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(54) **SYSTEMS AND METHODS FOR AUTOMATICALLY INVOKING A DELIVERY REQUEST FOR AN IN- PROGRESS ORDER**

(71) Applicant: **Walmart Apollo, LLC**, Bentonville, AR (US)

(72) Inventors: **Austin Lee Smith**, Burlingame, CA (US); **Deepak Deshpande**, San Jose, CA (US); **Vidyanand Krishnan**, Sunnyvale, CA (US); **Michael Gilbert Ebener**, San Francisco, CA (US); **Arnon Katz**, San Mateo, CA (US); **Prakash Seetharaman**, Santa Clara, CA (US)

(73) Assignee: **WALMART APOLLO, LLC**, Bentonville, AR (US)

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This patent is subject to a terminal disclaimer.

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CPC ***G06Q 10/0834*** (2013.01); ***G06Q 10/0631*** (2013.01); ***G06Q 10/063114*** (2013.01);

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(58) **Field of Classification Search**

CPC G06Q 10/0834; G06Q 10/063114; G06Q 10/0833; G06Q 30/0601

See application file for complete search history.

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(74) *Attorney, Agent, or Firm* — Dickinson Wright PLLC; Hector A. Agdeppa

(57) **ABSTRACT**

A system including one or more processors and one or more non-transitory storage media storing computing instructions that, when executed on the one or more processors, cause the one or more processors to perform operations including: receiving an order list for delivery at a delivery address; determining an estimated order collection time; continuously monitoring, in real-time, a respective location of each delivery driver of one or more delivery drivers of at least one delivery service by receiving the respective location of each delivery driver of the one or more delivery drivers from a

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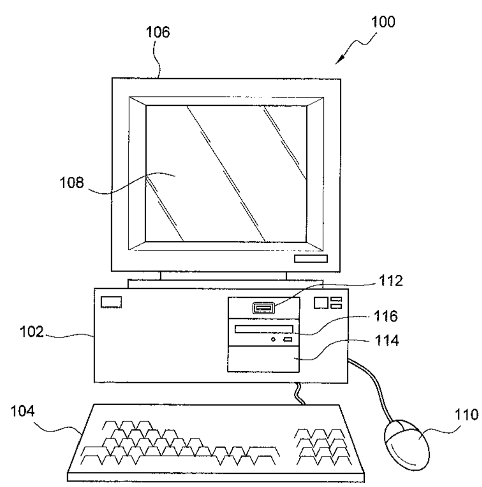

respective delivery driver electronic device of each delivery driver; and instructing a first delivery driver of the one or more delivery drivers to pick up one or more items in the order list and deliver the one or more items to the delivery address. Other embodiments are disclosed herein.

21 Claims, 5 Drawing Sheets

Related U.S. Application Data

continuation of application No. 15/623,153, filed on Jun. 14, 2017, now Pat. No. 11,126,953.

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G06Q 10/067 (2023.01)
G06Q 10/0833 (2023.01)
G06Q 30/0601 (2023.01)

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CPC ***G06Q 10/067*** (2013.01); ***G06Q 10/0833*** (2013.01); ***G06Q 30/0601*** (2013.01); ***G06Q 30/0635*** (2013.01)

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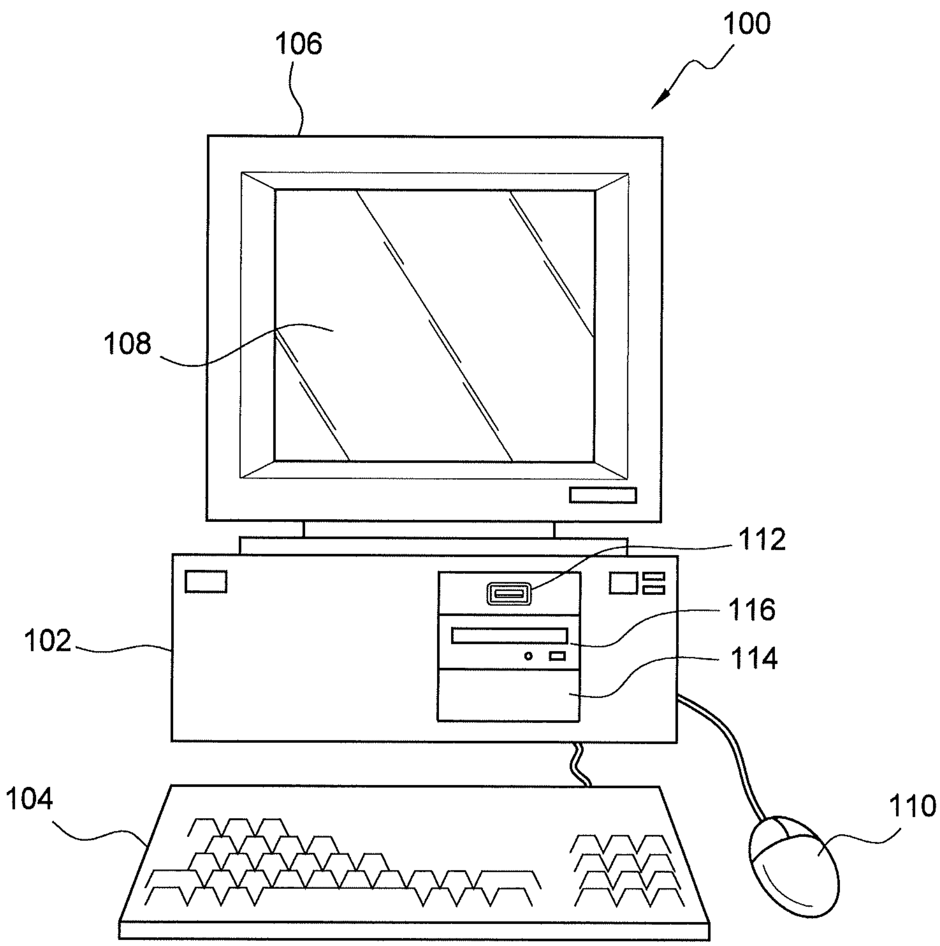
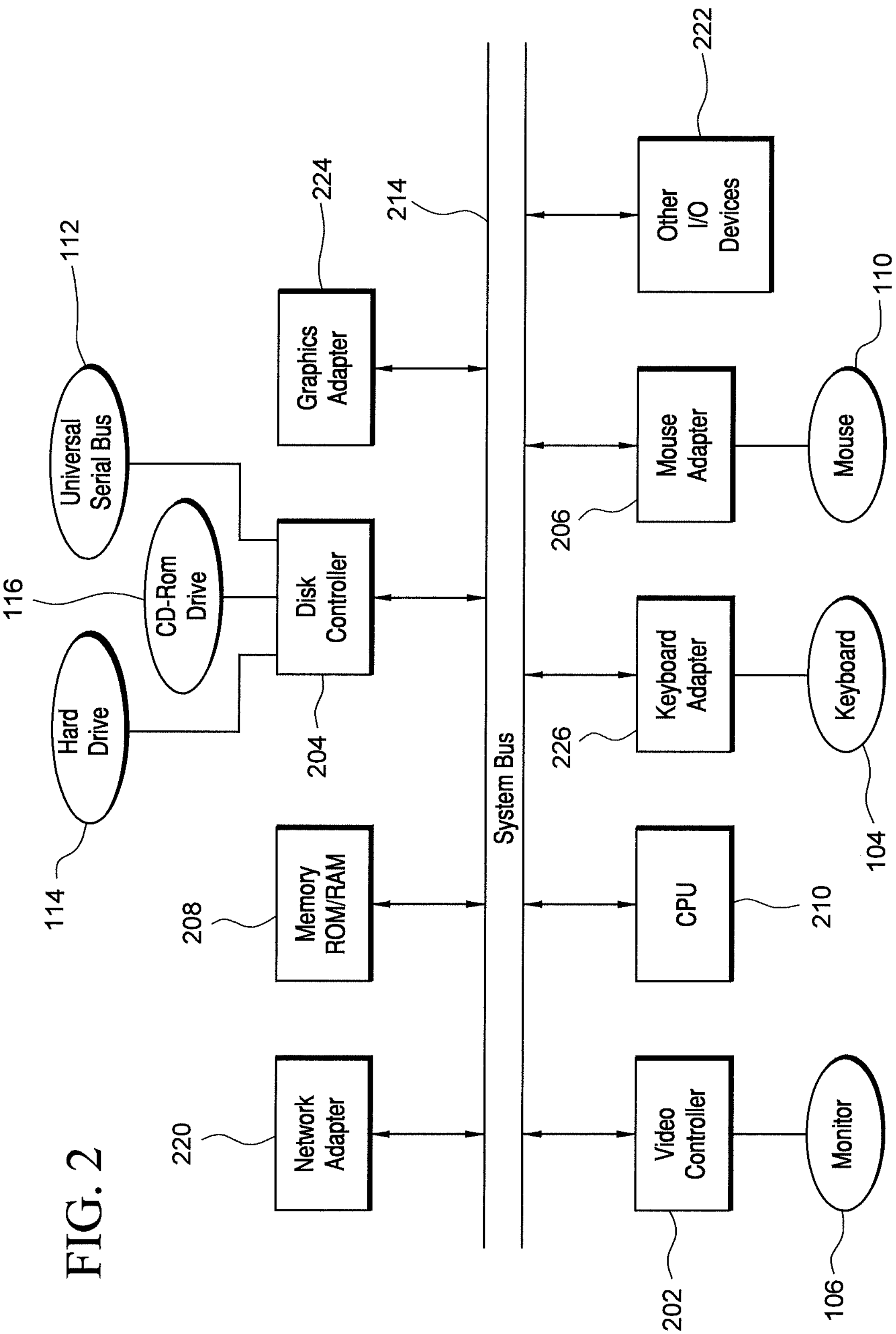


FIG. 1

FIG. 2


Universal Serial Bus
112
CD-Rom Drive
116
Hard Drive
114
Graphics Adapter
224
Disk Controller
204
Memory ROM/RAM
208
Network Adapter
220
214
System Bus
Other I/O Devices
222
Mouse Adapter
206
Mouse
110
Keyboard Adapter
226
Keyboard
104
CPU
210
Video Controller
202
Monitor
106

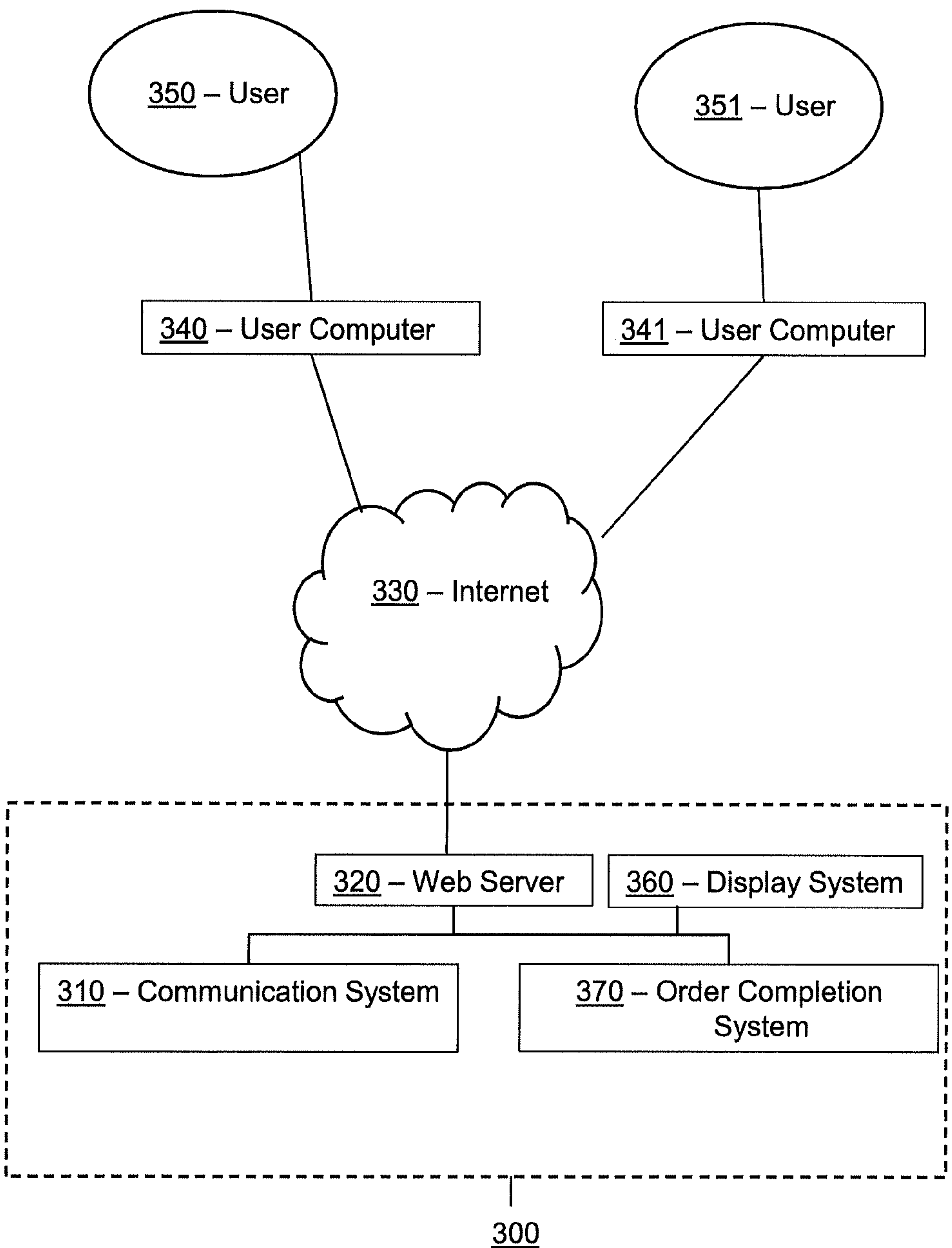

350 – User
351 – User
340 – User Computer
341 – User Computer
330 – Internet
320 – Web Server
360 – Display System
310 – Communication System
370 – Order Completion System
300

FIG. 3

400

405 – Receiving an order request from a customer.

↓

410 – Transmitting an order list of the order request to at least one employee of the store for a collection of one or more products of the order list at the store.

↓

415 – Determining an estimated order collection time of when the one or more products of the order list will be collected at the store by the at least one employee.

↓

420 – Continuously monitoring an estimated order pickup time for each delivery driver of one or more delivery drivers of at least one third-party delivery service.

↓

425 – When a first estimated order pickup time for a first delivery driver of the one or more delivery drivers is substantially equal to the estimated order collection time, transmitting a delivery request to the at least one third-party delivery service requesting the first delivery driver of the one or more delivery drivers to pick up the one or more products from the store.

FIG. 4

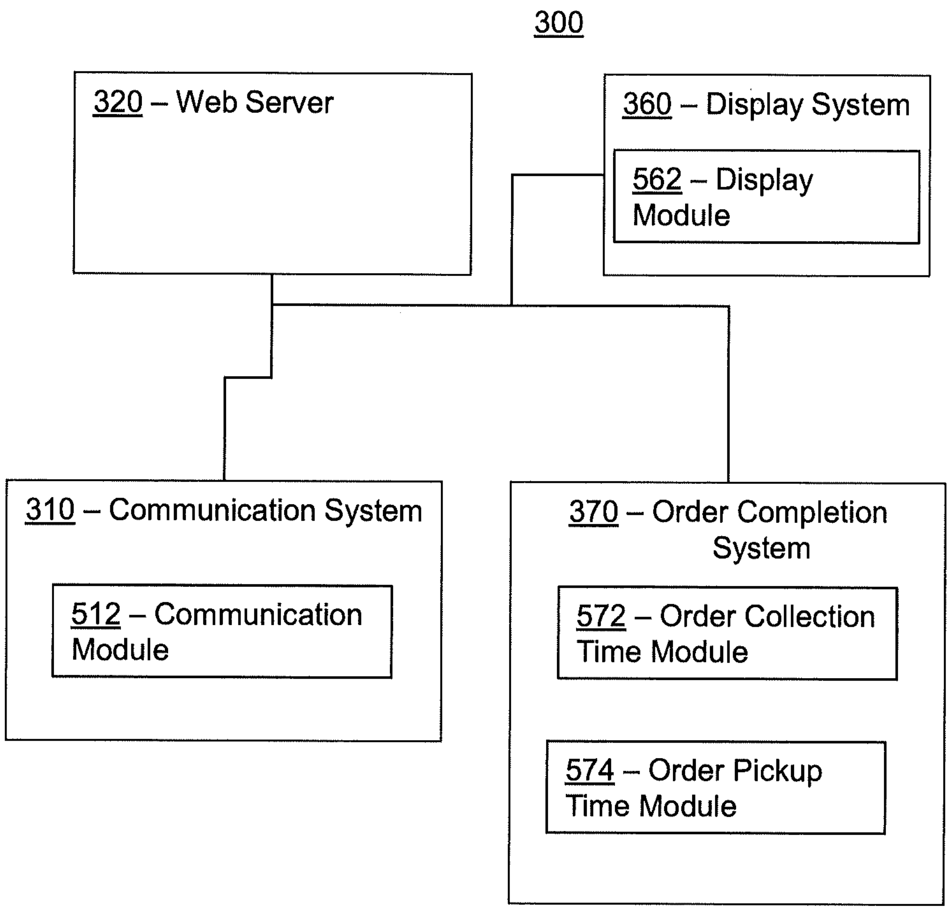

300
320 – Web Server
360 – Display System
562 – Display Module
310 – Communication System
512 – Communication Module
370 – Order Completion System
572 – Order Collection Time Module
574 – Order Pickup Time Module

FIG. 5

SYSTEMS AND METHODS FOR AUTOMATICALLY INVOKING A DELIVERY REQUEST FOR AN IN- PROGRESS ORDER

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 17/479,204, filed Sep. 20, 2021, which is a continuation of U.S. patent application Ser. No. 15/623,153, filed Jun. 14, 2017, issued as U.S. Pat. No. 11,126,953. U.S. patent application Ser. Nos. 17/479,204 and 15/623,153 and U.S. Pat. No. 11,126,953 are herein incorporated by reference in their entirety.

TECHNICAL FIELD

This disclosure relates generally to automatically invoking a delivery request while order fulfillment is still in progress.

BACKGROUND

Many customers of retail or grocery stores now desire the convenience of having their orders delivered to their homes and/or picking up their already-collected orders at a designated area of the store. These orders are often made online by the customers using a website or mobile application for the store. A common problem faced by stores, however, is the expense of maintaining freezers or refrigerators to store collected or assembled orders awaiting pickup by delivery drivers and/or the customers. Additionally, it can be difficult for the store to find space to store collected orders and/or separate orders into temperature-controlled portions and non-temperature controlled portions while awaiting pickup.

BRIEF DESCRIPTION OF THE DRAWINGS

To facilitate further description of the embodiments, the following drawings are provided in which:

FIG. **1** illustrates a front elevational view of a computer system that is suitable for implementing various embodiments of the systems disclosed in FIGS. **3** and **5**;

FIG. **2** illustrates a representative block diagram of an example of the elements included in the circuit boards inside a chassis of the computer system of FIG. **1**;

FIG. **3** illustrates a representative block diagram of a system, according to an embodiment;

FIG. **4** is a flowchart for a method, according to certain embodiments; and

FIG. **5** illustrates a representative block diagram of a portion of the system of FIG. **3**, according to an embodiment.

For simplicity and clarity of illustration, the drawing figures illustrate the general manner of construction, and descriptions and details of well-known features and techniques may be omitted to avoid unnecessarily obscuring the present disclosure. Additionally, elements in the drawing figures are not necessarily drawn to scale. For example, the dimensions of some of the elements in the figures may be exaggerated relative to other elements to help improve understanding of embodiments of the present disclosure. The same reference numerals in different figures denote the same elements.

The terms "first," "second," "third," "fourth," and the like in the description and in the claims, if any, are used for distinguishing between similar elements and not necessarily for describing a particular sequential or chronological order. It is to be understood that the terms so used are interchangeable under appropriate circumstances such that the embodiments described herein are, for example, capable of operation in sequences other than those illustrated or otherwise described herein. Furthermore, the terms "include," and "have," and any variations thereof, are intended to cover a non-exclusive inclusion, such that a process, method, system, article, device, or apparatus that comprises a list of elements is not necessarily limited to those elements, but may include other elements not expressly listed or inherent to such process, method, system, article, device, or apparatus.

The terms "left," "right," "front," "back," "top," "bottom," "over," "under," and the like in the description and in the claims, if any, are used for descriptive purposes and not necessarily for describing permanent relative positions. It is to be understood that the terms so used are interchangeable under appropriate circumstances such that the embodiments of the apparatus, methods, and/or articles of manufacture described herein are, for example, capable of operation in other orientations than those illustrated or otherwise described herein.

The terms "couple," "coupled," "couples," "coupling," and the like should be broadly understood and refer to connecting two or more elements mechanically and/or otherwise. Two or more electrical elements may be electrically coupled together, but not be mechanically or otherwise coupled together. Coupling may be for any length of time, e.g., permanent or semi-permanent or only for an instant. "Electrical coupling" and the like should be broadly understood and include electrical coupling of all types. The absence of the word "removably," "removable," and the like near the word "coupled," and the like does not mean that the coupling, etc. in question is or is not removable.

As defined herein, two or more elements are "integral" if they are comprised of the same piece of material. As defined herein, two or more elements are "non-integral" if each is comprised of a different piece of material.

As defined herein, "real-time" can, in some embodiments, be defined with respect to operations carried out as soon as practically possible upon occurrence of a triggering event. A triggering event can include receipt of data necessary to execute a task or to otherwise process information. Because of delays inherent in transmission and/or in computing speeds, the term "real time" encompasses operations that occur in "near" real time or somewhat delayed from a triggering event. In a number of embodiments, "real time" can mean real time less a time delay for processing (e.g., determining) and/or transmitting data. The particular time delay can vary depending on the type and/or amount of the data, the processing speeds of the hardware, the transmission capability of the communication hardware, the transmission distance, etc. However, in many embodiments, the time delay can be less than approximately one second, two seconds, five seconds, or ten seconds.

As defined herein, "approximately" can, in some embodiments, mean within plus or minus ten percent of the stated value. In other embodiments, "approximately" can mean within plus or minus five percent of the stated value. In further embodiments, "approximately" can mean within plus or minus three percent of the stated value. In yet other embodiments, "approximately" can mean within plus or minus one percent of the stated value.

DESCRIPTION OF EXAMPLES OF EMBODIMENTS

A number of embodiments can include a system. The system can include one or more processors and one or more non-transitory computer-readable storage devices storing computing instructions. The computing instructions can be configured to run on the one or more processors and perform receiving a request from a user, wherein the request can comprise: (1) an order list of one or more items; and/or (2) a delivery address for a delivery of the one or more items of the order list to the user; determining, using a regression analysis, an estimated order collection time for a collection of the one or more items of the order list by at least one collector, wherein the regression analysis can use: one or more independent variables affecting the estimated order collection time; respective coefficients of each respective independent variable of the one or more independent variables affecting the estimated order collection time; and/or a constant applicable to the at least one collector; continuously monitoring a respective location of each respective delivery driver of one or more delivery drivers of at least one delivery service; continuously determining a respective estimated order pickup time for each respective delivery driver of the one or more delivery drivers of the at least one delivery service using the respective location of each respective delivery driver of the one or more delivery drivers of the at least one delivery service; and when a first estimated order pickup time for a first delivery driver of the one or more delivery drivers is approximately equal to the estimated order collection time, instructing the first delivery driver of the one or more delivery drivers to pick up the one or more items and deliver the one or more items to the delivery address.

Various embodiments include a method. The method can be implemented via execution of computing instructions configured to run at one or more processors and configured to be stored at non-transitory computer-readable media The method can comprise receiving a request from a user, wherein the request can comprise: (1) an order list of one or more items; and/or (2) a delivery address for a delivery of the one or more items of the order list to the user; determining, using a regression analysis, an estimated order collection time for a collection of the one or more items of the order list by at least one collector, wherein the regression analysis can use: one or more independent variables affecting the estimated order collection time; respective coefficients of each respective independent variable of the one or more independent variables affecting the estimated order collection time; and/or a constant applicable to the at least one collector; continuously monitoring a respective location of each respective delivery driver of one or more delivery drivers of at least one delivery service; continuously determining a respective estimated order pickup time for each respective delivery driver of the one or more delivery drivers of the at least one delivery service using the respective location of each respective delivery driver of the one or more delivery drivers of the at least one delivery service; and when a first estimated order pickup time for a first delivery driver of the one or more delivery drivers is approximately equal to the estimated order collection time, instructing the first delivery driver of the one or more delivery drivers to pick up the one or more items and deliver the one or more items to the delivery address.

A number of embodiments can include a system. The system can include one or more processing modules and one or more non-transitory storage modules storing computing instructions configured to run on the one or more processing modules. The one or more storage modules can be configured to run on the one or more processing modules and perform an act of receiving an order request from a customer. The order request can comprise (1) an order list of one or more products available for purchase at a store and (2) a delivery address for a delivery of the one or more products of the order list to the customer. The one or more storage modules can be further configured to run on the one or more processing modules and perform an act of transmitting the order list to at least one employee of the store for a collection of the one or more products at the store by the at least one employee. The one or more storage modules can be further configured to run on the one or more processing modules and perform an act of determining an estimated order collection time of when the one or more products of the order list will be collected at the store by the at least one employee. The one or more storage modules can be configured to run on the one or more processing modules and perform an act of continuously monitoring, in real-time, an estimated order pickup time for each delivery driver of one or more delivery drivers of at least one third-party delivery service. The estimated order pickup time for each delivery driver of the one or more delivery drivers can be based at least on a distance of each driver of the one or more delivery drivers from the store. The one or more storage modules can be configured to run on the one or more processing modules and perform an act of, when a first estimated order pickup time for a first delivery driver of the one or more delivery drivers is substantially equal to the estimated order collection time, transmitting a delivery request to the at least one third-party delivery service requesting the first delivery driver of the one or more delivery drivers to pick up the one or more products from the store and deliver the one or more products to the delivery address.

Various embodiments include a method. The method can include receiving an order request from a customer. The order request can comprise (1) an order list of one or more products available for purchase at a store and (2) a delivery address for a delivery of the one or more products of the order list to the customer. The method also can include transmitting the order list to at least one employee of the store for a collection of the one or more products at the store by the at least one employee. The method also can include determining an estimated order collection time of when the one or more products of the order list will be collected at the store by the at least one employee. The method also can include continuously monitoring, in real-time, an estimated order pickup time for each delivery driver of one or more delivery drivers of at least one third-party delivery service. The estimated order pickup time for each delivery driver of the one or more delivery drivers being based at least on a distance of each driver of the one or more delivery drivers from the store. The method also can include, when a first estimated order pickup time for a first delivery driver of the one or more delivery drivers is substantially equal to the estimated order collection time, transmitting a delivery request to the at least one third-party delivery service requesting the first delivery driver of the one or more delivery drivers to pick up the one or more products from the store and deliver the one or more products to the delivery address.

Several embodiments can include a system. The system can include one or more processors and one or more non-transitory storage media storing computing instructions that, when executed on the one or more processors, cause the one or more processors to perform operations certain acts. The acts can include receiving an order list for delivery at a delivery address, as requested from a user. The acts also can include determining an estimated order collection time. The acts further can include continuously monitoring, in real-time, a respective location of each delivery driver of one or more delivery drivers of at least one delivery service by receiving the respective location of each delivery driver of the one or more delivery drivers from a respective delivery driver electronic device of each delivery driver of the one or more delivery drivers at predetermined time intervals. The acts additionally can include instructing a first delivery driver of the one or more delivery drivers to pick up one or more items in the order list and deliver the one or more items to the delivery address.

Various embodiments can include a method. The method being implemented via execution of computing instructions configured to run at one or more processors and stored at non-transitory computer-readable media. The method can include receiving an order list for delivery at a delivery address, as requested from a user. The method also can include determining an estimated order collection time. The method further can include continuously monitoring, in real-time, a respective location of each delivery driver of one or more delivery drivers of at least one delivery service by receiving the respective location of each delivery driver of the one or more delivery drivers from a respective delivery driver electronic device of each delivery driver of the one or more delivery drivers at predetermined time intervals. The method additionally can include instructing a first delivery driver of the one or more delivery drivers to pick up one or more items in the order list and deliver the one or more items to the delivery address.

Turning to the drawings, FIG. **1** illustrates an exemplary embodiment of a computer system **100**, all of which or a portion of which can be suitable for (i) implementing part or all of one or more embodiments of the techniques, methods, and systems and/or (ii) implementing and/or operating part or all of one or more embodiments of the memory storage modules described herein. As an example, a different or separate one of a chassis **102** (and its internal components) can be suitable for implementing part or all of one or more embodiments of the techniques, methods, and/or systems described herein. Furthermore, one or more elements of computer system **100** (e.g., a monitor **106**, a keyboard **104**, and/or a mouse **110**, etc.) also can be appropriate for implementing part or all of one or more embodiments of the techniques, methods, and/or systems described herein. Computer system **100** can comprise chassis **102** containing one or more circuit boards (not shown), a Universal Serial Bus (USB) port **112**, a Compact Disc Read-Only Memory (CD-ROM) and/or Digital Video Disc (DVD) drive **116**, and a hard drive **114**. A representative block diagram of the elements included on the circuit boards inside chassis **102** is shown in FIG. **2**. A central processing unit (CPU) **210** in FIG. **2** is coupled to a system bus **214** in FIG. **2**. In various embodiments, the architecture of CPU **210** can be compliant with any of a variety of commercially distributed architecture families.

Continuing with FIG. **2**, system bus **214** also is coupled to a memory storage unit **208**, where memory storage unit **208** can comprise (i) non-volatile memory, such as, for example, read only memory (ROM) and/or (ii) volatile memory, such as, for example, random access memory (RAM). The non-volatile memory can be removable and/or non-removable non-volatile memory. Meanwhile, RAM can include dynamic RAM (DRAM), static RAM (SRAM), etc. Further, ROM can include mask-programmed ROM, programmable ROM (PROM), one-time programmable ROM (OTP), erasable programmable read-only memory (EPROM), electrically erasable programmable ROM (EEPROM) (e.g., electrically alterable ROM (EAROM) and/or flash memory), etc. In these or other embodiments, memory storage unit **208** can comprise (i) non-transitory memory and/or (ii) transitory memory.

In various examples, portions of the memory storage module(s) of the various embodiments disclosed herein (e.g., portions of the non-volatile memory storage module(s)) can be encoded with a boot code sequence suitable for restoring computer system **100** (FIG. **1**) to a functional state after a system reset. In addition, portions of the memory storage module(s) of the various embodiments disclosed herein (e.g., portions of the non-volatile memory storage module(s)) can comprise microcode such as a Basic Input-Output System (BIOS) operable with computer system **100** (FIG. **1**). In the same or different examples, portions of the memory storage module(s) of the various embodiments disclosed herein (e.g., portions of the non-volatile memory storage module(s)) can comprise an operating system, which can be a software program that manages the hardware and software resources of a computer and/or a computer network. The BIOS can initialize and test components of computer system **100** (FIG. **1**) and load the operating system. Meanwhile, the operating system can perform basic tasks such as, for example, controlling and allocating memory, prioritizing the processing of instructions, controlling input and output devices, facilitating networking, and managing files. Exemplary operating systems can comprise one of the following: (i) Microsoft® Windows® operating system (OS) by Microsoft Corp. of Redmond, Washington, United States of America, (ii) Mac® OS X by Apple Inc. of Cupertino, California, United States of America, (iii) UNIX® OS, and (iv) Linux® OS. Further exemplary operating systems can comprise one of the following: (i) the iOS® operating system by Apple Inc. of Cupertino, California, United States of America, (ii) the Blackberry® operating system by Research In Motion (RIM) of Waterloo, Ontario, Canada, (iii) the WebOS operating system by LG Electronics of Seoul, South Korea, (iv) the Android™ operating system developed by Google, of Mountain View, California, United States of America, (v) the Windows Mobile™ operating system by Microsoft Corp. of Redmond, Washington, United States of America, or (vi) the Symbian™ operating system by Accenture PLC of Dublin, Ireland.

As used herein, "processor" and/or "processing module" means any type of computational circuit, such as but not limited to a microprocessor, a microcontroller, a controller, a complex instruction set computing (CISC) microprocessor, a reduced instruction set computing (RISC) microprocessor, a very long instruction word (VLIW) microprocessor, a graphics processor, a digital signal processor, or any other type of processor or processing circuit capable of performing the desired functions. In some examples, the one or more processing modules of the various embodiments disclosed herein can comprise CPU **210**.

Alternatively, or in addition to, the systems and procedures described herein can be implemented in hardware, or a combination of hardware, software, and/or firmware. For example, one or more application specific integrated circuits (ASICs) can be programmed to carry out one or more of the systems and procedures described herein. For example, one or more of the programs and/or executable program components described herein can be implemented in one or more ASICs. In many embodiments, an application specific integrated circuit (ASIC) can comprise one or more processors or microprocessors and/or memory blocks or memory storage.

In the depicted embodiment of FIG. **2**, various I/O devices such as a disk controller **204**, a graphics adapter **224**, a video controller **202**, a keyboard adapter **226**, a mouse adapter **206**, a network adapter **220**, and other I/O devices **222** can be coupled to system bus **214**. Keyboard adapter **226** and mouse adapter **206** are coupled to keyboard **104** (FIGS. **1-2**) and mouse **110** (FIGS. **1-2**), respectively, of computer system **100** (FIG. **1**). While graphics adapter **224** and video controller **202** are indicated as distinct units in FIG. **2**, video controller **202** can be integrated into graphics adapter **224**, or vice versa in other embodiments. Video controller **202** is suitable for monitor **106** (FIGS. **1-2**) to display images on a screen **108** (FIG. **1**) of computer system **100** (FIG. **1**). Disk controller **204** can control hard drive **114** (FIGS. **1-2**), USB port **112** (FIGS. **1-2**), and CD-ROM drive **116** (FIGS. **1-2**). In other embodiments, distinct units can be used to control each of these devices separately.

Network adapter **220** can be suitable to connect computer system **100** (FIG. **1**) to a computer network by wired communication (e.g., a wired network adapter) and/or wireless communication (e.g., a wireless network adapter). In some embodiments, network adapter **220** can be plugged or coupled to an expansion port (not shown) in computer system **100** (FIG. **1**). In other embodiments, network adapter **220** can be built into computer system **100** (FIG. **1**). For example, network adapter **220** can be built into computer system **100** (FIG. **1**) by being integrated into the motherboard chipset (not shown), or implemented via one or more dedicated communication chips (not shown), connected through a PCI (peripheral component interconnector) or a PCI express bus of computer system **100** (FIG. **1**) or USB port **112** (FIG. **1**).

Returning now to FIG. **1**, although many other components of computer system **100** are not shown, such components and their interconnection are well known to those of ordinary skill in the art. Accordingly, further details concerning the construction and composition of computer system **100** and the circuit boards inside chassis **102** are not discussed herein.

Meanwhile, when computer system **100** is running, program instructions (e.g., computer instructions) stored on one or more of the memory storage module(s) of the various embodiments disclosed herein can be executed by CPU **210** (FIG. **2**). At least a portion of the program instructions, stored on these devices, can be suitable for carrying out at least part of the techniques and methods described herein.

Further, although computer system **100** is illustrated as a desktop computer in FIG. **1**, there can be examples where computer system **100** may take a different form factor while still having functional elements similar to those described for computer system **100**. In some embodiments, computer system **100** may comprise a single computer, a single server, or a cluster or collection of computers or servers, or a cloud of computers or servers. Typically, a cluster or collection of servers can be used when the demand on computer system **100** exceeds the reasonable capability of a single server or computer. In certain embodiments, computer system **100** may comprise a portable computer, such as a laptop computer. In certain other embodiments, computer system **100** may comprise a mobile electronic device, such as a smartphone. In certain additional embodiments, computer system **100** may comprise an embedded system.

Turning ahead in the drawings, FIG. **3** illustrates a block diagram of a system **300** that can be employed for automatically invoking a delivery request for an in-progress order, as described in greater detail below. System **300** is merely exemplary and embodiments of the system are not limited to the embodiments presented herein. System **300** can be employed in many different embodiments or examples not specifically depicted or described herein. In some embodiments, certain elements or modules of system **300** can perform various procedures, processes, and/or activities. In these or other embodiments, the procedures, processes, and/or activities can be performed by other suitable elements or modules of system **300**.

Generally, therefore, system **300** can be implemented with hardware and/or software, as described herein. In some embodiments, part or all of the hardware and/or software can be conventional, while in these or other embodiments, part or all of the hardware and/or software can be customized (e.g., optimized) for implementing part or all of the functionality of system **300** described herein.

In some embodiments, system **300** can include a communication system **310**, a web server **320**, a display system **360**, and an order completion system **370**. Communication system **310**, web server **320**, display system **360**, and order completion system **370** can each be a computer system, such as computer system **100** (FIG. **1**), as described above, and can each be a single computer, a single server, or a cluster or collection of computers or servers, or a cloud of computers or servers. In another embodiment, a single computer system can host each of two or more of communication system **310**, web server **320**, display system **360**, and/or order completion system **370**. Additional details regarding communication system **310**, web server **320**, display system **360**, and order completion system **370** are described herein.

In many embodiments, system **300** also can comprise user computers **340**, **341**. In some embodiments, user computers **340**, **341** can be mobile devices. A mobile electronic device can refer to a portable electronic device (e.g., an electronic device easily conveyable by hand by a person of average size) with the capability to present audio and/or visual data (e.g., text, images, videos, music, etc.). For example, a mobile electronic device can comprise at least one of a digital media player, a cellular telephone (e.g., a smartphone), a personal digital assistant, a handheld digital computer device (e.g., a tablet personal computer device), a laptop computer device (e.g., a notebook computer device, a netbook computer device), a wearable user computer device, or another portable computer device with the capability to present audio and/or visual data (e.g., images, videos, music, etc.). Thus, in many examples, a mobile electronic device can comprise a volume and/or weight sufficiently small as to permit the mobile electronic device to be easily conveyable by hand. For examples, in some embodiments, a mobile electronic device can occupy a volume of less than or equal to approximately 1790 cubic centimeters, 2434 cubic centimeters, 2876 cubic centimeters, 4056 cubic centimeters, and/or 5752 cubic centimeters. Further, in these embodiments, a mobile electronic device can weigh less than or equal to 15.6 Newtons, 17.8 Newtons, 22.3 Newtons, 31.2 Newtons, and/or 44.5 Newtons.

Exemplary mobile electronic devices can comprise (i) an iPod®, iPhone®, iTouch®, iPad®, MacBook® or similar product by Apple Inc. of Cupertino, California, United States of America, (ii) a Blackberry® or similar product by Research in Motion (RIM) of Waterloo, Ontario, Canada, (iii) a Lumia® or similar product by the Nokia Corporation of Keilaniemi, Espoo, Finland, and/or (iv) a Galaxy™ or similar product by the Samsung Group of Samsung Town, Seoul, South Korea. Further, in the same or different embodiments, a mobile electronic device can comprise an electronic device configured to implement one or more of (i) the iPhone® operating system by Apple Inc. of Cupertino, California, United States of America, (ii) the Blackberry® operating system by Research In Motion (RIM) of Waterloo, Ontario, Canada, (iii) the Palm® operating system by Palm, Inc. of Sunnyvale, California, United States, (iv) the Android™ operating system developed by the Open Handset Alliance, (v) the Windows Mobile™ operating system by Microsoft Corp. of Redmond, Washington, United States of America, or (vi) the Symbian™ operating system by Nokia Corp. of Keilaniemi, Espoo, Finland.

Further still, the term "wearable user computer device" as used herein can refer to an electronic device with the capability to present audio and/or visual data (e.g., text, images, videos, music, etc.) that is configured to be worn by a user and/or mountable (e.g., fixed) on the user of the wearable user computer device (e.g., sometimes under or over clothing; and/or sometimes integrated with and/or as clothing and/or another accessory, such as, for example, a hat, eyeglasses, a wrist watch, shoes, etc.). In many examples, a wearable user computer device can comprise a mobile electronic device, and vice versa. However, a wearable user computer device does not necessarily comprise a mobile electronic device, and vice versa.

In specific examples, a wearable user computer device can comprise a head mountable wearable user computer device (e.g., one or more head mountable displays, one or more eyeglasses, one or more contact lenses, one or more retinal displays, etc.) or a limb mountable wearable user computer device (e.g., a smart watch). In these examples, a head mountable wearable user computer device can be mountable in close proximity to one or both eyes of a user of the head mountable wearable user computer device and/or vectored in alignment with a field of view of the user.

In more specific examples, a head mountable wearable user computer device can comprise (i) Google Glass™ product or a similar product by Google Inc. of Menlo Park, California, United States of America; (ii) the Eye Tap™ product, the Laser Eye Tap™ product, or a similar product by ePI Lab of Toronto, Ontario, Canada, and/or (iii) the Raptyr™ product, the STAR 1200™ product, the Vuzix Smart Glasses M100™ product, or a similar product by Vuzix Corporation of Rochester, New York, United States of America. In other specific examples, a head mountable wearable user computer device can comprise the Virtual Retinal Display™ product, or similar product by the University of Washington of Seattle, Washington, United States of America. Meanwhile, in further specific examples, a limb mountable wearable user computer device can comprise the iWatch™ product, or similar product by Apple Inc. of Cupertino, California, United States of America, the Galaxy Gear or similar product of Samsung Group of Samsung Town, Seoul, South Korea, the Moto 360 product or similar product of Motorola of Schaumburg, Illinois, United States of America, and/or the Zip™ product, One™ product, Flex™ product, Charge™ product, Surge™ product, or similar product by Fitbit Inc. of San Francisco, California, United States of America.

In some embodiments, web server **320** can be in data communication through Internet **330** with user computers (e.g., **340**, **341**). In certain embodiments, user computers **340-341** can be desktop computers, laptop computers, smart phones, tablet devices, and/or other endpoint devices. Web server **320** can host one or more websites. For example, web server **320** can host an eCommerce website that allows users to browse and/or search for products, to add products to an electronic shopping cart, and/or to purchase products, in addition to other suitable activities.

In many embodiments, communication system **310**, web server **320**, display system **360**, and/or order completion system **370** can each comprise one or more input devices (e.g., one or more keyboards, one or more keypads, one or more pointing devices such as a computer mouse or computer mice, one or more touchscreen displays, a microphone, etc.), and/or can each comprise one or more display devices (e.g., one or more monitors, one or more touch screen displays, projectors, etc.). In these or other embodiments, one or more of the input device(s) can be similar or identical to keyboard **104** (FIG. **1**) and/or a mouse **110** (FIG. **1**). Further, one or more of the display device(s) can be similar or identical to monitor **106** (FIG. **1**) and/or screen **108** (FIG. **1**). The input device(s) and the display device(s) can be coupled to the processing module(s) and/or the memory storage module(s) communication system **310**, web server **320**, display system **360**, and/or order completion system **370** in a wired manner and/or a wireless manner, and the coupling can be direct and/or indirect, as well as locally and/or remotely. As an example of an indirect manner (which may or may not also be a remote manner), a keyboard-video-mouse (KVM) switch can be used to couple the input device(s) and the display device(s) to the processing module(s) and/or the memory storage module(s). In some embodiments, the KVM switch also can be part of communication system **310**, web server **320**, display system **360**, and/or order completion system **370**. In a similar manner, the processing module(s) and the memory storage module(s) can be local and/or remote to each other.

In many embodiments, communication system **310**, web server **320**, display system **360**, and/or order completion system **370** can be configured to communicate with one or more user computers **340** and **341**. In some embodiments, user computers **340** and **341** also can be referred to as customer computers. In some embodiments, communication system **310**, web server **320**, display system **360**, and/or order completion system **370** can communicate or interface (e.g., interact) with one or more customer computers (such as user computers **340** and **341**) through a network or internet **330**. Internet **330** can be an intranet that is not open to the public. Accordingly, in many embodiments, communication system **310**, web server **320**, display system **360**, and/or order completion system **370** (and/or the software used by such systems) can refer to a back end of system **300** operated by an operator and/or administrator of system **300**, and user computers **340** and **341** (and/or the software used by such systems) can refer to a front end of system **300** used by one or more users **350** and **351**, respectively. In some embodiments, users **350** and **351** also can be referred to as customers, in which case, user computers **340** and **341** can be referred to as customer computers. In these or other embodiments, the operator and/or administrator of system **300** can manage system **300**, the processing module(s) of system **300**, and/or the memory storage module(s) of system **300** using the input device(s) and/or display device(s) of system **300**.

Meanwhile, in many embodiments, communication system **310**, web server **320**, display system **360**, and/or order completion system **370** also can be configured to communicate with one or more databases. The one or more databases can comprise a product database that contains information about products, items, or SKUs (stock keeping units) sold by a retailer. The one or more databases can be stored on one or more memory storage modules (e.g., non-transitory memory storage module(s)), which can be similar or identical to the one or more memory storage module(s) (e.g., non-transitory memory storage module(s)) described above with respect to computer system **100** (FIG. **1**). Also, in some embodiments, for any particular database of the one or more databases, that particular database can be stored on a single memory storage module of the memory storage module(s), and/or the non-transitory memory storage module(s) storing the one or more databases or the contents of that particular database can be spread across multiple ones of the memory storage module(s) and/or non-transitory memory storage module(s) storing the one or more databases, depending on the size of the particular database and/or the storage capacity of the memory storage module(s) and/or non-transitory memory storage module(s).

The one or more databases can each comprise a structured (e.g., indexed) collection of data and can be managed by any suitable database management systems configured to define, create, query, organize, update, and manage database(s). Exemplary database management systems can include MySQL (Structured Query Language) Database, PostgreSQL Database, Microsoft SQL Server Database, Oracle Database, SAP (Systems, Applications, & Products) Database, and IBM DB2 Database.

Meanwhile, communication between communication system **310**, web server **320**, display system **360**, order completion system **370**, and/or the one or more databases can be implemented using any suitable manner of wired and/or wireless communication. Accordingly, system **300** can comprise any software and/or hardware components configured to implement the wired and/or wireless communication. Further, the wired and/or wireless communication can be implemented using any one or any combination of wired and/or wireless communication network topologies (e.g., ring, line, tree, bus, mesh, star, daisy chain, hybrid, etc.) and/or protocols (e.g., personal area network (PAN) protocol(s), local area network (LAN) protocol(s), wide area network (WAN) protocol(s), cellular network protocol(s), powerline network protocol(s), etc.). Exemplary PAN protocol(s) can comprise Bluetooth, Zigbee, Wireless Universal Serial Bus (USB), Z-Wave, etc.; exemplary LAN and/or WAN protocol(s) can comprise Institute of Electrical and Electronic Engineers (IEEE) 802.3 (also known as Ethernet), IEEE 802.11 (also known as WiFi), etc.; and exemplary wireless cellular network protocol(s) can comprise Global System for Mobile Communications (GSM), General Packet Radio Service (GPRS), Code Division Multiple Access (CDMA), Evolution-Data Optimized (EV-DO), Enhanced Data Rates for GSM Evolution (EDGE), Universal Mobile Telecommunications System (UMTS), Digital Enhanced Cordless Telecommunications (DECT), Digital AMPS (IS-136/Time Division Multiple Access (TDMA)), Integrated Digital Enhanced Network (iDEN), Evolved High-Speed Packet Access (HSPA+), Long-Term Evolution (LTE), WiMAX, etc. The specific communication software and/or hardware implemented can depend on the network topologies and/or protocols implemented, and vice versa. In many embodiments, exemplary communication hardware can comprise wired communication hardware including, for example, one or more data buses, such as, for example, universal serial bus(es), one or more networking cables, such as, for example, coaxial cable(s), optical fiber cable(s), and/or twisted pair cable(s), any other suitable data cable, etc. Further exemplary communication hardware can comprise wireless communication hardware including, for example, one or more radio transceivers, one or more infrared transceivers, etc. Additional exemplary communication hardware can comprise one or more networking components (e.g., modulator-demodulator components, gateway components, etc.).

Turning ahead in the drawings, FIG. **4** illustrates a flow chart for a method **400**, according to an embodiment. Method **400** is merely exemplary and is not limited to the embodiments presented herein. Method **400** can be employed in many different embodiments or examples not specifically depicted or described herein. In some embodiments, the activities of method **400** can be performed in the order presented. In other embodiments, the activities of method **400** can be performed in any suitable order. In still other embodiments, one or more of the activities of method **400** can be combined or skipped. In many embodiments, system **300** (FIG. **3**) can be suitable to perform method **400** and/or one or more of the activities of method **400**. In these or other embodiments, one or more of the activities of method **400** can be implemented as one or more computer instructions configured to run at one or more processing modules and configured to be stored at one or more non-transitory memory storage modules **512**, **562**, **572**, and/or **574** (FIG. **5**). Such non-transitory memory storage modules can be part of a computer system such as communication system **310**, web server **320**, display system **360**, and/or order completion system **370** (FIGS. **3** & **5**). The processing module(s) can be similar or identical to the processing module(s) described above with respect to computer system **100** (FIG. **1**).

Many customers of retail or grocery stores now desire the convenience of having their orders delivered to their homes and/or picking up their already-collected orders at a designated area of the store. These orders are often made online by the customers using a website or mobile application for the store. A common problem faced by stores, however, is the expense of maintaining freezers or refrigerators to store collected or assembled orders awaiting pickup by delivery drivers and/or the customers. Additionally, it can be difficult for the store to find space to store collected orders and/or separate orders into temperature-controlled portions and non-temperature controlled portions while awaiting pickup.

To solve this problem, various embodiments of method **400** automatically invoke a delivery request while the order fulfillment (or collection of the order at the store) is still in progress. As shall be described in greater detail below, automatically invoking a delivery request at the correct time while the order is still being collected allows the delivery driver (and possibly the customer) to arrive at the store to pick up the order at essentially the same time as when collection of the order at the store is completed.

Method **400** can comprise an activity **405** of receiving an order request from a customer. In many embodiments, the order request can be made online by a customer visiting a website or a mobile application of a store or retailer on an electronic device. The website or mobile application can be associated with a brick and mortar store, an online store, a warehouse, a distribution center, and/or a fulfillment center, and thus, as used herein, the term "store" can include each of these locations. In many embodiments, the order request can comprise at least one of (1) an order list of one or more products available for purchase at the store, and/or (2) a delivery address for a delivery of the one or more products of the order list to the customer (or for pick up at the store by the customer). For example, when a customer visits or otherwise uses a web site or mobile application of the store, the customer can compile an order list of one or more products that are available for purchase at the store. Before or after compiling the order list of the one or more products, the customer can enter a delivery address where the customer would like the one or more products delivered (or can indicate that the customer will pick up the one or more products at the store). In some embodiments, the delivery address can be a default address previously entered with customer information and/or a previous order.

In many embodiments, method **400** and/or activity **405** also can comprise an activity of determining the order request is eligible for the delivery of the one or more products to the delivery address of the customer within a predetermined amount of time from an order request time. Such a determination can take place before or after the customer compiles the order list. For example, in some embodiments, system **300** (FIG. **3**) can coordinate displaying an inquiry to the customer before the customer begins shopping, the inquiry asking if the customer would like to make an order request for delivery of one or more products. If the customer selects or otherwise enters that he/she would like to make an order request for delivery of the one or more products, then system **300** (FIG. **3**) can coordinate displaying only products eligible for delivery.

In some embodiments, determining the order request is eligible for the delivery of the one or more products to the delivery address of the customer within a predetermined amount of time from an order request time can comprise determining the order request is eligible for the delivery of the one or more products to the delivery address of the customer based on a plurality of factors. This plurality of factors can comprise one or more of (1) a number of products in the order list, (2) a physical size of the one or more products in the order list, (3) a picker availability of the at least one employee of the store for the collection of the one or more products of the order list at the store, (4) a distance of the physical address from the store, and/or (5) a driver availability of the one or more delivery drivers. For example, if the order list is too small or too large, the order request may not be eligible for delivery. By way of another example, if one or more products on the order list are beyond certain size dimensions or weight (that would prevent the one or more products from fitting in a delivery vehicle or be carried by a delivery driver), the order request may not be eligible for delivery.

In some embodiments, activity **405** and other activities in method **400** can comprise using a distributed network comprising distributed memory architecture to perform the associated activity. This distributed architecture can reduce the impact on the network and system resources to reduce congestion in bottlenecks while still allowing data to be accessible from a central location. In some embodiments, activity **405** and other activities in method **400** can comprise using a distributed network comprising distributed memory architecture to perform the associated activity. This distributed architecture can reduce the impact on the network and system resources to reduce congestion in bottlenecks while still allowing data to be accessible from a central location.

Once the ordering process is completed by the customer, method **400** also can comprise an activity **410** of transmitting an order list of the order request to at least one employee of the store for a collection of one or more products of the order list at the store by the at least one employee. In many embodiments, activity **410** can comprise transmitting the order list to an electronic device used by the at least one employee of the store for the collection of the one or more products at the store by the at least one employee. The electronic device can be a personal electronic device of the employee or, alternatively, can be an electronic device owned by the store and given to the employee to use at the store.

In many embodiments, method **400** and/or activity **410** also can comprise an activity of coordinating displaying or otherwise generating instructions for providing an interface that displays the order list of the order request on the electronic device of the at least one employee.

Method **400** also can comprise an activity **415** of determining an estimated order collection time of when the one or more products of the order list will be collected at the store by the at least one employee. In many embodiments, the estimated order collection time can be based on one or more of (1) a time of day, (2) the employee collecting the one or more products of the order list, or (3) types of products in the order list. The time of day can affect the pick time estimation due to the store being more or less crowded at certain times of the day. System **300** (FIG. **3**) also can determine estimated order collection time based on the historical performance of the employee assigned to collect the one or more products of the order list.

In some embodiments, the estimated order collection time can be determined using a regression analysis for estimating the relationships among variables. The regression analysis used can use the relationship between a dependent variable and one or more independent variables (or "predictors"). The regression model can determine how order collection time (or the dependent variable or "criterion variable") can predict changes when any one of the independent variables is varied for each order. The independent variables can include, for example, a number of: (1) a total number of ambient, chilled, and/or frozen products; and/or (2) a total number of ambient, chilled, and/or frozen products.

In some embodiments, linear regression can be used where the relationships are modeled using linear predictor functions whose unknown model parameters are estimated from data. For example, given a variable y and a number of variables $X_1, \ldots, X_p$ that may be related toy, linear regression analysis can be applied to quantify the strength of the relationship between y and the X_j, to assess which X_j may have no relationship with y at all, and to identify which subsets of the X_j contain redundant information about y.

In a non-limiting example, the following was used to determine all values of A based on historical data, and then was used to estimate order collection time based on order related variables:

$$\text{Estimated Picking Time}=A1X1,A2X2,A3X3,A4X4,\ A5X5\ \ldots\ AnXn+\text{Constant}+\text{Error}$$

where Constant is a required value for each estimation, A are coefficients, and X are order related variables that impact order collection. Independent variables or order related variables that impact order collection time can be determined through techniques of feature selection, and then the independent variables or order related variables to the features that impacted the order collection time the most can be determined. Information gain for feature selection can be used to select features that are most important to order collection time and discard irrelevant or redundant features.

In many embodiments, method **400** and/or activity **415** also can comprise an activity of coordinating displaying or otherwise generating instructions for providing an interface that displays the estimated order collection time on one or more electronic devices. For example, system **300** (FIG. **3**) can coordinate displaying the estimated order collection time on the electronic device of the employee collecting the one or more products of the order list, a store administrator located at the store, a store administrator located remotely from the store, the customer for whom the order is being collected, and/or a delivery driver assigned to deliver the one or more products to the customer.

Method **400** also can comprise an activity **420** of continuously monitoring, in real-time, an estimated order pickup time for each delivery driver of one or more delivery drivers of at least one third-party delivery service and/or another delivery service of the store such as an internal delivery source. In many embodiments, the estimated order pickup time at a certain point in time can comprise an estimated time that the delivery driver would arrive at the store if a request for the delivery drive was made at that certain point in time. For example, system **300** (FIG. **3**) can continuously monitor, in real-time, the location of a plurality of delivery drivers for a third-party delivery service (and/or another delivery service of the store such as an internal delivery source) to estimate a time at which each of the plurality of delivery drivers would arrive at the store to pick up an order if a request was made at that moment.

In some embodiments, activity **420** can comprise receiving the estimated order pickup time for each delivery driver of the one or more delivery drivers of the at least one third-party delivery service (and/or another delivery service of the store such as an internal delivery source) from the at least one third-party delivery service (and/or another delivery service of the store such as an internal delivery source) at predetermined time intervals. For example, system **300** (FIG. **3**) can receive estimated order pickup times for a plurality of drivers for a third-party delivery service (and/or another delivery service of the store such as an internal delivery source) every 30 seconds, 60 seconds, 90 seconds, 2 minutes, 3 minutes, and so on. In some embodiments, system **300** (FIG. **3**) continuously monitors or receives updates for each delivery driver of one or more delivery drivers of the third-party delivery service (and/or another delivery service of the store such as an internal delivery source) through an application program interface (API) of the third-party delivery service (and/or another delivery service of the store such as an internal delivery source). The (API) can be configured to provide system **300** (FIG. **3**) with a direct connection to the third-party delivery service to allow system **300** (FIG. **3**) to continuously monitor the estimated order pickup time for each delivery driver.

In many embodiments, the estimated order pickup time for each delivery driver of the one or more delivery drivers can be based on one or more of a distance of each driver of the one or more delivery drivers from the store, traffic between each delivery driver and the store, a number of the one or more delivery drivers available to pick up the order, and so on. The third-party delivery service can comprise but is not limited to a crowd-sourced delivery service.

In many embodiments, method **400** and/or activity **420** also can comprise an activity of coordinating displaying or otherwise generating instructions for providing an interface that displays the estimated order pickup time for each delivery driver of one or more delivery drivers of at least one third-party delivery service on one or more electronic devices. For example, system **300** (FIG. **3**) can coordinate displaying the estimated order pickup time on the electronic device of the employee collecting the one or more products of the order list, a store administrator located at the store, a store administrator located remotely from the store, the customer for whom the order is being collected, and/or a delivery driver assigned to deliver the one or more products to the customer.

In many embodiments, method **400** and/or activity **420** can automatically invoke a delivery request when an estimated order pickup time and an estimated order collection are substantially equal or within a certain range of time. For example, if the estimated pickup time of one of the delivery drivers is within 30 seconds, 60 seconds, 90 seconds, 2 minutes, 3 minutes, and so on, of the order collection time, system **300** can automatically invoke or otherwise transmit a delivery request at an appropriate time. Thus, continuing in FIG. **4**, method **400** also can comprise an activity **425** of, when a first estimated order pickup time for a first delivery driver of the one or more delivery drivers is substantially equal to the estimated order collection time, transmitting a delivery request to the at least one third-party delivery service (and/or another delivery service of the store such as an internal delivery source). The delivery request can comprise requesting the first delivery driver of the one or more delivery drivers to pick up the one or more products from the store and deliver the one or more products to the delivery address. In some embodiments, the delivery request is transmitted to the third-party delivery service (and/or another delivery service of the store such as an internal delivery source), which then transmits the delivery request to the first delivery driver. In other embodiments, the delivery request is transmitted to the first delivery driver directly from system **300** (FIG. **3**) or through a server system of the third-party delivery service. In many embodiments, the delivery request is accepted by the third-party delivery service based on the ability of the third-party delivery service to fulfill the delivery request to pick up the order at the estimated order pickup time and/or deliver the order during a specified window of time.

In many embodiments, method **400** (and/or activity **425**) also can comprise an activity of coordinating displaying or otherwise generating instructions for providing an interface that displays the delivery request on one or more electronic devices. For example, system **300** (FIG. **3**) can coordinate displaying the delivery request on the electronic device of the first delivery driver.

In some embodiments, method **400** (and/or activity **425**) can optionally comprise an activity of transmitting delivery driver information to at least one employee of the store. The at least one employee of the store can comprise one or more employees of the store assigned to collect the order and/or a manager of the store. The delivery driver information transmitted to the at least one employee of the store can comprise one or more of (1) a name of the delivery driver assigned to pick up and deliver the one or more products, (2) vehicle make and model information for a vehicle being driven by the delivery driver assigned to pick up and deliver the one or more products, and/or (3) a meeting location for transfer of the one or more products from the employee of the store to the delivery driver assigned to pick up and deliver the one or more products.

In some embodiments, method **400** (and/or activity **425**) can optionally comprise an activity of coordinating displaying or otherwise generating instructions for providing an interface that displays delivery driver information on one or more electronic devices. For example, system **300** (FIG. **3**) can coordinate displaying the delivery driver information on the electronic device of an employee of the store.

In some embodiments, method **400** (and/or activity **425**) can optionally comprise an activity of transmitting delivery driver information to the electronic device of the customer. The delivery driver information transmitted to the customer can comprise one or more of (1) a name of the first delivery driver, (2) vehicle make and model information for a vehicle being driven by the first delivery driver, (3) an estimated arrival time of the first delivery driver at the delivery address, and/or (4) tracking information for the first delivery driver.

In many embodiments, method **400** (and/or activity **425**) can optionally comprise an activity of coordinating displaying or otherwise generating instructions for providing an interface that displays delivery driver information on the electronic device of the customer.

FIG. **5** illustrates a block diagram of a portion of system **300** comprising communication system **310**, web server **320**, display system **360**, and order completion system **370**, according to the embodiment shown in FIG. **3**. Each of communication system **310**, web server **320**, display system **360**, and/or order completion system **370**, is merely exemplary and not limited to the embodiments presented herein. Each of communication system **310**, web server **320**, display system **360**, and/or order completion system **370**, can be employed in many different embodiments or examples not specifically depicted or described herein. In some embodiments, certain elements or modules of communication system **310**, web server **320**, display system **360**, and/or order completion system **370** can perform various procedures, processes, and/or acts. In other embodiments, the procedures, processes, and/or acts can be performed by other suitable elements or modules.

In many embodiments, communication system **310** can comprise non-transitory storage module **512**. Memory storage module **512** can be referred to as communication module **512**. In many embodiments, communication module **512** can store computing instructions configured to run on one or more processing modules and perform one or more acts of method **400** (FIG. **4**) (e.g., activity **405** of receiving an order request from a customer, activity **410** of transmitting an order list of the order request to at least one employee of the store for a collection of one or more products of the order list at the store, and activity **425** of, when a first estimated order pickup time for a first delivery driver of the one or more delivery drivers is substantially equal to the estimated order collection time, transmitting a delivery request to the at least one third-party delivery service requesting the first delivery driver of the one or more delivery drivers to pick up the one or more products from the store (FIG. **4**)).

In many embodiments, display system **360** can comprise non-transitory memory storage module **562**. Memory storage module **562** can be referred to as display module **562**. In many embodiments, display module **562** can store computing instructions configured to run on one or more processing modules and perform one or more acts of method **400** (FIG. **4**) (e.g., coordinating displaying the order list on the electronic device of the employee of the store, coordinating displaying the estimated order collection time on an electronic device of the store, coordinating displaying the estimated order pickup time for each delivery driver of the one or more delivery drivers of the least one third-party delivery service, coordinating displaying the delivery request on an electronic device of the at least one third-party delivery service, coordinating displaying the delivery driver information on the electronic device of the employee of the store, and coordinating displaying the delivery driver information on the electronic device of the customer).

In many embodiments, order completion system **370** can comprise non-transitory memory storage module **572**. Memory storage module **572** can be referred to as order collection time module **572**. In many embodiments, order collection time module **572** can store computing instructions configured to run on one or more processing modules and perform one or more acts of method **400** (FIG. **4**) (e.g. activity **415** of determining an estimated order collection time of when the one or more products of the order list will be collected at the store by the at least one employee (FIG. **4**)).

In many embodiments, order completion system **370** can comprise non-transitory memory storage module **574**. Memory storage module **574** can be referred to as order pickup time module **574**. In many embodiments, order pickup time module **574** can store computing instructions configured to run on one or more processing modules and perform one or more acts of method **400** (FIG. **4**) (e.g., activity **420** of continuously monitoring an estimated order pickup time for each delivery driver of one or more delivery drivers of at least one third-party delivery service (FIG. **4**)).

Although systems and methods for automatically invoking a delivery request for an in-progress order have been described with reference to specific embodiments, it will be understood by those skilled in the art that various changes may be made without departing from the spirit or scope of the disclosure. Accordingly, the disclosure of embodiments is intended to be illustrative of the scope of the disclosure and is not intended to be limiting. It is intended that the scope of the disclosure shall be limited only to the extent required by the appended claims. For example, to one of ordinary skill in the art, it will be readily apparent that any element of FIGS. **1-5** may be modified, and that the foregoing discussion of certain of these embodiments does not necessarily represent a complete description of all possible embodiments. For example, one or more of the procedures, processes, or activities of FIG. **4** may include different procedures, processes, and/or activities and be performed by many different modules, in many different orders.

All elements claimed in any particular claim are essential to the embodiment claimed in that particular claim. Consequently, replacement of one or more claimed elements constitutes reconstruction and not repair. Additionally, benefits, other advantages, and solutions to problems have been described with regard to specific embodiments. The benefits, advantages, solutions to problems, and any element or elements that may cause any benefit, advantage, or solution to occur or become more pronounced, however, are not to be construed as critical, required, or essential features or elements of any or all of the claims, unless such benefits, advantages, solutions, or elements are stated in such claim.

Moreover, embodiments and limitations disclosed herein are not dedicated to the public under the doctrine of dedication if the embodiments and/or limitations: (1) are not expressly claimed in the claims; and (2) are or are potentially equivalents of express elements and/or limitations in the claims under the doctrine of equivalents.

What is claimed is:

1. A system comprising:

one or more processors; and

one or more non-transitory storage media storing computing instructions that, when executed on the one or more processors, cause the one or more processors to perform operations comprising:

receiving an order list for delivery at a delivery address, as requested from a user;

determining an estimated order collection time;

continuously monitoring, in real-time, a respective location of each delivery driver of one or more delivery drivers of at least one delivery service by receiving the respective location of each delivery driver of the one or more delivery drivers from a respective delivery driver electronic device of each delivery driver of the one or more delivery drivers at predetermined time intervals;

continuously determining, in real time, a respective estimated order pickup time for each respective delivery driver of the one or more delivery drivers of the at least one delivery service using the respective location of each respective delivery driver of the one or more delivery drivers of the at least one delivery service; and

automatically invoking a delivery request when a soonest one of the respective estimated order pickup times for the one or more delivery drivers is within a predetermined range of the estimated order collection time, comprising:

transmitting the delivery request instructing a first delivery driver of the one or more delivery drivers associated with the soonest one of the respective estimated order pickup times to pick up one or more items in the order list and deliver the one or more items to the delivery address.

2. The system of claim **1**, wherein determining the estimated order collection time uses regression analysis.

3. The system of claim **2**, wherein the regression analysis uses:

one or more independent variables affecting the estimated order collection time;

respective coefficients of each independent variable of the one or more independent variables affecting the estimated order collection time;

a constant applicable to at least one collector; and

collector device data from at least one collector electronic device of the at least one collector.

4. The system of claim **3**, wherein, when the regression analysis uses the collector device data from the at least one collector electronic device of the at least one collector, the collector device data comprises at least one of:

a quantity of ambient temperature items in the order list;

a quantity of chilled items in the order list; or

a quantity of frozen items in the order list.

5. The system of claim **4**, wherein the regression analysis is configured to determine when at least one portion of the collector device data comprises:

no effect on the estimated order collection time; or

a redundant effect on the estimated order collection time.

6. The system of claim **1**, wherein continuously monitoring, in real time, the respective location of each delivery driver of the one or more delivery drivers further comprises:

receiving, using an API, updates for each delivery driver of the one or more delivery drivers of a third-party delivery service, wherein the API enables the system to continuously monitor, in real time, a respective estimated order pickup time for each respective delivery driver of the one or more delivery drivers of the third-party delivery service, wherein the at least one delivery service comprises the third-party delivery service.

7. The system of claim **1**, determining the respective estimated order pickup time further comprises:

determining traffic patterns between the respective location between each delivery driver of the one or more delivery drivers and a store location.

8. The system of claim **1**, wherein instructing the first delivery driver of the one or more delivery drivers to pick up the one or more items and deliver the one or more items to the delivery address comprises:

displaying, on a respective first delivery driver electronic device of the first delivery driver, the delivery request to the first delivery driver of the one or more delivery drivers instructing the first delivery driver of the one or more delivery drivers to pick up the one or more items and deliver the one or more items to the delivery address.

9. The system of claim **1**, wherein the operations further comprise:

transmitting first delivery driver information to the user, the first delivery driver information comprising one or more of:

a name of the first delivery driver;

a vehicle make and a vehicle model associated with a vehicle being driven by the first delivery driver;

an estimated arrival time of the first delivery driver at the delivery address; or

tracking information for the first delivery driver.

10. The system of claim **1**, wherein the operations further comprise:

transmitting first delivery driver information to at least one collector, the first delivery driver information comprising one or more of:

a name of the first delivery driver;

a vehicle make and a vehicle model associated with a vehicle being driven by the first delivery driver;

an estimated arrival time of the first delivery driver at a pick up address where the at least one collector collects the one or more items in the order list; or

tracking information for the first delivery driver.

11. A method implemented via execution of computing instructions configured to run at one or more processors and stored at non-transitory computer-readable media, the method comprising:

receiving an order list for delivery at a delivery address, as requested from a user;

determining an estimated order collection time;

continuously monitoring, in real-time, a respective location of each delivery driver of one or more delivery drivers of at least one delivery service by receiving the respective location of each delivery driver of the one or more delivery drivers from a respective delivery driver electronic device of each delivery driver of the one or more delivery drivers at predetermined time intervals;

continuously determining, in real time, a respective estimated order pickup time for each respective delivery driver of the one or more delivery drivers of the at least one delivery service using the respective location of each respective delivery driver of the one or more delivery drivers of the at least one delivery service; and

automatically invoking a delivery request when a soonest one of the respective estimated order pickup times for the one or more delivery drivers is within a predetermined range of the estimated order collection time, comprising:

transmitting the delivery request instructing a first delivery driver of the one or more delivery drivers associated with the soonest one of the respective estimated order pickup times to pick up one or more items in the order list and deliver the one or more items to the delivery address.

12. The method of claim **11**, wherein determining the estimated order collection time uses regression analysis, wherein the regression analysis uses:

one or more independent variables affecting the estimated order collection time;

respective coefficients of each independent variable of the one or more independent variables affecting the estimated order collection time;

a constant applicable to at least one collector; and collector device data from at least one collector electronic device of the at least one collector.

13. The method of claim **12**, wherein, when the regression analysis uses the collector device data from the at least one collector electronic device of the at least one collector, the collector device data comprises at least one of:

a quantity of ambient temperature items in the order list;

a quantity of chilled items in the order list; or

a quantity of frozen items in the order list.

14. The method of claim **13**, wherein the regression analysis is configured to determine when at least one portion of the collector device data comprises:

no effect on the estimated order collection time; or

a redundant effect on the estimated order collection time.

15. The method of claim **11**, wherein continuously monitoring, in real time, the respective location of each delivery driver of the one or more delivery drivers further comprises:

receiving, using an API, updates for each delivery driver of the one or more delivery drivers of a third-party delivery service, wherein the API enables a system to continuously monitor, in real time, a respective estimated order pickup time for each respective delivery driver of the one or more delivery drivers of the third-party delivery service, wherein the at least one delivery service comprises the third-party delivery service.

16. The method of claim **11**, wherein determining the respective estimated order pickup time further comprises determining traffic patterns between the respective location between each delivery driver of the one or more delivery drivers and a store location.

17. The method of claim **11**, wherein instructing the first delivery driver of the one or more delivery drivers to pick up the one or more items and deliver the one or more items to the delivery address comprises:

displaying, on a respective first delivery driver electronic device of the first delivery driver, the delivery request to the first delivery driver of the one or more delivery drivers instructing the first delivery driver of the one or more delivery drivers to pick up the one or more items and deliver the one or more items to the delivery address.

18. The method of claim **11** further comprising:

transmitting first delivery driver information to the user, the first delivery driver information comprising one or more of:

a name of the first delivery driver;

a vehicle make and a vehicle model associated with a vehicle being driven by the first delivery driver;

an estimated arrival time of the first delivery driver at the delivery address; or

tracking information for the first delivery driver.

19. The method of claim **11**, wherein the computing instructions when executed on the one or more processors, further cause the one or more processors to perform a function comprising:

transmitting first delivery driver information to at least one collector, the first delivery driver information comprising one or more of:

a name of the first delivery driver;

a vehicle make and a vehicle model associated with a vehicle being driven by the first delivery driver;

an estimated arrival time of the first delivery driver at a pick up address where the at least one collector collects the one or more items in the order list; or

tracking information for the first delivery driver.

20. One or more non-transitory computer-readable media storing computing instructions that, when executed by one or more processors, cause the one or more processors to perform operations comprising:

receiving an order list for delivery at a delivery address, as requested from a user;

determining an estimated order collection time;

determining an estimated order pick up time based on one or more distances of each delivery driver of one or more delivery drivers from a respective store location;

continuously monitoring, in real-time, a respective location of each delivery driver of the one or more delivery drivers of at least one delivery service by receiving the respective location of each delivery driver of the one or more delivery drivers from a respective delivery driver electronic device of each delivery driver of the one or more delivery drivers at predetermined time intervals;

automatically invoking a delivery request when the estimated order pick up time for a first delivery of the one or more delivery drivers is approximately equal to the estimated order collection time; and

upon automatically invoking the delivery request, transmitting the delivery request instructing a first delivery driver of the one or more delivery drivers to pick up one or more items in the order list and deliver the one or more items to the delivery address.

21. The one or more non-transitory computer-readable media of claim **20**, wherein the operations further comprise:

determining traffic patterns between the respective location between each delivery driver of the one or more delivery drivers and a store location.

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