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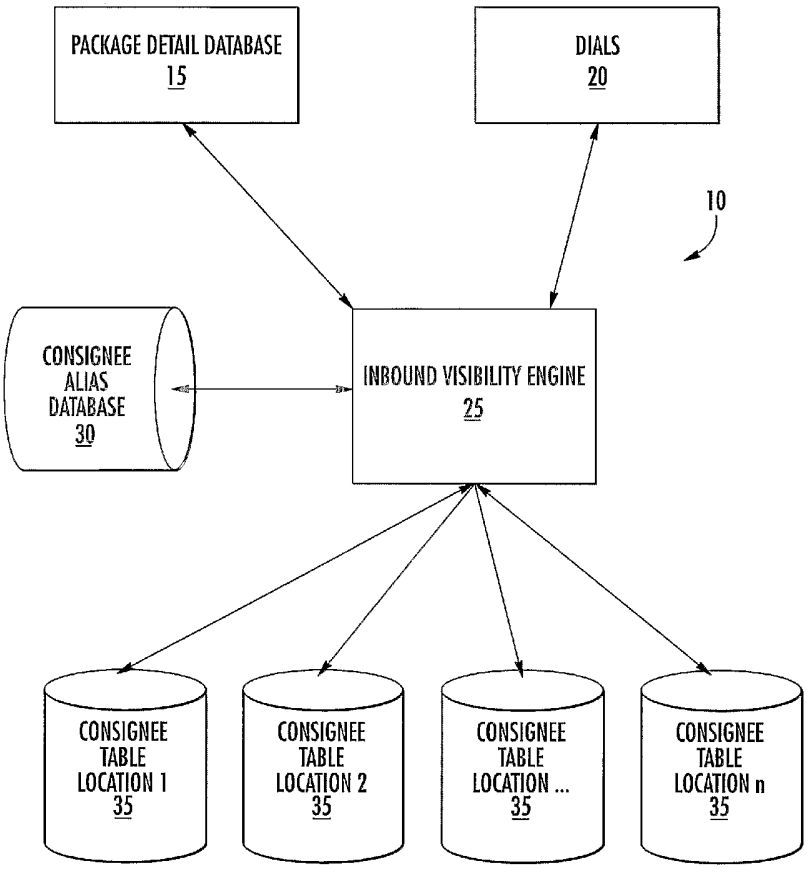
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(54) Title: INBOUND PACKAGE TRACKING SYSTEMS AND METHODS



(57) Abstract: The present invention discloses systems and methods for tracking packages inbound to a user. One embodiment of the invention discloses a process by which shipping information is analyzed to determine the various ways in which shippers have previously identified a consignee location. A consignee alias table is generated that lists the various combinations of consignee name and address used by shippers to identify the consignee location. Package level detail is then received from a carrier and compared against a consignee alias database to identify packages that are inbound to the consignee location, and a consignee location table is updated that monitors the status and anticipated delivery date of all packages inbound to the consignee location.

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INBOUND PACKAGE TRACKING SYSTEMS AND METHODS

FIELD OF THE INVENTION

Systems for tracking packages that are inbound to a location and that forecast when and how many packages will arrive on a given day.

BACKGROUND OF THE INVENTION

Package tracking is an integral part of a package delivery service that allows a customer to track goods that they have shipped or that have been shipped to them. The advent of the Internet has allowed commercial carriers such as the United Parcel Service (UPS) to make it possible for customers to track their shipments online using a web-based service. Some businesses have taken package tracking a step further and integrated the package tracking functionality into their internal business systems. Businesses thus have the ability to trigger business events based upon shipment status information received from a commercial carrier.

For the most part, package tracking services known in the art operate on an package by package basis and require that a customer query a carrier database with a package tracking number associated with the package to be tracked. As a result, it is difficult for a company with a heavy volume of inbound or outbound shipping to track all its packages currently in transit. Companies are often stuck with the burdensome task of individually tracking large numbers of packages or risk being surprised when an abnormally large number of packages arrives at its loading docks with insufficient help to dispatch it. The inbound tracking of packages is especially difficult as consignees often do not have ready access to the tracking numbers that are assigned to packages shipped to them. An unsatisfied need therefore exists in the industry for inbound package tracking methods and systems that overcomes this and other problems.

Inbound package tracking, that is, the ability to forecast what packages will be delivered to a particular location on a particular day can be especially valuable to businesses. If a business knows which packages are scheduled to arrive at which locations for a given day, that information can improve the inventory management and

planning of the business, allow it to sell goods that are in transit from a vendor or a supplier, allow for the efficient allocation of production and receiving staff based on incoming shipment volume, and reduce the time spent tracking individual packages.

Several methods have been used by commercial carriers in an attempt to provide inbound package tracking information services. UPS offers a service known as Quantum View to those customers that want inbound visibility package tracking but that do not want to track packages on an individual basis. To use the Quantum View service, consignees identify one or more locations for which they want inbound visibility and assign a unique identifier, known as a Location Identifier (LID) to each identified location. The consignee then provides the LID to each of the vendors and suppliers that ship to the locations and instructs the vendors and suppliers to include the LID in the package detail information anytime that they ship a package to one of the identified locations (one shipper shipping to 15 different locations for consignee xyz must change its shipping system to generate 15 different LIDs, as each LID is a unique to each consignee location). When UPS receives a package from one of these vendors or suppliers, UPS captures the LID from the electronic package manifest detail information that accompanies the shipment and uses the LID to identify that package as bound for a particular location. Using forecasting and delivery tables and methods that are well known in the art, UPS can forecast when the package will arrive at its destination and update a database of packages bound for the location. In this way, UPS provides a database to its customer that identifies the packages that are bound to a particular location and estimates the date of delivery for each inbound package.

This approach to inbound visibility tracking requires that the shipper include a LID in the package detail for each package shipped to the consignee. Vendors often use off-the-shelf shipping systems and may not be able to readily modify their shipping systems to accommodate a consignee's request that a LID be added to the package detail for packages bound to a consignee location, or the vendor may simply refuse the consignee request. Further, even assuming that a consignee can persuade its most frequently used vendors and suppliers to modify their shipping systems to use LIDs, the system captures only those packages shipped from these identified vendors

and suppliers; packages that are inbound to the consignee from other shippers are not captured by the system. A need therefore exists for an inbound package tracking system that tracks packages without requiring a special identifier that marks the package for inbound tracking.

Another technical hurdle to the problem of inbound package tracking is the fact that shippers do not conform to a single, standard shipping address when addressing packages that are bound for a consignee. In many cases, packages bearing incorrect consignee addresses or addresses that use non-standard abbreviations in the shipping address nonetheless reach the consignee address even though the shipping address used to ship the package does not conform to the standard address for the destination location. Thus, if an inbound system were designed to track only those packages with labels that have the correct or standard form for the destination address, the system would miss many of the packages inbound to that location. A need therefore exists for an inbound package tracking system that identifies and track packages that are incorrectly addressed but are nevertheless inbound to a consignee location.

An unsatisfied need therefore exists in the industry for inbound package tracking methods and systems that overcome the above-identified and other problems.

SUMMARY OF THE INVENTION

The present invention discloses systems and methods for tracking packages inbound to a user. One embodiment of the invention discloses a process by which shipping information is analyzed to determine the various ways in which shippers have previously identified a consignee location. A consignee alias table is generated that lists the various combinations of consignee name and address used by shippers to identify the consignee location. Package level detail is then received from a carrier and compared against a consignee alias database to identify packages that are inbound to the consignee location, and a consignee location table is updated that monitors the status and anticipated delivery date of all packages inbound to the consignee location.

BRIEF DESCRIPTION OF THE FIGURES

Fig. 1 is a high-level block diagram of an inbound package tracking system in accordance with an embodiment of the present invention.

Figs. 2A-2C illustrate a consignee alias address database in accordance with an embodiment of the present invention.

Fig. 3 is a flow chart that illustrates the operation of a inbound package tracking system **10** in accordance with an embodiment of the present invention.

Fig. 4 is flow chart that shows a process for updating a consignee table with package status information in accordance with an embodiment of the present invention.

Fig. 5 is a flow chart that describes a process through which manifest records that do not match the data in an address alias database are identified and marked for later processing as potential new consignee aliases.

Fig. 6 illustrates the process through which non-matching records are processed as potential new consignee aliases.

Figs. 7A-7E are screen shots that depict a user interface of a web-enabled inbound package tracking system.

Fig. 8 illustrates a general computing device that may be used to perform one or more of the processing steps in accordance with an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The present invention now will be described more fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like elements throughout.

Fig. 1 is a high-level block diagram of an inbound package tracking system **10** in accordance with an embodiment of the present invention that includes a package

detail database **15**, a delivery information automated lookup system (DIALS) database **20**, an inbound visibility engine **25**, a consignee address alias database **30** and a consignee table **35** for one or more consignee locations.

In a preferred embodiment, the package detail database **15** provides a complete picture of every package that is moving through a carrier system. Various types of records can be found in the package detail database **15** including, without limitation, a manifest, an origin scan, a destination scan and a delivery record. In general, the manifest record contains the information provided to the carrier by the shipper when the package is shipped, including a consignee address, a shipper identifier, a package tracking number, a service level, one or more user-defined reference fields and a package weight. Additional fields are present in the manifest record and are well known to one of ordinary skill in the art. In a preferred embodiment, the manifest record is the only type of record in the package detail database **15** that includes a consignee address field; therefore, if a value is present in the consignee address field, the record is identifiable as a manifest.

The package level detail database **15** also includes records that track the movement of the package in the carrier system. In a preferred embodiment, an origin scan record is generated when the package is received into the carrier system. For example, a driver that pickups a package from a shipper may scan a barcode on a shipping label affixed to a package and thereby generate a package scan record. Alternatively, an origin scan record might be generated at a designated carrier drop-off facility if a shipper elects to deliver a package to the carrier rather than having it picked up. In general, an origin scan record is generated at the time that the carrier first receives a package or shortly thereafter and serves as a record of the point at which the package entered the carrier system.

Additional record types are generated as the package moves through the carrier system. In preferred embodiment, a new record is generated for the package detail database **15** every time the shipping label of the package is scanned as the package moves through the various carrier hubs and sortation facilities on its way to the consignee. In addition, a destination record is generated when the package arrives at the final hub and is about to be placed on a truck for delivery. Further, a delivery scan

record is preferably present that details, among other things, the date and time the package is delivered to the consignee address.

In a preferred embodiment, each of these record types includes a unique tracking number that is associated with the package, and that provides an index by which all of the records associated with a particular package may be accessed. Thus, by querying the package detail database **15** with the package tracking number, a user can obtain those records associated with a particular package and in so doing see a complete history of the package as it moves through the carrier system.

Returning again to Fig. 1, the DIALS database **20** contains information obtained by a driver when he or she physically delivers the package. The records in the DIALS database **20** are preferably indexed with the package tracking number to allow the system to cross-index the DIALS data against the package detail history of the package detail database **15**. Thus, when a package is delivered to a particular location and the DIALS database **20** updated with the delivery information, the package tracking number of a delivered package can be cross-referenced against the package delivery database **15** to obtain the manifest record for the delivered package. In this way, the consignee address used by the shipper when the package was shipped, which is preferably present in the manifest record, is associated with the location where the package is delivered.

The operation of the inbound visibility engine **25** component of the inbound package tracking system **10** is described in greater detail below. At a high level, the function of the inbound visibility engine **10** is to analyze the records from the package detail **15** and DIALS databases **20** to identify the packages bound for one or more locations that are associated with a particular consignee, and to report to the consignee the status and forecasted delivery time for each of those identified packages.

The function of the various components of the inbound package visibility system **10** are described herein in the context of an example. For purposes of illustration, an inbound package tracking system **10** is described herein for the entity Amazon.com and, more particularly, a system is described that is configured to provide inbound package tracking information for five separate locations, representing five warehouses or other receiving locations, that are associated with Amazon.com.

This example is for illustrative purposes, however, and should not be interpreted as limiting the invention. One of ordinary skill in the art will readily recognize that the systems and methods described herein encompass inbound tracking methodologies that are capable of tracking packages for a plurality of consignees, each with one or more associated receiving locations.

Returning again to Fig. 1, the inbound package tracking system **10** includes a consignee address alias database **30** that has a table that lists the address, and any alias addresses, for each of the locations associated with a consignee. The following paragraphs describe a process in accordance with the present invention to identify alias addresses for a particular location.

In a first embodiment, the DIALS database **20** is queried to identify all of the shippers that have shipped a package to a particular consignee for a particular time period. To use the Amazon example, the DIALS database **20** is queried and every shipper that delivered to any one of the five Amazon receiving locations over a predetermined period of time (i.e. a week, a month, or a year) identified. Depending on the number of identified shippers, the list may be presented to the consignee and the consignee tasked with identifying only those shippers from which the consignee desires inbound package tracking. Alternatively, the entire list of shippers can be used to populate the consignee address alias database **30**.

Once the shippers are identified, the next step is to identify packages that were sent to the consignee by the identified shippers. This is done by querying the DIALS database **20** with the shipper numbers to obtain the package tracking numbers for packages that were delivered to the consignee. These package tracking numbers are then cross-referenced against the package detail database **15** to obtain the original manifest for the packages, and from this manifest the consignee address that the shipper used to ship the package is captured.

In a preferred embodiment, each consignee address captured represents a shipping address that was placed on a package label that resulted in the package being successfully delivered to one of the locations associated with the consignee. This does not necessarily mean that the shipping address used by the shipper is the correct address of a location associated with the consignee. Rather, it means that when the

carrier received the shipping address, the carrier had sufficient information to conclude that the package was intended for a location associated with the consignee.

To illustrate, we will assume that a shipment receiving location associated with a particular consignee is located at the corner of Main Street and Maple Road. We assume further that the correct postal address of this location is 123 Maple Street, but that at some point in the past the correct postal address had been 456 Main Street. Many times, a change of address like that illustrated in this example is not recognized by vendors that ship to the address. For example, assume that a first vendor is a long time supplier of the consignee and has 456 Main Street entered into its shipping system as the address of the consignee. This first vendor may continue to use the 456 Main Street address even after the address is officially changed to 123 Maple Street. The consignee may continue to receive packages that are shipped from this vendor either because the carrier recognizes that the vendor has not updated its shipping system with the new address and/or because the carrier has designated the 456 Main Street address as an alias address for 123 Maple Street. In either case, the DIALS database **30** will reflect that packages that contained the 456 Main Street address were delivered to the 123 Maple Street location.

To continue with this example, we will assume that a second vendor began supplying goods to the consignee after the address of the consignee location was changed to 123 Maple Street. Unfortunately, the second vendor made an error when it entered the address of the consignee into its shipping system, and instead of entering 123 Maple Street, the second vendor entered the consignee's address as 123 Mable Street. Notwithstanding this error, the carrier is able to deliver the package to the correct consignee location because it recognizes that there is no 123 Mable Street at the indicated zip code, and determines further from the consignee name and zip code listed on the shipping label that the package was actually intended for 123 Maple Street. Thus, even though the second vendor has an incorrect address in its shipping system, packages sent by this vendor are nevertheless delivered at the consignee location. In a preferred embodiment, data from the DIALS database **30** will indicate that packages shipped from the second vendor were delivered to the consignee location, and a cross reference of package tracking numbers will show that packages

from the second vendor that bore a consignee address of 123 Mable Street were delivered to 123 Maple Street.

Other examples of situations by which misaddressed packages are delivered to the correct consignee address will be readily apparent to one of ordinary skill in the art. In many cases, the difference between the address on the shipping label and the correct postal address is not as drastic as in the examples discussed above. For example, the shipper may have too many spaces between two words in the address (i.e. too many spaces between "Maple" and "Street") or an address may use the wrong term (i.e. 123 Maple Road instead of 123 Maple Street). And although the address entered by the shipper is not an exact match of the correct consignee address, the carrier will deliver the package to the intended location. In many case, the carrier will notify the shipper of the error in the shipping address so that the correct shipping address is used in the future. But in many cases the shipper will not change its shipping system if the packages are being delivered to the intended recipient.

The consignee address alias database **30** of the present invention contains a list of addresses that have been used by the identified shippers to ship packages to one or more locations associated with a particular consignee. In either a manual or an automated process, the package tracking numbers of packages that were delivered to a consignee location are obtained from the DIALS database **20**. These tracking numbers are cross-referenced against the manifest record of the package detail database **15** to obtain the address that the shipper used to identify the consignee address. An address alias database **30** is thus created that includes the addresses, including any aliases and/or misspelled addresses that the shippers used to send packages to one or more of the consignee locations. In a preferred embodiment, a single address alias database **30** is used for each consignee. But one of ordinary skill in the art will readily recognize that a separate alias database can be maintained for each location associated with a given consignee, or alternatively, a single address alias database can be maintained for a plurality of consignees.

Figs. 2A-2C illustrate a consignee alias address database **30** in accordance with an embodiment of the present invention. The alias address database **30** shown in the figure illustrates a database that could be used to identify packages that are inbound to

the five locations associated with the Amazon.com consignee described in the example above. In these figures, the left-most column lists the five Amazon.com locations: Campbellsville, Kentucky; Coffeyville, Kansas; Fernley Nevada, Lexington, Kentucky and NewCastle, Delaware. The next four columns show the various combinations of consignee name, address, city, state and postal code that are used by the system **10** to identify packages bound for the five Amazon locations. These figures also illustrate several ways in which two or more shippers can use different abbreviations and naming standards to label packages bound for the same location. As described below, the inbound tracking system **10** of the present invention compares actual destination addresses against each of these variations in determining whether a package is bound for a particular location.

Returning again to the block diagram of Fig. 1, a plurality of consignee tables **35** are illustrated. As discussed below, the consignee tables **35** are used to store information about packages that are inbound to locations associated with a consignee. In a preferred embodiment, each location associated with a consignee has a unique consignee table **35**. But one of ordinary skill in the art will recognize that a single consignee table can be maintained for a plurality of locations, or even for a plurality of consignees.

Fig. 3 is a flow chart that illustrates the operation of a inbound package tracking system **10** in accordance with an embodiment of the present invention. In Step 10, the inbound visibility engine **25** captures package detail data from the package detail database **15**. As described above, the package detail database **15** preferably includes several different types of records. In Step 20, the visibility engine **25** parses the various records to capture those records that contain package manifest information. In a preferred embodiment, the manifest record is the only record type that has a value in the consignee address field, and the visibility engine **25** parses the database by capturing those records with consignee address data.

In Step 30, the visibility engine **25** compares the consignee address data from the manifest record against the consignee address alias database **30** to determine whether the package is being shipped to one of the consignee locations or to a known alias address of one of the consignee locations. One of ordinary skill in the art will

readily recognize that not every manifest record in a carrier system needs to compared against the address alias database **30**. With a large carrier, such as UPS, the overhead associated with matching every package manifest record against one or more alias databases **30** would be considerable. To streamline the inbound tracking process, one or more filters are preferably established to limit the number of records that the visibility engine **25** processes. For example, the system **10** may reject any manifest records that do not have a consignee zip code that matches the zip code of at least one of the identified consignee locations. Alternatively, or in addition to the zip code filter, the system **10** may reject all manifest records that does not identify the consignee in the consignee field.

With reference to the Amazon.com example, the inbound tracking system **10** of the present invention may reject any manifest record received from the package detail database **15** that does not have a destination zip code that matches a zip code of one of the five warehouses or other locations that we previously established as being associated with Amazon.com. In addition, the system **10** may also reject any manifest record that does not include the string "Amazon" somewhere in the consignee field of the manifest record. In a preferred embodiment, records received from the detail database **15** that do not include one of the five identified zip codes and that do not include the string Amazon in the consignee field are rejected by the visibility engine **25** and are not processed against the address alias database **30**.

Another potential filter that can be employed in the systems and methods of present invention is a shipper identifier. In some cases, a consignee may elect to only track packages that are shipped from select shippers. In such case, the shipper identifier may be used as a filter to eliminate package detail records that do not relate to one of the selected shippers. In another embodiment, individual shippers may be given the choice of whether to have their packages processed by the inbound tracking system **10** and the shipper identifier can be used to eliminate records of shippers that opt out of the process.

It will be apparent to one of ordinary skill in the art that an intent of the data filters discussed above is to streamline the data processing function of the visibility engine **25**. The shipper identifier, zip code and consignee string filters described

above are intended to be illustrative and it will be obvious that other data filters can be used in conjunction with the present invention to streamline the processing. Moreover, while the visibility engine **25** is described as having responsibility for performing the data filtering function, it would be equally advantageous to have the data filter function performed by the package detail database **15** or by another component of a carrier system at a different stage in the process.

In Step 30 manifest records are filtered by the system and compared against the consignee address alias database **30**. If the consignee address of the manifest record matches the address of one of the consignee locations or matches one of the known alias addresses listed in the database **30**, then the visibility engine **25** flags the record as inbound to one of the consignee locations. In one embodiment, the destination address, city, state and postal code are all compared against the records of the address alias database **30**. In an alternate embodiment, the consignee name is also used as a matching criteria. But in still other embodiments of the present invention only a portion of the consignee address (i.e. the street address or address one field) is matched against the alias database **30**. One of ordinary skill will readily recognize that various combinations of address fields can be used with the present invention to match the manifest data against the alias database **30**.

In Step 40, the shipping detail from the manifest records that are identified as bound for one of the consignee locations is captured and passed to a forecasting routine, which determines when the package is scheduled to be delivered. Forecasting routines such as that used in Step 40 are well known in the art. In general, shipping information such as the origination address, destination address and service level are compared against one or more carrier tables to determine the route that will be used to move the package through the carrier system and the day on which it will be delivered.

In Step 50, the consignee tables **35** are updated with the shipping detail about the packages that are flagged as inbound to the consignee. In a preferred embodiment, a separate consignee table **35** is established for each location and each table is updated with the shipping detail for packages bound to that particular location. Also in a preferred embodiment, the forecasted delivery date and package tracking number for the package is part of the shipping detail added to the consignee tables **35**. But one of

ordinary skill in the art will readily recognize, that a single consignee table **35** can be used to store data for a plurality of consignee locations and that delivery forecast information may or may not be part of the data stored in table **35**.

The foregoing steps describe the process by which one or more consignee tables **35** that are associated with a consignee are updated with the manifest record information for new packages. The following paragraphs describe a process by which existing records in the consignee tables **35** are updated with new package status information.

Fig. 4 is a flow chart that illustrates the steps used to update existing records in the consignee tables **35** with package status information. In a preferred embodiment, the process flow illustrated in Fig. 4 is performed immediately after the process flow of Fig. 3. But one of ordinary skill will recognize that the two processes can be performed independently of one another and at different intervals. In general, the process illustrated in Fig. 3 uses manifest records from the package detail database **15** to identify new records to be added to the consignee table **35**. In contrast, the process of Fig. 4 uses the other record types (origin scans, destination scans, delivery records, etc.) from the package detail database **15** to update the package status information for existing records of the consignee table **35**.

In Step 100, the inbound visibility engine **25** captures package detail data from the package detail database. In one embodiment, the package detail database **15** is a carrier database that is updated on a predetermined frequency, such as once per hour, with information about packages in transit that the carrier has collected since the last update. In an alternate embodiment, the carrier updates the package detail database **15** in near real-time and the visibility engine **25** wakes up at predetermined times to access the database **15** and update the consignee tables **35** with package status changes that occurred since the last update. In still another embodiment, the detail database **15** and visibility engines **25** each operate in near real-time and the consignee tables **35** are continuously updated.

In Step 110, the package tracking number from the package detail records of the package detail database **15** is compared against the package tracking numbers used as indexes in the consignee tables **35**. If a match is found, the consignee tables **35** are

updated with the latest package status information. In a preferred embodiment, each entry in the consignee table **35** includes fields for specific package tracking events such as manifest, origin scan, destination scan and delivery. As a package moves through a carrier system, the package is scanned at several points in the system for traditional package tracking purposes and the results of these scans are made available to the inbound package tracking system **10** through the package detail database **15**. The consignee table records are then updated whenever a package tracking event occurs. Thus, in a preferred embodiment, the consignee table **35** includes a list of packages that are bound for a given location and provides a history of the movement of each package through the carrier system.

The processes described above show how the address alias database **30** is created and how the database **30** can be used in an inbound tracking system **10** to generate a table of packages bound for one or more locations. The following paragraphs describe a process through which new alias addresses are identified and added to the address alias database **30**.

Fig. 5 is flow chart that describes a process through which manifest records that do not match the data in the address alias database **30** are stored for later processing as potential new alias addresses. In Step 200, consignee address and/or name fields from the package manifest record from the package detail database **15** are compared against the address alias database **30** to determine if the package is bound for a consignee location. If the record qualifies, meaning that the consignee data in the manifest record matches the qualifying consignee data from alias database **30**, then the process proceeds to Step 210 and a new record is added to the consignee table **35**. But if the record does not qualify, meaning that the data in the manifest record does not match the appropriate data fields of the address alias database **30**, then the process proceeds to Step 220 and the record is stored in a no-match file **40**.

Fig. 6 illustrates the process through which the records in the no-match file are examined to determine if the consignee information contained in the records should be added to the address alias database **30**. In Step 300, a record of the no-match file **40** is read into the inbound visibility engine **25**. One of ordinary skill, however, will recognize that although the processes described in the following paragraphs are

attributed to the visibility engine **25**, these functions may be performed by any component of the inbound package tracking system **10** or by an entirely separate system.

In Step 310, the package tracking number of the no-match record is compared against the DIALS database **20** to determine if the package has been delivered. If a match is found against the DIALS data, then a determination is made that the package has been delivered and the process proceeds to Step 320. But if the package tracking number does not find a match in the DIALS database **20**, the process returns to Step 310 and the next no-match record is read.

In Step 320, the DIALS database **20** is queried to determine whether the package was delivered to the consignee. In a preferred embodiment, the no-match file **40** contain records that were not added to the consignee tables **35** and thus were not included in the inbound tracking information that is provided to the consignee. If a record in the no-match file **40** represents a package that in fact was delivered to the consignee then the alias address database **30** should be updated to include the consignee information stored in the no-match record. Thus, if the DIALS database **20** shows that the package was not delivered to the consignee, then the record is discarded (Step 330) and the process returns to Step 300 where the next no-match record is read. But if the DIALS database **20** shows that the package was delivered to the consignee, the process proceeds to Step 340.

At Step 340 a package has been delivered to the consignee, but the package shipping detail did not match the consignee location information in the address alias database **30**. The next step then, is to update the address alias database 30 with the new consignee alias information from the package shipping detail and in Step 340 that information is captured. In a first embodiment, this information is captured from the original manifest record stored in the package detail database **15**. But in an alternate embodiment, this information is already present in the records of the no-match file **40**.

Once the necessary consignee detail is captured, the process proceeds to Step 350 and the address alias database **30** is updated with the new consignee information. Thus, if a new shipper starts to ship packages to a consignee and enters a unique combination of consignee name, address, city, state and/or postal code (or any other

information used to match the package manifest record to the alias database **30**), this process will recognize that a new alias has been used to identify a consignee and/or a consignee address and will update the alias database **30** accordingly. One of ordinary skill in the art will recognize that the systems and methods herein described work in part because shippers tend to use the same address each time a package is sent to a repeat consignee. In a preferred embodiment, the address alias database **30** becomes a repository of the consignee identifiers and addresses used by the shippers that frequently ship to the consignee. The foregoing processes also provide a dynamic that updates the alias database to add new aliases as new shippers begin shipping to the consignee. If the inbound package tracking system **10** does not match a consignee alias the first time that the shipper ships to the consignee, the alias database **30** is updated to match future shipments that use the same consignee information.

The following paragraphs describe a web-enabled inbound package tracking system in accordance with an embodiment of the present invention. In a preferred embodiment, the inbound package tracking system **10** resides on a carrier server and is accessed by one or more users via the Internet using a browser such as Internet Explorer.

Figs. 7A – are screen shots that depict a user interface of a web-based an inbound package tracking system 10 in accordance with an embodiment of the present invention. These figures continue to use the example in which five separate locations are associated with a single consignee, Amazon.com. One of ordinary skill in the art will readily recognize that the web pages described herein are for illustrative purposes and are not intended to limit the invention.

Fig. 7A shows a web page that a consignee might see that presents a summary of the packages inbound to the various location or locations associated with that consignee for a given date. The web page includes a pull-down menu **100** that allows the consignee to view the packages inbound to the various consignee locations on any selected date. The various consignee location names and addresses are also listed on the web page and each consignee location is accompanied by fields for number of packages **105** and total package weight **110**. In a preferred embodiment, the data used to populate these fields is obtained from the consignee tables **35**, which include a

forecast of the packages that are scheduled to be delivered to each consignee location on any given date. But one of ordinary skill will recognize that some or all of the data presented to the user may be obtained from other components of the inbound package tracking system **10**. The web page also has a shipper link **115** to another web page should the user elect to view the inbound tracking information by shipper identifier, and location links **120** are associated with each consignee location.

If the user seeks additional information abound the inbound packages, the user can activate a location link **120** and obtain greater detail about the packages bound for each of the consignee locations. Fig. 7B shows a web page that the user receives when the location link **120** for the Campbellsville location is activated. In a preferred embodiment, this web page includes a shipper name field **125** that identifies which shippers shipped the packages that are scheduled to be delivered on the selected date. Additional fields include three user-defined reference fields **130**, a number of packages **135** from each shipper and a total package weight **140**. In this example, 21 packages having a combined weight of 186 pounds are bound for the Campbellsville location and 19 of these packages were shipped from the Navarre Corporation. The user can obtain even more detail about inbound packages through a shipper link **145** that provides the user with detail about each package that is bound to a selected location from a selected shipper.

Figs. 7C and 7D show a web page that includes package level detail about packages inbound to a selected consignee location from a selected shipper. Information included in this example includes the location name, package tracking number, one reference number, a ship date, origin scan date, exception identifier, destination scan date, delivery scan date, service level indicator and package weight. In a preferred embodiment, this information can be populated from the consignee tables **35**, but one of ordinary skill will recognize that some or all of this data may be pulled from other carrier databases that have package detail indexed by the package tracking number. Additional detail about specific packages is also available to the user through a package tracking link **150**.

Fig. 7E shows a web page that provides package level detail about a specific package. In a preferred embodiment, the information available to the user at this web

page mimics the information that a user can obtain using processes well known in the art to track a single package using a package tracking number. Information on this page may be populated from components of the inbound tracking system **10** discussed above or, alternatively, using carrier tracking systems and methods that are known in the art.

The inbound package tracking system **10**, which comprises an ordered listing of selectable services can be embodied in any computer-readable medium for use by or in connection with an instruction execution system, apparatus, or device, such as a computer-based system, processor-containing system, or other system that can fetch the instructions from the instruction execution system, apparatus, or device and execute the instructions. In the context of this document, a "computer-readable medium" can be any means that can contain, store, communicate, propagate, or transport the program for use by or in connection with the instruction execution system, apparatus, or device. The computer readable medium can be, for example but not limited to, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, device, or propagation medium. More specific examples (a non-exhaustive list) of the computer-readable medium would include the following: an electrical connection (electronic) having one or more wires, a portable computer diskette (magnetic), a random access memory (RAM) (magnetic), a read-only memory (ROM) (magnetic), an erasable programmable read-only memory (EPROM or Flash memory) (magnetic), an optical fiber (optical), and a portable compact disc read-only memory (CDROM) (optical). Note that the computer-readable medium could even be paper or another suitable medium upon which the program is printed, as the program can be electronically captured, via for instance optical scanning of the paper or other medium, then compiled, interpreted or otherwise processed in a suitable manner if necessary, and then stored in a computer memory.

Further, any process descriptions or blocks in flow charts should be understood as representing modules, segments, or portions of code which include one or more executable instructions for implementing specific logical functions or steps in the process, and alternate implementations are included within the scope of the preferred embodiment of the present invention in which functions may be executed out of order

from that shown or discussed, including substantially concurrently or in reverse order, depending on the functionality involved, as would be understood by those reasonably skilled in the art of the present invention.

Turning to Fig. 8, an embodiment of a general computing device is illustrated that can be used to practice aspects of the present invention. In Figure 8, a processor **201**, such as a microprocessor, is used to execute software instructions for carrying out the defined steps. The processor receives power from a power supply **217** that also provide power to the other components as necessary. The processor **201** communicates using a data bus **205** that is typically 16 or 32 bits wide (e.g., in parallel). The data bus **205** is used to convey data and program instructions, typically, between the processor and memory. In the present embodiment, memory can be considered primary memory **202** that is RAM or other forms which retain the contents only during operation, or it may be non-volatile **203**, such as ROM, EPROM, EEPROM, FLASH, or other types of memory that retain the memory contents at all times. The memory could also be secondary memory **204**, such as disk storage, that stores large amount of data. In some embodiments, the disk storage may communicate with the processor using an I/O bus **206** instead or a dedicated bus (not shown). The secondary memory may be a floppy disk, hard disk, compact disk, DVD, or any other type of mass storage type known to those skilled in the computer arts. One of ordinary skill will recognize that as data is transferred between two or more computing devices (in accordance with the above-described processing steps), the data is read from and written to one or more of these memory areas and the memory area is physically changed as a result of the process.

The processor **201** also communicates with various peripherals or external devices using an I/O bus **206**. In the present embodiment, a peripheral I/O controller **207** is used to provide standard interfaces, such as RS-232, RS422, DIN, USB, or other interfaces as appropriate to interface various input/output devices. Typical input/output devices include local printers **218**, a monitor **208**, a keyboard **209**, and a mouse **210** or other typical pointing devices (e.g., rollerball, trackpad, joystick, etc.).

The processor **201** typically also communicates using a communications I/O controller **211** with external communication networks, and may use a variety of

interfaces such as data communication oriented protocols **212** such as X.25, ISDN, DSL, cable modems, etc. The communications controller **211** may also incorporate a modem (not shown) for interfacing and communicating with a standard telephone line **213**. Finally, the communications I/O controller may incorporate an Ethernet interface **214** for communicating over a LAN. Any of these interfaces may be used to access the Internet, intranets, LANs, or other data communication facilities.

Finally, the processor **201** may communicate with a wireless interface **216** that is operatively connected to an antenna **215** for communicating wirelessly with another devices, using for example, one of the IEEE 802.11 protocols, 802.15.4 protocol, or a standard 3G wireless telecommunications protocols, such as CDMA2000 1x EV-DO, GPRS, W-CDMA, or other protocol.

Those skilled in the art of data networking will realize that many other alternatives and architectures are possible and can be used to practice the principles of the present invention. The embodiment illustrated in Figure 8 can be modified in different ways and be within the scope of the present invention as claimed.

It should be emphasized that the above-described embodiments of the present invention, particularly any "preferred embodiments" are merely possible examples of the implementations, merely set forth for a clear understanding of the principles of the invention. Any variations and modifications may be made to the above-described embodiments of the invention without departing substantially from the spirit of the principles of the invention. All such modifications and variations are intended to be included herein within the scope of the disclosure and present invention and protected by the following claims.

In concluding the detailed description, it should be noted that it will be obvious to those skilled in the art that many variations and modifications can be made to the preferred embodiment without substantially departing from the principles of the present invention. Also, such variations and modifications are intended to be included herein within the scope of the present invention as set forth in the appended claims. Further, in the claims hereafter, the structures, materials, acts and equivalents of all means or step-plus function elements are intended to include any structure, materials or acts for performing their cited functions.

THAT WHICH IS CLAIMED:

1. A system for tracking packages that are inbound to a destination location, said system comprising:

an alias database having a first memory area comprising one or more memory storage areas, wherein a plurality of combinations of names and addresses associated with said destination location are stored in said first memory area;

a package detail database having a second memory area comprising one or more memory storage areas, wherein shipping information for a plurality of packages in transit in a carrier network is stored in said second memory area, said shipping information including a consignee name and a destination address for each of said plurality of packages;

a consignee table having a third memory area comprising one or more memory storage areas, wherein information about packages that are in transit to said destination location is stored in said third memory area; and

an inbound visibility engine in electronic communication with said alias database, said package detail database and said consignee table; said inbound visibility engine configured to read from said first memory area, either directly or indirectly, said plurality of combinations of names and addresses associated with said destination location, said inbound visibility engine further configured to read from said second memory area, either directly or indirectly, said package consignee name and package destination address for each of said plurality of packages in said carrier network;

wherein said inbound visibility engine compares said package consignee name and package destination address against said plurality of combinations of names and address to identify which of said plurality of packages are in transit to said destination location; and wherein further said inbound visibility engine updates said consignee table by modifying said third memory area, either directly or indirectly, with at least a portion of said shipping information associated with said identified packages.

2. The system of Claim 1, wherein said inbound visibility engine is further configured to provide a user with access to said consignee table via a network.

3. The system of Claim 1, wherein said visibility engine is further configured to add to said alias database a new package destination address or a new package consignee name that is associated with a package delivered to said destination location.

4. The system of Claim 1, further comprising:

a delivery information system that captures delivery data about packages that are delivered to said destination location, said delivery data including a package tracking number associated with said delivered package; and

a package manifest storage area that contains manifest data about some or all of said plurality of packages in transit in said carrier system, said manifest data including said package consignee name, said package destination address and said package tracking number for each package;

wherein said inbound visibility engine updates said alias database with at least a portion of said manifest data associated with a package that is delivered to said destination location but that is not listed in said consignee table.

5. A method of tracking packages that are inbound to a user, said method comprising the steps of:

generating a user alias database that includes a plurality of combinations of a user name and a user address;

capturing shipping detail about a package that is in transit in a carrier system, said shipping detail including a consignee name field and a consignee address field;

comparing said package shipping detail against said alias database; and

updating a consignee memory area when said consignee name and address fields match one of said plurality of combinations of user name and address.

6. The method of Claim 5, wherein generating a user alias database comprises the steps of:

identifying one or more packages that are shipped to said user during a predetermined period of time;

capturing a tracking number for each of said one or more packages

querying a manifest with each of said tracking numbers to determine a consignee name and a consignee address used to identify said user;

comparing said combination of consignee name and consignee address against said known combinations of user name and user address in said user alias database; and

adding said combination of consignee name and consignee address to said user alias database if said combination of consignee name and consignee address does not match one of said known combinations of user name and user address.

7. The method of Claim 5, further including the step of forecasting an expected delivery date of said package and updating said memory area with said expected delivery date.

8. A system for tracking packages that are inbound to a location that is associated with a user, said system comprising:

a alias database that lists a variety of data combinations that identify said location;

a package detail database that provides shipping information about one or more packages that are in transit in a carrier system;

an inbound visibility engine that receives package shipping information from said package detail database and compares at least a portion of said shipping information against said alias database to determine whether said package is bound for said location; and

a memory area associated with said user that is updated by said inbound visibility engine with information about said packages that are bound for said location.

9. The system of Claim 8, wherein said visibility engine is further configured to provide user access to said memory area via a network.

10. The system of Claim 8, wherein said variety of data combinations used to identify said location comprise a plurality of combinations of user name and user address.

11. The system of Claim 10, wherein said inbound visibility engine determines whether said package is bound for said location by comparing at least a potion of said shipping detail against said plurality of combinations of user name and user address.

12. The system of Claim 10, wherein said shipping detail includes a consignee name field and at least one consignee address field.

13. The system of Claim 12, wherein said inbound visibility engine determines that said package is bound for said location if said consignee name and address fields match a combination of user name and address in said alias database.

14. The system of Claim 8, wherein said data in said memory area is read from said memory area and transferred to one or more users via a network.

15. The system of Claim 8, further comprising a delivery database that includes shipping information about packages that are delivered to said location.

16. The system of Claim 15, wherein said inbound visibility engine is further configured to query said delivery database with a package tracking number associated with said package and modify said memory area with said delivery information.

17. The system of Claim 8, wherein said inbound visibility engine is further configured to forecast an expected delivery date of said package.

18. The system of Claim 17, wherein said inbound visibility engine is further configured to update said memory area with said delivery information.

19. The system of Claim 8, wherein said inbound visibility engine is further configured to receive one or more shipping status updates from said package detail database and to update said memory area with said shipping status updates.

20. A method of tracking packages that are inbound to a destination location, said method comprising the steps of:

identifying one or more shippers that ship packages to said destination location;

storing consignee data in a first memory area, said consignee data including destination addresses previously used by one or more shippers to identify said destination location;

monitoring package shipping data for a plurality of packages in transit in a carrier system;

comparing at least a portion of said package shipping data for each of said plurality of packages and comparing said package shipping data against said consignee data read from said first memory area; and

updating a second memory area with at least a portion of said package shipping data when said shipping data for a package matches said consignee data.

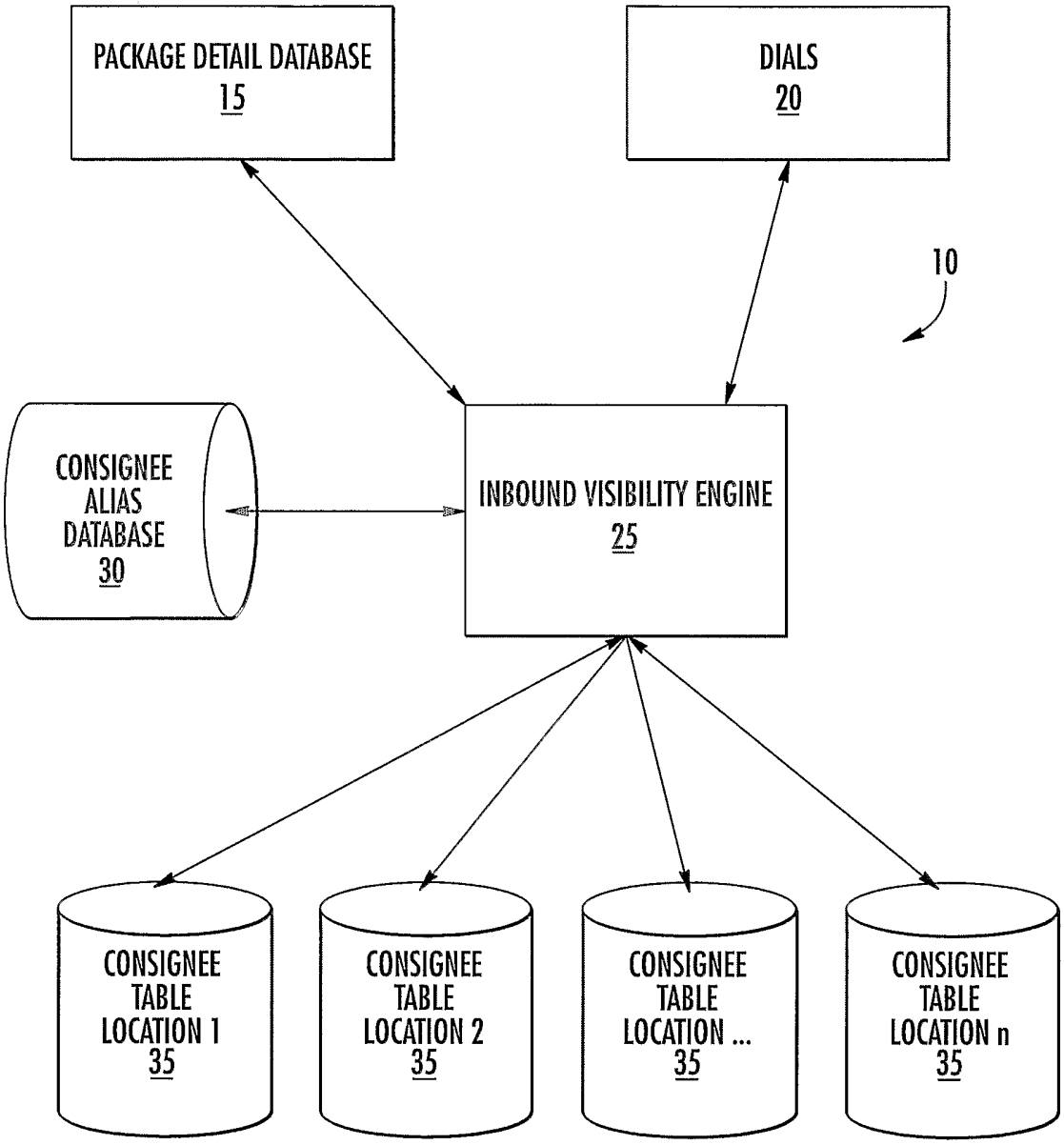

PACKAGE DETAIL DATABASE
15
DIALS
20
10
CONSIGNEE
ALIAS
DATABASE
30
INBOUND VISIBILITY ENGINE
25
CONSIGNEE
TABLE
LOCATION 1
35
CONSIGNEE
TABLE
LOCATION 2
35
CONSIGNEE
TABLE
LOCATION ...
35
CONSIGNEE
TABLE
LOCATION n
35

FIG. 1

UniqueNameAddress

Location Name	*ConsigneeName1*	*ConsigneeAddress1*	*ConsigneeCity*	*ConsigneeState*	*ConsigneePostalCode*
Campbellsville					
	AMAZON	1050 S COL	CAMPBELLSVILLE	KY	42718
	AMAZON COM 631757X	ATTN RECEIVING	CAMPBELLSVILLE	KY	42718
	AMAZON COM KYDC INC 3175	1050 SOUTH COLUMBIA AVE	CAMPBELLSVILLE	KY	42718
	AMAZON COM	1050 S COLUMBIA AVE	CAMPBELLSVILLE	KY	42718
	AMAZON COM	1050 SOUTH COLUMBIA	CAMPBELLSVILLE	KY	42718
	AMAZON COM KYDC INC	1050 SOUTH COLUMBIA AVE	CAMPBELLSVILLE	KY	427182454
	AMAZON COM KYDC INC	1050 SOUTH COLUMBIA	CAMPBELLSVILLE	KY	427182454
	AMAZON COM KYDC INC	1050 SOUTH COLUMBIA	CAMPBELLSVILLE	KY	42718
Coffeyville					
	AMAZON COM KSDC INC	1 AMAZON WAY	COFFEYVILLE	KS	67337
	AMAZON COM 6317545	ATTN MEDIA RECEIVE	COFFEYVILLE	KS	67337
	AMAZON COM	2654 N HIGHWAY 169 ONE AM	COFFEYVILLE	KS	67337
	AMAZON COM KSDC INC	COFFEYVILLE INDUSTRIAL PA	COFFEYVILLE	KS	673379235
	AMAZON COM KSDC INC	2654 N HIGHWAY 169	COFFEYVILLE	KS	67337
Fernley					
	AMAZON COM 566008	1600 EAST NEWLANDS DRIVE	FERNLEY	NV	89408
	AMAZON COM	1600 NEWLANDS DR E	FERNLEY	NV	89408
	AMAZON COM	1600 EAST NEWLANDS DRIVE	FERNLEY	NV	89408
	AMAZON COM INC	MEDIA RECEIVE	FERNLEY	NV	894088903
	AMAZON COM	1600 EAST NEWLANDS DRIVE	FERNLEY	NV	894088903
	AMAZON COM 1566008	ATTN MEDIA RECEIVE	FERNLEY	NV	89408
Lexington					
	AMAZON COM ADVANTAGE	1850 MERCER DR	LEXINGTON	KY	40511
	AMAZON COM INC	SPECIAL RECEIVE	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE D	1850 MERCER DR	LEXINGTON	KY	40511

FIG. 2A

Location Name	ConsigneeName1	ConsigneeAddress1	ConsigneeCity	ConsigneeState	ConsigneePostalCode
	AMAZON COM 6317480	ATTN MEDIA RECEIVE	LEXINGTON	KY	40511
	AMAZON ADVANTAGE DC	1850 MERCER DRIVE	LEXINGTON	KY	40511
	AMAZON COM	1850 MERCER ROAD	LEXINGTON	KY	40511
	AMAZON COM	1850 MERCER DRIVE	LEXINGTON	KY	40511
	AMAZON COM	1850 MERCER DR	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	1850 MERCER DR	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	1850 MERCER DRIVE	LEXINGTON	KY	40511
	AMAZON COMM KYDC INC	1850 MERCER DRIVE	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE KY	1850 MERCER DR	LEXINGTON	KY	40511
	AMAZON COM RECEIVING	1850 MERCER RD	LEXINGTON	KY	40511
	AMAZON COM KYDC INC 3174	1850 MERCER DRIVE	LEXINGTON	KY	40511
	AMAZON COM KYDC INC	SPECIAL RECEIVE	LEXINGTON	KY	40511
	AMAZON COM KYDC INC	SPECIAL RECEIVE	LEXINGTON	KY	40511
	AMAZON COM KYDC INC	1850 MERCER DRIVE	LEXINGTON	KY	405111013
	AMAZON COM KYDC INC	1850 MERCER DR	LEXINGTON	KY	405111013
	AMAZON COM KYDC INC	1850 MERCER DR	LEXINGTON	KY	40511
	AMAZON COM KYDC	SPECIAL RECEIVE POB316244	LEXINGTON	KY	40511
	AMAZON COM KY DIST CENTE	1850 MERCER DR	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE	1850 MERCER DRIVE	LEXINGTON	KY	40511
	AMAZON COM INC	1850 MERCER DRIVE	LEXINGTON	KY	40511
	AMAZON COM RETURNS	1850 MERCER RD	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	REF U0188719	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	1850 MERCER DR	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	SPECIAL RECV	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	SHIPPING ID R1133019	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	SHIPPING ID R5970691	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	SHIPPING ID K6396797	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	1850 MERCER DRIVE	LEXINGTON	KY	40511
	AMAZON COM ADVANTAGE DC	ID S5231219	LEXINGTON	KY	40511

FIG. 2B

Location Name	ConsigneeName1	ConsigneeAddress1	ConsigneeCity	ConsigneeState	ConsigneePostalCode
NewCastle	AMAZON COM ADVANTAGE DC REF K5314697		NEW CASTLE	KY	40511
	AMAZON	1 CENTERPOINT BLVD	NEW CASTLE	DE	19720
	AMAZON	1 CENTERPOINT BLVD	NEW CASTLE	DE	19720
	AMAZON COM INC	SPECIAL RECEIVE	NEW CASTLE	DE	19720
	AMAZON COM	1 CENTERPOINT BLVD	NEW CASTLE	DE	19720
	AMAZON COM DEDC INC	SPECIAL RECEIVE	NEW CASTLE	DE	19720
	AMAZON COM	1 CENTERPOINT BLVD	NEW CASTLE	DE	19720
	AMAZON COM INC	DELAWARE DISTRIBUTION CE	NEW CASTLE	DE	19720
	AMAZON COM 1553992	ATTN MEDIA RECEIVE	NEW CASTLE	DE	197204172
	AMAZON COM	1 CENTERPOINT BLVD	NEW CASTLE	DE	19720
					197204172

FIG. 2C

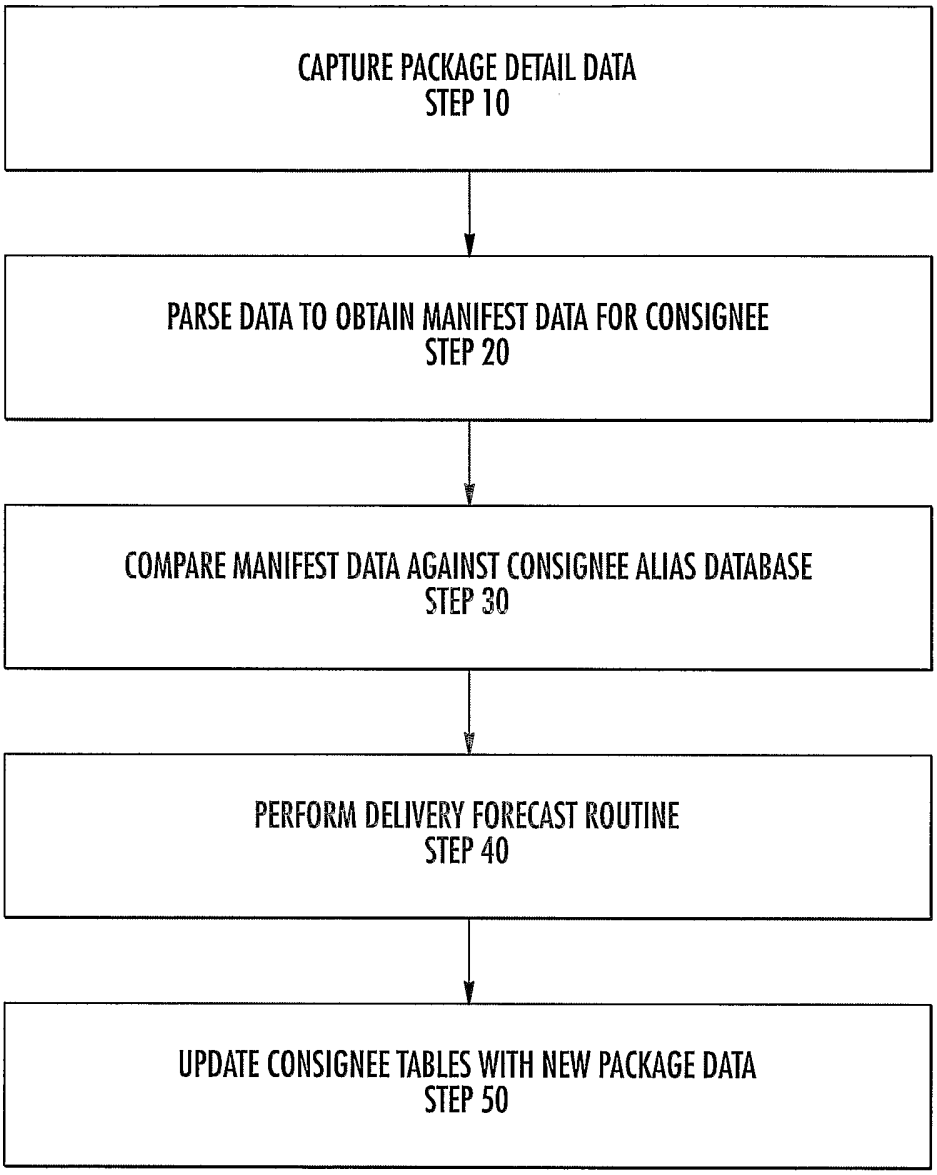

CAPTURE PACKAGE DETAIL DATA
STEP 10
PARSE DATA TO OBTAIN MANIFEST DATA FOR CONSIGNEE
STEP 20
COMPARE MANIFEST DATA AGAINST CONSIGNEE ALIAS DATABASE
STEP 30
PERFORM DELIVERY FORECAST ROUTINE
STEP 40
UPDATE CONSIGNEE TABLES WITH NEW PACKAGE DATA
STEP 50

FIG. 3

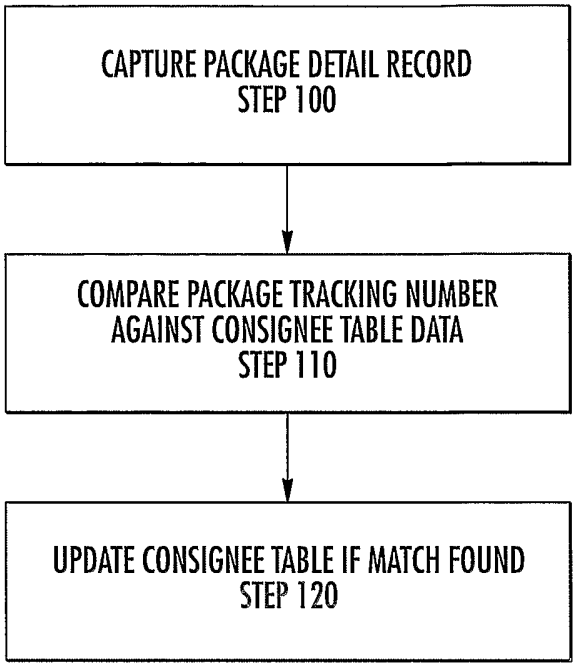

CAPTURE PACKAGE DETAIL RECORD
STEP 100
COMPARE PACKAGE TRACKING NUMBER AGAINST CONSIGNEE TABLE DATA
STEP 110
UPDATE CONSIGNEE TABLE IF MATCH FOUND
STEP 120

FIG. 4

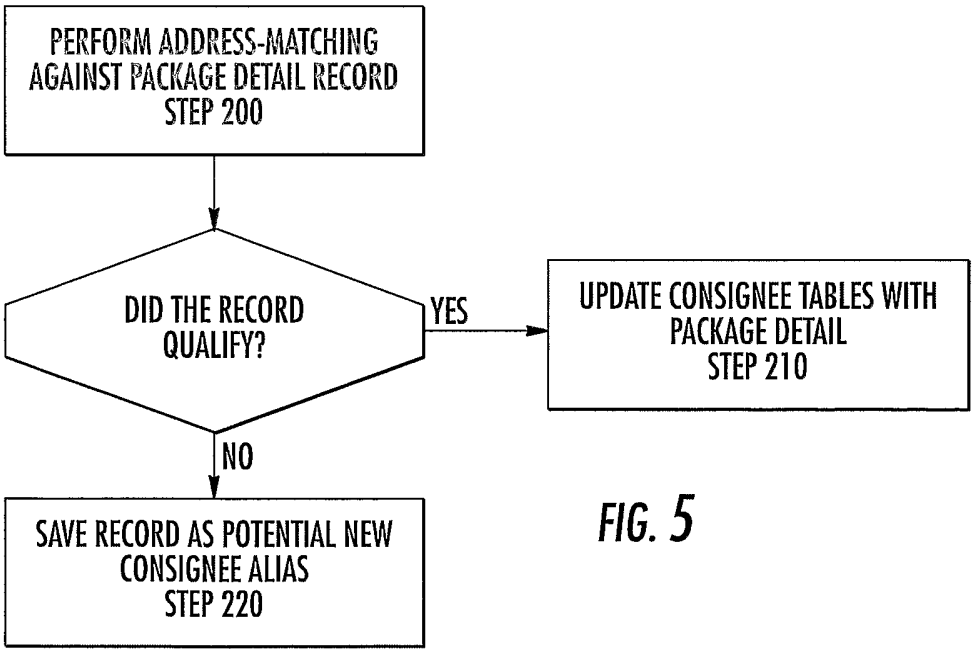

PERFORM ADDRESS-MATCHING AGAINST PACKAGE DETAIL RECORD
STEP 200
DID THE RECORD QUALIFY?
YES
UPDATE CONSIGNEE TABLES WITH PACKAGE DETAIL
STEP 210
NO
SAVE RECORD AS POTENTIAL NEW CONSIGNEE ALIAS
STEP 220

FIG. 5

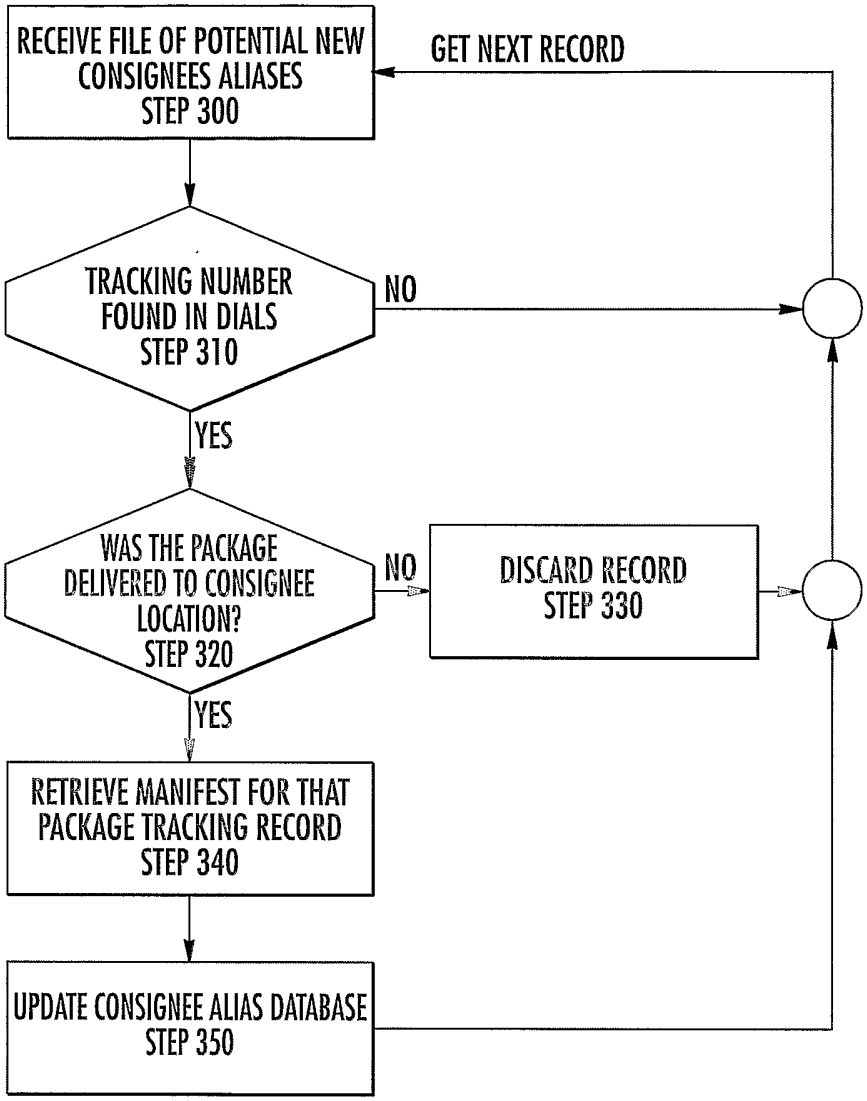
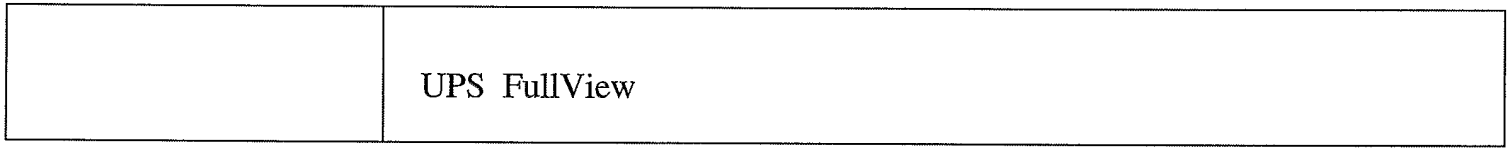

RECEIVE FILE OF POTENTIAL NEW CONSIGNEES ALIASES STEP 300
GET NEXT RECORD
TRACKING NUMBER FOUND IN DIALS STEP 310
NO
YES
WAS THE PACKAGE DELIVERED TO CONSIGNEE LOCATION? STEP 320
NO
DISCARD RECORD STEP 330
YES
RETRIEVE MANIFEST FOR THAT PACKAGE TRACKING RECORD STEP 340
UPDATE CONSIGNEE ALIAS DATABASE STEP 350

FIG. 6



HOME

AMAZON INBOUND

LOCATION: ALL CHANGE LOCATION

100

SELECT SCHEDULE DELIVERY DATE:

3/27/03 UPDATE

SHIPMENTS TO ALL LOCATIONS SCHEDULED FOR DELIVERY ON 3/24/2003

115

A SUMMARY OF INBOUND SHIPMENTS TO EACH RECEIVING LOCATION IS BELOW. VIEW INBOUND SHIPMENTS BY SHIPPER.

105

110

LOCATION NAME	CITY	STATE	NUMBER OF PACKAGES	TOTAL WEIGHT
CAMPBELLSVILE (120)	1050 SOUTH COLUMBIA	CAMPBELLSVILE	21	186 LBS.
COFFEYVILLE (120)	2654 N HIGHWAY 169 ONE AMAZON WAY	COFFEYVILLE	45	632 LBS.
FERNLEY (120)	1600 EAST NEWLANDS DRIVE	FERNLE Y	24	185 LBS.
LEXINGTON (120)	1850 MERCER DR	LEXINGTON	34	445 LBS.
NEWCASTLE (120)	DELAWARE DISTRIBUTION CENTER	NEWCASTLE	41	577 LBS.

FIG. 7A

	UPS FullView

HOME

AMAZON INBOUND

LOCATION: CAMPBELLSVILLE CHANGE LOCATION

SELECT SCHEDULE DELIVERY DATE:

3/25/03 UPDATE

SHIPMENTS TO AMAZON COM CAMPBELLSVILLE SCHEDULED FOR DELIVERY ON 3/24/2003

A SUMMARY OF INBOUND SHIPMENTS TO ALL LOCATIONS IS BELOW.

SHIPPER NAME (125)	CITY	STATE	REFERENCE NUMBER 1 (130)	REFERENCE NUMBER 2 (130)	REFERENCE NUMBER 3 (130)	NUMBER OF PACKAGES (135)	TOTAL WEIGHT (140)
INFODISK MGM EL PASO (145)	EL PASO	TX	82302340	P9249509	5102	1	3 LBS.
KAPLAN DEARBORN LOGISTICS (145)	AURORA	IL	2269176	SB	SB	1	33 LBS.
NAVARRE CORP (145)	NEW HOPE	NM	2668763	1Z5527470346970702	Q9651521	19	150 LBS.

FIG. 7B

	UPS FullView

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AMAZON INBOUND

LOCATION: ALL LOCATIONS CHANGE LOCATION

SELECT SCHEDULE DELIVERY DATE:

3/21/03 UPDATE

SHIPPER: NAVARRE CORP, 7400 49TH AVE N, NEW HOPE MN. 55428 4258

A SUMMARY OF INBOUND SHIPMENTS FROM THIS SHIPPER IS BELOW.

NO.	LOCATION	TRACKING NUMBER	REFERENCE NUMBER 1	SHIP DATE	ORIGIN	EXCEPTION	DESTINATION	DELIVERED	SERVICE	WEIGHT
1	CAMPBELLSVILLE	1Z5527470346974271	2668762	3/20/2003	3/20/2003				UPS GROUND	9 LBS.
2	CAMPBELLSVILLE	1Z5527470346972022	2669532	3/20/2003	3/20/2003				UPS GROUND	4 LBS.
3	CAMPBELLSVILLE	1Z5527470346972095	2668761	3/20/2003	3/20/2003				UPS GROUND	9 LBS.
4	CAMPBELLSVILLE	1Z5527470346972148	2668761	3/20/2003	3/20/2003				UPS GROUND	9 LBS.
5	CAMPBELLSVILLE	1Z5527470346974084	2668764	3/20/2003	3/20/2003				UPS GROUND	4 LBS.
6	CAMPBELLSVILLE	1Z5527470346974191	2669527	3/20/2003	3/20/2003				UPS GROUND	8 LBS.
7	CAMPBELLSVILLE	1Z5527470346974217	2668762	3/20/2003	3/20/2003				UPS GROUND	4 LBS.
8	CAMPBELLSVILLE	1Z5527470346974235	2668762	3/20/2003	3/20/2003				UPS GROUND	9 LBS.
9	CAMPBELLSVILLE	1Z5527470346970702	2668763	3/20/2003	3/20/2003				UPS GROUND	10 LBS.
10	CAMPBELLSVILLE	1Z5527470346974262	2668762	3/20/2003	3/20/2003				UPS GROUND	9 LBS.
11	CAMPBELLSVILLE	1Z5527470346981932	2671023	3/20/2003	3/20/2003				UPS GROUND	6 LBS.
12	CAMPBELLSVILLE	1Z5527470346974280	2668762	3/20/2003	3/20/2003				UPS GROUND	9 LBS.
13	CAMPBELLSVILLE	1Z5527470346974306	2668762	3/20/2003	3/20/2003				UPS GROUND	9 LBS.

150 150 150 150 150 150 150 150 150 150 150 150 150

FIG. 7C

14	CAMPBELLSVILLE	1Z5527470346974324	150	2668762	3/20/2003	3/20/2003	UPS GROUND	9 LBS.
15	CAMPBELLSVILLE	1Z5527470346974360	150	2668762	3/20/2003	3/20/2003	UPS GROUND	9 LBS.
16	CAMPBELLSVILLE	1Z5527470346974397	150	2668762	3/20/2003	3/20/2003	UPS GROUND	9 LBS.
17	CAMPBELLSVILLE	1Z5527470346974413	150	2668762	3/20/2003	3/20/2003	UPS GROUND	9 LBS.
18	CAMPBELLSVILLE	1Z5527470346976608	150	2669536	3/20/2003	3/20/2003	UPS GROUND	6 LBS.
19	CAMPBELLSVILLE	1Z5527470346974244		2668762	3/20/2003	3/20/2003	UPS GROUND	9 LBS.

FIG. 7D

	UPS FullView™

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AMAZON INBOUND

LOCATION: CAMPBELLSVILLE CHANGE LOCATION

PAKAGE DETAIL

SHIPPER:	SHIP TO:
NAVARRE CORP 7400 49TH AVE N	AMAZON COM KYDC INC 1050 SOUTH COLUMBIA
NEW HOPE NM 55428 4258 US	CAMPBELLSVILLE KY 427182454 US

TRACKING NUMBER:	1Z5527470346974271
REFERENCE NUMBER 1:	2668762
REFERENCE NUMBER 2:	1Z5527470346974271
REFERENCE NUMBER 3:	T4727725
REFERENCE NUMBER 4:	
REFERENCE NUMBER 5:	
UPS SERVICE:	UPS GROUND
PACKAGE WEIGHT:	9 LBS.
DELIVERY DATE:	
DELIVERY LOCATION:	
RECEIVER (SIGNED BY):	
MANIFEST DATE:	3/20/2003
SCHEDULED DELIVERY DATE:	3/24/2003
ORIGIN SCAN:	3/20/2003
ORIGIN HUB:	MAPLE GROVE HUB
EXCEPTION DATE, TIME:	
EXCEPTION HUB:	
EXCEPTION DESCRIPTION:	
EXCEPTION RESOLUTION:	
PACKAGE STATUS:	EN ROUTE
STATUS - UPS HUB:	
STATUS - DATE:	

FIG. 7E

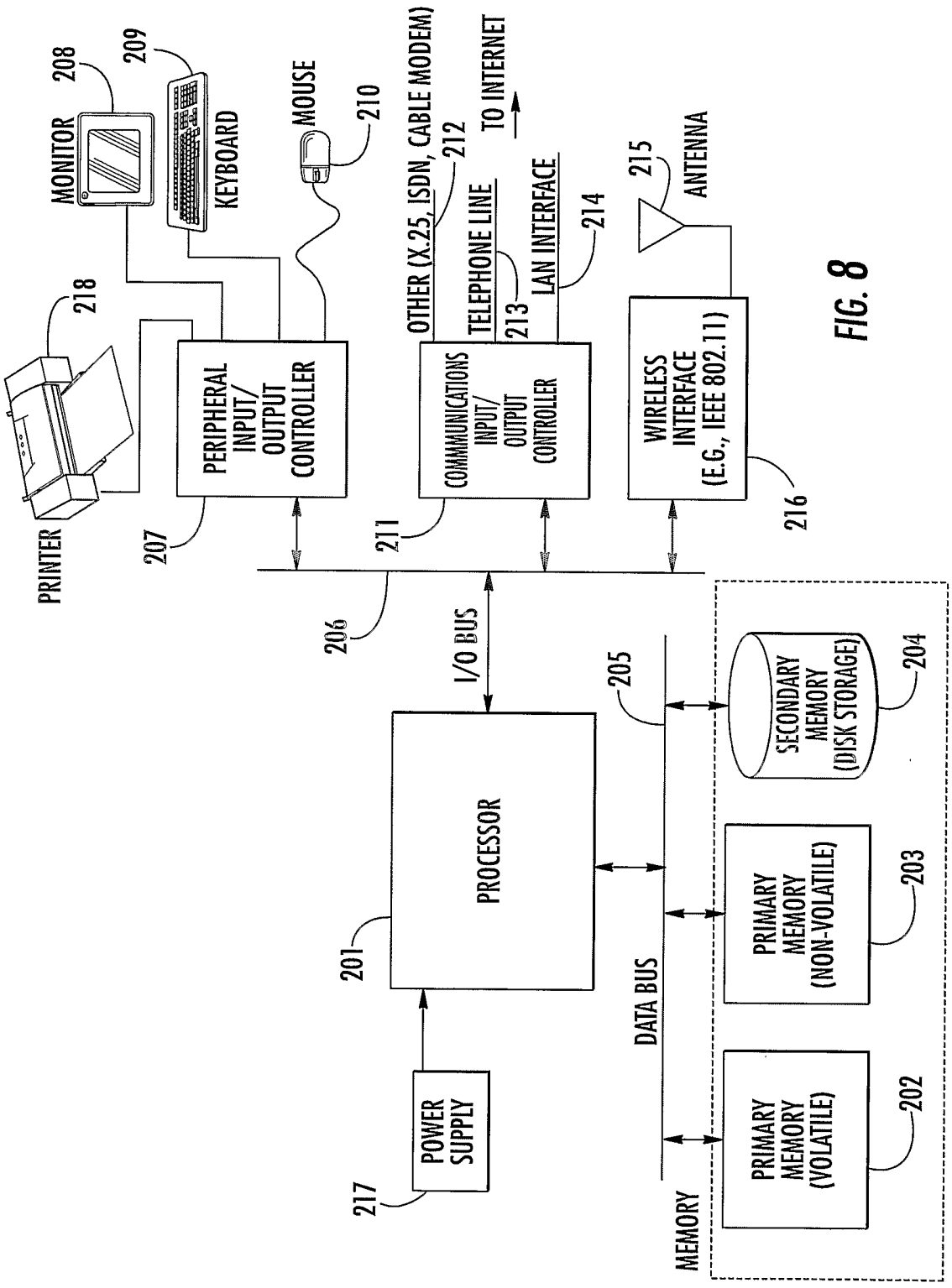

MONITOR
208
209
KEYBOARD
MOUSE
210
TO INTERNET
OTHER (X.25, ISDN, CABLE MODEM)
212
TELEPHONE LINE
213
LAN INTERFACE
214
215
ANTENNA
218
PRINTER
PERIPHERAL INPUT/ OUTPUT CONTROLLER
207
COMMMUNICATIONS INPUT/ OUTPUT CONTROLLER
211
WIRELESS INTERFACE (E.G., IEEE 802.11)
216
206
I/O BUS
205
SECONDARY MEMORY (DISK STORAGE)
204
PROCESSOR
201
PRIMARY MEMORY (NON-VOLATILE)
203
DATA BUS
POWER SUPPLY
217
PRIMARY MEMORY (VOLATILE)
202
MEMORY

FIG. 8