

## CLAIMS

1. An electronic device, comprising:
  - an interface coupled to an electronic data store storing segment information for generating a plurality of possible itineraries for a package; and
  - one or more processors coupled to the interface and configured to:
    - receive, from a computing device of a user, a request to ship the package comprising a GPS location identifying an initial location of the package, a destination of the package; a delivery time of the package at the destination; and one or more characteristics of the package;
    - determine a destination airport associated with the destination and a first pickup airport and a second pickup airport associated with the initial location;
    - retrieve, from the electronic data store, segment information comprising a first air route associated with a first airline from the first pickup airport to the destination airport and cargo area hours for the first airport, a second air route associated with a second airline from the second pickup airport to the destination airport, and a third air route associated with a third airline from the second pickup airport to the destination airport and a cargo cutoff time for the third air route;
    - determine a first driver by comparing the one or more characteristics to a stored driver profile associated with the first driver in a plurality of driver profiles storing a plurality of driver certifications and vehicle capacities to verify that the first driver can carry the package;
    - generate a set of possible itineraries for transporting the package from the initial location to the destination by applying a set of predetermined rules to the segment information to limit the segment information to segments that are compatible with the one or more characteristics, wherein the set of possible itineraries comprises a first possible itinerary comprising the first air route and a first ground route from the current location of the first driver to GPS location and then to the first airport, a second possible itinerary comprising the second air route and a second ground route from the current location of the first driver to the GPS location and then to the second airport; and a third possible itinerary comprising the second ground route and the third air route;
    - determine a first arrival time for the first ground route and a second arrival time for the second ground route;

determine a subset of possible itineraries less than the set of possible itineraries by considering congestion at the first pickup airport and the second pickup airport, a tracked average time to tender a package to the first airline, the second airline, and the third airline and eliminating, from the set of possible itineraries, the first possible itinerary in response to the first arrival time being outside the cargo area hours for the first airport and eliminating the third possible itinerary in response to the second arrival time being past the cargo cutoff time for the third air route;

select the second possible itinerary from among the subset of possible itineraries for the package based on the delivery time of the package at the destination;

send the second possible itinerary comprising the second ground route for transporting the package to a mobile device of the first driver;

send a map comprising the second route and a position of the first driver on the second route to the computing device of the user;

confirm the first driver has picked up the package by verifying first geotagged scan information received from the mobile device of the first driver at the initial location;

receive geotagged scan information from the mobile device of the first driver at the second airport;

update the map displayed on the computing device of the user based on the second geotagged scan information;

generate a graphical representation of an airway bill for the second air route upon receiving the second geotagged scan information from the mobile device of the first driver at the second airport, wherein a format of the airway bill matches a format required by the second airline; and

send the graphical representation of the airway bill to the mobile device of the first driver and to the second airline.

2. The electronic device of claim 1, the one or more processors further configured to:

rank each of the set of possible itineraries according to a criteria, wherein the second possible itinerary is selected based on the rank of the second possible itinerary.

3. The electronic device of claim 2, wherein the criteria comprises at least one of: a cost, a distance, a duration, a total number of segments, and risk.

4. The electronic device of claim 1, the one or more processors further configured to:

present the subset of possible itineraries to the user; and  
receive an input from the user selecting the second possible itinerary from the subset of possible itineraries.

5. The electronic device of claim 1, wherein the one or more characteristics comprise: a weight, a volume, a hazard level, a content, a durability, a shape, dimension measurements, a fragility of the package, and a density.

6. The electronic device of claim 5, the one or more processors further configured to:

eliminate, from the set of possible itineraries, itineraries that are incompatible with the one or more characteristics.

7. The electronic device of claim 1, the one or more processors further configured to:

eliminate, from the set of possible itineraries, itineraries that are temporally infeasible.

8. A method of determining logistics for shipping a package between an initial location and a destination, the method comprising:

receiving, by one or more processors, from a computing device of a user, a request to ship the package comprising a GPS location identifying the initial location of the package, the destination, a delivery time of the package at the destination, and one or more characteristics of the package;

determining a destination airport associated with the destination and a first pickup airport and a second pickup airport associated with the initial location;

retrieving, from an electronic data store, segment information comprising a first air route associated with a first airline from the first pickup airport to the destination airport and cargo area hours for the first airport, a second air route associated with a second airline from the second pickup airport to the destination airport, and a third air route associated with a third airline from the second pickup airport to the destination airport and a cargo cutoff time for the third air route;

determining, a first driver by comparing the one or more characteristics to a stored driver profile associated with the first driver in a plurality of driver profiles storing a plurality of driver certifications and vehicle capacities to verify that the first driver can carry the package;

generating, a set of possible itineraries associated with transporting the package from the initial location to the destination by applying a set of predetermined rules to the segment information to limit the segment information to segments that are compatible with the one or more characteristics, wherein the set of possible itineraries comprises: a first possible itinerary comprising the first air route and a first ground route from the current location of the first driver to the GPS location and then to the first airport; a second possible itinerary comprising the second air route and a second ground route from the current location of the first driver to the GPS location and then to the second airport; and a third possible itinerary comprising the second ground route and the third air route;

determining a first arrival time for the first ground route and a second arrival time for the second ground route;

determining a subset of possible itineraries less than the set of possible itineraries by considering congestion at the first pickup airport and the second pickup airport, a tracked average time to tender a package to the first airline, the second airline, and the third airline and eliminating, from the set of possible itineraries, the first possible itinerary in response to the first arrival time being outside the cargo area hours for the first airport and third possible itinerary in response to the second arrival time being past the cargo cutoff time for the third air route;

selecting the second possible itinerary from the subset of itineraries for the package based on the delivery time of the package at the destination;

sending the second possible itinerary comprising the second ground route for transporting the package to a mobile device of the first driver;

sending a map comprising the second route and a position of the first driver on the second route to the computing device of the user;

confirming the first driver has picked up the package by verifying first geotagged scan information received from the mobile device of the first driver;

receiving second geotagged scan information from the mobile device of the first driver at the second airport;

updating the map displayed on the mobile device of the user based on the second geotagged scan information;

generating a graphical representation of an airway bill for the second air route upon receiving the second geotagged scan information from the mobile device of the first driver at the second airport, wherein a format of the airway bill matches a format required by the second airline; and

sending the graphical representation of the airway bill to the mobile computing device of the first driver and to the second airline.

9. The method of claim 8, further comprising:  
ranking each of the set of possible itineraries according to a criteria,  
wherein the second possible itinerary is selected based on the rank of the second possible itinerary.

10. The method of claim 9, wherein the criteria comprises at least one of: a cost, a distance, a duration of the itinerary, a total number of segments, and risk.

11. The method of claim 8, further comprising:  
presenting the subset of itineraries to the user; and  
receiving an input from the user selecting the second possible itinerary from among the subset of possible itineraries.

12. The method of claim 8, wherein the one or more characteristics comprise: a weight, a volume, a hazard level, a content, a durability, a shape, dimension measurements, a fragility of the package, and a density.

13. The method of claim 12, further comprising:  
eliminating, from the set of possible itineraries, itineraries that are incompatible with the one or more characteristics.

14. The method of claim 8, further comprising:  
eliminating, from the set of possible itineraries, itineraries that are temporally infeasible.

15. The method of claim 8, wherein the one or more characteristics of the product comprise a commodity type of the product, further comprising:  
determining the first driver has a certification for transporting the commodity type of the product.

16. The method of claim 8, further comprising:  
receiving a photograph of a completed paper airway bill, wherein the first driver completes the paper airway bill while the graphical representation of the airway bill is displayed on the mobile device of the first driver; and  
sending, in response to the photograph, a release to the first driver.

17. The method of claim 8, further comprising:  
receiving a notification that a plane comprising the package and associated with the second air route landed at the destination airport;  
selecting a second driver after receiving the notification; and  
sending, after receiving the notification, a third ground route from the destination airport to the final destination to a mobile device of the second driver.

18. The electronic device of claim 1, wherein the one or more characteristics of the product comprise a commodity type of the product, the one or more processors further configured to:  
determine the first driver has a certification for transporting the commodity type of the product.

19. The electronic device of claim 1, wherein the one or more processors are further configured to:

receive a photograph of a completed paper airway bill, wherein the first driver completes the paper airway bill while the graphical representation of the airway bill is displayed on the mobile device of the first driver; and

send, in response to the photograph, a release to the first driver.

20. The electronic device of claim 1, wherein the one or more processors are further configured to:

receive a notification that a plane comprising the package and associated with the second air route landed at the destination airport;

select a second driver after receiving the notification; and

send, after receiving the notification, a ground third route from the destination airport to the final destination to a mobile device of the second driver.