"SYSTEM FOR FACILITATING TRANSACTIONS BETWEEN FREIGHT CUSTOMERS AND SERVICE PROVIDERS"

FIELD OF THE INVENTION

The invention relates to a system for facilitating transactions between freight customers and service providers by providing a conduit for freight customers to access shipping information and to provide relevant shipping details to service providers to activate the logistical control and management of shipments of freight.

BACKGROUND ART

When a freight customer engages a service provider for the logistical control and management of shipments, such as a freight forwarder, for air and sea freight services or warehousing services, daily coordination and communication between the freight customer and the service provider is important. Variations in the procedures for arranging freight services make the communication and coordination both difficult and confusing for the freight customer. A freight customer has to arrange and interact with the service providers and collect information. The service provider, is hindered by traditional forms of communication and the lack of data capture, retrieval and organisation to aid the freight customer to provide the relevant details required to transport the shipment. The freight customer is also faced with such a problem.

The typical corporate freight customer appoints personnel from its various departments to double-up as shipping coordinators. Bigger corporations have dedicated personnel to liase with service providers. In addition to arranging freight, these coordinators have to support their sales, operation and accounts department with information. These people usually call the freight service

providers every day and often more than once a day, before, during and after every shipment.

The freight transport industry has gradually seen the emergence of many Internet services. Some are centred on the activity of supply chain management while others are based on the concept of reverse auction. Such systems are merely an Internet presence for the service provider or freight forwarder and have minimal or no e-commerce capabilities. Other systems may have e-commerce capability but limit network access only to their customers. As freight customers typically use from three to six service providers at any given time they do not derive as much benefit as they could because they are subjected to different log-ins and interfaces for each service provider that they use.

It would be desirable to provide an improved system for facilitating transactions between freight customers and service providers and to capture transaction data. It would also be desirable to provide an improved method of arranging logistical control and management of shipments of freight.

SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a system for facilitating the logistical control and management of freight, which goes some way to achieving the abovementioned desiderata, or which will at least provide the public or industry with a useful choice.

Accordingly in a first aspect the present invention consists in a logistics system, comprising:

a server hosting a communications module and a database on a communications network accessible by a customer and a service provider;

the server being operable to generate a data input interface for the customer to input order data;

means to transmit the data to the service provider;

means for the service provider to enter acceptance data confirming receipt and action of the order;

means at the server to store on the database a record of the order data and acceptance data.

In a second aspect the present invention consists in a method of arranging a freight forwarding transaction over a communications network, the method comprising:

generating a freight data input interface;

receiving shipping order data regarding freight to be shipped over the communications network from a freight customer via the input interface;

transmitting the shipping order data to a service provider via the communications network;

receiving over the communications network, via the interface data from the service provider regarding acceptance; and

storing in a database a record of the shipping order data and the acceptance records;

whereby the service provider actions the order upon receipt of the order data.

To those skilled in the art to which this invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the scope of the invention as defined in the appended claims. The disclosures and the descriptions herein are purely illustrative and are not intended to be in any sense limiting.

The invention consists in the foregoing and also envisages constructions of which the following gives examples.

BRIEF DESCRIPTION OF THE DRAWINGS

One preferred form of the present invention will now be described with reference to the accompanying drawings.

Figure 1 is a system diagram illustrating a general overview of the various components of the system according to the preferred embodiment of the invention.

Figure 2 is a flowchart showing an example of the process that a freight customer may go through in activating a shipping order.

Figure 3 is a sample screen-shot giving an example of the typical information fields that a freight customer has to enter to request a quotation from a service provider.

Figure 4 is a sample screen-shot giving an example of the typical information fields that a freight customer has to enter to provide information on a shipping activation request.

Figure 5 is a sample screen-shot of an Air Import shipment showing an update form for the service provider to acknowledge receipt of a shipping request as well as provide status tracking updates to a freight customer.

Figure 6 is a sample screen-shot giving an example of the typical information fields that the system generates a pre-alert notification by a freight customer to his consignee.

Figure 7 is a sample screen-shot giving an example of the typical information fields that is generated for the freight customer to view, edit if necessary and send to his shipper a routing order instructing the shipper to

release shipment to a service provider at the origin location for an import shipment.

Figure 8 is a sample screen-shot showing a request for quotation for logistics and distribution services.

Figure 9 shows a sample screen-shot showing an inventory update screen.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment of the present invention will be described with reference to Figure 1. The system includes a communications server 10 that is located on a communications network 16, preferably on the Internet. A freight customer 12 and a service provider 14 each access the communications server 10 via the network 16 service provider and logistics provider are used interchangeable throughout this description. The communications server 10 is linked to a communications module 20 that is accessible by the freight customer 12 and service provider 14 through the communications server 10.

The communications module 20 preferably includes a module for requesting quotations 22, a module for shipment activation 24, a dispatch alert module 26, a routing order module 28 and a status tracking module 30. The communications server 10 is also linked to a query server 32, so that a freight customer 12 or service provider 14 can access relevant data stored on a transactions database 34 and information database 36 comprised in the system. Although the databases are for convenience separated into a transactions database 34 (for storing transactional data) and an information database 36 (for storing common and shared information, such as general updates on shipping practice and requirements), it should be appreciated that the system need not be limited to having these databases.

Referring to Figure 2 to create a shipping order a freight customer 12 logs 201 onto the communications server 10. The customer may not need to log in if they have a device typically a USB device attached to their computer to identify them to the system. The customer may then request a quotation 202 by entering the module for requesting quotations 22 and selecting a service provider 203. The customer then sends 204 a quotation request to the service provider 14, preferably via the service provider's email address. A quotation does not need to be requested if the customer has previously obtained a quotation for a similar shipment or the customer and service provider have an agreement that covers the type of shipment.

Having authenticated themselves or logged in 201 the customer 12 can also enter 206 the module for shipment activation 24, and be presented with the shipment activation form seen in Figure 4. Wherein the system will generate a shipment reference 402 for use by both the freight customer 12 and service provider 14 for future identification of the shipment. The freight customer 12 then enters 208 the shipping details. Once the freight customer 12 submits the shipment activation form, a database record is created in the transactions database 209. A copy of the record may be stored to the user's computer for future reference 210.

Notification of a new shipment activation form seen in Figure 4 is then sent via email 211 to the service provider 14. The service provider 14 accesses 212 the shipment activation form. At the same time, an update form seen in Figure 5 is created by the system for the service provider 14 to enter 213 the shipment details 14. Acknowledgement of the request and the shipping details are then sent to the customer 214.

Request for quote

Referring to Figure 3 in order to activate a shipment, a freight customer 12 would first request a quotation from a service or logistics provider 14. As mentioned above, if the freight customer 12 had previously obtained a quotation from a service provider 14, using the request for quote module 22 may not be necessary.

The form to request a quote is shown in Figure 3. A freight customer 12 having selected request a quotation is presented with an electronic form, the form includes a system reference 302 when it is created. To complete the form the freight customer 12 enters the email address 302 of the service provider that a quote is requested from. The freight customer can use an address book to select the freight company by selecting button 315. The freight customer 12 also enters other details including type of shipment 303, shipment origin 304, shipment final destination 305, commodity to be shipped 306. Other details included in the form are dimensions, of shipment 307, number of pieces or palletes 308, estimated weight 309, whether the shipment requires packing 310, palletising 311 or whether insurance is required 312. Any documentation required 313 and the delivery and collection addresses 314 are also included on the form.

After all the required details are entered the freight customer 12 submits the form using button 316. The quotation for the attention of the selected service provider 14. Service provider 14 is sent an email embedded with a Uniform Resource Locator "URL" for the service provider to fill in the quotation form as an active server page. In an alternative embodiment the system would send an email form to be completed and sent back to the system. This alternative method of communication could be used anytime the server sends an email. The service provider needs to authenticate themselves either using a USB or other device or by logging into the system. Upon accessing the form, the service

provider enters a quotation on the form and it is stored into the transactions database 34. The system alerts the freight customer 12 by email to log-in and access the quotation. The email in the preferred embodiment will contain a URL linking directly to the quotation. A quotation number is included in the quotation form for future reference.

Shipment activator

When the freight customer 12 retrieves a quotation and is satisfied with it, or has already previously obtained a quotation, they enter the Shipment Activator module 24. A unique transaction reference is automatically created for the transaction. The customer 12 enters the email address of the particular service or logistics provider 14, and enters details of the shipment such as shipment identification number, consignee name, origin and destination.

Referring to Figure 4 the customer enters the email address at 402 if necessary selecting it from an address book accessible by pressing button 403. The system pre-fills in a reference 404, the customer 12 enters a shipping ID number 405 or may alternatively attach shipping documents by selecting button 406, enters the consignee 407 or selects the consignee by selecting button 408, selects origin 409. Selects a local logistics provider at consignment original 410 or alternatively browses for the provider by selecting button 411. The form also provides for informing the logistics provider who is to pay local handling charges 412, freight charges 413, customs and delivery charges 414 and taxes 415. Insurance for a consignment is noted at 416 and may be selected by browsing for a quote 417. The insurance premium notes are listed at 418 and the amount at 419. The commodity may be described in box 420, the dimensions in box 421 and other information such as labels and markings in box 422. The number of pieces or palettes is selected at 423 and the estimated weight entered in box 424. The service or logistics provides a quotation number is entered at 425 and the type of service or choice of airline or shipping company at 426. Both

quotation number and airline shipping company or service type may be browsed for by selecting buttons 427 and 428. A free text field is available for additional comments 429.

Again, an email is sent to the service or logistics provider via the communications server 10. Preferably, the email is embedded with a URL, which links the service or logistics provider to the web-site hosting the communications server. When the service or logistics provider enters the web-site of the communications server 10, a pre-prepared form as an active web-page is completed by the service provider 14. A confirmation of receipt of the shipment instruction, cargo pick-up time and date, flight details and route, if applicable. A sample data entry form for the service provider 14 is shown in Figure 5. This form is capable of repeated use by the service provider 14 to provide updates on the status of the freight delivery. The service or logistics provider needs to have authenticated themselves to access the system.

Figure 5 shows the continuous status update form. The system reference is located at 501. The logistics provider 14 confirms receipt of instruction by selecting 502 accepts the routing order to be discussed later by selecting button 503, confirms the cargo as being picked up and the date of pick up by selecting button 504 and filling in box 515. The provider also fills in the number of palettes or pieces picked up 505, the chargeable weight 506. The flight or shipping details and route are filled in at 507. If multiple service providers are used then the form will separate the transport and allow a service provider to confirm uplift of goods in each particular sector. In the example form the uplift to Tokyo this confirmed at 508 the uplift from Tokyo is confirmed at 509. Arrival at the destination is confirmed by selecting 510 and completing box 516 with the date and time, cargo on board selected with button 511 cargo at ground handler's warehouse 512 any tax chargeable is entered at 513 and the time of delivery at 514.

Dispatch alert

After the shipment is activated, the freight customer 12 is able to send a dispatch alert to a consignee to inform them of a dispatch. This can be done through the Pre-Alert module 26 of the system. The data fields that are generated for the freight customer 12 to send to a consignee are shown in Figure 6. After editing the data contained in the fields, if necessary, an electronic mail message containing the information is sent to the consignee. Alternatively the consignee may be sent an email with a URL in the system to view.

Figure 6 shows an example web form that a freight customer 12 would complete. The system reference is contained at 601, who the alert is go to is selected at 602, usually this will be pre-filled in by the system, the shipping ID number is filled in by the system at 603, any attach documents are listed at 604, the origin at 605 the destination at 606, any waybill number at 607, number of pieces at 608, weight at 609, dimensions at 610, labels and marking at 611. The local logistics provider is filled in at 612. Which party pays the handling charges is filled in at 613, the freight charges at 614 and, customs clearance and delivery charges at 615. Who is to pay taxes is filled in at 616 and whether the goods are being shipped insured is completed at 617.

Routing orders

Routing orders may be sent to an exporter or service provider authorizing the release of goods to a service provider. The routing order is usually sent to the exporter/service provider and copied a local service provider. The customer enters the routing module 28 and the reference number of the shipment is first entered by the freight customer, so that details of the shipment can be retrieved. The data fields that should be inserted under this module are shown in Figure 7.

Referring to Figure 7 the customer 12 would enter the reference number in box 701 to enable the routing order to be displayed. The routing order would include who the order is to 702, any reference number 703, the date the order is issued 704, who the shipper of the goods is 705, instructions on, the date 706, method 707 and local destination 708 that the shipment is to be realised by. A local service provider or forwarder at origin of the goods is listed at 709 and a service provider or local forwarder at the destination of the goods is listed at 710.

All routing service providers are bookable through the system so that the consignment is traceable through the hands of multiple service providers. Routing orders in addition to being sent to service providers servicing the customer may also be sent to service providers servicing other service provider such as a local courier servicing an airline.

Status tracking

By entering the shipment reference number, a freight customer may retrieve details of the status of the shipment, for example, whether the shipment has been loaded onto a transport carrier or if the shipment has arrived at the shipment destination. There is a computer program associated with this module to update the transactions database as and when an update is sent by a service provider.

In the preferred embodiment the shipment status is periodically updated by the service provider handling the shipment using the form shown in Figure 5 to provide continuous updates to the system database. When the form is received by the Communications Server 10, the Communications Server 10 uses the data contained in the form to update the Transactions Database 34 concerning the record of the shipment for access of updated information by a freight customer 12.

Shipping Cost Calculator

The system also provides a shipping cost calculation. This calculates shipping costs by taking into account the per-unit price given in the quotation, the amount shipped and other variables such as customs clearance charges. The cost calculation can be obtained simply by entering the system reference number.

Database Query

The system also acts as a data centre and organiser since all transactions are recorded on a database, the details regarding the transaction can be retrieved from the Transactions Database 34 via the query server 32. Log files are also kept in each transaction. In order to retrieve a particular detail of a record, single or multiple criteria may be used, and a freight customer 12 may use any relevant details such as their name or the service providers' name to obtain details of a record. A list of records may be displayed if there is more than one record.

Information on general shipping practice and requirements may be retrieved from the Information Database 36 via the query server 32 for reference by a user. The system includes hyperlinks to transportation agencies, such as airlines, other carriers or warehouse operators , for a user to access further information from these sources.

Logistics and Distribution

The system includes the ability to book and receive stock status updates from logistics and distribution service providers. Referring to Figure 8 a customer would send a request for quotation to a logistics provider entering the email address 802 of the service provider that the quote is requested from. The

customer can use an address book to select the service provider by selecting button 803. The system reference is automatically generated and listed in box 804. The current location 805, the number of palettes 806, the number of packs after the palettes have been unpacked 807 and the number of distribution locations 808 can also be entered. The type of commodity is enterable in box 809 and the dimensions and the total number of pieces entered in box 810.

The customer submits the request for quotation by selecting box 801 and the system sends an email with an URL linking the service provider to the system or a form to fill in and return.

Referring to Figure 9 the system also provides for inventory holdings of customers to be updated. The logistics in service provider is entered in box 901 or if necessary selected from an address book accessible by pressing button 902. The system reference is pre-filled in box 903. The account that the inventory is being updated for is filled in by the system at 904. The number of palettes 905, cartons 906 are also entered. The date of the change 907 and time 908 are also entered. The system provides for the weight per carton type 910 and dimension per carton 911 and the total weight 912 to be entered. A user can create more carton types by selecting length 913. The current inventory is listed in 916, the inventory update and time at 914 and the system reference number at 915. The user needs to select a quote reference at 917 and then sends the update from selecting button 918.

CLAIMS:

1. A logistics system, comprising:

a server hosting a communications module and a database on a communications network accessible by a customer and a service provider;

the server being operable to generate a data input interface for the customer to input order data;

means to transmit the data to the service provider;

means for the service provider to enter acceptance data confirming receipt and action of the order;

means at the server to store on the database a record of the order data and acceptance data.

2. A system according to claim 1 wherein the service provider provides freight services.

3. A system according to claim 1 wherein the service provider provides warehousing and distribution services.

4. A system according to any one of claims 1 to 3 wherein the communications module includes a module for the customer to request a quotation from the service provider.

5. A system according to any one of claims 1 to 4, wherein the communications module includes an activator module.

6. A system according to any one of the preceding claims, wherein the communications module includes a dispatch alert module to inform a consignee of a shipment.

7. A system according to any one of the preceding claims, wherein the communications module includes a routing order module to instruct a service provider to release a shipment to another service provider.

8. A system according to any one of the preceding claims, wherein the communications module includes a status tracking module to track the status of a freight delivery.

9. A system according to any one of the preceding claims, which includes reply means for the freight forwarder to send an acknowledgement of receipt of the data to the freight customer.

10. A system according to any one of the preceding claims, wherein the communications network is the Internet.

11. A system according to any one of the preceding claims, wherein the data input interface is a web page.

12. A system according to any one of the preceding claims, wherein the system includes hyperlinks to transportation agencies, such as airlines and other carriers.

13. A system according to any one of the preceding claims, wherein the system includes a query server for freight customers and/or service providers to retrieve information.

14. A system according to claim 13, wherein the query server allows the freight customer to search the database for the status of a particular shipment that has been shipped.

15. A system according to any one of the preceding claims, wherein the data is sent to the freight forwarder by means of an electronic message with a Uniform Resource Locator embedded therein, said Universe Resource Locator directs the freight forwarder to the server.

16. A system according to any one of the preceding claims, which includes status tracking means to track the delivery status of the freight.

17. A system according to claim 16, wherein the interface is also for receiving updated data regarding the freight shipment, and the status tracking means stores the updated data in the database.

18. A system according to claim 17, wherein the interface allows removal of the updated data by a freight customer.

19. A system according to claim 16, wherein a shipment update form is generated to be input by the service provider status report to update the freight customer of the delivery status.

20. A system according to claim 16, wherein the shipment update form includes the delivery date of the shipment.

21. A system according to any preceding claim, the server being operable to transmit to a third party data regarding the freight to be shipped via the communications network.

22. A freight forwarding system as claimed in any one of claims 1 to 19 wherein the service provider may be selected from one or more service providers.

23. A freight forwarding system as claimed in any one of claims 1 to 19 wherein the service provider may be selected from one or more of a freight forwarder, air freight service provider, sea freight service provider and warehouse service provider.

24. A method of arranging a freight forwarding transaction over a communications network, comprising:

generating a data input interface;

receiving shipping order data regarding freight to be shipped over the communications network from a freight customer via the input interface;

transmitting the shipping order data to a service provider via the communications network;

receiving over the communications network, via the input interface acceptance data from the service provider regarding acceptance; and

storing in a database a record of the shipping order data and the acceptance data;

whereby the service provider actions the order upon receipt of the order data.

25. A method according to claim 24, including transmitting over the communications network to the service provider a request for a quotation by the freight customer.

26. A method according to claim 24 or 25, including automatically creating a unique transaction reference for the shipment order.

27. A method according to any of claims 24 to 26, further comprising transmitting over the communications network to a third party data regarding the freight to be shipped.

28. A method according to any claims 24 to 27, further comprising receiving updated data regarding the freight shipment and storing the updated data in the database.

29. A method according to any claims 24 to 28, wherein the communications network is the Internet.

30. A method according to any of claims 24 to 29, wherein the data input interface is an active web page.

31. A method according to any of claims 24 to 30, further comprising freight customers an/or service providers retrieving information from the database using a query server.

32. A method according to any of claims 24 to 31, wherein the step of transmitting the data to a service provider comprising transmitting an electronic message with a universe resource locator embedded therein, which universe resource locator links to the interface.

33. A method as claims in any one of claims 24 to 32 wherein the service provider may be selected from one or more of a freight forwarder, air freight service provider, sea freight service provider and warehouse service provider.