delivery assistance program capable of causing a delivery service in which the inside of a vehicle or the like used by a user can be designated as a delivery destination of luggage to be established while taking privacy of the user into consideration.

[0007] A first aspect of the present invention relates to a delivery assistance device that assists in a delivery service in which a cabin of a vehicle used by a user is designated as a delivery destination of luggage. The delivery assistance device includes a decision unit and an assistance unit. The decision unit is configured to decide a provision aspect including at least one of (a) whether or not information on the vehicle is provided to a company operating the delivery service and (b) a degree of limitation on the information to be provided. The assistance unit is configured to perform providing information on the vehicle to the company according to the provision aspect decided by the decision unit.

[0008] According to the first aspect of the present invention, the delivery assistance device can determine whether or not the provision of the information on the vehicle or the like or the contact with the user who is a requester is needed based on the position information of the vehicle and the progress situation for luggage in the process of the delivery service. For example, when the vehicle is moving, the delivery assistance device cannot settle whether or not the luggage is to be delivered to the vehicle as a delivery destination. Therefore, in the situation described above, the delivery assistance device can determine that provision of information on the vehicle is not needed for the delivery company, based on the position information of the vehicle. For example, when the vehicle is at a designated position designated by the user, the delivery assistance device can determine that intentional contact with the user is not needed since the deliverer solely has to be directed to the designated position. Therefore, in the situation described above,

as to, for example, whether or not re-delivery is performed. Therefore, the delivery assistance device can achieve improvement of efficiency of delivery work at the delivery company.

[0021] In the delivery assistance device according to the first aspect of the present invention, the transmission unit may transmit information on whether or not the vehicle is within a delivery available area in the delivery service to the external device when the vehicle is moving.

[0022] According to the first aspect of the present invention, the delivery assistance device can cause the delivery company to ascertain whether or not the vehicle is within the delivery available area in a situation in which the vehicle is moving. Therefore, for example, when the vehicle is out of the delivery available area, the delivery company can exclude the vehicle as the delivery destination and perform a determination as to, for example, whether or not re-delivery is performed. Therefore, the delivery assistance device can achieve improvement of efficiency of delivery work at the delivery company.

[0023] A second aspect of the present invention relates to a delivery assistance device that assists in a delivery service in which an inside of a vehicle, a building, or a facility used by a user is designated as a delivery destination of luggage. The delivery assistance device includes a decision unit and an assistance unit. The decision is configured to decide a provision aspect including at least one of (a) whether or not information on the vehicle, the building, or the facility is provided to a company operating the delivery service and (b) a degree of limitation on the information to be provided. The assistance unit is configured to perform providing information on the vehicle, the building, or the facility to the company according to the provision aspect decided by the decision unit.

[0024] According to the second aspect of the present invention, the delivery

consideration.

[0031] In the delivery assistance device according to the second aspect of the present invention, the assistance unit may provide an account of the user of a social networking service provided to be dedicated to the delivery service to the company or links the account of the user to an account of the company to mediate contact between the company and the user.

[0032] According to the second aspect of the present invention, the delivery assistance device can mediate the contact between the delivery company and the user without disclosing privacy-related information of the user such as an account of a general-purpose SNS of the user to the delivery company through the SNS provided to be dedicated to the delivery service. Accordingly, the delivery assistance device can specifically mediate the contact between the delivery company and the user while further taking the privacy of the user into consideration.

[0033] In the delivery assistance device according to the second aspect of the present invention, the decision unit may decide to prohibit the company to contact the user and decides to allow the user to contact the company, after the luggage has been delivered.

[0034] According to the second aspect of the present invention, since the delivery assistance device prohibits the contact from the delivery company to the user after the delivery is completed, it is possible to protect the privacy of the user. On the other hand, since the delivery assistance device permits the contact from the user to the delivery company even after the delivery is completed, the delivery assistance device can cause the user to easily perform contact with the delivery company using the contact function, for example, when the user desires to perform an inquiry about a delivery object. Therefore, the delivery assistance device can improve convenience for the user while taking the privacy of the user into the consideration.

[0035] A third aspect of the present invention relates to a delivery assistance method that is executed by a delivery assistance device that assists in a delivery service in which an inside of a vehicle, a building, or a facility used by a user is designated as a delivery destination of luggage. The delivery assistance method includes deciding

a provision aspect including at least one of (a) whether or not information on the vehicle, the building, or the facility is provided to a company operating the delivery service and (b) a degree of limitation on the information to be provided; and performing providing information on the vehicle, the building, or the facility to the company according to the provision aspect decided in the deciding.

[0036] A fourth aspect of the present invention relates to a non-transitory computer-readable storage medium storing a delivery assistance program. The delivery assistance program causes a delivery assistance device to execute the delivery assistance method according to the third aspect of the present invention.

[0037] A fifth aspect of the present invention relates to a delivery assistance method that is executed by a delivery assistance device that assists in a delivery service in which a cabin of a vehicle used by a user is designated as a delivery destination of luggage. The delivery assistance method includes deciding a provision aspect including at least one of (a) whether or not information on the vehicle is provided to a company operating the delivery service and (b) a degree of limitation on the information to be provided; and performing providing information on the vehicle to the company according to the provision aspect decided in the deciding.

[0038] A sixth aspect of the present invention relates to a non-transitory computer-readable storage medium storing a delivery assistance program. The delivery assistance program causes a delivery assistance device to execute the delivery assistance

CLAIMS

1. A delivery assistance device that assists in a delivery service in which a cabin of a vehicle used by a user is designated as a delivery destination of luggage, the delivery assistance device characterized by comprising:

a decision unit configured to decide a provision aspect including at least one of (a) whether or not information on the vehicle is provided to a company operating the delivery service and (b) a degree of limitation on the information to be provided; and

an assistance unit configured to perform providing information on the vehicle to the company according to the provision aspect decided by the decision unit.

2. The delivery assistance device according to claim 1, wherein the decision unit decides that the assistance unit provides a position information of the vehicle to the company when the vehicle is stopped.

3. The delivery assistance device according to claim 2, further comprising a transmission unit configured to transmit a notification indicating that the vehicle is moving to a predetermined external device belonging to the company when the vehicle is moving.

4. The delivery assistance device according to claim 3, wherein the transmission unit transmits position information of a place at which the vehicle has last been stopped, to the external device when the vehicle is moving.

5. The delivery assistance device according to claim 3 or 4, wherein the transmission unit transmits information on whether or not the vehicle is approaching a position designated by the user in advance to the external device when the vehicle is moving.

6. The delivery assistance device according to claim 5, wherein the transmission unit transmits a scheduled time of arrival when the vehicle is scheduled to arrive at the position

designated by the user to the external device when the vehicle is moving and the vehicle is approaching the position designated by the user.

7. The delivery assistance device according to claim 5 or 6, wherein the transmission unit transmits information to the external device when the vehicle is moving and the vehicle is away from the position designated by the user, the information relating to whether or not the vehicle is at a place at which the vehicle is able to return to the position designated by the user within a designated delivery time period of the luggage to the external device when the vehicle is moving and the vehicle is away from the position designated by the user.

8. The delivery assistance device according to any one of claims 3 to 7, wherein the transmission unit transmits information on whether or not the vehicle is within a delivery available area in the delivery service to the external device when the vehicle is moving.

9. A delivery assistance device that assists in a delivery service in which an inside of a vehicle, a building, or a facility used by a user is designated as a delivery destination of luggage, the delivery assistance device characterized by comprising:

a decision unit configured to decide a provision aspect including at least one of (a) whether or not information on the vehicle, the building, or the facility is provided to a company operating the delivery service and (b) a degree of limitation on the information to be provided; and

an assistance unit configured to perform providing information on the vehicle, the building, or the facility to the company according to the provision aspect decided by the decision unit.

10. The delivery assistance device according to claim 9, wherein the decision unit decides at least one of providing the information on the vehicle, the building, or the facility to the company by the assistance unit and allowing contact between the company and the

user by the assistance unit, during a period from a collection time when the luggage is collected at a business office to a delivery time when the luggage is delivered.

11. The delivery assistance device according to claim 10, wherein a function of the assistance unit mediating the contact between the company and the user is provided to be dedicated to the delivery service.

12. The delivery assistance device according to claim 11, wherein the assistance unit mediates the contact between the company and the user using an application program provided to be dedicated to the delivery service, the application program being installed in each of a company terminal belonging to the company and a user terminal belonging to the user.

13. The delivery assistance device according to claim 11 or 12, wherein the assistance unit provides an account of the user of a social networking service provided to be dedicated to the delivery service to the company or links the account of the user to an account of the company to mediate contact between the company and the user.

14. The delivery assistance device according to any one of claims 10 to 13, wherein the decision unit decides to prohibit the company to contact the user and decides to allow the user to contact the company, after the luggage has been delivered.

15. A delivery assistance method that is executed by a delivery assistance device that assists in a delivery service in which an inside of a vehicle, a building, or a facility used by a user is designated as a delivery destination of luggage, the delivery assistance method characterized by comprising:

deciding a provision aspect including at least one of (a) whether or not information on the vehicle, the building, or the facility is provided to a company operating the delivery service and (b) a degree of limitation on the information to be provided; and

performing providing information on the vehicle, the building, or the facility to the company according to the provision aspect decided in the deciding.

16. A non-transitory computer-readable storage medium storing a delivery assistance program causing a delivery assistance device to execute the delivery assistance method according to claim 15.

17. A delivery assistance method that is executed by a delivery assistance device that assists in a delivery service in which a cabin of a vehicle used by a user is designated as a delivery destination of luggage, the delivery assistance method characterized by comprising:

deciding a provision aspect including at least one of (a) whether or not information on the vehicle is provided to a company operating the delivery service and (b) a degree of limitation on the information to be provided; and

performing providing information on the vehicle to the company according to the provision aspect decided in the deciding.

18. A non-transitory computer-readable storage medium storing a delivery assistance program causing a delivery assistance device to execute the delivery assistance method according to claim 17.