

INTELLIGENT IN-LINE MANAGEMENT SYSTEMS AND METHODS

Field of the Invention

[0001] The disclosure relates generally to in-line management systems and methods, and, more particularly to systems and methods that can perform in-line managements by intelligently integrating a data network and a telecom network.

Background of the Invention

[0002] For catering industry, a best way to increase restaurant revenues is to provide customers to dine simultaneously as more as possible. However, a restaurant always provide limited seats to customers for dining due to some considerations, such as operating scale and cost. In actual cases, customers always concentrate on dining at specific interval, such as lunchtime or dinnertime. When a large amount of customers choose a restaurant for dining at the same time, customers always need to wait for dining since the number of seats of the restaurant is limited. How to improve the table turnover, and keep the in-line customers satisfactory and stay waiting are critical issues for catering industry.

[0003] Conventionally, when a restaurant is full, a receptionist will manually register related data, such as name, phone number, required seats of customers into an in-line table in accordance with the order. When a table is available, the receptionist will seek the in-line table, and manually make a call to the in-line customers in accordance with the order, thus notifying the customers to be serve. Generally, the receptionist will face some cases. In one case, the in-line customer has choose another restaurant for dining since the in-line customer has waiting for a long time. In another case, the in-line customer may miss the call, or intentionally not answer the call. Since the decision of the in-line customer is not known, the receptionist must

repeatedly make calls for confirmation. No matter what cases occurred, the receptionist must spend time to make calls for notifying or confirming related situations of the in-line customer.

[0004] In the other hand, in order to let the in-line customer know the current in-line order or number, a light device for displaying the in-line order is always set outside the restaurant. In other words, the in-line customer must always stay in front of the restaurant to see the light device if the in-line customer wants to know the in-line order. Once the in-line customer is out of the sight of the restaurant, the in-line progress is no longer known. Since the in-line progress cannot be known, the uncertainty of the in-line customer will be increased, resulting in more probabilities of choosing another restaurant for dining.

[0005] Therefore, if a well in-line management mechanism for in-line customers can be provided, related cost and payment of the industry can be reduced, and the management efficiency can be improved. Further, the uncertainty of conventional arts can be reduced by increasing the transparency of the in-line progress and related procedures, such that in-line customers can keep waiting, thereby further improving the turnover and use rate of restaurants.

Summary of the Invention

[0006] Intelligent in-line management systems and methods are provided, wherein in-line managements can be performed by intelligently integrating a data network and a telecom network.

[0007] An embodiment of an intelligent in-line management system includes a telecom service system, at least one user device, and a management device. The telecom service system provides a telecom service via a telecom network. The user

device corresponds to a candidate user, and has specific telecom ID corresponding to the telecom service. The management device records an in-line requirement including the specific telecom ID corresponding to the candidate user. The management device determines whether a specific instruction is received or not. When the specific instruction is received, the management device connects to the telecom service system via a network, and automatically generate a voice call to the user device via the telecom network of the telecom service system according to the specific telecom ID, thus to notify an admission to the candidate user.

[0008] In an embodiment of an intelligent in-line management method, an in-line requirement corresponding to a candidate user of a user device is recorded by a management device, wherein the in-line requirement includes a specific telecom ID of the candidate user in a telecom service provided by a telecom service system. It is determined whether a specific instruction is received or not by the management device. When the specific instruction is received, the telecom service system is connected via a network by the management device, and a voice call to the user device is automatically generated via a telecom network of the telecom service system according to the specific telecom ID, thus to notify an admission to the candidate user.

[0009] In some embodiments, the user device receives an operational input corresponding to the voice call, and transmits the operational input to the management device via the telecom service system, wherein the operational input comprises an indication of admission cancel or an indication of admission reservation.

[0010] In some embodiments, when the voice call is not answered by the user device, the management device connects to the telecom service system via the network, and generates and transmits a message to the user device via the telecom network of the telecom service system according to the specific telecom ID, thus to

notify an admission to the candidate user.

[0011] In some embodiments, the management device provides a management interface for inputting the in-line requirement corresponding to the candidate user to the management device. After the in-line requirement is input to the management device, the management device connects to the telecom service system via the network, and generates and transmits a message to the user device via the telecom network of the telecom service system according to the specific telecom ID, wherein the message comprises a link of an in-line status corresponding to the in-line requirement.

[0012] In some embodiments, the telecom service system provides a data service via a data network. The user device receives a selection corresponding to the link, links to a page comprising the in-line status in response to the selection, and displays the in-line status in the user device. In some embodiments, the page comprises an option of admission cancel. When the user device receives a selection corresponding to the option of admission cancel, the user device transmits the selection corresponding to the option of admission cancel to the management device via the data network, and the management device cancels the in-line requirement corresponding to the candidate user in response to the selection corresponding to the option of admission cancel.

[0013] In some embodiments, the specific instruction comprises a touch input via a touch-sensitive screen of the management device.

[0014] In some embodiments, the management device determines whether a dining time corresponding to a specific user is greater than a dining time limitation, and automatically generates the specific instruction when the dining time corresponding to the specific user is greater than the dining time limitation.

[0015] An embodiment of an intelligent in-line management system includes at least one user device, and a management device. The user device corresponds to a candidate user, and has specific ID. The management device records an in-line requirement including the specific ID corresponding to the candidate user. The management device determines whether a specific instruction is received or not. When the specific instruction is received, the management device automatically generates a voice call to the user device via a network according to the specific ID, thus to notify an admission to the candidate user.

[0016] Intelligent in-line management methods may take the form of a program code embodied in a tangible media. When the program code is loaded into and executed by a machine, the machine becomes an apparatus for practicing the disclosed method.

Brief Description of Drawings

[0017] The invention will become more fully understood by referring to the following detailed description with reference to the accompanying drawings, wherein:

[0018] Fig. 1 is a schematic diagram illustrating an embodiment of an intelligent in-line management system of the invention;

[0019] Fig. 2 is a schematic diagram illustrating another embodiment of an intelligent in-line management system of the invention;

[0020] Fig. 3 is a schematic diagram illustrating an embodiment of a management device of the invention;

[0021] Fig. 4 is a flowchart of an embodiment of an intelligent in-line management method of the invention;

[0022] Fig. 5 is a flowchart of another embodiment of an intelligent in-line

management method of the invention;

[0023] Fig. 6 is a flowchart of an embodiment of a method for generating a specific instruction of the invention;

[0024] Fig. 7 is a flowchart of another embodiment of a method for generating a specific instruction of the invention;

[0025] Fig. 8 is a flowchart of another embodiment of an intelligent in-line management method of the invention;

[0026] Fig. 9 is a flowchart of another embodiment of an intelligent in-line management method of the invention;

[0027] Fig. 10 is a schematic diagram illustrating an embodiment of an example of an admission message;

[0028] Fig. 11 is a flowchart of another embodiment of an intelligent in-line management method of the invention;

[0029] Fig. 12 is a flowchart of another embodiment of an intelligent in-line management method of the invention; and

[0030] Fig. 13 is a schematic diagram illustrating an embodiment of an example of a page of in-line status.

Detailed Description of Exemplary Embodiments

[0031] Intelligent in-line management systems and methods are provided.

[0032] Fig. 1 is a schematic diagram illustrating an embodiment of an intelligent in-line management system of the invention. The intelligent in-line management system 100 comprises a management device 110, a telecom service system 120, and at least one user device 130. The management device 110 and the user device 130 may be any electronic device having network connection capabilities, such as a computer,

or a portable device such as a mobile phone, a smart phone, a PDA, a GPS, a notebook, or a tablet computer. The management device 110 can connect to the telecom service system 120 via a network 140. The telecom service system 120 can provide a telecom service via a telecom network 150, and provide a data service via a data network 160. The user device 130 corresponds to a candidate user, and has specific telecom ID, such as a phone number corresponding to the telecom service of the telecom service system 120. The user device 130 can use the telecom service and the data service provided by the telecom service system 120 via the telecom network 150 and the data network 160.

[0033] Fig. 2 is a schematic diagram illustrating another embodiment of an intelligent in-line management system of the invention. The intelligent in-line management system 100 comprises a management device 110, and at least one user device 130. Similarly, the management device 110 and the user device 130 may be any electronic device having network connection capabilities, such as a computer, or a portable device such as a mobile phone, a smart phone, a PDA, a GPS, a notebook, or a tablet computer. The management device 110 and the user device 130 can connect to each other via a network 140.

[0034] Fig. 3 is a schematic diagram illustrating an embodiment of a management device of the invention. The management device may be any electronic device having network connection capabilities, such as a computer, or a portable device such as a mobile phone, a smart phone, a PDA, a GPS, a notebook, or a tablet computer. As shown in Fig. 3, the management device 110 comprises a network connection unit 112, a storage unit 114, and a processor 116. The network connection unit 112 can connect to other electronic devices having network connection capabilities via a network, such as a wired network or a wireless network such as a Wi-Fi or a Bluetooth network.

The storage unit 114 can comprise at least one in-line requirement IR. In some embodiments, the in-line requirement IR may corresponding to a candidate user of the user device 130. The storage unit 114 can further store related data, such as a menu of a restaurant needed by the system. The processor 116 can control related operations of hardware and software in the management device 110, which will be discussed later.

[0035] Fig. 4 is a flowchart of an embodiment of an intelligent in-line management method of the invention. The intelligent in-line management method can be used in a management device 110, a telecom service system 120, and at least one user device 130.

[0036] In step S402, an in-line requirement corresponding to a candidate user of the user device 130 is recorded via the management device 110. It is understood that, in some embodiments, the in-line requirement can comprise a specific telecom ID, such as a phone number of the candidate user in a telecom service provided by the telecom service system 120. In some embodiments, the in-line requirement can further comprise related data, such as a name of the candidate user, required seats of customers, and other specific requirements. It is understood that, in some embodiments, the management device 110 can provide an interface for receiving the input corresponding to the in-line requirement via the user device 110, such as a touch-sensitive screen of the user device 110. In some embodiments, the management device 110 can connect to a network platform via a network, and receive the in-line requirement from the network platform. In some embodiments, the management device 110 can connect to a voice reservation/in-line platform, and receive the in-line requirement from the voice reservation/in-line platform. Then, in step S404, the management device 110 determines whether a specific instruction is received or not.

It is noted that, the methods for generating the specific instruction will be discussed later. When the specific instruction is not received by the management device 110 (No in step S404), the procedure remains at step S404. When the specific instruction is received by the management device 110 (Yes in step S404), in step S406, the management device 110 connects to the telecom service system 120 via a network, and automatically generates a voice call to the user device 130 via a telecom network corresponding to a telecom service of the telecom service system 120 according to the specific telecom ID recorded in the in-line requirement, thus to notify an admission to the candidate user.

[0037] Fig. 5 is a flowchart of another embodiment of an intelligent in-line management method of the invention. The intelligent in-line management method can be used in a management device 110 and at least one user device 130.

[0038] In step S502, an in-line requirement corresponding to a candidate user of the user device 130 is recorded via the management device 110. Similarly, in some embodiments, the in-line requirement can comprise a specific ID, such as ID corresponding to a network communication app. In some embodiments, the in-line requirement can further comprise related data, such as a name of the candidate user, required seats of customers, and other specific requirements. Similarly, in some embodiments, the management device 110 can provide an interface for receiving the input corresponding to the in-line requirement via the user device 110. In some embodiments, the management device 110 can connect to a network platform via a network, and receive the in-line requirement from the network platform. In some embodiments, the management device 110 can connect to a voice reservation/in-line platform, and receive the in-line requirement from the voice reservation/in-line platform. Then, in step S504, the management device 110 determines whether a

specific instruction is received or not. Similarly, the methods for generating the specific instruction will be discussed later. When the specific instruction is not received by the management device 110 (No in step S504), the procedure remains at step S504. When the specific instruction is received by the management device 110 (Yes in step S504), in step S506, the management device 110 automatically generates a voice call to the user device 130 via a network according to the specific ID recorded in the in-line requirement, thus to notify an admission to the candidate user. For example, the management device 110 can automatically make a voice call to the user device 130 of the candidate user by using a network communication app.

[0039] Fig. 6 is a flowchart of an embodiment of a method for generating a specific instruction of the invention. In step S602, the management device 110 determines whether a touch input is received via a touch-sensitive screen. When no touch input is received via the touch-sensitive screen (No in step S602), the procedure remains at step S602. When a touch input is received via the touch-sensitive screen (Yes in step S602), in step S604, the management device 110 automatically generates a specific instruction. In other words, the specific instruction may correspond to a touch input on the touch-sensitive screen of the management device 110. In some embodiments, an icon corresponding to an in-line requirement can be displayed in a management interface of the management device 110. When the icon in the management interface is selected, the specific instruction is generated.

[0040] Fig. 7 is a flowchart of another embodiment of a method for generating a specific instruction of the invention. In step S702, the management device 110 obtains a dining time corresponding to at least one specific user. It is noted that, the dining time corresponding to the specific user can be calculated according to a current time, and a time in which the specific user entering the restaurant or a time in which

the required meal is ready for the specific user. In step S704, the management device 110 determines whether the dining time corresponding to the specific user is greater than a dining time limitation, such as 2 hours. When the dining time corresponding to the specific user is not greater than the dining time limitation (Not in step S704), the procedure returns to step S702. When the dining time corresponding to the specific user is greater than the dining time limitation (Yes in step S704), in step S706, the management device 110 automatically generates a specific instruction.

[0041] Further, in some embodiments, a specific electronic device, such as a POS system or a Bluetooth control device can connect to the management device 110, and transmit the specific instruction to the management device 110. For example, when the POS system performs a billing process for a specific table, the POS system can generate the specific instruction, and transmit the specific instruction to the management device 110. In another example, the Bluetooth control device can generate a control signal corresponding to the specific instruction, and transmit the control signal to the management device 110 via a Bluetooth network. It is understood that, the above methods for generating a specific instruction are only examples of the application, and the present invention is not limited thereto. Any method for generating a specific instruction can be used in the present invention.

[0042] Fig. 8 is a flowchart of another embodiment of an intelligent in-line management method of the invention. The intelligent in-line management method can be used in a management device 110, a telecom service system 120, and at least one user device 130.

[0043] In step S802, an in-line requirement corresponding to a candidate user of the user device 130 is recorded via the management device 110. Similarly, in some embodiments, the in-line requirement can comprise a specific telecom ID, such as a

phone number of the candidate user in a telecom service provided by the telecom service system 120. In some embodiments, the in-line requirement can further comprise related data, such as a name of the candidate user, required seats of customers, and other specific requirements. Similarly, in some embodiments, the management device 110 can provide an interface for receiving the input corresponding to the in-line requirement via the user device 110, such as a touch-sensitive screen of the user device 110. In some embodiments, the management device 110 can connect to a network platform via a network, and receive the in-line requirement from the network platform. In some embodiments, the management device 110 can connect to a voice reservation/in-line platform, and receive the in-line requirement from the voice reservation/in-line platform. Then, in step S804, the management device 110 determines whether a specific instruction is received or not. It is noted that, the application is not limited to any method for generating a specific instruction, and any method for generating a specific instruction can be used in the present invention. When the specific instruction is not received by the management device 110 (No in step S804), the procedure remains at step S804. When the specific instruction is received by the management device 110 (Yes in step S804), in step S806, the management device 110 connects to the telecom service system 120 via a network, and in step S808, automatically generates a voice call to the user device 130 via a telecom network corresponding to a telecom service of the telecom service system 120 according to the specific telecom ID recorded in the in-line requirement. In step S810, it is determined whether the user device 130 answers the voice call. When the user device 130 does not answer the voice call (No in step S810), the procedure remains at step S810. When the user device 130 answers the voice call (Yes in step S810), in step S812, a voice content corresponding to the voice call is played back via

the user device 130. It is noted that, the voice content can be used to notify an admission to the candidate user. In some embodiments, the voice content can prompt the candidate user to perform an operation. For example, the voice content can prompt the candidate user to press the number “1” if the candidate user wants to reserve the seats, and the restaurant will reserve seats for the candidate user if the number “1” is pressed. The voice content can prompt the candidate user to press the number “2” if the candidate user wants to cancel the admission, and the restaurant will cancel the admission for the candidate user if the number “2” is pressed. Then, in step S814, it is determined whether an operational input is received or not. When the user device 130 does not receive an operational input (No in step S814), the procedure remains at step S814. When the user device 130 receives an operational input (Yes in step S814), in step S816, the operational input is transmitted to the management device 110 via the telecom service system 120. At the time, the telecom service system 120 receives and re-directs the operational input to the management device 110 in step S818, and the management device 110 receives the operational input of the user device 130 in step S820. It is understood that, in some embodiments, the operational input can comprise an indication of admission cancel or an indication of admission reservation. After the management device 110 receives the operational input of the user device 130, subsequent processes, such as admission reservation or admission cancel will be performed according to the received operational input.

[0044] Fig. 9 is a flowchart of another embodiment of an intelligent in-line management method of the invention. The intelligent in-line management method can be used in a management device 110, a telecom service system 120, and at least one user device 130.

[0045] In step S902, an in-line requirement corresponding to a candidate user of

the user device 130 is recorded via the management device 110. Similarly, in some embodiments, the in-line requirement can comprise a specific telecom ID, such as a phone number of the candidate user in a telecom service provided by the telecom service system 120. In some embodiments, the in-line requirement can further comprise related data, such as a name of the candidate user, required seats of customers, and other specific requirements. Similarly, in some embodiments, the management device 110 can provide an interface for receiving the input corresponding to the in-line requirement via the user device 110, such as a touch-sensitive screen of the user device 110. In some embodiments, the management device 110 can connect to a network platform via a network, and receive the in-line requirement from the network platform. In some embodiments, the management device 110 can connect to a voice reservation/in-line platform, and receive the in-line requirement from the voice reservation/in-line platform. Then, in step S904, the management device 110 determines whether a specific instruction is received or not. It is noted that, the application is not limited to any method for generating a specific instruction, and any method for generating a specific instruction can be used in the present invention. When the specific instruction is not received by the management device 110 (No in step S904), the procedure remains at step S904. When the specific instruction is received by the management device 110 (Yes in step S904), in step S906, the management device 110 connects to the telecom service system 120 via a network, and in step S908, automatically generates a voice call to the user device 130 via a telecom network corresponding to a telecom service of the telecom service system 120 according to the specific telecom ID recorded in the in-line requirement. In step S910, it is determined whether the user device 130 answers the voice call. When the user device 130 answers the voice call (Yes in step S910), in step S912, a voice

content corresponding to the voice call is played back via the user device 130. It is noted that, the voice content can be used to notify an admission to the candidate user. When the user device 130 does not answer the voice call (No in step S910), in step S914, the telecom service system 120 determines that the user device 130 does not answer the call, and notify the result to the management device 110. Then, in step S916, the management device 110 connects to the telecom service system 120 via the network, and in step S918, automatically generates and transmits a message to the user device 130 via the telecom network corresponding to the telecom service of the telecom service system 120 according to the specific telecom ID recorded in the in-line requirement. At the time, the user device 130 receives the message in step S920, and generates prompts, such as sounds, vibrations, or displayed data. It is understood that, the message can be used to notify an admission to the candidate user. It is understood that, in some embodiments, when the user device 130 does not answer the voice call, the management device 110 will automatically attempt to re-make a voice call to the user device 130 for a predefined times. When the user device 130 does not answer the voice call after the predefined times, the message will be transmitted to the user device 130.

[0046] It is understood that, in some embodiments, the message can comprise a link. The candidate user can connect to a page via a network by selecting the link, and an admission message 1000 can be displayed in the user device 130, as shown in Fig. 10. It is understood that, the admission message 1000 can optionally comprise an option of admission cancel 1010, an option of admission reservation 1020, and an option of menu 1030. When the candidate user selects a specific option, the user device 130 will transmit the selected specific option to the management device 110, and the management device 110 will perform subsequent processes according to the

selected specific option. It is noted that, in some embodiments, the user device 130 can connect to the management device 110 to perform related processes via a data network provided by the telecom service system 120. In some embodiments, the user device 130 can connect to the management device 110 to perform related processes via a network, such as a wired network or a wireless network such as a Wi-Fi or a Bluetooth network provided by another network provider.

[0047] Fig. 11 is a flowchart of another embodiment of an intelligent in-line management method of the invention. The intelligent in-line management method can be used in a management device 110, a telecom service system 120, and at least one user device 130.

[0048] In step S1102, the management device 110 provides a management interface for receiving an in-line requirement corresponding to a candidate user. As described, the management device 110 can provide an interface for receiving the input corresponding to the in-line requirement via the user device 110. In some embodiments, the management device 110 can connect to a network platform via a network, and receive the in-line requirement from the network platform. In some embodiments, the management device 110 can connect to a voice reservation/in-line platform, and receive the in-line requirement from the voice reservation/in-line platform. In step S1104, it is determined whether the in-line requirement is input to the management device 110. When the in-line requirement is not input to the management device 110 (No in step S1104), the procedure remains at step S1104. When the in-line requirement is input to the management device 110 (Yes in step S1104), in step S1106, the management device 110 connects to the telecom service system 120 via a network, and generates and transmits a message to the user device 130 via a telecom network of the telecom service system 120 according to the specific

telecom ID recorded in the in-line requirement. It is noted that, the message content can be used to notify registration completion to the candidate user. That is the management device 110 has received the candidate user's in-line requirement.

[0049] It is understood that, in some embodiments, the message can comprise a link of an in-line status corresponding to the in-line requirement. Fig. 12 is a flowchart of another embodiment of an intelligent in-line management method of the invention. The intelligent in-line management method can be used in a management device 110, a telecom service system 120, and at least one user device 130.

[0050] In step S1202, it is determined whether a link corresponding to an in-line status of an in-line requirement in a message is selected. When the link corresponding to the in-line status of the in-line requirement in the message is not selected (No in step S1202), the procedure remains at step S1202. When the link corresponding to the in-line status of the in-line requirement in the message is selected (Yes in step S1202), in step S1204, the user device 130 links to a page comprising the in-line status via a data network provided by the telecom service system 120, and in step S1206, displays the in-line status in the user device 130. In other words, the candidate user can know the latest in-line situation via the page. It is understood that, in some embodiments, the page may comprise an option of admission cancel. In step S1208, it is determined whether a selection corresponding to the option of admission cancel is received. When a selection corresponding to the option of admission cancel is not received (No in step S1208), the procedure returns to step S1204. When a selection corresponding to the option of admission cancel is received (Yes in step S1208), in step S1210, the user device 130 transmits the selection corresponding to the option of admission cancel to the management device 110 via the data network, and the management device 110 cancels the in-line requirement corresponding to the

candidate user in response to the selection corresponding to the option of admission cancel. It is understood that, in some embodiments, in steps S1204 and S1210, the user device 130 can connect to the management device 110 to perform related processes via a network, such as a wired network or a wireless network such as a Wi-Fi or a Bluetooth network provided by another network provider.

[0051] Fig. 13 is a schematic diagram illustrating an embodiment of an example of a page of in-line status. As shown in Fig. 13, the page of in-line status 1300 can show a current in-line number and an estimated in-line time. In the example, the page of in-line status 1300 can include an option of menu 1310 and an option of admission cancel 1320. When the candidate user selects a specific option, the user device 130 will transmit the selected specific option to the management device 110, and the management device 110 will perform subsequent processes according to the selected specific option.

[0052] It is noted that, the above embodiments are introduced by using a single in-line requirement. In some embodiments, when the management device 110 receives several in-line requirements, the management device 110 can perform related processes for the respective in-line requirements in accordance with the receiving order of the respective in-line requirements. Additionally, in some embodiments, when the in-line requirement includes a requirement time, that is a time for dining expected by the candidate user, the management device 110 can perform related processes for the respective in-line requirements according to the receiving order of the respective in-line requirements and/or the requirement time recorded in the respective in-line requirements.

[0053] Therefore, intelligent in-line management systems and methods can perform in-line managements by intelligently integrating a data network and a

telecom network. By providing a well in-line management mechanism for in-line customers, related cost and payment of the industry can be reduced, and the management efficiency can be improved. Further, the uncertainty of conventional arts can be reduced by increasing the transparency of the in-line progress and related procedures, such that in-line customers can keep waiting, thereby further improving the turnover and use rate of restaurants.

[0054] Intelligent in-line management methods, may take the form of a program code (i.e., executable instructions) embodied in tangible media, such as floppy diskettes, CD-ROMS, hard drives, or any other machine-readable storage medium, wherein, when the program code is loaded into and executed by a machine, such as a computer, the machine thereby becomes an apparatus for executing the methods. The methods may also be embodied in the form of a program code transmitted over some transmission medium, such as electrical wiring or cabling, through fiber optics, or via any other form of transmission, wherein, when the program code is received and loaded into and executed by a machine, such as a computer, the machine becomes an apparatus for executing the disclosed methods. When implemented on a general-purpose processor, the program code combines with the processor to provide a unique apparatus that operates analogously to application specific logic circuits.

[0055] While the invention has been described by way of example and in terms of preferred embodiment, it is to be understood that the invention is not limited thereto. Those who are skilled in this technology can still make various alterations and modifications without departing from the scope and spirit of this invention. Therefore, the scope of the present invention shall be defined and protected by the following claims and their equivalent.

Claims

1. An intelligent in-line management system, comprising:
a telecom service system providing a telecom service via a telecom network;
at least one user device corresponding to a candidate user, and having specific telecom ID corresponding to the telecom service; and

a management device recording an in-line requirement comprising the specific telecom ID corresponding to the candidate user, determining whether a specific instruction is received or not, and when the specific instruction is received, connecting to the telecom service system via a network, and automatically generating a voice call to the user device via the telecom network according to the specific telecom ID, thus to notify an admission to the candidate user;

wherein the management device further provides a management interface for inputting the in-line requirement corresponding to the candidate user to the management device, and after the in-line requirement is input to the management device, the management device connects to the telecom service system via the network, and generates and transmits a message to the user device via the telecom network of the telecom service system according to the specific telecom ID, wherein the message comprises a link of an in-line status corresponding to the in-line requirement.

2. The system of claim 1, wherein the user device further receives an operational input corresponding to the voice call, and transmits the operational input to the management device via the telecom service system, wherein the operational input comprises an indication of admission cancel or an indication of admission reservation.

3. The system of claim 1, wherein when the voice call is not answered by the user device, the management device connects to the telecom service system via the network, and generates and transmits a message to the user device via the telecom network of the telecom service system according to the specific telecom ID, thus to notify an admission to the candidate user.

4. The system of claim 1, wherein the telecom service system further provides a data service via a data network, and the user device receives a selection corresponding to the link, links to a page comprising the in-line status in response to the selection, and displays the in-line status in the user device.

5. The system of claim 4, wherein the page comprises an option of admission cancel, and when the user device receives a selection corresponding to the option of admission cancel, the user device transmits the selection corresponding to the option of admission cancel to the management device via the data network, and the management device cancels the in-line requirement corresponding to the candidate user in response to the selection corresponding to the option of admission cancel.

6. The system of claim 1, wherein the specific instruction comprises a touch input via a touch-sensitive screen of the management device.

7. The system of claim 1, wherein the management device further determines whether a dining time corresponding to a specific user is greater than a dining time

limitation, and automatically generates the specific instruction when the dining time corresponding to the specific user is greater than the dining time limitation.

8. An intelligent in-line management system, comprising:

at least one user device corresponding to a candidate user, and having specific ID;

and

a management device recording an in-line requirement including the specific ID corresponding to the candidate user, determining whether a specific instruction is received or not, and when the specific instruction is received, automatically generating a voice call to the user device via a network according to the specific ID, thus to notify an admission to the candidate user;

wherein the management device further provides a management interface for inputting the in-line requirement corresponding to the candidate user to the management device, and after the in-line requirement is input to the management device, the management device generates and transmits a message to the user device via the network according to the specific ID, wherein the message comprises a link of an in-line status corresponding to the in-line requirement.

9. An intelligent in-line management method for use in a telecom service system, at least one user device and a management device, comprising:

providing a management interface for receiving an in-line requirement corresponding to a candidate user of a user device by the management device, wherein the in-line requirement comprises a specific telecom ID of the candidate user in a telecom service provided by the telecom service system;

determining whether the in-line requirement is input to the management device;

when the in-line requirement is input to the management device, connecting the management device to the telecom service system via a network, and generating and transmitting a message to the user device via a telecom network of the telecom service system according to the specific telecom ID, wherein the message comprises a link of an in-line status corresponding to the in-line requirement;

determining whether a specific instruction is received or not by the management device; and

when the specific instruction is received, connecting to the telecom service system via the network by the management device, and automatically generating a voice call to the user device via the telecom network of the telecom service system according to the specific telecom ID, thus to notify an admission to the candidate user.