US 20230245035A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2023/0245035 A1**

Luk (43) **Pub. Date: Aug. 3, 2023**

(54) **SHIPMENT OF MULTIPLE ITEMS FROM MULTIPLE SELLERS**

(71) Applicant: **eBay Inc.**, San Jose, CA (US)

(72) Inventor: **Alpha Kamchiu Luk**, San Jose, CA (US)

(21) Appl. No.: **17/592,243**

(22) Filed: **Feb. 3, 2022**

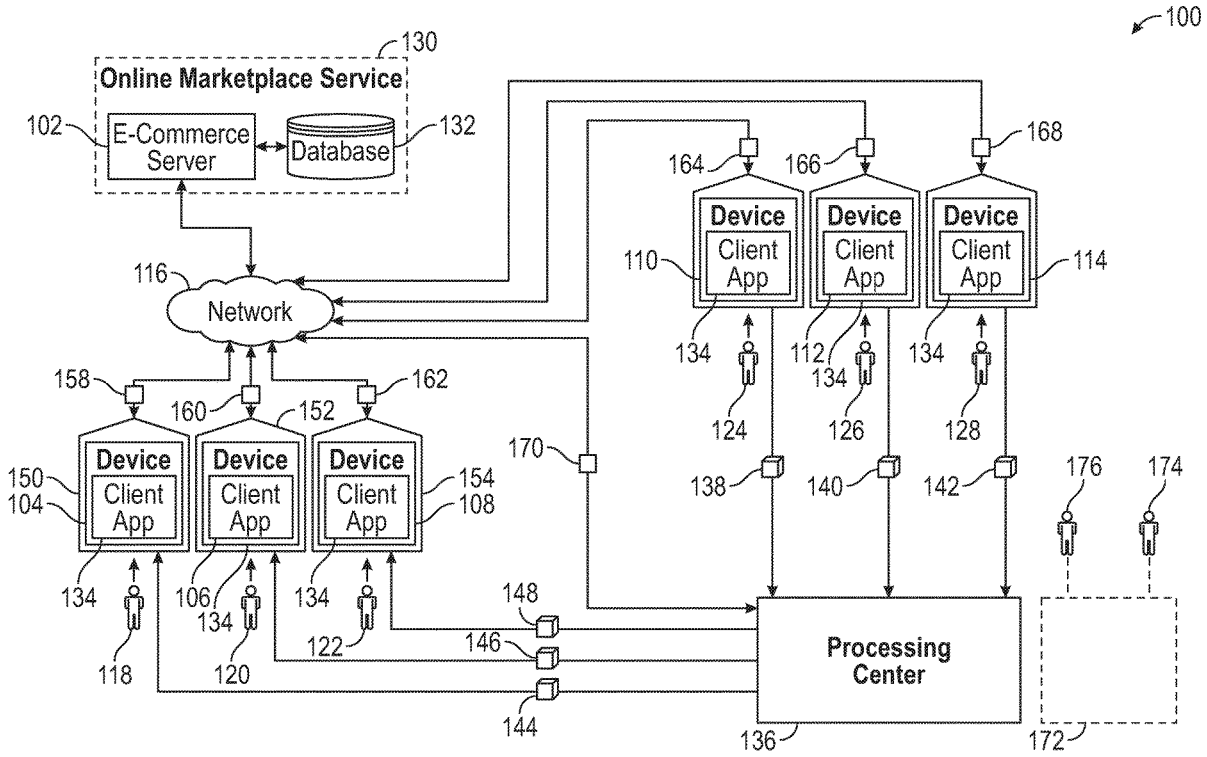
Publication Classification

(51) **Int. Cl.**
G06Q 10/08 (2006.01)

(52) **U.S. Cl.**
CPC ***G06Q 10/083*** (2013.01)

(57) **ABSTRACT**

A system for distributing items is provided. Requests from first users for items available from second users are received. The first users are associated with different shipping addresses. Clusters are identified from the requests. The clusters have items with similar characteristics and are requested by different first users. The clusters are then matched to individuals of the second users. First instructions for the individuals are generated that indicate a single shipment having items purchased by the first users are to be sent to a processor. Second instructions are generated for the processor. The second instructions include sorting instructions to sort the items from shipments received from the individuals. The second instructions include address instructions to determine shipping addresses for the first users. The second instructions include packaging instructions for packaging the sorted items according to the shipping addresses such that a single package is sent to individual first users.



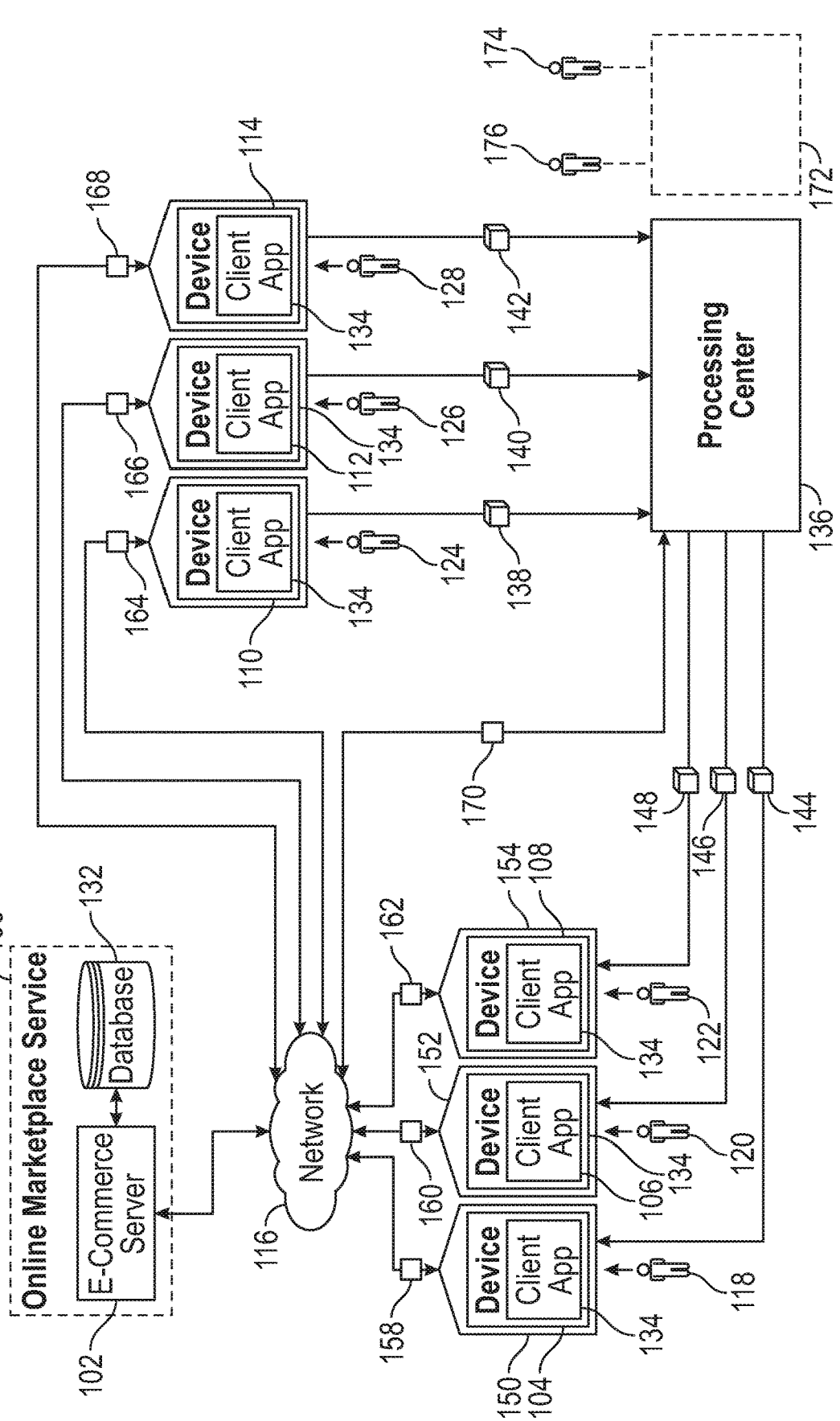

100
Online Marketplace Service
130
E-Commerce Server
102
Database
132
Network
116
Device
Client App
110
112
114
150
152
154
158
160
162
164
166
168
104
106
108
118
120
122
124
126
128
134
138
140
142
144
146
148
170
172
174
176
Processing Center
136

FIG. 1

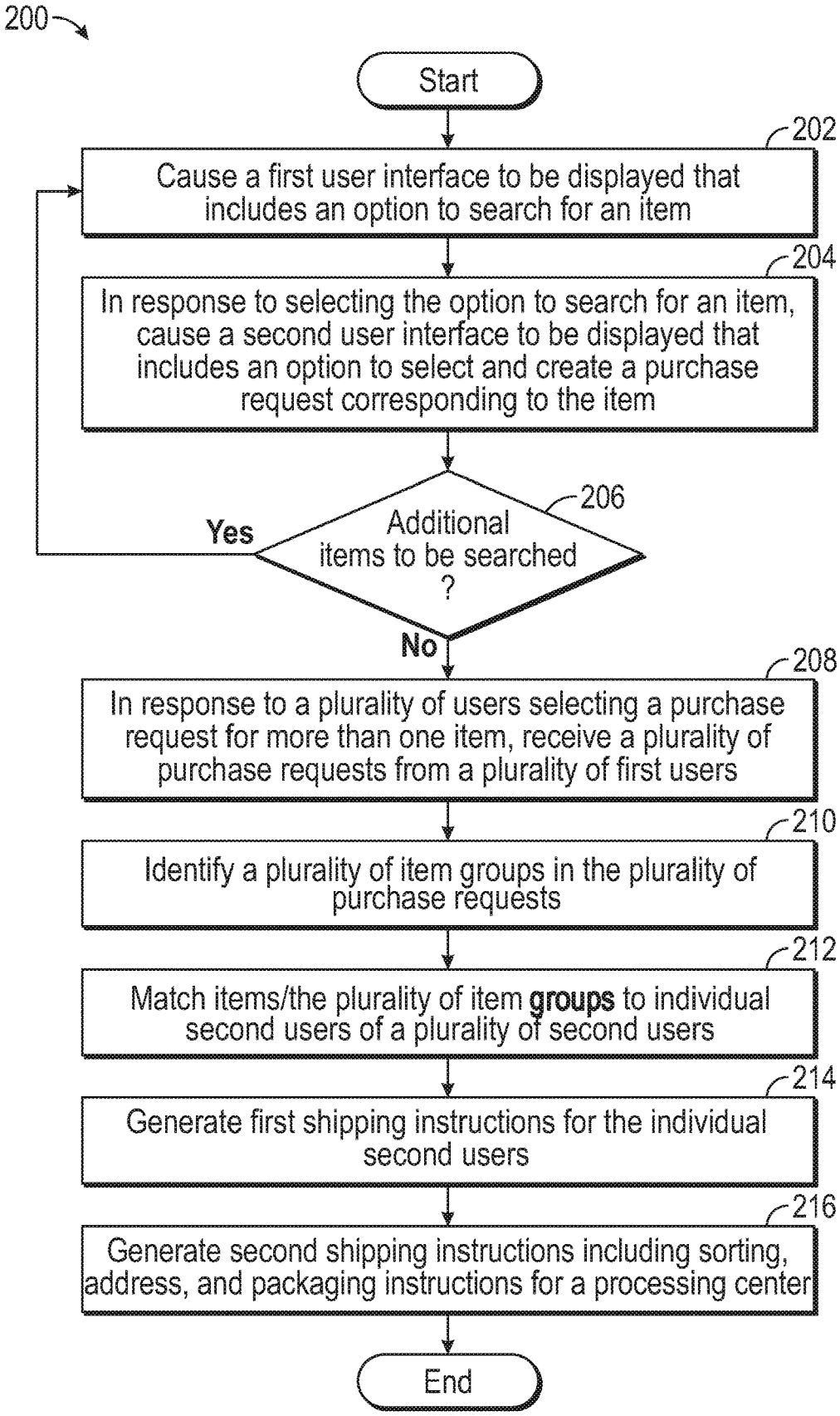

200
Start
202
Cause a first user interface to be displayed that includes an option to search for an item
204
In response to selecting the option to search for an item, cause a second user interface to be displayed that includes an option to select and create a purchase request corresponding to the item
206
Additional items to be searched ?
Yes
No
208
In response to a plurality of users selecting a purchase request for more than one item, receive a plurality of purchase requests from a plurality of first users
210
Identify a plurality of item groups in the plurality of purchase requests
212
Match items/the plurality of item groups to individual second users of a plurality of second users
214
Generate first shipping instructions for the individual second users
216
Generate second shipping instructions including sorting, address, and packaging instructions for a processing center
End

FIG. 2

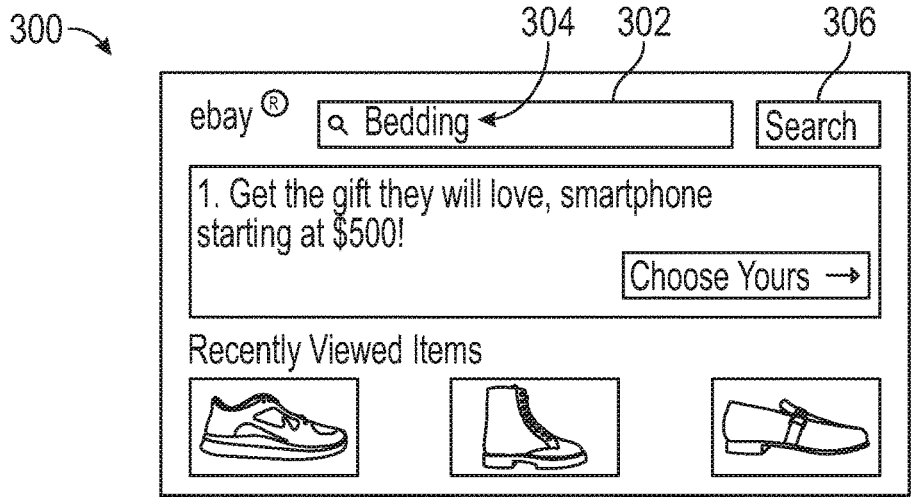


FIG. 3

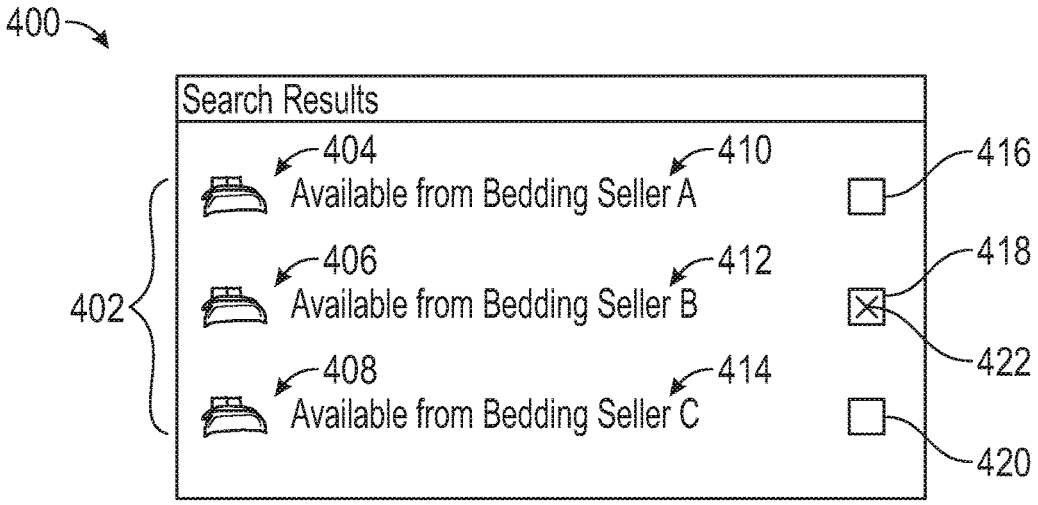


FIG. 4

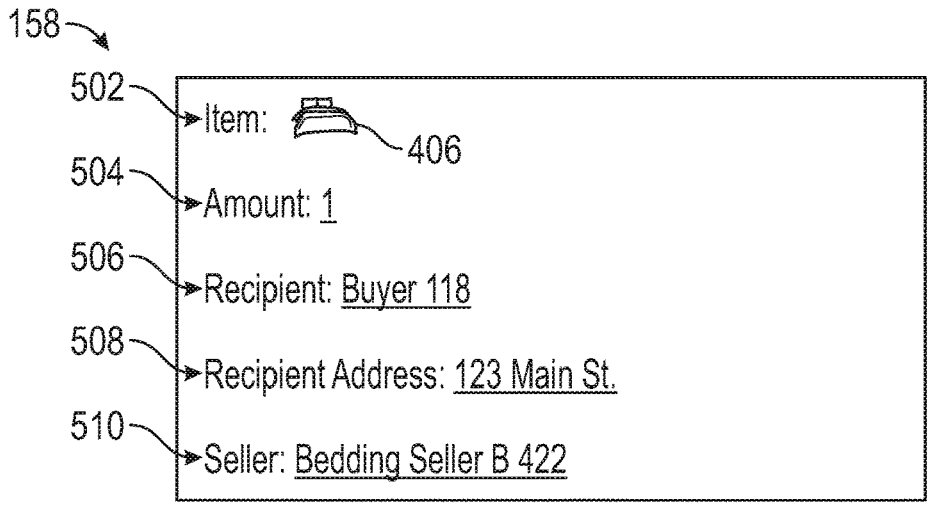


FIG. 5

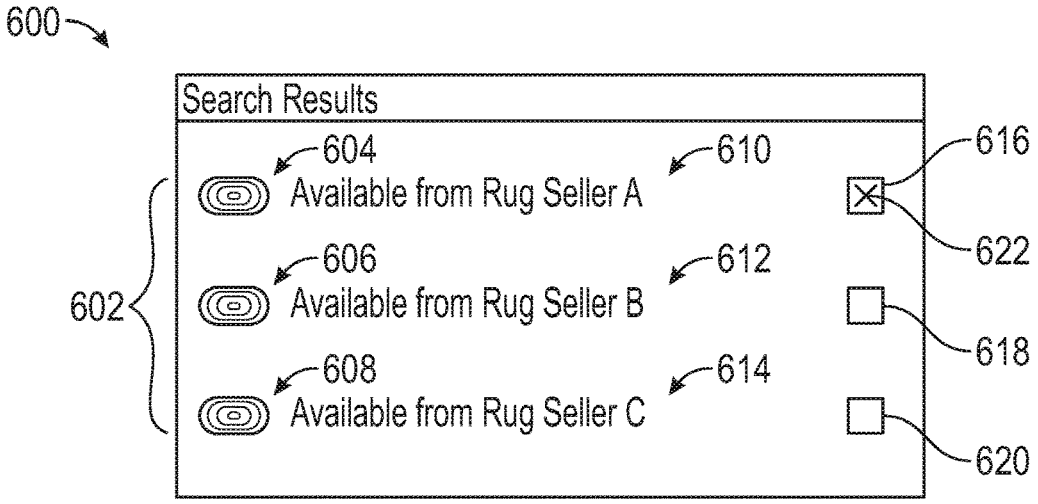


FIG. 6

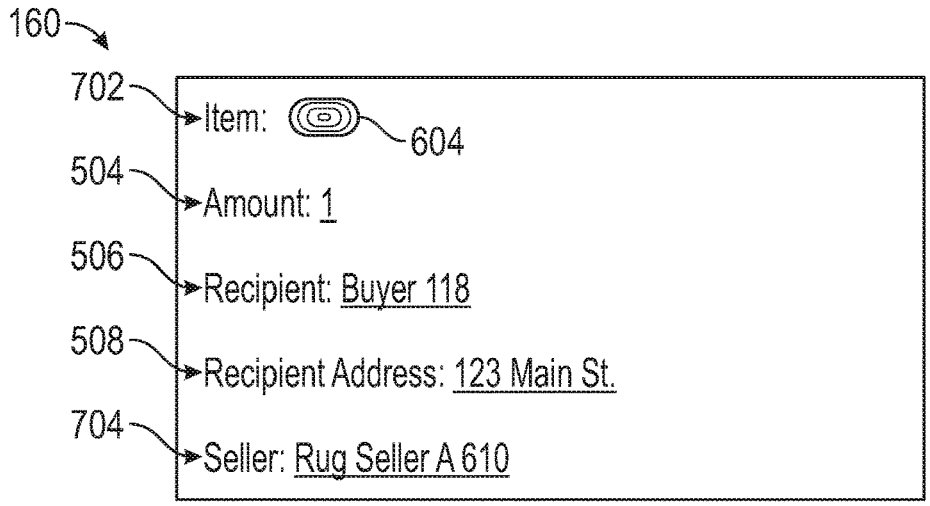


FIG. 7

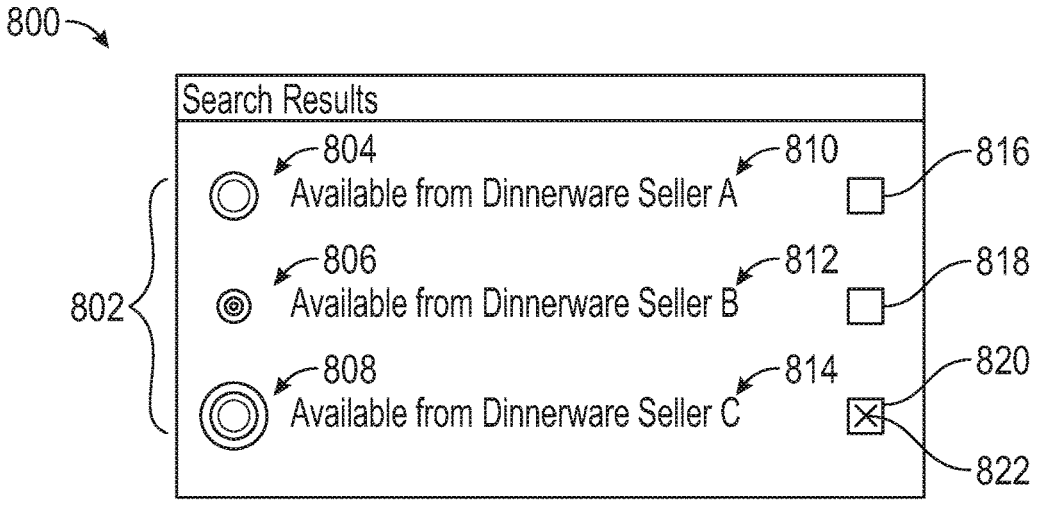


FIG. 8

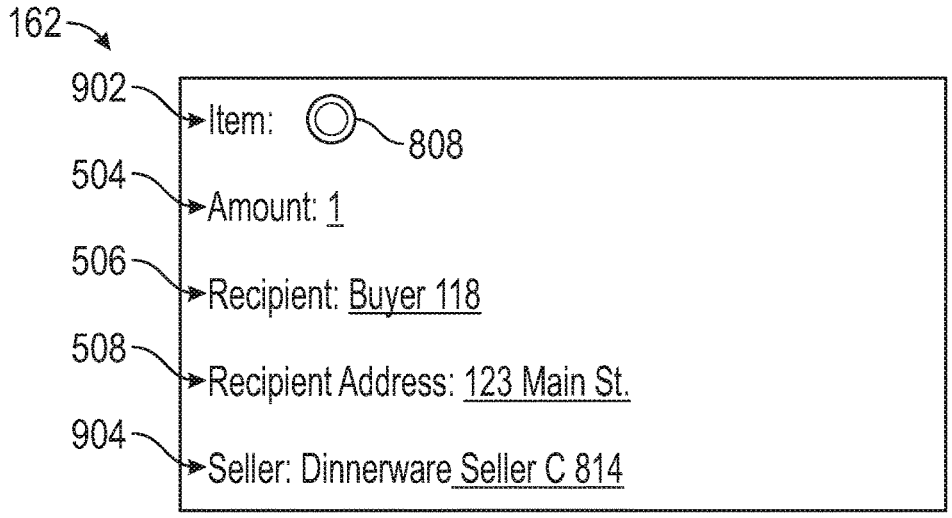


FIG. 9

1000

Item	Listed Seller	Selling Entity
Bedding	Bedding Seller A	Seller XBZ
Bedding	Bedding Seller B 412	Seller 124
Bedding	Bedding Seller C	Seller ABC
Area Rug	Rug Seller A 610	Seller 126
Area Rug	Rug Seller B	Seller XRZ
Area Rug	Rug Seller C	Seller ARC
Dinnerware	Dinnerware Seller A	Seller XDZ
Dinnerware	Dinnerware Seller B	Seller ADC
Dinnerware	Dinnerware Seller C 814	Seller 128

FIG. 10

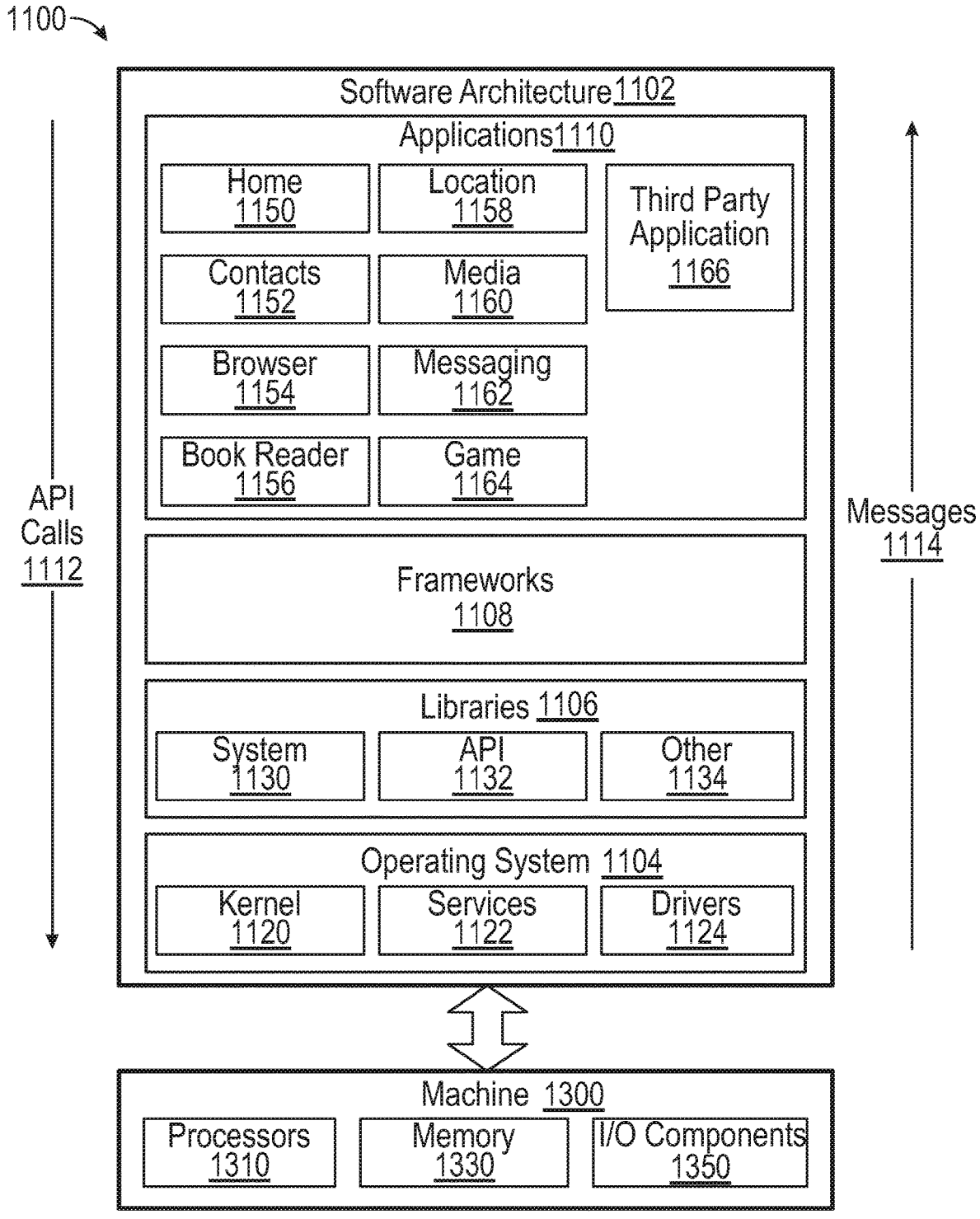

1100
Software Architecture 1102
Applications 1110
Home 1150
Location 1158
Third Party Application 1166
Contacts 1152
Media 1160
Browser 1154
Messaging 1162
Book Reader 1156
Game 1164
API Calls 1112
Messages 1114
Frameworks 1108
Libraries 1106
System 1130
API 1132
Other 1134
Operating System 1104
Kernel 1120
Services 1122
Drivers 1124
Machine 1300
Processors 1310
Memory 1330
I/O Components 1350

FIG. 11

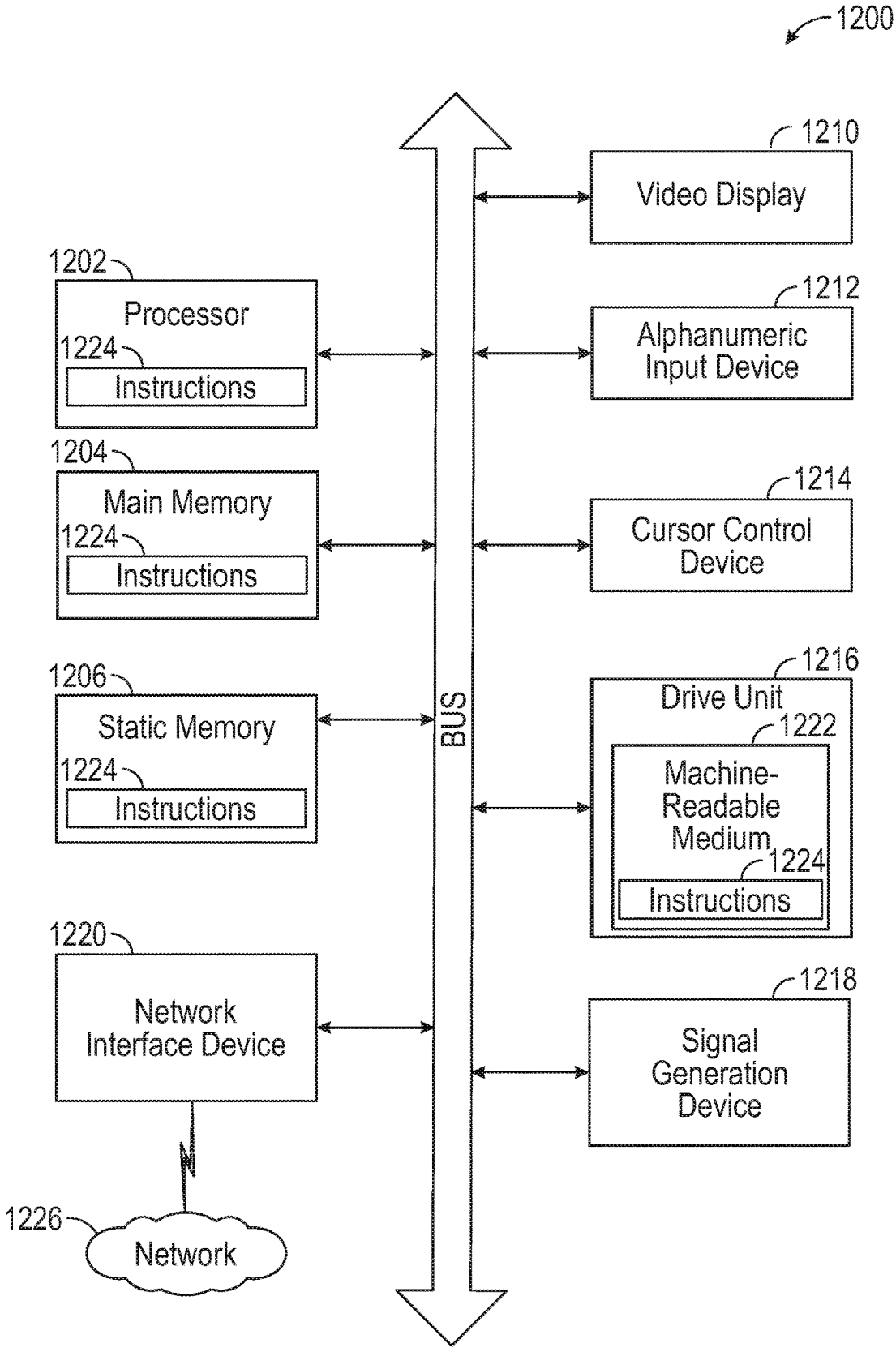

1200
1210
Video Display
1202
Processor
1224
Instructions
1212
Alphanumeric Input Device
1204
Main Memory
1224
Instructions
1214
Cursor Control Device
1206
Static Memory
1224
Instructions
BUS
1216
Drive Unit
1222
Machine-Readable Medium
1224
Instructions
1220
Network Interface Device
1218
Signal Generation Device
1226
Network

FIG. 12

SHIPMENT OF MULTIPLE ITEMS FROM MULTIPLE SELLERS

TECHNICAL FIELD

[0001] The subject matter disclosed herein generally relates to generating machine instructions. Specifically, in some examples, the present disclosure provides instructions that consolidate items to be sent to various recipients.

BACKGROUND

[0002] An online seller may offer free and/or reduced cost shipping when a buyer purchases items that exceed a preset amount. For example, if a buyer purchases items that exceed $100, the buyer may be entitled to free shipping where the seller covers the cost of shipping. The seller is able to cover the cost of shipping while still maintaining a profit margin that makes covering shipping worth the cost. However, in these scenarios, the buyer must purchase items from the seller that exceed a preset amount. If a buyer does not purchase items from the seller that exceed the preset amount, the cost associated with shipping the item may not allow the seller to retain enough of a profit in order to make covering the cost of shipping viable. Thus, the buyer may instead choose to purchase the item from a seller willing to cover the cost of shipping.

BRIEF DESCRIPTION OF THE DRAWINGS

[0003] Some examples are illustrated by way of example and not limitation in the figures of the accompanying drawings.

[0004] FIG. **1** illustrates an environment **100** that facilitates the buying and selling of items is shown, according to some examples.

[0005] FIG. **2** illustrates a method that consolidates items sold by multiple sellers and sends the items to buyers who purchased the items, according to some examples.

[0006] FIG. **3** illustrates a user interface that may be used to search for items to purchase, according to some examples.

[0007] FIG. **4** illustrates a user interface that may be used to display items searched for with the user interface shown with reference to FIG. **3**, according to some examples.

[0008] FIG. **5** illustrates a purchase request that is generated in response to a user selecting an item to purchase, according to some examples.

[0009] FIG. **6** illustrates a user interface that may be used to display items searched for with the user interface shown with reference to FIG. **3**, according to some examples.

[0010] FIG. **7** illustrates a purchase request that is generated in response to a user selecting an item to purchase, according to some examples.

[0011] FIG. **8** illustrates a user interface that may be used to display items searched for with the user interface shown with reference to FIG. **3**, according to some examples.

[0012] FIG. **9** illustrates a purchase request that is generated in response to a user selecting an item to purchase, according to some examples.

[0013] FIG. **10** shows a data table that matches items to sellers, according to some examples.

[0014] FIG. **11** is a block diagram illustrating an example of a software architecture that may be installed on a machine, according to some examples.

[0015] FIG. **12** is a diagrammatic representation of a machine in the form of a computer system within which a set of instructions may be executed for causing the machine to perform any one or more of the methodologies discussed herein, according to some examples.

DETAILED DESCRIPTION

[0016] Examples are directed to systems and methods that consolidate items sold from multiple sellers and sends the consolidated items to multiple buyers who purchased the items. In an example, a plurality of buyers can buy items being sold by a plurality of sellers. To further illustrate, three sellers can be selling three different types of home furnishings, such as bedding, area rugs, and dinnerware. In this illustration, first, second, and third buyers can be remotely located in relation to each other and can separately purchase each of the three different items. Each of the buyers sends their individual orders to a selling platform, which then disseminates the individual orders to the plurality of sellers for fulfillment. When each of the plurality of sellers receives an individual order for an item being sold by the seller, after a period of time elapses, each of the sellers fulfills the individual orders by sending the items to a processing center. The processing center then sends the purchased items to each of the buyers.

[0017] In the home furnishings illustration, first, second, and third buyers may purchase bedding, area rugs, and dinnerware over a three day period. During this three day period, the three buyers submit bedding, area rugs, and dinnerware purchase requests to the selling platform. The selling platform disseminates the bedding purchase requests to the bedding seller as the purchase requests are received from the buyers during the three day period. The selling platform also disseminates the rug purchase requests to the area rug seller as the purchase requests are received from the buyers during the three day period. In addition, the selling platform disseminates the dinnerware purchase requests to the dinnerware seller as the purchase requests are received from the buyers during the three day period.

[0018] After expiration of the period of time, each of the sellers sends the items for the buyers in a single package to a processing center. In the illustration, the time period can be three days. Thus, after three days, the bedding seller sends bedding purchased by the buyers in the last three days in a single package to the processing center. Moreover, the area rug seller sends area rugs purchased by the buyers in the last three days in a single package to the same processing center. Likewise, the dinnerware seller sends dinnerware purchased by the buyers in the last three days in a single package to the same processing center.

[0019] Once the processing center receives the packages from the sellers, the processing center repackages the items purchased by the buyers into individual packages that are to be sent to each of the buyers. Thus, the bedding, the area rug, and the dinnerware intended for the first buyer received from each of the sellers is sent in one package to the first buyer. Likewise, the bedding, the area rug, and the dinnerware intended for the second buyer received from each of the sellers is sent in one package to the second buyer. In addition, the bedding, the area rug, and the dinnerware intended for the third buyer received from each of the sellers is sent in one package to the third buyer.

[0020] Examples address problems associated with a seller who sells the same item to multiple buyers having to separately send the sold items to different buyers where, depending on location, the seller sends the same item in all

of the packages to a single processing center. In the bedding scenario above, the seller may have sold bedding items to three different buyers. Typically, the seller would have to put the bedding item intended for a first buyer in a first package, the bedding item intended for a second buyer in a second package, and the bedding item intended for a third buyer in a third package, where, in some instances, the first, second, and third packages are being sent to a single processing center. Examples address this problem by allowing the seller to place the bedding items for all three buyers in a single package and then send the single package to the single processing center where the process of sending different packages to different buyers can be automated at the single processing center.

[0021] Now making reference to the Figures, an example of an environment in which examples that provide the functionality discussed above is shown with reference to FIG. **1**. FIG. **1** illustrates an environment **100** that facilitates the buying and selling of items, according to some examples. The environment **100** includes a selling platform **102**, such as an e-commerce server, along with user devices **104-114** communicatively coupled to each other via a network **116**. The selling platform **102** can further provide functionality that enables buyers **118-122** respectively associated with the user devices **104-108** to purchase, submit an offer, and/or bid on an item listed for sale by sellers **124-128** respectively associated with the user devices **110-114**. For example, the selling platform **102** can provide user interface elements (e.g., button, text fields) that one of the buyers **118-122** can use to select to purchase an item, place a bid, etc., as well as provide their financial (e.g., credit card number, bank account number) and personal information (e.g., shipping address, billing address) to complete the purchase. To view listings and/or purchase/bid on listed items, a buyer can create a user account with an online marketplace service **130**.

[0022] The online marketplace service **130** can be a network-based system that can include one or more computing devices configured to facilitate an online marketplace (e.g., EBAY, AMAZON) in which users may post items for sale and purchase items posted for sale by other users. For example, the online marketplace service **130** provides a user interface that enables users to view listings posted to the online marketplace service **130**. Each listing provides details for an item or items listed for sale. For example, the listing may include an item description, images, sale price, current bid price, auction time remaining, shipping options, aspects, customer reviews, etc.

[0023] The selling platform **102** can further provide functionality that enables a user to purchase, submit an offer, and/or bid on an item listed for sale. For example, the selling platform **102** can provide user interface elements (e.g., button, text fields) that a user may use to select to purchase an item, place a bid, etc., as well as provide their financial (e.g., credit card number, bank account number) and personal information (e.g., shipping address, billing address) to complete the purchase. To view listings, purchase/bid on listed items, and/or perform other functionalities provided by the selling platform **102**, a user may create a user account with the selling platform **102**.

[0024] The user devices **104-114** can be any type of computing device, such as desktop computers; mobile computers; mobile communications devices, e.g., mobile phones, smart phones, tablets; smart televisions; set-top boxes; and/or any other network enabled computing devices. A computing device is any type of general computing device capable of network communication with other computing devices.

[0025] For example, a computing device can be a personal computing device such as a desktop or workstation, a business server, or a portable computing device, such as a laptop, smart phone, or a tablet personal computer (PC). A computing device can include some or all of the features, components, and peripherals of the machine **1200** shown in FIG. **12**.

[0026] To facilitate communication with other computing devices, a computing device includes a communication interface configured to receive a communication, such as a request, data, and the like, from another computing device in network communication with the computing device and pass the communication along to an appropriate module running on the computing device. The communication interface also sends a communication to another computing device in network communication with the computing device.

[0027] In the environment **100**, users, such as the buyers **118-112** and the sellers **124-128**, interact with the selling platform **102** to utilize the services provided by the selling platform **102**. The selling platform **102** provides an online marketplace in which users may post items for sale and purchase items posted for sale by other users. For example, the selling platform **102** may include items being auctioned for sale and/or items listed for sale at a set price. Users communicate with and utilize the functionality of the selling platform **102** by using the user devices **104-114** that are connected to the network **116** by direct and/or indirect communication.

[0028] The network **116** can be any type of communication network, including a local area network (LAN), such as an intranet, a wide area network (WAN), such as the internet, or any combination thereof. Further, the network **116** may be a public network, a private network, or a combination thereof. The network **116** is implemented using any number of communication links associated with one or more service providers, including one or more wired communication links, one or more wireless communication links, or any combination thereof. Additionally, the network **116** is configured to support the transmission of data formatted using any number of protocols.

[0029] To list an item for sale on the online marketplace, the sellers **124-128** can create a user account with the selling platform **102**. The user account may include the personal information (e.g., name, address, email address, phone number) and financial information (e.g., credit card information, bank account information) associated with the seller **124-128**. Once the sellers **124-128** have created a user account, the sellers **124-128** can then use their user account to utilize the functionality of the selling platform **102**, including listing an item for sale.

[0030] The selling platform **102** can be part of the online marketplace service **130** that includes a cloud-based database **132**. Examples of the database **132** can include the Simple Storage Service offered by Amazon Web Services™. Other examples of the database **132** can include a SwiftStack™ object storage system.

[0031] A user, such as one of the buyers **118-122** or one of the sellers **124-128**, or both, interacts with the selling platform **102** via a client-side application **134** installed on the user devices **104-114**. In some examples, the client-side

application **134** can include a component specific to the online marketplace service **106**. For example, the component may be a stand-alone application, one or more application plug-ins, and/or a browser extension. However, the users may also interact with the selling platform **102** via a third-party application, such as a web browser, that resides on the client devices **104-114** and is configured to communicate with the selling platform **102**. In either case, the client-side application **134** can present a user interface (UI), such as the user interfaces discussed further on, for the user, to interact with the selling platform **102**. For example, the user interacts with the selling platform **102** via the client-side application **134** integrated with the file system or via a webpage displayed using a web browser application. The selling platform **102** and the user devices **104-114** can each be implemented in a computer system, in whole or in part, as described below with respect to FIGS. **11** and **12**. The selling platform **102** can provide an electronic commerce application to other machines (e.g., the user devices **104-108**) via the network **116**. The electronic commerce application may provide a way for users to buy and sell items directly to each other, to buy from and sell to the electronic commerce application provider, or both.

[0032] The environment **100** also includes a processing center **136** that receives packages **138-142** from each of the sellers **124-128**. The packages **138-142** can include items the buyers **118-122** bought from the sellers **124-128**. In an example, the items in the packages **138-142** are repackaged into packages **144-148** at the processing center **136**. After repackaging, the packages **144-148** are respectively sent to locations **150-154**, such as domiciles, places of employment, or any destination associated with each of the buyers **118-122** where each of the buyers can physically receive the packages **144-148**.

[0033] As noted above, examples relate to consolidating items sold from multiple sellers and sending the items to multiple buyers who purchased the items. To further illustrate these principles, reference is now made to FIG. **2** and a method **200** that consolidates items sold by multiple sellers and sends the items to buyers who purchased the items. Initially, in an operation **202**, a first user interface is caused to be displayed at a first user device that includes an option to search for an item. In an example, the selling platform **102** causes a user interface to be displayed at user devices associated with potential buyers. An example of a user interface that can be displayed is a user interface **300**, as shown with reference to FIG. **3**.

[0034] The user interface **300** can include an input field **302** where a user can input a search term **304** that correlates to an item the user is interested in purchasing. Moreover, the user interface **300** can include a button **306** that provides the user an option to search for an item associated with the search term **304**. In an example, a first user interface, such as the user interface **300**, can be displayed at multiple user devices at various times. In addition, in an example, the first user interface, such as the user interface **300**, can be simultaneously displayed at multiple user devices. In an example, during the operation **202**, the first user interface can be displayed multiple times, such as in the instance when a user wants to purchase multiple items. Furthermore, during the operation **202**, the first user can engage the button **306**, which can correlate to the user selecting an option to search for an item.

[0035] As an example, multiple users can be interested in purchasing home furnishings, such as the aforementioned bedding, area rugs, and dinnerware. In the example, during the operation **202**, the selling platform **102** causes the user interface **300** to be displayed on the user devices **104-108** associated with first users, such as the buyers **118-122**. In an example, the selling platform **102** can cause the user interface **300** to be displayed on the user devices **104-108** at the same time or at different times. In the example, the buyer **118** enters "Bedding" as the search term **304** during the operation **202**. Once the buyer **118** enters the term "Bedding" as the search term **304**, the buyer **118** engages the search button **306** during the operation **202** such that the buyer **118** selects the option to search for bedding. In an example, engaging the search button **306** can include clicking on the search button **306** or any other engagement means known to those skilled in the art.

[0036] In the example, during the operation **202**, the selling platform **102** can cause the user interface **300** to be displayed on the user devices **106** and **108** associated with the buyers **120** and **122** in addition to the user device **104** associated with the buyer **118**. Thus, during the operation **202**, the buyers **120** and **122** also enter "Bedding" as the search term **304** on the user interfaces **300** respectively displayed on the user devices **106** and **108**. Additionally, once the buyers **120** and **122** enter the term "Bedding" as the search term **304**, the buyers **120** and **122** each engage the search button **306** similar to the buyer **118** during the operation **202** such that the buyers **120** and **122** select the option to search for bedding. Once the option to search for bedding is selected, the method **200** performs an operation **204**.

[0037] Returning attention to FIG. **2** and the method **200**, in response to selecting the option to search for an item, the selling platform **102** displays a second user interface during the operation **204**. In an example, the second user interface that is displayed during the operation **204** can include an option to select and create a purchase request corresponding to the item searched for in the operation **202**. An example of the user interface that can be displayed can include a user interface **400** shown with regards to FIG. **4**.

[0038] The user interface **400** can display search results **402** that include bedding items **404-408** corresponding to the search term **304** entered by the first user at the input field **302** in the user interface **300**. In addition, the user interface **400** can display sellers **410-414** selling each of the bedding items **404-408**. To further illustrate, Bedding Seller A **410** sells the item **404**, Bedding Seller B **412** sells the item **406**, and Bedding Seller C **414** sells the item **408**. The user interface **400** includes checkboxes **416-420** respectively corresponding to the Bedding Sellers A-C **410-414**. In an example, if a first user desires the bedding item **406** sold by the Bedding Seller B **412**, the first user can engage the checkbox **418**, such as by placing a checkmark **422** within the checkbox **418**, as shown with reference to FIG. **4**. While an "X" is shown as the checkmark **422**, any type of indicia can be used for the checkmark **422**.

[0039] In an example, the checkboxes **416-420** correspond to an option to select and create a purchase request for the item corresponding to the checkbox. As an illustration, when the checkmark **422** is placed within the checkbox **418**, in the operation **204**, this can correspond to selecting an option to

select and create a purchase request corresponding to the item **404**, such as a purchase request **158** shown with reference to FIG. **5**.

[0040] Now making reference to FIG. **5**, the purchase request **158** can list item **502** along with an amount **504** of the item **502** to be purchased. In addition, the purchase request **158** can identify the recipient **506** of the item and a recipient address **508** associated with the recipient **506**. In an example, the item **502** can correspond to the bedding item **406** selected by the user via the user interface **400**, such as the bedding item **406**. The amount **504** can correspond to a number of the items **502** the user wants, which is one item. The recipient **506** identifies the user while the recipient address **508** lists an address associated with the recipient. Additionally, the purchase request **158** can include seller identification **510**, which lists the seller that is selling the bedding item **406**. Here, the Bedding Seller B **412** sells the bedding item **406**.

[0041] To further illustrate the operation **204**, in the example, after the buyer **118** engages the search button **306** as noted above, the selling platform **102** displays the user interface **400** on the user device **104** during the operation **204**. The user interface **400** displays the items **404-408**, which correspond to bedding that the buyer **118** was searching for in the operation **202**. In this example, the buyer **118** wants one of the bedding item **406**. Thus, the buyer places the checkmark **422** in the checkbox **418**. Furthermore, during the operation **204** in the example, the selling platform **102** displays the user interface **400** on the user devices **106** and **108** associated with the buyers **120** and **122** in response to the buyers **120** and **122** each engaging the search button **306** on the user interfaces **300** respectively displayed on the user devices **106** and **108**. Similar to the buyer **118**, each of the buyers **120** and **122** want one of the bedding item **406**. Thus, each of the buyers **120** and **122** place the checkmark **422** in the checkbox **418** on the user interfaces **400** respectively displayed on the user devices **106** and **108** during the operation **204**. It should be noted that in accordance with some examples, each of the buyers **118-122** could choose as many of the bedding items **406** as they want. To further illustrate, the buyer **120** could choose two of the bedding items **406** and the buyer **122** could choose three of the bedding items **406**.

[0042] During the operation **204**, as result of the buyer **118** selecting the bedding item **406**, the purchase request **158** is selected and created, where the purchase request **158** lists the item **502** as corresponding to the bedding item **406** selected by the buyer **118**. In addition, the purchase request **158** lists an amount as one bedding item **406**, identifies the recipient **506** as the buyer **118**, and lists the recipient address **508** as 123 Main Street, which, in the example, is the address where the buyer **118** receives packages. In addition to the purchase request **158** associated with the buyer **118**, similar purchase requests **158** are selected and created for each of the buyers **120** and **122** when each of the buyers **120** and **122** select the bedding item **406** in the example during the operation **204**.

[0043] Returning attention to FIG. **2** and the method **200**, after the operation **204**, the method **200** performs an operation **206**, where a determination is made if additional items are to be searched. Returning to the example, after each of the buyers **118-122** select the bedding item **406** in the operation **204**, the method **200** determines that additional items are to be searched in the operation **206**. In particular, in the example, the buyers **118-122** are interested in purchasing area rugs and dinnerware. Therefore, the operations **202** and **204** are repeated. Regarding area rugs, during the operation **202**, each of the buyers **118-122** input "area rugs" as a search term at the input field **302** (not shown). In response to entering area rugs as a search term at the input field **302**, the selling platform **102** causes a user interface **600** to be displayed at each of the user devices **104-106** associated with the buyers, as shown with reference to FIG. **6**.

[0044] In the example, the user interface **600** can display search results **602** that include area rug items **604-608** corresponding to the search term **304** ("area rugs") entered by the first user at the input field **302** in the user interface **300**. In addition, the user interface **600** displays Rug Sellers A-C **610-614** selling each of the area rug items **604-608**. To further illustrate, Rug Seller A **610** sells the area rug item **604**, Rug Seller B **612** sells the area rug item **606**, and Rug Seller C **614** sells the area rug item **608**. The user interface **600** includes checkboxes **616-620** respectively corresponding to the Rug Sellers A-C **610-614**. In an example, if the buyer **118** desires the area rug item **604** sold by the Rug Seller A **610**, the buyer **118** can engage the checkbox **616**, such as by placing a checkmark **622** within the checkbox **616**, as shown with reference to FIG. **6**. While an "X" is shown as the checkmark **622**, any type of indicia may be used for the checkmark **622**. Similar to the buyer **118**, each of the buyers **120** and **122** also want the area rug item **604** sold by the Rug Seller A **610**. Thus, in the example, each of the buyers **120** and **122** place the checkmark **622** in the checkbox **616** on the user interfaces **600** respectively displayed on the user devices **106** and **108** during the operation **204**.

[0045] In the example, the checkboxes **616-620** correspond to an option to select and create a purchase request for the item corresponding to the checkbox. In the example, the buyer **118** desires to purchase the area rug item **604** from the Rug Seller A, thus the checkmark **622** is placed within the checkbox **616**. In the operation **204**, placing the checkmark **622** within the checkbox **616** can correspond to selecting an option to select and create a purchase request corresponding to the item, such as a purchase request **160** shown with reference to FIG. **7**.

[0046] Now making reference to FIG. **7**, in the example, the purchase request **160** can list an item **702** along with the amount **504** of the item to be purchased. In addition, the purchase request can identify the recipient **506** of the item and the address **508** associated with the recipient **506**. In the example, the item **702** corresponds to the item selected by the user via the user interface **600**, which is the area rug item **604**. The amount can correspond to a number of the items **702** the user wants. Here, the buyer **118** selected one area rug item **604**. Additionally, the purchase request **160** can include seller identification **704**, which lists the seller that is selling the area rug item **604**. Here, the Rug Seller A **610** sells the area rug item **604**. In addition to the purchase request **160** associated with the buyer **118**, purchase requests **160** for each of the buyers **120** and **122** are created when each of the buyers **120** and **122** select the area rug item **604** in the example. Moreover, it should be noted that in accordance with some examples, each of the buyers **118-122** could choose as many of the area rug items **604** as they want. To

further illustrate, the buyer **120** could choose two of the area rug items **604** and the buyer **122** could choose three of the area rug items **604**.

[0047] As noted above, each of the buyers **118-122** are also interested in purchasing dinnerware. Thus, the operations **202** and **204** are repeated in response to determining that additional items are to be searched during the operation **206**. Regarding dinnerware, during the operation **202**, each of the buyers **118-122** input "dinnerware" as a search term at the input field **302** (not shown). In response to entering dinnerware as a search term at the input field **302**, the selling platform **102** causes a user interface **800** to be displayed at each of the user devices **104-106** associated with the buyers, as shown with reference to FIG. **8**.

[0048] The user interface **800** can display search results **802** that include dinnerware items **804-808** corresponding to the search term **304** ("dinnerware") entered by the first user at the input field **302** in the user interface **300**. In addition, the user interface **800** displays Dinnerware Sellers A-C **810-814** selling each of the dinnerware items **804-808**. To further illustrate, Dinnerware Seller A **810** sells the dinnerware item **804**, Dinnerware Seller B **812** sells the dinnerware item **806**, and Dinnerware Seller C **814** sells the dinnerware item **808**. The user interface **800** includes checkboxes **816-820** respectively corresponding to the Dinnerware Sellers A-C **810-814**. In the example, the buyer **118** desires the dinnerware item **808** sold by the Dinnerware Seller C **814**. Accordingly, the buyer **118** engages the checkbox **820**, such as by placing a checkmark **822** within the checkbox **820**, as shown with reference to FIG. **8**. While an "X" is shown as the checkmark **822**, any type of indicia may be used for the checkmark **822**. Similar to the buyer **118**, each of the buyers **120** and **122** also want the dinnerware item **808** sold by the Dinnerware Seller C **814**. As such, each of the buyers **120** and **122** place the checkmark **822** in the checkbox **820** on the user interfaces **800** respectively displayed on the user devices **106** and **108** during the operation **204**.

[0049] In the example, the checkboxes **816-820** can correspond to an option to select and create a purchase request for the item corresponding to the checkbox. In the example, the buyer **118** desires to purchase the dinnerware item **808** from the Dinnerware Seller C, thus the checkmark **822** is placed within the checkbox **820**. In the operation **204**, placing the checkmark **822** within the checkbox **820** can correspond to selecting an option to select and create a purchase request corresponding to the item, such as a purchase request **162** shown with reference to FIG. **9**.

[0050] Now making reference to FIG. **9**, in the example, the purchase request **162** can list an item **902** along with the amount **504** of the item to be purchased. Here, the buyer **118** has requested one of the dinnerware items **808**. In addition, the purchase request can identify the recipient **506** of the item and the address **508** associated with the recipient **506**. In the example, the item **902** corresponds to the item selected by the user via the user interface **800**, which is the dinnerware item **808**. Additionally, the purchase request **162** can include seller identification **904**, which lists the seller that is selling the dinnerware item **808**. Here, the Dinnerware Seller C **814** sells the dinnerware item **808**. The amount can correspond to a number of the dinnerware items **808** the user wants, which in the example is one dinnerware item (in this example, the dinnerware item can correspond to a full set of dinnerware, e.g., dinner plates, salad plates, bowls, cups). In addition to the purchase request **162** associated with the buyer **118**, similar purchase requests **162** are selected and created when each of the buyers **120** and **122** select the dinnerware item **808** in the example. It should be noted that in accordance with some examples, each of the buyers **118-122** could choose as many of the dinnerware items **408** as they want. To further illustrate, the buyer **120** could choose two of the dinnerware items **408** and the buyer **122** could choose three of the dinnerware items **408**.

[0051] Making reference again to FIG. **2**, when the method **200** determines that no additional items are to be searched, an operation **208** is performed. During the operation **208**, in response to a plurality of users selecting a purchase request for more than one item, a plurality of purchase requests is received from the plurality of users at the selling platform **102**.

[0052] The selling platform examines the plurality of purchase requests to identify pluralities of item groups in the plurality of purchase requests during an operation **210**. In an example, item groups can refer to groups that have the same items.

[0053] To further illustrate the operations **208** and **210**, in the example, the selling platform **102** receives the purchase requests **158-162** during the operation **208**. With respect to the purchase requests **158-162**, each of the buyers **118-122** included a request for the bedding item **406** available from the Bedding Seller B **412**. Thus, during the operation **210**, the selling platform **102** identifies the bedding items **406** as an item group. With regards to the purchase request **160**, in the example, each of the buyers **118-122** included a request for the area rug item **604** available from the Rug Seller A **610**.

[0054] During the operation **210**, the selling platform **102** identifies the area rug items **604** as an item group. As noted above, item groups can refer to groups that include the same item. In the example, the area rug items **604** are area rugs.

[0055] Furthermore, in the example, each of the buyers **118-122** included a request for the dinnerware item **808** available from the Dinnerware Seller C **814** in the purchase request **162**. As such, during the operation **210**, the selling platform **102** identifies the dinnerware items **808** as an item group.

[0056] Returning to FIG. **2** and the method **200**, after the operation **210**, the method **200** performs an operation **212**, where the plurality of item clusters is matched to individual second users of a plurality of second users. In an example, the second users can correspond to the sellers, such as the sellers **124-128**. Moreover, an individual second user of the plurality of second users can be one of the sellers **124-128**. Thus, in an example, the seller **124** can be an individual user of the plurality of second users, the seller **126** can be an individual user of the plurality of second users, and the seller **128** can be an individual user of the plurality of second users. During the operation **212**, the selling platform can determine the individual second user from the purchase requests received during the operation **208**. As noted above, the purchase requests list the seller selling the selected item. Using the listed seller in the purchase request, the selling platform **102** can match the item groups to an individual second user using a data table stored at the database **132**.

[0057] To further illustrate the operation **212**, in the example, after the selling platform **102** identifies the bedding items **406** as an item group, the selling platform **102** identifies the Bedding Seller B **412** as the seller. The selling platform **102** identifies the Bedding Seller B **412** as the seller

from the purchase request **158**, which lists the Bedding Seller B **412** at the seller identification **510**. Moreover, the selling platform **102** identifies the seller **124** as the Bedding Seller B **412**. In particular, the selling platform accesses a data table **1000** shown with reference to FIG. **10** and matches the Bedding Seller **412** B with the seller **124**. Thus, the selling platform **102** matches the bedding items **406** to the seller **124** during the operation **212**. Furthermore, in the example, the seller **124** is an individual second user since the seller **124** sells the bedding items **406**.

[0058] Furthermore, in the example, during the operation **212**, after the selling platform **102** identifies the area rug items **604** as an item group, the selling platform **102** identifies the Rug Seller A **610** as the seller. The selling platform **102** identifies the Rug Seller A **610** as the seller from the purchase request **160**, which lists the Rug Seller A **610** at the seller identification **704**. Moreover, the selling platform **102** identifies the seller **126** as the Rug Seller A **610**. In particular, the selling platform accesses the data table **1000** and matches the Rug Seller A **610** with the seller **126**. Thus, the selling platform **102** matches the area rug items **604** to the seller **126** during the operation **212**. Furthermore, in the example, the seller **126** is an individual second user since the seller **126** sells the area rug items **406**.

[0059] In the example, also during the operation **212**, after the selling platform **102** identifies the dinnerware items **808** as an item group, the selling platform **102** identifies the Dinnerware Seller C **814** as the seller. The selling platform **102** identifies the Dinnerware Seller C **814** as the seller from the purchase request **162**, which lists the Dinnerware Seller C **814** at the seller identification **904**. In particular, the selling platform accesses the data table **1000** and matches the Dinnerware Seller C **814** with the seller **128**. Thus, the selling platform **102** matches the dinnerware items **808** to the seller **128** during the operation **212**. Furthermore, in the example, the seller **128** is an individual second user since the seller **128** sells the dinnerware items **808**.

[0060] In an example, upon completion of the operation **212**, the method **200** performs an operation **214**, where the selling platform **102** generates first shipping instructions for each of the individual users identified in the operation **212**, as shown with reference to FIG. **2**. During the operation **214**, the selling platform generates instructions **164-168** based on the item groups identified during the operation **210** and the individual second users identified during the operation **212**. Each of the instructions **164-168** describe an item that is to be sold by the individual second user, an amount of the items, and an address to which the items are to be sent. In an example, each of the instructions include a single address such that the individual second user only has to send a single package that includes items being sold by the individual second user.

[0061] It should be noted that in some examples, while a single package is envisioned, a single seller may have a high volume of orders to fill, which may require more than one package for shipment. To further illustrate, a seller may have such a high quantity of orders to fill that all the items may not fit into a single package. Similarly, the items may be large in size, which limits the number of items that can be placed in a single package. In either scenario, the seller may have to use multiple packages. Nonetheless, in an example, the packages may be sent to the same address. In an example, based on receiving one of the instructions **164-168**, each of the individual second users package the items indicated specified in one of the instructions **164-168** into a single package and then sends the single package to the single address.

[0062] To further illustrate this concept, the seller **124** can receive the instructions **164**. The instructions **164** can indicate to the seller **124** that the seller **124** is to package up items that are sold by the seller **124** into a single package. In addition, the instructions **164** can specify an address to which the package prepared by the seller **124** should be sent. Likewise, the seller **126** can receive the instructions **166**. The instructions **166** can indicate to the seller **126** that the seller **126** is to package up items that are sold by the seller **126** into a single package. In addition, the instructions **166** can specify an address to which the package prepared by the seller **126** should be sent. Similarly, the seller **128** can receive the instructions **168**. The instructions **168** can indicate to the seller **128** that the seller **128** is to package up items that are sold by the seller **128** into a single package. In addition, the instructions **168** can specify an address to which the package prepared by the seller **128** should be sent.

[0063] In an example, the address specified in each of the instructions **164-168** can be based on a geographic location of the processing center **136**. To further illustrate, the processing center **136** can service a particular geographical region, such as the Pacific Northwest. Moreover, each of the buyers **118-122** may be located in the Pacific Northwest. Therefore, in an example, each of the instructions **164-168** can specify an address associated with the processing center **136** in the first shipping instructions.

[0064] In a further example, buyers **174** and **176** can be located in the southeast that is serviced by a processing center **172** that provides items to buyers **174** and **176**. In a further example, additional shipping instructions can be generated that are based on the additional processing center **172** being located at in the southeast and where different shipping addresses associated with the buyers **174** and **176** are associated with the processing center **172**. Thus, the first shipping instructions, or additional shipping instructions if the seller is shipping to separate processing centers, can be generated that also list the shipping address associated with the processing center **172** in addition to the address associated with the processing center **136**. It should be noted that while the buyers **118-122** are shown as being associated with the processing center **136**, one of the buyers **118-122** can be associated with the processing center **172** in an example where one of the buyers **118-112** has an address in the southeast.

[0065] In addition, in an example, the first shipping instructions can include a time period after which each of the sellers **124-128** can ship items to the processing center **136**. As noted above, examples relate to minimizing the number of packages the sellers **124-128** send to the processing center **136**. By establishing a time period, such as three days, this increases the chances of the sellers **124-128** being able to send items for different buyers in one package to a processing center since different purchase requests may be submitted by different buyers at different times. Moreover, in an example, during the time period, additional purchase requests from buyers different from the buyers **118-122** can be received during the time period when the sellers **124-128** receive the shipping instructions. In this example, the operations **208-214** can be repeated for the additional purchase requests during the time period. Accordingly, if the time period is three days, the operations **208-214** can be repeated

for three days for additional purchase requests that are created during the three day period as discussed with reference to the operations **202-206**.

[0066] Returning to the example, as noted above, the selling platform **102** identified the bedding items **406**, the area rug items **604**, and the dinnerware items **808** as item clusters during the operation **210**. Furthermore, the selling platform **102** matched the bedding items **406** to the seller **124**, the area rug items **604** to the seller **126**, and the dinnerware items **808** to the seller **128** during the operation **212**. Thus, during the operation **214**, the selling platform **102** generates the instructions **164** for the seller **124**, the instructions **166** for the seller **126**, and the instructions **168** for the seller **128**.

[0067] In the example, the instructions **164** indicate that the seller **124** should provide three bedding items **406** in a single package. As noted above, the purchase request **158** indicated that each of the buyers wanted one bedding item **406**. It should be noted that different amounts can be requested within the scope of the present disclosure. Moreover, the instructions **164** indicate that the seller **124** should send the single package that includes the three bedding items **406** to the processing center **136**. Thus, in response to receiving the instructions **164**, the seller **124** will prepare the package **138** to include three bedding items **406** and then send the package **138** to the processing center **136**.

[0068] In the example, the instructions **166** indicate that the seller **126** should provide three area rug items **604** in a single package. As noted above, the purchase request **160** indicated that each of the buyers **118-122** wanted one area rug item **604**. It should be noted that different amounts can be requested within the scope of the present disclosure. Moreover, the instructions **166** indicate that the seller **126** should send the single package that includes the three area rug items **604** to the processing center **136**. Thus, in response to receiving the instructions **166**, the seller **126** will prepare the package **140** to include three area rug items **604** and then send the package **140** to the processing center **136**.

[0069] In the example, the instructions **168** indicate that the seller **128** should provide three dinnerware items **808** in a single package. As noted above, the purchase request **162** indicated that each of the buyers **118-122** wanted one dinnerware item **808**. It should be noted that different amounts can be requested within the scope of the present disclosure. Moreover, the instructions **168** indicate that the seller **128** should send the single package that includes the three dinnerware items **808** to the processing center **136**. Thus, in response to receiving the instructions **168**, the seller **128** will prepare the package **142** to include three dinnerware items **808** and then send the package **142** to the processing center **136**.

[0070] In an example, in addition to generating first shipping instructions for the individual second users during the operation **214**, the method **200** generates second shipping instructions **170** that include sorting, address, and packaging instructions for a processing center during an operation **216**. As noted above, each of the sellers receiving the first shipping instructions package items sold by the seller into a single package and then forward along the single package to the processing center. The items within the single package can be destined for different buyers. In accordance with an example, the items are removed from the packages at the processing center, sorted, and then repackaged. After repackaging, the items are sent to the buyers.

[0071] Regarding the sorting instructions, the second shipping instructions **170** can include how the items removed should be allocated. To further illustrate, the items may be sorted according to buyer. Thus, if three packages from three separate sellers that include individual packages for the three separate buyers are being sent to the processing center **136**, the second shipping instructions **170** can include instructions indicating that the items in the three individual packages should be removed and sorted according to the three separate buyers, i.e., the first buyer is allocated a first package from the three individual packages, the second buyer is allocated a second package from the three individual packages, and the third buyer is allocated a third package from the three individual packages.

[0072] Regarding the address information, when a buyer sends a purchase request, such as the purchase requests **158-162**, each of the purchase requests **158-162** include the recipient address **508**. During the operation **216**, the selling platform **102** can pull the recipient address **508** from the purchase requests **158-162** and provide the recipient address **508** in the second shipping instructions **170**.

[0073] As noted above, the second shipping instructions **170** generated by the selling platform **102** can also include the packaging instructions. As such, in an example, the second shipping instructions **170** can indicate how items received from the buyers can be repackaged into packages destined for the buyers. To further illustrate, the three individual packages removed from the three packages sent from the three sellers for the first buyer can be repackaged into a single package to be sent to the first buyer, the three individual packages removed from the three packages sent from the three sellers for the second buyer can be repackaged into a single package to be sent to the second buyer. Similarly, the three individual packages removed from the three packages sent from the three sellers for the third buyer can be repackaged into a single package to be sent to the third buyer.

[0074] Returning to the example, during the operation **216**, the selling platform **102** generates and then sends the second shipping instructions **170** to the processing center **136**. The second shipping instructions **170** include instructions relating to sorting the packages **138-142** received at the processing center **136**, address information for the buyers **118-122**, and packaging instructions for the items **406**, **604**, and **808** purchased by the buyers **118-122**. The processing center **136** receives the package **138** from the seller **124** that includes the bedding items **406** along with the package **140** from the seller **126** that includes the area rug items **604**. Furthermore, the processing center **136** receives the package **142** from the seller **128** that includes the dinnerware items **808**.

[0075] In the example, the selling platform **102** generates the second shipping instructions **170** to indicate that each of the buyers **118-122** receive one of the bedding items **406**. Moreover, the selling platform **102** generates the second shipping instructions **170** to indicate that each of the buyers **118-122** receive one of the area rug items **604** along with one of the dinnerware items **808**. Thus, the second shipping instructions **170** include sorting instructions to sort the bedding items **406** such that each of the buyers **118-122** receive one of the bedding items **406**. The second shipping instructions **170** also include sorting instructions to sort the area rug items **604** such that each of the buyers **118-122** receive one of the area rug items **604**. In addition, the second

shipping instructions **170** include sorting instructions to sort the dinnerware items **808** such that each of the buyers **118-122** receive one of the dinnerware items **808**.

[0076] In addition to the sorting instructions, the second shipping instructions **170** include address information associated with the locations **150-154** associated with each of the buyers **118-122**. To further illustrate, as noted above, the purchase requests **158-162** include the recipient address **508** for each of the buyers **118-122** (only the address for the buyer **118** is shown). During the operation **216**, the selling platform **102** pulls this address information from the purchase requests **158-162** and includes the address information in the second shipping instructions **170**. In the example, the location **150** associated with the buyer **118** has the following address: 123 Main Street. Thus, during the operation **216**, the selling platform **102** generates the second shipping instructions **170** to include the address of 123 Main Street for the package **144** to be sent to the buyer **118**. Using a similar methodology, the selling platform **102** generates an address of 121 South Eighth Street for the location **152** associated with the buyer **120** and an address of 111 West Saint John Street for the location **154** associated with the buyer **122** for the packages **146** and **148** to be respectively sent to the buyers **120** and **122**. This address information is provided to the processing center **136**.

[0077] In the example, the selling platform **102** generates the second shipping instructions **170** to include instructions regarding how the processing center **136** should repackage the items **406**, **604**, and **808** sent in the packages **138-142**. As noted above, the buyer **118** purchased the bedding item **406**, the area rug item **604**, and the dinnerware item **808**. Thus, the repackaging instructions in the second shipping instructions **170** indicate that at least one of the bedding item **406**, the area rug item **604**, and the dinnerware item **808** should be repackaged into the single package **144** to be sent to the buyer **118**.

[0078] Also as noted above, the buyer **120** purchased the bedding item **406**, the area rug item **604**, and the dinnerware item **808**. Accordingly, the repackaging instructions in the second shipping instructions **170** indicate that at least one of the bedding item **406**, the area rug item **604**, and the dinnerware item **808** should be repackaged into the single package **146** to be sent to the buyer **120**.

[0079] Moreover, the buyer **122** purchased the bedding item **406**, the area rug item **604**, and the dinnerware item **808**. As such, the repackaging instructions in the second shipping instructions **170** indicate that at least one of the bedding item **406**, the area rug item **604**, and the dinnerware item **808** should be repackaged into the single package **148** to be sent to the buyer **122**. Afterwards, in the example, the processing **136** sends each of the packages **144-148** to each of the buyers **118-122** at the address associated with the locations **150-154**.

[0080] It should be noted that in the examples, discussion is made where the three buyers **118-122** purchase items from the sellers **124-128**. However, in accordance with examples, only the buyers **118** and **120** may purchase items from of the sellers **124-128** while the buyer **122** purchases items from the sellers **124** and **126**. In this example, in the package **142** from the seller **128** will includes items for the buyers **118** and **120**. In this example, the instructions **168** sent to the seller **128** will reflect only placing items for the buyers **118** and **120**. Moreover, the instructions **170** will reflect preparing the package **148** to include only the items from the sellers **124** and **126**. thus, the number of buyers purchasing items is variable such that the instructions **164-168** can vary depending on which of the buyers **118-122** purchase items from the various sellers **124-128**. Moreover, the contents of the packages **144-148** sent to the buyers **118-122** can be different from one another.

[0081] It should be noted that in alternative examples, the operation **210** can be skipped where once the purchase requests are received during the operation **208**, the items in the purchase requests are matched to individual second users of the plurality of second users. To further illustrate this concept, in an illustration, when a purchase request is received from the buyer **118** for the dinnerware item being sold by the seller **168**, the selling platform **102** matches the purchase request for the dinnerware item to the seller **168** and sends shipping instructions to the seller **168**. In the alternative example, when a purchase request is received from the buyer **120** for the dinnerware item being sold by the seller **168** after shipping instructions for the buyer **118** are sent to the seller **168**, the selling platform **102** matches the purchase request for the dinnerware item to the seller **168** and sends shipping instructions to the seller **168**. In the alternative example, the operation **210** that identifies the item groups can be skipped. In the alternative example, during the operation **212**, instead of matching the item groups to individual second users, the item is matched to individual second users of the plurality of second users. Thus, the dinnerware item is matched to the seller **168**, as noted above.

[0082] Furthermore, in the examples given above, the items, such as the bedding items **404-408**, the area rug items **604-608**, and the dinnerware items **804-808** are related to housewares. In further examples, the items being sold by the sellers **124-128** could be unrelated. To further illustrate, the seller **124** can sell automotive parts, the seller **126** can sell clothing, and the seller **128** can sell hair products. In this example, each of the buyers **118-122** can still purchase items from each of the sellers **124-128**.

[0083] The described techniques provide a specific improvement over prior systems, such as systems that allow a plurality of first users to obtain items from a plurality of seconds users. The specific improvement results in an improved user interface for electronic devices that allow a plurality first users to obtain items from a plurality of seconds users. Additionally, the described techniques provide a particular manner of summarizing and presenting information in electronic devices by providing the first plurality of users the ability to select various objects at a first user interface and then causing the display of a second user interface that summarizes the object selections at the first user interface, without using conventional user interface methods such as displaying a generic index on a computer. Inputs received at a first interface cause the generation of a second user interface based on the inputs received at the first user interface. Furthermore, inputs received at the user interfaces described herein cause a processing device to perform actions related to inputs received at the user interfaces.

[0084] FIG. **11** is a block diagram **1100** illustrating a software architecture **1102**, which may be installed on any one or more of the devices described above. FIG. **11** is merely a non-limiting example of a software architecture, and it will be appreciated that many other architectures may be implemented to facilitate the functionality described

herein. The software architecture **1102** may be implemented by hardware such as a machine **1300** that includes processors **1310**, memory **1330**, and I/O components **1350**. In this example, the software architecture **1102** may be conceptualized as a stack of layers where each layer may provide a particular functionality. For example, the software architecture **1102** includes layers such as an operating system **1104**, libraries **1106**, frameworks **1108**, and applications **1110**. Operationally, the applications **1110** invoke application programming interface (API) calls **1112** through the software stack and receive messages **1114** in response to the API calls **1112**, according to some implementations.

[0085] In various implementations, the operating system **1104** manages hardware resources and provides common services. The operating system **1104** includes, for example, a kernel **1120**, services **1122**, and drivers **1124**. The kernel **1120** acts as an abstraction layer between the hardware and the other software layers in some implementations. For example, the kernel **1120** provides memory management, processor management (e.g., scheduling), component management, networking, and security settings, among other functionality. The services **1122** may provide other common services for the other software layers. The drivers **1124** may be responsible for controlling or interfacing with the underlying hardware. For instance, the drivers **1124** may include display drivers, camera drivers, Bluetooth® drivers, flash memory drivers, serial communication drivers (e.g., Universal Serial Bus (USB) drivers), Wi-Fi® drivers, audio drivers, power management drivers, and so forth.

[0086] In some implementations, the libraries **1106** provide a low-level common infrastructure that may be utilized by the applications **1110**. The libraries **1106** may include system libraries **1130** (e.g., C standard library) that may provide functions such as memory allocation functions, string manipulation functions, mathematic functions, and the like. In addition, the libraries **1106** may include API libraries **1132** such as media libraries (e.g., libraries to support presentation and manipulation of various media formats such as Moving Picture Experts Group-4 (MPEG4), Advanced Video Coding (H.264 or AVC), Moving Picture Experts Group Layer-3 (MP3), Advanced Audio Coding (AAC), Adaptive Multi-Rate (AMR) audio codec, Joint Photographic Experts Group (JPEG or JPG), or Portable Network Graphics (PNG)), graphics libraries (e.g., an OpenGL framework used to render in two dimensions (2D) and three dimensions (3D) in a graphic context on a display), database libraries (e.g., SQLite to provide various relational database functions), web libraries (e.g., WebKit to provide web browsing functionality), and the like. The libraries **1106** may also include a wide variety of other libraries **1134** to provide many other APIs to the applications **1110**.

[0087] The frameworks **1108** provide a high-level common infrastructure that may be utilized by the applications **1110**, according to some implementations. For example, the frameworks **1108** provide various graphic user interface (GUI) functions, high-level resource management, high-level location services, and so forth. The frameworks **1108** may provide a broad spectrum of other APIs that may be utilized by the applications **1110**, some of which may be specific to a particular operating system or platform.

[0088] In an example example, the applications **1110** include a home application **1150**, a contacts application **1152**, a browser application **1154**, a book reader application **1156**, a location application **1158**, a media application **1160**, a messaging application **1162**, a game application **1164**, and a broad assortment of other applications such as a third-party application **1166**. According to some examples, the applications **1110** are programs that execute functions defined in the programs. Various programming languages may be employed to create one or more of the applications **1110**, structured in a variety of manners, such as object-orientated programming languages (e.g., Objective-C, Java, or C++) or procedural programming languages (e.g., C or assembly language). In a specific example, the third-party application **1166** (e.g., an application developed using the Android™ or iOS™ software development kit (SDK) by an entity other than the vendor of the particular platform) may be mobile software running on a mobile operating system such as iOS™, Android™, Windows® Phone, or other mobile operating systems. In this example, the third-party application **1166** may invoke the API calls **1112** provided by the mobile operating system (e.g., the operating system **1104**) to facilitate functionality described herein.

[0089] Certain examples are described herein as including logic or a number of components, modules, or mechanisms. Modules may constitute either software modules (e.g., code embodied (1) on a non-transitory machine-readable medium or (2) in a transmission signal) or hardware-implemented modules. A hardware-implemented module is a tangible unit capable of performing certain operations and may be configured or arranged in a certain manner. In examples, one or more computer systems (e.g., a standalone, client or server computer system) or one or more processors may be configured by software (e.g., an application or application portion) as a hardware-implemented module that operates to perform certain operations as described herein.

[0090] In various examples, a hardware-implemented module may be implemented mechanically or electronically. For example, a hardware-implemented module may include dedicated circuitry or logic that is permanently configured (e.g., as a special-purpose processor, such as a field programmable gate array (FPGA) or an application-specific integrated circuit (ASIC)) to perform certain operations. A hardware-implemented module may also include programmable logic or circuitry (e.g., as encompassed within a general-purpose processor or other programmable processor) that is temporarily configured by software to perform certain operations. It will be appreciated that the decision to implement a hardware-implemented module mechanically, in dedicated and permanently configured circuitry, or in temporarily configured circuitry (e.g., configured by software) may be driven by cost and time considerations.

[0091] Accordingly, the term "hardware-implemented module" should be understood to encompass a tangible entity, be that an entity that is physically constructed, permanently configured (e.g., hardwired) or temporarily or transitorily configured (e.g., programmed) to operate in a certain manner and/or to perform certain operations described herein. Considering examples in which hardware-implemented modules are temporarily configured (e.g., programmed), each of the hardware-implemented modules need not be configured or instantiated at any one instance in time. For example, where the hardware-implemented modules include a general-purpose processor configured using software, the general-purpose processor may be configured as respectively different hardware-implemented modules at different times. Software may, accordingly, configure a processor, for example, to constitute a particular hardware-

implemented module at one instance of time and to constitute a different hardware-implemented module at a different instance of time.

[0092] Hardware-implemented modules can provide information to, and receive information from, other hardware-implemented modules. Accordingly, the described hardware-implemented modules may be regarded as being communicatively coupled. Where multiples of such hardware-implemented modules exist contemporaneously, communications may be achieved through signal transmission (e.g., over appropriate circuits and buses) that connects the hardware-implemented modules. In examples in which multiple hardware-implemented modules are configured or instantiated at different times, communications between such hardware-implemented modules may be achieved, for example, through the storage and retrieval of information in memory structures to which the multiple hardware-implemented modules have access. For example, one hardware-implemented module may perform an operation and store the output of that operation in a memory device to which it is communicatively coupled. A further hardware-implemented module may then, at a later time, access the memory device to retrieve and process the stored output. Hardware-implemented modules may also initiate communications with input or output devices, and can operate on a resource (e.g., a collection of information).

[0093] The various operations of example methods described herein may be performed, at least partially, by one or more processors that are temporarily configured (e.g., by software) or permanently configured to perform the relevant operations. Whether temporarily or permanently configured, such processors may constitute processor-implemented modules that operate to perform one or more operations or functions. The modules referred to herein may, in some examples, include processor-implemented modules.

[0094] Similarly, the methods described herein may be at least partially processor-implemented. For example, at least some of the operations of a method may be performed by one or more processors or processor-implemented modules. The performance of certain of the operations may be distributed among the one or more processors, not only residing within a single machine, but also deployed across a number of machines. In some examples, the processor or processors may be located in a single location (e.g., within a home environment, an office environment or as a server farm), while in other examples, the processors may be distributed across a number of locations.

[0095] The one or more processors may also operate to support performance of the relevant operations in a "cloud computing" environment or as a "software as a service" (SaaS). For example, at least some of the operations may be performed by a group of computers (as examples of machines including processors), these operations being accessible via a network **115** (e.g., the Internet) and via one or more appropriate interfaces (e.g., application program interfaces (APIs).)

[0096] Examples may be implemented in digital electronic circuitry, or in computer hardware, firmware, software, or in combinations of them. Examples may be implemented using a computer program product, e.g., a computer program tangibly embodied in an information carrier, e.g., in a machine-readable medium for execution by, or to control the operation of data processing apparatus, e.g., a programmable processor, a computer, or multiple computers.

[0097] A computer program can be written in any form of programming language, including compiled or interpreted languages, and it can be deployed in any form, including as a stand-alone program or as a module, subroutine, or other unit suitable for use in a computing environment. A computer program can be deployed to be executed on one computer or on multiple computers, at one site or distributed across multiple sites, and interconnected by a communication network.

[0098] The computing system can include clients and servers. A client and server are generally remote from each other and typically interact through a communication network. The relationship of client and server arises by virtue of computer programs running on the respective computers and having a client-server relationship to each other. In examples deploying a programmable computing system, it will be appreciated that both hardware and software architectures require consideration. Specifically, it will be appreciated that the choice of whether to implement certain functionality in permanently configured hardware (e.g., an ASIC), in temporarily configured hardware (e.g., a combination of software and a programmable processor), or a combination of permanently and temporarily configured hardware may be a design choice. Below are set out hardware (e.g., machine) and software architectures that may be deployed, in various examples.

[0099] FIG. **12** is a block diagram of a machine within which instructions may be executed for causing the machine to perform any one or more of the methodologies discussed herein. In one example, the machine may be any of the devices described above. In alternative examples, the machine operates as a standalone device or may be connected (e.g., networked) to other machines. In a networked deployment, the machine may operate in the capacity of a server or a client machine in a server-client network environment, or as a peer machine in a peer-to-peer (or distributed) network environment. The machine may be a personal computer (PC), a tablet PC, a set-top box (STB), a personal digital assistant (PDA), a cellular telephone, a web appliance, a network router, switch or bridge, or any machine capable of executing instructions (sequential or otherwise) that specify actions to be taken by that machine. Further, while only a single machine is illustrated, the term "machine" shall also be taken to include any collection of machines that, individually or jointly, execute a set (or multiple sets) of instructions to perform any one or more of the methodologies discussed herein.

[0100] The example computer system **1200** includes a processor **1202** (e.g., a central processing unit (CPU), a graphics processing unit (GPU) or both), a main memory **1204** and a static memory **1206**, which communicate with each other via a bus **1208**. The computer system **1200** may further include a video display unit **1210** (e.g., a liquid crystal display (LCD) or a cathode ray tube (CRT)). The computer system **1200** also includes an alphanumeric input device **1212** (e.g., a keyboard), a user interface (UI) navigation device (cursor control device) **1214** (e.g., a mouse), a disk drive unit **1216**, a signal generation device **1218** (e.g., a speaker) and a network interface device **1220**.

[0101] The drive unit **1216** includes a machine-readable medium **1222** on which is stored one or more sets of instructions and data structures (e.g., software) **1224** embodying or utilized by any one or more of the methodologies or functions described herein. The instructions **1224**

may also reside, completely or at least partially, within the main memory **1204** and/or within the processor **1202** during execution thereof by the computer system **1200**, the main memory **1204** and the processor **1202** also constituting machine-readable media. Instructions **1224** may also reside within the static memory **1206**.

[0102] While the machine-readable medium **1222** is shown in an example to be a single medium, the term "machine-readable medium" may include a single medium or multiple media (e.g., a centralized or distributed database, and/or associated caches and servers) that store the one or more instructions or data instructions **1224**. The term "machine-readable medium" shall also be taken to include any tangible medium that is capable of storing, encoding or carrying instructions **1224** for execution by the machine and that cause the machine to perform any one or more of the methodologies of the present invention, or that is capable of storing, encoding or carrying data structures utilized by or associated with such instructions **1224**. The term "machine-readable medium" shall accordingly be taken to include, but not be limited to, solid-state memories, and optical and magnetic media. Specific examples of machine-readable media include non-volatile memory, including by way of example, semiconductor memory devices, e.g., erasable programmable read-only memory (EPROM), electrically erasable programmable read-only memory (EEPROM), and flash memory devices; magnetic disks, such as internal hard disks and removable disks; magneto-optical disks; and CD-ROM and DVD-ROM disks.

[0103] The instructions **1224** may further be transmitted or received over a communications network **1226** using a transmission medium. The instructions **1224** may be transmitted using the network interface device **1220** and any one of a number of well-known transfer protocols (e.g., HTTP). Examples of communication networks include a local area network ("LAN"), a wide area network ("WAN"), the Internet, mobile telephone networks, plain old telephone (POTS) networks, and wireless data networks (e.g., Wi-Fi and WiMax networks). The term "transmission medium" shall be taken to include any intangible medium that is capable of storing, encoding or carrying instructions **1224** for execution by the machine, and includes digital or analog communications signals or other intangible media to facilitate communication of such software.

[0104] Although an example has been described with reference to specific examples, it will be evident that various modifications and changes may be made to these examples without departing from the broader spirit and scope of the invention. Accordingly, the specification and drawings are to be regarded in an illustrative rather than a restrictive sense. The accompanying drawings that form a part hereof, show by way of illustration, and not of limitation, specific examples in which the subject matter may be practiced. The examples illustrated are described in sufficient detail to enable those skilled in the art to practice the teachings disclosed herein. Other examples may be utilized and derived therefrom, such that structural and logical substitutions and changes may be made without departing from the scope of this disclosure. This Detailed Description, therefore, is not to be taken in a limiting sense, and the scope of various examples is defined only by the appended claims, along with the full range of equivalents to which such claims are entitled.

[0105] Such examples of the inventive subject matter may be referred to herein, individually and/or collectively, by the term "invention" merely for convenience and without intending to voluntarily limit the scope of this application to any single invention or inventive concept if more than one is in fact disclosed. Thus, although specific examples have been illustrated and described herein, it should be appreciated that any arrangement calculated to achieve the same purpose may be substituted for the specific examples shown. This disclosure is intended to cover any and all adaptations or variations of various examples. Combinations of the above examples, and other examples not specifically described herein, will be apparent to those of skill in the art upon reviewing the above description.

[0106] The Abstract of the Disclosure is provided to comply with 37 C.F.R. § 1.72(b), requiring an abstract that will allow the reader to quickly ascertain the nature of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims. In addition, in the foregoing Detailed Description, it can be seen that various features are grouped together in a single example for the purpose of streamlining the disclosure. This method of disclosure is not to be interpreted as reflecting an intention that the claimed examples require more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive subject matter lies in less than all features of a single disclosed example. Thus, the following claims are hereby incorporated into the Detailed Description, with each claim standing on its own as a separate example.

What is claimed is:

1. A method, comprising:

causing to be displayed at a user device associated with each of a plurality of first users, a first user interface that includes an option to search a first item;

in response to a selection of the option to search for the first item, causing to be displayed at the user device associated with each of the plurality of first users a second user interface that includes an option to select a purchase request corresponding to the item;

repeating the display of the first user interface and the second user interface for a second item;

receiving, from the plurality of first users, a plurality of purchase requests for the first item and the second item sold by a plurality of second users, the plurality of first users being associated with different shipping addresses and being received in response to the plurality of users selecting a purchase request for the first item and the second item;

matching the items of the plurality purchase requests to individual second users of the plurality of second users to generate matched purchase requests;

generating first shipping instructions for the individual second users to send a single shipment to a processing center;

generating second shipping instructions for the processing center that comprise address instructions to determine shipping addresses based on the items from the single shipments, the plurality of purchase requests, and the different shipping address associated with the plurality of first users for the sorted items; and

sending the second shipping instructions to the processing center.

2. The method of claim 1, wherein the first shipping instructions indicate that the single shipment has the items purchased by the different first users of the plurality of first users is to be sent to a processing center

3. The method of claim 1, the method further comprising sending the first shipping instructions and the matched purchase requests to the individual second users.

4. The method of claim 1, where the second shipping instructions further comprise:

sorting instructions to sort the items from single shipments received from the individual second users according to the different first users; and

packaging instructions to package the sorted items according to the shipping addresses such that the processing center sends a single package intended for a single first user of the plurality first users to each of the plurality of first users.

5. The method of claim 1, wherein the individual second user is a seller selling a single item, where the first item is the single item and the purchase requests include a request for the single item such that multiple first users associated with the different shipping addresses request the single item and the single shipment includes multiples of the single item intended for the multiple first users associated the different shipping addresses, the multiples of the single items being sorted and packaged according to the sorting instructions and the packaging instructions such that each first user of the multiple first users is individually sent the single item from the multiples of the single item.

6. The method of claim 1, wherein the processing center is located at a first geographic location and generating the first and second shipping instructions is based on the first geographic location and the method further includes generating third shipping instructions, the third shipping instructions being based on an additional processing center located at a second geographic location and ones of the different shipping addresses associated with the plurality of first users.

7. The method of claim 1, wherein the first shipping instructions further include:

a time period; and

instructions to the individual second users to wait to send the single shipment until expiration of the time period and the method further comprises:

receiving a second plurality of purchase requests from a second plurality of first users; and

repeating the operations of matching the items of the plurality purchase requests to individual second users of the plurality of second users, generating, and sending the first shipping instructions for the second plurality of purchase requests.

8. A system comprising:

a processor; and

a memory storing instructions that, when executed by the processor, configure the system to perform operations comprising:

causing to be displayed at a user device associated with each of a plurality of first users, a first user interface that includes an option to search a first item;

in response to a selection of the option to search for the first item, causing to be displayed at the user device associated with each of the plurality of first users a second user interface that includes an option to select a purchase request corresponding to the item;

repeating the display of the first user interface and the second user interface for a second item;

receiving, from the plurality of first users, a plurality of purchase requests for the first item and the second item sold by a plurality of second users, the plurality of first users being associated with different shipping addresses and being received in response to the plurality of users selecting a purchase request for the first item and the second item;

matching the items of the plurality purchase requests to individual second users of the plurality of second users to generate matched purchase requests;

generating first shipping instructions for the individual second users to send a single shipment to a processing center;

generating second shipping instructions for the processing center that comprise address instructions to determine shipping addresses based on the items from the single shipments, the plurality of purchase requests, and the different shipping address associated with the plurality of first users for the sorted items; and

sending the second shipping instructions to the processing center.

9. The system of claim 8, wherein the first shipping instructions indicate that the single shipment has the items purchased by the different first users of the plurality of first users is to be sent to a processing center

10. The system of claim 8, wherein the instructions further configure the system to perform operations comprising sending the first shipping instructions and the matched purchase requests to the individual second users.

11. The system of claim 8, wherein the instructions further configure the system to perform operations comprising:

sorting instructions to sort the items from single shipments received from the individual second users according to the different first users; and

packaging instructions to package the sorted items according to the shipping addresses such that the processing center sends a single package intended for a single first user of the plurality first users to each of the plurality of first users.

12. The system of claim 8, wherein the individual second user is a seller selling a single item, where the first item is the single item and the purchase requests include a request for the single item such that multiple first users associated with the different shipping addresses request the single item and the single shipment includes multiples of the single item intended for the multiple first users associated the different shipping addresses, the multiples of the single items being sorted and packaged according to the sorting instructions and the packaging instructions such that each first user of the multiple first users is individually sent the single item from the multiples of the single item.

13. The system of claim 8, wherein the processing center is located at a first geographic location and generating the first and second shipping instructions is based on the first geographic location and the instructions further configure the system to perform operations comprising generating third shipping instructions, the third shipping instructions being based on an additional processing center located at a second geographic location and ones of the different shipping addresses associated with the plurality of first users.

14. The system of claim **8**, wherein the first shipping instructions further include:

a time period; and

instructions to the individual second users to wait to send the single shipment until expiration of the time period and the instructions further configure the system to perform operations comprising:

receiving a second plurality of purchase requests from a second plurality of first users; and

repeating the operations matching the items of the plurality purchase requests to individual second users of the plurality of second users, generating, and sending the first shipping instructions for the second plurality of purchase requests.

15. A non-transitory computer-readable storage medium, the computer-readable storage medium including instructions that when executed by a computer, cause the computer to perform operations comprising:

causing to be displayed at a user device associated with each of a plurality of first users, a first user interface that includes an option to search a first item;

in response to a selection of the option to search for the first item, causing to be displayed at the user device associated with each of the plurality of first users a second user interface that includes an option to select a purchase request corresponding to the item;

repeating the display of the first user interface and the second user interface for a second item;

receiving, from the plurality of first users, a plurality of purchase requests for the first item and the second item sold by a plurality of second users, the plurality of first users being associated with different shipping addresses and being received in response to the plurality of users selecting a purchase request for the first item and the second item;

matching the items of the plurality purchase requests to individual second users of the plurality of second users to generate matched purchase requests;

generating first shipping instructions for the individual second users to send a single shipment to a processing center;

generating second shipping instructions for the processing center that comprise address instructions to determine shipping addresses based on the items from the single shipments, the plurality of purchase requests, and the different shipping address associated with the plurality of first users for the sorted items; and

sending the second shipping instructions to the processing center.

16. The non-transitory computer-readable storage medium of claim **15**, wherein the first shipping instructions indicate that the single shipment has the items purchased by the different first users of the plurality of first users is to be sent to a processing center

17. The non-transitory computer-readable storage medium of claim **15**, wherein the instructions further configure the system to perform operations comprising sending the first shipping instructions and the matched purchase requests to the individual second users.

18. The non-transitory computer-readable storage medium of claim **15**, wherein the instructions further cause the computer to perform operations comprising:

sorting instructions to sort the items from single shipments received from the individual second users according to the different first users; and

packaging instructions to package the sorted items according to the shipping addresses such that the processing center sends a single package intended for a single first user of the plurality first users to each of the plurality of first users.

19. The system of claim **8**, wherein the individual second user is a seller selling a single item, where the first item is the single item and the purchase requests include a request for the single item such that multiple first users associated with the different shipping addresses request the single item and the single shipment includes multiples of the single item intended for the multiple first users associated the different shipping addresses, the multiples of the single items being sorted and packaged according to the sorting instructions and the packaging instructions such that each first user of the multiple first users is individually sent the single item from the multiples of the single item.

20. The system of claim **8**, wherein the processing center is located at a first geographic location and generating the first and second shipping instructions is based on the first geographic location and the instructions further cause the computer to perform operations comprising generating third shipping instructions, the third shipping instructions being based on an additional processing center located at a second geographic location and ones of the different shipping addresses associated with the plurality of first users, wherein the first shipping instructions further include:

a time period; and

instructions to the individual second users to wait to send the single shipment until expiration of the time period and the instructions further cause the computer to perform operations comprising:

receiving a second plurality of purchase requests from a second plurality of first users; and

repeating the operations of matching the items of the plurality purchase requests to individual second users of the plurality of second users, generating, and sending the first shipping instructions for the second plurality of purchase requests.

* * * * *