

METHOD AND APPARATUS FOR EXCHANGING INFORMATION BETWEEN SERVICE PLATFORMS

Field of the Invention

The present invention relates to the Internet technology, and particularly, to a method and an apparatus for exchanging information between service platforms.

Background of the Invention

Along with advancements in Internet technology, various types of web-based services are constantly emerging. The services not only provide convenience for their users in both work and daily life, but also make recreational life of users colorful. A user usually uses multiple web services at the same time, such as instant messaging (IM) services, email services, blog or micro-blog services, social networking services, e-commerce services, online game services, and so on. Conventional web service platforms are independent of each other and are operated individually.

When a first user meets a second user on a web service platform, the first user may hope to get detailed information about the second user such as whether the second user is online, whether the second user has new articles published, whether the second user has concluded a deal or the second user's level or role attributes in a game. In conventional art, the first user may only query the service platform the first user is using to obtain service information of the second user or contact the second user via that platform to ask for the second user's user ID in another service platform, and then uses a user ID to log in the other service platform to get in touch with the second user for service information of the second user in that service platform.

Summary of the Invention

Embodiments of the present invention provide a method and an apparatus for exchanging information between service platforms, for implementing information interaction between web service platforms and allowing users to exchange information across different service platforms.

The method for exchanging information between service platforms according to an embodiment may include:

obtaining, by a first service apparatus of a first service platform, a relation between a first user and a second user provided by a second service apparatus of a second service platform, obtaining service information of the second user in the second service platform based on the

relation between the first user and the second user, and providing the service information for the first user.

The apparatus for exchanging information between service platforms according an embodiment may include:

a relation obtaining module, configured to obtain a relation between a first user and a second user provided by a second service apparatus of a second service platform; and

an information obtaining module, configured to obtain service information of the the second user in the second service platform based on the relation obtained, and to provide the service information for the first user.

Compared with the conventional art, the method and apparatus for exchanging information between service platforms provided by embodiments of the present invention allow users to exchange information across different service platforms.

Brief Descriptions of the Drawings

Fig. 1 is a flowchart illustrating a method for exchanging information between service platforms according to an embodiment of the present invention;

Fig. 2 is a flowchart illustrating a method for exchanging information between service platforms according to an embodiment of the present invention;

Fig. 3 is a schematic diagram illustrating an IM client in an application scenario according to an embodiment of the present invention;

Fig. 4 is a flowchart illustrating a process of adding a contact in an application scenario according to an embodiment of the present invention;

Fig. 5 is a flowchart illustrating a method of adding a contact in an application scenario according to an embodiment of the present invention;

Fig. 6 is a flowchart illustrating a process of displaying state information of a contact in an application scenario according to an embodiment of the present invention;

Fig. 7 is a flow chart illustrating a process of initiating a temporary chatting session with a contact in an application scenario according to an embodiment of the invention;

Fig. 8 is a schematic diagram illustrating a temporary chatting window in an application scenario according to an embodiment of the invention;

Fig. 9 is a flowchart illustrating a process of synchronizing state information of a contact in a game in an application scenario according to an embodiment of the invention;

Fig. 10 is a schematic diagram illustrating a structure of an apparatus for exchanging information between service platforms according to an embodiment of the present invention;

Fig. 11 is a schematic diagram illustrating a structure of a system for exchanging information between service platforms according to an embodiment of the present invention;

Fig. 12 is a schematic diagram illustrating a structure of a system for exchanging information between service platforms according to an embodiment of the present invention.

Detailed Description of the Invention

Technical schemes provided by embodiments of the present invention are hereinafter described clearly and completely in detail with reference to the accompanying drawings.

The technical scheme according to an embodiment mainly includes: a first service apparatus of a first service platform obtains a relation between a first user and a second user provided by a second service apparatus of a second service platform; the first service apparatus of the first service platform obtains service information of the second user in the second service platform based on the relation; the first service apparatus of the first service platform displays the service information for the first user.

The first and the second service platforms are for providing different services for users, and each may be one of an IM service platform, an email service platform, a blog or micro-blog service platform, a social networking platform, an e-commerce platform, an online gaming service platform, and so on.

The first and the second service apparatuses may be clients and/or servers in respective service platforms, may be a group of service apparatuses on the network side. Each of the first and the second service apparatuses may be a standalone device or multiple devices linked by wired or wireless connections. The first and the second service apparatuses may be connected with each other via communication connections. They may be directly connected, or indirectly connected via transit devices, or connected via various communication networks.

The first user and the second user may be in a friend relation (in IM services, social networking, online gaming, etc.), or in a follower relation (usually in blogging services), or in an email sender and receiver relation, or in a seller and buyer relation (in e-commerce services), etc. For simplicity, users in all these relationships are referred to as contacts and the second user is called a contact of the first user.

The service information may include main and general service information of the second user in the second service platform, such as a nickname, a service level, a group that the second user is in, a service zone, online state and service state and so on, and/or more detailed information such as a role in a game, game records and possessions in a game, the number of blog articles posted, titles of blog articles recently posted, recent photos and information on recent transactions, and so on.

Embodiments of the invention generally involve the exchange of user information between service platforms, the method is sometimes also referred to as a method for synchronizing contact information in the following description.

Fig. 1 is a flowchart illustrating a method for exchanging information between service platforms according to an embodiment of present invention (also referred to as a method for synchronizing information of a game contact in the following). The method is applied to a network system including a first service apparatus in a first service platform, a second service apparatus in a second service platform, and a user database. The method may include the following procedures.

In block 101, a second service apparatus updates information of a first user's contact in a second service platform and stores the updated information in a user database.

The user database may be located in an apparatus in any service platform. It may be a part of the first service apparatus or the second service apparatus or a shared database independent of the first and the second service platforms. The first and the second service apparatuses may access the user database in a pre-defined manner. Both the first and the second service apparatuses may communicate with the first user, such as receiving information input by the first user, providing or displaying information for the first user, etc.. In an embodiment, the first and the second service apparatuses may be clients of the first and the second service platforms respectively.

The above method adopting a user database is only an example of the method provided by the present invention. The second service apparatus may also send the information of the contact directly, or indirectly via other intermediate devices, to the first service apparatus, or send the information to the first service apparatus after receiving a request from the first service apparatus.

The information of the contact may refer to information of a relation between the first user and his/her contact in the second service platform.

The relation information may be information of a relation between the first user and the second user generated and stored by the second service apparatus in the second service platform after the first user sends a request to the second service apparatus for establishing a relation (contact relation, follow relation, etc.) in the second service platform with the second user (e.g. a contact of the first user), or relation information generated and to be sent to the first service apparatus by the second service apparatus after the first user sent a request to the second service apparatus for establishing a relation in the first service platform with the second user based on options offered by the second service apparatus to the first user.

The relation information may include one or more types of information in the following: information of the first user's ID in the first service platform, information of the first user's ID in the second service platform, information of the contact's ID in the first service platform, information of the contact's ID in the second service platform and information of the contact's service attributes in the second service platform.

The second service apparatus may obtain information of a user's ID in the first service platform in the following methods: a user's ID information in the first service platform may be in the information the user provided when the user is registered in the second service platform; or a user's ID information in the first service platform may be the user's ID information in the second service platform when the user uses his/her ID in the first service platform as his/her ID in the second service platform; or the user may provide his/her ID information in the first service platform after receiving a request from the second service platform.

The contact is also a user for a service platform. Whether user is referred to as a first user or a first user's contact is determined by the perspective of the description and is merely for facilitating description.

The update process may include: adding, deleting or modifying a contact's information.

In block 102, the second service apparatus triggers the first service apparatus to synchronize the updated contact information via the user database, and the first service apparatus displays contacts in groups.

In an embodiment, the first service apparatus may obtain the updated contact information by actively accessing the user database and display contacts in groups based on the updated contact information. Displaying contacts in groups is merely adopted in some embodiments, and other embodiments may do not require grouping of contacts. The criteria for grouping contacts may be the service zone, user level, state or other attributes of the contacts in the second service platform. For example, when the second service platform is a game platform,

the contacts may be grouped according to the service zones where the contacts play games, or according to game levels or state of the contacts, the gaming state or other information. For example, if prior to an information update, a contact is in Zone 1 in Guangdong, a first client may display the contact in a list corresponding to Zone 1 in Guangdong; if the contact is found in Zone 2 in Guangdong after the information update, the first client may display the contact in a list corresponding to Zone 2 in Guangdong. The first client may display at least one of the following types of information: the contacts' ID information in the second service platform, the contacts' state information in the second service platform, and the contacts' state information in the first service platform.

the first service apparatus may directly obtain ID information of the first user in the first service platform from the relation, or may obtain ID information of the first user in the first service platform based on ID information of the first user in the second service platform in the relation and ID information of the first user in the second service platform inputted by the first user into the first service platform, and so on.

In an embodiment, after updating the contact information, the second service apparatus may also display contacts in groups according to the updated contact information using the above method. The grouping may be as described in the above example, e.g. based on the game zone where a contact belongs, or based on the contacts' game levels, or based on other information such as the contact's state and so on.

The method may also include the following procedures.

The first service apparatus may trigger a main panel display event and obtain ID information of the first user. The ID information of the first user may be the first user's ID information in the first service platform or in the second service platform. When the first service apparatus is an IM client and the second service apparatus is a game client, the ID information may be an IM identification or a game account identification.

The first service apparatus may search the user database based on the ID information of the first user for state information of a contact of the first user, and display the state information on the main panel of the first service apparatus. When the first service platform is an IM platform and the second service platform is a game platform, the state information may include the name of the role of the contact in the game, and an IM state of the contact and/or a game state of the contact.

The method may also include the following procedures.

The first service apparatus may receive a contact query request from the first user, obtain ID information of the contact. The ID information may be information of the ID of the contact in the first service platform or in the second service platform.

The first service apparatus may obtain second service information of the contact in the second service platform based on the ID information of the contact, and display the second service information. The service information may be displayed in a pop up window or in a balloon or in a floating window.

The second service information may include various aspects of information of the contact uses in the second service platform, such as a user level, experience points, total number of blog articles posted, the number of fans, game possessions and role information in a game, and so on. For example, the role information in a game may includes at least one of: a game level, a profession in the game and game attributes such as experience points, combat records and attributes of possessions and so on.

When the first service apparatus is an IM client and the second service apparatus is a game client, the IM client may trigger a game role query event and obtain an IM ID or an account number in the game platform of the contact.

The IM client may search the user database for role information of the contact in a game based on the contact's IM ID or account number in the game platform, and display the role information on the IM client (e.g. in a game role information card).

The method may also include the following procedures.

The first service apparatus may trigger a temporary chatting event and obtain state information of the contact in the first service platform and/or in the second service platform. The state information may be offline, online or other states. If the contact is online in the first service platform, the first service apparatus may send a temporary chatting message to a first service client being used by the contact and establish a chatting connection between the first user and the contact in the first service platform. If the contact is offline in the first service platform and is online in the second service platform, the first service apparatus may send a temporary chatting message to a second service client in the second service platform being used by the contact, request assistance of the second service apparatus in establishing a chatting connection between the first service client in the first service platform being used by first user and the second service client in the second service platform being used by the contact. If the contact is offline in both the first and the second service platforms, the first service apparatus may store the temporary chatting message into a session server in the first service

platform and initiate the above procedures for establishing a chatting connection between the first user and the contact when the contact is online in the first service platform or the second service platform. After the chatting connection is established, the first user and the contact may start chatting via the connection. The chatting messages may be forwarded by the first service apparatus (when the chatting connection is established in the first service platform) or by the first service apparatus together with the second service apparatus (when the chatting connection is established across the first service platform and the second service platform).

In an embodiment, when the first service platform is an IM platform and second service platform is a game platform, if the contact is online in the IM platform, the IM client of the first user may send a temporary chatting message to the IM client of the contact. If the contact is offline in the IM platform and is online in the game platform, the IM client of the first user may send a temporary chatting message to the game client of the contact. If the contact is offline in both the IM and game platforms, the client of the first user may store the temporary chatting message into a session server.

An embodiment provides another method for exchanging information between service platforms, as shown in Fig. 2. The method is applicable to a network system including a first service apparatus of a first service platform serving a first user, a second service apparatus of a second service platform serving a second user, and a user database. The second user is a contact of the first user. The method may include the following procedures.

In block 201, the second service apparatus updates information of the second user and stores the information of the second user into the user database.

In block 202, the second service apparatus instructs the first service apparatus to synchronize the information of the second user via the user database, and the first service apparatus displays information of the second user in groups.

In an embodiment, block 202 may include: the second service apparatus sends a state update event to the first service apparatus, and the first service apparatus synchronizes the information of the second user using the information stored in the user database and provides the updated information for the first user.

When the second service apparatus is a game client of the second user and the first service apparatus is an IM client of the first user, the update process may include: the game client of the second user updates game attribute information of the second user.

The above synchronization process may include: the IM client of the first user obtains the game attribute information of the second user and updates the display order of the second user in a contact list in real time according to the game attribute information. The game attribute information may include information about a game zone, a game level, a game state (preparing for a game, playing the game, not in game, etc.), a profession in a game, possessions in the game, experience points, combat records, etc.

In an embodiment, a contact in the second service platform may be automatically loaded into the first service platform, thus eliminating the need of adding the contact manually. Furthermore, a user may view his/her contact's service information in the second service platform via the first service apparatus without having to log in to the second service platform, thereby user experience is improved.

In an embodiment, the first service apparatus may display only part of the contact information according to configurations or pre-set rules or according to privilege information in the user's settings for access his/her information in each service platform. For example, the first service apparatus may be configured to display a contact's service information in the second service platform only and not to display the contact's personal information in the first service platform. When a user requests to access the information which is not allowed to be displayed, the request will be rejected, and further in some embodiments, a popup window may be displayed to inform the user that the access to the information is not allowed. For example, an IM client may be configured to display a contact's game information only and not to display the contact's IM ID and other personal information in the IM system. This provides effective protection for the contact's privacy.

The following is a detailed description of a method for exchanging information between service platforms in an exemplary application scenario as shown in Fig. 3. In the application scenario, the first service apparatus is an IM client and the second service apparatus is a game client. They are serving the same user. In the example shown in Fig. 3, the box on the right side shows contents displayed by the main panel of the IM client and the box on the left side shows service information of contacts. There are two tabs in the main panel of the IM client, which respectively display a list of contacts in the game platform and a list of contacts in another platform. The user may view contact information by switching between the two tabs. In the tab shown in Fig. 3, contacts in the game platform form the contact list. The contacts may be displayed in groups. The user may opt to unfold each contact group of interest and fold other groups. A displayed nickname of a contact is the name used by the contact for his/her role in the game within the game platform. When the user moves his/her mouse onto a contact

in the contact list or selects an entry in a right-click menu, a window (a popup window or a floating window) is displayed, showing contents in the left list such as role information of the contact in a game in the game platform, including a nickname, a profession, a level of the role and so on.

The user may double-click on a contact in the contact list to trigger a temporary chatting event in the first service apparatus. If the contact is online in the first service platform, the first service apparatus may display a temporary chatting window for the user to chat with the contact in the first service platform. The first service apparatus may also be configured to display the contact's real information (when the first service apparatus judges that it is allowed according to pre-set rules in the platforms or the contact's settings). If the contact is offline in the first service platform but is online in the second service platform, the first service apparatus may send a message and the second service apparatus serving the contact may display the message on a panel of the second service apparatus. Thus communications between a user in the first service platform and a user in the second service platform can be implemented. If the contact is offline in both the first service platform and the second service platform, the first service apparatus serving the contact may display the message on its panel when the contact logs into the first service platform; or, when the contact logs into the second service platform, the second service apparatus may display the message for the contact on its interface.

In the above examples, messages may be sent between the first service platform and the second service platform either directly or via an intermediate device. Any communication protocol may be adopted for the communications such as TCP/IP and so on.

The user may use the first service apparatus and/or the second service apparatus to update the information of his/her contacts in the second service platform, i.e. adding, modifying or deleting a contact. Fig. 4 is a flowchart illustrating a process of adding a contact in an application scenario according to an embodiment of the present invention. The first service apparatus may be an IM client and the second service apparatus may be a game client. The method may include the following procedures.

In block 401, the game client adds a contact and stores a relation between the user and the contact into a user database.

In block 402, the user database triggers the IM client to obtain the information of the relation between the user and the contact.

In block 403, the IM client obtains the relation information and adds information of the contact onto the main panel according to the relation information.

In an embodiment, when the user adds a contact using the IM client, the user may also trigger the game client via the user database to add the same contact. When contact information is modified or a contact is deleted, a similar process may also be adopted to synchronize IM clients and game clients. In addition, the order of the procedures of the methods provided by the embodiments being executed may be adjusted according to the needs.

In the above embodiments, the IM client and the game client may synchronize the addition, modification and deletion of a contact. In an embodiment, after the user opens a game panel in the main panel of the IM client (i.e. the tab for game contacts), the IM client may also display state information of a contact on the main panel, i.e. the contact list. The display process, as shown in Fig. 5, may include the following procedures.

In block 501, the IM client triggers a main panel display event and obtains an IM ID of the user.

In an embodiment, the IM client may trigger a main panel display event by opening a game panel.

In block 502, the IM client searches the user database according to the IM ID of the user and obtains state information of a contact of the user.

In block 503, the IM client displays the state information of the contact on a game panel.

The state information of the contact may include a name the contact uses for a role in a game, an IM state and/or a game state of the contact and a server zone where the contact belongs. If the game state of the contact is online, the IM client may display further information of the contact such as the channel of the game participated by the contact.

In an embodiment, the state information of the contact may also include the IM ID of the contact. The IM ID of the contact may only be stored in the IM client of the user and will not be displayed by the IM client, i.e. not open to the user.

In an embodiment, the IM client may also obtain state information of union members in an online game played by the user, and display the state information on the game panel. The state information of a union member may include a user name, an IM state and/or a game state of the union member.

In an embodiment, the IM client may also display the information of the role played by a contact in a game, as shown in Fig. 6. The process may include the following procedures.

In block 601, the IM client triggers a game role query event and obtains the IM ID of the contact.

In an embodiment, the game role query event may be triggered by a right-click operation on the contacts list. The IM ID of the contact may be obtained from information stored in the IM client in advance or by querying the user database.

In block 602, the IM client searches the user database according to the IM ID of the contact for the information of the role played by the contact in a game.

In block 603, the IM client displays the game role information in a game role information card.

The game role information may include at least one of: a game level, a profession in the game and attributes information.

In an embodiment, the user may initiate a temporary chat with a contact, as shown in Fig. 7. This process may include the following procedures.

In block 701, the IM client of the user triggers a temporary chatting event and obtains the IM ID of the user.

In an embodiment, the user may double click on a contact list to make the IM client trigger a temporary chatting event.

In block 702, the IM client of the user searches the user database based on the IM ID of the user for state information of the contact.

If the contact is online in the IM platform, the procedure in block 703 is performed; if the contact is online in the game platform, the procedure in block 704 is performed; and if the contact is offline in both the IM platform and the game platform, the procedure in block 705 is implemented.

In block 703, the IM client of the user sends a temporary chatting message to the IM client of the contact.

In an embodiment, if the contact is online in the IM platform, the IM ID of the contact is obtained and a temporary chatting window is established between the IM client of the user and the IM client of the contact. Through the chatting window, various types of information may be exchanged, such as texts, expressions and pictures, and so on. Fig. 8 is a schematic diagram

illustrating an exemplary temporary chatting window. If the contact registered a name card, real information of the contact may also be accessed by the user.

In block 704, the IM client of the user sends a temporary chatting message to the IM client of the contact.

In an embodiment, if the contact is online in the game platform, a chatting interface with the contact is established to enable communications between the IM client and the game client. Text communications may be implemented by using the Socket technique. Once the communications is established, the temporary chatting message is displayed on a game interface for the contact and the contact may also reply to messages via the game interface.

In block 705, the IM client of the user stores the temporary chatting message in a session server.

In an embodiment, after the temporary chatting message is stored in the session server, the message may not be sent immediately; instead, the messages may be sent to an IM client of the contact after the contact logs in from the IM client. If the contact logs in from a game client, the temporary chatting message may be displayed in a game interface for the contact.

In other embodiments, a user may initiate a temporary chat with a contact by using a game client through a process the same or a similar to the above process.

In an embodiment, when contact information is updated, the information may also be updated at the client of the user at the same time, as shown in Fig. 9. The process may include the following procedures.

In block 901, the IM client of the contact updates information of the contact and stores the updated information into the user database.

In an embodiment, the contact information may include the attributes information of the contact in the game and the state of the contact. For example, the IM client of the contact may update state of the contact to “offline” from “online”.

In block 902, the IM client of the contact sends a state update event to the IM client of the user.

In block 903, the IM client of the user synchronizes the information of the contact stored in the user database.

In an embodiment, the IM client may update the state of the contact displayed in the main panel, such as changing the contact’s state to “offline” from “online”.

In addition, when the client of the contact is an IM client and the client of the user is an IM client, if the IM client of the contact updates game attributes of the contact, the IM client of the user may obtain the game attributes of the contact and dynamically update the display order of the contact in a contacts list according to the game attributes. The contact list may display contacts in groups according to the game zones or other information such as game levels of the contacts. The game attributes of the contact may include game zone information or other information such as a game level.

The above embodiments provide methods for synchronizing contact information and multiple application scenarios. Accordingly, embodiments also provide an apparatus performing the above methods for synchronizing contact information.

The apparatus may belong to a first service platform and may include:

a relation obtaining module, configured to obtain information of a relation between a first user and a second user provided by a second service apparatus of a second service platform;

an information obtaining module, configured to obtain service information of the second user in the second service platform according to the relation information obtained and to provide the service information obtained for the first user.

The information obtaining module may also obtain state information of the second user in the first service platform based on the relation information and provide the state information for the first user.

The apparatus may also include:

a first request receiving module, configured to receive a request from a first user for obtaining detailed information of a second user. The information obtaining module may obtain detailed information of the second user in the second service platform according to the relation information and provide the detailed information for the first user.

The apparatus may also include: a second request receiving module, configured to receive a request from the first user for obtaining information of the second user in the first service platform. The information obtaining module may judge whether the first user is allowed to obtain the information of second user in the first service platform based on pre-set rules or settings information defined by the second user. If the query is allowed, the information obtaining module may obtain the information of the second user in the first service platform based on the relation information and provide the information for the first user. If the query is not allowed, the information obtaining module may refuse the request.

The apparatus may also include: a third request receiving module, configured to receive a request from first user for establishing a chatting connection with the second user; a session establishing module, configured to obtain first state information of the second user in the first service platform based on the request and the relation information, judge whether the second user is online in the first service platform based on the state information, and establish a chatting connection within the first service platform for the first user and the second user in response to a determination that the second user is online; or obtain second state information of the second user in the second service platform based on the relation information or the service information in response to a determination that the second user is offline, judge whether the second user is online in the second service platform based on the second state information, and send a request to a second service apparatus of the second user for establishing a chatting connection between first user and second user in response to a determination that the second user is online in the second service platform.

The apparatus may also include: a fourth request receiving module, configured to receive a request from a third user for establishing a relation with a fourth user, obtain ID information of the third user and the fourth user, generate a relation between the third user and the fourth user according to the ID information of the third user and the fourth user, and provide information of the relation for a third service apparatus of a third service platform. The service apparatus may also include an information updating module, configured to receive an information update request from the third user and provide updated information of the third user for the third service apparatus.

In the above service apparatus, the information obtaining module is configured to group multiple second users having a relation with the first user, and display service information of the users in groups.

In the above embodiments, the modules are divided only by functions. In practice, the apparatus may be implemented according to the above structure, or using another structure by integrating the above modules into one or splitting one of the above modules into multiple modules.

The following provides an example of a service apparatus with a different structure from the one described above.

Fig. 10 is a schematic diagram of a structure of an apparatus for exchanging information between service platforms according to an embodiment. The apparatus may belong to a first service platform and may include the following components.

An updating module 1010 is configured to update information of a first user and/or information of a contact of the first user, and store the updated information into a user database.

In an embodiment, the updating module 1010 may add, delete or modify contact information. The contact information may be information of a relation between the first user and a contact.

A triggering module 1020 is configured to trigger a second service apparatus of a second service platform to synchronize the information updated by the updating module via the user database and display contacts in groups according to the information.

In an embodiment, the triggering module 1020 may send a state update event to the second service apparatus for synchronizing information of the user stored in the user database.

A displaying module 1030 is configured to receive a display event from a main panel, obtain ID information of the first user, search a first user database for state information of the contacts of the user based on the user ID information, and display the state information in the main panel. The state information of the contact may include ID information of the contact in a third service platform, such as the name of a role played by the contact in a game, and state information of the contact in the first service platform and/or in the third service platform.

A querying module 1040 is configured to receive a contact information query event, obtain ID information of the contact, search a user database for information of the contact in the third service platform based on the ID information of the contact, and display the information via displaying module 1030 (e.g. in a game role information card in the IM client).

A chatting module 1050 is configured to receive a temporary chatting event and obtain state information of a contact, send a temporary chatting message to a first service apparatus serving the contact in response to a determination that the contact is online in the first service platform; send a temporary chatting message to a third service apparatus serving the contact in response to a determination that the contact is offline in the first service platform and online in a game in the third service platform; and store the temporary chatting message in a chatting server in response to a determination that the contact is offline in both the first service platform and the third service platform,.

Fig. 11 is a schematic diagram illustrates a structure of a system for exchanging information between service platforms according to an embodiment. The system may include

a second service apparatus 1110 of a second service platform, a first service apparatus 1120 of a first service platform and a user database 1130.

The second service apparatus 1110 is configured to update information of a contact, store the updated information into the user database, and trigger the first service apparatus 1120 via the user database 1130 for synchronizing the updated information.

In an embodiment, the second service apparatus 1110 may add, delete and modify contact information. The contact information may include information of a relation between the user of a second client and a contact of the first user in the second service platform.

The first service apparatus 1120 may trigger a main panel display event, obtain user ID information, search the user database for state information of the contact of the user in the second service platform based on the user ID information, and display the state information of the contact in the main panel of the first service apparatus. The state information of the contact may include ID information of the contact in the second service platform, such as the name of a role played by the contact in a game, and state information of the contact in the first service platform and/or in the second service platform.

The first service apparatus 1120 may also trigger a contact information query event, obtain ID information of the contact, search the user database for service information of the contact in the second service platform based on the ID information, and display the service information in the first service apparatus 1120 (e.g. in a game role information card in the IM client).

The first service apparatus 1120 may also trigger a temporary chatting event and obtain state information of the contact, send a temporary chatting message to a first service client of the contact in response to a determination that the contact is online in the first service platform; send the temporary chatting message to a second service client of the contact in response to a determination that the contact is offline in the first service platform and online in the second service platform; and store the temporary chatting message into a chatting server in response to a determination that the contact is offline in both the first service platform and the second service platform.

A first client 1120 is configured to synchronize the updated contact information according to the user database 1130 and display contacts in groups according to the contact information.

The user database 1130 is configured to store the contact information updated by second service apparatus 1110.

Fig. 12 is a schematic diagram of a structure of a system for exchanging information between platforms according to an embodiment. The system may include a client 1210 of a first user in a first service platform, a client 1220 of a second user in second service platform and a user database 1230. The first user is a contact of the second user.

The client 1210 of the first user is configured to update information of the first user, store the updated information into the user database 1230 and trigger the client 1220 of the second user via the user database 1230 to synchronize the information of the first user.

The client 1210 of the first user may be a first IM client of the first user, the client 1220 of the second user may be a game client of the second user. In another embodiment, the client 1210 of the first user may be a game client of the first user and the client 1220 of the second user may be an IM client of the second user.

In an embodiment, the client 1210 of the first user may send a state update event to the client 1220 of the second user for synchronizing the information of the first user stored in the user database 1230.

When the client 1210 of the first user is an IM client of the first user, the IM client may trigger a main panel display event, obtain an IM ID of the first user, search the user database for the information of the second user by using the IM ID of the first user, and display the information of the second user on the main panel of the IM client. The information of the second user may include a user name, an IM state and/or a game state of second user.

When the client 1210 of the first user is an IM client, the IM client may trigger a game role query event, obtain an IM ID of the second user, search the user database for information of the role played by the second user in a game according to the IM ID of the second user, and display the game role information in the IM client (e.g. in a game role information card).

The client 1210 of the first user may trigger a temporary chatting event and obtain state information of the second user, send a temporary chatting message to the IM client of the second user in response to a determination that the second user is online in the IM platform; send a temporary chatting message to the game client of the second user in response to a determination that the second user is offline in the IM platform and online in the game platform; and store the temporary chatting message in a chatting server in response to a determination that the second user is offline in both the IM platform and the game platform.

The client 1220 of the second user is configured to synchronize the information of the first user according to the user database 1230 and display the first user in a group according to the information of the first user.

The user database 1230 is configured to store the information of the first user updated by the client 1210 of the first user.

From the above descriptions, the person skilled in the art is able to clearly understand that this invention may be implemented by software and necessary general-purpose hardware platform. It may also be implemented only by means of hardware. In many cases, the former manner may be adopted. Based on this understanding, the technical scheme provided by this invention can, in essence or from the aspect of its contributions to the conventional art, be embodied in the form of software products. The computer software product may be stored in a non-transitory storage medium, including a series of commands to make a terminal device (a handset, a PC, a server or a network device) implement the methods provided by the embodiments of the invention.

The foregoing is only embodiments of the present invention. The protection scope of the present invention, however, is not limited to the above description. Any change or substitution, easily occurring to those skilled in the art, should be covered by the protection scope of the present invention.

Claims

1. A method for exchanging information between service platforms, comprising:

obtaining, by a first service apparatus of a first service platform, information of a relation between a first user and a second user provided by a second service apparatus of a second service platform, obtaining service information of the second user in the second service platform based on the relation information, and providing the service information for the first user.

2. The method of claim 1, further comprising:

obtaining, by the first service apparatus, state information of the second user in the first service platform based on the relation information and providing the state information for the first user.

3. The method of claim 1, further comprising:

receiving, by the first service apparatus, a request from the first user for obtaining second service information of the second user, obtaining the second service information of the second user in the second service platform based on the relation information, and providing the second service information for the first user.

4. The method of claim 1, further comprising:

receiving, by the first service apparatus, a request from the first user for obtaining information of the second user in the first service platform, judging whether the first user is allowed to obtain the information of the second user in the first service platform according to pre-set rules or settings information defined by the second user, obtaining the information of the second user in the first service platform based on the relation information in response to a determination that the first user is allowed to obtain the information, and providing the information for first user; or rejecting the request from first user in response to a determination that the first user is not allowed to obtain the information.

5. The method of claim 1, further comprising:

receiving, by the first service apparatus, a request from the first user for establishing a chatting connection with the second user, obtaining a first state information of the second user

in the first service platform according to the relation information, and judging whether the second user is online in the first service platform based on the first state information;

establishing a chatting connection between the first user and the second user in the first service platform in response to a determination that the second user is online in the first service platform;

obtaining second state information of the second user in the second service platform based on the relation information or the service information in response to a determination that the second user is offline in the first service platform, and judges whether the second user is online in the second service platform based on the second state information, sending a request to the second service apparatus for establishing a chatting connection between the first user and the second user in response to a determination that the second user is online in the second service platform.

6. The method of claim 1, further comprising:

receiving, by the second service apparatus, a request from the first user for establishing a relation between the first user and the second user, obtaining ID information of the first user and ID information of the second user, generating a relation between the first user and the second user according to the ID information of the first user and the ID information of the second user, and providing information of the relation for the first service apparatus.

7. The method of any of claims 1-6, wherein the relation information comprises ID information of the first user and ID information of the second user; the ID information of the first user comprises ID information of the first user in the first service platform and/or in the second service platform, and the ID information of second user comprises ID information of the second user in the first service platform and/or in the second service platform.

8. The method of claim 1, further comprising:

providing, by the second service apparatus, updated service information for the first service apparatus when detecting an update of the service information of the second user;

providing, by the first service apparatus, the updated service information of the second user for the first user.

9. The method of claim 1, wherein the providing the service information for the first user comprises:

grouping, by the first service apparatus, multiple second users having a relation with the first user based on the service information and displaying the service information of the second users in groups.

10. The method of claim 1, wherein when the first service platform is an instant messaging (IM) platform and the second service platform is a game platform, the service information and/or the second service information comprise at least one of: a nickname, an online state, a gaming state and game attribute information of the second user in the game platform.

11. The method of claim 10, wherein the game attribute information comprises at least one of: a level, a profession, a game zone, possessions in a game, experience points and combat records.

12. A service apparatus for exchanging information between service platforms, belonging to a first service platform, comprising:

a relation obtaining module, configured to obtain information of a relation between a first user and a second user provided by a second service apparatus of a second service platform;

an information obtaining module, configured to obtain service information of the second user in the second service platform based on the relation information and to provide the service information of the second user for the first user.

13. The service apparatus of claim 12, wherein

the information obtaining module is further configured to obtain state information of the second user in the first service platform based on the relation information and to provide the state information for the first user.

14. The service apparatus of claim 12, further comprising:

a first request receiving module, configured to receive a request from the first user for obtaining second service information of the second user;

wherein the information obtaining module is further configured to obtain the second service information of the second user in the second service platform based on the relation information, and to provide the second service information for the first user.

15. The service apparatus of claim 12, further comprising:

a second request receiving module, configured to receive a request from a first user for obtaining information of the second user in the first service platform;

wherein the information obtaining module is further configured to judge whether the first user is allowed to obtain the information of the second user in the first service platform according to pre-set rules or settings information defined by the second user, obtain the information of the second user in the first service platform based on the relation information in response to a determination that the first user is allowed to obtain the information, and provide the information for the first user; to reject the request in response to a determination that the first user is not allowed to obtain the information.

16. The service apparatus of claim 12, further comprising:

a third request receiving module, configured to receive a request from the first user for establishing a chatting connection with the second user; and

a chatting establishing module, configured to obtain first state information of the second user in the first service platform based on the request and the relation information, judge whether the second user is online in the first service platform based on the first state information, establish a chatting connection in the first service platform between the first user and the second user in response to a determination that the second user is online in the first service platform; obtain second state information of the second user in the second service platform based on the relation information or the service information in response to a determination that the second user is offline in the first service platform, judge whether the second user is online in the second service platform based on the second state information, and request the second service apparatus to establish a chatting connection between the first user and the second user in response to a determination that second user is online in the second service platform.

17. The service apparatus of claim 12, further comprising:

a fourth request receiving module, configured to receive a request from a third user for establishing a relation with a fourth user, obtain ID information of the third user and ID information of the fourth user, generate a relation between the third user and the fourth user based on the ID information of the third user and the ID information of the fourth user, and provide information of the relation for a third service apparatus of a third service platform.

18. The service apparatus of claim 17, further comprising:

an information updating module, configured to receive an information update request from the fourth user and provide updated information of the fourth user for the third service apparatus.

19. The service apparatus of claim 12, wherein

the information obtaining module is configured to group multiple second users having a relation with the first user based on the service information and display the service information of the multiple second users in groups.

20. The service apparatus of claim 12, wherein when the first service platform is an instant messaging (IM) platform and the second service platform is a game platform, the service information and/or the second service information comprise at least one of: a nickname, an online state, a gaming state and game attribute information of the second user in the game platform.

21. The service apparatus of claim 12, wherein the game attribute information comprises at least one of: a level, a profession, a game zone, possessions in a game, experience points and combat records.