Delete

[Claim 11] Delete

[Claim 12] According to claim number 8: The customer can use this system to find the location of a particular item.

[Claim 13] According to claim No. 8: The customer can use this system to learn the use of new goods and products.

[Claim 14] According to claim number 8: After the customer's purchase, he can see his shopping bill on the phone.

[Claim 15] According to number 14: Given the customer 's billing, the payment amount can be paid via smart phone or the point of sale (POS) terminal, without any queue only by passing the output gate equipped with the device to check the RFID tags. to check all the goods purchased.

[Claim 16] According to number 11 and 12: With respect to the guidance of the client in finding the cargo location, the system will help in reducing time and budget in the hypermarkets and shopping centers so that the client will get a better purchase at the minimum time.

[Claim 17] Delete

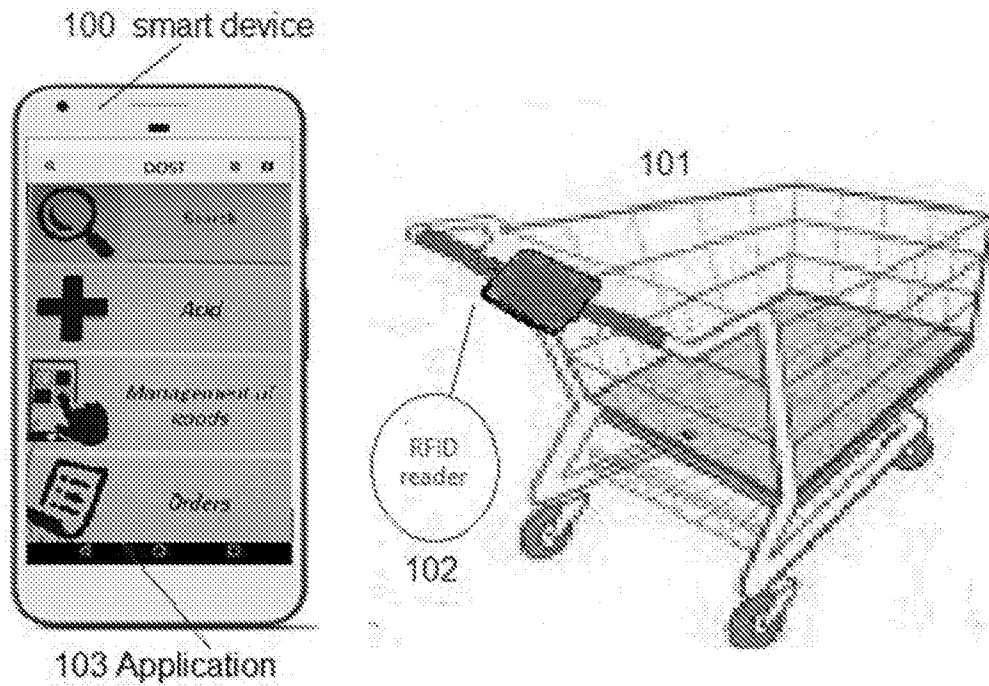
[Claim 18] According to claim No. 15: This system has a complete protection system that prevents any theft and fraud.

[Claim 19] According to number 6: This system can spread Individual ads for every user as it broadcasts exclusively for goods required by the costumers that they are looking for them at the same time.

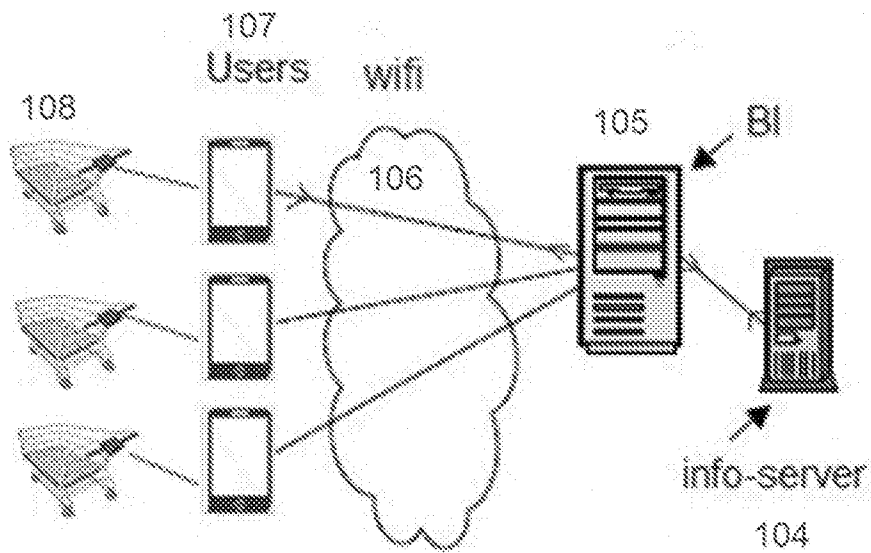
[Claim 20] According to number 6 and 19: Given that such individual propaganda is not present until now,depending on the needs of the individual at the same time, one can say the use of this system can create a new type of Individual advertising.

[Claim 21] The Individual advertising system apart from the smart shopping system can be used in hypermarkets and malls, airports, sports terminals, etc. to guide the user when the user searches for the goods or location.

[Fig. 1]

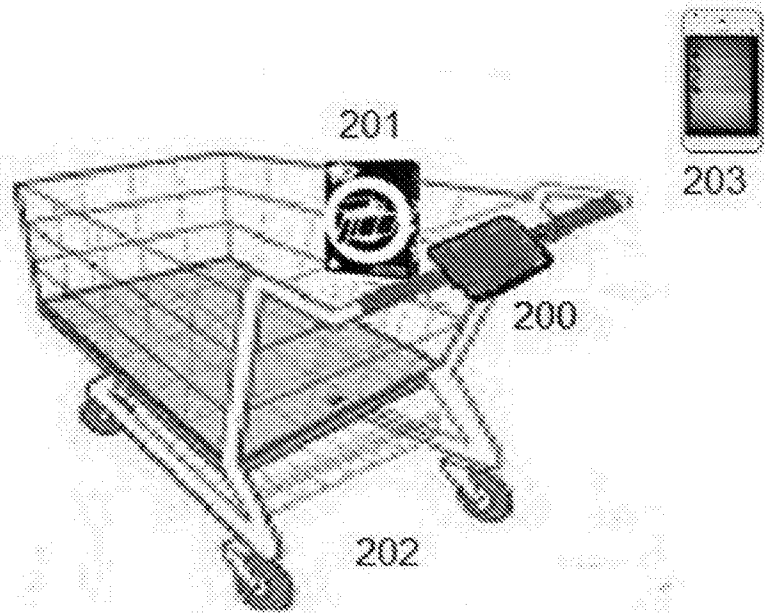


1A

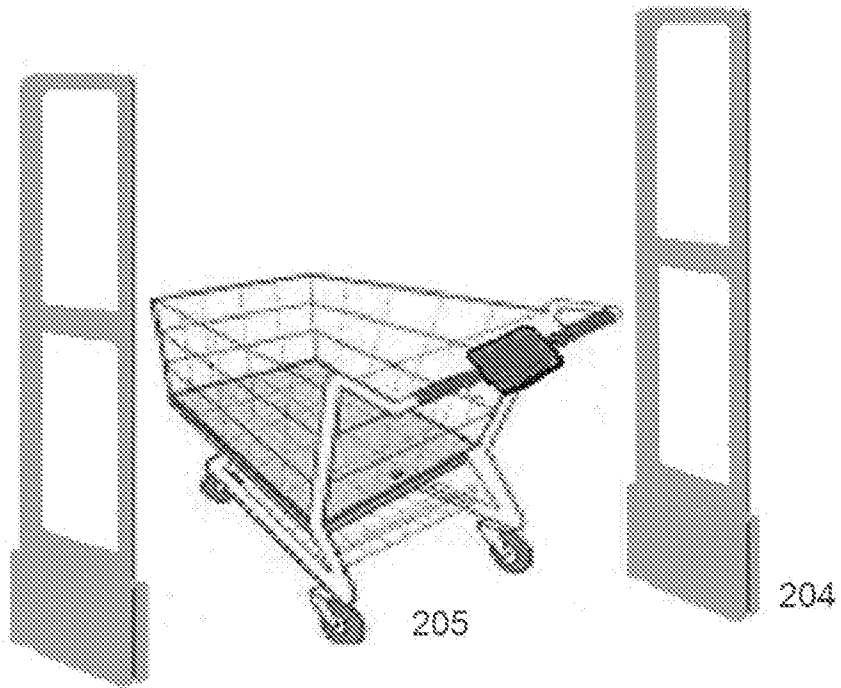


1B

[FIG. 2]

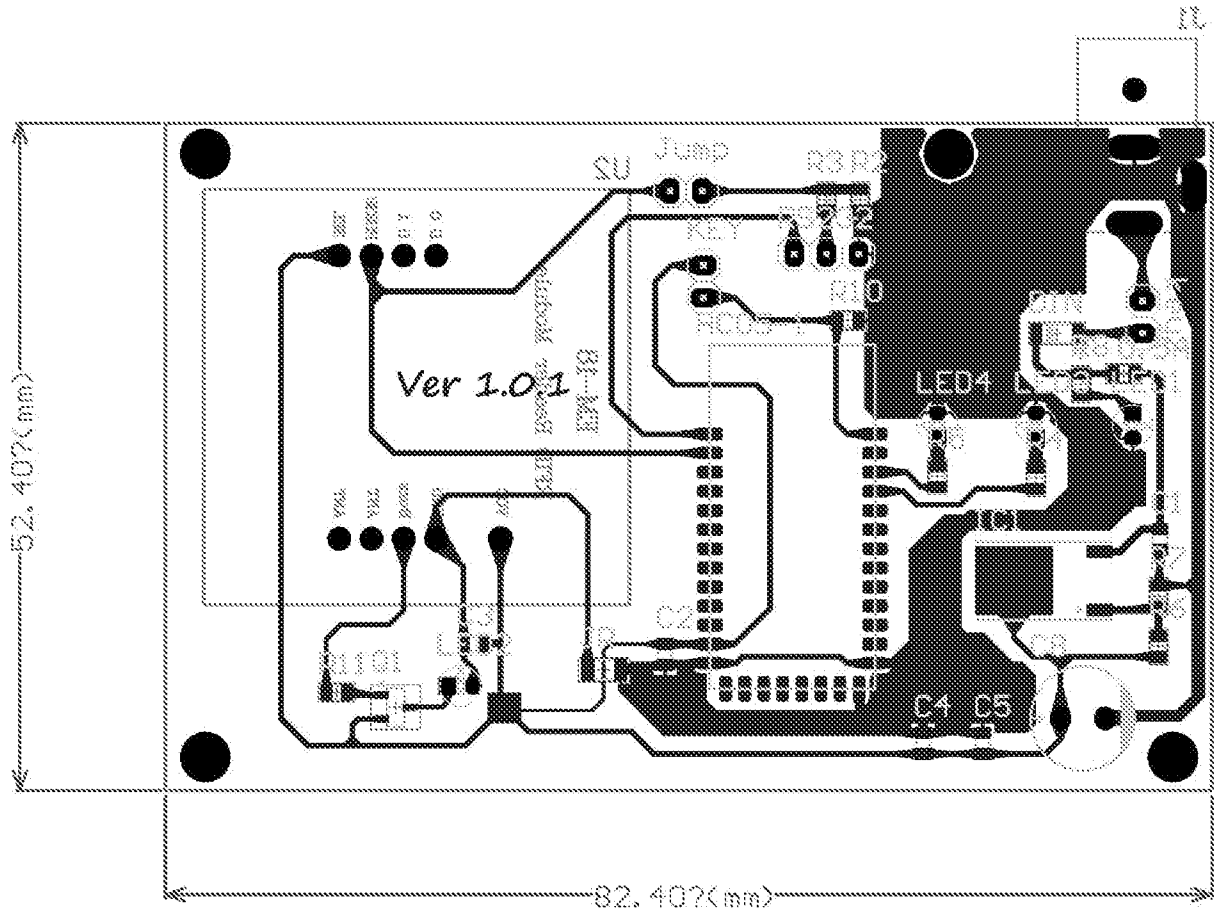


2A

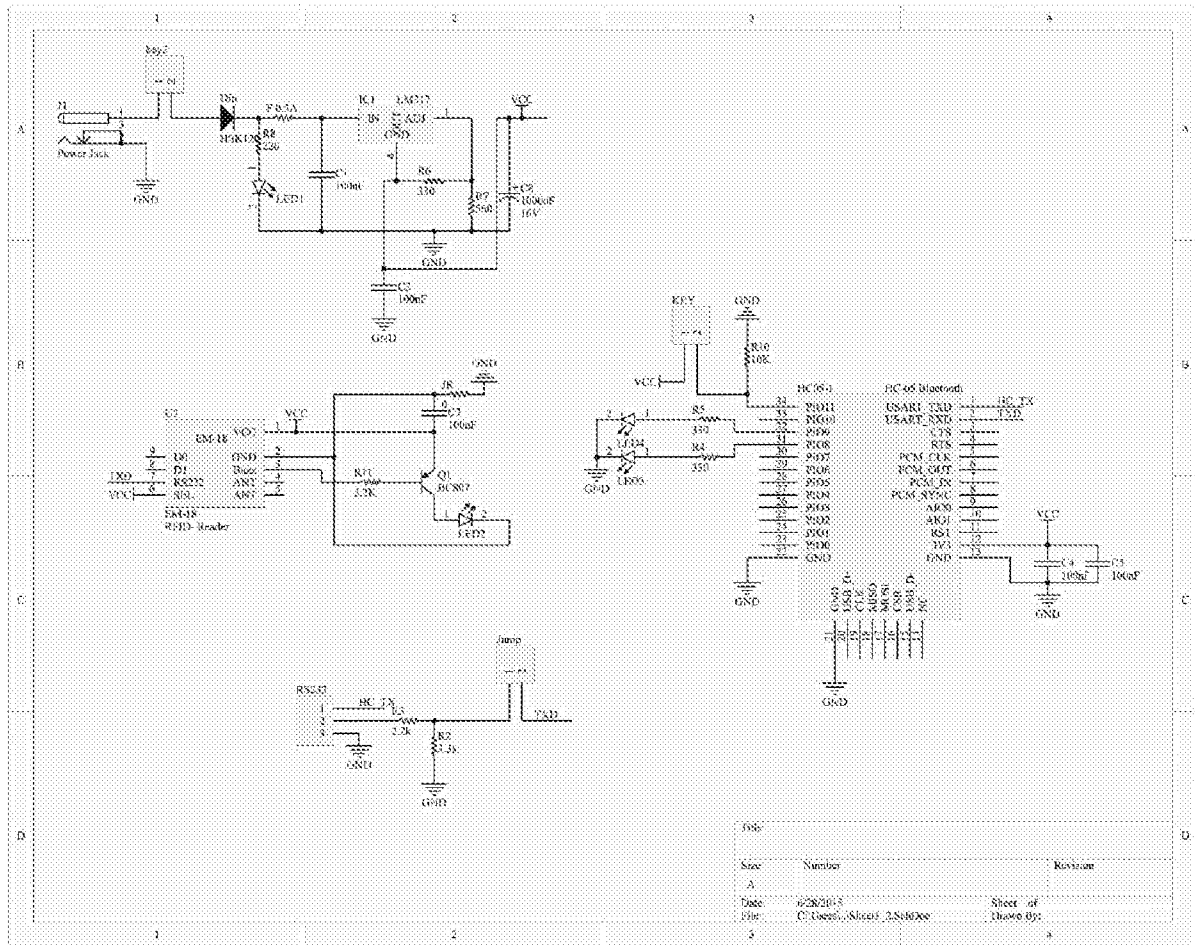


2B

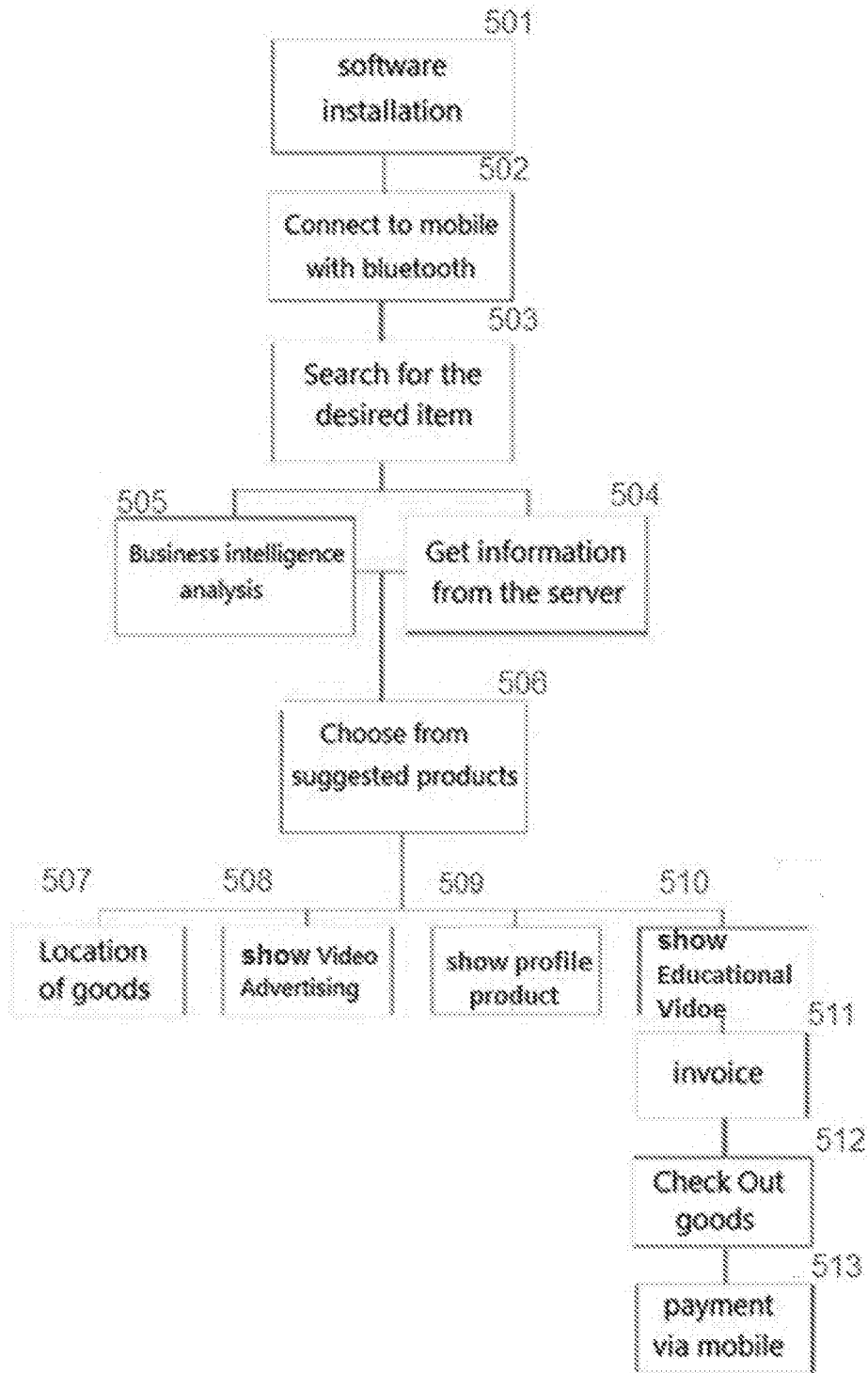
[Fig. 3]



[Fig. 4]



[FIG. 5]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2018/053452

A. CLASSIFICATION OF SUBJECT MATTER
G06Q30/00,G06Q20/00 Version=2018.01

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)

G06Q, G06F

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)

TotalPatent One, IPO Internal Database

Keywords: RFID, internet, phone, analysis, search, advertisement, bill

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 105354736 A (BEIJING YUNJING YUANPU INFORMATION TECHNOLOGY CO LTD), 24 February 2016 (24/02/2016) abstract and claims 1-3	1-4, 7, 9-11, 17, 20-21
Y	abstract and claims 1-3	5, 6, 8, 12-16, 18-19
Y	KR 101721006 B1 (KI WON NAM), 30 March 2017 (30/03/2017) complete description	6, 8, 13, 18, 19
Y	EP 2585997 A4 (MASTERCARD INTERNATIONAL INC.), 27 August 2014 (27/08/2014) paragraphs [0018-0021, 0038-0040]	5, 12, 14, 15-16

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

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 23-08-2018	Date of mailing of the international search report 23-08-2018
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Name and mailing address of the ISA/ Indian Patent Office Plot No.32, Sector 14,Dwarka,New Delhi-110075 Facsimile No.	Authorized officer Pritish Ranjan pradhan Telephone No. +91-1125300200
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2018/053452

Citation	Pub.Date	Family	Pub.Date
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