

GUIDE INFORMATION METHOD AND SYSTEM

TECHNICAL FIELD

- 5 This invention relates generally to a guide information method and a guide information system for use in way finding.

Background

- Signs used in buildings for way finding are typically inadequate. As such, many still turn to
10 premise directories or an information desk for assistance. Directories are usually cluttered with a myriad of information and will require a user to be able to plan their own route of progression and be sufficiently competent in finding ones directional bearing. Information desk service staff are helpful may not be entirely familiar with some shops and may end up giving the wrong info due to change in tenancy or mistake in recalling the details. Further,
15 clear helpful instructions from the service staff may end up being forgotten during the course of travel to a destination location. Therefore, there exists a need for a guide information method for addressing the foregoing problems.

Summary

- 20 In accordance with a first aspect of the invention, there is disclosed a guide information method comprising receiving input from a user interface (UI) module when a user interacts therewith with the input being indicative of one of a plurality of locations, retrieving one of a plurality of guide information associated with the indicated one of the plurality of locations from a server module, and transmitting the retrieved one of the plurality of guide
25 information and an address information to access the retrieved guide information to the UI module. Wherein the address information is communicable to a mobile computing device to access the retrieved guide information therewith.

In accordance with a second aspect of the invention, there is disclosed a guide information system comprising a user interface (UI) module for receiving input from a user when a user interacts therewith with the input being indicative of one of a plurality of locations, and a server module wherefrom one of a plurality of guide information associated with the indicated one of the plurality of locations is retrievable. The server module is further for transmitting the retrieved one of the plurality of guide information and an address information to access the retrieved guide information to the UI module. Wherein the address information is communicable to a mobile computing device to access the retrieved guide information therewith.

In accordance with a third aspect of the invention, there is disclosed a machine-readable medium having stored therein a plurality of programming instructions, which when executed, the instructions cause the machine to receive input from a UI module when a user interacts therewith with the input being indicative of one of a plurality of locations, retrieve one of a plurality of guide information associated with the indicated one of the plurality of locations from a server module, and transmit the retrieved one of the plurality of guide information and an address information to access the retrieved guide information to the UI module. Wherein the address information is communicable to a mobile computing device to access the retrieved guide information therewith.

Brief Description of the Drawings

FIG. 1 shows a system diagram of a guide information system according to an aspect of the invention;

FIG. 2 shows a data flow diagram of the guide information system of FIG. 1; and

FIG. 3 shows a process flow diagram of a guide information method according to an aspect of the invention and implementable by the guide information system of FIG. 1.

Detailed Description

An exemplary embodiment of the present invention, a guide information system 20 utilising a guide information method 100, is described hereinafter with reference to FIG. 1 to FIG. 3.

5 The guide information system 20 preferably comprises a user interface (UI) module 22 and a server module 24. It is preferred that the UI module 22 is in signal and data communication with the server module 24. The UI module 22 and the server module 24 can be combined to form a structurally intercoupled unitary system, for example a kiosk system, functioning independently or in cooperation with other unitary systems. Communication
10 between the UI module 22 and the server module 24 can occur through wired or wireless means. When employed as a unitary system, it is preferred that communication between the UI module 22 and the server module occur through wired means. In configurations where the server module 24 and the UI module is structurally decoupled, the server module 24 is preferably also in signal and data communication with the UI module 22 over a
15 network 26. In such a configuration, the server module 24 may further reside on a cloud platform.

The server module 24 can represent various forms of server systems including, but not limited to a web server, an application server, a proxy server, a network server, or a server
20 farm. In some implementations, the guide information system 20 may communicate wirelessly through a communication interface (not shown), which may include digital signal processing circuitry where necessary. The communication interface may provide for communications under various modes or protocols. In addition, short-range communication may occur, such as using a Bluetooth, WiFi, or other such transceiver.

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The network 26 can be a large computer network, such as a local area network (LAN), wide area network (WAN), the Internet, a cellular network, or a combination thereof connecting any number of mobile clients, fixed clients, and/or servers. In some implementations, each client (e.g., the UI module 22) can communicate with one or more of the control computer
30 systems 28 via a virtual private network (VPN), Secure Shell (SSH) tunnel, or other secure network connection. In some implementations, the network 26 can include the Internet and a

wireless service network. In other implementations, the network 26 may include a corporate network (e.g., an intranet) and one or more wireless access points.

In an implementation of the guide information system 20, the guide information method 100
5 initiates with receiving input 28 from the UI module 22 when a user 30 interacts therewith
in a step 112. The input 28 is indicative of one of a plurality of locations 32. Next, one of a
plurality of guide information 34 associated with the indicated one of the plurality of
locations 32 is retrieved from the server module 24 in a step 114. The retrieved one of the
plurality of guide information 34 and an address information 36 to access the retrieved guide
10 information 34 is then transmitted to the UI module 22 in a step 116. The address
information 36 is then communicable to a mobile computing device 38 to access the
retrieved guide information 34 therewith in a step 118. Further, the retrieved one of the
plurality of guide information 34 is presentable, for example via the display thereof, by the
UI module to the user 30 in a step 120. The mobile computing device 38 can be a smart
15 phone, a tablet, a notebook, an in-object processing module, an image capture device or the
like smart devices with wireless communication capabilities

The UI module 22 preferably comprises a touch-screen interface 40 for displaying
information thereon and for receiving touch and proximity input from the user 30. In
20 addition or alternatively, the UI module 22 may comprise at least one of a keypad, a
keyboard, a track pad, switches, biometric sensors an image capture device for
complementing the touch-screen with more or additional input options.

In the step 112, receiving input from the UI module 22 comprises capturing the user's
25 selection of one of a plurality of location options 42 in a step 122. Each of the plurality of
location options 42 is associated with one of the plurality of locations 32. Preferably, the
plurality of location options 42 are displayed and presented as a list, in a table or in a nested
tree on the touch-screen interface 40. Alternatively or in addition, the plurality of location
options 42 are presented as regions on a map with the UI module 22 capturing the user's
30 selection of at least one region on the map. In addition to using just a single map, multiple

maps, for example with each of the multiple maps corresponding with each level of a shopping mall complex, may be employed for presenting the plurality of location options 42 on the UI module 22.

- 5 The guide information system 20 can have a default or option of receiving the input as one start location and one end location with the start location and the end location being two of the plurality of location options 42 presented for selection by the UI module 22. The combination of the start location and the end location will point uniquely to one of the plurality of guide information 34 that has been pre-provided or pre-generated for the guide information system 20.

Alternatively, the guide information system 20 can have a default or a further option of receiving a destination location with the destination location being one of the plurality of location options 42 presented for selection by the UI module 22. The end location will point uniquely to one of the plurality of guide information 34 that has been pre-provided or pre-generated for the guide information system 20.

In instances where receiving one start location and one end location by the UI module 22 is one option while receiving the end location is another option, the guide information system 20 will assume that assigned location of the guide information system 20 is a start location when only the destination is selected. For such instances, the combination of the selected end location and the assigned location of the guide information system 20 will point uniquely to one of the plurality of guide information 34 that has been pre-provided or pre-generated for the guide information system 20.

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The UI module 22 of the guide information system 20 can further comprise an image capture device, a machine code reader, for example a bar code reader, or a contactless scanner, for example an NFC reader, an RFID tag reader or an iBeacon for capturing machine readable codes and machine readable identifiers from a tag, an object or an image.

The machine readable code and the machine readable identifiers will be indicative of at least one of the plurality of locations 32.

5 In the step 120 the retrieved one of the plurality of guide information 34 is displayed on the UI module 22, preferably on the touch-screen module 40. The retrieved one of the plurality of guide information 34 is at least one of an image file, a video file and instructional steps retrievable from the server module 24 for providing directional guidance to the user to an intended destination.

10 In the step 118, the address information 36 is providable to or retrievable by the mobile computing device 38. The address information 36 is provided by one of displaying a machine readable code containing the address information 36 for capture by the mobile computing device 38 and providing the address information 36 to the mobile computing device 38 through one of an RFID tag, an NFC module and an iBeacon. Preferably, the
15 machine readable code is at least one of a QR code and a bar code.

The guide information method 100 further comprises a step 130 of transmitting secondary information 50 to the UI module 22. The secondary information 50 is presentable on the touch-screen interface 40 of the UI module 22 and comprises at least one of location
20 descriptor data, advertisements, coupons and alerts that are general in nature, associated with the vicinity, specific location or businesses associated with the retrieved one of the plurality of locations 32. The secondary information 50 is further accessible through an application, for example an iBeacon-based application, or an access address 52 transmittable to the mobile computing device 38 through wired, wireless or contactless, for example via
25 WiFi, NFC or iBeacon. Further or alternatively, the access address is presentable by the UI module 22, preferably displayed on the touch-screen interface 40 as machine-readable codes, for example bar codes and QR codes, for capture by the mobile computing device 38.

The UI module 22 of the guide information system 20 can further comprise a printer module
30 54 for printing a hardcopy of at least one of the retrieved one of the plurality of guide

information 34 and the associated address information 36, and the secondary information 50 and the associated access address 52 in a step 132 in instances where access to the mobile computing device 38 is unavailable or the user prefers to have the hardcopy of the guide information.

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In an example of implementation of the guide information system and the guide information method 100, a visitor requiring route guidance within a building complex will approach one of multiple kiosks scattered across the building complex as the user 30. Each kiosk is either comprises a configuration of the UI module 22 and the server module 24 communicatively coupled to or decoupled from other kiosks of the same configuration, or comprise just the UI module 22 all communicatively coupled to a central control system comprising the server module 24. In the latter configuration, a single one of the server module 24 will be operationally coupled with more than one of the UI module 22.

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15 The visitor will then interact with the touch-screen interface 40 of the UI module and will be presented with the plurality of location options 42. Through the use of a drop-down list, a map view or a keyword search facility, the visitor will select one of the plurality of location options 42 to thereby provide an input indicative of one of the plurality of locations 32 associated therewith. Alternatively, the visitor may have an image of a QR code or a bar code printed in a letter or made available on this mobile phone, the mobile computing device 38, which he makes available for capture or scanning by the UI module for providing the input indicative of one of the plurality of locations 32 associated therewith.

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Next, one of the plurality of guide information 34 associated with the indicated one of the plurality of locations 32 is retrieved from the server module 24. If, for example, the visitor indicates that he intends to go to Retail Store X and selects one of the plurality of location options 42 that indicates "Retail Store X", the one of the plurality of guide information being tagged with the location of the kiosk as the start location and the Retail Store X as the end location or destination location will be retrieved. Assuming that the plurality of location options 42 is being presented as segments of a map on the UI module 22, the retrieved guide

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information 34 can comprise an image containing graphical route directions that can be used to overlay the presented map. The image may be an animated image and/or multiple images for overlaying multiple maps across different levels of a building should the kiosk and Retail Store X be located at different levels. Multiple maps with the retrieved guide information 34 containing multiple images may be employed for large complexes with dense locations points on a single level. Further, the address information 36, for example a URL or a machine readable code, to access or to recall a web page for accessing the retrieved guide information 34 is also transmitted to the UI module 22. The guide information 34 together with the address information 36 are displayable on the UI module to enable the visitor to view the route to the destination location from the guide information 34 and to enable capture of the address information 36 using the mobile computing device 38. The address information 36 may also be wirelessly communicated to the mobile computing device 38 for accessing the guide information 34 therevia. The visitor may also choose to have the guide information 34 and/or address information 36 printed on paper by the printer module 54.

Besides the guide information 34 and the address information 36, additional information on the destination location, for example a write-up or reviews on Retail Store X, or advertisements on in-store offers available at Retail Store X may be provided as the secondary information 50 together with the access address 52, for example a URL or a machines readable code, for display by the UI module 22 and for capture by and/or conveyance to the mobile computing device 38. As a further example, discount coupons for the destination location may be conveyed to the mobile computing device or be printed by the printer module 54.

Hence, similarly, the article guide information method 100 may be implemented through use of a machine-readable medium having stored therein a plurality of programming instructions, which when executed, the instructions cause the machine to receive input from a UI module when a user interacts therewith with the input being indicative of one of a plurality of locations, retrieve one of a plurality of guide information associated with the

indicated one of the plurality of locations from a server module, and transmit the retrieved one of the plurality of guide information and an address information to access the retrieved guide information to the UI module. Wherein the address information is communicable to a mobile computing device to access the retrieved guide information therewith.

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Aspects of particular embodiments of the present disclosure address at least one aspect, problem, limitation, and/or disadvantage associated with existing guide information methods and systems. While features, aspects, and/or advantages associated with certain embodiments have been described in the disclosure, other embodiments may also exhibit such features, aspects, and/or advantages, and not all embodiments need necessarily exhibit such features, aspects, and/or advantages to fall within the scope of the disclosure. It will be appreciated by a visitor of ordinary skill in the art that several of the above-disclosed structures, components, or alternatives thereof, can be desirably combined into alternative structures, components, and/or applications. In addition, various modifications, alterations, and/or improvements may be made to various embodiments that are disclosed by a visitor of ordinary skill in the art within the scope of the present disclosure, which is limited only by the following claims.

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Claims

1. A guide information method comprising:

receiving input from a user interface (UI) module when a user interacts therewith, the input being indicative of one of a plurality of locations, each of the plurality of locations having one of a plurality of guide information associated therewith, the plurality of guide information being provided on a server module prior to the input being received from the UI;

retrieving one of a the plurality of guide information associated with the indicated one of the plurality of locations from a the server module; and

transmitting the retrieved one of the plurality of guide information and an address information to access the retrieved guide information to the UI module,

wherein the address information is communicable to a mobile computing device to enable access to the retrieved guide information therewith.

2. The method as in claim 1, further comprising:

providing the address information to the mobile computing device.

3. The method as in claim 2, providing the address information to the mobile computing device comprising:

one of displaying a machines readable code containing the address information for capture by the mobile computing device and providing the address information to the mobile computing device through one of an RFID tag, an NFC module and an iBeacon.

4. The method as in claim 3, the machine readable code being at least one of a QR code and a bar code.

5. The method as in claim 1, further comprising displaying the retrieved one of the plurality of guide information on the UI module.

6. The method as in claim 1, the guide information being at least one of an image file, a video file and instructional steps retrievable from the server module.
7. The method as in claim 1, further comprising:
 - 5 transmitting secondary information to the UI module, the secondary information comprising at least one of location descriptor data associated with the indicated one of the plurality of locations, advertisements, coupons and alerts, wherein the secondary information is communicable to a mobile computing device to access the retrieved guide information therewith.
- 10 8. The method as in claim 1, receiving input from a UI module when a user interacts therewith comprising:
 - 15 capturing the user's selection of one of a plurality of location options, each of the plurality of location options being associated with one of the plurality of locations.
9. The method as in claim 8, capturing the user's selection of one of a plurality of location options being capturing the user's selection of at least one region on a map displayable by the UI module.
- 20 10. The method as in claim 1, the one of the plurality of locations comprising a start location and an end location corresponding with one of the plurality of guide information.
- 25 11. The method as in claim 1, the one of the plurality of locations being a destination location corresponding with one of the plurality of guide information.

12. The method as in claim 1, receiving input from a UI module when a user interacts therewith comprising:

capturing machine readable code presented by the user to the UI module as the input.

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13. A guide information system comprising:

a user interface (UI) module for receiving input from a user when a user interacts therewith, the input being indicative of one of a plurality of locations, each of the plurality of locations having one of a plurality of guide information associated therewith;

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a server module wherefrom one of a the plurality of guide information associated with the indicated one of the plurality of locations is retrievable, the plurality of guide information being provided on a server module prior to the input being received from the UI, the server module further for transmitting the retrieved one of the plurality of guide information and an address information to access the retrieved guide information to the UI module,

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wherein the address information is communicable to a mobile computing device to enable access to the retrieved guide information therewith.

- 20 14. The system as in claim 13, the UI module further for providing the address information to the mobile computing device.

15. The system as in claim 14, the UI module at least one of displays a machines readable code containing the address information for capture by the mobile computing device and provides the address information to the mobile computing device through an RFID tag or an NFC module.

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16. The system as in claim 14, the machine readable code being at least one of a QR code and a bar code.

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17. The system as in claim 13, the UI module further for displaying the retrieved one of the plurality of guide information on the UI module.
18. The system as in claim 13, the guide information being at least one of an image
5 file, a video file and instructional steps retrievable from the server module.
19. The system as in claim 13, the server module further for transmitting secondary information to the UI module, the secondary information comprising at least one of location descriptor data associated with the indicated one of the plurality of
10 locations, advertisements, coupons and alerts,
wherein the secondary information is communicable to a mobile computing device to access the retrieved guide information therewith.
20. The system as in claim 13, the UI module receives input from the user by capturing
15 the user's selection of one of a plurality of location options, each of the plurality of location options being associated with one of the plurality of locations.
21. The system as in claim 20, capturing the user's selection of one of a plurality of location options being capturing the user's selection of at least one region on a map
20 displayable by the UI module.
22. The system as in claim 13, the one of the plurality of locations comprising a start location and an end location corresponding with one of the plurality of guide information.
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23. The system as in claim 13, the one of the plurality of locations being a destination location corresponding with one of the plurality of guide information.
24. The system as in claim 13, the UI module receives input from the user by capturing
30 machine readable code presented by the user to the UI module as the input.

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

5 receive input from a UI module when a user interacts therewith, the input being indicative of one of a plurality of locations, each of the plurality of locations having one of a plurality of guide information associated therewith, the plurality of guide information being provided on a server module prior to the input being received from the UI;

10 retrieve one of a the plurality of guide information associated with the indicated one of the plurality of locations from a the server module; and

transmit the retrieved one of the plurality of guide information and an address information to access the retrieved guide information to the UI module,

15 wherein the address information is communicable to a mobile computing device to enable access to the retrieved guide information therewith.

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