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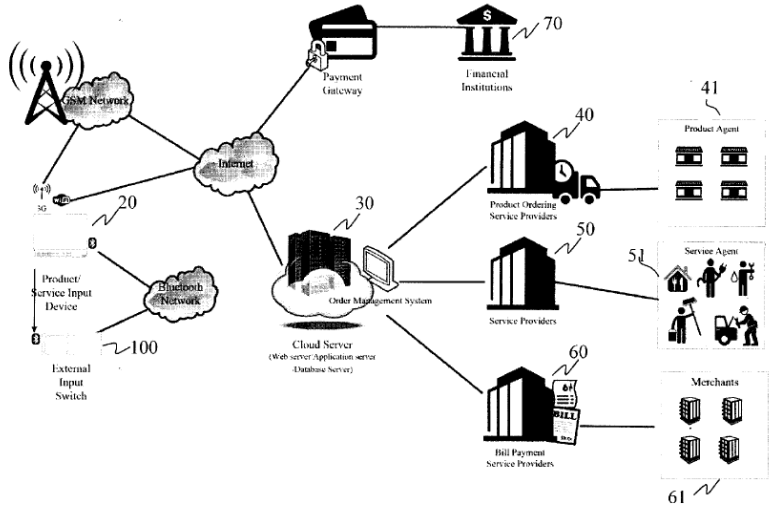
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[54] A PRODUCT / SERVICE INPUT DEVICE AND A METHOD FOR GENERATING A SHOPPING/SERVICING LIST AND FULFILLING THE SHOPPING/SERVICING LIST
用於生成購物/服務列表並完成該購物/服務列表的產品/服務輸入裝置和方法

[57] The present invention disclosed a product/service input device 20 configured to read and collect product identification data which may be in various form of coding system including but not limited to a barcode, a QR code, an audio code, a number code, or letter code. The product/service input device 20 is further configured to process and store the collected product identification data and transmit the product identification data over a network to an order management system 30 administered by one or more product ordering service providers 40, service providers 50 or bill payment service providers 60. The product input/service device 20 together with the order management system 30 is configured to create a shopping list based on the data transmitted from product/service input device and enable one or more one or more product ordering service providers 40, service providers 50 or bill payment service providers 60 to fulfill the shopping list for delivery. A method for generating a shopping/servicing list and fulfilling the shopping/servicing list using the product/service input device 20 is also disclosed.

本發明創造公開一種產品/服務輸入裝置(20)，其配置為讀取和收集可以為各種編碼系統的形式的產品標識數據，各種編碼系統包括但不限於：條形碼、QR 碼、音頻碼、數字碼或字母碼。產品/服務輸入裝置(20)進一步配置為處理和存儲收集的產品標識數據並通過網絡將產品標識數據發送至由一個或多個產品訂購服務提供商(40)、服務提供商(50)或賬單支付服務提供商(60)管理的訂購管理系統(30)。產品/服務輸入裝置(20)以及訂購管理系統(30)配置為基於從產品/服務輸入裝置(20)發送的數據創建購物列表並使一個或多個產品訂購服務提供商(40)、服務提供商(50)或賬單支付服務提供商(60)能夠完成該購物列表以進行交付。本發明還公開了一種使用產品/服務輸入裝置(20)以生成購物/服務列表和完成該購物/服務列表的方法。


GSM Network
Internet
Payment Gateway
Financial Institutions
70
41
Product Agent
40
Product Ordering Service Providers
20
30
50
51
Service Agent
Service Providers
Product/ Service Input Device
Bluetooth Network
Order Management System
Cloud Server
(Web server Application server Database Server)
External Input Switch
100
60
Merchants
Bill Payment Service Providers
61

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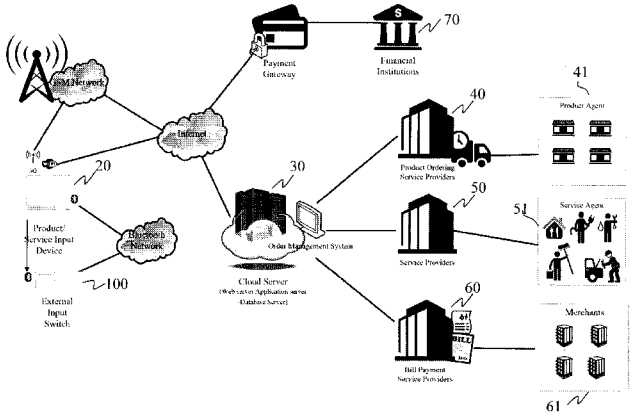


FIG. 1

(57) **Abstract**: The present invention disclosed a product/service input device 20 configured to read and collect product identification data which may be in various form of coding system including but not limited to a barcode, a QR code, an audio code, a number code, or letter code. The product/service input device 20 is further configured to process and store the collected product identification data and transmit the product identification data over a network to an order management system 30 administered by one or more product ordering service providers 40, service providers 50 or bill payment service providers 60. The product input/service device 20 together with the order management system 30 is configured to create a shopping list based on the data transmitted from product/service input device and enable one or more one or more product ordering service providers 40, service providers 50 or bill payment service providers 60 to fulfill the shopping list for delivery. A method for generating a shopping/servicing list and fulfilling the shopping/servicing list using the product/service input device 20 is also disclosed.

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A PRODUCT / SERVICE INPUT DEVICE AND A METHOD FOR GENERATING A SHOPPING/SERVICING LIST AND FULFILLING THE SHOPPING/SERVICING LIST

TECHNICAL FILED OF THE INVENTION

The present invention relates to computer engineering and/or electrical engineering. In particular, it relates to a product/service input device, a system and method for generating a shopping/servicing list and fulfilling the list.

BACKGROUND OF THE INVENTION

In a fast pace environment of today living where time is of an essence, a once or twice a week visits to the stores, supermarkets, or retail shops to fill replenish stock of grocery products, goods, fresh produces as per a pre-prepared shopping list, is no longer an option or enjoyable experience, at least for certain group of people. Some people may find it difficult to complete the list so that they can pick up all the required products and items while they were in the store. Some people may find it difficult to manage the shopping list which, for example, a family with multiple family members. Some people, for example, elderly persons or persons with disabilities may find it difficult to visit the store all together. Further, with vast varieties of services offering available such as for example home cleaning services, home care services, food/groceries delivery services, and laundry services, etc., some people prefer to call for services and waiting to be serviced at the comfort of their own living space and/or have the services delivered to their door steps or making certain transaction such as bill payments from their own devices.

With the pressure of today market and advancement of technologies and services, while home shopping, home delivery services may reduce burden for certain groups of people, problems still exists. For example, in certain situation one may need to order the products /services over the phone and thus verifying the shopping list, confirming of product/service identification, or confirmation of address for delivery could pose many problems. In another example, one may need to own certain computing devices such as a

smart phone, a desktop computer, a tablet or the like which one may not be able to afford or find it is too difficult to operate the devices and associated software or applications to complete the task.

Simpler and arguably more convenience devices, systems and methods to solve various drawbacks and problems relating to various aspects of the technology have been attempted. For example:

WO/2015/130709 disclosed a handheld electronic device for generating and processing a shopping list which may operate in a voice input mode or a scanner input mode. When operating in the voice input mode, the handheld electronic device may records and store audio data in memory. In some cases the stored audio data may be communicated from the handheld electronic device (e.g. via a WIFI-connection) to one or more remote computing devices (e.g. for speech processing). When operating the scanner input mode, the handheld electronic device may record and store item identifier information (e.g. as barcode data) in the memory in which in some cases, the stored item identifier data may be communicated to the one or more remote computing devices (e.g. for item identification processing). While the device may be perceived as simple and easy to operate, the device as well as the associated system is rather rigid in term of user interaction with the device, ability to communicate the product information to the user. Accordingly, alternative devices, systems and methods are desirable.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a product/service input device, and method for generating a shopping/servicing list and fulfilling the shopping/servicing list that is efficient, user friendly, and offer more enjoyable home-shopping experience.

In one aspect of the invention, the invention provides a product/service input device for generating a shopping/servicing list. The product/service input device is configured to read and collect product/service identification which may be in various forms of coding systems such as a barcode, a QR code, etc. The device is further configured to process and store the collected product/service identification data and

transmit such data over a network to a remote computing device, being part of an order management system. The order management system is configured to create a shopping/servicing list based on the data transmitted from product/service input device and enable one or more service providers, retailers, vendors to fulfill the shopping list for delivery or completing the servicing list.

In an embodiment of the invention, the product/service input device functions as a terminal for generating a shopping/servicing list. The product/service input device comprising a central processing unit runs on software applications or computer program tailored for such specific purpose and function, a display unit to allow user interfacing with the device, a product/service identification code scanner/reader with an activating means such as a proximity sensor or a switch configured to activate the product identification code scanner/reader to scan or read product/service identification coding such as a barcode, a QR code, etc., a connection means configured to allow wire or wireless connection of the device to a remote computing system over a network to enable transmitting of data, including product/service identification data to be processed by an order management system administered by one or more product ordering providers or service ordering providers, or bill payment service providers, and associate vendors, and delivering agents being part of the order management system. The product/service input device comprise a power source which may be in a form of a battery, including and not limited to a dry cell battery or rechargeable battery or electrical source such as a wall socket. In the case of a wall socket, the product input device also comprises an AC/DC adaptor as well.

In an embodiment of the invention, the connection means of the product/service input device includes a GSM module such as an air card with a SIM card to enable transmitting of the product identification data via a cellular network, or a WIFI module, or a Bluetooth module, or connections to allow wired or wireless transmission of product/service identification data to the order management system.

In an embodiment of the invention, the product/service input device linked to a payment gateway linked to a financial institution configured to facilitate and process electronic payment, such as payment using a credit card, or a debit card, electronic banking to allow payment transaction for the purchased products/services.

In an embodiment of the invention, the product/service input device is configured to be stationary such as a wall mounting unit or portable unit. In an embodiment where the product/service input device is designed to be stationary, the product/service identification code scanner/reader, with activating means, such as the proximity sensor is built integrated to the product/service input device. In an embodiment of the invention, the product/service input device is of a plug-in type wherein the product/service input device is connected to a power source via electrical wall socket using appropriate electrical cord. In this embodiment, the product/service input device may have a built-in AC/DC adaptor or it may have an external AC/DC adaptor. In an embodiment where the product/service input device is designed to be portable, the product/service identification code scanner/reader, and the activating means are built and powered by a built-in a rechargeable battery.

In an embodiment of the invention, the product/service input device comprises the product/service identification code scanner/reader, the proximity sensor as a detachable unit configured to be detachable from the main body of the product/service input device allowing mobility of the product/service identification code reader/scanner. The detachable unit is powered by the power source which may be the one and same power source of the product/service input device or a separate power source. The detachable unit is configured to read and collect product/service identification code data and is capable of transferring or transmitting such data to the product/service input device.

In an embodiment of the invention, the product/service input device further comprising an external input switch configured to read, collect and store product/service identification data and is configured to operable supplementary with the product/service

input device including to allow wire or wireless transfer of the product/service identification code data to the product/service input device.

In an embodiment, the external input switch comprises a central processing unit with internal memory unit, a power source such as a rechargeable battery or battery to power the external switch and a Bluetooth module allowing the external input switch to communicate with the product/service input service.

In an embodiment, the external input switch is configured to pre-stored specified product/service identification data and a specified amount/unit of the products/service to facilitate bulk order/purchase of a particular product/service. The specified product/service identification data together with the specified amount/unit is transmitted to the product/service input device via Bluetooth connection. Such specific product/service identification data will form part of a shopping/servicing list generating process. Other forms of near field communications between the external input switch and the product/service input device are also possible.

In an embodiment, the external input switch is configured to be programmable to enable changes of the specified product/service identification and the specified amount/unit stored in the memory unit of the external input switch.

In an embodiment, the product/service input device is configured to operable for settlement of bills with the bill payment service provider such that it allows bill payments such as utility bills, credit card bills, telephone bill, etc. to be paid though the product/ input device.

In an embodiment, the product/service input device is configured to communicate with remote computing devices, servers, cloud servers or the like being part of the order management system wherein the product/service input device is configured to receive contents (push contents) from such remote computing devices, servers, cloud servers or the like being part of the order management system administered by one or more product

ordering providers or service ordering providers, or bill payment service providers, and associate vendors, and delivering agents being part of the order management system. In an embodiment, the content may be in the form of text messages, audio visual content which may be directed to a promotional text messages, in-store discount offers, service discount offers or others.

In another aspect of the invention, the invention provides a method for generating a shopping/servicing list and fulfilling the shopping/servicing list using the product/service input device according to the present invention.

In an embodiment of the invention, the method involving a customer, one or more product ordering providers, or service ordering providers, or bill payment service providers, and associate vendors, and delivering agents wherein the method comprising:

-providing a terminal for a user/customer to generate a shopping/servicing list, such terminal is realized a as a product/service input device configured to read, collect, transmit product/service identification data;

-generating a shopping/servicing list containing product/service identification data;

-transmitting the generated shopping/servicing list containing the product/service identification data to the order management system over a network; and

-processing the generated shopping/servicing list based on the product/service identification data contain in the list and fulfilling the list for delivery of products or services to the user/customer.

In an embodiment of the invention, in the step of providing a terminal for a customer to generate a shopping/servicing list, the terminal is realized as a product/service input device capable of collecting product/service identification data. The product/service input device may be in the form of according to any one or more embodiments of the product/service input device in accordance with the principle of the afore-described aspect of the invention.

In an embodiment of the invention, in the step of generating a shopping/servicing list containing product/service identification data, the shopping/servicing list is generated through the use of the product/service input device with user interfacing function of the device, in particular, its interactive display unit and other associated tools/components/means and functions.

In certain embodiment, in the step of generating a shopping/servicing list containing product/service identification data, such data may be stored at the product/service input device prior to transmitting to a remote computing device/a server of which being a part of the order management system administered by one or more product ordering providers or service ordering providers, or bill payment service providers, and associate vendors, and delivering agents

In an embodiment of the invention, in the step of processing the generated shopping/servicing list based on the product/service identification data contain in the list and fulfilling the list for delivery or providing the service to the user/customer, the shopping/servicing list may be processed according to the order management system administered by one or more product ordering providers or service ordering providers, or bill payment service providers, and associate vendors, and delivering agents. In an embodiment, the one or more product ordering providers or service ordering providers, or bill payment service providers, and associate vendors, and delivering agents may be the one and same entity which taken up different roles and functions or they may be separate entities.

BRIEF DESCRIPTION OF DRAWINGS

Characteristics and advantages of the invention will be appreciated from the following description of exemplary embodiments of the present invention, in which, as a non-limiting example, some preferable embodiments of the principle of the invention are described, with reference to the accompanying drawings, in which:

FIG. 1 shows an example of a scheme of operation of involving a product/service input device
according to the present invention;
FIG. 2 shows an embodiment of a product/service input device according to the present invention;
FIG. 3 shows a side view of the embodiment of a product/service input device of FIG. 2;
FIG. 4 shows an embodiment of a product/service input device according to the present invention;
FIG. 5 shows a graphical representation of components scheme of an embodiment of a product/service input device according to the present invention;
FIG. 6 shows a graphical representation of components scheme of an embodiment of a product/service input device according to the present invention;
FIG. 7 shows an embodiment of an external input switch according to the present invention;
FIG. 8 shows a graphical representation of components scheme of the input switch of FIG. 7 and
its example of communication protocol to the product/service input device of the present
invention;
FIG. 9 shows a graphical representation of component scheme of an embodiment of the product/service input device and its connection scheme;
FIG. 10 shows a graphical representation of component scheme of an embodiment of the product/service input device and its connection scheme;
FIG. 11 shows an example of product ordering operation flow using the product/service input
device of the present invention;
FIG. 12 shows an example of service ordering operation flow using the product/service input
device of the present invention; and
FIG. 13 shows an example of bill payment operation flow using the product/service input device

of the present invention;

DETAIL DESCRIPTION OF EMBODIMENTS OF THE INVENTION

The present invention provides a product/service input device 20 and a method for generating a shopping/servicing list and fulfilling the shopping/servicing list. The term "product/service input device" being referred to throughout this document refers to the product/service input device 20 according to the principle of the present invention which facilitates product ordering, service ordering, and bill payment involving or using the product/service input device 20 according to the present invention. Further, the term "shopping/servicing list" being referred to herein refer to a list of products, services or bills identification data and/or description inputted to the product/service input device 20 by user of the product/service input device 20. Further, any element or component of the invention described as singular or plural such as product/service provider(s), service provider(s), product agent(s), service agent(s), merchant(s), financial institution(s) such terms may be used interchangeably. The detail description of preferred, exemplary embodiments according to principle of the invention will now be described in reference to the accompanying FIGs. 1-13 which form part of the specification, in which:

In one aspect of the invention as shown in an exemplary scheme of operation in FIG. 1, the invention provides a product/service input device 20 configured to read and collect product/service identification data which may be in various forms of coding system such as a barcode, a QR code, etc. The product/service input device 20 is further configured to process and/or store the collected product/service identification data and transmit such data over a network or internet to a remote computing device or a server or a cloud storage, being part of an order management system 30 administered by one or more product ordering service providers 40, service providers 50, and bill payment service providers 60 and/or including associate vendors, and delivering agents enabling the one or more product ordering service providers 40, service providers 50, and bill payment service providers 60 and/or including associate vendors, and delivering agents being part of the order management system 30 to fulfilled the shopping and servicing list and deliver the product or service to the user of the product/service input device 20. The

product ordering service providers 40 may include one or more parties who offer products for sale or for other purposes such as, for example, superstores, convenience stores, retailers and supermarkets collectively referred to as product agents 41. The service providers 50 may include one or more parties who offer services such as cleaning services, gardening services, home care services, plumbing services, laundry services, meal/food services (restaurants) including associated vendors merchants, and delivering agents, collectively referred to herein as service agents 51. The bill payment service providers 60 may include one or more parties who provide bill payment services on behalf of merchants 61 who provided the services such as banks or other financial service company, telecommunication companies, electricity companies, rental/hire services companies etc. who collect their fees for providing the services as a bill over a cycle of time. The order management system 30 is configured to process a shopping/servicing list based on the product/service identification data transmitted from the product/service input device to enable one or more product ordering service providers 40, service providers 50, and bill payment service providers 60 to fulfill the shopping/servicing list or completing the transaction. The product ordering service providers 40, service providers 50, and bill payment service providers 60 and associated parties may be a single and same entity who taken up different roles and functions. It is also possible that product ordering service providers 40, service providers 50, and bill payment service providers 60 may be of a separate entity who takes specific roles and functions. For example, a particular product ordering provider 40 may provide products to a customer, and deliver the products to the customer, i.e. user of the product/service input device themselves. While on a different scheme, a particular product ordering service provider 40 may provide products to a customer, i.e. user of the product/service input device 20, but subcontract a delivering function to a different party such as a delivering agent. The product ordering service providers 40, service providers 50, and bill payment service providers 60 as well as the product/service input device 20 is linked to a payment gate way linked to a network of financial institution 70 whom the customer may have an account with the financial institution 70 to enable the user of the product/service input device 20 to make payments or completing financial transaction for the purchase of the

products, services or settlement of bills using credit cards, debit cards, other type of stored-value cards, or electronic banking.

FIGs, 2- 5 show example embodiments of the product/service input device 20 is located in a customer's home, place of resident, office, restaurant or other business or private premises for generating a shopping/servicing list which serves as a terminal for generating a shopping/servicing list. The product/service input device 20 comprising a main board 70 comprising a central processing unit 80 with a primary memory unit 99" and is installed with processors which run on software application or applications or other computer readable programs specifically tailored for such purposes or functions including but not limited reading, collecting, and processing, displaying, transmitting the data acquired/received/send by the product/service input device 20, a display unit 90, configured to allow or facilitates user interfacing with the product/service input device 20, a product identification code scanner/reader 96 with an activating means such as a proximity sensor 97 configured to scan/read product identification codes such as a barcode or a QR code, a connection means 81 configured to allow wire or wireless or cellular connection of the product/service input device 20 to a remote computing system forming part of the order management system 30 over a network to enable transmitting of data, including product identification data to be stored and/or processed by the order management system 30 of the one or more product ordering service providers 40, service providers 50, and bill payment service providers 60 and associated parties. The product input device 20 is powered by a power source 95 of which supplies power to the product/service input device 20. The power supply to the product/service input device 20 can be regulated via an on-off button 92 which also serves as means to activate or deactivate the product/service input device 20. The product/service input device 20 also comprises an audio/visual means 85 configured to display audio visual data or content on the product/service input device 20 to facilitate the user to perform or take specific actions or commands while inputting the product/service identification code onto the product/service input device 20. The audio visual means 85 may be a combination of a software application, a speaker 86, a microphone 87 configured to display audio visual content including audio, video data to facilitate the user product/service input device 20

to interface or perform request or command while inputting the product/service identification data into the product/service input device 20 or completing payment transaction including bill payment on the product/service input the device 20.

In a preferred embodiment, the display unit 90 is an interactive touch screen display unit which displays various user interfacing screens and functions in response to a signal or input data or request, or command sequence perform by the user of the product/service input device 20 or as a result of processing of the data by the central processing unit 80 of the product input device 20. In an example, as the product input device 20 is powered "on", the product input device 20 including its product identification code scanner/reader 96 and its activating means such as a proximity sensor 97, the display unit 90 are activated and standby and the central processing unit 80 with processors which run on software application or applications or other computer readable applications or programs ready to function as per the received signal, data, input or command or request performed.

In an embodiment of the invention, the power source 95 may be in a form of a battery, including and not limited to a dry cell battery or a rechargeable battery or an electrical source such as a wall socket. In the case of a wall socket, the product/service input device 20 also comprises an AC/DC adaptor 98 as well. The AC/DE adaptor 98 may be a built-in type embedded to the product/service input device 20 or it may be provided externally and integral with an electrical/power cord. In an embodiment, the product/service input device 20 may be equipped with dual power sources. That is, the product/service input device 20 may, at any one time be powered by electricity by connecting the product/service input device 20 to a wall socket using an electrical cord or when it is not plug in to an electrical wall socket it may also run on a dry cell battery or a rechargeable battery pack which may be charged and recharged as well.

As mentioned above, in an embodiment of the invention, the product/service input device 20 is linked to a payment gateway which linked to financial institutions 70 or a network of financial institutions of which the user of the product/service input device 20

may have an account with to facilitate and process payment using such as credit card, debit card, electronic banking to allow payment or financial transaction for the purchased products/services or to facilitate bill payment transaction. In this embodiment, the product/service input device 20 may be also connected to a network of financial institutions 70 or other financial or payment service providers, including such as the credit card issuing banks so as to enable credit card payment processing for settlement of bills or payment for products or services.

In an embodiment of the invention, the product/service input device 20 may be designed to be stationary or portable.

In an embodiment, the product/service input device 20 is designed to be stationary. In this embodiment, the product/service identification code scanner/reader 96 with activating means such as the proximity sensor 97 is built integrated to the product/service input device 20, see FIG. 2. In this embodiment of the invention, the product/service input device 20 may be of a plug-in type wherein the product/service input device 20 is connected to an electrical wall socket for a power supply.

In an embodiment, the product/service identification code scanner/reader 96 with the proximity sensor 97 is built as a detachable unit 120 configured to be detachable from main unit of the product/service input device 20. In this embodiment, the product/service input device comprises a secondary memory unit 99 (memory unit of the detachable unit 120) arranged at the detachable unit 120. Detail on the detachable unit 120 to be described further below.

In another embodiment, the product/service input device 20 is designed to be portable. The product/service input device 20 may run on the built-in power source 95 such as a rechargeable battery.

In an embodiment of the invention, as shown in FIG. 5, the connection means 81 of the product/service input device 20 comprises for example a GSM module 82 such as

an air card with a SIM card to enable transmitting of the product/service identification data via a cellular network, and/or a WIFI module 83, and/or a Bluetooth module 84, to enable wired or wireless transmission of product/service identification data to the remote computing device of the order management system 30. It is not necessary that the product/service input device 20 are equipped with all of the example of connection means 82 as mentioned, but rather the product/service input device 20 are configured to be compatible with various available options. It may be equipped with a certain connection means 82 to enable the product/service input device to effectively perform required function, i.e. transmitting of product identification data to a remote computing device of the order management system 30 over a network, while it may also be equipped with more than one connecting means 81 to provide as a more preferred or alternative options made available to the user. The product/service input device 20 also comprises a USB hub 75 to enable connectivity of the product/service input device with other hardware.

Fig 5 also shows a graphical representation of components scheme of an embodiment of a product/service input device of FIG. 4 which the product/service identification code scanner/reader 96, the proximity sensor 97 and configured to be detachable from the main body of the product/service input device 20 and re-connected to the main body of the product/service input device 20 as needed. The detachable unit 120 also comprises a power source 95'' such as a rechargeable battery to power the detachable unit 120, a non-volatile internal secondary memory unit 99 to store the data including the product/service identification data collected by the detachable unit 120. However, a skilled person in the art would easily recognized that it is possible to provide a product/service input device 20 where the product/service input device 20 may contain a single central processing unit or multiple processing units including microprocessors. For example, in the embodiment where the product/service input device 20 comprises the detachable unit 120, the product/service input device 20 may be provided with a single or multiple processing units, for example one primary central processing unit 80 with a primary memory unit 99" (memory unit at the mainboard 70) arranged on the main unit of the product input device 20 and a secondary central processing unit (not shown) with a secondary memory 99 at the detachable unit 120 to store process data and perform

designated functions while the detachable unit 120 is operated remotely and away from the main unit of the product/service input device 20. In this embodiment, as the detachable unit 120 is detachable, it allows mobility of the product identification code scanner/reader 96 and associated elements, including the proximity sensor 97 powered by the power source) 95'', to function away from the main unit of the product/service input device 20 for more convenience. The detachable unit 120, for example, is configured to coupled/connect to electrical terminals 125 provided on the main body of the product/service input device 20 such that detachable unit 120 engage to electrical terminals 125 on the main unit of the product/service input device 20, it completes the circuitry of connectivity such that it enable the detachable unit 120 to be transferred / transmitted /downloaded the product/service identification data collected by the detachable unit 120 to the primary memory unit 99" product/service input device 20, or read, process, by the central processing unit 80 and display on the display unit 90, or otherwise merge with the product identification data stores at the product/service input device 20 such that the product/service identification data may be combined or integrated into a single product/service list ready for transferring or transmitting to the remote computing devices of the order management system 30 administered by the product ordering service providers 40, service providers 50, and bill payment service providers 60 and associated parties.

In an embodiment of the invention, the product/service input device 20 further comprising an external input switch 100 configured to read, collect and store product identification data and is operable supplementary with the product/service input device 20. An exemplary embodiment of the external input switch 100 is shown FIG. 7. Figure 8 shows a graphic representation scheme of components of the external input switch 100 and its connectivity to the product/service input device 20.

In the embodiment, as shown in FIG. 6 and FIG. 7 the external input switch 100 comprises a central processing unit with internal non-volatile memory unit 105, a power source such as a battery 110 to power the external input switch 100 and a Bluetooth module 115 (an external input switch Bluetooth module 115 is a separate unit from that

of the Bluetooth module 84 of the product/service input device) allowing the external input switch 100 to communicate and transfer or transmit product/service identification data stored at the external input switch 100 to the product/service input service 20 via low powered Bluetooth technology. See also in FIG. 8. The external input switch 100 is operable via operation of one or more input buttons 120. The central processing unit 105 of the external input switch 100 may be in the form of a microprocessor with its own memory. The external input switch 100 is configured to sync with the product/service input device 20 and it is configured to be programmable (setting) via the product/service input device 20. The external input switch 100 is configured to be programmable to enable changes of the specified product identification data and the specified amount/unit. The Bluetooth module 115 inside the external input switch 100 allows the external input switch 100 to wirelessly communicate or connected to the product/service input device 20 such that the data including the product/service identification code stored at the external input switch 100 is communicated to the product/service input device 20.

In an embodiment, the external input switch 100 configured to pre-stored specified product identification data and a specified amount/unit of the products to facilitate bulk order/purchase of a particular product. The specified product identification data together with the specified amount/unit is transmitted to the product/service input device 20 via low powered Bluetooth technology. Other forms of near field communications allowing data transmission between the external input switch 100 and the product/service input device 20 are also possible. The external input switch 100 is designed to facilitate bulk order/purchase of products, for example for purchasing of staple products or routine items. This would be very convenience for, for example, offices, restaurants, or food and drink shops or other type of business operators who may require large number of particular items on a regular basis. Instead of having to input the product identification code, i.e. scanning of the barcode into the product/service input device 20 for each unit of the required quantity of products and to confirm inputting of each item on the display unit 90 , or having to scan the product identification code for the required item and to separately inputting the number of required unit on the display unit 90, the user simply use the external input switch 100 to complete the task by pressing on the input button 120 of external input switch 100. Through operating of the input button

120 on the external input switch 100, the pre-stored product identification data together with the pre-specified unit of the product is communicated to the product/service input device 20 and such data will be displayed on the display unit 90 of the product/service input device 20 enable the user to confirm the input (entry) of the product identification into the list of item to be ordered/purchased. Similarly, when applicable or possible, the external input switch 100 may be configured to store specified services identification data such as those service identification which are requested or ordered by the user on a regular basis.

As mentioned above that external input switch 100 is operable via operation of one or more input button 120 to communicate the pre-stored data to the product/service input device 20 to form part of the shopping/servicing list to be further processed by the product/service input device 20. The term "one or more input button 120" signifies that the external input switch 100 may comprise one input button 120 or more than one input buttons 120. In an embodiment where the external input switch 100 comprises a single input button 120, it is possible to configure the external input switch 100 to pre-store a single set of product identification data which may directed to identification data of a single product or several product. However, it is also possible to configured the external input switch 100 to pre-stored multiple set of product identification data which may directed to identification data of multiple products such that manipulating the input button 120 in a different way can result in a different command or that it results in the external input switch 100 to transmit different sets of data to the product/service input device 20. As well, in an embodiment where the external input switch 100 comprise more than one input buttons 120, each input button 120 may be assigned or designated for a different product identification code such that each input button 120 is assigned to transmit different sets of data to the product/service input device 20.

Further, as mentioned above that the term "product/service input device" being referred to throughout this document refer to the product/service input device 20 according to the principle of the present invention which facilitates product ordering, service placement, and bill payment involving or using the product/service input device

20 according to the present invention. Further, the term "shopping/servicing list" being referred to herein refer to a list of products, services or bills inputted to the product/service input device 20 by a user. Accordingly, the product/service input device 20 may be configured to embody a different interface or window or tab or applications for ordering of products, ordering for services and bill payment service among others. In an embodiment, the product/service input device 20 is configured to enable bill payment such that it allows payment transaction for settlement of bills such as utility bills, credit card bills, etc. to be performed though the product/service input device 20 linked to a payment gateway of which also linked to a network of financial institution such that it allows electronic payment using credit card, debit card, electronic banking or other type of stored-value cards, etc. In this embodiment, the product/service input device 20 operates and functions in the same manner as with in the case of ordering a product or a service using a barcode as the product/service identification code. Similarly, the product/service input device 20 is configured to recognize a bill identification code, such as a barcode of a bill to enable the use to further proceed with bill payment transaction. Specific description for product ordering, service ordering and bill payment involving or using the product/service input device 20 according to the present invention will be further described in relation to a respective operation flow later on.

As mentioned above that in an embodiment, the product/service input device 20 comprise an audio visual means 85 of which may comprise a speaker 87 and a microphone 86 with accompanying software or application. As an example, the speaker 87 may serves to display audio content such as a push content (to be further described below) transmitted from the order management system 30 or the product ordering provider 40, service providers 50, and bill payment service provider 60 and associated product agents 41, service agents 51 and merchants 61. Further, the speaker 87 is provided to provide various audio notifications to the user of the product/service input device 20. For example, upon scanning of a product/service identification code, the product/service input device 20 may emit an audio notification, such as a "beep", to notify a user that a barcode has been scanned. In another example, the speaker 87 may provide sound effects for audio content being received or displayed by the

product/service input device 20. In another example, the microphone 86 serves to provide a voice command for operating or executing command on the product/service input device 20 to be further discussed below.

As shown in FIG. 1 and FIG. 9-10, the product/service input device 20 is configured to communicate with a remote computing device, servers or cloud servers or the like forming part of the order management system 30 over the internet or a network. The product/service input device 20 is not only configured to transmit data to the order management system 30, but may be also configured to receive data or content (push content) from such remote computing device, servers, cloud servers or the like of the order management system 30. In an example, the data or content may be in the form of text messages or audio visual content which may be directed to a promotional text message, in-store discount offer, or others. In an example scenario, the content may be in the form of an audio-visual data which will be processed and displayed on the display unit 90 of the product/service input device 20. Preferably, the content being received is related to a product or a service being ordered by the user. For example, during scanning i.e. inputting of a product identification code onto the product/service input device 20, for example a laundry care products, such as a washing detergent, the push content being received by the product/service input device 20 may directed to an in-store promotional campaign such as "buy two get one free" may be displayed on the display unit 90 of the product/service input device 20 advertising to the user if the user wish to take the promotional offer or decline the offer. In a further example, the content may be directed to a product similar or categorically related to a product being scanned to provide the user/customer an opportunity to also order or purchase different service or product lines, different sizes (volume), different brands, or related products, or substitute products. Preferably, in an example, it is possible for a user/customer to close or skip or ignore the content and continue with the inputting process as normal or disable the push service should the user/customer does not wish to received such content with promotional or advertising messages.

Moreover, apart from an audio notification as described above for which the product/service input device 20 further equipped with the speaker 87 is a preference, it is possible to also configure the product/service input device to issue different format of notification to a user/customer. For example, the notification may be in the form of light (such as red or green) to show different states of operation of the product/service input device 20. In another example, the notification may be in a form of an image or visual symbol. In any case, an element configured to issue such notification with a corresponding microcontroller responsible for controlling or issuing such notification shall be provided.

In an embodiment, the product/service input device 20 is configured to pair with other electronic devices with Bluetooth module, such as a smart phone, smart watch or other similar gadgets or be installed with other applications, programs or software to suit different lifestyle of the user. It may also sync to a home automation system enabling controlling of the home automation, as a hub, from the product/service input device.

In an embodiment, the product/service input device 20 may also include a location identification means to transmit its location to provide brief location of the product/service input device to the product ordering service providers 40, service providers 50, and bill payment service providers 60 or other associates product agents 41, service agent 51for the benefit of managing delivery routes or managing delivery for delivering the products or services to the customer/user.

While it has been described above that the product input device 20 is configured read and collect product/service identification data and transmit or transfer such product identification data to the order management system 30 for further processing, it is possible, however, that the product identification is not only limited to a barcode or QR code and that the means for reading or recognizing the product identification code is not limited to the product identification code scanner/reader 96 or that the product identification code is limited to a barcode or a QR code. It is possible to configure the product/service input device 20 to recognize different forms of product identification

coding system. Accordingly, in an embodiment, the product/service input device 20 is configured to recognize a product/service identification code via voice commands or audio code. That is, the user of the product/service input device 20 can input product/service identification code by speaking or providing audio code to the product/service input device 20 via the microphone 86. Hence in this embodiment, the product/service input device 20 further comprise a voice recognition module 88 configured to enable the product/service input device 20 to accept inputting of the product/identification data via voice command or as an audio code. See FIG. 6. It is possible through configuration of the voice recognition module 88 and related software/applications to formulate or paired or mapped a specific product/service identification code as an audio code against a product/service/bill identification code database maintain by the order management system 30 or the product ordering service providers 40, service providers 50, and bill payment service providers 60. For example, a user of the product/service input device 20 may formulate a specific general name, or general product name such as "chicken soup" by pairing the speaking phrase "chicken soup" with an identification code of a chicken soup of a specific brand, volume or size, flavor maintain by the order management system 30 or the product ordering provider 40. Once the user of the product/service input device 20 input the audio code "chicken soup" into the product/service input device 20, the order management system 30 or the product ordering service providers 40 check the code "chicken soup" against its product identification code database and will be able to match the product identification code and display the specific chicken soup as requested (or of which has been paired/mapped with) on the display unit 90 of the product/service input device 20 to enable the user to confirm the order.

Moreover, it will be appreciated that it is possible to pair or map a specific product/service identification code with a number code or a letter code in a similar manner as with pairing or mapping an audio code with a product identification code maintain by the order management system 30 or the product ordering service providers 40, service providers 50, and bill payment service providers 60 as previously described above. That is, in this embodiment, the user of the product/service input device 20 will

be able to type in or input a specifically assigned number(s), preferably a shorter and simpler number combination than that of the actual barcode number of a product, or letter(s) using a keypad or a keyboard, preferably as a virtual keyboard, integrated keyboard or a keyboard application installed on the product/service input device 20. Such number code or letter code which has been formulated and paired with a specific product/service identification code maintained by the order management system 30 or the product ordering service providers 40, service providers 50, and bill payment service providers 60. This can be very useful for certain circumstances or certain group of users. For example, when it is not possible for the product/identification code scanner/reader to read a barcode of a product, the user may input the product barcode numbers manually. However, in for certain group of people such as an elderly or person with poor eyesight, inputting the accurate product barcode numbers, which often very small, can be a difficult task, hence alternative forms of inputting product/service identification code such as those of an audio code (via voice command), a number code, or a letter code as described above can be very helpful.

We will now be describing use and examples of operation flow of the product/service input devices where examples of operation flow for ordering of products, ordering of services and bill payment will be discussed.

In use, the product/service input device 20 may be distributed to customers on certain terms and conditions by service providers. In the initial first use of the product/service input device, the user/customer is required to provide personal identification means or contact information such as a contact number, mobile phone number(s) as a form of registration or activation of the product input device 20. The provided information will enable the service providers and the product agent 41, service agent 51 and merchants 61 to contact the user/customer to confirm the identity of the customer, to confirm the order and to arrange for delivery or for visiting the customer to provide the service. The product/service input device 20 may be embedded with a location identification means to provide information on location of the product/service input device 20 for the benefit of managing delivery routes or managing delivery for

delivering the products/services to the customer/user.. The product/service input device 20 is linked to the order management system 30 where a database containing product/service identification code is maintained. Once the product/service input device 20 is "on" and the customer or a user enter product/service identification code into the product/service input device 20 by inputting a product/service identification code either as a universal barcode, an audio code, a formulated numbers code or a formulated letters code into the product/service input device 20, the product/service input device will process the product/service identification code and communicate with the order management system 30 to match and pull a corresponding product/service identification code with product/service description and display the information on the display unit 90 to enable the user/customer to confirm the order for that particular product/service. While inputting product/service/bill identification code into the product/service input device 20, the user/customer is required to specify a number of unit or quantity of the product/service and confirm each input/entry of the product/service/bill identification code into the product/service input device 20 which will later serve as an order/shopping list for the user/customer. It is, however, possible to configure the product/service input device 20 to collect multiple product/service/bill identification codes, such as a list of product/service identification codes and that such list of inputted product/service identification code may be confirmed with a single confirmation. With after each input of product/service identification code or after each confirmation, the customer will have an option to continue adding more product/service identification code. Where the user/customer inputs a product/service identification code by mistake, or no longer wishes to order/purchase such item or service, the user may remove such item or service from the list by pressing an icon, symbol or word on designated button conveying "deleted" or "cancel" or "back" and executed such function on the display screen 90. Once inputting of product/service identification code is complete, the customer will have an opportunity to save and store the list on the device and may amend or revised the list as needed and submit or transfer the list to the order management system 30 when desired, or to submit or transfer the list to the order management system 30 after inputting of product identification code is completed. The order management system 30, after receipt of the list of product/service identification from the user or customer will then

generate an order number and confirm the order with the user or customer, for example by way of a short message service or other form of notification to the user/customer mobile device (i.e. registered mobile number) or to the product/service input device 20 itself. The order management system 30 or the product ordering service providers 40, service providers 50, and bill payment service providers 60 will then fulfill the order by delivery of the product/service or completing the transaction.

In the embodiment where the product/service input device 20 comprises the product/service identification code scanner/reader 96 as the detachable unit 120, the user/customer may detach the detachable unit 120 and use the detachable unit 20 to scan/read product identification for example, large, bulky item, or items which are kept away from the product/service input device 20. Once the detachable unit 120 is returned and coupled to the main unit of the product/service input device 20, the product identification code data which has been processed and stored in the non-volatile memory unit 99 of the detachable unit 120 will be transferred or downloaded into the central processing unit 80 of the product/service input device 20 for further processing. This is where an embodiment wherein the product/service input device 20 which is configured to allow confirmation of multiple product identification codes with a single confirmation to be more appreciated. That is, as the detachable unit 120 is configured to read and collect the product identification code remotely away from the main unit of the product/service input device 20, it would be rather an inconvenience for a user to come back to the display unit 90 to provide confirmation for entry or each input of the product identification code, hence providing e a single confirmation for a list of multiple product identification codes is provided.

As mentioned earlier, in one embodiment, the product/service input device 20 further comprising an external input switch 100, see FIG. 9. In this embodiment, the user may use a pre-programmed external input switch 100, of which carry one or more set of data of product identification code together with a specify unit of the product, to input the product identification code together with the required unit by operating the input button 120 on the external input switch 100. The said specified product identification code

together with the specified number of unit will be communicated or transmitted to the product/service input device 20 via low powered Bluetooth technology, i.e. the Bluetooth module 115, see FIG. 8. Accordingly, such data will be displayed on the display unit 90 of the product/service input device 20 allowing the user/customer to confirm the order as normal.

It is possible that the user may pay for the ordered/purchased products/services upon delivery or through other methods or channels of payment. It is also possible that the product/service identification code together with a unit price will be updated by the order management system 30 or the product ordering service providers 40, service providers 50, and bill payment service providers 60 a regular basis. Hence, the product/service order list generated using the product/service input device 20 will include a total price for the ordered/purchased products/service. Accordingly, the product/service input device 20 which is linked to the payment gateway and the network of financial institution 70, it enable the user/customer to pay for the products/service using a credit card or a debit card or electronic banking at the product/service input device 20 as per the protocol and security module established by the payment gateway and the financial institution 70 to enable the transaction and to avoid theft or fraud. Further, order management system 30 or the product ordering service providers 40, service providers 50, and bill payment service providers 60 also connected to the network of the financial institution 70, for example, a credit card issuing bank for the purpose of authenticating and approval of the card payment as generally known in the art.

Example of Product Ordering Operation Flow

As shown in FIG 11, a user of the product/service input device 20 activates the product/service input device 20 and completes a registration process by providing user identification such as a mobile phone number or other personal identification means. The user identification or other personal identification means may be stored in a profile database at the product/service input device 20 so that the information may be retained for future visits. The user may then pick from the display unit 90, a portal, window, or tab or application for product ordering. The product identification code scanner/reader

96 and/or the external input switch 100 are ready and standby. In this example, the user may then use the product/service identification code scanner/reader 96 (as both integrated (attached) unit or detachable unit 120) and/or the external input switch 100 for inputting the product identification code. The product/service input device 20 retrieve product identification from a product identification code database (in this example, barcode database) maintain by the order management system 30 and/or the product agent 41 and display the product description (such as product brand, packing size, volume, or image of the product, etc. and unit price on the display unit 90 of the product/service input device 20. The user may then add the required number (quantity) of unit of the product as needed. Then the user will have an option of adding more product identification codes and input additional product identification code by scanning identification code of the next product. Once inputting of product identification code is completed the user may then place an order and confirm order placement where the order or product order list is transferred or transmitted over the internet or network to the remote computing device, server or cloud servers are for example, of the order management system 30 where the order management system 30 will generate an order number for the user and record the order in the order database (such as order number, product list, user identity, etc.) and send notification of confirmation of receipt of order along with order number to the user via for example a short message service to the customer. The product ordering is then considered to be completed and the user may deactivate the product/service identification code scanner/reader 96 at the product/service input device 20 and end the process. The product ordering service provider 40 and/ or product agent 41 being part of the order management system 30 may then execute the order and deliver the products to the user or customer. Where, after completion of inputting of product identification code into the product/service input device 20 and the user does not wish to immediately place an order to the order management system 30, the user may save the data in the primary memory unit 99'' of the product/service input device 20 and may place an order later when desired. They user may then deactivate the product/service identification code scanner/reader 96 at the product/service input device 20 and end the process.

Example of Service Ordering Operation Flow

As shown in FIG. 12, a user of the product/service input device 20 activates the product/service input device 20 and completes a registration process by providing user identification such as a mobile phone number or other personal identification means. The user identification or other personal identification means may be stored in a profile data base at the product/service input device 20 so that the information may be retained for future visits. The user may then pick from the display unit 90, a portal, window, or tab or application for service ordering. The product/service identification code scanner/reader 96 and/or the external input switch 100 are ready and standby. In this example, the user may then use the product/service identification code scanner/reader 96 (as both integrated (attached) unit or detachable unit 120) and/or the external input switch 100 for inputting the service identification code. In this example, the service identification code may be for example a delivery meal or services provide by the service agent 51 such as a restaurant where the user may input a barcode for a specific menu, or such service barcode is a specific restaurant where upon scanning of the service identification code, available menu which are retrieved from the service database of the order management system 30 or the service order provider 50 being part of the order management system 30, will be displayed along with the service (meal/dish) description and unit price and allow the user to pick the desired menu and quantity from the screen of the display unit 90. The user may be provided with an opportunity to input additional information regarding the service, for example if the user does not wish to have MSG in the ordered menu. The user may then place an order and confirm order placement where the order or service order list is transferred or transmitted over the internet or network to the remote computing device, server or cloud servers are for example, of the order management system 30 where the order management system 30 will generate an order number for the user and record the order in the order database (such as order number, service list, user identity, etc.) and send notification of confirmation of receipt of order along with order number to the user via for example a short message service to the customer. The service order is then considered to be completed and the user may deactivate the product/service identification code scanner/reader 96 at the product/service input device 20 and end the process. The service ordering service provider 50 being part of the order management system 30 may then execute the order and deliver the services to the user or customer.

Where, after completion of inputting of service identification code into the product/service input device and the user does not wish to immediately place an order to the order management system 30, the user may save the data in the primary memory unit 99'' of the product/service input device and may place an order later when desired. The user may then deactivate the product/service identification code scanner/reader 96 at the product/service input device 20 and end the process.

For both product and service ordering, depending on the policy and arrangement and available options, the user may pay for the ordered product or service via cash upon delivery or fulfilling of the order or settle payment for the ordered product or service after placing the order via payment gateway as earlier described.

Example of Bill Payment Operation Flow

As shown in FIG. 13, a user of the product/service input device 20 activates the product/service input device 20 and completes a registration process by providing user identification such as a mobile phone number or other personal identification means. The user identification or other personal identification means may be stored in a profile data base at the product/service input device 20 so that the information may be retained for future visits. The user may then pick from the display unit 90, a portal, window, or tab or application for bill payment. The product identification code scanner/reader 96 is ready and standby. In this example, the user may then use the product/service identification code scanner/reader 96 (as integrated attached unit (attached) or detachable unit 120) for inputting the bill identification code. The order management system 30 may then be retrieved bill information from bill database maintained by merchants 61 and display the bill description and total payable amount on the bill. The user will be then request to select whether to proceed with payment or cancel the payment. Where the user wishes to proceed with payment, the user will be asked to provide credit card information and authorization code and transmit the data to the order management system 30 and the bill payment service providers 60 being part of the order management system 30. The bill payment service provider 60 may conduct credit card validity/credit check with the financial institution 70 who issued the credit card. Where the card is found to be invalid

or without credit, the user will be ask to provide alternative credit card. Where card validity and credit check is valid and payment is accepted, the order management system will issue a notification of confirmed payment with receipt number to the user and store transaction history in the paid bill database at the order management system 30 administered by the bill payment service provider 60. The payment is regarded as completed.

In another aspect of the invention, the invention provides a method for generating a shopping/servicing list and fulfilling the shopping/servicing list using the product/service input device 20.

In an embodiment of the invention, the method involving a customer, one or more product ordering service providers 40, service ordering providers 50, bill payment service providers 60 and wherein the method comprising:

-providing a terminal for a customer to generate a shopping/servicing list, such terminal is realized as the product/service input device (20) configured to read and collect product/service identification data;

-generating a shopping/servicing list containing product/service identification data inputted into the product/service input device (20);

-transmitting the generated shopping/servicing list containing the product identification data over a network to remote computing devices, servers or cloud servers forming part of an order management system (30) administered by one or more product ordering service providers (40), service providers (50) and bill payment service providers (60); and

-processing the generated shopping/servicing list based on the product/service identification data contain in the list and fulfilling the list for delivery of products/services to the customer.

In an embodiment of the invention, in the step of providing the terminal for a user to generate the shopping/servicing list, the terminal is realized as the product/service input device 20 configured to read and collect product/service identification code data as

described in the first aspect of the invention. The product/service input device 20 may be in the form of any one or more embodiments of the product/service input device in accordance with the principle of the afore-described aspect of the invention.

In an embodiment of the invention, in the step of generating the shopping/servicing list containing product/service identification code data, the shopping/servicing list is generated through the use of the product/service input device 20 and user interfacing with the product/service input device 20, in particular, its interactive display unit 90 and other associated tools/components/means such as the product/service identification code scanner/reader, external input switch, voice recognition module and associated software/applications installed at the product/service input device 20 as described above for inputting product identification code in the form of barcodes, QR codes, number codes, letter codes and audio codes.

In certain embodiment, in the step of generating a shopping/servicing list containing product/service identification data, such data may be stored at the product/service input device 20 prior to transmitting to the remote computing device, a servers, cloud servers of which being a part of the order management system 30 administered by one or more product ordering service provider 40, service ordering provider 50, bill payment service provider 60.

In an embodiment of the invention, in the step of processing the generated shopping/servicing list based on the product/service identification data contain in the list and fulfilling the list for delivery of product/service to the user, the shopping/servicing list is processed by the order management system 30 administered by one or more product ordering service providers 40, service providers 50, bill payment service providers 60 including product agents 41, service agents 51, merchants 61, all of which being part of the order management system 30 and fulfilled the shopping/servicing list and deliver products/services to the user of the product/service input device 20. In an embodiment, the one or more product ordering service providers 40, service providers 50, bill payment service providers 60 including product agents 41, service agents 51,

merchants 61, being part of the order management system 30 may be the one and same entity which take different roles and functions or they may be separate entities contracted or commissioned by them.

It will be appreciated by the afore-described detail description of the present invention that the product/service input device and the method for generating a shopping/servicing list and fulfilling the list offers more convenience and effectiveness and eliminates the user the need to physically present at the place of businesses for shopping of products/service. Hence the objective of the invention as set out above is believed to have been met. It will be appreciated by a skilled person in the art that various modifications and approaches for achieving the same results and effects intended by the present invention, such modifications are within the spirit and scope of the present invention and the accompanying claims.

CLAIMS

1. A product/service input device (20) configured to read and collect product/service identification codes and is configured to process the collected product/service identification code data and transmit such data to an order management system (30) administered by one or more product ordering service providers (40), service providers (50) and bill payment service providers (60); the order management system (30) is configured to process the product identification data transmitted from the product/service input device (20) to generate a shopping/servicing list to enable the one or more product ordering service providers (40), service providers (50) and bill payment service providers (60) to fulfill the shopping/servicing list and deliver products/services to product/service input device (20) users/customers.

2. The product/service input device (20) according to Claim 1, wherein the product/service input device (20) comprising a main board (70) with a central processing unit (80), a primary memory unit (99"), an audio visual means (85) configured to run on software applications or applications or computer readable programs specifically tailored for purposes and functions including but not limited to reading, collecting, processing, displaying, and transmitting data acquired/collected/received/sent by the product/service input device (20); a display unit (90) configured to allow or facilitate user interfacing with the product/service input device (20), a product/service identification code scanner/reader (96) with a proximity sensor (97) configured to scan/read product/service identification codes, a power source (95) providing power supply to the product/service input device (20), a USB hub (75), a connection means (81) configured to allow wire or wireless, or cellular connection of the product/service input device (20) to the order management system (30) to enable transmitting of data, including product/service identification code data to be stored and processed by the order management system 30.

3. The product/service input device (20) according to Claim 2, wherein the connection means (81) of the product/service input device (20) comprise a GSM module (82), or

a WIFI module (83), or a Bluetooth module (84), or a combination thereof to enable wired or wireless transmission of product/service identification code data.

4. The product/service input device (20) according to Claim 3, wherein the product/service identification code scanner/reader (96) and the proximity sensor (97) are built integrated to main body of the product/service input device (20) or as a detachable unit (120).

5. The product/service input device (20) according to Claim 4, wherein the detachable unit (120) is detachable from main body the product/service input device (20) and comprises the product/service identification code scanner/reader (96) and the proximity sensor (97), a power source (95"), a secondary memory unit (99) to allows mobility of the product/service identification code scanner/reader (96) and the proximity sensor (97) which are powered by the power source (95") to read and collect product/service identification code and function away from the main body of the product/service input device (20) ; the detachable unit (120) is configured to couple or connect to electrical terminals (125) provided on the main body of the product/service input device (20) such that once the detachable unit (120) engages to electrical terminals (125) on the main body of the product/service input device (20) it completes the circuitry of connectivity such that it enable the product identification code data collected by the detachable unit (120) to be transferred/downloaded or read by the product/service input device (20), or display on the display unit (90), or otherwise merge with the product/service identification code data stored at the primary memory unit (99") of the product/service input device (20).

6. The product/service input device (20) according to Claim 4, further comprising an external input switch (100).

7. The product/service input device (20) according to Claim 6, wherein the external input switch (100) comprises a central processing unit with internal non-volatile memory unit (105), a battery (110) to power the external switch (100) and a

Bluetooth module (115) of the external input switch (100), and one or more input button (120); the external input switch (100) is configured to communicate and transfer or transmit the product/service identification code data stored at the external input switch (100) to the product/service input service (20).

8. The product/service input device (20) according to Claims 4 or 7 wherein the product/service identification code reader/scanner (96) is configured to read and collect the product/service identification data in the forms of coding including but not limited to a barcode, a QR code, a number code or a letter code.

9. The product/service input device (20) according to Claims 8 further comprising a voice recognition module (88) configured to enable the product/service input device (20) to accept inputting of the product/identification data via voice command or as an audio code.

10. The product/service input device (20) according to Claim 9 wherein the product/service input device (20) and the order management system (30) linked to a payment gateway linked to a network of financial institutions (70) enabling payment or completing of financial transactions for the ordered or purchased of the products, services or settlement of bills using credit cards, debit cards, other type of stored-value cards, or electronic banking.

11. A method for generating a shopping/servicing list and fulfilling the shopping/servicing list using the product/service input device (20) according to any one of Claims 1-10 involving a customer, one or more one or more product ordering service providers (40), service providers (50) and bill payment service providers (60), product agents (41), service agent (51) and merchants (61) being part of the order management system (30); the method comprising:

-providing the product/service input device (20) configured to read and collect product/service identification data as a terminal for a customer to generate a shopping/servicing list;

-generating a shopping/servicing list containing product/service identification data inputted into the product/service input device (20);

-transmitting the generated shopping/servicing list containing the product identification data over a network to remote computing devices, servers or cloud servers forming part of an order management system (30) administered by one or more product ordering service providers (40), service providers (50) and bill payment service providers (60); and

-processing the generated shopping/servicing list based on the product/service identification data contain in the shopping/servicing list and fulfilling the shopping/servicing list for delivery of products/services to the customer.

12. The method according to Claim 11, wherein generating a shopping/servicing list containing product/service identification data into the product/service input device (20) is achieved by inputting of barcodes, QR codes, number codes, letter codes or audio codes into the product/service input device (20).

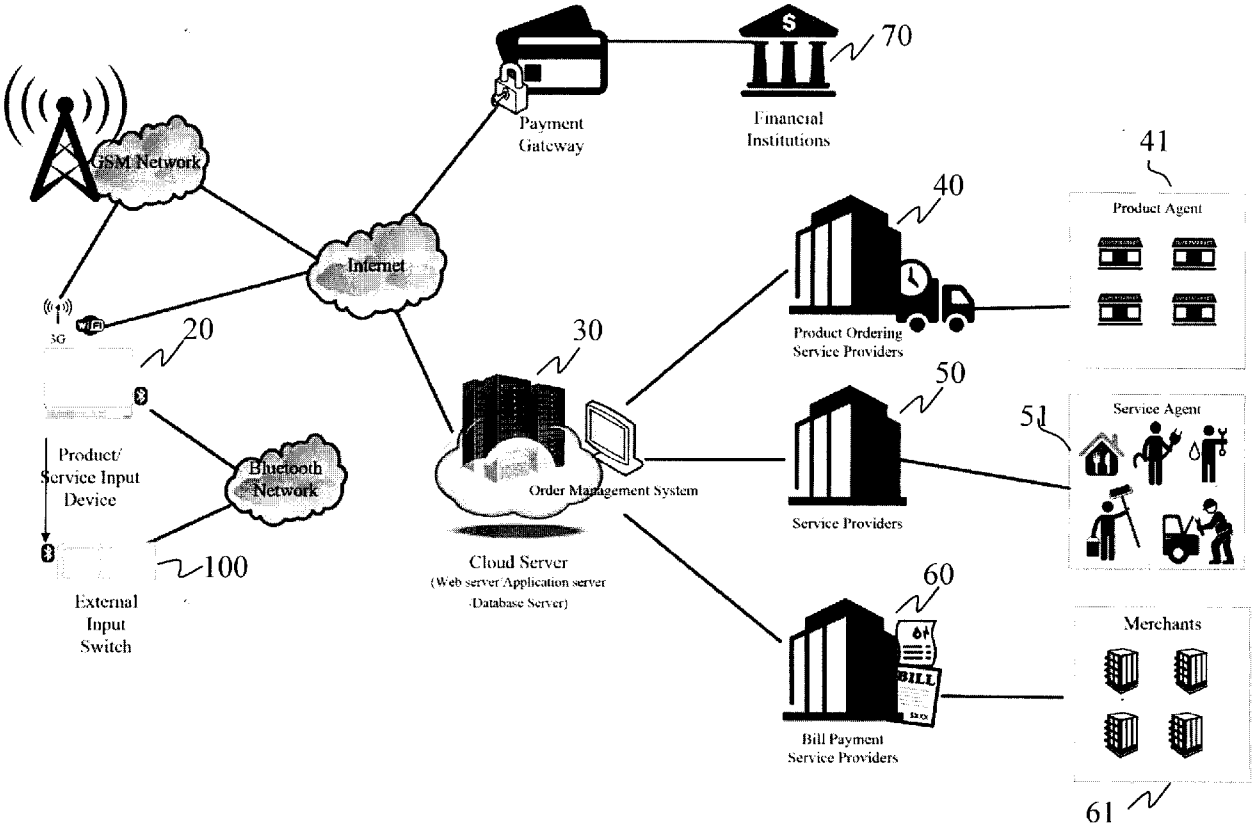

GSM Network
3G
Internet
Payment Gateway
Financial Institutions
70
41
Product Agent
40
Product Ordering Service Providers
20
30
50
51
Service Agent
Product/ Service Input Device
Bluetooth Network
Order Management System
Service Providers
Cloud Server
(Web server Application server Database Server)
100
External Input Switch
60
Merchants
Bill Payment Service Providers
61

FIG. 1

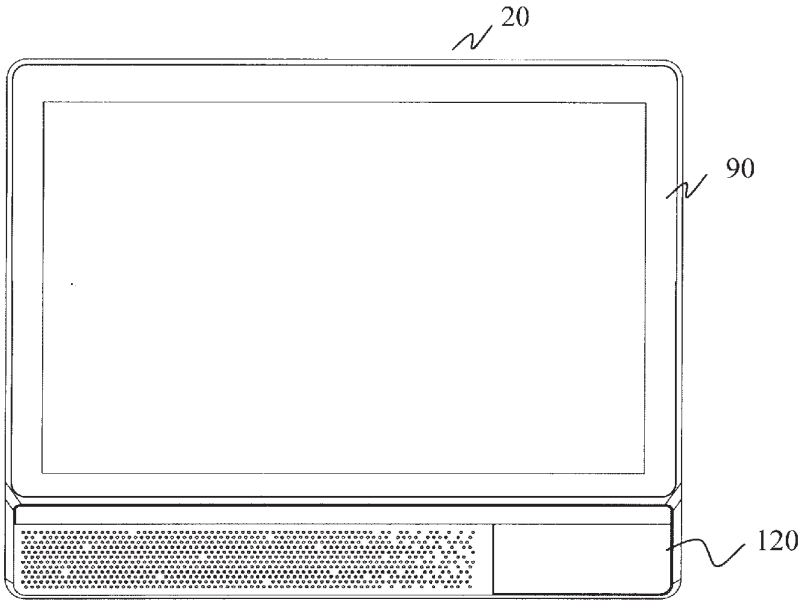
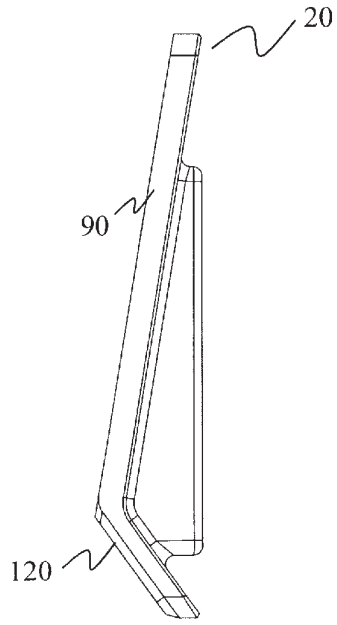


FIG. 2



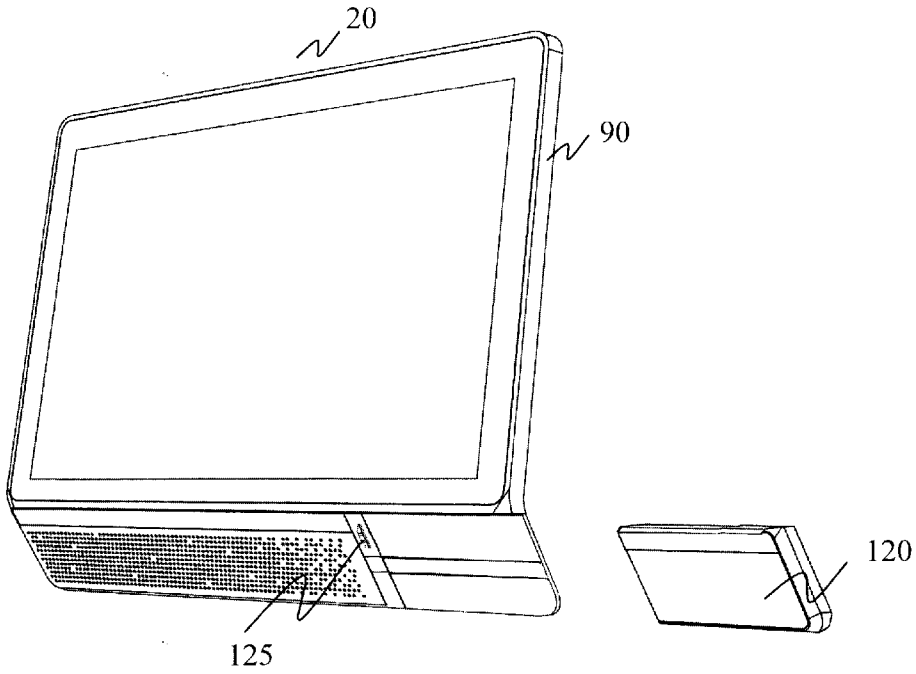


FIG. 4

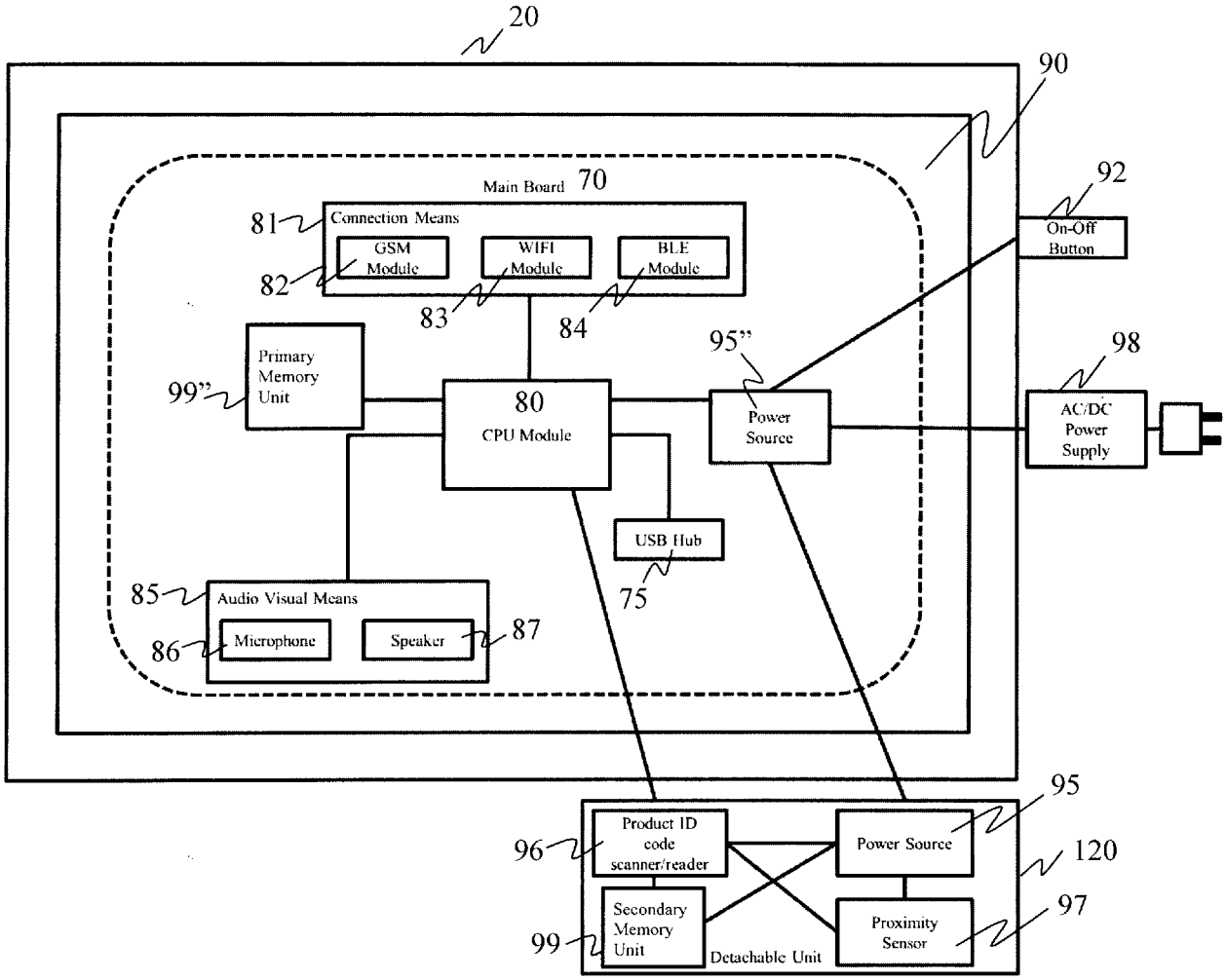

20
90
92
On-Off Button
Main Board 70
81
Connection Means
GSM Module
WIFI Module
BLE Module
82
83
84
95"
98
Primary Memory Unit
99"
80
CPU Module
Power Source
AC/DC Power Supply
USB Hub
75
85
Audio Visual Means
Microphone
Speaker
86
87
95
96
Product ID code scanner/reader
Power Source
120
Secondary Memory Unit
99
Proximity Sensor
97
Detachable Unit

FIG. 5

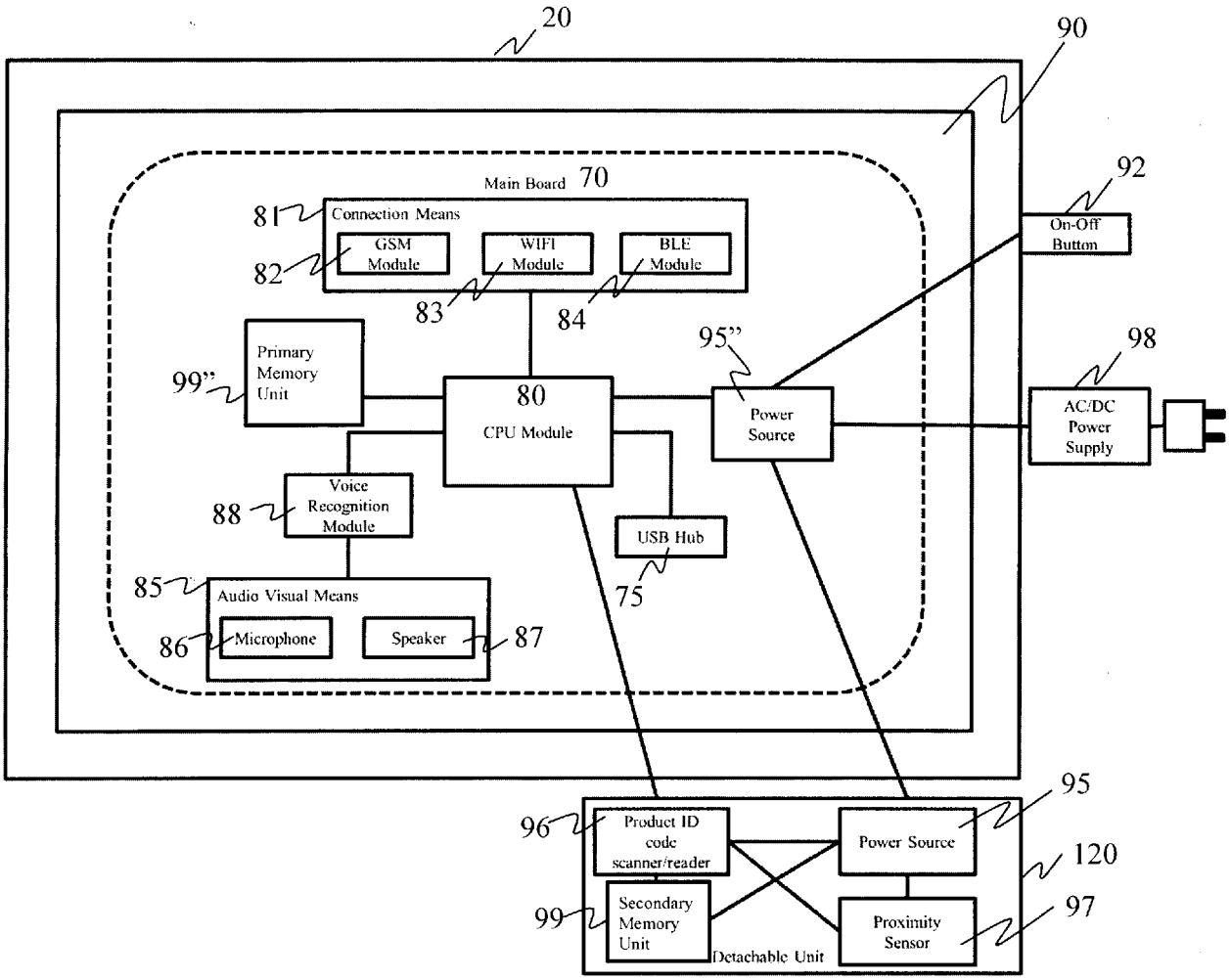

20
90
92
On-Off Button
Main Board 70
81
Connection Means
GSM Module
WIFI Module
BLE Module
82
83
84
95"
98
Primary Memory Unit
99"
80
CPU Module
Power Source
AC/DC Power Supply
Voice Recognition Module
88
USB Hub
75
85
Audio Visual Means
Microphone
Speaker
86
87
95
96
Product ID code scanner/reader
Power Source
120
99
Secondary Memory Unit
Proximity Sensor
97
Detachable Unit

FIG. 6

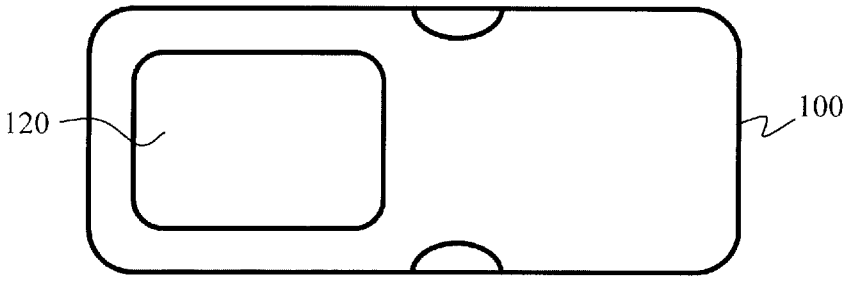

120
100

FIG. 7

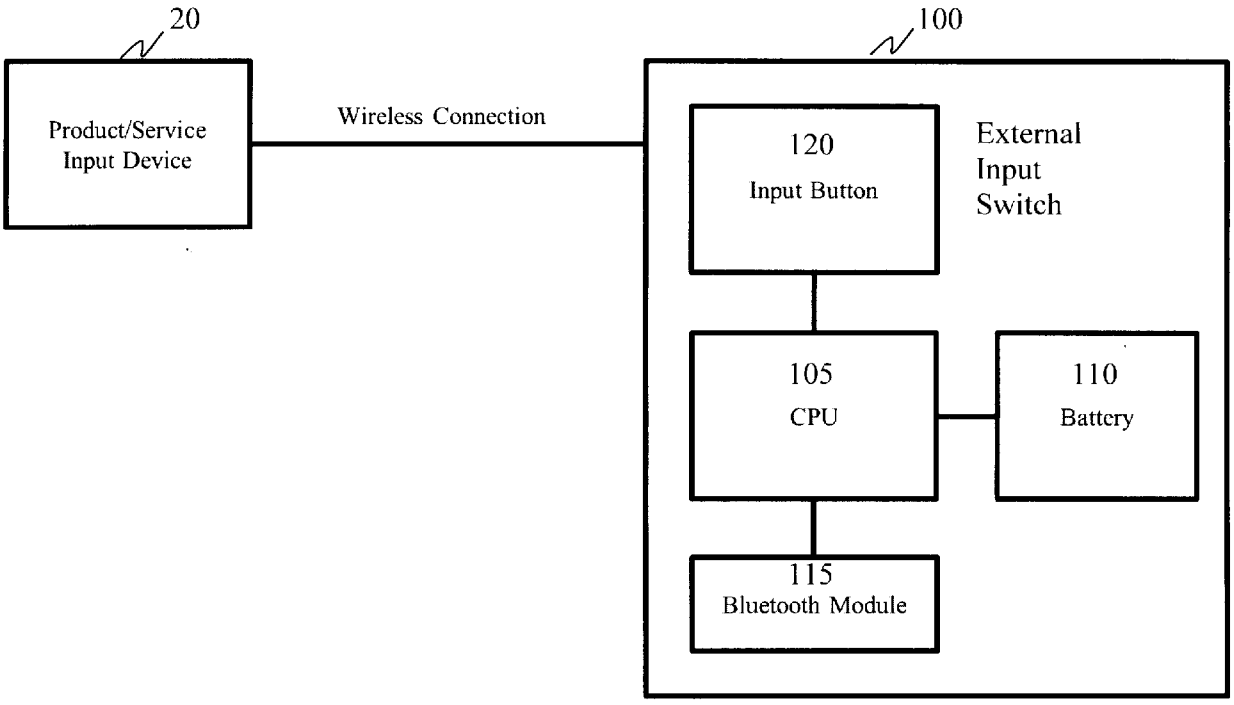

20
Product/Service
Input Device
Wireless Connection
100
120
Input Button
External
Input
Switch
105
CPU
110
Battery
115
Bluetooth Module

FIG. 8

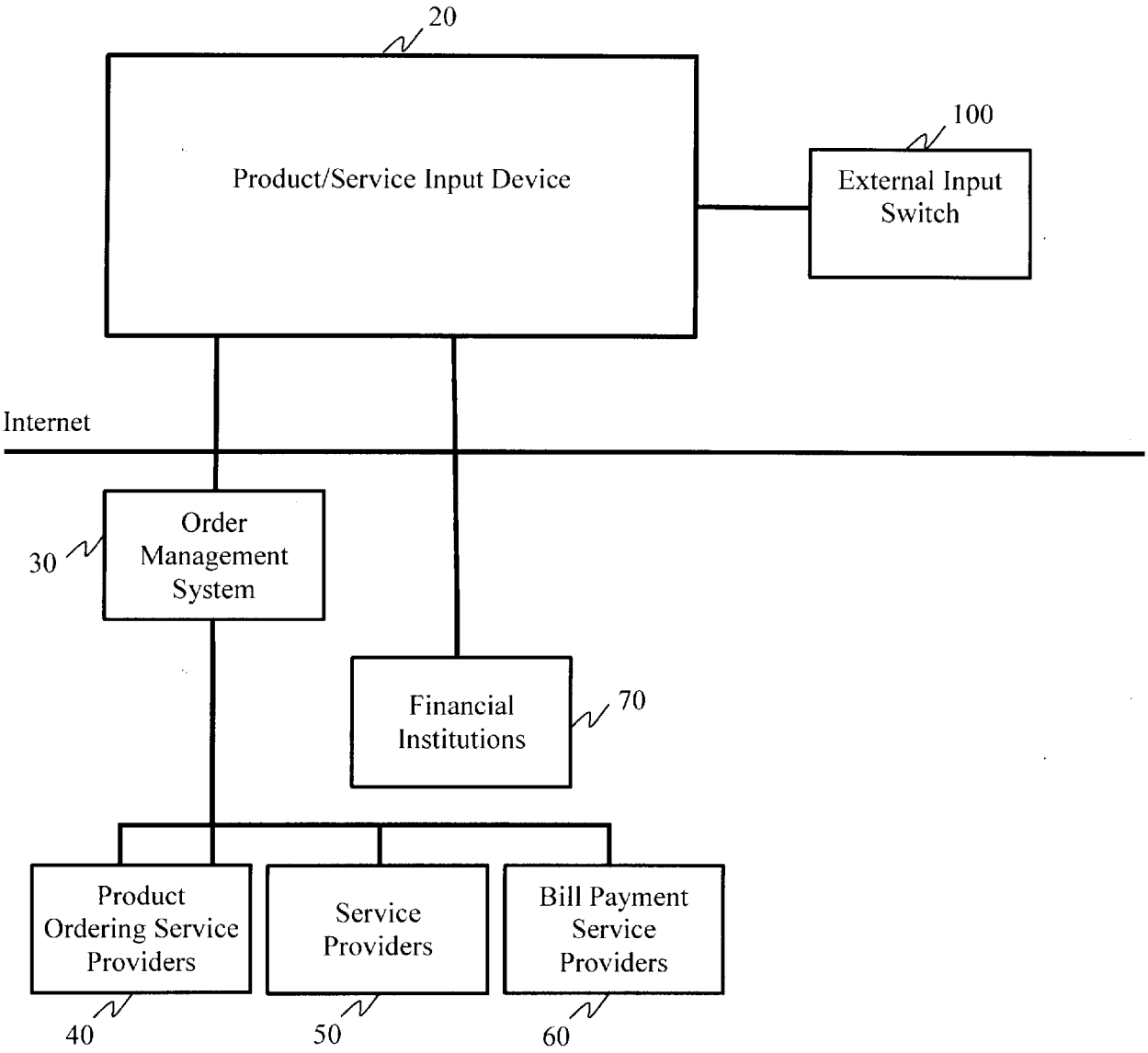

20
Product/Service Input Device
100
External Input Switch
Internet
30
Order Management System
Financial Institutions
70
Product Ordering Service Providers
Service Providers
Bill Payment Service Providers
40
50
60

FIG. 9

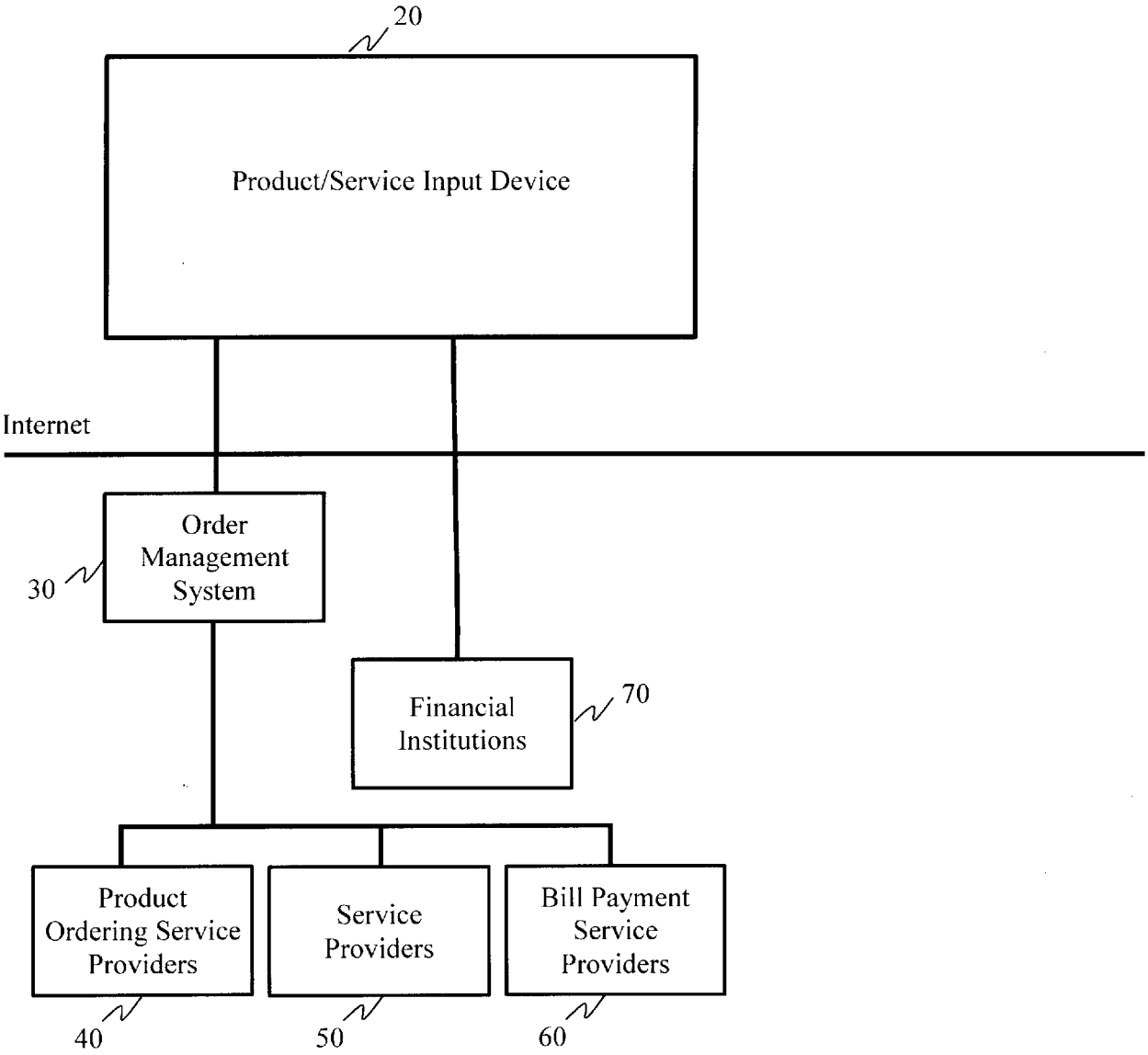

20
Product/Service Input Device
Internet
Order Management System
30
Financial Institutions
70
Product Ordering Service Providers
40
Service Providers
50
Bill Payment Service Providers
60

FIG. 10

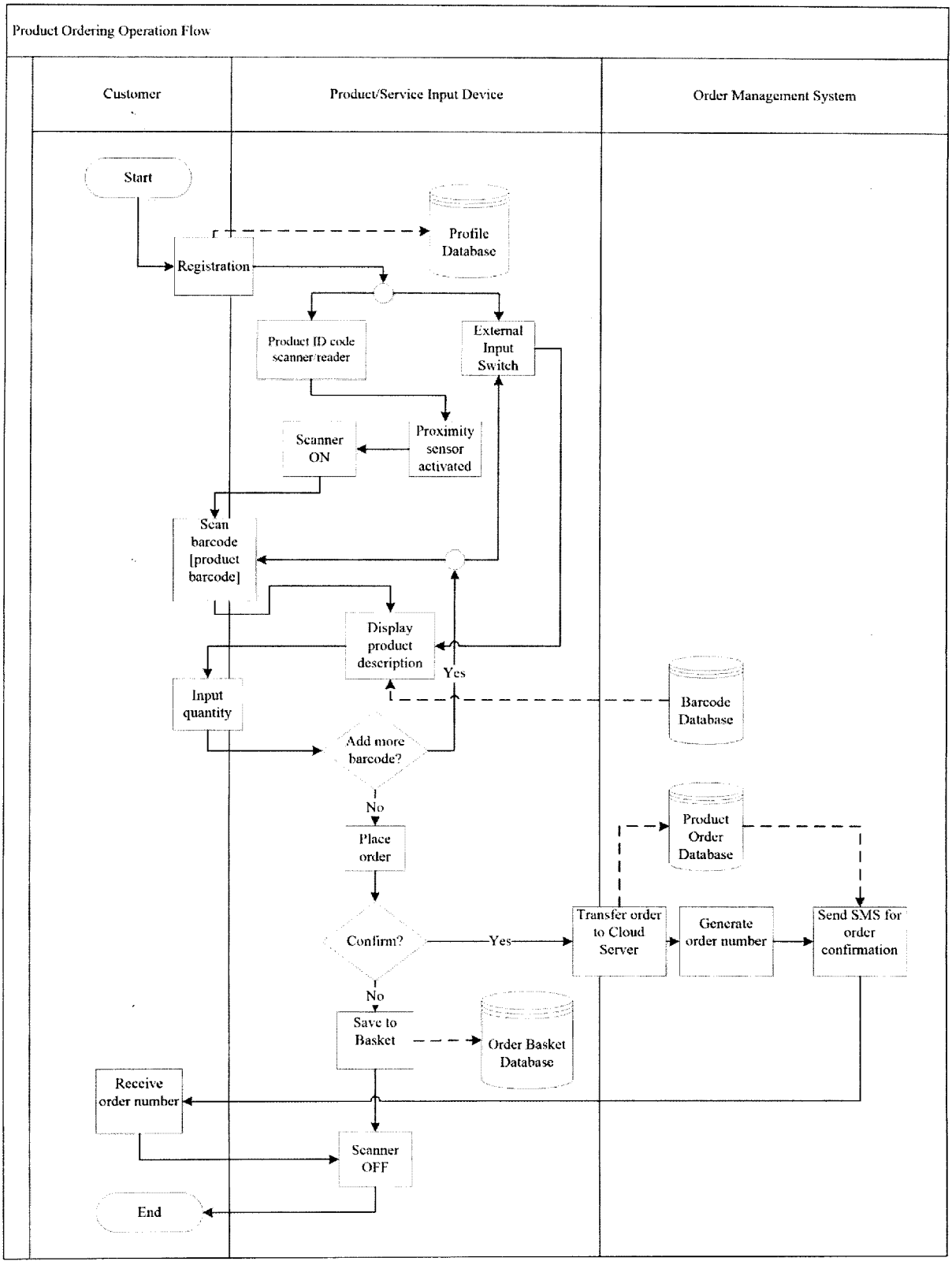

Product Ordering Operation Flow
Customer
Product/Service Input Device
Order Management System
Start
Registration
Profile Database
Product ID code scanner/reader
External Input Switch
Scanner ON
Proximity sensor activated
Scan barcode [product barcode]
Display product description
Yes
Input quantity
Barcode Database
Add more barcode?
No
Place order
Product Order Database
Confirm?
Yes
Transfer order to Cloud Server
Generate order number
Send SMS for order confirmation
No
Save to Basket
Order Basket Database
Receive order number
Scanner OFF
End

FIG. 11

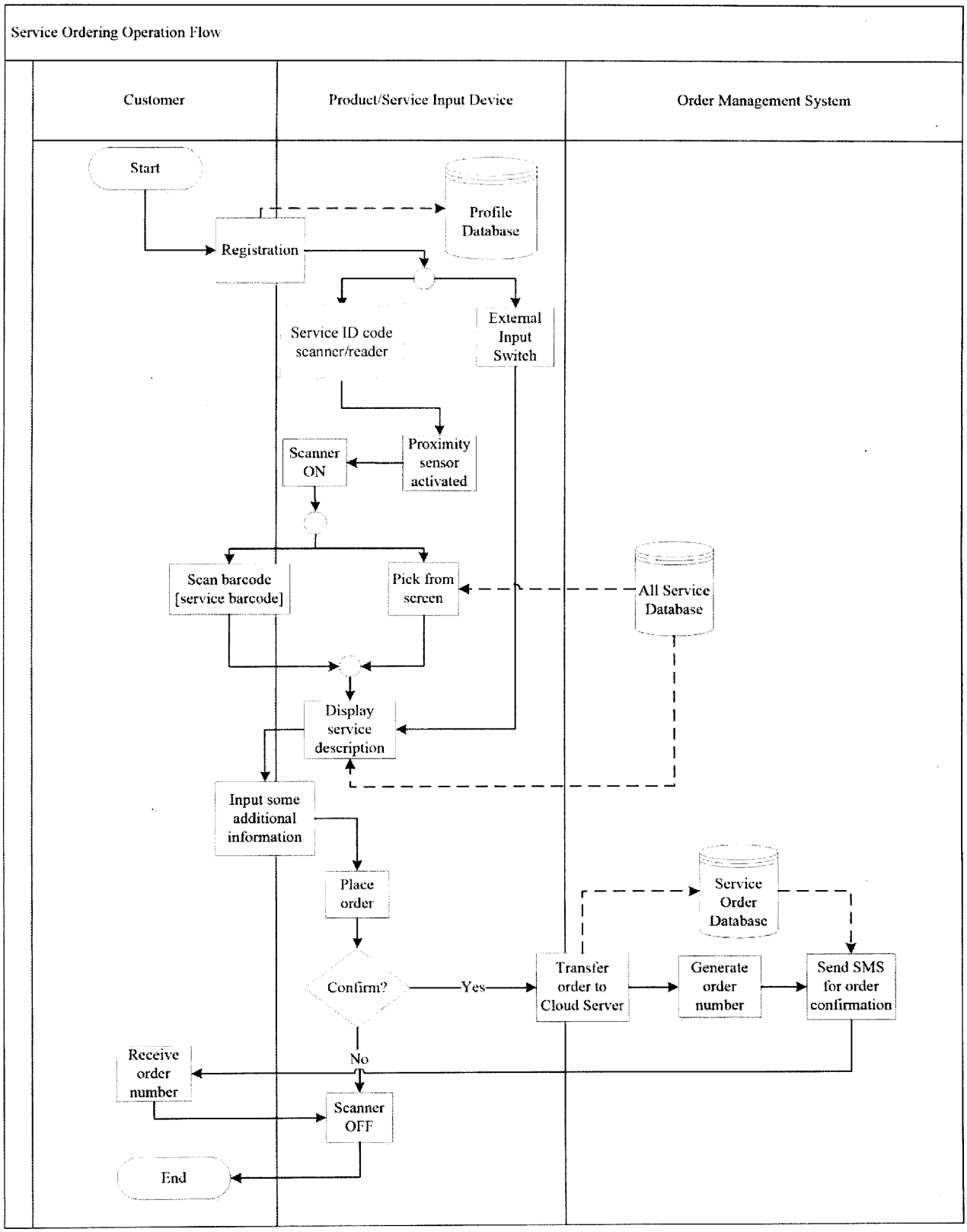

Service Ordering Operation Flow
Customer
Product/Service Input Device
Order Management System
Start
Registration
Profile Database
Service ID code scanner/reader
External Input Switch
Scanner ON
Proximity sensor activated
Scan barcode [service barcode]
Pick from screen
All Service Database
Display service description
Input some additional information
Place order
Service Order Database
Confirm?
Yes
Transfer order to Cloud Server
Generate order number
Send SMS for order confirmation
No
Receive order number
Scanner OFF
End

FIG. 12

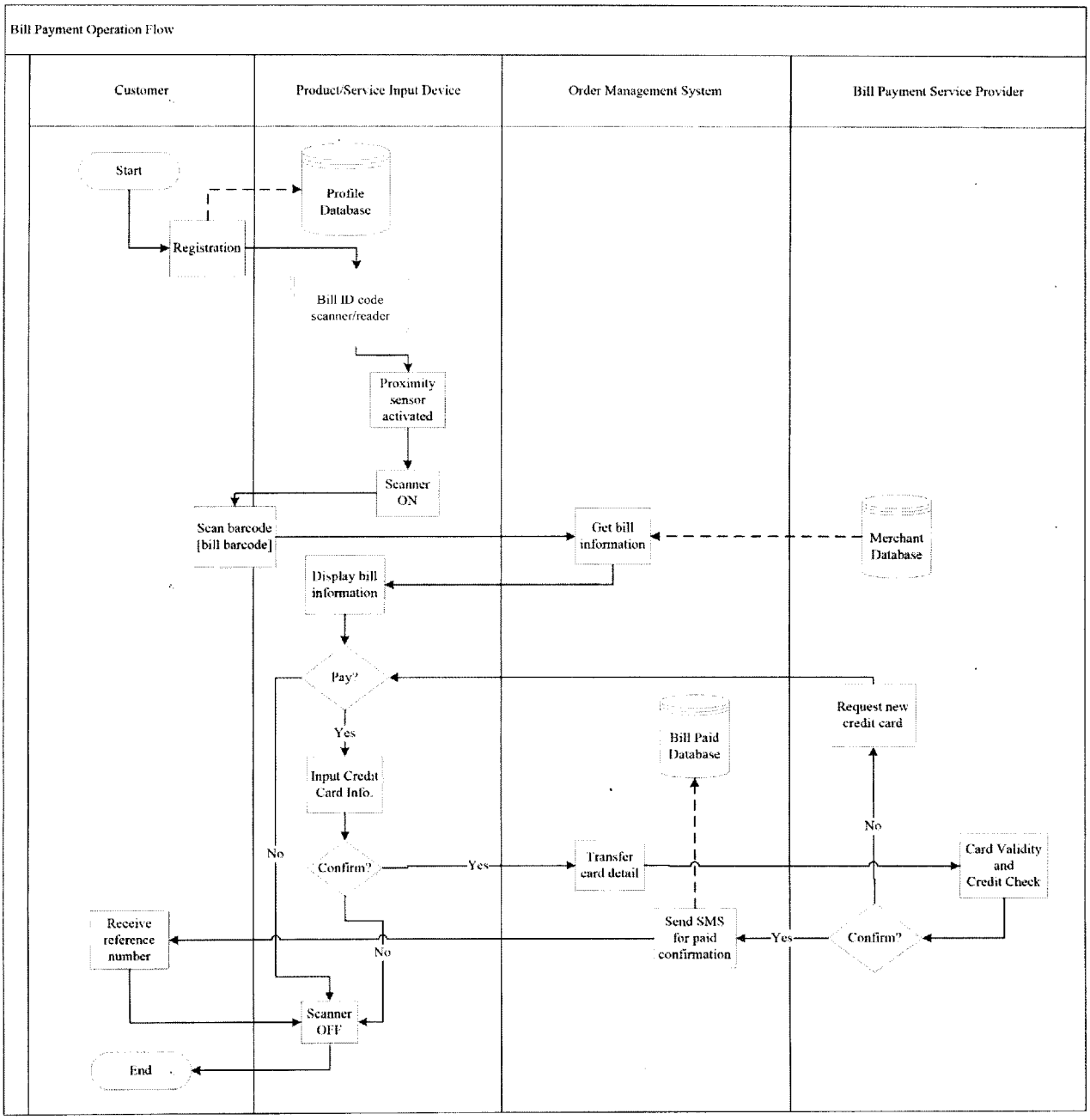

Bill Payment Operation Flow
Customer
Product/Service Input Device
Order Management System
Bill Payment Service Provider
Start
Profile Database
Registration
Bill ID code scanner/reader
Proximity sensor activated
Scanner ON
Scan barcode [bill barcode]
Get bill information
Merchant Database
Display bill information
Pay?
Yes
No
Input Credit Card Info.
Confirm?
Yes
No
Transfer card detail
Bill Paid Database
Request new credit card
No
Card Validity and Credit Check
Confirm?
Yes
Send SMS for paid confirmation
Receive reference number
Scanner OFF
End

FIG. 13

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(12)实用新型专利

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G06Q 30/06(2012.01)

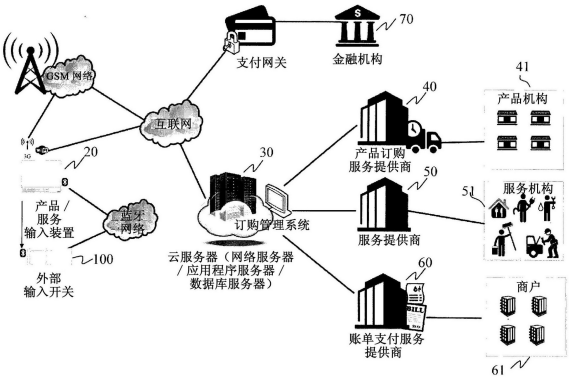
权利要求书2页 说明书15页 附图11页

(54)实用新型名称

产品/服务输入装置

(57)摘要

本实用新型创造公开一种产品/服务输入装置(20),其配置为读取和收集可以为各种编码系统的形式的产品标识数据,各种编码系统包括但不限于:条形码、QR码、音频码、数字码或字母码。产品/服务输入装置(20)进一步配置为处理和存储收集的产品标识数据并通过网络将产品标识数据发送至由一个或多个产品订购服务提供商(40)、服务提供商(50)和账单支付服务提供商(60)管理的订购管理系统(30)。产品/服务输入装置(20)以及订购管理系统(30)配置为基于从产品/服务输入装置(20)发送的数据创建购物列表并使一个或多个产品订购服务提供商(40)、服务提供商(50)或账单支付服务提供商(60)能够完成该购物列表以进行交付。



CN 208737526 U

1.一种产品/服务输入装置(20),包括:

主板(70),主板(70)具有中央处理单元(80)、主存储器单元(99″)、音频视觉装置(85),用于读取、收集、处理、显示、和发送由所述产品/服务输入装置(20)获取/收集/接收/发送的数据;

显示单元(90),其配置为允许或促进用户与所述产品/服务输入装置(20)交互;

产品/服务标识码扫描器/读取器(96)与近距离传感器(97),其配置为扫描/读取产品/服务标识码;

电源(95),其向所述产品/服务输入装置(20)供电;以及

USB集线器(75)、连接装置(81),其配置为允许所述产品/服务输入装置(20)与订购管理系统(30)的有线或无线或蜂窝连接,以能够发送数据,所述数据包括要由所述订购管理系统(30)存储和处理的产品/服务标识码数据。

2.根据权利要求1所述的产品/服务输入装置(20),其中,所述产品/服务输入装置(20)的所述连接装置(81)包括GSM模块(82)或WIFI模块(83)或蓝牙模块(84)或其组合,以进行产品/服务标识码数据的有线或无线发送。

3.根据权利要求2所述的产品/服务输入装置(20),其中,所述产品/服务标识码扫描器/读取器(96)和所述近距离传感器(97)经构建集成到所述产品/服务输入装置(20)的主体或作为可拆除单元(120)。

4.根据权利要求3所述的产品/服务输入装置(20),其中,所述可拆除单元(120)能够从所述产品/服务输入装置(20)的主体拆除并包括所述产品/服务标识码扫描器/读取器(96)和所述近距离传感器(97)、电源(95″)、次存储器单元(99),以允许通过所述电源(95″) 供电的所述产品/服务标识码扫描器/读取器(96)和所述近距离传感器(97)的移动,从而读取和收集产品/服务标识码并远离所述产品/服务输入装置(20)的主体地工作;所述可拆除单元(120)配置为耦接或连接到设置在所述产品/服务输入装置(20)的主体上的电气端子(125),使得一旦所述可拆除单元(120)接合至在所述产品/服务输入装置(20)的主体上的电气端子(125),其就完成连接电路系统,使得所述可拆除单元(120)收集的所述产品标识码数据被传递/下载、或由所述产品/服务输入装置(20)读取、或显示在所述显示单元(90)上、或以其他方式与在所述产品/服务输入装置(20)的所述主存储器单元(99″)处存储的产品/服务标识码数据合并。

5.根据权利要求3所述的产品/服务输入装置(20),其中,所述产品/服务输入装置(20)还包括外部输入开关(100)。

6.根据权利要求5所述的产品/服务输入装置(20),其中,所述外部输入开关(100)包括具有内部非易失性存储器单元的中央处理单元(105)、为所述外部输入开关(100)供电的电池(110)、所述外部输入开关(100)的蓝牙模块(115)和一个或多个输入按钮(120);所述外部输入开关(100)配置为将在所述外部输入开关(100)处存储的产品/服务标识码数据通信和传递或发送至所述产品/服务输入装置(20)。

7.根据权利要求1至6中任一项所述的产品/服务输入装置(20),其中,所述产品/服务标识码扫描器/读取器(96)配置为读取和收集以下编码形式的产品/服务标识数据,包括但不限于:条形码、QR码、数字码或字母码。

8.根据权利要求7所述的产品/服务输入装置(20),其中,所述产品/服务输入装置(20)

进一步包括语音识别模块(88),其配置为使所述产品/服务输入装置(20)能够接受经由语音命令的或作为音频码的产品/服务标识数据的输入。

9.根据权利要求8所述的产品/服务输入装置(20),其中,所述产品/服务输入装置(20)和所述订购管理系统(30)链接到支付网关,该支付网关链接到金融机构(70)的网络,以使用信用卡、借记卡、其他类型的储值卡或电子银行服务针对订购或购买的产品、服务或账单结算进行支付或完成金融交易。

产品/服务输入装置

技术领域

[0001] 本发明创造涉及计算机工程和/或电气工程。具体地，本发明创造涉及用于生成购物/服务列表并完成该列表的产品/服务输入装置、系统和方法。

背景技术

[0002] 在时间非常重要的现代生活的快节奏环境下，一周一次或两次逛商店、超市或零售店以按照预先准备的购物列表补充杂货产品、商品、生鲜农产品的库存至少对于某些人群不再是选择或愉快的体验。一些人可以发现在商店挑选所有所需产品和商品以完成该列表是困难的。一些人可以发现管理例如具有多个家庭成员的家庭的购物列表是困难的。一些人(例如，老人或残疾人)可发现一起逛所有商店是困难的。进一步地，在各种服务报价(例如，家庭清洁服务、家庭护理服务、食物/杂货交付服务和洗衣服务等)可用的情况下，一些人更喜欢要求服务并在其自己的居住空间舒服地等候服务和/或让服务交付到其住所附近或从其自己的装置进行某些交易(例如，账单支付)。

[0003] 在当今市场压力以及技术和服务进步的情况下，虽然家庭购物服务、送货上门服务可减少某些人群的负担，但仍存在问题。例如，在某些情况下，人们可能需要通过手机订购产品/服务，且因此，核查购物清单、确认产品/服务标识或确认交付地址会产生许多问题。在另一示例中，人们可能需要拥有特定的计算装置(例如，智能手机、台式计算机、平板电脑等)，人们可能无法负担得起这些计算装置或发现难于操作这些装置以及相关联的软件或应用程序来完成任务。

[0004] 已经尝试了用来解决与本技术的各方面相关的缺陷和问题的更简单的且可能更舒适的装置、系统和方法。例如：

[0005] WO/2015/130709公开了一种用于生成和处理购物列表的手持式电子装置，该装置可以语音输入模式或扫描输入模式操作。在以语音输入模式操作时，手持式电子装置可记录音频数据并将其存储在存储器中。在一些情况下，存储的音频数据可(例如，经由WIFI连接) 从手持式电子装置通信到一个或多个远程计算装置(例如，用于语音处理)。当操作扫描输入模式时，手持式电子装置可记录项目标识符信息并将项目标识符信息(如，作为条形码数据)存储在存储器中，其中，在一些情况下，存储的项目标识符数据可通信到一个或多个远程计算装置(例如，用于项目标识处理)。尽管可认为该装置简单且容易操作，但该装置以及相关联的系统在用户与装置交互、将产品信息传达给用户的能力方面相当僵硬。因此，替代装置、系统和方法是期望的。

发明内容

[0006] 本发明创造的目的是提供用于生成购物/服务列表并完成该列表的产品/服务输入装置和方法，其是高效、用户友好的并提供更令人愉快的家庭购物体验。

[0007] 在本发明创造的一个方面中，本发明创造提供一种用于生成购物/服务列表的产品/服务输入装置。产品/服务输入装置配置为读取和收集产品/服务标识，所述产品/服务

标识可以用各种编码系统(比如,条形码、QR码等)形式。该装置进一步配置为处理和存储所收集的产品/服务标识数据并通过网络将这种数据发送至作为订购管理系统的一部分远程计算装置。订购管理系统配置为基于从产品/服务输入装置发送的数据创建购物/服务列表并使一个或多个服务提供商、零售商、供应商能够完成该购物列表以进行交付或完成服务列表。

[0008] 在本发明创造的实施例中,产品/服务输入装置起到用于生成购物/服务列表的终端的功能。产品/服务输入装置包括:中央处理单元,其上运行软件应用程序或计算机程序,该软件应用程序或计算机程序专为此类具体目的和功能设计;显示单元,用于允许用户与装置交互;产品/服务标识码扫描器/读取器,其具有构造为激活产品标识码扫描器/读取器以扫描或读取产品/服务标识编码(例如条形码或QR码等) 的激活装置(例如,近距离传感器或开关);连接装置,其配置为允许所述产品/服务输入装置通过网络有线地或无线地连接至远程计算系统以能够发送数据,所述数据包括要由订购管理系统处理的产品/ 服务标识数据,所述订购管理系统由作为该订购管理系统的一部分的一个或多个产品订购服务提供商或服务订购提供商、或账单支付服务提供商、以及相关联的供应商和交付机构管理。产品/服务输入装置包括电源,其可以是电池(包括且不限于干电池或可再充电电池)或电源(比如壁式插座)的形式。在壁式插座的情况下,产品/服务输入装置还包括AC/DC适配器。

[0009] 在本发明创造的实施例中,产品/服务输入装置的连接装置包括:使得能够经由蜂窝网络发送产品标识数据的GSM模块(例如,具有 SIM卡的空中卡(air card));或WIFI模块;或蓝牙模块;或用于允许产品/服务标识数据有线地或无线地发送至订购管理系统的连接。

[0010] 在本发明创造的实施例中,产品/服务输入装置链接到支付网关,该支付网关链接到金融机构,所述支付网关配置为促进和处理电子支付(比如使用信用卡或借记卡、电子银行服务的支付),从而允许购买的产品/服务的支付交易。

[0011] 在本发明创造的实施例中,产品/服务输入装置配置为是固定 (比如,壁上安装单元)或便携式单元。在产品/服务输入装置被设计为固定的实施例中,具有激活装置(比如,近距离传感器)的产品 /服务标识码扫描器/读取器被构建为集成到产品/服务输入装置。在本发明创造的实施例中,产品/服务输入装置是插入式,其中,使用适当电线通过壁式插座将产品/服务输入装置连接到电源。在此实施例中,产品/服务输入装置可以具有内置AC/DC适配器,或其可以具有外部AC/DC适配器。在产品/服务输入装置被设计为便携式的实施例中,产品/服务标识码扫描器/读取器和激活装置被构建并由内置可再充电电池供电。

[0012] 在本发明创造的实施例中,产品/服务输入装置包括作为可拆除单元的产品/服务标识码扫描器/读取器、近距离传感器,可拆除单元配置为可从产品/服务输入装置的主体可拆除,以实现产品/服务标识码扫描器/读取器的移动性。可拆除单元由电源供电,该电源可以是产品/服务输入装置的同一个电源或单独的电源。可拆除单元配置为读取和收集产品/服务标识码数据并能够将这种数据传输或发送至产品/服务输入装置。

[0013] 在本发明创造的实施例中,产品/服务输入装置还包括外部输入开关,其配置为读取、收集和存储产品/服务标识数据并配置为可操作来辅助产品/服务输入装置,包括允许有线地或无线地将产品/服务标识码数据传输至产品/服务输入装置。

[0014] 在实施例中,外部输入开关包括具有内部存储器单元的中央处理单元、为外部开

关供电的电源(例如,可再充电电池或电池)和蓝牙模块,所述蓝牙模块允许外部输入开关与产品/服务输入装置通信。

[0015] 在实施例中,外部输入开关配置为预存储指定的产品/服务标识数据和指定的量/单位的产品/服务,以促进特定产品/服务的大量订购/购买。指定的产品/服务标识数据和指定的量/单位通过蓝牙连接发送到产品/服务输入装置。这种具体的产品/服务标识数据将构成购物/服务列表生成过程的一部分。外部输入开关和产品/服务输入装置之间的其他形式的近场通信也是可能的。

[0016] 在实施例中,外部输入开关配置为是可编程的,以使得能够改变存储在外部输入开关的存储器单元中的指定的产品/服务标识和指定的量/单位。

[0017] 在实施例中,产品/服务输入装置配置为可操作来与账单支付服务提供商进行账单结算,使得允许通过产品/输入装置支付账单(比如,公共设施账单、信用卡账单、电话账单等)。

[0018] 在实施例中,产品/服务输入装置配置为与作为订购管理系统的一部分的远程计算装置、服务器、云服务器等通信,其中,产品/服务输入装置配置为从作为订购管理系统的一部分的此类远程计算装置、服务器、云服务器等接收内容(推送内容),所述订购管理系统由作为该订购管理系统的一部分的一个或多个产品订购服务提供商或服务订购提供商、或账单支付服务提供商、以及相关联的供应商和交付机构管理。在实施例中,内容可以是文本消息、音频视觉内容的形式,其可指向促销文本消息、店内折扣报价、服务折扣报价等。

[0019] 在本发明创造的另一个方面中,本发明创造提供一种使用根据本发明创造的产品/服务输入装置生成购物/服务列表并完成购物/服务列表的方法。

[0020] 在本发明创造的实施例中,所述方法涉及消费者、一个或多个产品订购服务提供商、或服务订购提供商、或账单支付服务提供商、以及相关联的供应商和交付机构,其中,所述方法包括:

[0021] 为用户/消费者提供用于生成购物/服务列表的终端,这种终端实现为产品/服务输入装置,其配置为读取、收集、发送产品/服务标识数据;

[0022] 生成包含产品/服务标识数据的购物/服务列表;

[0023] 通过网络将所生成的包含产品/服务标识数据的购物/服务列表发送至订购管理系统;和

[0024] 基于列表中包含的产品/服务标识数据处理所生成的购物/服务列表并完成列表以将产品或服务交付给用户/消费者。

[0025] 在本发明创造的实施例中,在为消费者提供用于生成购物/服务列表的终端的步骤中,终端被实现为产品/服务输入装置,其能够收集产品/服务标识数据。产品/服务输入装置可以是根据依据本发明创造的上述方面的原理的产品/服务输入装置的任何一个或多个实施例的形式。

[0026] 在本发明创造的实施例中,在生成包含产品/服务标识数据的购物/服务列表的步骤中,通过使用产品/服务输入装置生成购物/服务列表,该产品/服务输入装置具有装置的用户交互功能,具体地,具有其交互式的显示单元和其他相关联的工具/组件/装置和功能。

[0027] 在某些实施例中,在生成包含产品/服务标识数据的购物/服务列表的步骤中,这种数据可存储在产品/服务输入装置,然后发送至作为订购管理系统的一部分的远程计算

装置/服务器，该订购管理系统由一个或多个产品订购服务提供商或服务订购提供商、或账单支付服务提供商、以及相关联的供应商以及交付机构管理。

[0028] 在本发明创造的实施例中，在基于列表中包含的产品/服务标识数据处理所生成的购物/服务列表并完成列表以将服务交付或提供给用户/消费者的步骤中，可根据订购管理系统处理购物/服务列表，该订购管理系统由一个或多个产品订购服务提供商或服务订购提供商、或账单支付服务提供商、以及相关联的供应商和交付机构管理。在实施例中，一个或多个产品订购服务提供商、或服务订购提供商、或账单支付服务提供商、以及相关联的供应商和交付机构可以是具有不同的角色和功能的同一个实体，或他们可以是分离的实体。

附图说明

[0029] 根据对本发明创造的示例实施例的以下描述将认识到本发明创造的特征和优点，其中，作为非限制性示例，参考附图描述了本发明创造的原理的一些优选实施例，在附图中：

[0030] 图1示出根据本发明创造的涉及产品/服务输入装置的操作方案的示例；

[0031] 图2示出根据本发明创造的产品/服务输入装置的实施例；

[0032] 图3示出图2的产品/服务输入装置的实施例的侧视图；

[0033] 图4示出根据本发明创造的产品/服务输入装置的实施例；

[0034] 图5示出根据本发明创造的产品/服务输入装置的实施例的组件方案的图形表示；

[0035] 图6示出根据本发明创造的产品/服务输入装置的实施例的组件方案的图形表示；

[0036] 图7示出根据本发明创造的外部输入开关的实施例；

[0037] 图8示出图7的输入开关的组件方案及其与本发明创造的产品/ 服务输入装置的通信协议的示例的图形表示；

[0038] 图9示出产品/服务输入装置的实施例的组件方案及其连接方案的图形表示；

[0039] 图10示出产品/服务输入装置的实施例的组件方案及其连接方案的图形表示；

[0040] 图11示出使用本发明创造的产品/服务输入装置的产品订购操作流程的示例；

[0041] 图12示出使用本发明创造的产品/服务输入装置的服务订购操作流程的示例；和

[0042] 图13示出使用本发明创造的产品/服务输入装置的账单支付操作流程的示例。

具体实施方式

[0043] 本发明创造提供用于生成购物/服务列表并完成购物/服务列表产品/服务输入装置20和方法。整个文件中所引用的术语“产品/服务输入装置”指根据本发明创造的原理的产品/服务输入装置20，其促进涉及或使用根据本发明创造的产品/服务输入装置20的产品订购、服务订购、和账单支付。进一步地，本文所引用的术语“购物/ 服务列表”指由产品/服务输入装置20的用户输入至产品/服务输入装置20的产品、服务或账单标识数据和/或描述的列表。进一步地，本发明创造的描述为单数或复数的任何元素或组件(比如，(一个或多个)产品/服务提供商、(一个或多个)服务提供商、(一个或多个)服务机构、(一个或多个)商户、(一个或多个)商人、(一个或多个)金融机构)的这类术语可以互换地使用。现将参考构成本说明书的一部分的图1至图13描述根据本发明创造的原理的优选示例实施例的详细描

述,其中:

[0044] 在本发明创造的一个方面中,如图1中的操作的示例性方案中所示,本发明创造提供一种产品/服务输入装置20,其配置为读取和收集产品/服务标识数据,所述产品/服务标识数据可以用各种编码系统(如,条形码、QR码等)形式。产品/服务输入装置20进一步配置为处理和存储所收集的产品/服务标识数据并通过网络或互联网将这种数据发送至远程计算装置或服务器或云存储,所述远程计算装置或服务器或云存储是订购管理系统30的一部分,订购管理系统30 由一个或多个产品订购服务提供商40、服务提供商50和账单支付服务提供商60管理和/或包括使能一个或多个产品订购服务提供商40、服务提供商50和账单支付服务提供商60的相关联的供应商以及交付机构和/或包括作为订购管理系统30的一部分的相关联的供应商以及交付机构,以完成购物和服务列表并将产品或服务交付给产品/服务输入装置20的用户。产品订购服务提供商40可包括提供产品以出售或用于其他目的一方或多方(比如,例如,大型超市、便利店、零售商和超市),它们统称为产品机构41。服务提供商50可包括提供服务(例如,清扫服务、园林服务、家庭护理服务、管道服务、洗衣服务、餐饮/膳食服务(餐厅))的一方或多方,包括相关联的供应商商户和交付机构,它们统称为服务机构51。账单支付服务提供商 60可包括代表商户61提供账单支付服务的一方或多方,比如银行或其他金融服务公司、电信公司、电网公司、租赁/雇佣服务公司等,其周期地收集提供服务的费用作为账单。订购管理系统30配置为基于从产品/服务输入装置发送的产品/服务标识数据来处理购物/服务列表,以使一个或多个产品订购服务提供商40、服务提供商50和账单支付服务提供商60能够完成购物/服务列表或完成交易。产品订购服务提供商40、服务提供商50和账单支付服务提供商60以及相关联的各方可以是具有不同的角色和功能的单个相同实体。还可能的是,产品订购服务提供商40、服务提供商50和账单支付服务提供商60 可以是具有特定角色和功能的分离实体。例如,特定的产品订购服务提供商40可以给消费者提供产品并自己将产品交付给消费者,即,产品/服务输入装置的用户。而在不同的方案上,特定的产品订购服务提供商40可以给消费者(即,产品/服务输入装置20的用户)提供产品,但其将交付功能分包给不同方(比如,交付机构)。产品订购服务提供商40、服务提供商50和账单支付服务提供商60以及产品/服务输入装置20链接到支付网关,该支付网关链接到金融机构 70的网络,消费者可具有金融机构70的账户,以使产品/服务输入装置20的用户能使用信用卡、借记卡、其他类型的储值卡或电子银行服务进行产品、服务的购买或账单结算的支付或完成金融交易。

[0045] 图2至图5示出用作生成购物/服务列表的终端的产品/服务输入装置20的示例实施例,其位于消费者家中、居住地中、办公室中、饭店中或其他商务区或私人处所中,以生成购物/服务列表。产品/ 服务输入装置20包括:主板70,其包括中央处理单元80与主存储器单元99″且安装有处理器,该处理器运行软件应用程序或应用程序或其他计算机可读程序,该软件应用程序或应用程序或其他计算机可读程序专为以下目的或功能设计,包括但不限于:读取、收集和处理、显示、发送由产品/服务输入装置20获取/接收/发送的数据;显示单元90,其配置为允许或促进用户与产品/服务输入装置20交互;产品标识码扫描器/读取器96与激活装置(比如,近距离传感器97),其配置为扫描/读取产品标识码(比如,条形码或QR码);连接装置 81,其配置为允许产品/服务输入装置20通过网络有线地或无线地或蜂窝地连接至构成订购管理系统30的一部分的远程计算装置,以能够发送数据,所述数据包括要

由一个或多个产品订购服务提供商40、服务提供商50和账单支付服务提供商60以及相关各方的订购管理系统30存储和/或处理的产品标识数据。产品输入装置20由电源95 供电，电源95向产品/服务输入装置20供电。至产品/服务输入装置 20的电力供应可经由开关按钮92调节，开关按钮92还用作激活或停用产品/服务输入装置20的装置。产品/服务输入装置20还包括音频/视觉装置85，其配置为在产品/服务输入装置20上显示音频视觉数据或内容，以促进用户执行或采取具体动作或命令，同时在产品/ 服务输入装置20上输入产品/服务标识码。音频视觉装置85可以是软件应用程序、扬声器86、麦克风87的组合，其配置为显示包括音频、视频数据的音频视觉内容，以促进用户产品/服务输入装置20 交互或执行请求或命令，同时将产品/服务标识数据输入产品/服务输入装置20或在产品/服务输入装置20上完成包括账单支付的支付交易。

[0046] 在优选实施例中，显示单元90是交互式触屏显示单元，其响应于信号或输入数据或请求、或产品/服务输入装置20的用户执行命令序列或作为由产品输入装置20的中央处理单元80处理数据的结果，显示各种用户交互画面和功能。在一个示例中，随着产品输入装置 20“通电”，产品输入装置20(包括其产品标识码扫描器/读取器96 和激活装置(如，近距离传感器97)、显示单元90)被激活并待机，并且具有运行软件应用程序或应用程序或其他计算机可读应用程序或程序的处理器的中央处理单元80准备好根据接收到的信号、数据、输入或所执行的命令或请求运行。

[0047] 在本发明创造的实施例中，电源95可以是电池(包括且不限于干电池或可再充电电池)或电源(比如壁式插座)的形式。在壁式插座的情况下，产品/服务输入装置20还包括AC/DC适配器98。AC/DC 适配器98可以是内置式，其嵌入至产品/服务输入装置20，或其可以外部设置且与电线/电源线集成。在实施例中，产品/服务输入装置 20可配备有双电源。即，产品/服务输入装置20可以在任一时刻通过使用电线将产品/服务输入装置20连接到壁式插座而被供电，或者在其未插入壁式插座时，其还可以运行干电池或可再充电电池组，所述可再充电电池组可以充电和再充电。

[0048] 如上所述，在本发明创造的实施例中，产品/服务输入装置20 链接到支付网关，所述支付网关链接到金融机构70或金融机构的网络，产品/服务输入装置20的用户可具有其账户以使用诸如信用卡、借记卡、电子银行服务，以促进和处理支付，从而允许为购买的产品 /服务进行支付或金融交易或促进账单支付交易。在此实施例中，产品/服务输入装置20还可以连接到金融机构70的网络或其他金融或支付服务提供商(比如包括信用卡发卡银行)，以使得能够针对账单结算或者产品或服务的支付进行信用卡支付处理。

[0049] 在本发明创造的实施例中，产品/服务输入装置20可以被设计为固定的或便携式的。

[0050] 在实施例中，产品/服务输入装置20被设计为固定的。在此实施例中，产品/服务标识码扫描器/读取器96与激活装置(比如，近距离传感器97)被构建为集成到产品/服务输入装置20，参见图2。在本发明创造的实施例中，产品/服务输入装置20可以是插入式，其中，产品/服务输入装置20连接到用于供电的壁式插座。

[0051] 在实施例中，产品/服务标识码扫描器/读取器96与近距离传感器97被构建为可拆除单元120，其配置为从产品/服务输入装置20 的主单元可拆除。在此实施例中，产品/服务输入装置包括布置在可拆除单元120处的次存储器单元99(可拆除单元120的存储器单元)。

下面将进一步描述可拆除单元120的细节。

[0052] 在另一实施例中，产品/服务输入装置20被设计为便携式的。产品/服务输入装置20可运行内置电源95(比如，可再充电电池)。

[0053] 在本发明创造的实施例中，如图5所示，产品/服务输入装置20 的连接装置81例如包括：使得能够经由蜂窝网络发送产品标识数据的GSM模块82(如，具有SIM卡的空中卡(air card))和/或WIFI 模块83和/或蓝牙模块84，以能够有线地或无线地将产品/服务标识数据发送至订购管理系统30的远程计算装置。产品/服务输入装置 20并非必须配备有上述连接装置81的所有示例，更确切地说，产品 /服务输入装置20配置为与各种可用选项兼容。其可配备有某种连接装置81以使产品/服务输入装置能够有效执行所需功能，即，通过网络将产品标识数据发送至订购管理系统30的远程计算装置，同时其还可以配备有多于一个的连接装置81以提供作为可用于用户的更优选的或替代的选项。产品/服务输入装置20还包括USB集线器75以使能产品/服务输入装置与其他硬件的连接性。

[0054] 图5还示出图4的产品/服务输入装置的实施例的组件方案的图形表示，其中，产品/服务标识码扫描器/读取器96、近距离传感器 97配置为根据需要可从产品/服务输入装置20的主体可拆除和重新连接至产品/服务输入装置20的主体。可拆除单元120还包括为可拆除单元120供电的电源95″(比如，可再充电电池)、存储包括由可拆除单元120收集的产品/服务标识数据的数据的非易失性内部次存储器单元99。然而，本领域技术人员将容易认识到可以提供这样的产品/服务输入装置20，其中，产品/服务输入装置20可包含单个中央处理单元或多个处理单元(包括多个微处理器)。例如，在产品/ 服务输入装置20包括可拆除单元120实施例中，产品/服务输入装置 20可设置有单个或多个处理单元(例如，布置在产品输入装置20的主单元上的具有主存储器单元99″(主板70处的存储器单元)的一个主中央处理单元80和在可拆除单元120处的具有次存储器99的次中央处理单元(未示出))，以存储处理数据并执行指定功能，同时远程并远离产品/服务输入装置20的主单元地操作可拆除单元120。在此实施例中，由于可拆除单元120是可拆除的，其允许产品/服务标识码扫描器/读取器96和相关联的元件(包括由电源95″供电的近距离传感器97)移动以远离产品/服务输入装置20的主单元地工作，从而更加便利。例如，可拆除单元120配置为耦接/连接到设置在产品/服务输入装置20的主体上的电气端子125，使得可拆除单元120 接合至在产品/服务输入装置20的主单元上的电气端子125，其完成连接电路系统，使得其使可拆除单元120能够将由可拆除单元120 收集的产品/服务标识数据传递/发送/下载至产品/服务输入装置20 的主存储器单元99″，或由中央处理单元80读取、处理并显示在显示单元90上，或以其他方式与在产品/服务输入装置20处存储的产品标识数据合并，使得产品/服务标识数据可以被合并到或集成到单个产品/服务列表，该列表准备用于传递或发送至由产品订购服务提供商40、服务提供商50和账单支付服务提供商60以及相关联各方管理的订购管理系统30的远程计算装置。

[0055] 在本发明创造的实施例中，产品/服务输入装置20还包括外部输入开关100，其配置为读取、收集和存储产品标识数据并可操作来辅助产品/服务输入装置20。图7示出外部输入开关100的示例实施例。图8示出外部输入开关100的组件方案及其与产品/服务输入装置20的连接的图形表示。

[0056] 在实施例中，如图6和7所示，外部输入开关100包括具有内部非易失性存储器单元

的中央处理单元105、为外部输入开关100供电的电源(比如电池110)和蓝牙模块115(外部输入开关的蓝牙模块115是与产品/服务输入装置的蓝牙模块84分开的单元),蓝牙模块115通过低功率蓝牙技术允许外部输入开关100与产品/服务输入装置20通信和将存储在外部输入开关100处的产品/服务标识数据传递或发送至产品/服务输入装置20。还参见图8。外部输入开关100 可经由一个或多个输入按钮120的操作而操作。外部输入开关100 的中央处理单元105可以是具有其自己的存储器的微处理器的形式。外部输入开关100配置为与产品/服务输入装置20同步,且其配置为经由产品/服务输入装置20而可编程(设置)。外部输入开关100 配置为是编程的,以使能够改变指定的产品标识数据和指定的量/单位。外部输入开关100内的蓝牙模块115允许外部输入开关100与产品/服务输入装置20无线地通信或连接,使得存储在外部输入开关 100处的包括产品/服务标识码的数据通信到产品/服务输入装置20。

[0057] 在实施例中,外部输入开关100配置为预存储指定的产品标识数据和指定的量/单位的产品,以促进特定产品的大量订购/购买。指定的产品标识数据和指定的量/单位通过低功率蓝牙技术发送到产品 /服务输入装置20。允许外部输入开关100和产品/服务输入装置20 之间的数据传输的其他形式的近场通信也是可能的。外部输入开关 100设计为促进产品的大量订购/购买,例如,用于购买主要产品或例行项目。这对于例如办公室、饭店或食品和饮料商店或会定期需要大量特定项目的其他类型的商业运营者而言将是非常方便的。代替必须针对所需量产品的每个单位将产品标识码输入至(即,将条形码扫描至)产品/服务输入装置20并在显示单元90上确定每个项目的输入,或必须扫描所需的项目的产品标识码并单独在显示单元90上输入所需单位的数量,用户通过按压外部输入开关100的输入按钮120 简单地使用外部输入开关100完成任务。通过在外部输入开关100 上操作输入按钮120,产品的预存储的产品标识数据以及预先指定的单位通信到产品/服务输入装置20,且这种数据将显示在产品/服务输入装置20的显示单元90上,使用户能够确认产品标识输入(进入) 待被订购/购买的项目列表中。类似地,当可适用或可能时,外部输入开关100可配置为存储指定的服务标识数据(比如,用户定期要求或订购的那些服务标识)。

[0058] 如上所述,外部输入开关100可经由一个或多个输入按钮120 的操作而可操作为将预存储的数据通信到产品/服务输入装置20以形成待由产品/服务输入装置20进一步处理的购物/服务列表的一部分。术语“一个或多个输入按钮120”表示外部输入开关100可包括一个输入按钮120或一个以上输入按钮120。在外部输入开关100包括一个输入按钮120的实施例中,可配置外部输入开关100以预存储单组产品标识数据,其可指向单个产品或若干产品的标识数据。然而,还可配置外部输入开关100以预存储多组产品标识数据,其可指向多个产品的标识数据,使得以不同方式操纵输入按钮120可导致不同命令或导致外部输入开关100发送不同组数据至产品/服务输入装置20。同样,在外部输入开关100包括一个以上输入按钮120的实施例中,每个输入按钮120可被分配或指定给不同的产品标识码,使得每个输入按钮120被分配用于发送不同组数据至产品/服务输入装置20。

[0059] 进一步地,如上所述,在本文中引用的术语“产品/服务输入装置”指根据本发明创造原理的产品/服务输入装置20,其促进涉及或使用根据本发明创造的产品/服务输入装置20的产品订购、服务布置、和账单支付。进一步地,本文所引用的术语“购物/服务列表”指由用户输入至产品/服务输入装置20的产品、服务或账单的列表。因此,产品/服务输入装置20

可配置为针对产品订购、服务订购或账单支付服务等实现不同接口或窗或标记或应用程序。在实施例中，产品/服务输入装置20配置为使得能够通过连接到支付网关的产品/服务输入装置20进行账单结算的支付交易，账单比如是公共设施账单、信用卡账单等，所述支付网关链接至金融机构的网络，使得允许使用信用卡、借记卡、电子银行服务或其他类型的储值卡等进行电子支付。在此实施例中，产品/服务输入装置20以与以下情况相同的方式操作或起作用：使用条形码作为产品/服务标识码订购产品或服务。类似地，产品/服务输入装置20配置为识别账单标识码(比如，账单的条形码)，以使用户能够进一步继续账单支付交易。涉及或使用根据本发明创造的产品/服务输入装置20的产品订购、服务订购或账单支付的具体描述将关于相应操作流程在下面进一步描述。

[0060] 如上所述，在实施例中，产品/服务输入装置20包括音频视觉装置85，其可包括具有附带的软件或应用程序的扬声器87和麦克风 86。作为示例，扬声器87可用来表现诸如推送内容之类的音频内容 (下面将进一步描述)，该内容发送自订购管理系统30或产品订购服务提供商40、服务提供商50和账单支付服务提供商60和相关联的产品机构41、服务机构51和商户61。进一步地，扬声器87设置为向产品/服务输入装置20的用户提供各种音频通知。例如，在扫描产品/服务标识码时，产品/服务输入装置20可发出音频通知(比如，“哔哔声”)，以通知用户已经扫描了条形码。在另一示例中，扬声器87可提供由产品/服务输入装置20接收或表现的音频内容的声音效果。在另一示例中，麦克风86用来提供对产品/服务输入装置20 操作或执行命令的语音命令，这将在下面进一步讨论。

[0061] 如在图1和图9至图10中所示，产品/服务输入装置20配置为通过互联网或网络与构成订购管理系统30的一部分的远程计算装置、服务器或云服务器等通信。产品/服务输入装置20不仅配置为发送数据至订购管理系统30，还可配置为从订购管理系统30的这种远程计算装置、服务器或云服务器等接收数据或内容(推送内容)。在一个示例中，数据或内容可以是文本消息或音频视觉内容的形式，其可指向促销文本消息、店内折扣报价等。在一个示例场景下，内容可以是将被处理并显示在产品/服务输入装置20的显示单元90上的音频视觉数据的形式。优选地，被接收的内容涉及用户订购的产品或服务。例如，在扫描(即，将产品标识码输入在产品/服务输入装置20上) 例如洗衣护理产品(比如，清洁剂)期间，产品/服务输入装置20 接收的推送内容可涉及店内促销活动(比如，“买二赠一”)，该促销活动可显示在产品/服务输入装置20的显示单元90上，以在用户希望接受促销报价或谢绝报价时向用户做广告。在另一示例中，内容可指向与被扫描的产品类似相关或类别相关的产品，以为用户/消费者提供还订购或购买不同服务或产品线、不同大小(体积)、不同品牌或相关产品或替代产品的机会。优选地，在一个示例中，用户/消费者可关闭或跳过或忽略所述内容并照常继续输入过程，或禁用推送服务，用户/消费者可能不希望接收到促销或广告消息的此类内容。

[0062] 此外，除了如上所述的音频通知(针对其偏好配备有扬声器87 的产品/服务输入装置20)，可还将产品/服务输入装置配置为向用户/消费者发出不同格式的通知。例如，通知可以是光(如，红光或绿光)的形式，以示出产品/服务输入装置20的不同操作状态。在另一示例中，通知可以是图像或视觉符号的形式。在任何情况下，应该提供配置为发出此类通知的元件，其具有负责控制或发出此类通知的相应微控制器。

[0063] 在实施例中，产品/服务输入装置20配置为与具有蓝牙模块的其他电子装置(比

如，智能电话、智能手表或其他类似小工具）配对或安装有其他应用程序、程序或软件，以适应不同风格的用户。其还可同步到家庭自动化系统，使得能够从产品/服务输入装置集中控制家庭自动化。

[0064] 在实施例中，产品/服务输入装置20还可包括位置标识装置以发送其位置，从而将产品/服务输入装置20的简明位置提供至产品订购服务提供商40、服务提供商50和账单支付服务提供商60或其他相关联的产品机构41、服务机构51，对于将产品或服务交付给消费者/用户，这有益于管理交付路线或管理交付。

[0065] 虽然上面已经描述了产品/服务输入装置20配置为读取和收集产品/服务标识数据并将这种产品标识数据发送或传递至订购管理系统30以进一步处理，但是，可行的是，产品标识不仅限于条形码或 QR码，并且用于读取或识别产品标识码的装置不限于产品标识码扫描器/读取器96或者产品标识码限于条形码或QR码。可配置产品/ 服务输入装置20以识别不同形式的产品标识编码系统。因此，在实施例中，产品/服务输入装置20配置为经由语音命令或音频码来识别产品/服务标识码。即，产品/服务输入装置20的用户能经由麦克风 86通过向产品/服务输入装置20讲出或提供音频码而输入产品/服务标识码。因此，在该实施例中，产品/服务输入装置20进一步包括语音识别模块88，其配置为使产品/服务输入装置20能够接受经由语音命令的或作为音频码的产品/标识数据的输入。参见图6。可以通过配置语音识别模块88和相关的软件/应用程序来针对由订购管理系统30或产品订购服务提供商40、服务提供商50和账单支付服务提供商60维护的产品/服务/账单标识码数据库来将具体产品/服务标识码公式化或配对或映射为音频码。例如，产品/服务输入装置20 的用户可通过将口语短语“鸡汤”与由订购管理系统30或产品订购服务提供商40维护的具体商标、体积或大小、风味的鸡汤的标识码配对来公式化具体的一般名称或一般产品名称（如，“鸡汤”）。一旦产品/服务输入装置20的用户将音频码“鸡汤”输入产品/服务输入装置20，订购管理系统30或产品订购服务提供商40就针对其产品标识码数据库检查代码“鸡汤”并将能够匹配产品标识码并将所需的具体的鸡汤（或已经配对/映射的鸡汤）显示在产品/服务输入装置 20的显示单元90上以使用户能够确认订购。

[0066] 此外，应当理解，可以用与如上所述的方式（即，将音频码与订购管理系统30或产品订购服务提供商40、服务提供商50和账单支付服务提供商60维护的产品标识码配对或映射）类似的方式将具体的产品/服务标识码与数字码或字母码配对或映射。即，在此实施例中，产品/服务输入装置20的用户将能够使用按键或键盘（优选地，作为虚拟键盘、集成键盘或安装在产品/服务输入装置20上的键盘应用程序）打入或输入（一个或多个）具体指定的数字（优选地，比产品的实际条形码数字更短和更简单的数字组合）或（一个或多个）字母。这种数字码或字母码已经被公式化并与由订购管理系统30或产品订购服务提供商40、服务提供商50和账单支付服务提供商60维护的具体的产品/服务标识码配对。这对于某些情况或某些用户群体可以是特别有用的。例如，在产品/标识码扫描器/读取器不能读取产品的条形码时，用户可手动输入产品条形码数字。然而，针对某些人群（比如，老人或视力差的人），输入准确的产品条形码数字（其通常非常小）可能是困难的任务，因此，如上所述的替代形式的输入产品/服务标识码（如，音频码（经由语音命令）、数字码或字母码） 可以是非常有用的。

[0067] 现在将描述产品/服务输入装置的使用和操作流程的示例，其中，将讨论产品订

购、服务订购和账单支付的操作流程的示例。

[0068] 在使用时，产品/服务输入装置20可由服务提供商根据特定条件或情况下分配给消费者。在产品/服务输入装置初始第一次使用时，需要用户/消费者提供个人标识方式或联系信息(比如，联系电话、(一个或多个)手机号码)，作为产品输入装置20的注册或激活形式。所提供的信息将使服务提供商和产品机构41、服务机构51和商户61能够联系用户/消费者以确认消费者的身份，确认订购并安排交付或访问消费者以提供服务。产品/服务输入装置20可嵌入有位置标识装置，以提供关于产品/服务输入装置20的位置的信息，对于将产品或服务交付给消费者/用户，这有益于管理交付路线或管理交付。产品/服务输入装置20链接到订购管理系统30，其中，维护有包含产品/服务标识码的数据库。一旦产品/服务输入装置20“接通”且消费者或用户通过将产品/服务标识码作为通用条形码、音频码、公式化的数字码或公式化的字母码输入产品/服务输入装置20来将产品/服务标识码输入产品/服务输入装置20，产品/服务输入装置就将处理产品/服务标识码并与订购管理系统30通信，以将相应的产品/ 服务标识码与产品/服务描述匹配并取得相应的产品/服务描述且将信息显示在显示单元90上以使用户/消费者能够确认该特定产品/服务的订购。在将产品/服务/账单标识码输入产品/服务输入装置20 时，需要用户/消费者指定产品/服务的单位或量的数量并确认产品/ 服务/账单标识码至产品/服务输入装置20的每次输入/录入，这稍后将用作用户/消费者的订购/购物列表。然而，可配置产品/服务输入装置20以收集多个产品/服务/账单标识码(比如产品/服务标识码的列表)并且可利用单次确认来确认输入的产品/服务标识码的这种列表。在产品/服务标识码的每次输入之后或在每次确认之后，消费者将具有选项以继续增加更多产品/服务标识码。在用户/消费者错误地输入产品/服务标识码或不再希望订购/购买这种项目或服务的情况下，用户可通过按下显示屏90上的指定的按钮上的、传达“删除”或“取消”或“返回”并执行这种功能的图标、符号或单词，从列表中移除这种项目或服务。一旦完成输入产品/服务标识码，消费者就将具有机会在装置上保存并存储列表并且根据需要可修改或改进列表并在需要时将该列表提交或传递至订购管理系统30，或在完成输入产品标识码之后将该列表提交或传递至订购管理系统30。然后，订购管理系统30在从用户或消费者接收到产品/服务标识的列表之后将生成订购号并例如通过以下方式与用户或消费者确认订购：短消息服务或至用户/消费者移动装置(即，注册的手机号码)或至产品/ 服务输入装置20本身的其他形式的通知。然后，订购管理系统30 或产品订购服务提供商40、服务提供商50和账单支付服务提供商60 将通过交付产品/服务来完成订购，或完成交易。

[0069] 在产品/服务输入装置20包括产品/服务标识码扫描器/读取器 96作为可拆除单元120的实施例中，用户/消费者可拆除可拆除单元 120并使用可拆除单元120以扫描/读取产品标识，例如，大的、庞大的项目或远离产品/服务输入装置20的项目。一旦可拆除单元120 返回并耦接到产品/服务输入装置20的主单元，已经被处理并存储在可拆除单元120的非易失性存储器单元99中的产品标识码数据将传递或下载到产品/服务输入装置20的中央处理单元80中以进一步处理。这就是将被更加理解的实施例，其中，产品/服务输入装置20配置为允许利用单次确认来确认多个产品标识码。即，在可拆除单元 120配置为远离产品/服务输入装置20的主单元远程地读取和收集产品标识码时，用户返回显示单元90以提供产品标识码的录入或每次输入的确认是不方便的，由此提供对多个产品标识码的列表的单次

确认。

[0070] 如上所述，在一个实施例中，产品/服务输入装置20进一步包括外部输入开关100，参见图9。在此实施例中，用户可以使用预编程的外部输入开关100，其携带产品标识码的一组或多组数据以及产品的指定的单位，以通过操作外部输入开关100上的输入按钮120 输入产品标识码和所需单位。所述指定的产品标识码和指定数量的单位将经由低功率蓝牙技术(即，蓝牙模块115)通信或发送至产品/ 服务输入装置20，参见图8。因此，这种数据将显示在产品/服务输入装置20的显示单元90上以允许用户/消费者照常确认订购。

[0071] 可能地，用户可在交付时或通过其他方法或支付渠道来支付订购/购买的产品/服务。还可能的是，产品/服务标识码和单位价格将由订购管理系统30或产品订购服务提供商40、服务提供商50和账单支付服务提供商60定期更新。因此，使用产品/服务输入装置20 生成的产品/服务订购列表将包括订购/购买的产品/服务的总价格。因此，产品/服务输入装置20链接到支付网关和金融机构70的网络，其使用户/消费者能够在产品/服务输入装置20处使用信用卡或借记卡或电子银行服务依据网关和金融机构70建立的协议和安全模块支付产品/服务，以进行交易并避免盗窃或欺诈。进一步地，订购管理系统30或产品订购服务提供商40、服务提供商50和账单支付服务提供商60还连接到金融机构70(例如，信用卡发卡银行)的网络，以认证和同意卡支付，如本领域通常已知的。

[0072] 产品订购操作流程的示例

[0073] 如图11所示，产品/服务输入装置20的用户激活产品/服务输入装置20并通过提供用户标识(比如，电话号码或其他个人标识方式)完成注册过程。用户标识或其他个人标识方式可以存储在产品/ 服务输入装置20处的配置文件数据库中，使得信息可以被保存用于未来访问。用户然后可以从显示单元90挑选入口、窗或标签或应用程序以进行产品订购。产品标识码扫描器/读取器96和/或外部输入开关100准备好且待机。在此示例中，用户然后可以使用产品/服务标识码扫描器/读取器96(作为集成(附接)单元或可拆除单元120) 和/或外部输入开关100来输入产品标识码。产品/服务输入装置20 从由订购管理系统30和/或产品机构41维护的产品标识码数据库(在此示例中，为条形码数据库)检索产品标识，并将产品描述(如，产品品牌、包装大小、体积或产品的图像等)和单位价格显示在产品/ 服务输入装置20的显示单元90上。用户然后可以根据需要增加产品的单位的所需数量(量)。然后，用户将具有增加更多产品标识码的选项并通过扫描下一个产品的标识码输入附加的产品标识码。一旦完成产品标识码的输入，用户然后可以进行订购并确认下单，其中，订购或产品订购列表通过互联网或网络传递或发送至订购管理系统30 的例如远程计算装置、服务器或云服务器，其中，订购管理系统30 将生成用户的订购号并将该订购记录在订购数据库(比如，订购号、产品列表、用户身份等)中并经由例如到消费者的短消息服务向用户发送订购接收的确认通知和订购号。产品订购然后被认为完成并且用户可在产品/服务输入装置20处停用产品/服务标识码扫描器/读取器96并结束该过程。作为订购管理系统30的一部分的产品订购服务提供商40和/或产品机构41然后可以执行订购并将产品交付给用户或消费者。其中，在完成将产品标识码输入至产品/服务输入装置20 且用户不希望立即向订购管理系统30下单后，用户可以将数据保存在产品/服务输入装置20的主存储器单元99″中并可在稍后需要时下单。随后，用户可在产品/服务输入装置20处停用产品/服务标识码扫描器/读取器96并结束该过程。

[0074] 服务订购操作流程的示例

[0075] 如图12所示，产品/服务输入装置20的用户激活产品/服务输入装置20并通过提供用户标识(比如，电话号码或其他个人标识方式)完成注册过程。用户标识或其他个人标识方式可以存储在产品/ 服务输入装置20处的配置文件数据库中，使得信息可以被保存用于未来访问。用户然后可以从显示单元90挑选入口、窗或标签或应用程序以进行服务订购。产品标识码扫描器/读取器96和/或外部输入开关100准备好且待机。在此示例中，用户然后可以使用产品/服务标识码扫描器/读取器96(作为集成(附接)单元或可拆除单元120) 和/或外部输入开关100来输入服务标识码。在此示例中，服务标识码可以是例如由服务机构51(如，饭店)提供的交付食物或服务，其中，用户可以输入具体菜单的条形码或此类服务条形码是具体饭店，其中，在扫描服务标识码时，从订购管理系统30或作为订购管理系统30的一部分的服务订购提供商50的服务数据库中检索的可用菜单将连同服务(食物/餐具)描述和单位价格被显示并允许用户从显示单元90的屏幕挑选期望的菜单和量。用户可以被提供输入关于服务的附加信息的机会，例如，在用户不希望在订购的菜单中具有MSG 的情况下。用户然后可以进行订购并确认下单，其中，订购或服务订购列表通过互联网或网络传递或发送至订购管理系统30的例如远程计算装置、服务器或云服务器，其中，订购管理系统30将生成用户的订购号并将该订购记录在订购数据库(比如，订购号、服务列表、用户身份等)中并经由例如到消费者的短消息服务向用户发送订购接收的确认通知和订购号。服务订购然后被认为完成并且用户可在产品 /服务输入装置20处停用产品/服务标识码扫描器/读取器96并结束该过程。作为订购管理系统30的一部分的服务订购服务提供商50 然后可以执行订购并将服务交付给用户或消费者。其中，在完成将服务标识码输入至产品/服务输入装置且用户不希望立即向订购管理系统30下单后，用户可以将数据保存在产品/服务输入装置的主存储器单元99″中并可在稍后需要时下单。用户可在产品/服务输入装置20 处停用产品/服务标识码扫描器/读取器96并结束该过程。

[0076] 对于产品订购和服务订购二者，取决于政策和安排以及可用选项，用户可以在交付或完成订购时支付订购的产品或服务，或者在经由如上所述的支付网关下单之后进行订购的产品或服务的支付。

[0077] 账单支付操作流程的示例

[0078] 如图13所示，产品/服务输入装置20的用户激活产品/服务输入装置20并通过提供用户标识(比如，电话号码或其他个人标识方式)完成注册过程。用户标识或其他个人标识方式可以存储在产品/ 服务输入装置20处的配置文件数据库中，使得信息可以被保存用于未来访问。用户然后可以从显示单元90挑选入口、窗或标签或应用程序以进行账单支付。产品标识码扫描器/读取器96准备好且待机。在此示例中，用户然后可以使用产品/服务标识码扫描器/读取器96 (作为集成(附接)单元或可拆除单元120)来输入账单标识码。订购管理系统30然后可以从由商户61维护的账单数据库检索账单信息并显示账单描述和账单的总的可支付量。用户然后将被请求选择是继续支付还是取消支付。在用户希望继续支付的情况下，用户将被要求提供信用卡信息和认证码并将数据发送到订购管理系统30和作为订购管理系统30的一部分的账单支付服务提供商60。账单支付服务提供商60可以利用发行信用卡的金融机构70进行信用卡有效性/信用检查。在发现卡是无效的情况下或在没有信用的情况下，将要求用户提供替代的信用卡。在卡有效性和信用检查是有效且接受支付的情

况下,订购管理系统将发出具有收据号的确认支付的通知给用户并将交易历史存储在订购管理系统30处的由账单支付服务提供商60维护的已支付账单数据库中。支付被认为完成了。

[0079] 在本发明创造的另一个方面中,本发明创造提供一种使用产品/ 服务输入装置20生成购物/服务列表并完成购物/服务列表的方法。

[0080] 在本发明创造的实施例中,方法涉及消费者、一个或多个产品订购服务提供商40或服务订购提供商50或账单支付服务提供商60,其中,所述方法包括:

[0081] 为消费者提供用于生成购物/服务列表的终端,这种终端实现为产品/服务输入装置(20),其配置为读取、收集产品/服务标识数据;

[0082] 生成包含输入至产品/服务输入装置(20)中的产品/服务标识数据的购物/服务列表;

[0083] 通过网络将所生成的包含产品标识数据的购物/服务列表发送至构成订购管理系统(30)的一部分的远程计算装置、服务器或云服务器,所述订购管理系统(30)由一个或多个产品订购服务提供商(40)、服务提供商(50)和账单支付服务提供商(60)管理;和

[0084] 基于列表中包含的产品/服务标识数据处理所生成的购物/服务列表并完成列表以将产品或服务交付给消费者。

[0085] 在本发明创造的实施例中,在为消费者提供用于生成购物/服务列表的终端的步骤中,终端被实现为产品/服务输入装置20,其配置为读取和收集产品/服务标识数据,如本发明创造的第一方面中描述的。产品/服务输入装置20可以是根据依据本发明创造的上述方面的原理的产品/服务输入装置的任何一个或多个实施例的形式。

[0086] 在本发明创造的实施例中,在生成包含产品/服务标识码数据的购物/服务列表的步骤中,通过使用产品/服务输入装置20且用户与产品/服务输入装置20(具体为其交互式的显示单元90和其他相关联的工具/组件/装置(比如,如上所述地用于输入二维码、QR码、数字码、子母码、音频码形式的产品识别码的产品/服务标识码扫描器/读取器、外部输入开关、语音识别模块及安装在产品/服务输入装置20处的相关联的软件/应用程序))交互来生成购物/服务列表。

[0087] 在某些实施例中,在生成包含产品/服务标识数据的购物/服务列表的步骤中,这种数据可存储在产品/服务输入装置20处,然后发送至作为订购管理系统30的一部分的远程计算装置、服务器、云服务器,所述订购管理系统30由一个或多个产品订购服务提供商40、服务提供商50和账单支付服务提供商60管理。

[0088] 在本发明创造的实施例中,在基于列表中包含的产品/服务标识数据处理所生成的购物/服务列表并完成列表以将产品/服务交付给用户的步骤中,通过由一个或多个产品订购服务提供商40、服务提供商50和账单支付服务提供商60(包括产品机构41、服务机构51、商户61)(其全都是订购管理系统30的一部分)管理的订购管理系统30处理购物/服务列表,并完成购物/服务列表并交付产品/服务给产品/服务输入装置20的用户。在实施例中,一个或多个产品订购服务提供商40或服务订购提供商50或账单支付服务提供商60(包括产品机构41、服务机构51、商户61)(其是订购管理系统30的一部分)可以是具有不同的角色和功能的同一个实体,或他们可以是由他们定契约或委任的分离的实体。

[0089] 通过本发明创造的上述具体实施方式将理解,用于生成购物/服务列表并完成列

表的产品/服务输入装置和方法提供更多方便和有效性并消除用户亲自出现在营业地点处购买产品/服务的需要。因此，上面提出的本发明创造的目的被认为已经满足。本领域技术人员将理解，用于实现相同结果和效果的各种修改和方法是本发明创造意图的，这种修改在本发明创造和随附权利要求的精神和范围内。

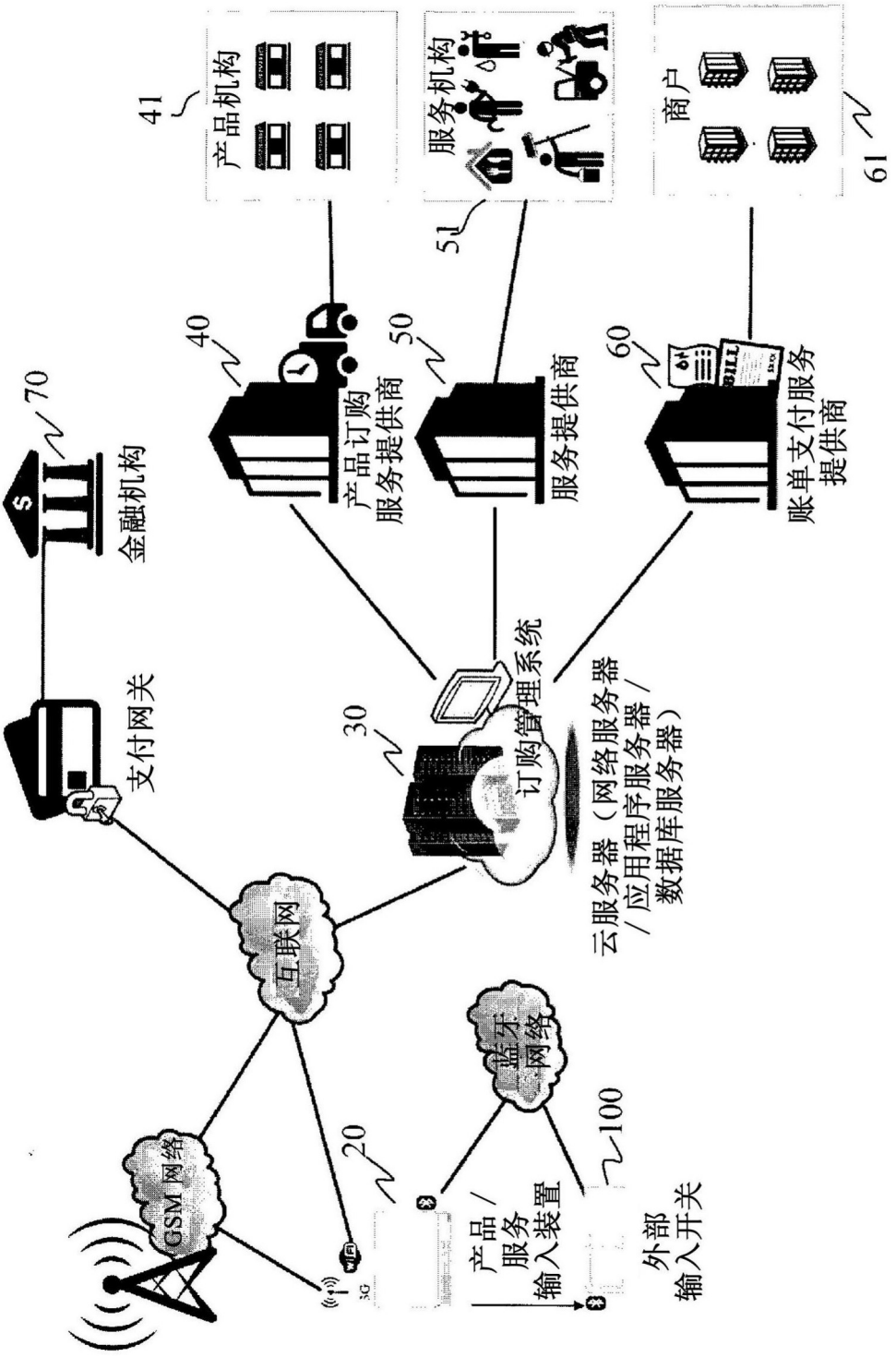

41
产品机构
服务机构
商户
61
51
40
50
60
70
产品订购
服务提供商
服务提供商
账单支付服务
提供商
金融机构
支付网关
30
订购管理系统
云服务器（网络服务器
/应用程序服务器/
数据库服务器）
互联网
GSM 网络
3G
20
蓝牙
网络
100
产品/
服务
输入装置
外部
输入开关

图1

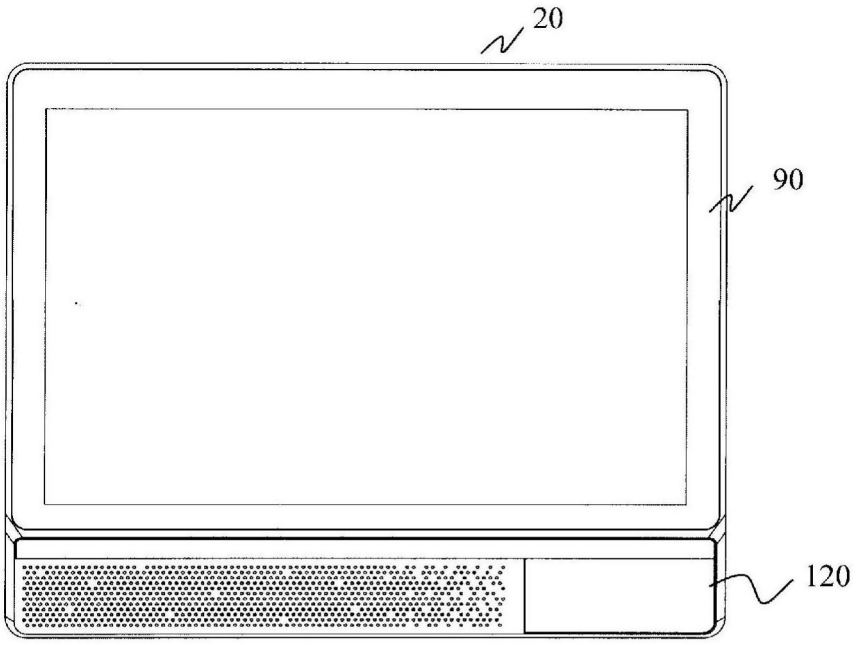


图2

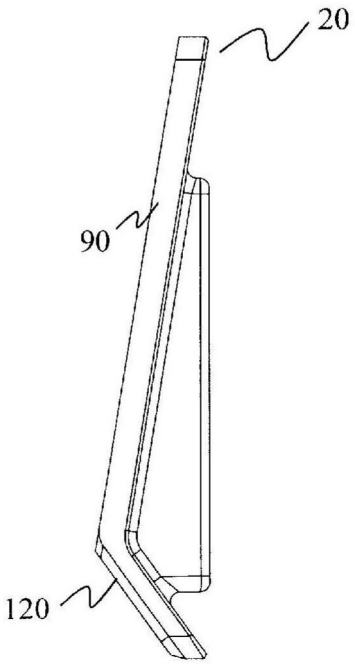


图3

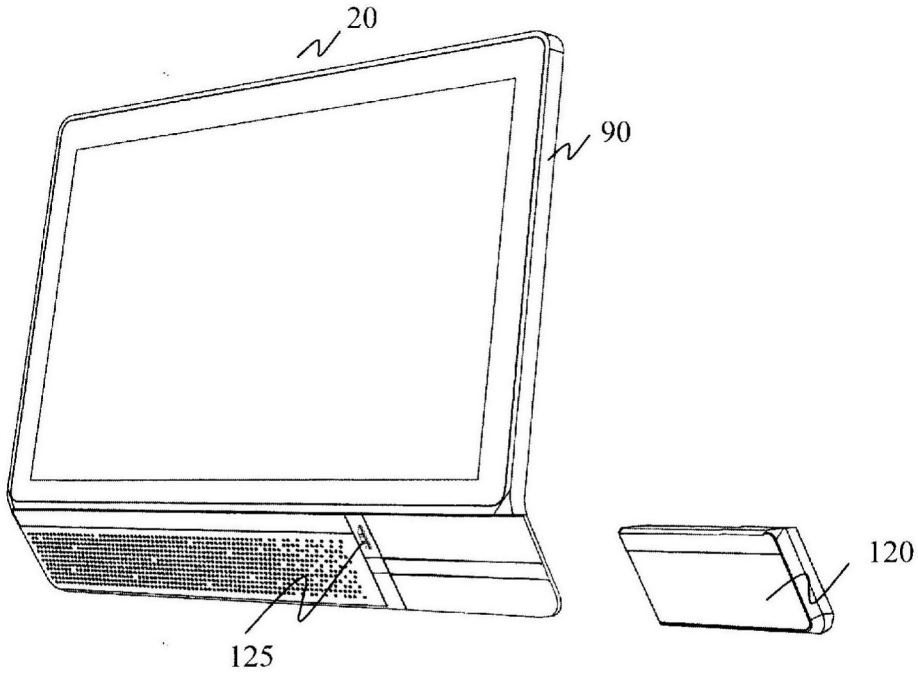


图4

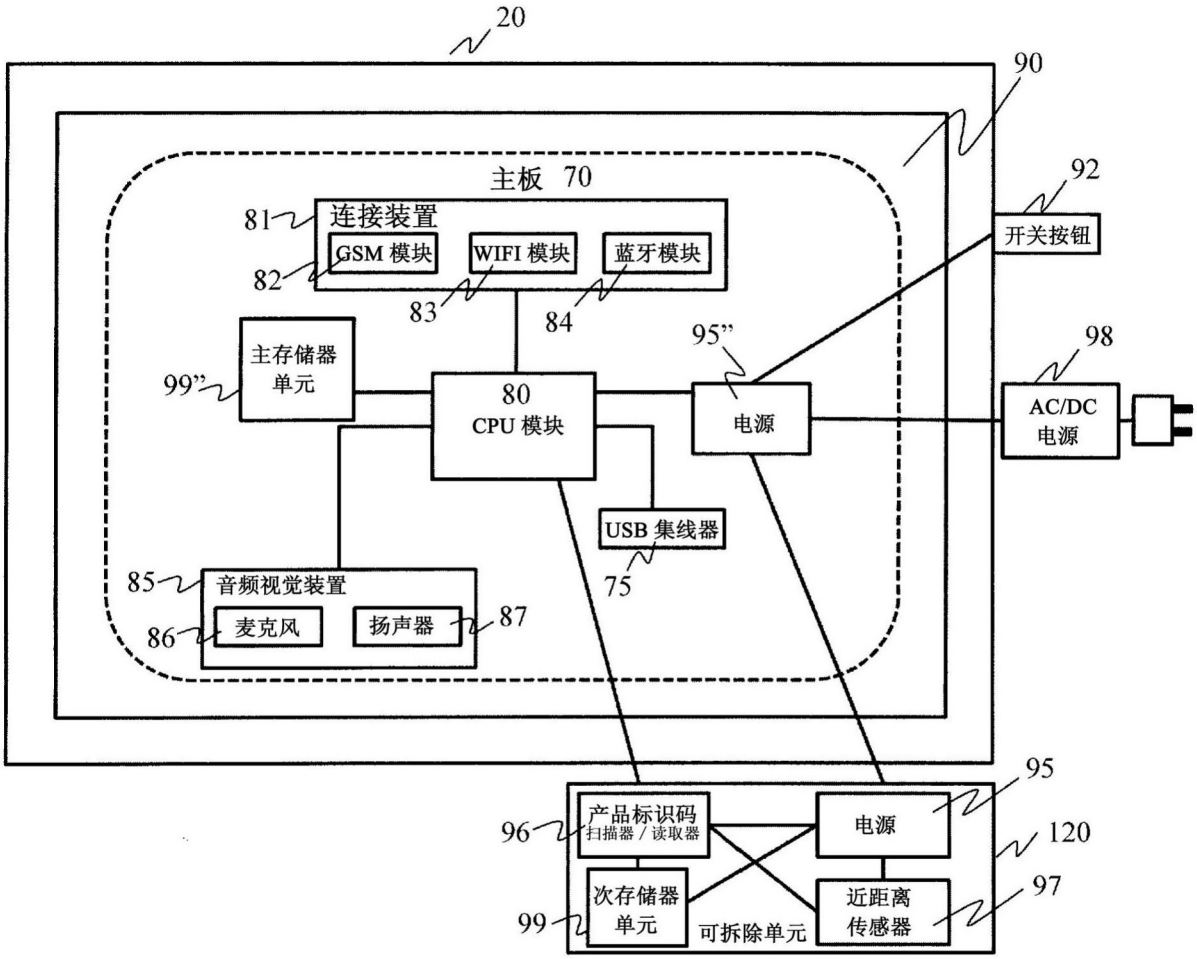

20
90
主板 70
81
连接装置
GSM 模块
WIFI 模块
蓝牙模块
82
83
84
92
开关按钮
95”
98
主存储器
单元
99”
80
CPU 模块
电源
AC/DC
电源
USB 集线器
75
85
音频视觉装置
麦克风
扬声器
86
87
95
96
产品标识码
扫描器 / 读取器
电源
120
次存储器
单元
99
可拆除单元
近距离
传感器
97

图5

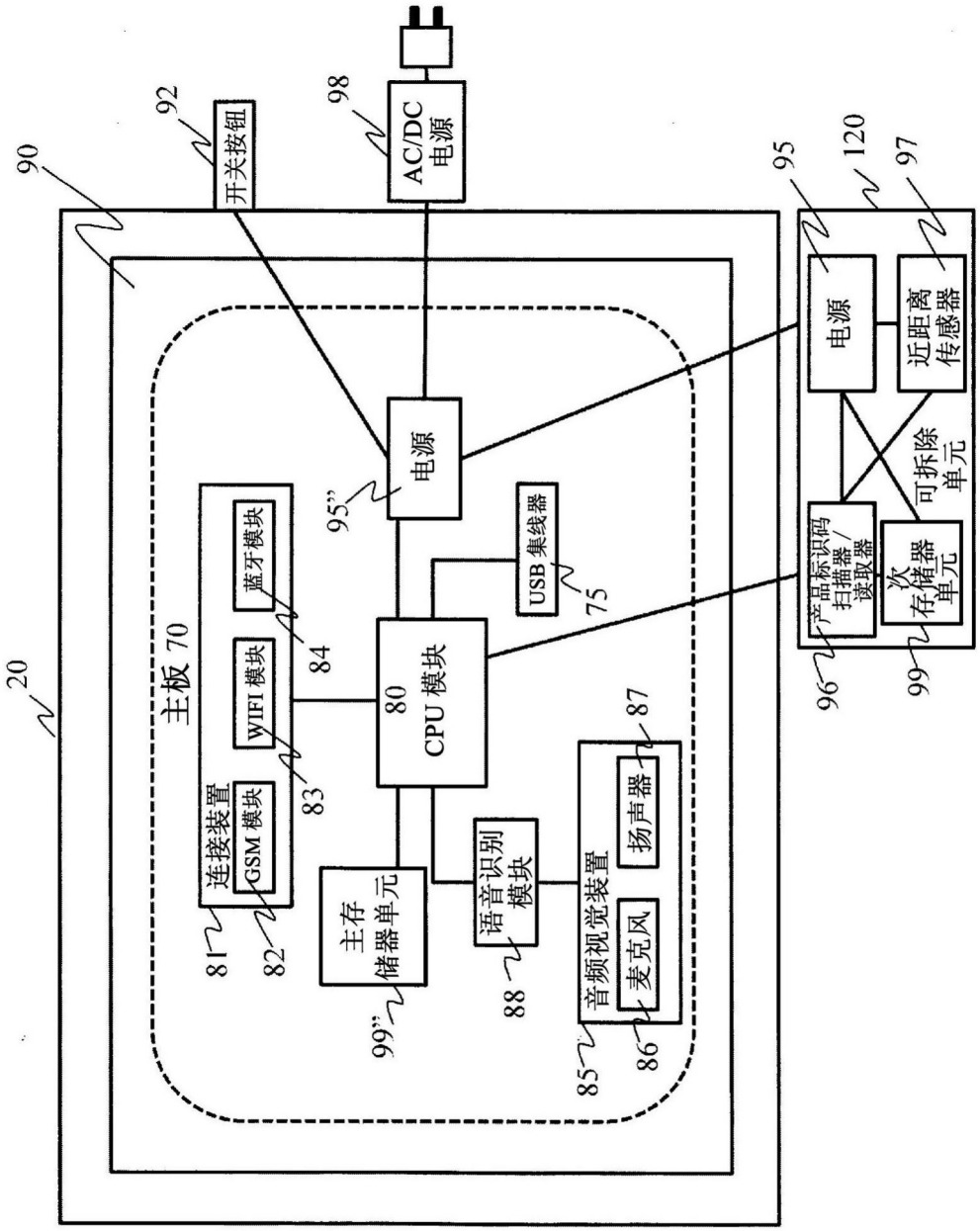

90
92
开关按钮
98
AC/DC 电源
95
120
97
电源
近距离传感器
可拆除单元
95''
电源
USB 集线器
75
20
主板 70
蓝牙模块
WIFI 模块
84
80 CPU 模块
87
扬声器
连接装置
GSM 模块
83
语音识别模块
麦克风
音频视觉装置
81
82
主存储器单元
99''
88
85
86
产品标识码扫描器/读取器
次存储器单元
96
99

图6

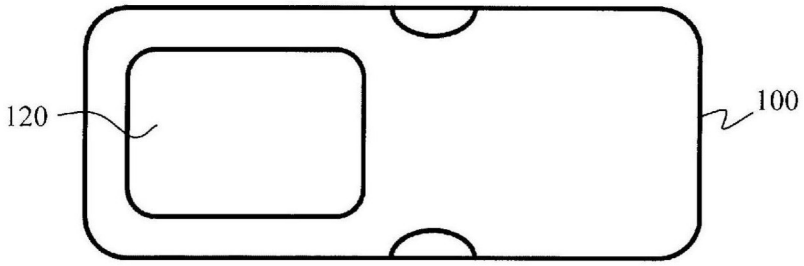

120
100

图7

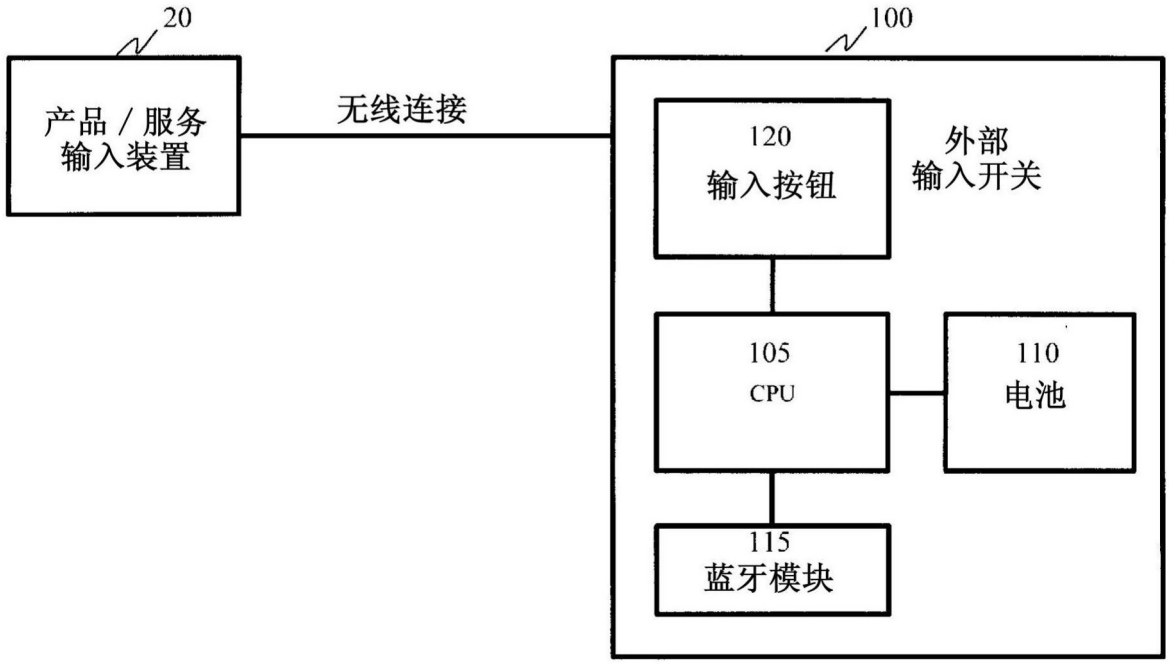


图8

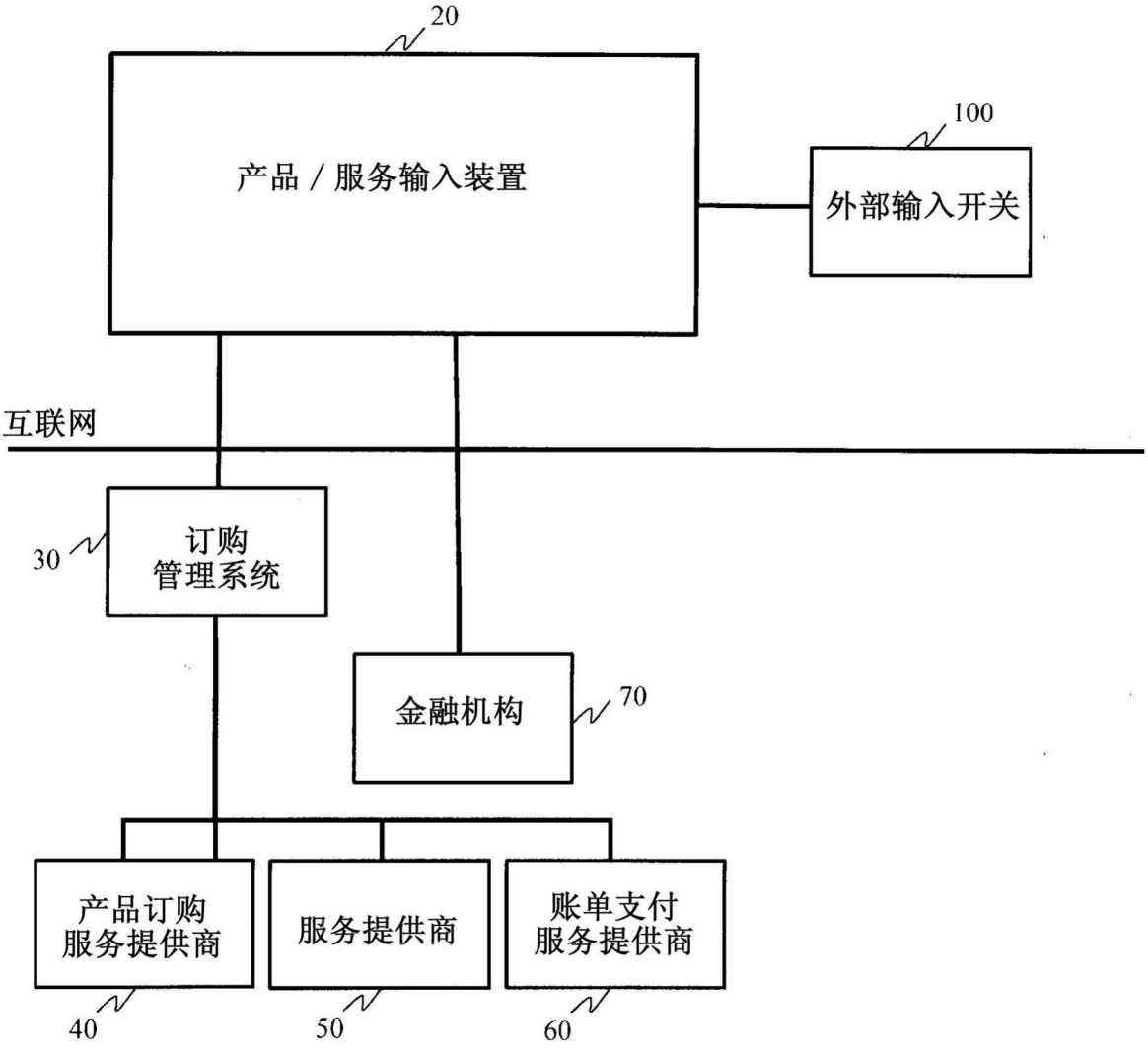

20
产品 / 服务输入装置
100
外部输入开关
互联网
30
订购
管理系统
金融机构
70
产品订购
服务提供商
服务提供商
账单支付
服务提供商
40
50
60

图9

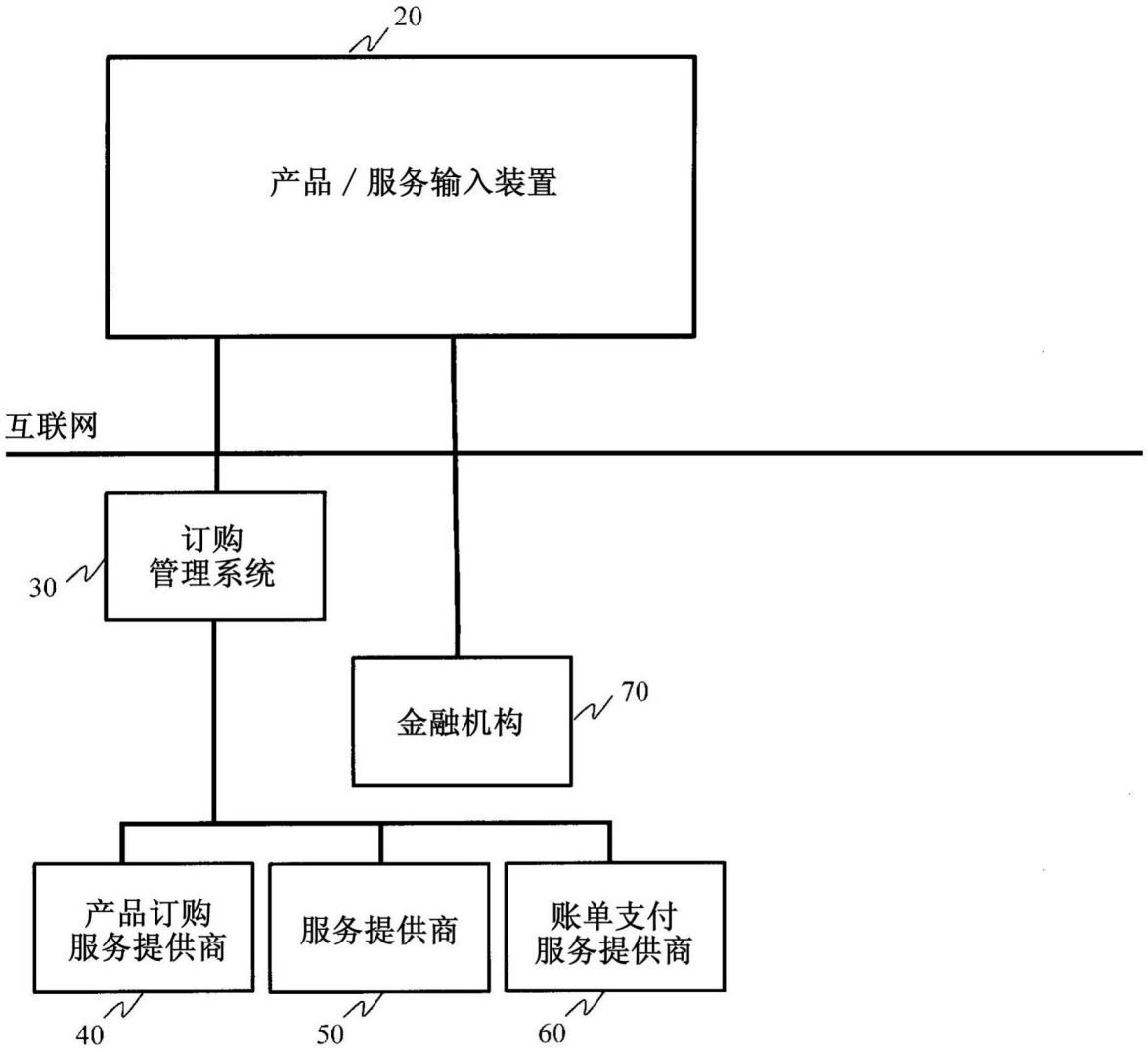

20
产品 / 服务输入装置
互联网
订购
管理系统
30
金融机构
70
产品订购
服务提供商
40
服务提供商
50
账单支付
服务提供商
60

图10

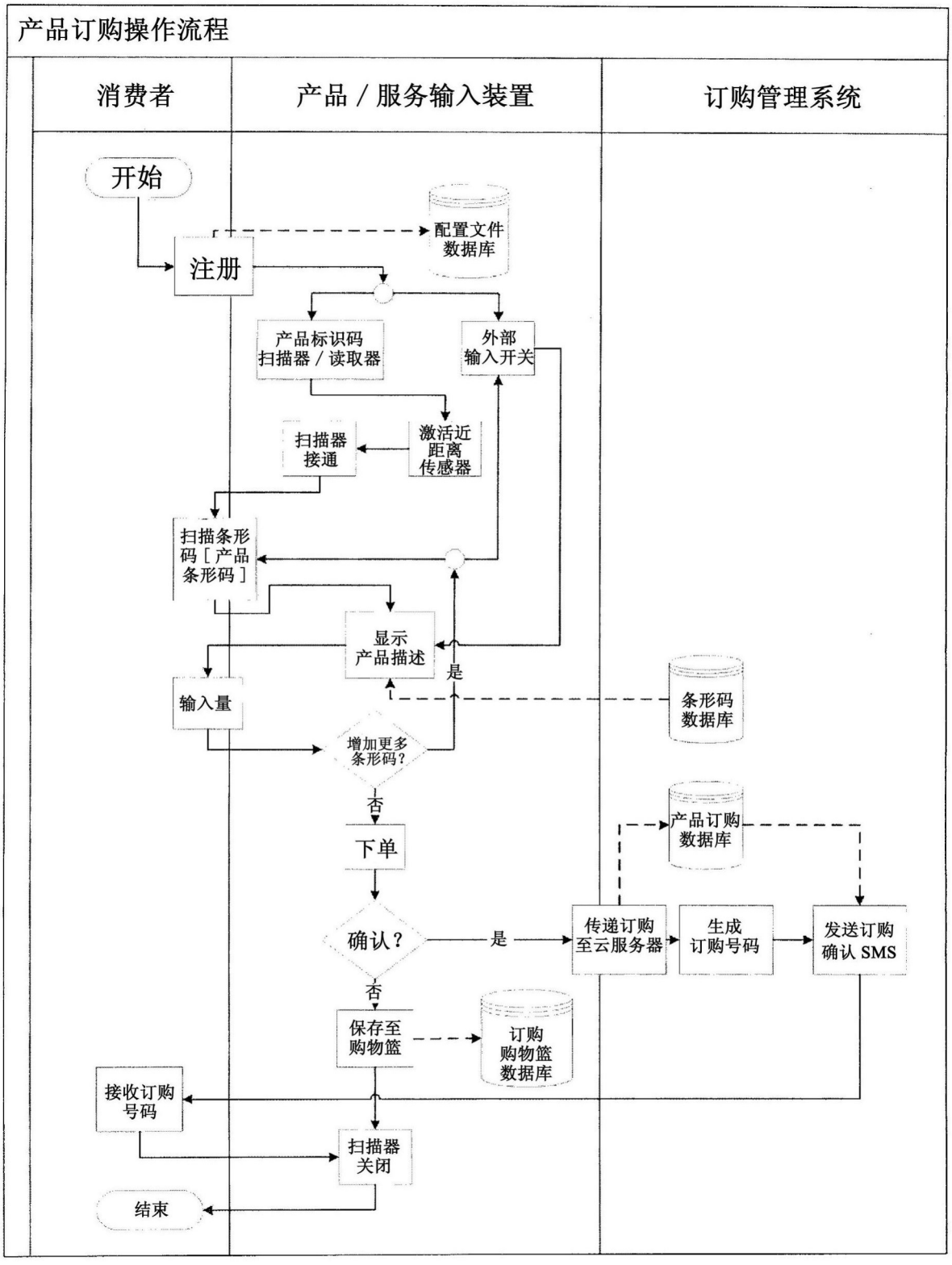

产品订购操作流程
消费者
产品 / 服务输入装置
订购管理系统
开始
注册
配置文件数据库
产品标识码扫描器 / 读取器
外部输入开关
扫描器接通
激活近距离传感器
扫描条形码 [产品条形码]
显示产品描述
是
输入量
条形码数据库
增加更多条形码?
否
下单
产品订购数据库
确认?
是
传递订购至云服务器
生成订购号码
发送订购确认 SMS
否
保存至购物篮
订购购物篮数据库
接收订购号码
扫描器关闭
结束

图11

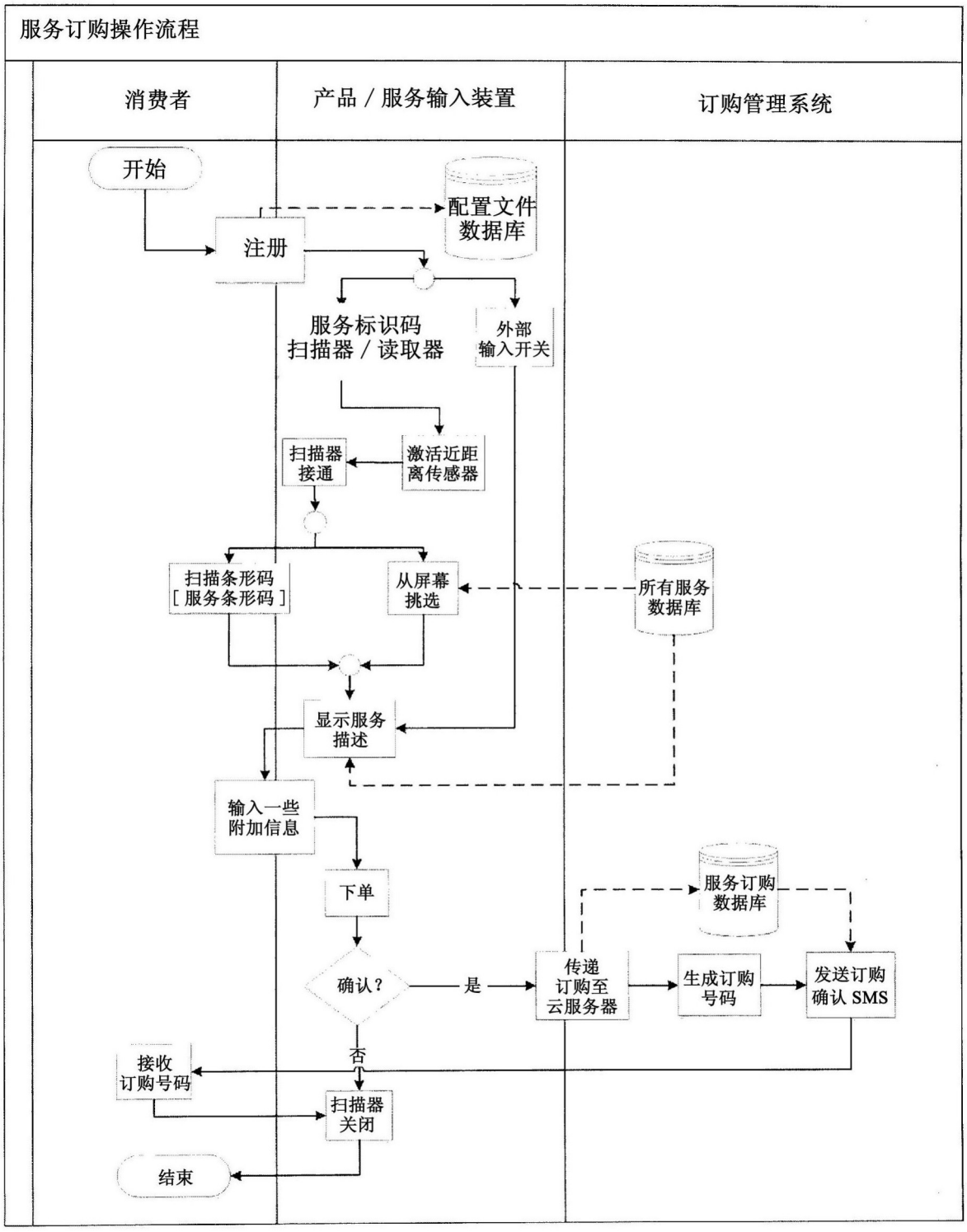

服务订购操作流程
消费者
产品 / 服务输入装置
订购管理系统
开始
注册
配置文件数据库
服务标识码扫描器 / 读取器
外部输入开关
扫描器接通
激活近距离传感器
扫描条形码[服务条形码]
从屏幕挑选
所有服务数据库
显示服务描述
输入一些附加信息
下单
服务订购数据库
确认?
是
传递订购至云服务器
生成订购号码
发送订购确认 SMS
否
接收订购号码
扫描器关闭
结束

图12

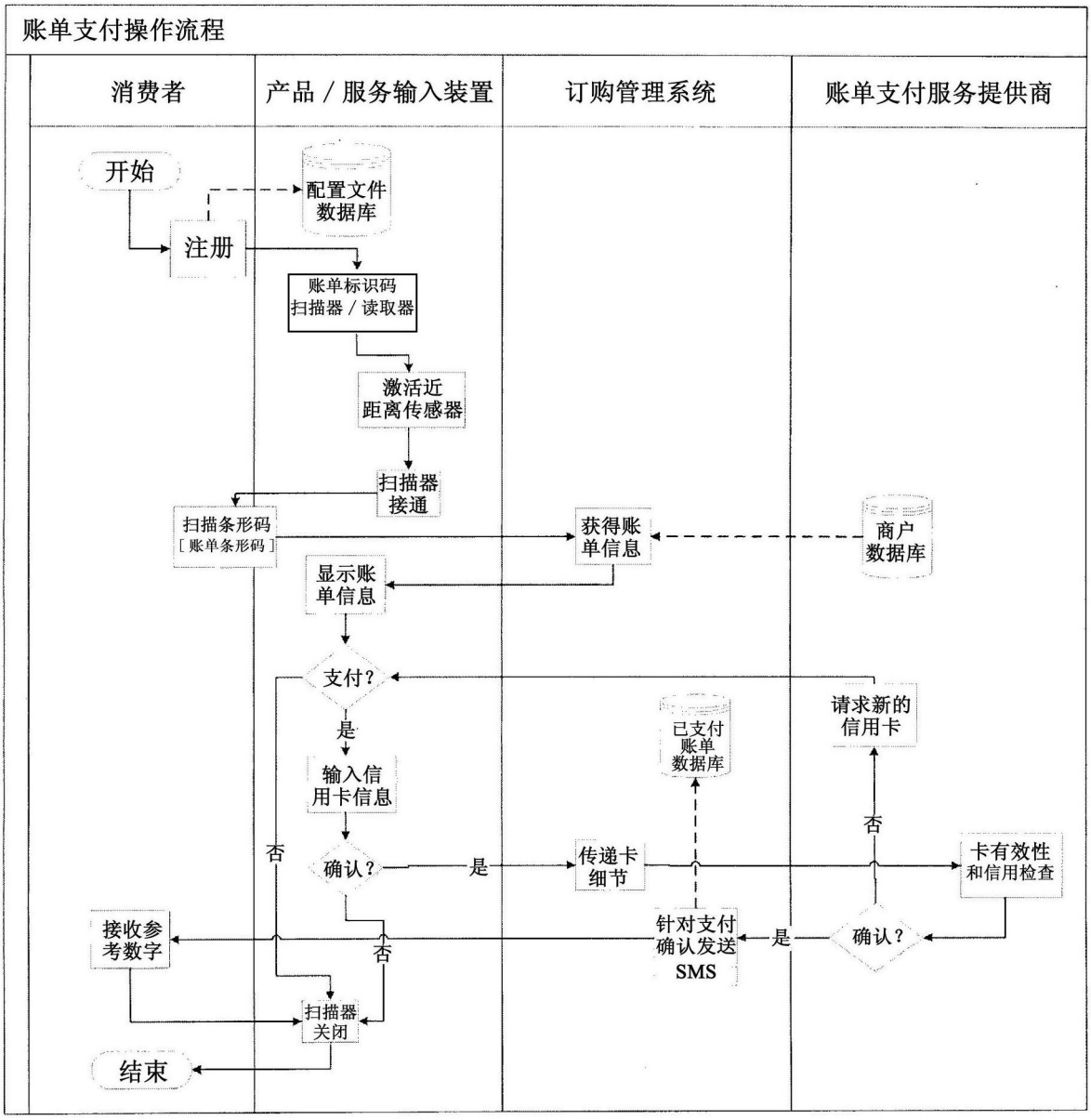

账单支付操作流程
消费者
产品 / 服务输入装置
订购管理系统
账单支付服务提供商
开始
注册
配置文件数据库
账单标识码扫描器 / 读取器
激活近距离传感器
扫描器接通
扫描条形码[账单条形码]
获得账单信息
商户数据库
显示账单信息
支付?
是
输入信用卡信息
确认?
否
是
传递卡细节
已支付账单数据库
请求新的信用卡
否
卡有效性和信用检查
确认?
是
针对支付确认发送SMS
接收参考数字
否
扫描器关闭
结束

图13

INTERNATIONAL SEARCH REPORT

International application No
PCT/TH2016/000090

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06Q10/08 G06Q30/00
ADD.

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

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)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2013/262315 A1 (HRUSKA JOHN [US]) 3 October 2013 (2013-10-03) abstract; figure 2 paragraph [0002] - paragraph [0006] -----	1-12
X	US 2013/048717 A1 (BRENDELL BRIAN [US] ET AL) 28 February 2013 (2013-02-28) abstract; figure 6 paragraph [0006] - paragraph [0010] paragraph [0031] - paragraph [0034] -----	1-12

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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

"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

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
19 December 2016	03/01/2017

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Gardiner, Alexander

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/TH2016/000090

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2013262315 A1	03-10-2013	US 2013262315 A1	03-10-2013
		US 2013262316 A1	03-10-2013
US 2013048717 A1	28-02-2013	US 2013048717 A1	28-02-2013
		US 2014201085 A1	17-07-2014