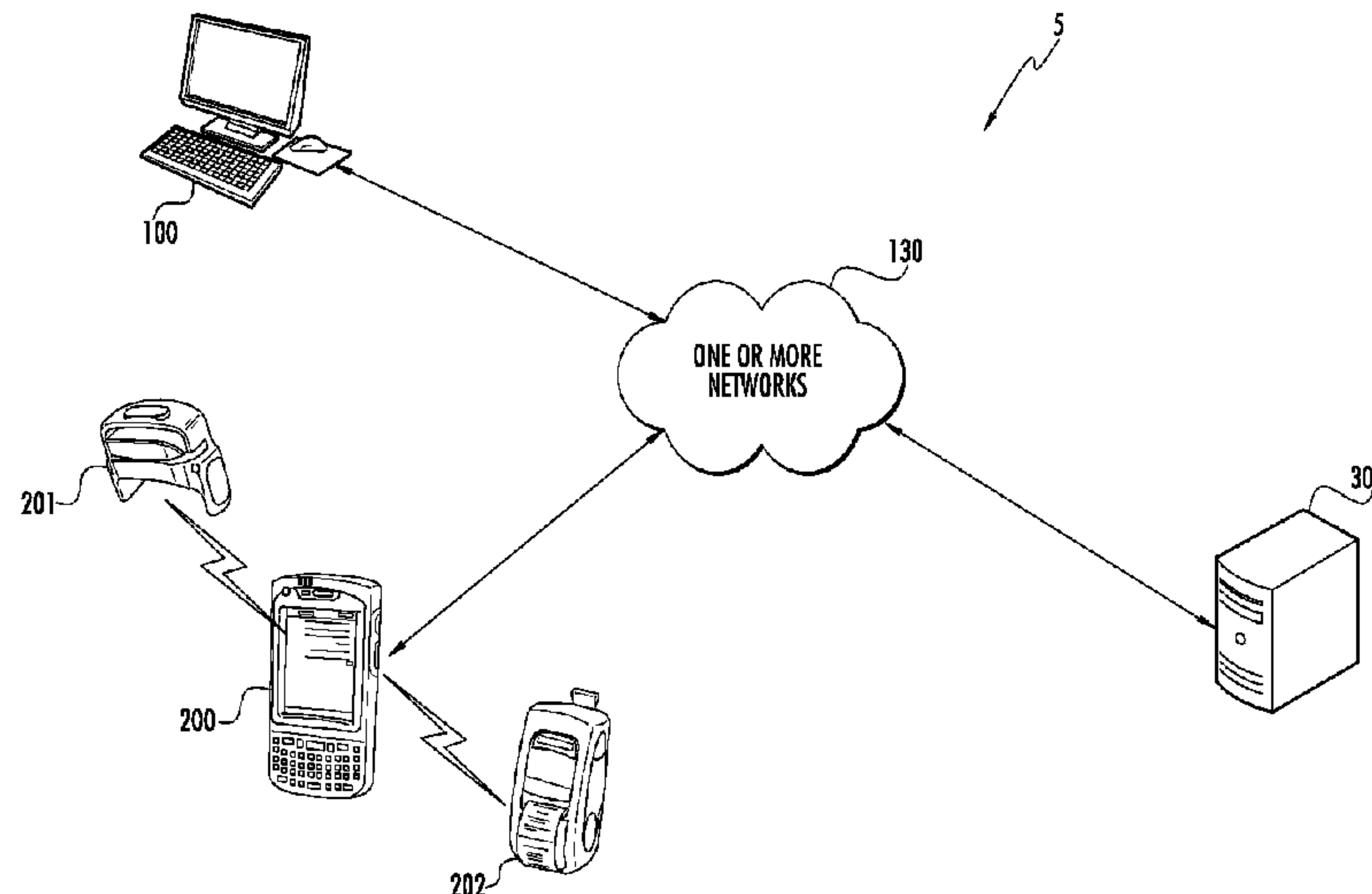




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(57) **Abrégé/Abstract:**

Various embodiments provide computer program products and mobile purchase shipping systems for facilitating purchase of a product by a customer. The products and systems may be configured to receive customer data associated with the customer and to validate at least a portion of the received customer data. The products and systems may then receive package data associated with the product and receive payment data from a type of payment presented by the customer. Once received, the products and systems may use at least a portion of the validated data, the package data, and the payment data to generate a shipping manifest. In certain embodiments, the products and systems may include a magnetic card reader configured to read customer data from a customer driver's license. Still other embodiments may incorporate a mobile printer, such that the products and systems may generate a package shipping label, a shipping manifest, and/or a receipt.

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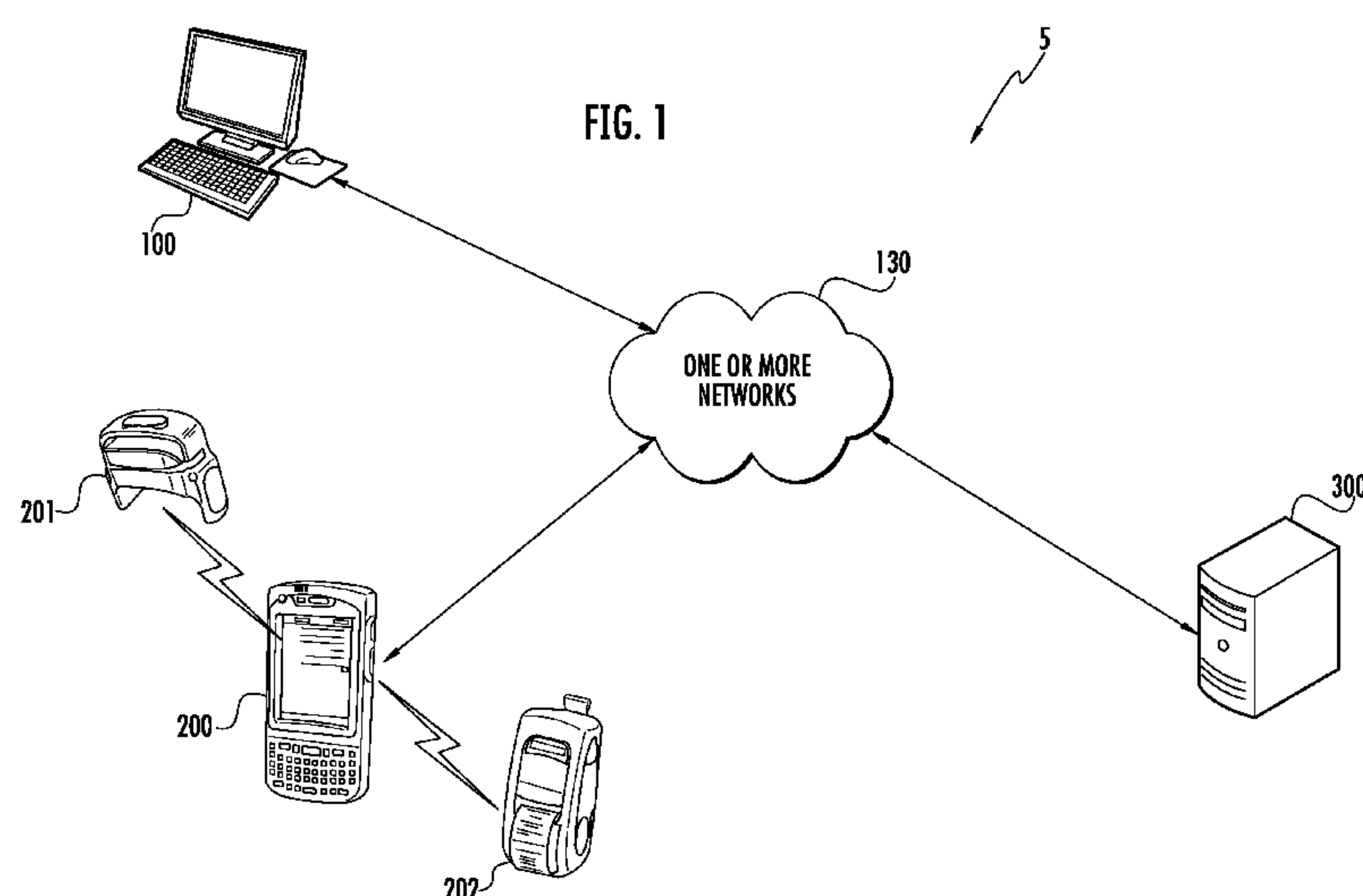
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(54) Title: SYSTEMS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR MOBILE PROCESSING OF PACKAGE SHIPMENT ORDERS AT A POINT OF SALE

(57) **Abstract:** Various embodiments provide computer program products and mobile purchase shipping systems for facilitating purchase of a product by a customer. The products and systems may be configured to receive customer data associated with the customer and to validate at least a portion of the received customer data. The products and systems may then receive package data associated with the product and receive payment data from a type of payment presented by the customer. Once received, the products and systems may use at least a portion of the validated data, the package data, and the payment data to generate a shipping manifest. In certain embodiments, the products and systems may include a magnetic card reader configured to read customer data from a customer driver's license. Still other embodiments may incorporate a mobile printer, such that the products and systems may generate a package shipping label, a shipping manifest, and/or a receipt.**WO 2013/106085 A1**

SYSTEMS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR MOBILE PROCESSING OF PACKAGE SHIPMENT ORDERS AT A POINT OF SALE

BACKGROUND

Many retail sales providers that offer a variety of retail articles for sale are located in and operated within larger retail facilities. Such retail sales providers are often event or special occasion (e.g., game day) driven, in which case, customer volumes may be extremely high. In such instances, it is often desirable to facilitate customer processing of desired purchases for not only provider efficiency, but also customer convenience. In the past, customers must locate an item for purchase and subsequently wait in, often quite long, lines to purchase the same. As such, a need exists for an improved device that facilitates seamless and efficient completion of such transactions, without the need for traditional cashiers and their associated lines.

Further, because such retail sales providers as described above are often event or special occasion driven, it is often preferable to offer consolidated sales purchase and shipping services to customers. Indeed, customers who are attending events such as football games, concerts, and the like, typically do not want to lug purchased items around at their attended event or occasion. In the past, customers have either had to postpone purchases until the end of the night further exacerbating the problems highlighted above, or had to carry their purchases around. As such, a need exists for a mobile device that not only processes purchase orders, but also electronically collects the customer data necessary for not only purchasing but also shipping a customer's items.

BRIEF SUMMARY

Various embodiments of the present invention address the above needs and achieves other advantages by providing a mobile purchase and shipping system for facilitating a purchase of a product by a customer. The system according to these and other embodiments may comprise one or more memory storage areas and one or more computer processors that are configured to receive data stored in the one or more memory storage areas. The one or more computer processors may be further configured to: receive customer data associated with the customer; validate at least a portion of the received customer data; receive package data associated with the product; receive payment data from a type of payment presented by the customer; and use at least a portion of the validated data, the package data, and the payment data to generate a shipping manifest.

Still further embodiments of the present invention provide a mobile purchase and shipping system for facilitating a purchase of a product by a customer. Such systems comprise one or more memory storage areas and one or more computer processors that are configured to receive data stored in the one or more memory storage areas. The one or
5 more computer processors may be further configured to: receive customer data; validate at least a portion of the received customer data; and use at least a portion of the validated data to facilitate generation of a shipping manifest.

Various embodiments of the present invention provide a computer program product comprising at least one computer-readable storage medium having computer-
10 readable program code portions embodied therein. The computer-readable program code portions may comprise: a first executable portion configured for receiving customer data; a second executable portion configured for validating at least a portion of the received customer data; a third executable portion configured for receiving package data associated with a product; a fourth executable portion configured for receiving payment data; and a
15 fifth executable portion configured for using at least a portion of the validated data, the package data, and the payment data to generate a shipping label manifest.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

Having thus described various embodiments of the invention in general terms,
20 reference will now be made to the accompanying drawings, which are not necessarily drawn to scale, and wherein:

Figure 1 is a schematic diagram of an exemplary mobile shipping system according to various embodiments;

Figure 2 is schematic block diagram of a mobile device server according to various
25 embodiments of the exemplary mobile shipping system;

Figure 3 is a more detailed schematic block diagram of the customer data module, the data validation module, the package data module, the payment data module, and the print data module, each shown in Figure 2 according to various embodiments;

Figure 4 is a flow diagram of steps executed by the mobile device server shown in
30 Figure 2 according to various embodiments;

Figure 5 is a flow diagram of steps executed by the customer data module shown in Figure 2 according to various embodiments;

Figure 6 is a flow diagram of steps executed by the data validation module shown in Figure 2 according to various embodiments;

Figure 7 is a flow diagram of steps executed by the package data module shown in Figure 2 according to various embodiments;

Figure 8 is a flow diagram of steps executed by the payment data module shown in Figure 2 according to various embodiments;

5 Figure 9 is a flow diagram of steps executed by the print data module shown in Figure 2 according to various embodiments;

Figure 10 is an exemplary main display screen of a handheld device of the mobile shipping system according to various embodiments;

10 Figure 11 is an exemplary customer data entry screen of a handheld device of the mobile shipping system according to various embodiments;

Figure 12 is an exemplary view of the customer data entry screen shown in Figure 11, but with populated customer data fields according to various embodiments;

Figure 13 is an exemplary data validation screen of a handheld device of the mobile shipping system according to various embodiments;

15 Figure 14 is an exemplary package data entry screen of a handheld device of the mobile shipping system according to various embodiments;

Figure 15 is an exemplary payment data entry screen of a handheld device of the mobile shipping system according to various embodiments;

20 Figure 16 is an exemplary print data entry screen of a handheld device of the mobile shipping system according to various embodiments;

Figure 17 is an exemplary shipping label according to various embodiments;

Figure 18 is an exemplary ticket according to various embodiments; and

Figure 19 is an exemplary receipt according to various embodiments.

25 DETAILED DESCRIPTION OF VARIOUS EMBODIMENTS

Various embodiments of the present invention now will be described more fully hereinafter with reference to the accompanying drawings, in which some, but not all embodiments of the invention are shown. Indeed, embodiments of the invention may be embodied in many different forms and should not be construed as limited to the
30 embodiments set forth herein. Rather, these embodiments are provided so that this disclosure will satisfy applicable legal requirements. The term “or” is used herein in both the alternative and conjunctive sense, unless otherwise indicated. Like numbers refer to like elements throughout.

Systems, Apparatuses, Methods, and Computer Program Products

As should be appreciated, various embodiments may be implemented in various ways, including as systems, apparatuses, methods, or computer program products. Accordingly, the embodiments may take the form of an entirely hardware embodiment or an embodiment in which a processor is programmed to perform certain steps. Furthermore, various implementations may take the form of a computer program product on a computer-readable storage medium having computer-readable program instructions embodied in the storage medium. Any suitable computer-readable storage medium may be utilized including hard disks, CD-ROMs, optical storage devices, or magnetic storage devices.

Various embodiments are described below with reference to block diagrams and flowchart illustrations of methods, apparatus, systems, and computer program products. It should be understood that each block of the block diagrams and flowchart illustrations, respectively, may be implemented in part by computer program instructions, e.g., as logical steps or operations executing on a processor in a computing system. These computer program instructions may be loaded onto a computer, such as a special purpose computer or other programmable data processing apparatus to produce a specifically-configured machine, such that the instructions which execute on the computer or other programmable data processing apparatus implement the functions specified in the flowchart block or blocks.

These computer program instructions may also be stored in a computer-readable memory that can direct a computer or other programmable data processing apparatus to function in a particular manner, such that the instructions stored in the computer-readable memory produce an article of manufacture including computer-readable instructions for implementing the functionality specified in the flowchart block or blocks. The computer program instructions may also be loaded onto a computer or other programmable data processing apparatus to cause a series of operational steps to be performed on the computer or other programmable apparatus to produce a computer-implemented process such that the instructions that execute on the computer or other programmable apparatus provide operations for implementing the functions specified in the flowchart block or blocks.

Accordingly, blocks of the block diagrams and flowchart illustrations support various combinations for performing the specified functions, combinations of operations for performing the specified functions and program instructions for performing the specified functions. It should also be understood that each block of the block diagrams and flowchart illustrations, and combinations of blocks in the block diagrams and flowchart illustrations, can be implemented by special purpose hardware-based computer systems that perform the specified functions or operations, or combinations of special purpose hardware and computer instructions.

General Overview

In general, according to various embodiments of the present invention, systems, apparatuses, methods, and computer program products are provided for coordinating the onsite processing of package purchase and shipment orders placed at remote points of sale. This may include capturing, storing, and analyzing content data associated with such orders, including the non-limiting examples of customer data, address validation data, package data, payment data, and print data. To provide improved efficiency of scale, in various embodiments, at least a portion of the customer data may be scanned from, for example, a customer's driver's license. In certain embodiments, the driver's license data may be scanned via a magnetic card reader. In other embodiments, such may be scanned via a two-dimensional (2-D) imager, while in still other envisioned embodiments such data may be read with a barcode scanner or any of a variety of devices, as may be configured to acquire data from one or more of the variously formatted driver's licenses. As will be described in further detail below, at least certain embodiments may provide a stylus and/or touchpad screen for alternative data entry capabilities. In particular embodiments, the customer data may include any of a variety of combinations of a customer name, a customer address, a customer email, a customer phone number, and, if different from above, certain recipient data.

To provide further efficiency and customer convenience, in various embodiments, an address validation tool may be accessed to minimize inaccuracies encountered in data scanned from driver's licenses or otherwise acquired. In certain embodiments, the address validation tool returns one or more updated addresses, as validated against one or more standardization tools, as commonly known and used in the art, as disclosed in at least U.S. Patent Application Publication No. 2005/0267821 owned by the United Parcel Service of America, Inc.

Upon selection of a validated and/or standardized address, various embodiments may prompt a user to, if desired, further enter package and/or payment data. In certain embodiments, such may be acquired manually, while in other embodiments, such may be scanned as previously described with regard to the customer data. In particular
5 embodiments, the package data may include any of a variety of combinations of a package weight, package dimensions, a service code, a service cost, and a reference number (e.g., a tracking and/or routing code). The payment data may include any of a variety of combinations of a payment type, a card number, and an authorized signature.

Upon receipt of certain combinations of the above customer, package, and/or
10 payment data, particular embodiments are configured to prompt user printing of various combinations of a shipping label, a “pick” ticket for subsequent payment, and/or a receipt. It should be understood that this process can be performed at a variety of remote locations and during a variety of timeframes, although generally prior to shipping a package to which the shipping label is affixed so as to (a) provide increased efficiency of customer
15 service and (b) enable fully mobile processing of all stages of a purchase and shipping transaction.

Exemplary System Architecture

Figure 1 provides an illustration of one type of an onsite shipping system **5** that can be used in conjunction with various embodiments of the present invention. In the
20 illustrated embodiment, the system **5** may include one or more networks **130**, a mobile device **200**, a data acquisition device **201**, a printing device **202**, a central server **300**, and a remote terminal **100**. While Figure 1 illustrates the various system entities as separate, standalone entities, the various embodiments are not limited to this particular architecture.

According to various embodiments of the present invention, the one or more
25 networks **130** may be capable of supporting communication in accordance with any one or more of a number of second-generation (2G), 2.5G, third-generation (3G), and/or fourth-generation (4G) mobile communication protocols, or the like. More particularly, the one or more networks **130** may be capable of supporting communication in accordance with 2G wireless communication protocols IS-136 (TDMA), GSM, and IS-95 (CDMA). Also,
30 for example, the one or more networks **130** may be capable of supporting communication in accordance with 2.5G wireless communication protocols GPRS, Enhanced Data GSM Environment (EDGE), or the like. In addition, for example, the one or more networks **130** may be capable of supporting communication in accordance with 3G wireless communication protocols such as Universal Mobile Telephone System (UMTS) network

employing Wideband Code Division Multiple Access (WCDMA) radio access technology. Some narrow-band AMPS (NAMPS), as well as TACS, network(s) may also benefit from embodiments of the present invention, as should dual or higher mode mobile stations (e.g., digital/analog or TDMA/CDMA/analog phones). As yet another example, each of the
5 components of the system **5** may be configured to communicate with one another in accordance with techniques such as, for example, radio frequency (RF), Bluetooth™, infrared (IrDA), or any of a number of different wired or wireless networking techniques, including a wired or wireless Personal Area Network (“PAN”), Local Area Network (“LAN”), Metropolitan Area Network (“MAN”), Wide Area Network (“WAN”), or the
10 like.

Although at least the mobile device **200**, the central server **300**, and the remote terminal **100** are illustrated in Figure 1 as communicating with one another over the same one or more networks **130**, these devices may likewise communicate over multiple, separate networks. For example, while the mobile device **200** may communicate with the
15 central server **300** over a wireless personal area network (WPAN) using, for example, Bluetooth techniques, the remote terminal **100** may communicate with the central server **300** over a wireless wide area network (WWAN), for example, in accordance with EDGE, or some other 2.5G wireless communication protocol.

According to one embodiment, in addition to receiving data from the remote
20 terminal **100** and/or the central server **300**, the mobile device **200** may be further configured to collect and transmit data on its own. For example, according to one embodiment, the mobile device **200** may include a data acquisition device **201** such as the non-limiting example of a magnetic card reader configured to acquire certain customer data in the form of driver’s license data. In particular embodiments, and as is described in
25 more detail below, the data acquisition device **201** may be further used to gather information regarding a package or purchased item, or even a method of payment, which may, in turn, be used to facilitate further mobile processing of a purchase and shipment transaction.

The mobile device **200** may be any device associated with a carrier (e.g., a
30 common carrier, such as UPS, FedEx, USPS, etc.). In various embodiments, the data mobile device **200** may be capable of receiving and/or sending data via one or more input units or devices, such as a keypad, a touchpad, a magnetic card reader **201**, a barcode scanner, a radio frequency identification (RFID) reader, an interface card (e.g., modem, etc.), a printing device **202**, and/or a receiver. The mobile device **200** may be configured

to communicate with any combination of these input units or devices via the same one or more networks **130**, as previously described, or alternatively, as shown in at least Figure 1 with respect to the magnetic card reader **201** and the printing device **202**, at least some devices may communicate over multiple, separate networks configured in any of a variety of formats, as previously described herein.

The mobile device **200** may further be capable of storing data to one or more volatile or non-volatile memory modules, and outputting the data via one or more output units or devices, for example, by displaying data to the user operating the device, or by transmitting data, for example over the one or more networks **130** for verification and/or validation. One type of mobile device **200**, which may be used in conjunction with embodiments of the present invention is the Motorola MC70, presently utilized by UPS, although any of a variety of commonly known and understood handheld computer devices may be incorporated as within the scope of the present invention. Similarly, one type of printing device **202**, which may be used in conjunction with the mobile device **200** of the present invention is the Zebra QL 220 Bluetooth printer, presently utilized by UPS, although any of a variety of commonly known and understood mobile printing devices may be incorporated as within the scope of the present invention.

The remote terminal **100**, in various embodiments, may be any device capable of receiving data via one or more input units or devices, such as a keypad, a touchpad, a barcode scanner, an RFID, an interface card (e.g., modem, etc.), and/or a receiver. The remote terminal **100** may further be capable of storing data to one or more volatile or non-volatile memory modules, and outputting the data via one or more output units or devices, for example, by displaying data to the user operating the terminal **100**, or by transmitting data, for example, over the network **130**. In certain embodiments, the remote terminal **100** is associated with the carrier at a location remote from the central server **300**. In other embodiments, the remote terminal **100** is associated with a client or customer, also at a location remote from the central server **300**. In at least one embodiment, the remote terminal **100** may be a register/payment terminal at a retail sales location counter, where, for example, at least a portion of customer payment may be received.

Mobile Device

In various embodiments, the mobile device **200** includes various means for performing one or more functions in accordance with embodiments of the present invention, including those more particularly shown and described herein. It should be understood, however, that the mobile device **200** may include alternative devices for

performing one or more like functions, without departing from the spirit and scope of the present invention.

Figure 2 is a schematic diagram of the mobile device **200** according to various embodiments. The mobile device **200** includes a processor **230** that communicates with
5 other elements within the device via, for example, a system interface or bus **235**. Also included in the mobile device **200** is a display/input device **250** for receiving and displaying data. This display/input device **250** may be, for example, a keyboard or scanning device that is used in combination with a monitor. The mobile device **200** further includes memory **220**, which preferably includes both read only memory (ROM)
10 **224** and random access memory (RAM) **222**. The device's ROM **224** is used to store a basic input/output system **226** (BIOS), containing the basic routines that help to transfer information between elements within the mobile device **200**.

In addition, the mobile device **200** includes at least one storage device **210** for storing information on various computer-readable media, such as the non-limiting
15 examples of flash memory cards and/or SD cards. As will be appreciated by one of ordinary skill in the art, each of these storage devices **210** may be connected to the system bus **235** by an appropriate interface. The storage devices **210** and their associated computer-readable media provide nonvolatile storage for a personal and/or handheld computer. As will be appreciated by one of ordinary skill in the art, the computer-readable
20 media described above could be replaced by any other type of computer-readable media known in the art. Such media include, for example, magnetic cassettes, CD-ROM disks, digital video disks, Bernoulli cartridges, etc.

A number of program modules may be stored by the various storage devices **210** and within RAM **222**. Such program modules include an operating system **280**, a
25 customer data module **400**, a validation data module **500**, a package data module **600**, a payment data module **700**, and a print data module **800**. According to various embodiments, the customer data module **400**, the validation data module **500**, the package data module **600**, the payment data module **700**, and the print data module **800** control certain aspects of the operation of the central server **200** with the assistance of the
30 processor **230** and operating system **280**.

In general, the customer data module **400** is configured to (i) receive, store, and provide data associated with a customer, and (ii) receive, store, and provide data associated with a recipient. The validation data module **500** is configured to activate a remote validation tool that, in turn, performs one or more hygiene cleansing processes on

at least a received customer and/or recipient address. The package data module **600** is configured to receive, store, and provide data associated with a package. The payment data module **700** is configured to receive, store, and provide data associated with a customer's form of payment. The print data module **800** is configured to generate one or more of a shipping label, a pick ticket, and/or a receipt, depending upon various inputs received from at least the customer data module **400**, the package data module **600**, and the payment data module **700**. Various embodiments of the logic employed by these modules are described in more detail below in relation to Figures 4-9, while various embodiments of user interface screens employed by these modules are described in more detail below in relation to Figures 10-16.

In a particular embodiment, these program modules **400**, **500**, **600**, **700**, and **800**, are executed by and on the mobile device **200** and are configured to generate graphical user interfaces accessible to users of the system **5**. In other embodiments, the user interfaces may be alternatively stored remotely such that they may be accessible via one or more networks **130**, which may include the Internet or other feasible communications network, as previously discussed. In other embodiments, one or more of the modules **400**, **500**, **600**, **700**, and **800**, such as, for example the non-limiting example of the payment data module **700** may alternatively, or in addition (e.g., as a mirror module) be stored locally on one or more remote terminals **100**, and may be executed by one or more processors of the terminals **100**. According to various embodiments, the modules **400**, **500**, **600**, **700**, and **800** may send data to, receive data from, and utilize data contained in a database, which may be comprised of one or more separate, linked and/or networked databases.

Also located within the mobile device **200** is a network interface **260** for interfacing and communicating with other elements of the one or more networks **130**. It will be appreciated by one of ordinary skill in the art that one or more of the mobile device **200** components may be located geographically remotely from other mobile device **200** components. Furthermore, one or more of the mobile device **200** components may be combined, and/or additional components performing functions described herein may also be included in the mobile device **200**.

While the foregoing describes a single processor **230**, as one of ordinary skill in the art will recognize, the mobile device **200** may comprise multiple processors operating in conjunction with one another to perform the functionality described herein. In addition to the memory **220**, the processor **230** can also be connected to at least one interface or other

means for displaying, transmitting and/or receiving data, content or the like. In this regard, the interface(s) can include at least one communication interface or other means for transmitting and/or receiving data, content or the like, as well as at least one user interface that can include a display and/or a user input interface. The user input interface, in turn, can comprise any of a number of devices allowing the entity to receive data from a user, such as a keypad, a touch display, a joystick or other input device.

While reference is made to a single mobile “device” **200**, as one of ordinary skill in the art will recognize, embodiments of the present invention are not limited to such architecture. The system of embodiments of the present invention is further not limited to a single device, or similar network entity or mainframe computer system. Other similar architectures including one or more network entities operating in conjunction with one another to provide the functionality described herein may likewise be used without departing from the spirit and scope of embodiments of the present invention. For example, a mesh network of two or more personal computers (PCs), similar electronic devices, or handheld portable devices, collaborating with one another to provide the functionality described herein in association with the mobile device **200** may likewise be used without departing from the scope of embodiments of the present invention.

Mobile Device Logic

Figure 4 illustrates exemplary logical steps executed by the mobile device **200** to:

(i) analyze any of a variety of data captured by and received from the data acquisition device **201**, the mobile device itself, the remote terminal **100**, and/or the central server **300**; (ii) validate at least certain of the data captured and received; and (iii) generate one or more of a shipping label, a pick ticket for subsequent payment, and/or a receipt. Beginning with step **310**, the mobile device **200**, according to various embodiments, continually monitors the customer data module **400** to assess whether the latter has been received customer data **410**, as shown in at least Figure 3. If, in step **315**, the mobile device **200** determines that no access has occurred, monitoring continues. In such instances, the mobile device **200** may according to certain embodiments continually display a main screen **1000**, as shown in Figure 10, which may be configured to permit user access to module **400**, as will be described in further detail below. In other embodiments, the mobile device **200** may remain in a “standby” state, as commonly known and understood in the art, until the customer data module **400** is accessed. In any case, once the mobile device **200** determines that the customer data module **400** has been accessed, acquisition of customer data is prompted via step **320**.

Acquisition of customer data **410** according to certain embodiments may be performed via a magnetic card reader in step **322**, via a bar code scanner in step **324**, and/or via a keyboard or touchscreen interface of the mobile device **200**, as in step **326**. Methods of customer data input may vary dependent upon a particular scenario or desired application; however, it should be understood that any of a variety of the above-mentioned devices may be employed to acquire any combination of any portion of the customer data **410** of, for example, Figure 3. In certain embodiments, the customer data **410** may contain various pieces of information located on a customer's driver's license, and may include the non-limiting examples of a customer name **401** and a customer address **402**. The customer data **410**, according to various embodiments, may include, for example, further pieces of information such as a customer email **403**, a customer phone number **404**, and/or a variety of recipient information **405**, if, for example such differs in any regard from the above customer data **410**.

Returning to Figure 4, if, after implementing step **320**, the mobile device **200** determines that no customer data **410** has been received, the device may call the data acquisition device **201** for a status update. In certain embodiments, the status update, when received, may identify whether any customer data **410** was previously transmitted to the customer data module **400**, but never received. In other embodiments, the mobile device **200** may also request re-transmittal of any customer data **410** identified as having been previously transmitted. In one embodiment, when back at step **320** for a second or subsequent time, if customer data **410** still is not received, the mobile device **200** may passively await receipt of the customer data. In another embodiment, when back at step **320** for a second or subsequent time, if the customer data **410** still is not received, the mobile device **200** will continually loop back through steps **322**, **324**, and/or **326** until customer data is received. In other embodiments (not shown), the mobile device **200** may call a remote terminal **100** instead of and/or in addition to the data acquisition device **201**.

As previously described, when awaiting receipt of customer data **410**, the mobile device **200** may remain in a "stand-by" mode, which according to at least certain embodiments may disable display of a main screen **1000**, as illustrated in at least Figure 10, until a user accesses the mobile device to provide customer data. However, in other envisioned embodiments, the main screen **1000** may remain active until a user actually enters some form of data, depending upon the needs and/or desires of a particular application. In still other envisioned embodiments, it should be understood that after a predetermined period of time or a predetermined number of queries, the mobile device **200**

may discontinue altogether further monitoring activities in this regard. Such discontinuation of monitoring could essentially “cancel out” a transaction, as may be desirable for a particular application wherein, for example, a user decides not to purchase and ship a retail article, as will be described in further detail below.

5 If, during the process of executing steps **322**, **324**, and/or **326**, the mobile device **200** determines that customer data **410** has been received at the customer data module **400**, the device proceeds to step **330** and transmits at least a portion of the data to the data validation module **500**. In step **332**, the mobile device **200** according to particular embodiments continues to monitor the data validation module **500** subsequent to
10 transmitting the portion of customer data to the same. The expectation is, in these and still other envisioned embodiments, that cleansed, standardized, and/or validated versions of at least a portion of the previously transmitted data will be returned to the customer data module **400** and/or the mobile device **200** in general by and from the data validation module and/or the remote validation tool **502**, as will be further described in more detail
15 below.

 Once, in step **334**, the mobile device **200** has received notification that validation of at least a portion of the transmitted customer data **410** has been completed, the mobile device **200** according to various embodiments proceeds to step **340**, during which the mobile device prompts a user thereof to select at least certain portions of the validated data
20 to replace the originally received and transmitted data. In certain embodiments, multiple versions (e.g., options) of validated data may be received, as described in further detail below, in which case, the mobile device **200** may, in step **340**, prompt a user to select a particular option of validated data from the more than one options provided. As mentioned, such will be described in further detail below, with reference to at least Figures
25 6 and 13.

 Remaining with Figure 4, it may be seen that the mobile device **200** may, according to various embodiments, continually monitor in step **342** whether a user of the device has (or, alternatively, has not) selected validation data from the one or more options of the validation results **505**, as shown in at least Figure 3. In certain embodiments, it
30 should be understood that the mobile device **200** may monitor such activity in a passive manner, perhaps even remaining in a “standby” state until such data is selected. In other embodiments, the mobile device **200** may be configured to behave substantially differently, for example, by actively re-prompting a user thereof to select a desired option of validated data so that the overall logic processing of Figure 4 may proceed without

undue delay. In still other envisioned embodiments, it should be understood that after a predetermined period of time, the mobile device **200** may discontinue monitoring activities in this regard. Such discontinuations of monitoring could essentially “cancel out” a transaction, as may be desirable for a particular application wherein, for example, a user decides not to purchase and ship a retail article, as will be described in further detail below.

Once validated data has been received and selected at the mobile device **200**, the device proceeds to the steps **350** and **360**, as may be envisioned according to certain applications in which consolidated purchase and shipment processes are desired. In these and still other envisioned embodiments, the step **350** prompts for user entry of various items of package data via the package data module **500**. According to various embodiments, exemplary items of package data **610**, as shown in at least Figure 3, may include the non-limiting examples of a package weight **601**, package dimensions **602**, a service type **603**, a service cost **604**, and/or a reference number **605** such as a tracking or routing code. It should be understood that any portion or combination of the package data **610** may be acquired in a similar fashion as described above with regard to acquisition of customer data **410**, namely in various combinations of steps **322**, **324**, and/or **326**.

It should be further understood that in various embodiments, the customer may simply identify a product or package for purchase, in response to which the device **200** may scan or otherwise retrieve any of a variety of data **610** associated with that particular product or package. Of course, in other embodiments, the customer may manually or otherwise directly provide at least some portion, or even alternatively the entirety, of the data **610** associated with the particular product or package. In any event, if, after executing step **350**, the mobile device **200** determines according to various embodiments that no package data **610** has been acquired, the device may call the data acquisition device **201** for a status update, which may be configured in any of the variety of manners as previously described herein. Monitoring and update activities in this regard may be implemented in, for example, step **352** via any of a variety of combinations of active, passive, and/or discontinuous monitoring methods, as likewise previously described herein.

It should be understood that in certain embodiments of the mobile device **200**, package data **610** may not be received at all, as may be desirable for a particular end-use application. In such instances, provided customer data **410** has been previously received and/or validated, the mobile device may proceed nevertheless to execute step **355**, as

illustrated in at least Figure 4. During execution of step **355** according to various embodiments, the mobile device **200** generates a “pick-ticket,” which may according to certain embodiments, be carried out at least in part in conjunction with the print data module **800**, as will be described in further detail below. In at least these envisioned
5 embodiments, the logic executed by the mobile device **200** would thus be completed, in which case, according to a particularly envisioned application, a user of the device could take the generated “pick-ticket” along with a selected package to a traditional checkout counter for further assistance with shipment and payment. At least one exemplary “pick ticket” is illustrated in at least Figure 18, as will be described in further detail below.

10 In those various further envisioned embodiments in which package data **610** is indeed received in step **352**, regardless of how so, as will be described in further detail below, the mobile device **200** may according to various embodiments further proceed to execute step **360**, in which a user of the device is further prompted (or alternatively permitted) to provide any combination of a variety of items that comprise payment data
15 **710**, as shown in at least Figure 3. Such payment data **710** may, in certain embodiments include the non-limiting examples of payment type information **701**, a card number **702**, a security code **703**, an expiration data **704**, and an authorized signature **705** for use of the particular payment method. It should be understood that any portion or combination of the payment data **710** may be acquired in a similar fashion as described above with regard to
20 acquisition of customer data **410** and/or package data **610**, namely in various combinations of steps **322**, **324**, and/or **326**.

In any event, if, after executing step **360**, the mobile device **200** determines according to various embodiments that no payment data **710** has been acquired, the device may call the data acquisition device **201** for a status update, which may be configured in
25 any of the variety of manners as previously described herein. Monitoring and update activities in this regard may be implemented in, for example, step **362** via any of a variety of combinations of active, passive, and/or discontinuous monitoring methods, as likewise previously described herein.

It should be understood that in certain embodiments of the mobile device **200**,
30 payment data **710** may not be received at all, as may be desirable for a particular end-use application. In such instances, provided at least customer data **410** and package data **610** has been previously received and/or validated, the mobile device may proceed nevertheless to execute step **365**, as illustrated in at least Figure 4. During execution of step **365** according to various embodiments, the mobile device **200** generates not only a

“pick-ticket,” as it may be likewise configured to do in step **355**, as previously described herein, but also a shipping label. The generation of both items may, according to certain embodiments, be carried out at least in part in conjunction with the print data module **800**, as will be described in further detail below. In at least these envisioned embodiments, the logic executed by the mobile device **200** would thus be completed, in which case, a user of the mobile device could affix the generated shipping label, an example of which is illustrated in at least Figure 17, to the package associated with the received package data **610**. In these and still other envisioned embodiments, the user could take the labeled package to a traditional, or otherwise configured, checkout counter for further assistance with shipment and, in particular, payment.

In those various further envisioned embodiments in which payment data **710** is indeed received in step **362**, regardless of how so, as will be described in further detail below, the mobile device **200** may according to various embodiments further proceed to execute step **370**. During step **370**, the mobile device may according to various embodiments generate not only a signed receipt, together with a shipping label, the latter of which, as generated in at least step **365**. It should be understood generally that, as payment data has been received and/or processed, the mobile device **200**, when executing step **370** need not generate a “pick ticket,” as previously would have been done in at least steps **355** and **365**. The generation of either or both of the shipping label and the signed receipt may, according to certain embodiments, be carried out at least in part in conjunction with the print data module **800**, as will be described in further detail below. In at least these envisioned embodiments, the logic executed by the mobile device **200** would thus be completed, in which case, a user of the mobile device could affix the generated shipping label, an example of which is illustrated in at least Figure 17, to the package associated with the received package data **610**. In these and still other envisioned embodiments, the user could then retain their signed receipt for future reference, as may be desirable for a particular application.

Customer Data Module

According to various embodiments, as illustrated in Figure 3, the customer data module **400** is configured to (i) receive, store, and provide data associated with a customer, and (ii) receive, store, and provide data associated with a recipient.

Figure 5 illustrates exemplary steps executed by the customer data module **400** according to various embodiments. Beginning with step **420**, the customer data module **400** of certain embodiments assesses whether data **410** (see Figure 3) associated with a customer (which may or may not also be a user of the mobile device **200**) has been
5 received by the module. In various envisioned embodiments, the data module **400** makes this assessment by scanning one or more data tables associated with the module and identifying customer data **410** within the data tables that was not present during a previous assessment likewise performed under step **420**.

If, in various embodiments, execution of step **420** by the customer data module **400**
10 determines that no new customer data **410** has been received, the customer data module proceeds, in step **424**, to continue monitoring for receipt of such data. As previously described herein, such monitoring may, in certain embodiments be continuous in nature, while in other embodiments, such may be periodic, as may be desirable for a particular application. As a non-limiting example, a proprietor making use of such mobile devices
15 **200** during the course of operating a business may configure the devices to automatically query for new or updated customer data **410**, so as to avoid undue burdens upon associated systems if such queries were performed less frequently (e.g., hourly or otherwise). Further, such monitoring may, in still other embodiments be passive, although in other envisioned embodiments, the module **400** may be configured to actively query one or
20 more databases for new customer data **410**. In at least one embodiment (not shown), the data module **400** may query a remote terminal **100** and/or a central server **300** or the like, regarding customer data **410** instead of and/or in addition to querying the data acquisition device **201**.

In various embodiments, the customer data **410** received in step **420** and
25 subsequently retrieved in step **430** may include a variety of information commonly associated with an individual driver's license or identification card. As best understood from Figure 3, the customer data **410** may include at least a customer name **401**, a customer address **402**, a customer email **403**, a customer phone **404**, and recipient data **405**. According to certain embodiments, at least the customer name **401** and the customer
30 address **402** may be acquired by a scan of the customer's driver's license (or, alternatively, as the case may be, identification card). In various embodiments, such may be performed by the mobile device **200** in conjunction with a data acquisition device **201**, as has been previously generally described herein.

As mentioned, according to various embodiments, the mobile device **200** may be configured with a data acquisition device **201** so as to acquire some portion of the desired customer data **410** directly from the customer's driver's license. In certain embodiments, the data acquisition device **201** may be integrally formed as at least a portion of the mobile device itself, while in other envisioned embodiments, the two devices may be separately manufactured and configured, as in at least Figure 1. In any of these "separate" embodiments, the two devices may be removably attached or merely positioned relatively adjacent or nearby, relative to one another, as a particular application may desire. In this manner, the two devices **200**, **201** may efficiently and effectively communicate data there-
between, as has also been described previously herein.

Returning to further details surrounding the execution of step **430** of Figure 5 according to various embodiments, it should be understood that the data acquisition device **201**, however physically configured, may substantially comprise a magnetic card reader. Such magnetic card readers, as commonly known and understood in the art, may be configured to read a variety of data from magnetic strips located on a variety of scanned sources, including the non-limiting examples of driver's licenses, identification cards, banking and credit cards, and the like. In any of these and other envisioned embodiments, the magnetic card reader may be configured to retrieve at least a portion of the customer data **410** directly from a scan of the magnetic strip located on, for example, the customer's driver's license. In still other envisioned embodiments, the data acquisition device **201** may concurrently, or alternatively, comprise one or more of a two-dimensional imager and a bar code scanner, as such may prove beneficial for acquiring customer data from driver's licenses and other customer data sources, which may or may not incorporate a magnetic strip, as previously described.

The mobile device **200** may, in the various embodiments comprising a data acquisition device **201**, further comprise an integrated customer data entry screen **1100**, as illustrated in at least Figure 11. As may be seen from that figure, a user wishing to populate certain of the various displayed customer data fields, namely customer name field **1101**, customer address field **1102**, customer email field **1103**, and/or customer phone field **1104** may manually enter any combination or portion of those fields via the mobile device **200** itself. For example, in at least the illustrated embodiment of Figure 11, the mobile device **200** may incorporate a touchscreen display screen that includes an on screen input **1110** capable of receiving user-typed data into each of the respective fields. Still other envisioned embodiments of the mobile device **200** may, instead of a touchscreen

display screen, use an external keyboard or otherwise configured input device, such as, for example, the remote terminal **100** for manual entry of particular fields of data. Of course, manual entry of any of the various customer data fields may be configured in any of a variety of manners, as generally may be commonly known and understood in the art.

5 Where manual entry of at least a portion of the customer data **410** is performed according to various embodiments, such may be done in conjunction with acquisition of data via the data acquisition device **201** (e.g., the magnetic card reader). However, in other envisioned embodiments, the acquisition of customer data manually may be preferable, or even necessary, depending on various external factors. For example, a user
10 of the device **200** may encounter a customer having an unreadable source of customer data, whether a damaged magnetic strip upon a driver's license or merely a previously unrecognizable data encryption format. In such a scenario, the device **200** according to various embodiments may acquire the necessary customer data **410** via alternative methods, whether via manual entry, as previously described, or otherwise. As such, it
15 should be understood that not only do the various concurrent and/or alternative devices for facilitating data acquisition provide various alternative user options, such also serve as backup or safety mechanisms should primarily relied upon options fail.

 Once the customer data module **400** determines that new customer data **410** has been received, whether via the data acquisition device **201** or otherwise, the module
20 proceeds to steps **460** and **480**. In various embodiments, during step **460**, the customer data module **400** provides (e.g., transmits) at least a portion of the customer data **410** to the validation module **500**. As will be discussed in further detail below in relation to Figures 3 and 6, the validation module **500** is generally configured to cleanse, standardize, and/or validate at least a portion of the customer data transmitted to its module. In various
25 embodiments, during step **480**, the data module **400** may further prompt the user to provide package data **610** to the package data module **600**, as will be described in further detail below. In certain embodiments, user prompted acquisition of package data **610** may occur concurrently with the steps performed by the data validation module **500**, as likewise described below. In other embodiments, as may be desirable for particular
30 applications, acquisition of the package data **610** may be deferred until after the module **500** validates at least a portion of the customer data **410**.

 In various embodiments, as has been alluded to above, the customer data module **400** may be configured to receive or acquire, whether actively or in a more passive manner, recipient data **405**. Such recipient data **405** may be necessary, in certain

embodiments, where, as a non-limiting example, the customer with whom the customer data **410** is associated wishes to ship the purchased retail article to a third party recipient. In still other embodiments, it may be that the customer's scanned address **402**, or some variety or combination of the customer data **410** may be different from an address to
 5 which the customer wishes the item shipped (e.g., if the address **402** is a post office box, but shipment is desired to a street address, or alternatively, to a customer's business address).

In any of these envisioned embodiments, it should be understood that the recipient data **405** may be acquired by the customer data module **400** in any of the previously
 10 described manners, as may be desirable or most practical for a particular scenario or application. It should also be understood, as will be described in further detail below, that when such recipient data **405** is acquired by the module **400**, such may be transmitted by the module **400** to the data validation module **500** in conjunction with, or alternatively, in place of, a portion of the customer data **410**. User selection of which data is so
 15 transmitted, including whether recipient data **405** is acquired at all may be facilitated according to various embodiments by the non-limiting exemplary customer data entry screen **1100**, as shown in at least Figures 11 and 12 and described in further detail below.

Data Validation Module

According to various embodiments, as shown in Figure 3, validation data module
 20 **500** is configured to activate a remote validation tool **502** that, in turn, performs one or more hygiene cleansing processes on at least a received customer and/or recipient address.

In various embodiments, the remote validation tool **502** comprises one or more software programs that generally reside on centralized frameworks, such as that of the central server **300** of Figure 1. In certain embodiments, the validation tool **502** may
 25 comprise merely a portion of a consolidated package of programs, such as the non-limiting example of UPS Online Tools. UPS Online Tools are generally available in both XML (eXtensible Markup Language) and HTML formats and typically includes at least the following tools: package tracking; rates & service selection; time in transit calculator; address validation; signature tracking; and custom shipping. As such, it should be
 30 understood that according to various envisioned embodiments, the validation tool **502** may comprise the UPS Online Address Validation Tool, various aspects of which are generally described in U.S. Patent App. Pub. No. 2002/0196944.

As a non-limiting example, the UPS Online Address Validation Tool may validate that an input city, state, postal code combination is consistent, and return a

list of up to ten (10) valid city-state-postal code combinations that closely match the input data. In other envisioned embodiments, however, the validation tool **502** may comprise any of a variety of address validation tools, as commonly known and understood in the art as being capable of cleansing at least portions of address-related data.

5 Figure 6 illustrates exemplary steps executed by the data validation module **500** according to various embodiments. Beginning with step **520**, the data validation module **500** receives at least a portion of the customer data **410** from the customer data module **400**. In certain embodiments, the data validation module **500** requests the data from the customer data module **400**, while in other embodiments, the customer data module **400**
10 transmits the data automatically without request from the data validation module **500**. In at least the illustrated embodiment (see also Figure 3), at least the customer address **402** is transmitted to the data validation module **500**. In other embodiments, it should be understood that, instead of the customer address **402**, an address-related portion of the recipient data **405** may be transmitted, as previously described herein. In still other
15 embodiments, the customer address **402** and the address-related portion of the recipient data **405** may both be transmitted. Still further envisioned embodiments may transmit additional data, as may be desirable for a particular application.

 In any event, according to various embodiments, once at least a portion of customer data **410** (and/or the recipient data **405**, as may be appropriate) has been received
20 by the data validation module **500**, the module proceeds to step **530**, wherein the remote validation tool **502** is activated. In certain embodiments, activation of the remote validation tool **502** involves the module **500** communicating with the central server **300**, where upon a plurality of tools, including the validation tool **502**, may be stored, as previously described herein. In other embodiments, the central server **300** may have to
25 further communicate with additional servers or infrastructure to access the tool **502**, depending on a particular application and design. In any of these embodiments, however, it should be understood that the validation tool **502** is generally not located upon the mobile device **200**, although still other embodiments may incorporate any of a variety of mobile applications or widgets through which the tool **502** may be remotely accessed.

30 In those embodiments wherein the data validation module **500** proceeds through step **530** by activating and/or contacting the validation tool **502**, as however may be the case, the data validation module **500** according to various embodiments next executes step **540** (see Figure 6), during which it receives a set of validated data results **505** (see Figure 3) from the tool. In certain embodiments, as has been described herein with regard to the

customer data module **400**, the validation module **500** may be configured to passively await receipt of the validated data results in step **540**. In other embodiments, however, it should be understood that the validation module **500** may be configured to continually, or alternatively periodically, query the tool **502** for receipt of results **505**.

5 Once the data validation module **500** receives the set of validated data results **505** from the validation tool **502**, the module is then configured, according to various embodiments, to prompt a user to select one of the displayed options within the set of results, as illustrated in an exemplary data validation screen **1200** of Figure 13, which will be described in further detail below. In certain embodiments, the set of results **505** may
10 include a plurality of options, while in other embodiments only a single result option may exist. Further, in still other envisioned embodiments, although a single or multiple results **505** may be returned by the validation tool **502**, a user, when prompted to select one of the results may also be given an option to reject all of the results, essentially selecting to use the originally input data **410** and/or **405**. Various embodiments of this nature, as
15 envisioned within the scope of the present invention, will be described in further detail below with reference to at least Figure 13, which illustrates an exemplary user interface screen **1200** for the execution of step **540** by the data validation module **500**.

 Returning to Figure 6, the data validation module **500** according to various embodiments may be configured, as was the customer data module **400**, to passively await
20 receipt of the validated data results in step **560**. In other embodiments, however, it should be understood that the validation module **500** may be configured to continually, or alternatively periodically, query the user for selection of the results **505** or, alternatively, of originally input customer data **410**.

 Once the data validation module **500** according to various embodiments has
25 received a user selection, whether of a particular subset of the set of validated results **505** or, alternatively, of originally input customer data **410**, as previously described, the module proceeds to steps **570** and **580**. In certain embodiments, during step **570**, the data validation module **500** provides (e.g., transmit) at least the selected validated data results **505** to the print data module **800**. In other embodiments, during step **570**, the data
30 validation module **500** may further provide (e.g., transmit) additional portions of, or alternatively and entirety of the customer data **410** and/or any acquired recipient data **405** to the print data module **800**, as may be desirable for a particular application.

According to various embodiments, during step **580**, the data validation module **500** may further prompt the user to provide package data **610** to the package data module **600**, as will be described in further detail below. In certain embodiments, as described previously herein, user prompted acquisition of package data **610** may occur concurrently with the steps performed by the data validation module **500**. However, in various other envisioned embodiments, as may be desirable for particular applications, acquisition of the package data **610** may be deferred until after the module **500** has performed at least steps **520**, **530**, **540**, **550**, and **560**, as described immediately above.

Package Data Module

According to various embodiments, as shown in Figure 3, package data module **600** is configured to receive, store, and provide data associated with a package.

Figure 7 illustrates exemplary steps executed by the package data module **600** according to various embodiments. Beginning with step **620**, the package data module **600** of certain embodiments assesses whether data **610** (see Figure 3) associated with a package (which may comprise one or more retail articles purchased by a user/customer of the mobile device **200**) has been received by the module. In various envisioned embodiments, the package data module **600** makes this assessment by scanning one or more data tables associated with the module and identifying package data **610** within the data tables associated with a particular set of customer data **410**, as previously described herein, that was not present during a previous assessment likewise performed under step **620**.

If, in various embodiments, execution of step **620** by the package data module **600** determines that no new package data **610** has been received, the package data module proceeds, in step **624**, to continue monitoring for receipt of such data. As previously described herein, such monitoring may, in certain embodiments be continuous in nature, while in other embodiments, such may be periodic, as may be desirable for a particular application. As a non-limiting example, a proprietor making use of such mobile devices **200** during the course of operating a business may configure the devices to automatically query for new or updated package data **610**, so as to avoid undue burdens upon associated systems if such queries were performed less frequently (e.g., hourly or otherwise). Further, such monitoring may, in still other embodiments be passive, although in other envisioned embodiments, the module **600** may be configured to actively query one or more databases for new data **610**. In at least one embodiment (not shown), the package data module **600** may query a remote terminal **100** and/or a central server **300** or the like,

regarding package data **610** instead of and/or in addition to querying the data acquisition device **201**.

5 In various embodiments, the package data **610** received in step **620** and subsequently retrieved in step **630** may include a variety of information commonly associated with a package configured for shipment from one initial location to an ultimate destination. As best understood from Figure 3, the package data **610** may include at least a package weight **601**, package dimensions **602**, a service type **603**, a service cost **604**, and a reference field **605**. However, it should be understood that various envisioned
10 embodiments may include still other types and values of package data, as may be desirable for a particular application or purpose, and such should be considered, nevertheless, within the scope of the present invention.

It should be understood that according to various embodiments, certain package data **610** may include combinations of data related to not only a shipping package, but also the one or more retail articles associated with (e.g., placed within) the package. As a non-
15 limiting example, in certain embodiments, the package weight **601** may comprise a summation of not only the weight of the empty package box itself, but also a weight of the enclosed articles. In these and other envisioned embodiments, various bar codes may be sequentially scanned during a particular user transaction and combined for a total weight **601**. In still other envisioned embodiments, the corresponding service cost **604** may be
20 similarly calculated. However, it should be understood that in yet additional embodiments, the package data **610** may include at least certain portions that are predetermined, based upon any of a variety of user parameters, such as, the non-limiting example of a cost **604** of at least \$5.00 in shipping for any packages with a dimension **602** greater than ten inches.

25 As mentioned previously with regard to Figure 5 and the general steps executed by the customer data module **400**, the mobile device **200** may be configured according to various embodiments with a data acquisition device **201** so as to acquire some portion of the desired package data **610** directly from the package, or otherwise. In certain
30 embodiments, the data acquisition device **201** may be integrally formed as at least a portion of the mobile device itself, while in other envisioned embodiments the two devices may be separately manufactured and configured, as in at least Figure 1. In any of these “separate” embodiments, the two devices may be removably attached or merely positioned relatively adjacent or nearby, relative to one another, as a particular application may

desire. In this manner, the two devices **200**, **201** may efficiently and effectively communicate data there-between, as has also been described previously herein.

Returning to further details surrounding the execution of steps **620** and **630** of Figure 7 according to various embodiments, it should be understood that the data acquisition device **201**, however physically configured, may comprise, at least in part, a bar code scanner. Such scanners, as commonly known and understood in the art, may be configured to read a variety of package-related data **610**, as described previously herein, from a variety of scanned sources in a variety of formats. In any of these and other envisioned embodiments, the bar code scanner may be configured to retrieve at least a portion of the package data **610** directly from the package. As a non-limiting example, a user of the device may point the data acquisition device **201**, more particularly its bar code scanner at a corresponding bar code of a package or retail article for purchase, thereby acquiring pertinent information for purchase and shipping of the same, as will be described in further detail below. However, it should be understood that in still other envisioned embodiments, the data acquisition device **201** may concurrently, or alternatively, comprise one or more of a two-dimensional imager, a magnetic card reader, or any of a variety of scanning and/or data reading devices, as may be commonly known and understood in the art as beneficial for such applications.

The mobile device **200** may, in the various embodiments comprising a data acquisition device **201**, further comprise an integrated package data entry screen **1300**, as illustrated in at least Figure 14. As may be seen from that figure, a user wishing to populate certain of the various displayed package data fields, namely a package weight field **1301**, a package dimension field **1302**, a service type field **1303**, a service cost field **1304**, and/or a reference field **1305** may manually enter any combination or portion of those fields via the mobile device **200** itself. For example, in at least the illustrated embodiment of Figure 14, the mobile device **200** may incorporate a touchscreen display screen that includes an on screen input **1310** capable of receiving user-typed data into each of the respective fields. Still other envisioned embodiments of the mobile device **200** may, alternatively, use an external keyboard or otherwise configured input device, such as, for example, the remote terminal **100** for manual entry of particular fields of data. Of course, manual entry of any of the various customer data fields may be configured in any of a variety of manners, as generally may be commonly known and understood in the art.

Where manual entry of at least a portion of the package data **610** is performed according to various embodiments, such may be done in conjunction with acquisition of data via the data acquisition device **201** (e.g., the bar code scanner). However, in other envisioned embodiments, the acquisition of package data manually may be preferable, or even necessary, depending on various external factors. For example, a user of the device **200** may encounter a customer having an unreadable source of package data, whether a damaged or missing bar code upon a retail article or merely a previously unrecognizable data format. In such a scenario, the device **200** according to various embodiments may acquire the necessary package data **610** via alternative methods, whether via manual entry, as previously described, or otherwise. As such, it should be understood that not only do the various concurrent and/or alternative devices for facilitating data acquisition provide various alternative user options such also serve as backup or safety mechanisms should primarily relied upon options fail.

Once the package data module **600** determines that new package data **610** has been received in step **620** (and such is retrieved in step **630**), whether via the data acquisition device **201** or otherwise, as previously described herein, the module proceeds to steps **660** and **680**. In various embodiments, during step **660**, the package data module **600** provides (e.g., transmits) at least a portion of the package data **610** to the print data module **800**, as may be desirable for a particular application. According to various embodiments, during step **680**, the package data module **600** may further prompt the user to provide payment data **710** to the payment data module **700**, as will be described in further detail below. In certain embodiments, as described previously herein, user prompted acquisition of payment data **710** may occur concurrently with the steps performed by at least the data validation module **500**. However, in various other envisioned embodiments, as may be desirable for particular applications, acquisition of the payment data **710** may be deferred until after at least the modules **500**, **600** have performed their various configured steps, as described above.

Payment Data Module

According to various embodiments, as shown in Figure 3, payment data module **700** is configured to receive, store, and provide data associated with a customer's form of payment.

Figure 8 illustrates exemplary steps executed by the payment data module **700** according to various embodiments. Beginning with step **720**, the payment data module **700** of certain embodiments assesses whether data **710** (see Figure 3) associated with a form of payment has been received by the module. In various envisioned embodiments, the payment data module **700** makes this assessment by scanning one or more data tables associated with the module and identifying payment data **710** within the data tables associated with a particular set of customer data **410** and/or package data **610**, as previously described herein, that was, in particular, not present during a previous assessment likewise performed under step **720**.

If, in various embodiments, execution of step **720** by the payment data module **700** determines that no new payment data **710** has been received, the payment data module proceeds, in step **724**, to continue monitoring for receipt of such data. As previously described herein, such monitoring may, in certain embodiments be continuous in nature, while in other embodiments, such may be periodic, as may be desirable for a particular application. As a non-limiting example, a proprietor making use of such mobile devices **200** during the course of operating a business may configure the devices to automatically query for new or updated payment data **710**, so as to avoid undue burdens upon associated systems if such queries were performed less frequently (e.g., hourly or otherwise). Further, such monitoring may, in these and still other embodiments be passive, although in other envisioned embodiments, the module **700** may be configured to actively query one or more databases for new data **710**. In at least one embodiment (not shown), the payment data module **700** may query a remote terminal **100** and/or a central server **300** or the like, regarding payment data **710** instead of and/or in addition to querying the data acquisition device **201**.

In various embodiments, the payment data **710** received in step **720** and subsequently retrieved in step **730** may include a variety of information commonly associated with certain methods and forms of payment, in particular bank and/or credit cards. As best understood from Figure 3, the payment data **710** may include at least a payment type **701** (e.g., Mastercard, Amex, Debit, etc.), a card number **702**, a security code **703** (e.g., a multi-digit number located on and/or associated with a presented form of payment, which in the case of at least a debit card may comprise a personal identification number (PIN)), an expiration date **704**, and an authorized signature **705**. However, it should be understood that various envisioned embodiments may include still other types

and values of payment data, as may be desirable for a particular application or purpose, and such should be considered, nevertheless, within the scope of the present invention.

As mentioned previously with regard to Figure 5 and the general steps executed by the customer data module **400**, the mobile device **200** may be configured according to various embodiments with a data acquisition device **201** so as to acquire some portion of the desired payment data **710** directly from the tendered form of payment, or otherwise. In certain embodiments, the data acquisition device **201** may be integrally formed as at least a portion of the mobile device itself, while in other envisioned embodiments the two devices may be separately manufactured and configured, as in at least Figure 1. In any of these “separate” embodiments, the two devices may be removably attached or merely positioned relatively adjacent or nearby, relative to one another, as a particular application may desire. In this manner, the two devices **200**, **201** may efficiently and effectively communicate data there-between, as has also been described previously herein.

Returning to further details surrounding the execution of steps **720** and **730** of Figure 8 according to various embodiments, it should be understood that the data acquisition device **201**, however physically configured, may comprise, at least in part, a magnetic card reader. Such magnetic card readers, as commonly known and understood in the art, may be configured to read a variety of data from magnetic strips located on a variety of scanned sources, including the non-limiting examples of banking and credit cards, and the like. In any of these and other envisioned embodiments, the magnetic card reader may be configured to retrieve at least a portion of the payment data **710** directly from a scan of the magnetic strip located on, for example, the customer’s debit card. In still other envisioned embodiments, the data acquisition device **201** may concurrently, or alternatively, comprise one or more of a two-dimensional imager and a bar code scanner, as such may prove beneficial for acquiring payment data from a variety of alternative payment data sources, which may or may not incorporate a magnetic strip, as previously described.

The mobile device **200** may, in the various embodiments comprising a data acquisition device **201**, further comprise an integrated payment data entry screen **1400**, as illustrated in at least Figure 15. As may be seen from that figure, a user wishing to populate certain of the various displayed payment data fields, namely a payment type field **1401**, a card number field **1402**, a security code field **1403**, an expiration field **1404**, and/or a signature field **1405** may alternatively manually enter any combination or portion of those fields via the mobile device **200** itself. For example, in at least the illustrated

embodiment of Figure 15, the mobile device **200** may incorporate a touchscreen display screen that includes an on screen input **1410** capable of receiving user-typed data, including the non-limiting example of a user's or customer's authorizing signature **1405** for payment/charge of an amount, into each of the respective fields. Still other envisioned
5 embodiments of the mobile device **200** may, alternatively, use an external keyboard or otherwise configured input device, such as, for example, the remote terminal **100** for manual entry of particular fields of data. Of course, manual entry of any of the various payment data fields may be configured in any of a variety of manners, as generally may be commonly known and understood in the art.

10 Where manual entry of at least a portion of the payment data **710** is performed according to various embodiments, such may be done in conjunction with acquisition of data via the data acquisition device **201** (e.g., the magnetic card reader and/or the bar code scanner). However, in other envisioned embodiments, the acquisition of customer data manually may be preferable, or even necessary, depending on various external factors. For
15 example, a user of the device **200** may encounter a customer having an unreadable banking or credit card, whether with a damaged magnetic card strip or an unreadable security code. In such a scenario, the device **200** according to various embodiments may acquire the necessary payment data **710** via alternative methods, whether via manual entry, as previously described, or otherwise. As such, it should be understood that not
20 only do the various concurrent and/or alternative devices for facilitating data acquisition provide various alternative user options such also serve as backup or safety mechanisms should primarily relied upon options fail.

Once the payment data module **700** determines that new payment data **710** has been received in step **720** (and such is retrieved in step **730**), whether via the data
25 acquisition device **201** or otherwise, as previously described herein, the module proceeds to step **760**. In various embodiments, during step **760**, the payment data module **700** provides (e.g., transmits) at least a portion of the payment data **710** to the print data module **800**, as may be desirable for a particular application.

Print Data Module

30 According to various embodiments, as shown in Figure 3, the print data module **800** is configured to generate one or more of a shipping label, a pick ticket, and/or a receipt, depending upon various inputs received from at least the customer data module **400**, the package data module **600**, and the payment data module **700**.

Figure 9 illustrates exemplary steps executed by the print data module **800** according to various embodiments. Beginning with step **820**, according to various embodiments, the print data module **800** determines whether any new customer data **410** (and/or recipient data **405**, as previously described herein) has been received by the module. If, in certain embodiments, execution of step **820** determines that no new customer data **410** has been received by or at the print data module **800**, the module proceeds in step **825** to continue monitoring for receipt of such data. As previously described herein, such monitoring may, in certain embodiments be continuous in nature, while in other embodiments, such may be periodic, as may be desirable for a particular application. Further, such monitoring may, in still other embodiments be passive, although in other envisioned embodiments, the module **800** may be configured to actively query one or more databases for new customer data **410**. In at least one embodiment (not shown), the print data module **800** may query a remote terminal **100** and/or a central server **300** or the like, regarding customer data **410** instead of and/or in addition to querying the data acquisition device **201**.

Once, according to various embodiments, the print data module **800** identifies new customer data **410**, the module proceeds to step **830**. During step **830**, the module further determines whether any new package data **610** has been received by the module. If, in certain embodiments, execution of step **830** determines that no new package data **610** has been received, the print data module **800** proceeds, in step **834** to query whether such data should be anticipated, as may be the case for a particular application. If such is anticipated, as indicated by a user input indication thereof or otherwise, as may be customary for a particular application, the module **800** proceeds to step **836**.

In step **836** according to various embodiments, the print data module **800** will continue monitoring for receipt of new package data **610**. As previously described herein, such monitoring may, in certain embodiments be continuous in nature, while in other embodiments, such may be periodic, as may be desirable for a particular application. Further, such monitoring may, in still other embodiments be passive, although in other envisioned embodiments, the module **800** may be configured to actively query one or more databases for new package data **610**. In at least one embodiment (not shown), the print data module **800** may query a remote terminal **100** and/or a central server **300** or the like, regarding package data **610** instead of and/or in addition to querying the data acquisition device **201**.

If, according to various embodiments, in step **834**, the print data module **800** determines, whether via user input thereof or otherwise, that package data **610** is not anticipated, the module proceeds instead to step **870**. During step **870**, the print data module **800** according to these and still other envisioned embodiments, may be configured to generate a “pick-ticket” **1700**, such as that illustrated as a non-limiting example in at least Figure 18. As may be seen in at least that figure, the pick ticket **1700** may include a variety of pieces of information, including but not limited to a barcode **1706**, a customer data field **1710** comprising at least a subset of customer data **410**, and/or a recipient data field **1705** comprising at least a subset of recipient data **405**, if such differs from the customer data. Various embodiments of the “pick-ticket” **1700** may further include general instructions (shown, but not numbered), directing a customer to provide this ticket, together with a package for purchase, at a payment counter or other location.

It should be understood that in at least these embodiments in which only a “pick ticket” **1700** is generated in step **870**, the user or customer must subsequently provide both package data **610** and payment data **710**, as may or may not be desirable for a particular application. Of course, while such does not fully incorporate the mobile device **200** throughout the duration of the purchase and shipment process, such may be necessary or desirable for a particular application. However, as will be described in further detail below, the mobile devices **200** associated with these and still other envisioned embodiments ultimately involving generation of a pick ticket **1700** via step **870** may be configured nonetheless as capable of receiving one or both of the package data **610** and the payment data **710**, should such become necessary during a particular application.

In the various embodiments in which the print data module **800**, during step **834**, determined that package data is indeed anticipated (or received by the mobile device **200**, but just not yet received by the module **800**, however the case may be), the module **800** proceeds to step **830**, in which some degree of package data **610** is ultimately received by the module. Once received, the print data module **800** proceeds to step **840**, in which the module assesses whether any new payment data **710** has been received by the module. As with regard to the receipt of package data **610** described above, the module **800** proceeds, in step **844**, to continue monitoring for receipt of such data. As previously described herein with respect to at least monitoring of customer data **410**, such monitoring may according to various embodiments be conducted in a continuous, periodic, passive, and/or proactive fashion, as may be desirable for any of a variety of applications.

If, according to various embodiments, in step **844**, the print data module **800** determines, whether via user input thereof or otherwise, that payment data **710** is not anticipated, the module proceeds instead to step **850**. During step **850**, the print data module **800** according to these and still other envisioned embodiments, may be configured to generate not only a “pick-ticket” **1700**, as previously described herein and illustrated in at least Figure 18, but also a shipping manifest or label **1600**, as illustrated in at least Figure 17. As may be seen in at least that figure, the shipping manifest or label **1600** may include a variety of pieces of information, including but not limited to at least one barcode **1606** and some portion and/or combination of the following data collected by the mobile device **200**: a package weight **601**, package dimensions **602**, customer data **410**, recipient data **405**, service type **603**, and/or a reference number **605** (e.g., a UPS tracking number).

It should be understood that the pick-ticket **1700** generated in step **850** may be substantially the same as that generated in step **870** in certain embodiments, while in other embodiments, such may be substantially differently configured, as may be desirable for a particular application. It should also be understood that the shipping manifest or label **1600**, as described above may be alternatively configured and/or include any of a variety of pieces of data and information, as may be desirable for a particular application, with such being further envisioned as within the scope of the present invention. Further, in at least these embodiments in which a “pick ticket” **1700** and a shipping manifest or label **1600** is generated in step **850**, the user or customer must subsequently provide at least some form of payment data **710** to fully complete the purchase and shipping process, as previously described herein.

Once, according to various embodiments, the print data module **800** identifies that new payment data **710** is anticipated and ultimately received by the module during step **840**, the module proceeds to step **860**. During step **860**, the print data module **800** according to these and still other envisioned embodiments, may be configured to generate not only a shipping manifest or label **1600**, as previously described herein and illustrated in at least Figure 17, but also a signed receipt **1800**, as illustrated in at least Figure 19. As may be seen in at least that figure, the signed receipt **1800** may include a variety of pieces of information, including but not limited to at least one barcode **1806**, some portion of package data **1810** (associated with data **610**), customer data **1820** (associated with data **410**), recipient data **1805** (associated with data **405**), and an authorized signature **1830** (associated with signature data **705** acquired by the payment data module **700**).

It should be understood that the shipping manifest or label **1600** generated in step **650** may be substantially the same as that generated in step **850** in certain embodiments, while in other embodiments, such may be substantially differently configured, as may be desirable for a particular application. It should also be understood that the signed receipt **1800**, as described above may be alternatively configured and/or include any of a variety of pieces of data and information, as may be desirable for a particular application, with such being further envisioned as within the scope of the present invention. Further, in at least these embodiments in which a signed receipt **1800** and a shipping manifest or label **1800** (but, notably, no “pick ticket” **1700**) is generated in step **860**, the mobile device **200** facilitates seamless user or customer completion of the purchase and shipping process, as previously described herein.

Methods of Using various Embodiments of the Mobile Device

A method of using the mobile device **200** of Figure 1 according to various embodiments will now be described in detail with particular reference to Figures 10-16, in which various exemplary user interface screens are illustrated.

The first step of using the mobile device **200** involves a user turning on the device, in response to which according to various embodiments, the user encounters a main screen display **1000**, as illustrated in at least Figure 10. As may be understood from the exemplary display **1000**, the user may choose from any of a variety of options from this screen, including the non-limiting examples of entering data, transferring data (e.g., to a central server **300**, or elsewhere), exiting from using the device, and/or seeking help on how to use the device. Such options may, in certain embodiments, be accessible via touchscreen buttons, as illustrated in at least Figure 10, although in other envisioned embodiments, such may be alternatively accessible, as may be desirable for a particular application. In those embodiments having touchscreen buttons, at least a data entry button **1010**, a transfer data button **1020**, an exit button **1030**, and a help button **1040** may be displayed on the main screen **1000**.

As may be understood from viewing Figures 10 and 11 in conjunction with one another, selection of the data entry button **1010** may, according to various embodiments, replace the main screen **1000** with a customer data entry screen **1100**, which may contain a plurality of fields for entry of customer data **410** and/or recipient data **405**, as previously described herein. Notably, a user, once accessing the customer data entry screen **1100**, may populate the same either by scanning data from, for example, a customer’s driver’s license, or by manually entering all or some portion of the same, as may be desirable for a

particular application. Exemplary populated fields, upon data entry by the user, may be seen in Figure 12.

Once a user has acquired various pieces of customer data in accordance with the method, the user may hit a “submit” button, as illustrated (but not numbered) in at least
5 Figure 11. Such action, according to various embodiments, will transfer the user to a data validation screen **1200**, as illustrated in at least Figure 13. On this screen, the user may select from one or more options of validated data results **1202** (associated with results **505**, as previously described herein). Alternatively, as may be desirable for a particular application, the user may select to use the current (e.g., originally input) data, illustrated in
10 exemplary form as a portion of address data **402**, as previously described herein. Once selected, the data validation screen **1200** displays in field **1203** details of the data selected by the user, which the user may, in accordance with the method, accept by hitting the “submit” button.

In accordance with various embodiments of the exemplary method described
15 herein, submitting the validated address results brings a user to a new package data screen **1300**. On the package data screen **1300**, the user may enter a variety of pieces of information regarding a retail item or package associated therewith for purchase, as has been previously described herein. The user may, for example, enter such information into fields **1301-1305**, in part or in whole, via a bar code scan of the item or package.
20 Alternatively, the user may enter any portion of the requested data into the respective fields via a touchscreen keyboard **1310**, as commonly known and understood in the art.

It should be understood that in the exemplary embodiment, once a user has submitted package data, the user may “submit” the same to the mobile device **200**, in which case the device generally displays a payment data screen **1400**, as illustrated in at
25 least Figure 15. However, in alternative methods, the user, when faced with package data screen **1300** may opt to not enter any or at least a portion of the package data via the mobile device **200** at all, in which embodiments, the user may be taken directly to a print data screen **1500** and given the option to checkout and print **1510**. In such instances, the user could receive a “pick-ticket,” which the user could take to a traditional checkout
30 counter or facility.

If, as described above, the user has submitted the appropriate package data, the user may then submit various items of payment data on the payment data screen **1400**, as such items have been previously described herein. If, as described above, the user wishes to, according to various aspects of this exemplary method, wishes to not enter payment

data, the user may not do so, in which case, upon submittal, the user will be taken directly to the print data screen **1500**. Of course, if the user likewise submits payment data, the user will be similar directed to the print data screen **1500**, but just receive alternative options, as described below.

5 According to various embodiments, the print data screen **1500** permits the user to checkout and print **1510** various items, dependent upon what information the user has entered in the previous screens of Figures 11-15. For example, if the user only entered customer data, but no package or payment data, the user may, upon selecting to checkout **1510** (e.g., a touchscreen button, or otherwise activated input, as previously described),
10 may cause the system **5** to generate a “pick ticket” **1700**, as illustrated in at least Figure 18. Alternatively, where the user has entered not only customer data, but also package data, the print data screen **1500** may permit checkout and printing of a shipping manifest of label **1600** and the “pick ticket” **1700**. Only in those instances in which the user has, according to various embodiments, entered not only customer data and package data, but
15 also payment data, will the checkout **1510** permit the user to generate the shipping manifest of label **1600** and a signed receipt **1800**.

As may be further understood from Figure 16, a user of the device according to various embodiments may wish to go back and subsequently enter either package or payment data, or even further customer data, upon reaching the print data screen **1500**. In
20 such instances, the screen **1500** may further comprise according to certain embodiments a data entry button **1520**, through which the user may return to any of the previously described screens, as desired. Such a button **1520**, may however be configured via alternative embodiments to permit a user to return to prior screens only after fully completing a particular transaction, for example, for the purpose of beginning a new
25 transaction, as is often necessary in high-volume retail environments.

Conclusion

It will be appreciated by one of ordinary skill in the art that one or more of the components of the computer systems described herein may be located geographically remotely from other components. Furthermore, one or more of the components may be
30 combined, and additional components performing the functions described herein may be included in the first carrier computer system.

Figures in the present application are schematic diagrams, flowcharts and control flow illustrations of methods, systems and program products according to the invention. It will be understood that each block or step of the block diagram, flowchart and control

flow illustration, and combinations of blocks in the block diagram, flowchart and control flow illustration, can be implemented by computer program instructions. These computer program instructions may be loaded onto a computer or other programmable apparatus to produce a machine, such that the instructions which execute on the computer or other programmable apparatus create means for implementing the functions specified in the block diagram, flowchart or control flow block(s) or step(s).

These computer program instructions may also be stored in a computer-readable memory that can direct a computer or other programmable apparatus to function in a particular manner, such that the instructions stored in the computer-readable memory produce an article of manufacture including instruction means which implement the function specified in the block diagram, flowchart or control flow block(s) or step(s). The computer program instructions may also be loaded onto a computer or other programmable apparatus to cause a series of operational steps to be performed on the computer or other programmable apparatus to produce a computer implemented process such that the instructions which execute on the computer or other programmable apparatus provide steps for implementing the functions specified in the block diagram, flowchart or control flow block(s) or step(s).

Accordingly, blocks or steps of the block diagram, flowchart or control flow illustration support combinations of means for performing the specified functions, combinations of steps for performing the specified functions and program instruction means for performing the specified functions. It will also be understood that each block or step of the block diagram, flowchart or control flow illustration, and combinations of blocks or steps in the block diagram, flowchart or control flow illustration, can be implemented by special purpose hardware-based computer systems which perform the specified functions or steps, or combinations of special purpose hardware and computer instructions.

Many modifications and other embodiments of the inventions set forth herein will come to mind to one skilled in the art to which these inventions pertain having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the inventions are not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

WE CLAIM:

1. A portable handheld device operable within a retail sales location for facilitating fully mobile completion, at the portable handheld device, of a purchase and shipping transaction for a product by a customer, the portable handheld device comprising:

one or more memory storage areas;

at least one integrated data entry screen;

one or more bar code scanners; and

one or more computer processors that are configured to receive and retrieve data stored in the one or more memory storage areas, wherein the one or more computer processors are configured to:

- (A) receive, via said one or more bar code scanners, customer data associated with a customer at the retail sales location, said customer data being contained at least in part upon the customer's drivers' license;
- (B) wirelessly transmit at least a portion of the customer data to a remote validation tool;
- (C) receive validation data identifying validated portions of the customer data, said identified validated portions being displayed on said integrated data entry screen as one or more options of validated customer data results;
- (D) obtain, at said portable handheld device, scanned package data associated with a package for shipment and obtained by said one or more bar code scanners scanning one or more bar codes located on the package and one or more products to be shipped within said package, wherein the scanned package data associated with the package comprises package dimensions contained within the bar code located on the package and a package weight determined based on data stored within the bar code located on

the package and data stored within a bar code located on each product to be shipped within the package;

(E) determine, based upon the scanned package data and a selection by the customer of at least one of the one or more options of validated customer data results displayed via said integrated data entry screen, a service cost for shipment of the package from the retail location;

(F) apply against said service cost payment data a type of payment presented by the customer and received via each of said devices; and

(G) based upon said selected one of the one or more options of validated customer data results, the scanned package data, and the payment data applied against said service cost:

3. generate and print at said at least one portable handheld device a shipping manifest configured for immediate securing to the package during shipment and containing said selected one of the one or more options of validated customer data results;

4. generate and print at said at least one portable handheld device a receipt indicating that shipping services for the package have been purchased; and

5. upon generation and printing of said shipping manifest and said receipt at said at least one portable handheld device, marking said purchase of said product by said customer as complete and based upon said marking, permitting navigation to a main screen configured for beginning a separate purchase and shipping transaction by said customer or a separate customer.

2. The portable handheld device of Claim 1, further comprising:
one or more magnetic card readers; and

the customer drivers' license comprises a magnetic strip portion containing at least a portion of the received customer data, the magnetic strip portion being configured to be read by the one or more magnetic card readers.

3. The portable handheld device of Claim 1, wherein the customer data comprises at least a customer name and a customer address.
4. The portable handheld device of Claim 3, wherein the validated data corresponds to at least the customer address.
5. The portable handheld device of Claim 3, wherein the customer data further comprises at least a customer email and a customer phone.
6. The portable handheld device of Claim 5, wherein:

the mobile purchase and shipping system further comprises a touchscreen display; and

the customer email and the customer phone are received via the touchscreen display.
7. The portable handheld device of Claim 1, wherein the type of payment is a customer payment card.
8. The portable handheld device of Claim 7, further comprising:

one or more magnetic card readers; and

the customer payment card comprises a magnetic strip portion containing at least the received payment data, the magnetic strip portion being configured to be read by the one or more magnetic card readers.
9. The portable handheld device of Claim 7, wherein the customer payment card is a credit or debit card.
10. The portable handheld device of Claim 7, wherein the payment data comprises at least a

card number and a customer signature.

11. The portable handheld device of Claim 10, further comprising:

a touchscreen display; and wherein

the card number is received via the one or more magnetic card readers; and

the customer signature is received via the touchscreen display.
12. The portable handheld device of Claim 1, wherein the scanned package data comprises at least one identifier that is selected from a group consisting of: a package weight, package dimensions, a service type, a service cost, and a reference code or number.
13. The portable handheld device of Claim 1, further comprising:

a two-dimensional imager; and wherein

at least a portion of the customer data has been obtained by:

(A) using the imager to acquire a scanned image of the customer data; and

(B) identifying the received customer data from the information in the scanned image.
14. The portable handheld device of Claim 1, wherein the validated data is received over a network, as transmitted from a remote data validation tool.
15. The portable handheld device of Claim 1, wherein:

the one or more computer processors are in communication with a mobile printer; and

the mobile printer is configured to generate a package shipping label associated with the shipping manifest.
16. The portable handheld device of Claim 15, wherein the mobile printer is further configured to generate a signed receipt associated with the shipping manifest.

17. A non-transitory computer program product comprising at least one computer-readable storage medium having computer-readable program code portions embodied therein, the at least one computer-readable storage medium being located on at least one portable handheld device operable within a retail sales location, the computer-readable program code portions comprising one or more executable portions configured to facilitate fully mobile completion, at the portable handheld device, of a purchase and shipping transaction for a product by a customer by:

receiving at said at least one portable handheld device and via one or more bar code scanners customer data, said customer data data being contained at least in part upon a customer's drivers' license;

wirelessly transmitting at least a portion of the customer data to a remote validation tool;

receiving validation data identifying validated portions of the customer data, said identified validated portions being displayed on an integrated data entry screen as one or more options of validated customer data results;

an obtaining, at said at least one portable handheld device, scanned package data associated with a package for shipment and obtained by said one or more bar code scanners scanning one or more bar codes located on the package and one or more products to be shipped within said package, wherein the scanned package data associated with the package comprises package dimensions contained within the bar code located on the package and a package weight determined based on data stored within the bar code located on the package and data stored within a bar code located on each product to be shipped within the package;

determining, based upon the scanned package data and a selection by the customer of at least one of the one or more options of validated customer data results displayed via said integrated data entry screen, a service cost for shipment of the package from the retail location;

applying against said calculated service cost payment data a type of payment presented

by the customer via said at least one portable handheld device; and

based upon said selected one of the one or more options of validated customer data results, the scanned package data, and the payment data applied against said service cost:

generate and print at said at least one portable handheld device a shipping label manifest configured for immediate securing to the package during shipment and containing said selected one of the one or more options of validated customer data results;

generate and print at said at least one portable handheld device a receipt indicating that shipping services for the package have been purchased; and

upon generation and printing of said shipping manifest and said receipt at said at least one portable handheld device, marking said purchase of said product by said customer as complete and based upon said marking, permitting navigation to a main screen configured for beginning a separate purchase and shipping transaction by said customer or a separate customer.

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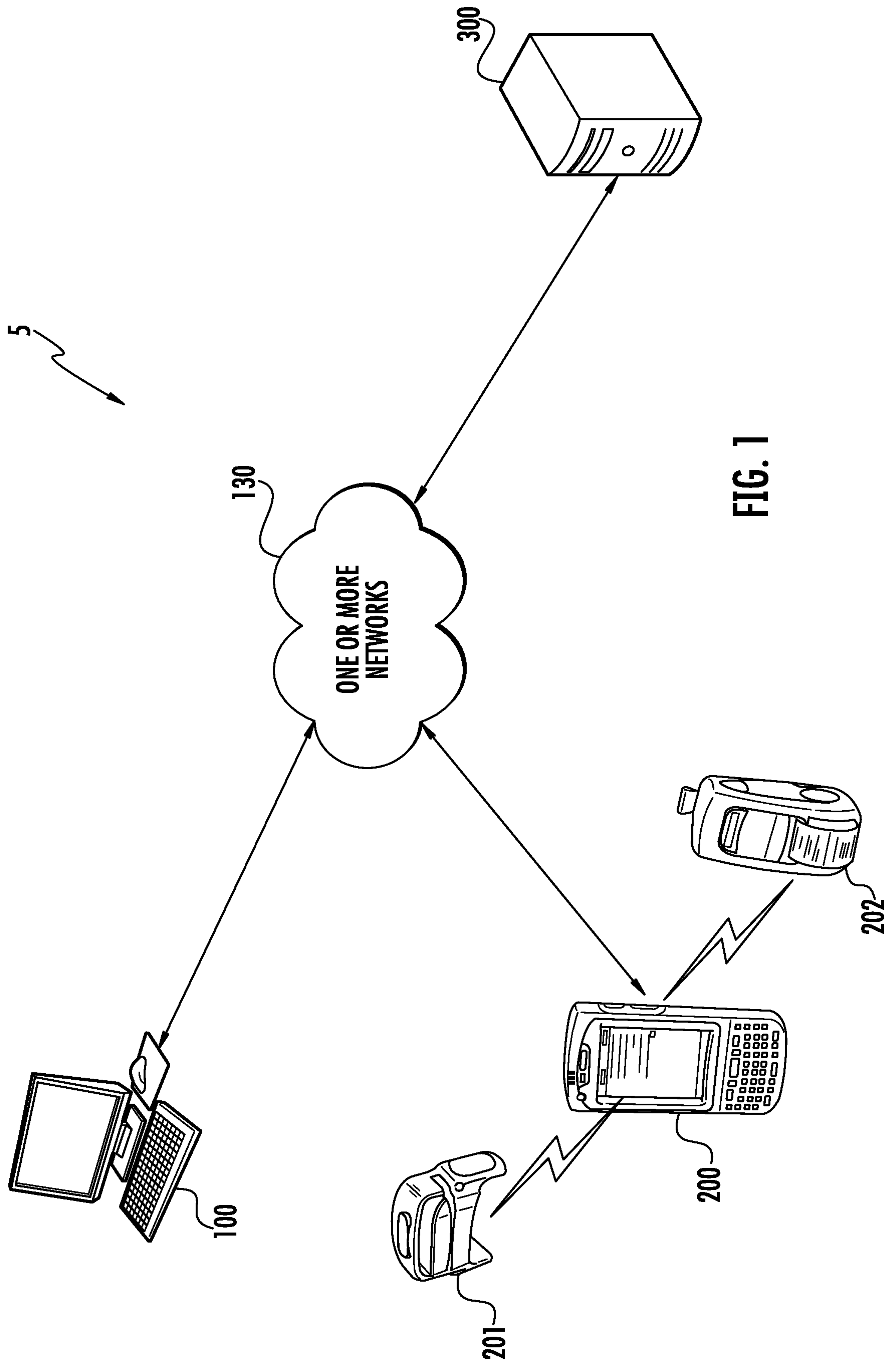


FIG. 1

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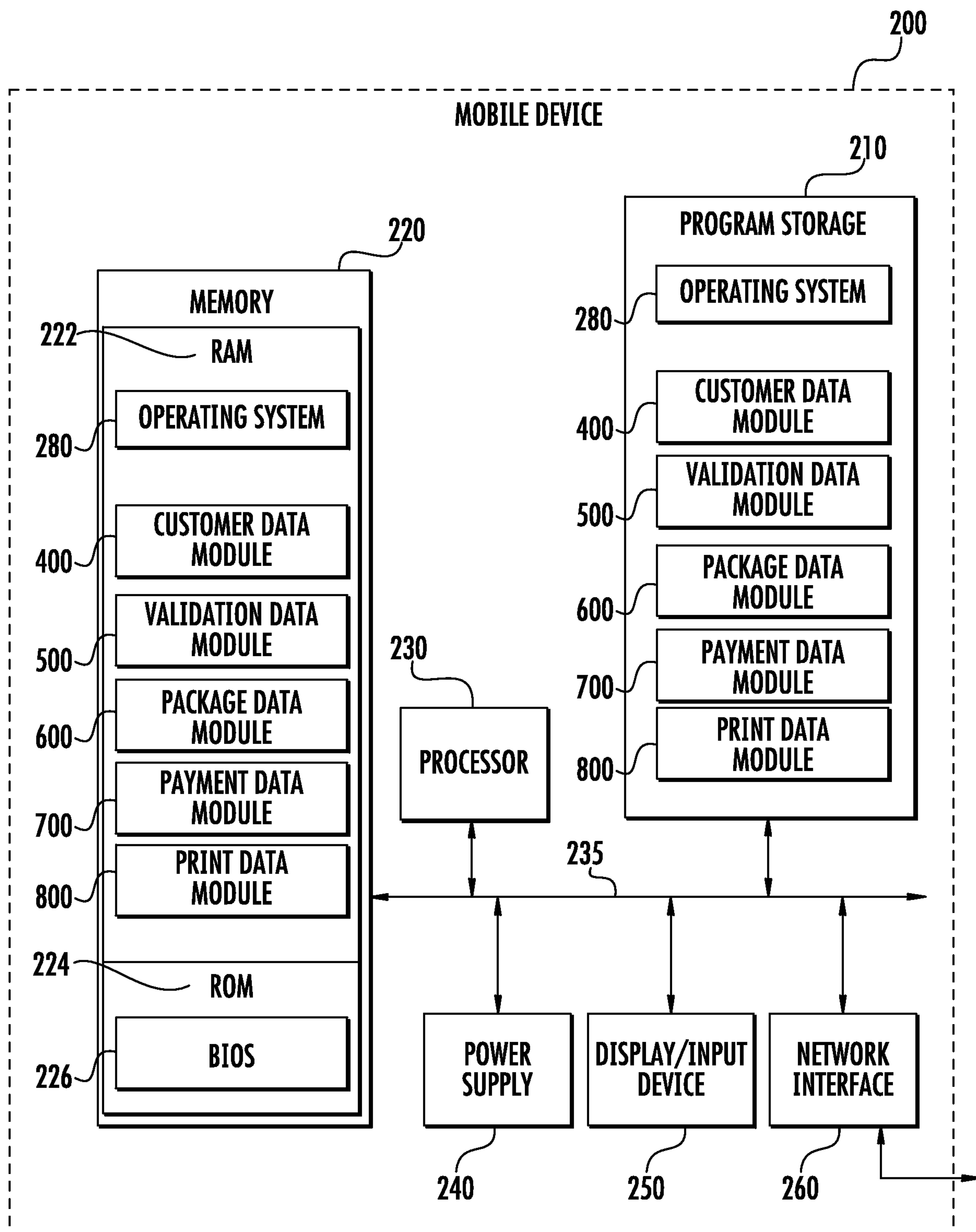


FIG. 2

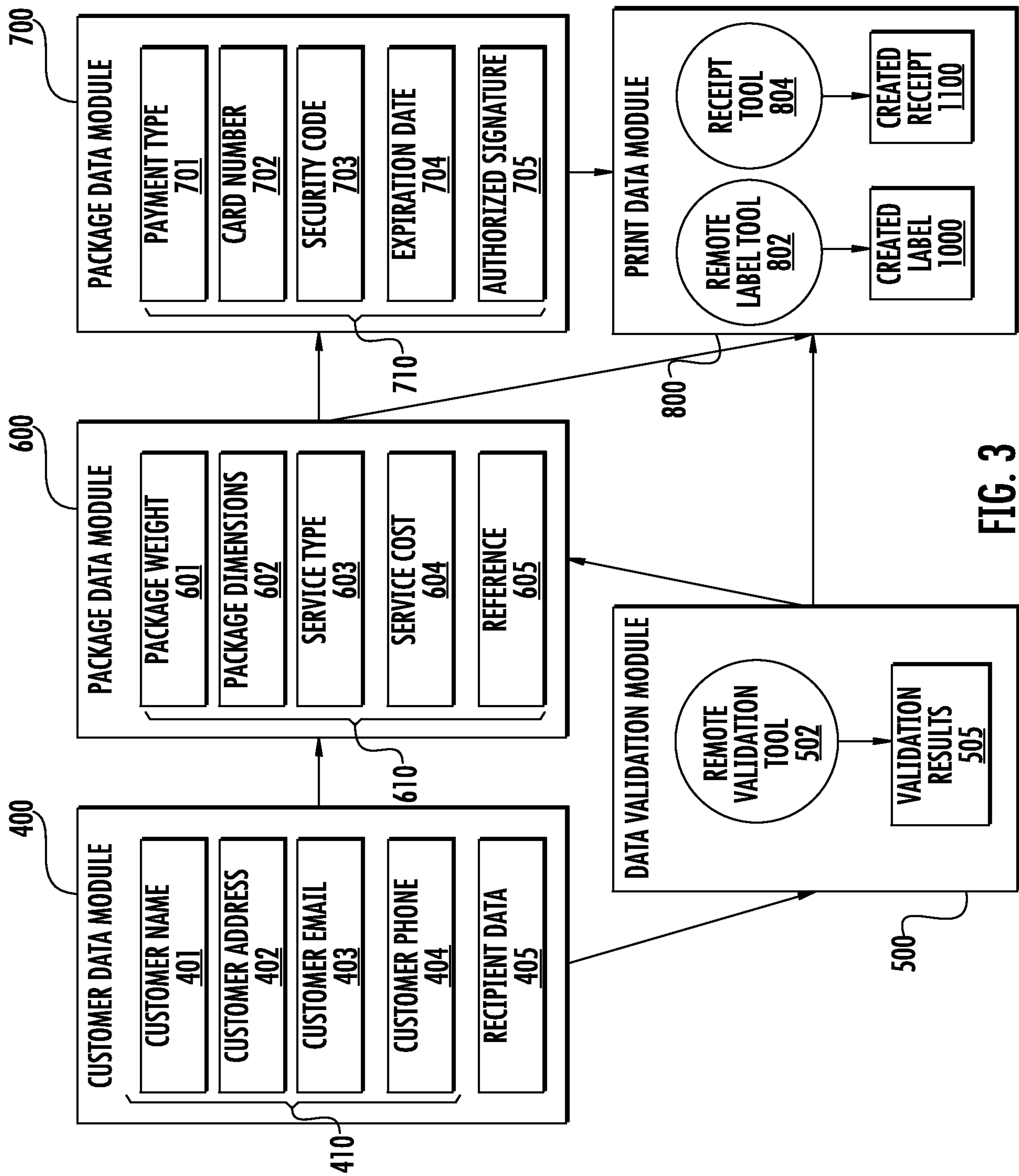
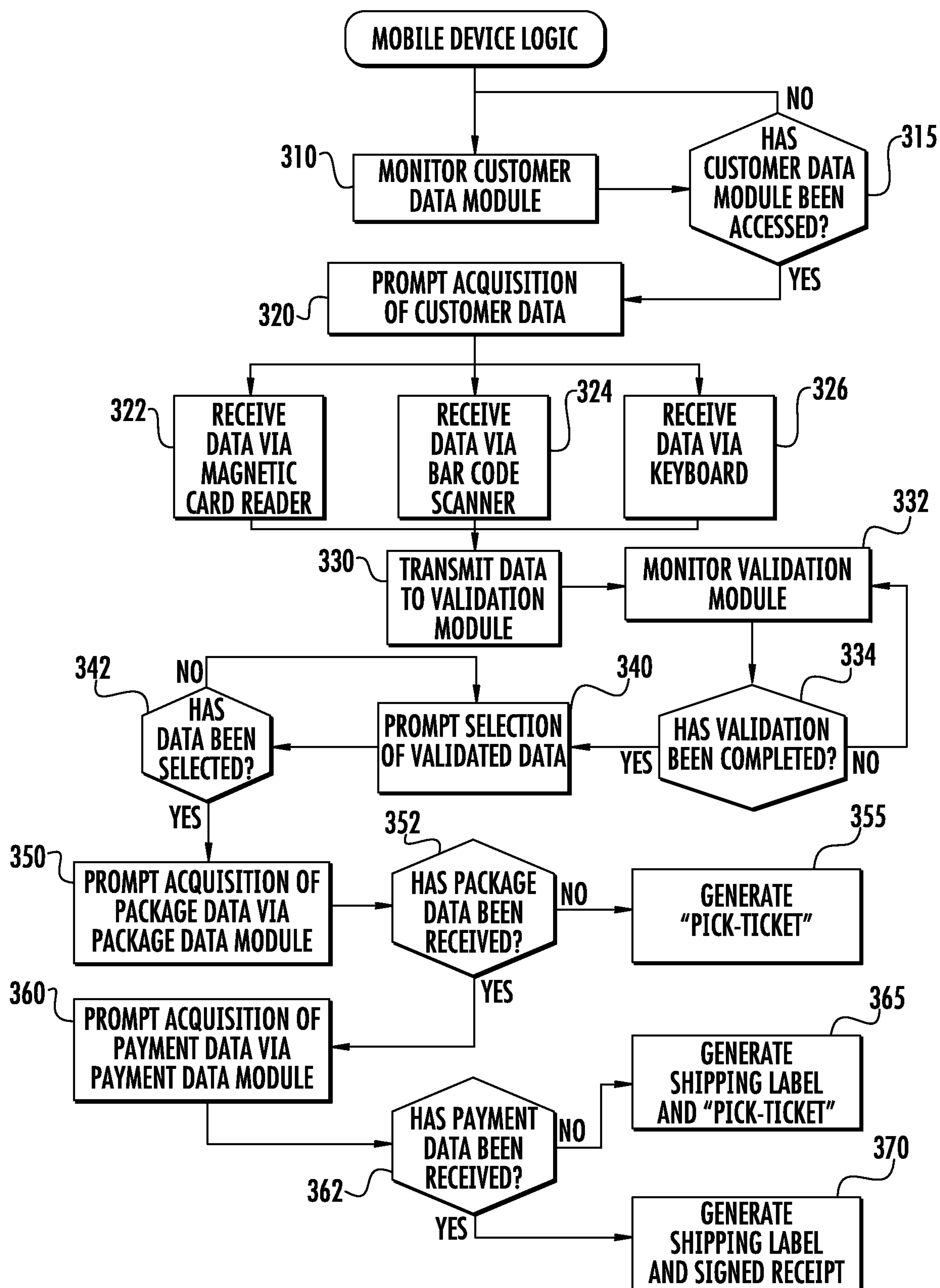


FIG. 3

MOBILE DEVICE LOGIC



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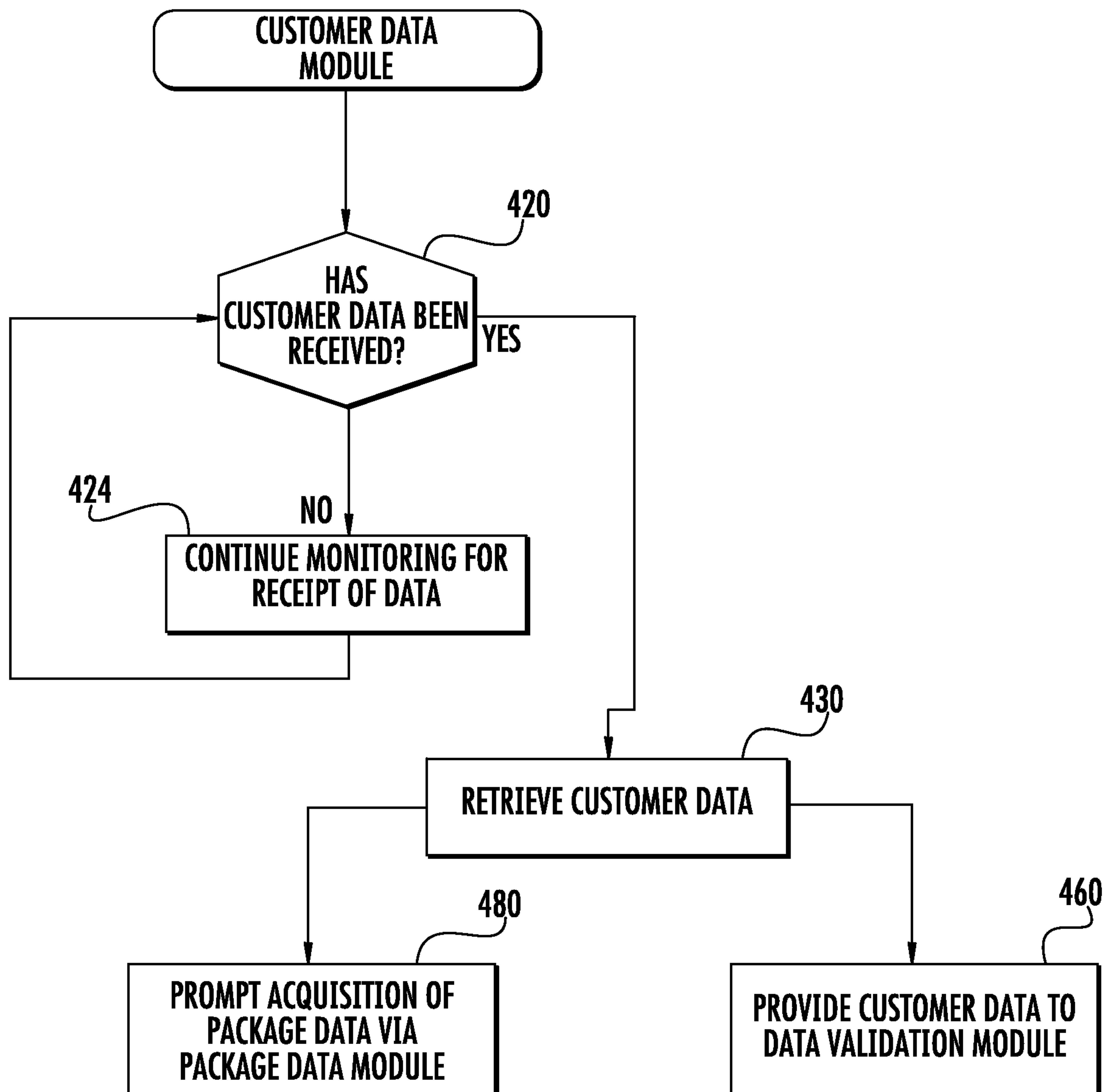
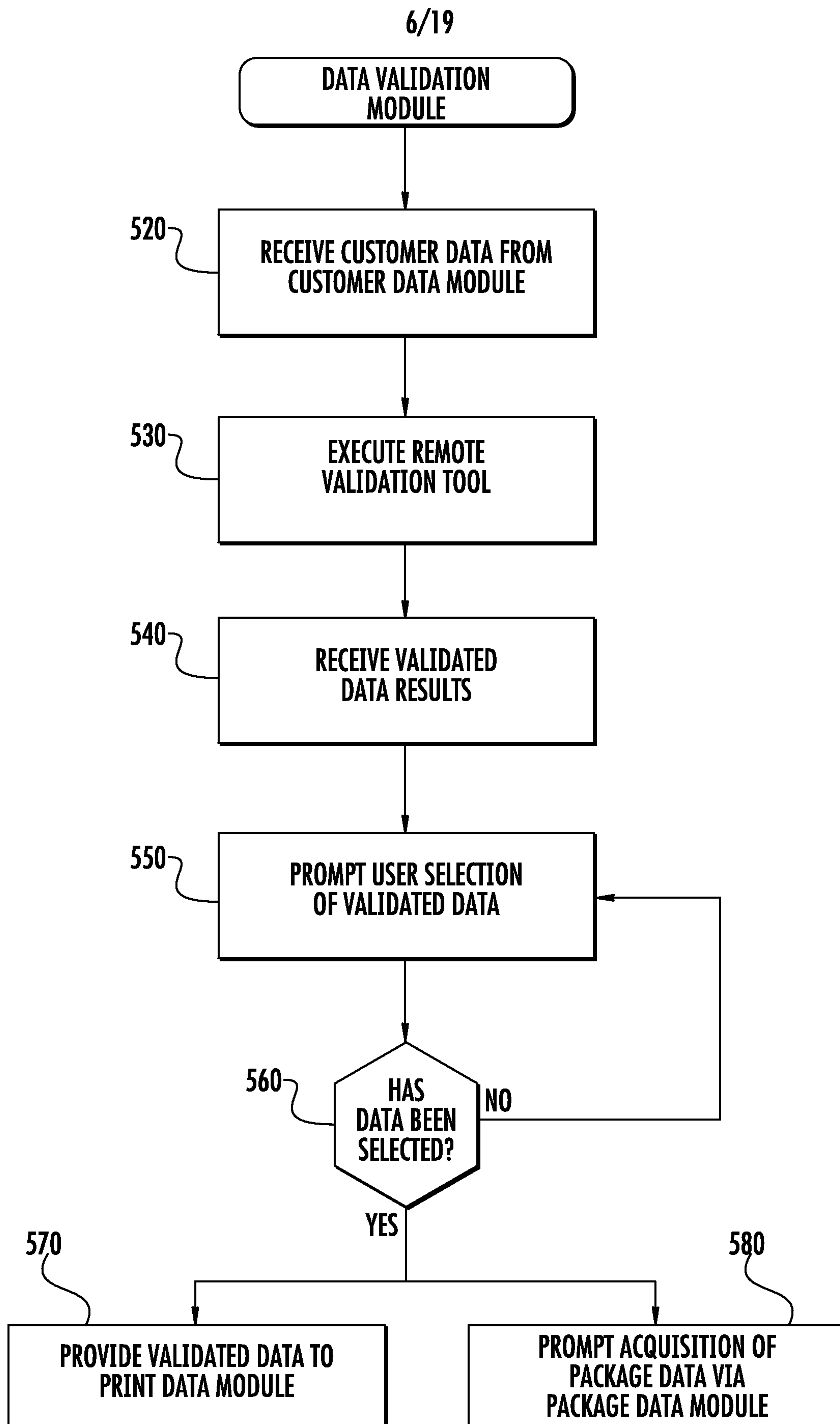


FIG. 5



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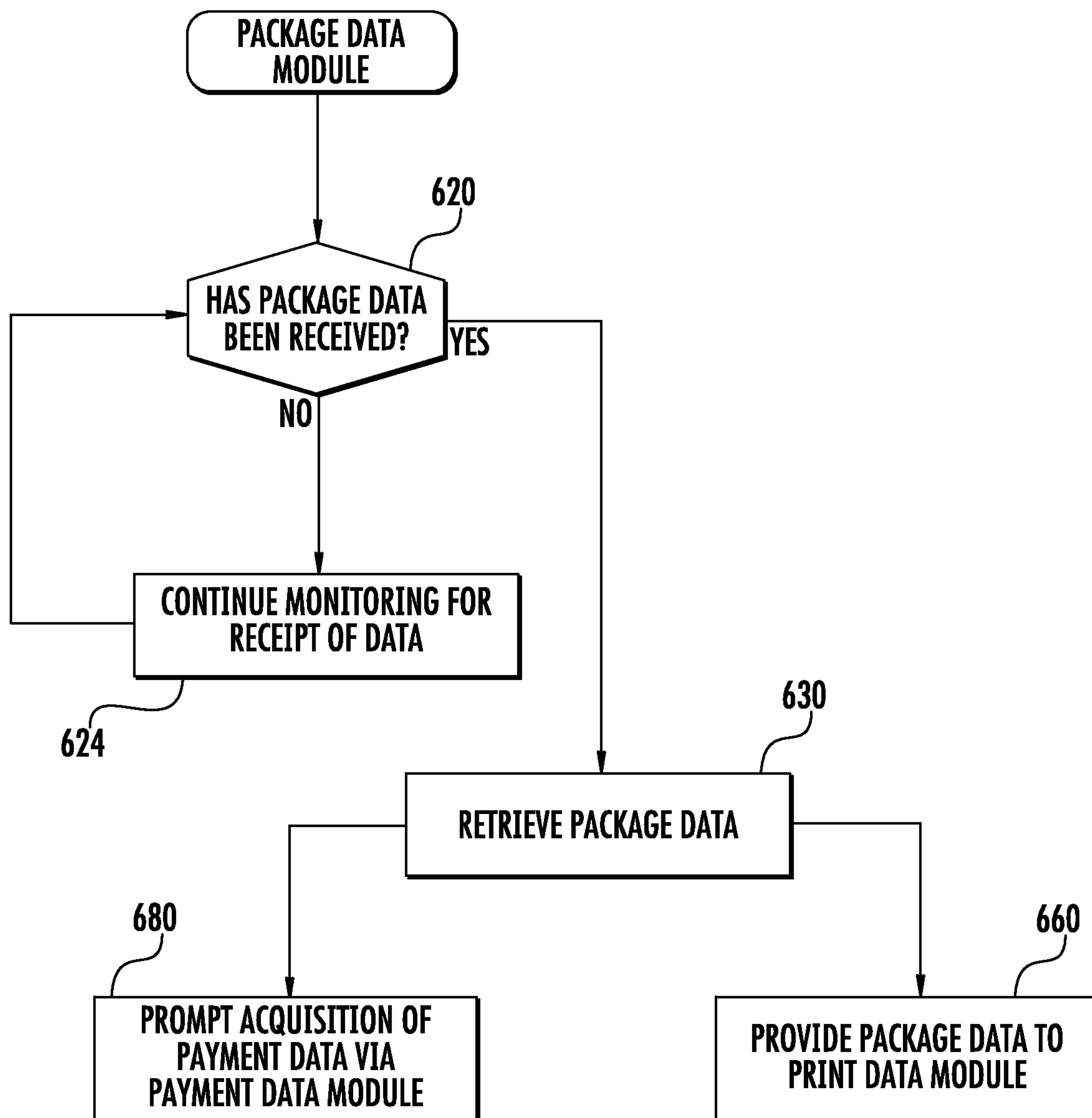


FIG. 7

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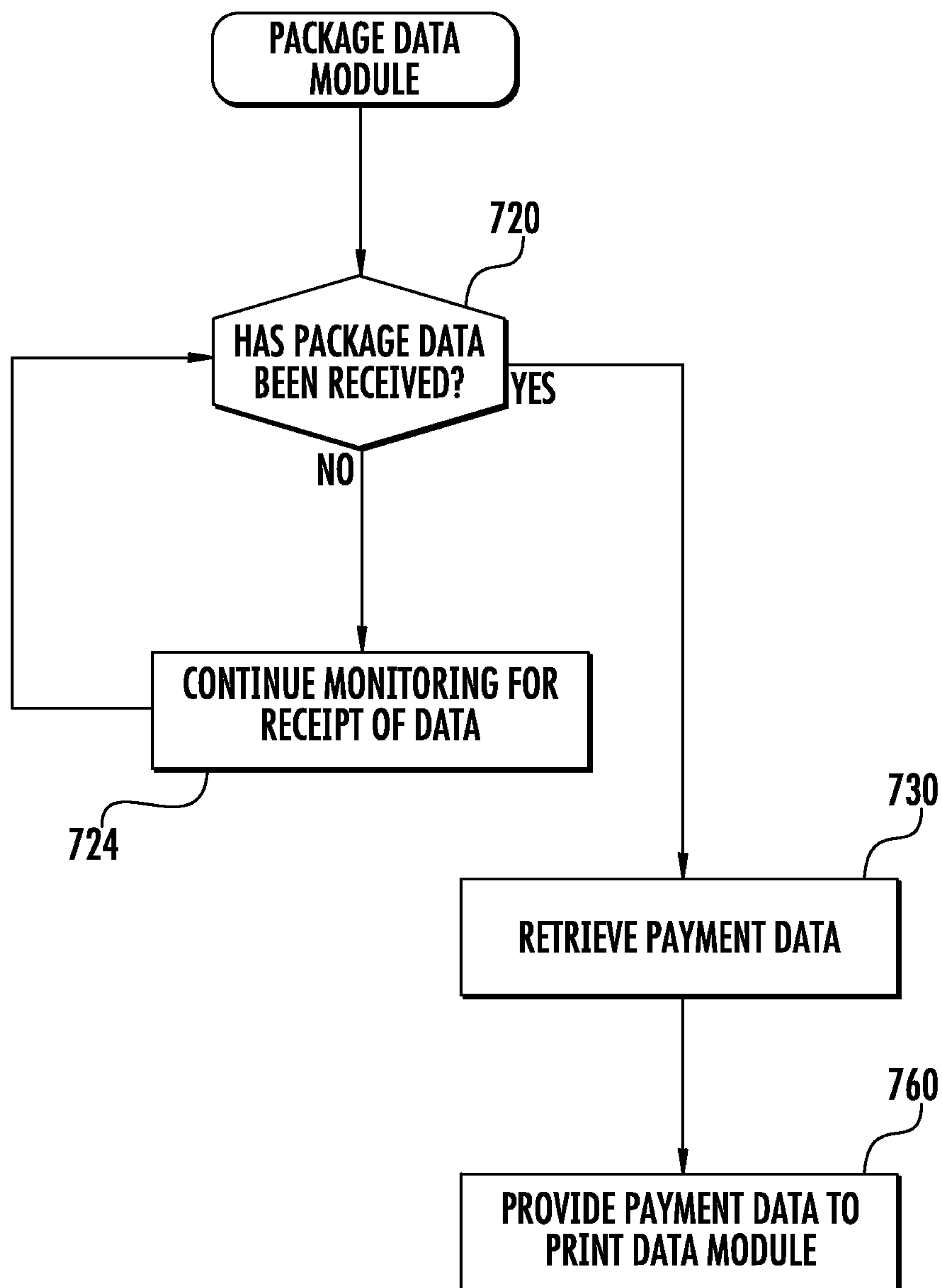


FIG. 8

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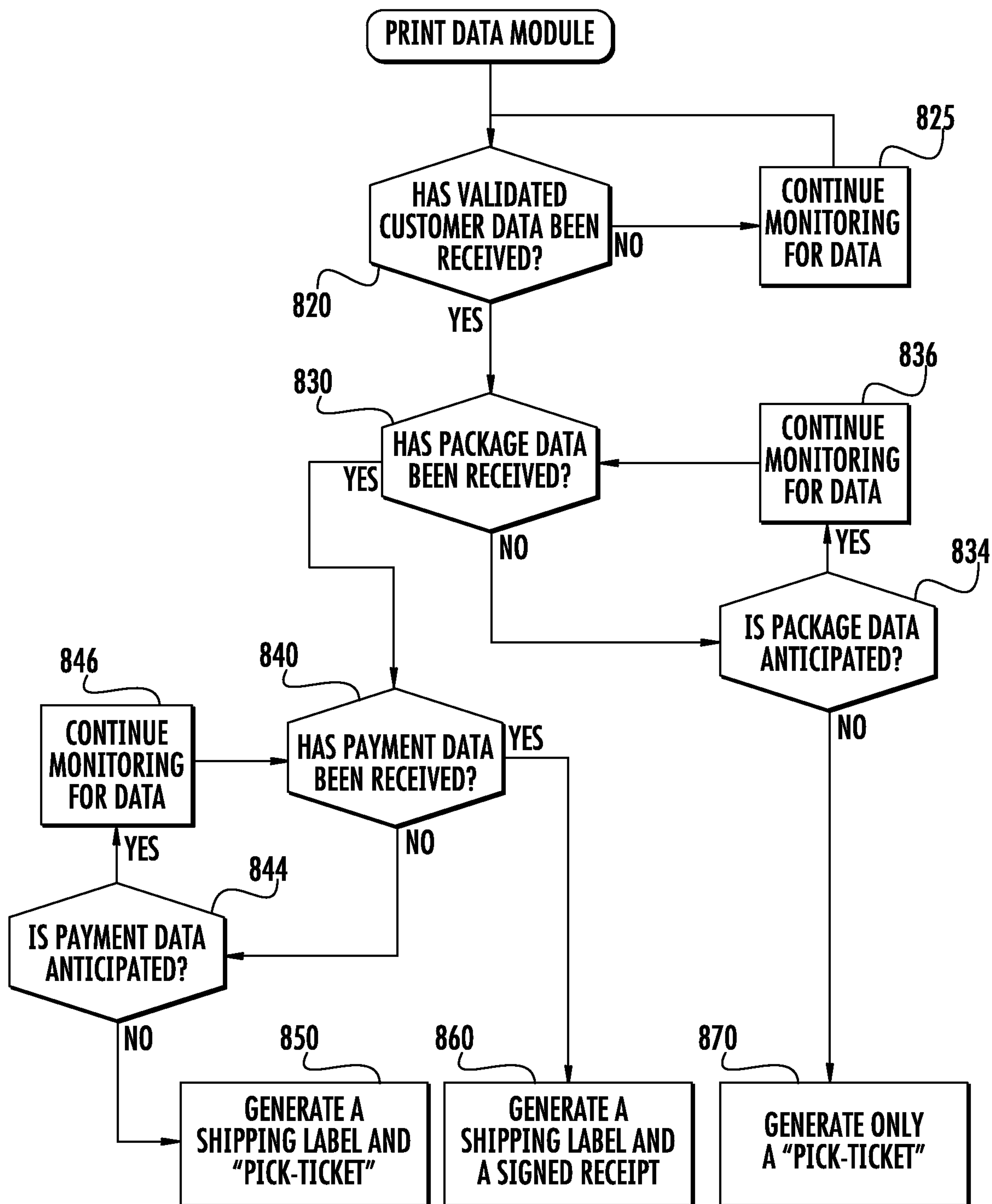


FIG. 9

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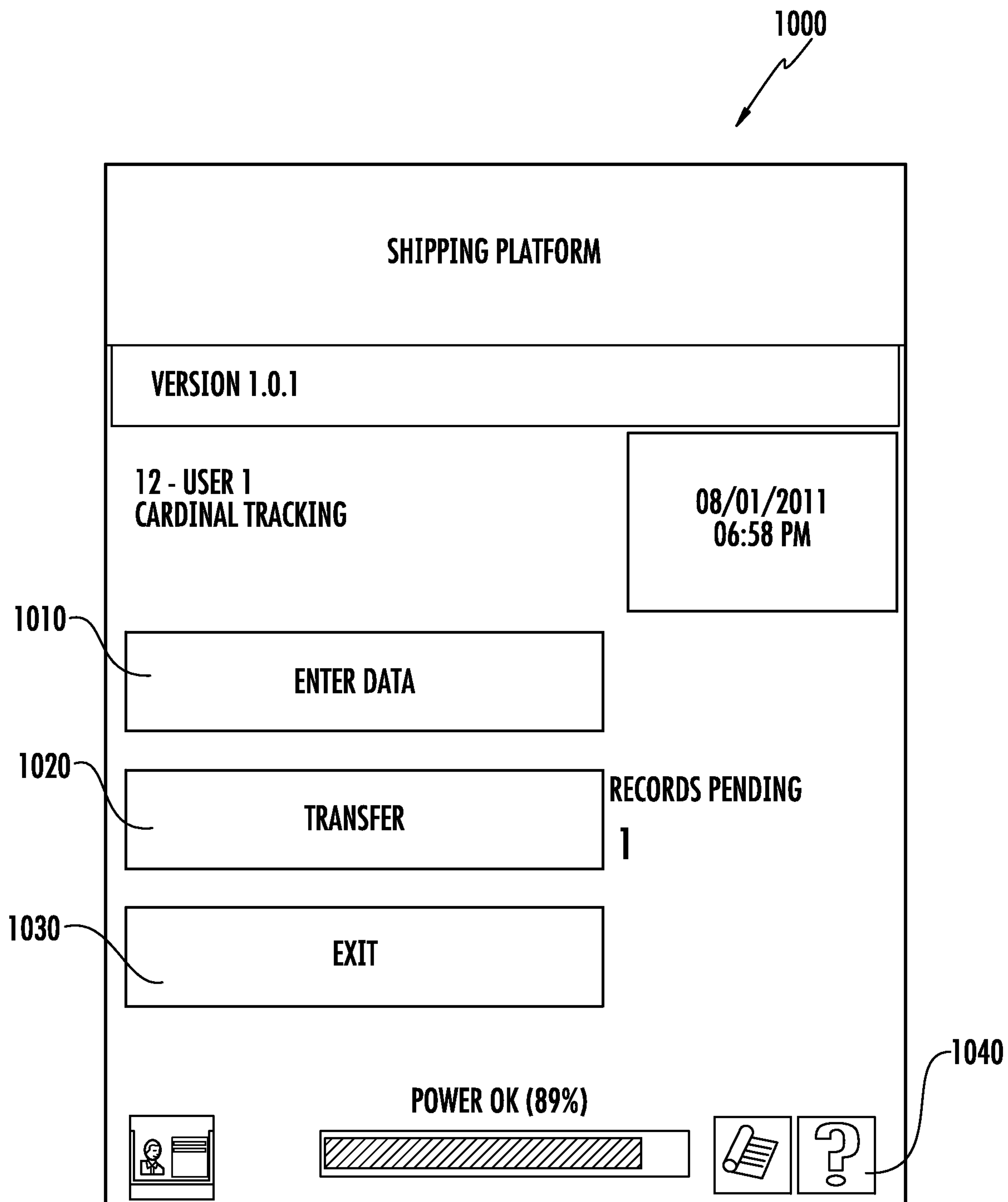


FIG. 10

11/19

1100

SWIPE, SCAN OR MANUALLY ENTER
CUSTOMER INFORMATION

X

1101

NAME (FIRST/LAST)

1102

ADDRESS

APT/STE

CITY

STATE

ZIP

1103

EMAIL

@

1104

PHONE

() -

1110

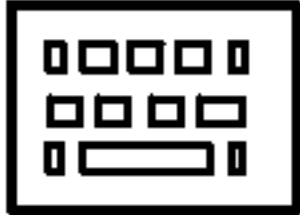
123 1 2 3 4 5 6 7 8 9 0 - = ⬅

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? SUBMIT  CLEAR

1120

FIG. 11

12/19

1100

SWIPE, SCAN OR MANUALLY ENTER
CUSTOMER INFORMATION

X

1101

NAME (FIRST/LAST)

JOHN

SAMPLE

1102

ADDRESS

1825 LAK

APT/STE

100

CITY

LEWISVILLE

STATE

TX ▾

ZIP

75057

1103

EMAIL

JSAMPLE

@

CARDINALTRACKING.COM

↓

1104

PHONE

(800) 285 - 3833

1110

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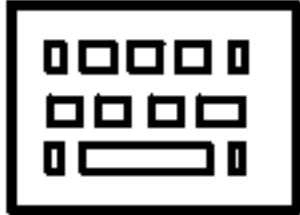
↑

←

→

?

SUBMIT



CLEAR

1120

FIG. 12

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1200

ADDRESS VALIDATION RESULTS

1201 ☐ **USE CURRENT ADDRESS**

1825 LAK 100

LEWISVILLE, TX 75057

ADDRESS OPTIONS

1825 LAKEWAY DR STE 400

1825 LAKEWAY DR STE 100

1202 1825 LAKEWAY DR STE 500-700

1825 LAKEWAY DR STE 800

1825 LAKEWAY DR STE 725

1203 **SELECTED ADDRESS DETAILS**

1825 LAKEWAY DR STE 100

LEWISVILLE, TX 75057

?

SUBMIT AND CLEAR

CANCEL 1220

FIG. 13

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1300

SWIPE, SCAN OR MANUALLY ENTER
PACKAGE INFORMATION

1301 PACKAGE WEIGHT

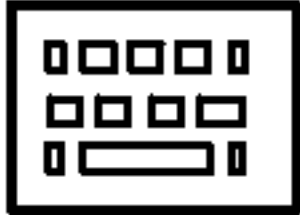
1302 PACKAGE DIMENSIONS

1303 SERVICE TYPE

1304 COST

1305 REFERENCE FIELD

1310

123	1	2	3	4	5	6	7	8	9	0	-	=	←
Tab	q	w	e	r	t	y	u	i	o	p	[	]	
CAP	a	s	d	f	g	h	j	k	l	;	'		
SHIFT	z	x	c	v	b	n	m	,	.	/		↵	
Ctrl	áü	`	\						↓	↑	←	→	
?	SUBMIT								CLEAR				

1320

FIG. 14

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1400

SWIPE, SCAN OR MANUALLY ENTER
PAYMENT INFORMATION

X

1401 PACKAGE TYPE

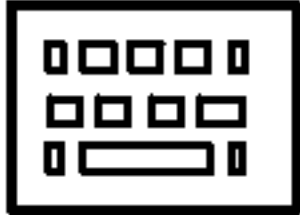
1402 CARD NUMBER (IF APPLICABLE)

1403 SECURITY CODE

1404 EXPIRATION

1405 SIGNATURE

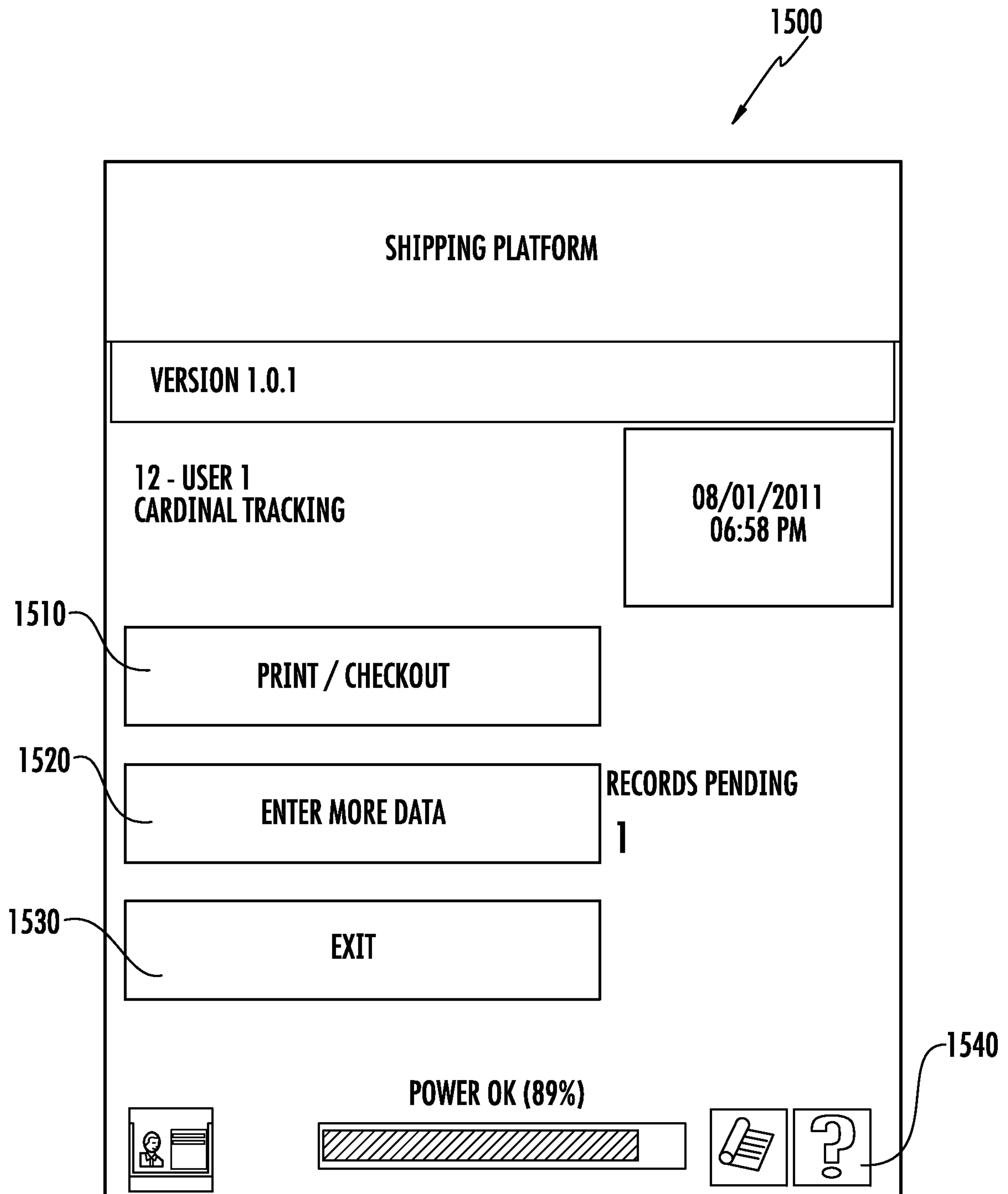
1410

123	1	2	3	4	5	6	7	8	9	0	-	=	←
Tab	q	w	e	r	t	y	u	i	o	p	[	]	
CAP	a	s	d	f	g	h	j	k	l	;	'		
SHIFT	z	x	c	v	b	n	m	,	.	/		↵	
Ctrl	áü	`	\						↓	↑	←	→	
?	SUBMIT								CLEAR				

1420

FIG. 15

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**FIG. 16**

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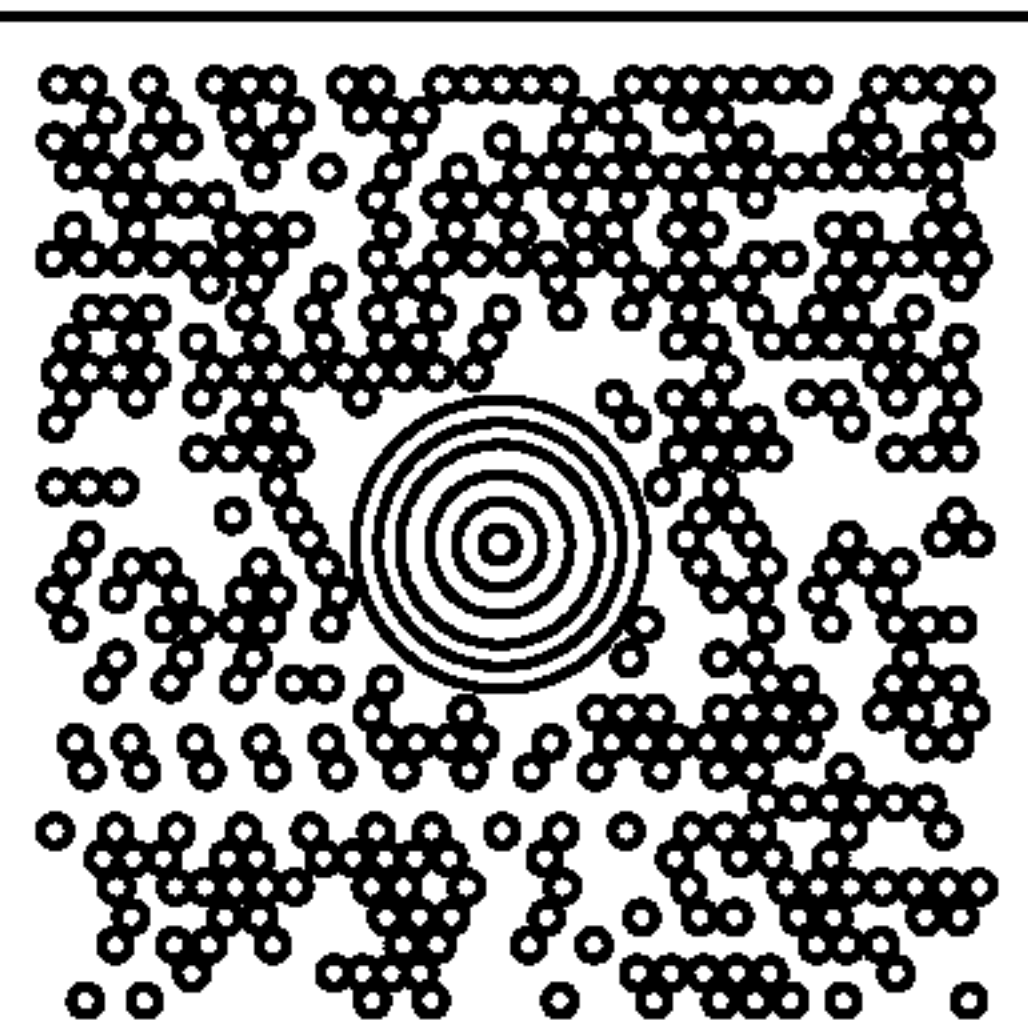
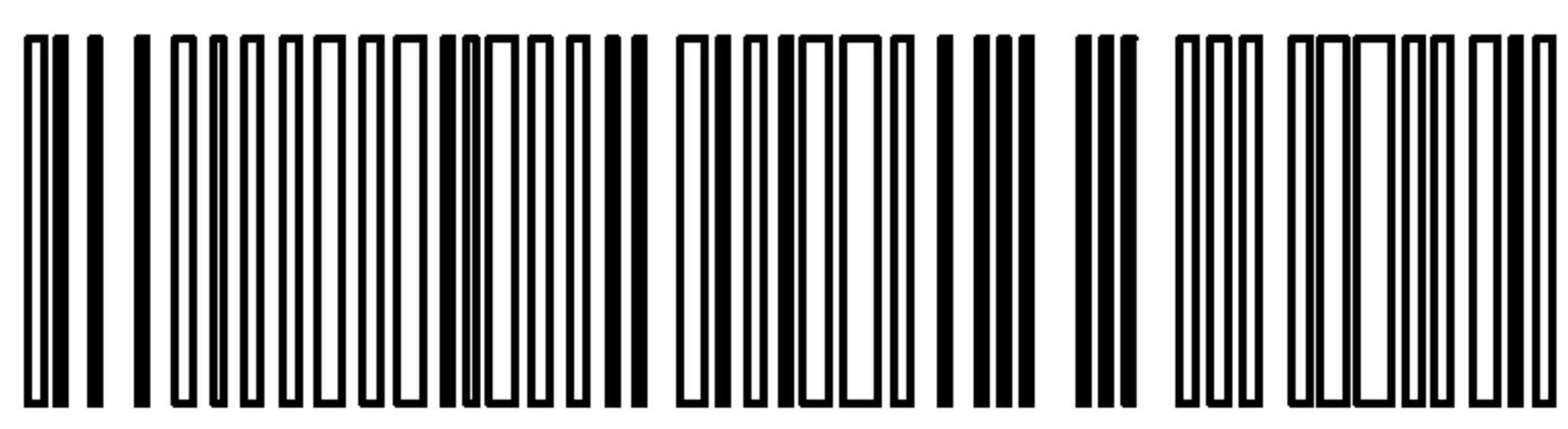
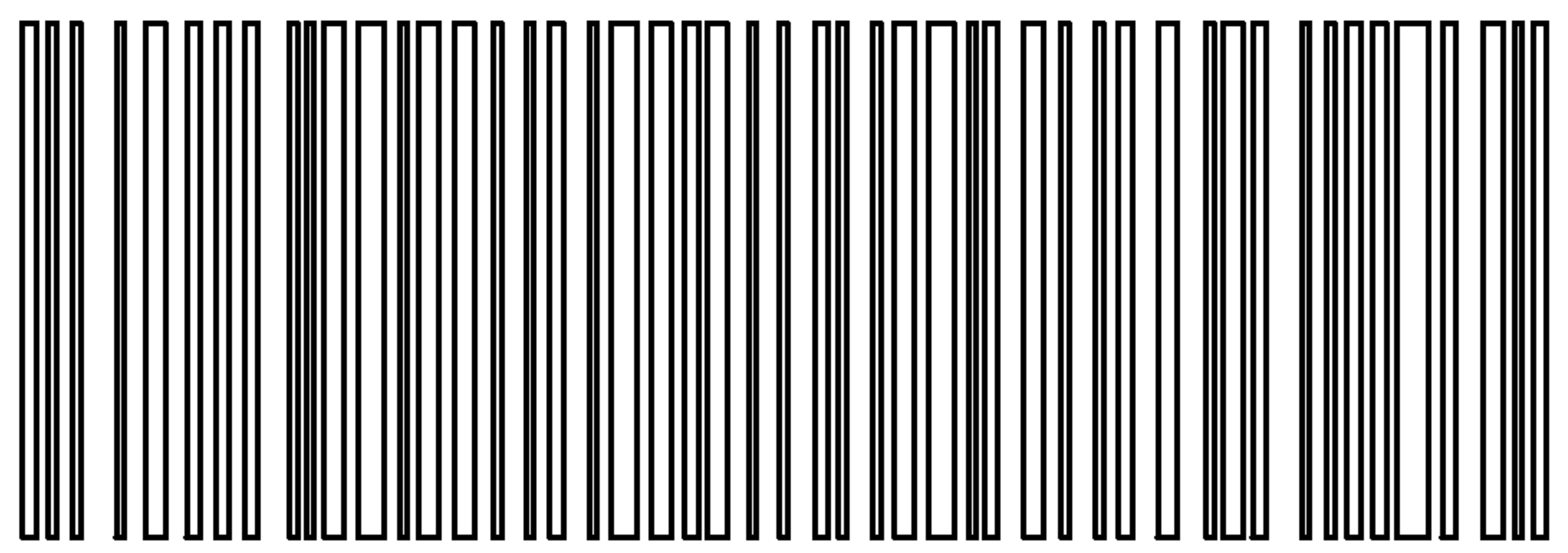
410	UNITED PARCEL SERVICE (404) 828-6500 55 GLENLAKE PKWY NE ATLANTA GA 30328	10 LBS	1 OF 2				
405	SHIP JOHN SMITH TO: (801) 974-4491 CFS SUITE 1331 10450 S STATE	DWT: 22, 11, 12 AH					
SALT LAKE CITY UT 84170-6672							
		UT 841 1-22 					
603	UPS NEXT DAY AIR		1				
605	TRACKING #: 1Z 123 45E 01 1234 5675						
							
1606							

FIG. 17

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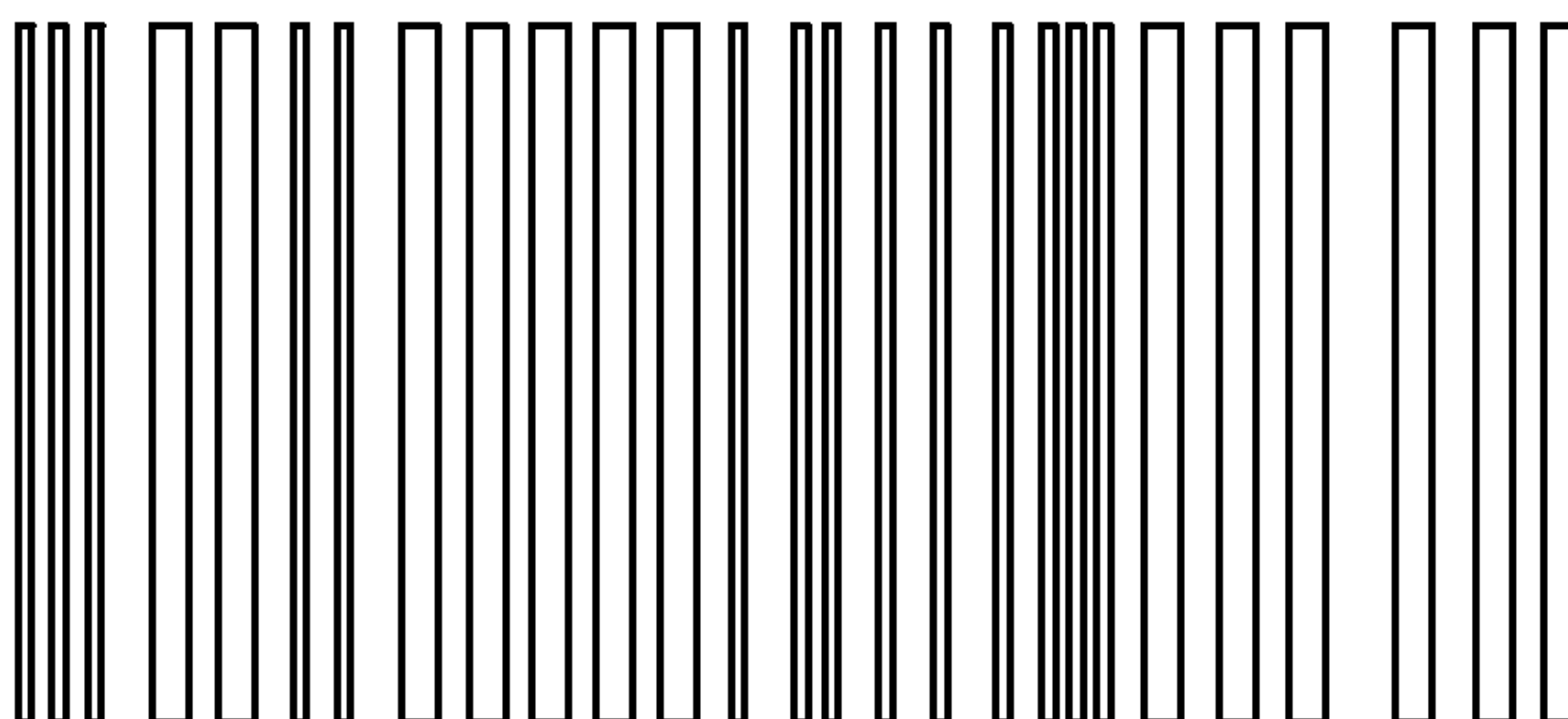
1700

PLEASE PRINT AND ATTACH THIS RECEIPT TO YOUR PACKAGE

THURSDAY, SEPTEMBER 25, 2003 5:37:47 PM

PACKAGE ID:

1706



JC663363564

1710

SHIPPER: BETTY SANDERS
PHONE: 404-881-4602

1705

SHIPPED TO: ARMSTRONG TEASDALE LLP

FIG. 18

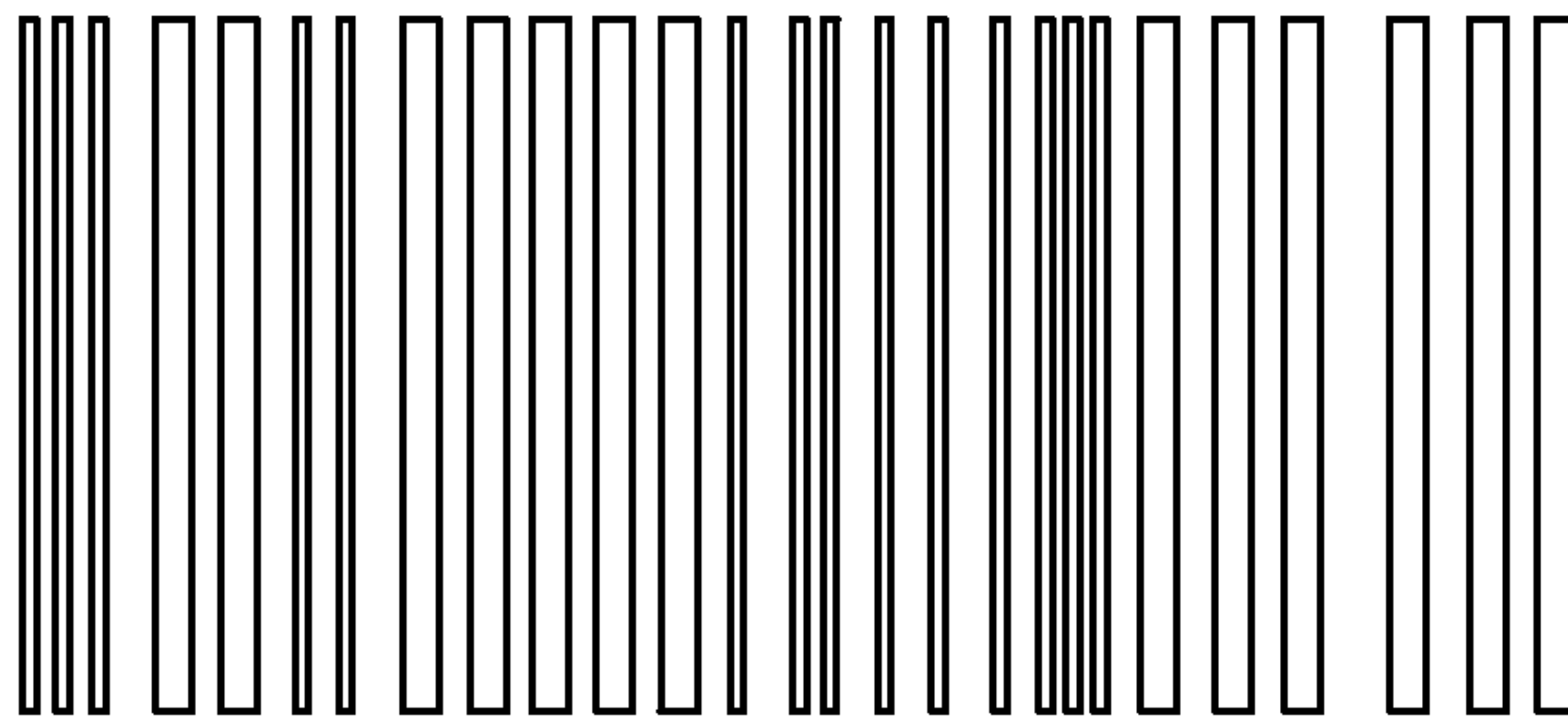
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1800

THURSDAY, SEPTEMBER 25, 2003 5:37:47 PM

PACKAGE ID:

1806



JC663363564

1810

SERVICE LEVEL: NEXT DAY AIR
REFERENCE NUMBER1: 009990-030000
REFERENCE NUMBER2: JOHN DOE

1820

SHIPPER: BETTY SANDERS
PHONE: 404-881-4602

1805

SHIPPED TO: ARMSTRONG TEASDALE LLP

1830

A stylized, handwritten signature in black ink, enclosed within a hand-drawn oval.

FIG. 19

