

A CALLPOINT SYSTEM

Field Of Invention

The present invention generally relates to transportation. More particularly, the invention relates to booking of a vehicle.

Background

Transportation is an essential aspect of everyday life. Particularly, most people require transportation to travel from one location to another, especially when distance of the travel is considerable. Often, many people are faced with the difficulty of securing an available vehicle such as a public transport vehicle. An example of the public transport vehicle is a taxi. Hence there is often a need to place a booking in order to secure a taxi.

Conventional implementations for booking a taxi are, for example calling a taxi service provider to book a taxi. It is readily appreciated that when calling the taxi service provider to book a taxi, the caller is often required to provide the location at which the caller is expecting the taxi. The location of the caller may not be communicated correctly to the taxi.

For example, a service operator of the taxi service provider may communicate the location erroneously to the taxi picking up the caller. Furthermore, sometimes there may either be more than one designated pick-up location at the location provided by the caller or the location provided by the caller is one that is not specific. Hence the taxi may face difficulties locating the caller.

It is therefore desirable to provide a solution to address at least one of the foregoing problems of the conventional vehicle booking implementations.

Summary

In accordance with an aspect of the invention, a method for processing vehicle request is provided. The method comprises capturing user identifier by a data capture device and communicating request data to an allocation system in response to

the user identifier being captured. The user identifier is associable with a user and the request data comprises the user identifier and a location identifier, the location identifier being indicative of a location. The method further comprises receiving allocation data from the allocation system. The allocation data comprises vehicle data, the vehicle data being indicative of at least one vehicle allocated to the user identifier. The at least one vehicle provides at least one confirmation dataset in response to receiving the request data, the provision of the at least one confirmation dataset being indicative of intent of travel by the at least one vehicle to the location, wherein the allocation data is subsequently communicable to the user.

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In accordance with another aspect of the invention, a data capture device is provided. The data capture device comprises an input module for capturing user identifier and a processor unit for providing a location identifier being indicative of a location. The user identifier is associable with a user. The data capture device further comprises a transceiver module for communicating request data to an allocation system in response to the user identifier being captured. The request data comprises the user identifier and the location identifier, wherein allocation data is receivable from the allocation system for subsequent communication to the user. The allocation data comprising vehicle data, the vehicle data being indicative of at least one vehicle allocated to the user identifier. The at least one vehicle provides at least one confirmation dataset in response to receiving the request data, the provision of the at least one confirmation dataset being indicative of intent of travel by the at least one vehicle to the location.

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In accordance with yet another aspect of the invention, a system is provided. The system comprises a plurality of a data capture device. Each of the plurality of a data capture device comprises an input module for capturing user identifier and a processor unit for providing a location identifier being indicative of a location. The user identifier is associable with a user. The data capture device further comprises a transceiver module for communicating request data to an allocation system in response to the user identifier being captured. The request data comprises the user identifier and the location identifier, wherein allocation data is receivable from the allocation system for subsequent communication to the user. The allocation data

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comprising vehicle data, the vehicle data being indicative of at least one vehicle allocated to the user identifier. The at least one vehicle provides at least one confirmation dataset in response to receiving the request data, the provision of the at least one confirmation dataset being indicative of intent of travel by the at least one
5 vehicle to the location.

In accordance with yet another aspect of the invention, a machine-readable medium having stored therein a plurality of programming instructions is provided. The plurality of programming instructions when executed, cause the machine to capture
10 user identifier by a data capture device and communicate request data to an allocation system in response to the user identifier being captured. The user identifier is associable with a user and the request data comprises the user identifier and a location identifier, the location identifier being indicative of a location. The machine is further caused to receive allocation data from the allocation system. The
15 allocation data comprises vehicle data, the vehicle data being indicative of at least one vehicle allocated to the user identifier. The at least one vehicle provides at least one confirmation dataset in response to receiving the request data, the provision of the at least one confirmation dataset being indicative of intent of travel by the at least one vehicle to the location, wherein the allocation data is subsequently
20 communicable to the user.

Brief Description Of The Drawings

The invention is described hereinafter with reference to the following drawings, in which:

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FIGs. 1a-d show an apparatus for booking a passenger pick-up vehicle in accordance with an embodiment of the invention;

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FIG. 2 shows a system comprising a plurality of the apparatus of Figs. 1a-1d in accordance with another embodiment of the invention;

FIG. 3 shows a process flow chart of a method employed by the apparatus of Figs. 1a-1d; and

FIG. 4 shows a process flow chart of a method employed by a vehicle allocation system using the apparatus of 1a-1d.

Detailed Description

5 For purposes of brevity and clarity, the description of the present invention is limited hereinafter to an apparatus, a method and a system for vehicle booking. This however does not preclude various embodiments of the invention from other applications where fundamental principles prevalent among the various embodiments
10 of the invention such as operational, functional or performance characteristics are required.

An exemplary embodiment of the invention, an apparatus 100 for vehicle booking for addressing the foregoing problems of conventional vehicle booking implementations,
15 is described hereinafter with reference to Fig. 1a-1d. The vehicle is for example a passenger pick-up vehicle such as a taxi or a vehicle from a concierge service.

The apparatus 100, as shown in Fig. 1a, comprises an input module 110 and a processor unit 115. The processor unit 115 is coupled to the input module 110 and
20 comprises a memory device 120. The apparatus 100 further comprises a transceiver module 130. The transceiver module 130 is coupled to one or both of the input module 110 and the processor unit 115. Preferably, the transceiver module 130 is communicable with both of the input module 110 and the processor unit 115. Alternatively, the transceiver 130 is communicable with either the input module 110
25 or the processor unit 115.

The input module 110 preferably comprises at least one of a keypad 110a and a card reader 110b. The input module 110 is usable by a user for generating a user request. The user request is receivable by one or both of the processor unit 115 and the
30 transceiver module 130. In one example, the user when desiring to secure a booking of a passenger pick-up vehicle uses a booking card. Initially the user causes the booking card to be detected by the card reader 110b of the input module 110.

Upon detection of the booking card by the card reader 110b, the user request is generated. The user request is then received by the processor unit 115, which further communicates the user request to the transceiver module 130. In another example, after the user request is generated via the input module 110, the user request is received by the transceiver module 130 from the input module 110. Preferably, after the user request is received by the transceiver module 130, the transceiver module 130 proceeds to transmit the user request.

Preferably, the booking card comprises a booking card identification (ID) number and upon generating the user request, the booking card ID number is captured via the input module 110. Preferably, the captured booking card ID number is received by the processor unit 115. The booking card ID number preferably corresponds to a user. A user identifier is associated with a user. Preferably the user identifier associated with a user defines personal data of the user.

Preferably, the booking card ID is associable with personal data of the user. In one example, personal data of the user is stored in the booking card. After receipt of the booking card ID by the processor unit 115, at least a portion of personal data of the user is transmitted together with the user request via the transceiver module 130. In another example, personal data of the user is registered in an allocation system (not shown). The personal data of the user is preferably stored in a database of the allocation system upon registration.

After receipt of the booking card ID by the processor unit 115, the transceiver module 130 triggers a retrieval of at least a portion of personal data of the user from the allocation system. In a further example, personal data of the user is stored in the memory device 120 of the processor unit 115. After receipt of the booking card ID by the processor unit 115, personal data of the user is retrieved or read from the memory device 120.

Examples of personal data of the user are contact number of the user, name of the user and a charge account of the user. The charge account comprises funds data and the funds data represents available funds deductible from the charge account of the

user. Alternatively, the booking card further comprises security data. The security data comprises a personal identification number (PIN) of the user. The security data of the booking card constitutes a security function.

- 5 For example, the card reader 110b upon detecting the booking card, prompts the user to enter the PIN. The user request is generated upon the PIN being entered via the keypad 110a. The card reader 110b of the input module 110 is preferably implemented using near field communication (NFC) technology and the booking card is preferably implemented via NFC based cards such as Mifare and Felicia or
10 ISO 14443 contactless card. Alternatively, the card reader 110b of the input module 110 is implemented using magnetic strip reader techniques.

The processor unit 115 is, for example, a microprocessor and the memory device 120 is, for example, a memory retention or a storage area within the processor unit 115
15 for storing information. Examples of the information stored by the memory device 120 are data of the apparatus 100, the user request and a plurality of user requests. The data of the apparatus 100 comprises at least one of location of the apparatus 100 and a location associable with the apparatus 100.

- 20 Preferably, each of the location of the apparatus 100 and the location associable with the apparatus 100 is a location identifier of apparatus 100. Preferably, the location identifier is associated with a location descriptor. Preferably, the location descriptor is indicative and descriptive of the location. Alternatively, the location descriptor is either indicative or descriptive of the location. The data of the apparatus 100 further
25 comprises time stamp, date stamp and identification number of the apparatus 100.

For example, as shown in Fig. 1b, where the apparatus 100 is located at point A in a building 140, the data of the apparatus 100 will reflect that the location of the apparatus 100 is at point A. Point A is hence a designated pick-up location of the
30 passenger pick-up vehicle.

Alternatively, as shown in Fig. 1c, where the apparatus 100 is located at point B in the building 140 and the designated pick-up location of the passenger pick-up vehicle

is desired at point A, the apparatus 100 can be programmed to reflect that the location of the apparatus 100 is at point A. The programmed location, point A, of the apparatus 100 is hence the location associable with the apparatus 100.

- 5 Preferably, location coordinates of the designated pick-up location of the passenger pick-up vehicle is stored in the memory device 120 of the processor unit 115. The location coordinates is an example of the location descriptor.

10 In an exemplary scenario, as shown in Fig. 1d, the passenger pick-up vehicle is a public transportation vehicle such as a taxi 150. Preferably, the taxi 150 comprises a receiver module 150a. The apparatus 100 communicates with the receiver module 150a of the taxi 150 via the transceiver module 130 over a communication network 155.

- 15 Preferably, upon receipt the user request via the input module 110 of the apparatus 100, the transceiver module 130 of the apparatus 100 transmits the user request of the user and the data of the apparatus 100 to the receiver module 150a of the taxi 150. The apparatus 100 is a data capture device capturing the user request of the user. The user request of the user captured by the apparatus 100 and the data of the apparatus
20 100 are receivable by the receiver module 150a of the taxi 150.

Upon receipt of the user request transmission and data of the apparatus 100 from the transceiver module 130 of the apparatus 100, the taxi 150 communicates a confirmation dataset, preferably, to the apparatus 100 over the communication
25 network 155. Alternatively, the confirmation dataset is further communicated, from the apparatus 100, to a personal communication device, such as a mobile phone, of the user. In another alternative, the apparatus 100 upon receiving the confirmation dataset, communicates the confirmation dataset directly to the personal communication device.

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The personal communication device, preferably, comprises a device address associable with personal data of the user and is capturable by the apparatus 100. Preferably, the device address is captured by the apparatus 100 for associating the

device address with the personal data of the user. Alternatively, the device address is pre-associated with the personal data of the user and registered in the allocation system. The personal data of the user is providable by the allocation system upon, for example, generation of the user request.

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Communication of the confirmation dataset by the taxi 150 preferably constitutes an acceptance by the taxi 150 to pick up the user at the designated pick-up location. It can be readily appreciated that the location coordinates of the designated pick-up location of the passenger pick-up vehicle are transmitted to the taxi 150. Therefore
10 difficulties relating to the locating of the user by the taxi 150 are mitigated.

The communication network 155 is preferably one or both of a wired communication network 155a and a wireless communication network 155b. Preferably after the taxi 150 communicates the confirmation dataset, at least a portion of personal data of the
15 user is communicated to the taxi 150. The at least a portion of personal data of the user, preferably, allows the taxi 150 to identify the user.

In one example, where the apparatus 100 communicates with the taxi 150 via a wired communication network 155a, the apparatus 100 is connected to a telephone network,
20 via the transceiver module 130. The user request is communicated to the taxi 150 via a call service 157 associated with the telephone network. An example of the call service 157 associated with the telephone network is the above mentioned allocation system. Alternatively, the call service 157 associated with the telephone network is, for example, a taxi service call center operated by a human operator. Other examples
25 of the wired communication network 155a include various wired internet network connections such fiber optic internet connection, cabled internet connection, integrated digital service network (ISDN) internet connection, broadband connection, dial-up internet connection and power-line internet connection.

30 In another example, where the apparatus 100 communicates with the taxi 150 via a wireless communication network 155b, the apparatus 100 communicates, via the transceiver module 130, with the receiver module 150a of the taxi 150 over a wireless communication network 155b based system. Examples of the wireless

communication network 155b based system are Global Position System (GPS), Galileo coordinate based systems, Bluetooth based systems, Global System for mobile communications (GSM), General Radio Packet Service (GPRS), Code Division Multiple Access (CDMA), 3G and Wifi based systems. Other examples of the wireless communication network 155b include wireless internet networks such as satellite internet access network or high speed packet access (HSPA) network.

In yet another example, the apparatus 100 communicates the user request via the wireless communications network 155b to the call service 157. The call service 157 then communicates the user request to the taxi 150. In this example, the wireless communications network 155b is a wireless telephone network such as a mobile phone network.

In another exemplary scenario, the apparatus 100 is implemented in a vehicle allocation system. The apparatus 100 communicates with a plurality of public transportation vehicle. Each of the plurality of public transportation vehicle comprises the receiver module 150a. Preferably, at least one confirmation dataset is provided by at least one of the plurality of public transportation vehicle upon receipt of a request data by each of the plurality of public transport vehicle.

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The request data is providable by the apparatus 100. The request data comprises at least one of the data of the apparatus, the user request, PIN of the user and the at least a portion of personal data of the user. Following this, one of the plurality of public transportation vehicle is allocated to the user, preferably, by allocating the user identifier of the user to one of the plurality of public transportation vehicle.

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The apparatus 100 further comprises a feedback module 160. The feedback module 160 is coupled to at least one of the input module 110, processor unit 115 and the transceiver 130. The feedback module 160 comprises one or both of a visual feedback unit 160a and an audio feedback unit 160b. The visual feedback unit 160a is preferably a display module such as a liquid crystal display (LCD) and the audio feedback unit 160b is preferably a voice communication module such as a speaker or a buzzer.

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In one example, the user is prompted to enter the PIN of the booking card. The user views the visual feedback unit 160a while entering the PIN via the keypad 110a. The visual feedback unit 160a allows the user to ascertain that the correct PIN is entered.

5 In another example, upon communication of the confirmation dataset by the passenger pick-up vehicle, particulars of the passenger pick-up vehicle are transmitted to the apparatus 100. The particulars of the passenger pick-up vehicle are viewable by the user via the visual feedback unit 160a. The particulars of the passenger pick-up vehicle are examples of allocation data communicable to the apparatus 100 from the allocation system, for identifying at least one of the plurality
10 of passenger pick-up vehicles allocated to the user.

Particulars of the passenger pick-up vehicle are, for example, vehicle number of the passenger pick-up vehicle and contact number of the passenger pick-up vehicle. The vehicle number of the passenger pick-up vehicle is, for example, the passenger pick-up vehicle license number and the contact number of the passenger pick-up vehicle
15 is, for example the contact number associable with a communications unit installed in the passenger pick-up vehicle or a mobile phone number of a driver of the passenger pick-up vehicle. The vehicle license number is an example of a vehicle descriptor. Preferably, the vehicle descriptor is descriptive of the passenger pick-up vehicle.

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The particulars of the passenger pick-up vehicle further comprises an estimated time of arrival (ETA) at the desired pick up location. In yet another example, a communication link is establishable, as desired by either the user or the driver of the passenger pick-up vehicle, between the apparatus 100 and the passenger pick-up vehicle. Preferably, the audio feedback unit 160b of the feedback module 160
25 functions as an intercom between the user and the passenger pick-up vehicle to establish audio communication between the user and the driver of the passenger pick-up vehicle.

30 Preferably, upon communication of the confirmation dataset by the passenger pick-up vehicle to the apparatus 100, a charge is registered on the charge account of the user. Funds data is, preferably, deducted from the charge account of the user when a charge is registered. The funds data amount deducted from the charge account is, for

example, booking fees for the passenger pick-up vehicle. Preferably, sufficiency in funds available in the charge account of the user is determinable prior to deduction of the funds data. After determination of sufficient funds in the charge account of the user, deduction of the funds data is effected. Therefore, the booking card functions
5 similarly to a debit card in terms of deducting funds data from the charge account of the user.

Alternatively, when a charge is registered, the funds data deductible from the charge account is recorded in a bill account associable with the user. The bill account
10 comprises billable transactions of the user each time a charge is registered. An accumulated billable total is therefore obtainable from the billable transactions. Preferably, the accumulated billable total is deducted from the charge account of the user. Alternatively, a statement comprising the billable transactions and the accumulated billable total is provided to the user for payment. Therefore, the
15 booking card functions similarly to a credit card in terms of registering a charge and providing a statement to the user for payment.

In an exemplary scenario, the user wishing to book the taxi 150 proceeds to tap the booking card on the card reader 110b of the input module 110 of the apparatus 100.
20 The apparatus 100 transmits data of the apparatus 100 to the taxi 150. The driver of the taxi 150 ascertains the designated pick-up location from the data of the apparatus 100 and proceeds to communicate the confirmation dataset to the apparatus 100.

The apparatus 100, upon receiving the confirmation dataset from the taxi 150,
25 displays particulars of the taxi 150 on the display feedback module 160a of the feedback module 160 while deducting the booking fees of the taxi 150 from the charge account of the user. In the meantime, particulars of the taxi 150 such as the vehicle number and the ETA are viewable by the user via the display feedback module 160a of the feedback module 160. Where desired, the user establishes an
30 audio communication link with the driver of the taxi 150 or an operator of the taxi service provider via the audio feedback unit 160b of the feedback module 160 to enter into a dialogue with the driver of the taxi 150 or the operator to, for example, give further instructions or make specific requests.

The apparatus 100 is preferably packaged using a chassis 170. The chassis 170 provides a mechanical housing for apparatus 100. The chassis 170 is formed from materials such as plastic, fiber or metal. Other materials such as metal alloys are also used to form the chassis 170. Preferably, the apparatus 100 further comprises an anti-tampering module (not shown). The anti-tampering module is, preferably, an alarm for detecting unauthorized tampering of the apparatus 100. Examples of unauthorized tampering of the apparatus 100 are an unauthorized dismantling and prying open of the chassis 170 of the apparatus 100.

The apparatus 100 is preferably a portable device and is conveniently installable. In one example, the apparatus 100 is installable in any part of the building 140 such as a reception area of the building 140, a meeting room of the building 140 or a pillar structure of the building 140. In another example, the apparatus is installable around the vicinity, such as a nearby lamp post or car parking area, of the building 140.

The apparatus 100 is preferably commissioned via a first commissioning scheme and a second commissioning scheme. Preferably, commissioning the apparatus 100 constitutes initiating the apparatus 100 for use for the first time. In other words, the data of the apparatus has not yet been stored in the memory device 120 of the processor unit 115. For example, upon installation of an apparatus 100 yet to be commissioned, the memory device 120 of the processor unit 115 does not contain coordinates of the location at which the apparatus 100 is installed. The coordinates of the location, at which the apparatus 100 is installed, is registered in the memory device 120 of the processor unit 115 upon the commissioning of the apparatus 100.

Alternatively commissioning the apparatus 100 constitutes updating the apparatus 100 after the apparatus 100 has been initialized for use for the first time. An example of commissioning the apparatus 100 is initializing and storing the data of the apparatus 100 in the memory device 120 of the processor unit 115. Another example of commissioning the apparatus 100 is installing a firmware in the processor unit 115 of the apparatus 100. Preferably, the firmware is installed in the memory device 120 of the processor unit 115.

The firmware installed in the processor unit 115 of the apparatus 100 preferably comprises one or both of a software operating system (OS) and software drivers for the apparatus 100. The software OS is preferably an operating platform, one or both, for providing a graphics user interface (GUI) and facilitating cooperation between the input module 110, the processor unit 115 and the transceiver 130. The GUI allows the user to interact with the apparatus 100 via the input module 110 and the display feedback module 160a of the feedback module 160. The software drivers are software programs facilitating interaction of one or both of the input module 110 and the transceiver 130 with the processor unit 115.

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The first commissioning scheme is preferably implemented via static commissioning. An example of static commissioning is commissioning the apparatus 100 via a commissioning device. The commissioning device is, for example, a handheld transmitter or an installation card. The apparatus device 100 is commissionable by the commissioning device via one or both of wired and wireless techniques.

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In a first exemplary scenario, the data of the apparatus 100 is stored in the installation card. Upon detection of the installation card by the card reader 110b of the input module 110, the data of the apparatus 100 is transmitted to and stored in the memory device 120 of the apparatus 100.

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In a second exemplary scenario, the firmware and the data of the apparatus are transmitted and stored, respectively, in the processor unit 115 and memory device 120 of the processor unit 115 using the handheld transmitter. Preferably, the firmware and the data of the apparatus are stored in the handheld transmitter and transmitted using the handheld transmitter via wireless techniques such as Radio Frequency Identification (RFID). Other wireless techniques are also usable for transmission using the handheld transmitter. Alternatively, the firmware and the data of the apparatus are transmitted using the handheld transmitter via wired techniques such as cabled communication via the transceiver module 130 of the apparatus 100 and the handheld transmitter device.

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The second commissioning scheme is preferably implemented via dynamic commissioning. An example of dynamic commissioning is commissioning the

apparatus 100 via one or both of the wired and wireless communication networks 155a/155b. For example, one or both of the data of the apparatus 100 and the firmware is downloaded, from a database and stored in the apparatus 100, over one or both of the wired communication network 155a and the wireless communication network 155b.

Another example of dynamic commissioning is commissioning the apparatus 100 by integrating a navigator system with the apparatus 100. The navigator system, preferably, retrieves location coordinates of the apparatus 100 via automatic location coordinates retrieval techniques such as GPS based techniques or Galileo coordinate based techniques. In one application, after the personal data of the user has been captured by the apparatus 100, the location coordinates of the apparatus 100 is captured and pre-stored on the apparatus 100. Preferably, the location coordinates of the apparatus 100 is captured and pre-stored on the apparatus 100 in response to the capture of the personal data of the user by the apparatus 100.

A further example of dynamic commissioning is commissioning the apparatus 100 by providing a data interface for data communicating the transceiver module 130 with a positioning system. The positioning system determines the location coordinates of the apparatus 100 and provides the location coordinates of the apparatus 100 to the processor unit 115 for storage.

Preferably a plurality of the apparatus 100 is coupled to form a system 200 as shown in Fig. 2. The plurality of the apparatus 100 is coupled via at least one of the wired communication network 155a and the wireless communication network 155b to form the system 200. The system 200 is preferably a local area network (LAN) of the plurality of the apparatus 100. Alternatively, the system 200 is a wide area network (WAN) of the plurality of the apparatus 100. Each of the plurality of the apparatus 100 is preferably communicable with one another.

For example, the plurality of the apparatus 100 comprises a first apparatus 100a and a second apparatus 100b. The first apparatus 100a is communicable with the second apparatus 100b via the communication network 155. The first and second apparatus

100a/100b, preferably, communicates with each other for security purposes such as prevention of fraud.

For example, where both the first and second apparatus 100a/100b detects a duplicate
5 of the user request, the first and second apparatus 100a/100b communicates with each other to compare data, such as the time stamp, date stamp and location, of each of the first and second apparatus 100a/100b for determining the probability of a fraud. Where it is determined that, given the date and time of the user request and the location of the first and second apparatus 100a/100b, it is not probable for the user to
10 have generated the user request in both the first and second apparatus 100a/100b, within a determined user generation period, a fraud is determined.

In an exemplary scenario, the first apparatus 100a is located in the United States of America (USA) and the second apparatus 100b is located in Singapore, the user
15 request from the user is detected by both the first and second apparatus 100a/100b, the first and second apparatus 100a/100b proceeds to compare the time stamp and date stamp. The time and date stamp defines the determined user generation period. If the time and date stamp provides that it is not possible for the user to have traveled between the first and second apparatus 100a/100b to have generated the user request,
20 a fraud is determined. For example, a fraud is determined when the time and date stamp of the first and second apparatus 100a/100b, taking into consideration time difference between USA and Singapore, shows that both the user requests are generated on the same date an hour apart.

25 The system 200 further comprises a central server 210. Preferably, the central server 210 interfaces communication between the first apparatus 100a and the second apparatus 100b. Alternatively, upon detection of unauthorized tampering of any of the each of the plurality of the apparatus 100, the anti-tampering module of the apparatus 100 communicates a security breach transmission to the central server 210.

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Preferably upon at least one of determination of the fraud and detection of unauthorized tampering, the central server 210 effects security breach procedures. The security breach procedures comprises at least one of freezing the charge account

of the user to prevent deduction of funds data from the charge account, invalidating use of the booking card to generate further user requests and dispatching security personnel to the location of the apparatus 100. Alternatively, upon determination of the fraud, the central server 210 communicates the fraud to the user and awaits
5 confirmation from the user of the fraud before effecting security breach procedures.

Preferably the apparatus 100 is applied using a method 300 as shown in Fig. 3. The method 300 comprises generating the user request using the input module 110 of the apparatus 100 at step 310. At step 320, the request data is transmitted over the
10 communication network 155. Following this the passenger pick-up vehicle, upon receiving the request data, communicates a confirmation dataset to the apparatus 100 at step 330. The method 300 further comprises deducting the funds data from the charge account of the user and requesting the user to enter the PIN of the booking card prior to generating the user request.

Preferably, the vehicle allocation system implemented using a method 400 as shown in Fig. 4. The method 400 comprises receiving the request data provided by the apparatus 100, at step 410. The method 400 further comprises communicating the request data to a plurality of passenger pick-up vehicles at step 420. Following this,
20 at step 430, at least one confirmation dataset provided by at least one of the plurality of vehicles. The at least one confirmation dataset is providable in response to the request data being received. The method 400 further comprises allocating the at least one of the plurality of vehicles to the user via, for example, the user identifier.

In the foregoing manner, an apparatus and method for vehicle booking are described for addressing at least one of the foregoing disadvantages. The invention is not to be limited to specific forms or arrangements of parts so described and it will be apparent to one skilled in the art in view of this disclosure that numerous changes and/or modification can be made without departing from the scope and spirit of the
30 invention.

Claims

1. A method for processing vehicle request, the method comprising:
capturing a user identifier by a data capture device, the user identifier being
5 associated with a user;
communicating a request data to an allocation system in response to capturing
the user identifier, the request data comprising the user identifier and a location
identifier, the location identifier being indicative of a location; and
receiving an allocation data from the allocation system, the allocation data
10 comprising vehicle data, the vehicle data being indicative of at least one vehicle
allocated to the user identifier, the at least one vehicle providing at least one
confirmation dataset in response to receiving the request data, the provision of the at
least one confirmation dataset being indicative of intent of travel by the at least one
vehicle to the location,
15 wherein the allocation data is subsequently communicable to the user.
2. The method as in claim 1, further comprising communicating the allocation
data to the user.
- 20 3. The method as in claim 2, communicating the allocation data to the user
comprising:
displaying the allocation data on a feedback module of the data capture device
for viewing by the user.
- 25 4. The method as in claim 2, communicating the allocation data to the user
comprising:
transmitting the allocation data to a mobile device having a device address,
the device address being associated with the user identifier.
- 30 5. The method as in claim 4, further comprising:
capturing the device address by the data capture device for associating the
device address with the user identifier.

6. The method as in claim 4, the device address being pre-associated with the user identifier and being providable by the allocation system.

7. The method as in claim 1, capturing the user identifier by the data capture
5 device comprising:
reading the user identifier stored in the data capture device.

8. The method as in claim 1, capturing the user identifier by the data capture device comprising:
10 capturing the user identifier generated by an input module of the data capture device during operation thereof by the user.

9. The method as in claim 1, further comprising:
capturing personal identification number (PIN) of the user by the data capture
15 device, the request data communicated to the allocation system further comprising the PIN of the user.

10. The method as in claim 1, the location identifier being one of being provided by a positioning system to the data capture device in response to the user identifier
20 being captured thereby and pre-stored on the data capture device.

11. The method as in claim 10, the positioning system being one of a global positioning system (GPS) and Galileo coordinate based systems.

25 12. The method as in claim 1, the allocation data further comprising:
at least one estimated time of arrival (ETA) of the at least one vehicle.

13. The method as in claim 1, the vehicle data comprising:
at least one vehicle descriptor being descriptive of the at least one vehicle.

30 14. A data capture device comprising
an input module for capturing a user identifier, the user identifier being associated with a user;

a processor unit for providing a location identifier being indicative of a location; and

a transceiver module for communicating a request data to an allocation system in response to the user identifier being captured, the request data comprising
5 the user identifier and the location identifier,

wherein an allocation data is receivable from the allocation system for subsequent communication to the user, the allocation data comprising vehicle data, the vehicle data being indicative of at least one vehicle allocated to the user identifier, the at least one vehicle providing at least one confirmation dataset in response to
10 receiving the request data, the provision of the at least one confirmation dataset being indicative of intent of travel by the at least one vehicle to the location.

15. The data capture device as in claim 14, further comprising:

a data interface for data communicating the transceiver module with a
15 positioning system, the positioning system for determining the location identifier and providing the location identifier to the processor unit for storage thereon.

16. The data capture device as in claim 14, the location identifier being one of being provided by a positioning system to the data capture device in response to the
20 user identifier being captured by the input module and pre-stored on the processor unit.

17. The data capture device as in claim 16, the positioning system being one of a global positioning system (GPS) and Galileo coordinate based systems.

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18. The data capture device as in claim 14, the input module comprising at least one of a key pad and a card reader operable by the user for capture of the user identifier.

30 19. The data capture device as in claim 14, the transceiver module capturing the location identifier from a transponder disposed adjacent thereto, the location identifier being pre-stored by the transponder.

20. The data capture device as in claim 14, further comprising:
a feedback module for displaying the allocation data for viewing by the user.

21. The data capture device as in claim 14, the transceiver module further for
transmitting the allocation data to a mobile device having a device address, the
device address being associated with the user identifier.

22. The data capture device as in claim 21, further capturing the device address
for associating the device address with the user identifier.

23. The data capture device as in claim 21, the device address being pre-
associated with the user identifier and being providable by the allocation system.

24. The data capture device as in claim 14, the input module further for capturing
personal identification number (PIN) of the user, the request data communicated to
the allocation system further comprising the PIN.

25. The data capture device as in claim 14, the allocation data further comprising:
at least one estimated time of arrival (ETA) of the at least one vehicle.

26. The data capture device as in claim 14, the vehicle data comprising:
at least one vehicle descriptor being descriptive of the at least one vehicle.

27. A system comprising a plurality of a data capture device, each of the plurality
of a data capture device comprising:

an input module for capturing a user identifier, the user identifier being
associated with a user;

a processor unit for providing a location identifier being indicative of a
location; and

a transceiver module for communicating a request data to an allocation
system in response to the user identifier being captured, the request data comprising
the user identifier and the location identifier,

wherein allocation data is receivable from the allocation system for subsequent communication to the user, the allocation data comprising vehicle data, the vehicle data being indicative of at least one vehicle allocated to the user identifier, the at least one vehicle providing at least one confirmation dataset in response to receiving the request data, the provision of the at least one confirmation dataset being indicative of intent of travel by the at least one vehicle to the location.

28. The system as in claim 27, the plurality of a data capture device being a first data capture device and a second data capture device.

29. The system as in claim 28, the input module comprising at least one of a keypad and a card reader.

30. The system as in claim 29, the user request comprises personal data of the user.

31. The system as in claim 30, the personal data of the user comprises:
contact information of the user; and
charge account of the user.

32. The system of claim 31, the charge account comprises funds data, the funds data deductible from the charge account of the user thereupon communication of the confirmation dataset.

33. The system as in claim 32, wherein the first data capture device is communicable with the second data capture device and a fraud is determinable.

34. The system as in claim 33, wherein the funds data is not deductible from the charge account thereupon determination of the fraud.

35. A machine-readable medium having stored therein a plurality of programming instructions, which when executed, the instructions cause the machine to:

capture a user identifier by a data capture device, the user identifier being
5 associated with a user;

communicate a request data to an allocation system in response to capturing the user identifier, the request data comprising the user identifier and a location identifier, the location identifier being indicative of a location; and

receive an allocation data from the allocation system, the allocation data
10 comprising vehicle data, the vehicle data being indicative of at least one vehicle allocated to the user identifier, the at least one vehicle providing at least one confirmation dataset in response to receiving the request data, the provision of the at least one confirmation dataset being indicative of intent of travel by the at least one vehicle to the location,

15 wherein the allocation data is subsequently communicable to the user.

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