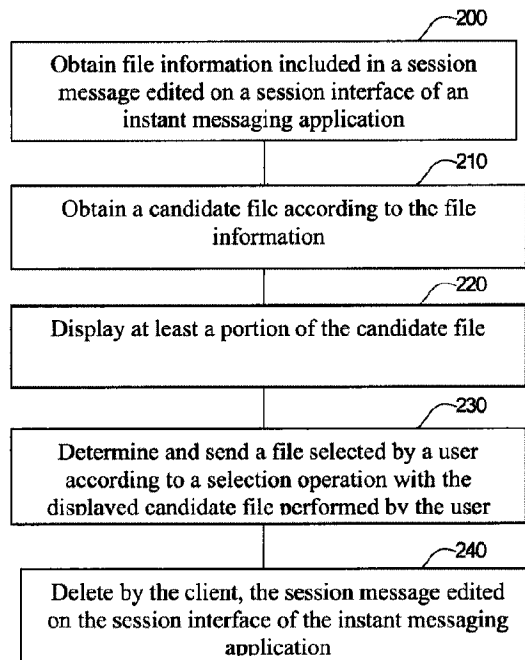




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(57) **Abrégé/Abstract:**

Provided are a file sending method in an instant messaging application and a corresponding client and server. According to an example of the file sending method, a client may obtain file information included in a session message edited on a session interface of an instant messaging application and obtain a candidate file according to the file information. The client may then present at least a portion of the candidate file and determine and send the file selected by a user according to a selection operation with the presented candidate file performed by the user. File sending efficiency in the instant messaging application can be effectively improved by automatically searching for the matched file according to the file information input by a user and displaying the same to the user for the user to select, without requiring the user to browse a file storage directory step by step.

Abstract

Provided are a file sending method in an instant messaging application and a corresponding client and server. According to an example of the file sending method, a client may obtain file information included in a session message edited on a session interface of an instant messaging application and obtain a candidate file according to the file information. The client may then present at least a portion of the candidate file and determine and send the file selected by a user according to a selection operation with the presented candidate file performed by the user. File sending efficiency in the instant messaging application can be effectively improved by automatically searching for the matched file according to the file information input by a user and displaying the same to the user for the user to select, without requiring the user to browse a file storage directory step by step.

FILE SENDING IN INSTANT MESSAGING APPLICATIONS

Related applications

[01] This patent application claims the priority of the Chinese patent application entitled “File sending method and device in an instant messaging application, an electronic device,” which was filed on May 8, 2017, with the application number 201710318822.8.

Technical Field

[02] The present application relates to a file sending method and device, and an electronic device in an instant messaging application.

Background Art

[03] In an instant messaging application, when a session object sends a file to other session objects in the current session, it is necessary to first click on a file sending icon provided on the session interface; a file browser is then invoked by the instant messaging application, the session object next manually opens the local folders one by one, views the file names, and finally selects the file to be sent.

[04] Since the user is required to manually open the folders one by one and manually search for the file to be sent, the sending file operation is inefficient.

Summary of the Invention

[05] In view of the foregoing, according to a first aspect of the present invention, a file sending method in an instant messaging application is provided. The method comprises: obtaining, by a client, file information included in a session message edited on a session interface of an instant messaging application; obtaining, by the client, a candidate file according to the file information; displaying, by the client, at least a portion of the candidate file; determining and sending, by the client, a file selected by a user according to a selection operation with the displayed candidate file performed by the user.

[06] According to a second aspect of the present invention, a file sending device in an instant messaging application is provided. The device comprises: a file information obtaining module, which is used for obtaining file information included in a session message edited on a session interface of an instant messaging application; a candidate file obtaining module, which is used for obtaining, by the client, a candidate file according to the file information; a candidate file displaying module, which is used for displaying at least a portion of the candidate file; a file sending module, which is used for determining and sending a file selected by a user according to a selection operation with the displayed candidate file performed by the user.

[07] According to a third aspect of the present invention, a file sending method in an instant messaging application is provided. The method comprises: receiving, by a server, a file search request sent by a client, wherein the file search request comprises file information; searching, by the server, a candidate file that matches the file information; and sending, by the server, the candidate file to the client to display at least a portion of the candidate file at the client.

[08] According to a fourth aspect of the present invention, a file sending device in an instant messaging application is provided. The device comprises: a file search request receiving module, which is used for receiving, by a server, a file search request sent by a client, wherein the file search request comprises file information; and a searching and sending module, which is used for searching a candidate file that matches the file information and sending the candidate file to the client to display at least a portion of the candidate file at the client.

[09] According to a fifth aspect of the present invention, an electronic device is provided. The electronic device comprises: a memory, a processor, and a computer program stored on the memory and operable on the processor, the processor executing the computer program to implement the file sending method in the instant messaging application mentioned above.

[10] According to a sixth aspect of the present invention, a computer readable storage medium is provided. The computer readable storage medium has a computer program stored thereon, and a processor executes the computer program to implement the file sending method in an instant messaging application as mentioned above.

[11] By means of obtaining file information included in a session message edited on a session interface of an instant messaging application; obtaining a candidate file according to the file information; displaying at least a portion of the candidate file; and determining and sending a file selected by a user according to a selection operation with the displayed candidate file performed by the user, the problem that the instant messaging application in the prior art is inefficient when sending a file has been solved. By automatically searching for the matching file according to the file information input by the user, and displaying it to the user for the user to select, the user does not need to browse the file storage directory step by step, thereby effectively improving the efficiency of file sending.

Brief Description of the Drawings

[12] In order to more clearly illustrate the technical solutions of the embodiments of the present application, the drawings used in the embodiments or the prior art description will be briefly described below. The drawings in the following description are only some embodiments of the present application. For a person of ordinary skill in the art, without requiring any inventive skills, other drawings can also be obtained from the drawings.

[13] FIG. 1 is a schematic flowchart of a file sending method according to an embodiment of the present application.

[14] FIG. 2 is a schematic flowchart of a file sending method according to another embodiment of the present application.

[15] FIG. 3 is a schematic diagram of an interface for displaying a candidate file in a file sending method according to an embodiment of the present application.

[16] FIG. 4 is a schematic flowchart of a file sending method according to another embodiment of the present application.

[17] FIG. 5 is a schematic structural diagram of a file sending device according to an embodiment of the present application.

[18] FIG. 6 is a schematic structural diagram of a file sending device according to another embodiment of the present application.

[19] FIG. 7 is a schematic structural diagram of a file sending device according to another embodiment of the present application.

[20] FIG. 8 is a schematic structural diagram of a file sending device according to another embodiment of the present application.

Description of the Embodiments

[21] The technical solutions of the embodiments of the present application will be clearly and completely described in the following with reference to the accompanying drawings. It is apparent that the described embodiments are part of the embodiments of the present application, and not all of them. All other embodiments obtained by a person of ordinary skill in the art based on the embodiments of the present application without departing from the inventive scope should be within the scope of protection of the present application.

[22] A file sending method in an instant messaging application according to an embodiment of the present application is applicable to an instant messaging application client. As shown in FIG. 1, the method may include steps 100 through 130.

[23] Step 100 is obtaining file information included in a session message edited on a session interface of an instant messaging application.

[24] In an instant messaging application, a session participant may be referred to as a session object, and a session object may edit the session message through an editor on the session interface.

[25] The instant messaging application can get the session message entered in the editor by calling the interface provided by the system. For example, the session message obtained by the instant messaging application can be a string type. The instant messaging application can identify the obtained session message in real time to identify whether a preset character is included. For example, it can be identified if the session message contains “#?#,” where “?” can represent any number of characters.

[26] Alternatively, after inputting the session message, a user clicks the send icon to send the session message to the other session object through an instant messaging application server. The instant messaging application can obtain the session message output from the editor by means of calling an interface provided by the system after detecting that the send icon is pressed. For example, the session message obtained by the instant messaging application can be a string type.

[27] The instant messaging application can further identify the character in the obtained session message output by the editor to identify whether a preset character is included therein. For example, it can be identified if the session message contains “#?#,” where “?” represents any number of characters. An instant messaging application can identify whether a session message contains “#?#” via a regular expression or by calling a character matching function. When “#?#” is included in the session message, “?” is the file information. For example, after identifying “#Financial Statement #” in the session message, it is determined that “Financial Statement” is the file information.

[28] The preset characters in the session message can be represented by the following format: first preset character + file information + second preset character. The first preset character and the second preset character may be: #, 《, 》, &, and the like which are not defined as characters having special meanings, and the first preset character and the second preset character may be the same or may be different. The file information may include a file name, an author, a date of modification, a date of creation, and the like. The session message containing the file

information can be exemplified as follows: #Li Bai#, # Financial Statement#, 《Labor Contract》 .

[29] Step 110 is obtaining a candidate file according to the file information.

[30] After obtaining the file information, the instant messaging application can obtain a candidate file at the local electronic device or through an instant messaging application server. The file information may include a file name, an author, a modification date, a creation date, and the like. In the case where the file information is a file name, the instant messaging application may then search for a file containing the file information in the locally stored file name by calling an interface provided by the system at the local client, and use the file obtained from the search as a candidate file.

[31] Alternatively, still using the case where the file information is the file name as an example, the instant messaging application may send a file search request to an instant messaging application server, which can include the file information. After receiving the file search request, the instant messaging application server may search for a file containing the file information in the file name in the server local and/or third party database. Then, the instant messaging application server may feed back the file list found in the search to the instant messaging application client that issues the file search request in a JSON (JavaScript Object Notation) data format, which will be parsed and displayed by the client.

[32] If the file information is an author, only the author attribute of the file needs to be matched in the search. If the file information is a date of modification, only the date of modification attribute of the file needs to be matched in the search. If the file information is a date of creation, only the date of creation attribute of the file needs to be matched in the search.

[33] For an electronic device with high computing power, or a server, the file information can also be file content. If the file information is the file content, the file name and file text may be matched when searching for the file.

[34] Step 120 is displaying at least a portion of the candidate file.

[35] After the instant messaging application client obtains the candidate file, the entire candidate file or a part of the candidate files may be displayed for the user to select and send. For example, the instant messaging application client can create a floating window on the current session interface area or the input method area by calling an interface provided by the system for displaying the list of candidate files. In view of the limitation of the display space, the instant messaging application client may select a part of the candidate file with a higher matching degree to be displayed in the floating window according to the matching degree between the candidate file found in the search and the file information. The instant messaging application client can also create a list box within the floating window to display more candidate files, allowing the user to browse through more candidate files by changing pages or pulling the scroll bar. Other ways of displaying the candidate files may also be conceivable by a person skilled in the art based on the disclosure of the present application, which is not enumerated herein.

[36] Step 130 is determining and sending a file selected by a user according to a selection operation with the displayed candidate file performed by the user.

[37] The user performs a preset operation on the candidate file displaying interface to select one candidate file to be sent, and then the instant messaging application client can determine the candidate file selected by the user and send the candidate file selected by the user to the instant messaging application server, and then the instant messaging application server can send the candidate file selected by the user to the current session. For example, the user can select a candidate file to be sent by performing a preset operation such as clicking a file, sliding a file, or dragging a file.

[38] By means of obtaining file information included in a session message edited on a session interface of an instant messaging application; obtaining a candidate file according to the file information; displaying at least a portion of the candidate file; and determining and sending a file selected by a user according to a selection operation with the displayed candidate file performed

by the user, the problem that the instant messaging application in the prior art is inefficient when sending a file has been solved. By automatically searching for the matching file according to the file information input by the user, and displaying it to the user for the user to select, the user does not need to browse the file storage directory step by step, thereby effectively improving the efficiency of file sending.

[39] A file sending method in an instant messaging application disclosed in another embodiment of the present application is applicable to an instant messaging application client. As shown in FIG. 2, the method may include steps 200 through 240.

[40] Step 200 is obtaining file information included in a session message edited on a session interface of an instant messaging application.

[41] The step of obtaining file information contained in a session message edited on a session interface of an instant messaging application comprises: identifying, by the client, a preset character included in the session message edited on the session interface of the instant messaging application; and determining, by the client, file information of the preset character identifier. For example, the file information may include any one or more of a file name, an author, a date of creation, a date of modification, and the like.

[42] When the user inputs a session message containing a preset character through the editor on the session interface, the format of the session message may be as follows: the first preset character + the file information + the second preset character. The first preset character and the second preset character may be #, 《, 》, &, and the like, which are not defined as having special meanings, and the first preset character and the second preset character may be the same or may be different. For example, the session message input by the user may be “#Financial Statement #,” where the file information may represent the file name. After the session message is edited, the user clicks “send,” and the instant messaging application client can obtain the session message output by the editor, and identify the session message so as to identify whether the first preset character and the second preset character are included in the session message. If the first preset character and the second preset character are included in the session message, it is

determined that the session message is a file search message instead of a normal session message. Then, the instant messaging application client may further determine that the character(s) between the first preset character and the second preset character is file information. For example, if the session message input by the user is "#Financial Statement #," the file information can be determined as "Financial Statement."

[43] For example, the instant messaging application client may identify whether the session message contains a preset character, such as "#?#", by using a regular expression or calling a character matching function. When "#?#" is included in the session message, "?" would be the file information. For example, after identifying "#Financial Statement #" in the session message, it can be determined that "Financial Statement" is the file information.

[44] A user can also enter session messages by voice on the session interface. In this case, before the preset character included in the session message edited by the session interface of the instant messaging application is identified, the method may further include: if the session message edited on the session interface of the instant messaging application is a voice message, the voice message will be converted into a text message.

[45] After detecting the completion of the voice input, the instant messaging application client may obtain the voice message input by the user, convert the voice message into a text message, then identify the preset character contained in the text message, and further determine the file information in the text message.

[46] Step 210 is obtaining a candidate file according to the file information.

[47] For a specific implementation manner of obtaining a candidate file according to the file information, please refer to the foregoing embodiment, and details will not be described herein again.

[48] Step 220 is displaying at least a portion of the candidate file.

[49] After the instant messaging application client obtains the candidate file, all the candidate files or part of the candidate files may be displayed for the user to select and send. For example, displaying at least part of the candidate file may include displaying the file name of at least a portion of the obtained candidate file in a list form. As shown in FIG. 3, the instant messaging application client can create a floating window 300 on the current session interface area or the input method area by calling an interface provided by the system, and then display the candidate file list 310 in the floating window 300. In view of the limitation of the display space, the instant messaging application client may select a part of the candidate files with a higher matching degree to be displayed in the floating window according to the matching degree between the candidate file found in the search and the file information, and display only the file name. When the candidate file is displayed, information such as a file name and a version number of the obtained candidate file may also be displayed in a list form.

[50] In the case where the file information is an author, when the candidate file is displayed, the obtained file name and author information of the candidate file may also be displayed in a list form. In the case where the file information is the date of modification, when the candidate file is displayed, the file name or the file name and the date of modification of the candidate file matching the date of modification, may be displayed in a list form. In the case where the file information is the date of creation, when the candidate file is displayed, the file name or the file name and the date of creation of the candidate file matching the date of creation, may also be displayed in a list form.

[51] Step 230 is determining and sending a file selected by a user according to a selection operation with the displayed candidate file performed by the user.

[52] The user can select a candidate file to be sent by performing a preset operation on the candidate file displaying interface. Then, the instant messaging application client can determine the candidate file selected by the user and send the candidate file selected by the user to the instant messaging application server to send the received candidate file to the current session by the instant messaging application server. Sending the file selected by the user according to the selection operation on the displayed candidate file by the user may include: obtaining a selection

operation of the candidate file by the user; and sending a candidate file corresponding to the selection operation. The selection operation may be any of the following: clicking a file, sliding a file, or dragging a file.

[53] In the case where the selection operation is “clicking a file,” when the user clicks on a file displayed on the floating window, the floating window will receive the click event, and the instant messaging application client can obtain the click event by calling the system interface. Then, through the message processing, the candidate file corresponding to the click operation can be determined. If the candidate file clicked by the user is a file stored locally by the electronic device of the instant messaging application client, the instant messaging application client may send a message of file sending to the instant messaging application server; the instant messaging application server then sends the file to the current session. Accordingly, other session objects of the current session will receive a session message of file sharing. As for the specific technical solution of the instant messaging application client sending a message of file sending to the instant messaging application server, please refer to any related technology well known to a person skilled in the art, and details will not be described herein.

[54] If the candidate file clicked by the user is a file stored by the instant messaging application server or a file obtained by the instant messaging application server in a search by calling a third party database, the instant messaging application client may send a file sending request to the instant messaging application server by calling the HTTP protocol. The file sending request may include an identifier of the candidate file, such as a file name, a storage address, etc. After reading the file locally from the instant messaging application server or from a third-party database, the file will be sent to the current session. For a specific technical solution for the instant messaging application server sending a file to a certain session of the instant messaging application, please refer to any related technology well known to a person skilled in the art, and details will not be described herein.

[55] A user may also select a file by sliding file or dragging the file, for example, sliding to the right of a file in the displayed file list, dragging a file in the file list to the session area, and so on.

[56] Step 240 is, after the file selected by the user is sent, deleting the session message edited on the session interface of the instant messaging application.

[57] After the instant messaging application client sends the session message of sending file to the server, since the session message input by the user has been converted into a sending file message, the session message can be deleted on the session interface of the instant messaging application, so as to ensure that the instant messaging application client no longer continues to send the session message.

[58] By means of obtaining file information included in a session message edited on a session interface of an instant messaging application; obtaining a candidate file according to the file information; displaying at least a portion of the candidate file; and determining and sending a file selected by a user according to a selection operation with the displayed candidate file performed by the user, the problem that the instant messaging application in the prior art is inefficient when sending a file has been solved. By automatically searching for the matching file according to the file information input by the user, and displaying it to the user for the user to select, the user does not need to browse the file storage directory step by step, thereby effectively improving the efficiency of file sending.

[59] A file sending method in an instant messaging application according to another embodiment of the present application is applicable to an instant messaging application server. As described in FIG. 4, the method can include steps 400 and 410.

[60] Step 400 is receiving a file search request sent by a client, wherein the file search request comprises file information.

[61] The server may receive a file search request sent by the client in real time. In the case where the file information is a file name, the instant messaging application sends a file search request to the instant messaging application server, and the file search request may include the file name.

[62] Step 410 is searching a candidate file that matches the file information, and sending the candidate file to the client to display at least a portion of the candidate file at the client.

[63] After the instant messaging application server receives the file search request sent by the client, it searches the server local database and/or third party database for a file whose file name contains the file information. Then, the instant messaging application server may feed back the file list obtained in the search to the instant messaging application client that issues the file search request in a JSON (JavaScript Object Notation) data format for parsing and displaying by the client.

[64] The method may further include: receiving a file sending request sent by the client, wherein the file sending request comprises file information of a file to be sent by the client in an instant messaging application and a destination client to receive the file.

[65] In the process of displaying at least part of the candidate file, the client can select a file to be sent to the session partner by clicking a file, sliding a file, dragging a file, and the like. After the user selects one or some of the displayed candidate file, the client may send a file sending request to the server.

[66] The server may receive a file sending request sent by the client in real time, and the file sending request may include file information of a file to be sent by the client in the instant messaging application and a destination client to receive the file.

[67] The method may further include: sending a file corresponding to the file information to the destination client.

[68] The server determines a corresponding file according to the file information included in the file sending request, and sends the file to the destination client included in the file sending request.

[69] By means of the instant messaging application server receiving a file search request, searching for a candidate file that matches the file information contained in the file search request, and then sending the candidate file to a client that sends the file search request to display at least part of the candidate file by the client, it would be convenient to quickly send files to the client of the session partner according to the user's selection, which can effectively improve the efficiency of the instant messaging application when sending files.

[70] A file sending device according to an embodiment of the present application is applicable to an instant messaging application client. As shown in FIG. 5, the device may include a file information obtaining module 500, a candidate file obtaining module 510, a candidate file displaying module 520, and a file sending module 530.

[71] Among them, the file information obtaining module 500 is used for obtaining file information included in a session message edited on a session interface of an instant messaging application; the candidate file obtaining module 510 is used for obtaining a candidate file according to the file information obtained by the file information obtaining module 500; the candidate file displaying module 520 is used for displaying at least a portion of the candidate file; and the file sending module 530 is used for determining and sending a file selected by a user according to a selection operation with the displayed candidate file displayed by the candidate file displaying module 520 performed by the user.

[72] According to an example, as shown in FIG. 6, the file information obtaining module 500 may specifically include a preset character identifying unit 5001 and a file information determining unit 5002. The preset character identifying unit 5001 may be used to identify a preset character included in a session message edited on the session interface of the instant messaging application. The file information determining unit 5002 is used to determine file information of a preset character identifier.

[73] For example, the preset characters in the session message can be represented by the following format: first preset character + file information + second preset character. The first preset character and the second preset character may be: #, 《, 》, &, and the like which are not

defined as characters having special meanings, and the first preset character and the second preset character may be the same or may be different. The file information may include a file name, an author, a date of modification, a date of creation, and the like. The session message containing the file information can be exemplified as follows: #Li Bai#, # Financial Statement#, 《Labor Contract》 .

[74] The preset character identifying unit 5001 can identify whether “#?#” is included in the session message by using a regular expression or calling a character matching function. When the preset character identifying unit 5001 identifies that “#?#” is included in the session message, the file information determining unit 5002 may determine “?” to be the file information. For example, after the preset character identifying unit 5001 identifies that “# financial statement #” is included in the session message, the file information determining unit 5002 may determine that “financial statement” is file information.

[75] According to another example, as shown in FIG. 6, the file information obtaining module 500 may further include a message converting unit 5003, which is used for: if the session message edited on the session interface of the instant messaging application is a voice message, converting the voice message into a text message.

[76] A user may enter session messages by voice on the session interface. In this case, the message converting unit 5003 may obtain a voice message input by the user after detecting that the voice input is completed, and convert the voice message into a text message. Then, the preset character identifying unit 5001 may identify the preset character included in the text session message, and the file information determining unit 5002 may further determine the file information in the text message.

[77] The file information may include any one or more of a file name, an author, a date of creation, and a date of modification.

[78] In addition, the candidate file displaying module 520 may be specifically used for: displaying, in a list form, a file name of at least a portion of the obtained candidate file.

[79] The selection operation may comprise any one of the following: clicking a file, sliding a file, and dragging a file.

[80] The file sending module 530 may be specifically used for obtaining a selection operation of the candidate file by the user, and sending a candidate file corresponding to the selection operation.

[81] According to yet another example, as shown in FIG. 6, the device may further include a message deleting module 540, which is used for deleting the session message edited on the session interface of the instant messaging application after the file sending module 530 sends the file.

[82] By means of obtaining file information included in a session message edited on a session interface of an instant messaging application; obtaining a candidate file according to the file information; displaying at least a portion of the candidate file; and determining and sending a file selected by a user according to a selection operation with the displayed candidate file performed by the user, the problem that the instant messaging application in the prior art is inefficient when sending a file has been solved. By automatically searching for the matching file according to the file information input by the user, and displaying it to the user for the user to select, the user does not need to browse the file storage directory step by step, thereby effectively improving the efficiency of file sending.

[83] A file sending method according to an embodiment of the present application is applicable to an instant messaging application server. As shown in FIG. 7, the device may include a file search request receiving module 700 and a searching and sending module 710.

[0084] The file search request receiving module 700 may be used for receiving a file search request sent by a client, wherein the file search request comprises file information. The searching and sending module 710 may be used for searching a candidate file that matches the file

information and sending the candidate file to the client to display at least a portion of the candidate file at the client.

[0085] As shown in FIG. 8, the device may further include a file sending request receiving module 720 for receiving a file sending request. The file sending request may include file information of a file to be sent by the client in an instant messaging application and a destination client to receive the file.

[86] As shown in FIG. 8, the device may further include a file sending module 730, which is used for sending a file corresponding to the file information included in the file sending request to the destination client.

[87] By means of the instant messaging application server receiving a file search request, searching for a candidate file that matches the file information contained in the file search request, and then sending the candidate file to a client that sends the file search request to display at least part of the candidate file by the client, it would be convenient to quickly send files to the client of the session partner according to the user's selection, which can effectively improve the efficiency of the instant messaging application when sending files.

[88] Accordingly, the present application also discloses an instant application communication client, including a memory, a processor, and a computer program stored on the memory and operable on the processor. The file sending method in the instant messaging application as shown in FIGS. 1 and 2 is implemented when the processor executes the computer program. The instant application communication client can be a PC, a mobile terminal, a personal digital assistant, a tablet, or the like.

[89] Accordingly, the present application also discloses an instant messaging application server, including a memory, a processor, and a computer program stored on the memory and operable on the processor. The sending method in the instant messaging application as shown in FIG. 4 is implemented when the processor executes the computer program.

[90] The present application also discloses a computer readable storage medium having a computer program stored thereon. The program is executed by the processor to implement the steps of the file transmitting method in the instant messaging application as shown in FIGS. 1, 2, and 4.

[91] Various embodiments in the present specification are described in a progressive manner, and each embodiment focuses on differences thereof from other embodiments, and the same similar parts between the various embodiments may be referred to each other. For the device embodiment, since it is basically similar to the method embodiment, the description is relatively simple, and the relevant parts can be referred to the description of the method embodiment.

[92] The above description provides a file sending method and device in an instant messaging application as provided by the present application. The principle and implementation of the present application are described by using specific examples. The description of the above embodiments is only for helping to understand the method of the present application and its core ideas. At the same time, for a person skilled in the art, according to the idea of the present application, there may be changes in the specific implementation manner and application scope. In summary, the content of this specification should not be construed as limiting the application.

[93] Through the description of the above embodiments, a person skilled in the art can clearly understand that the embodiments can be implemented by means of software plus a necessary general hardware platform. Of course, it can also be implemented by hardware. Based on this understanding, the above technical solution essentially, or the part thereof that contributes to the existing technology, can be reflected in the form of software product. The computer software product can be stored in a computer readable storage medium, such as ROM/RAM, disk, CD, etc. A number of instructions are included to cause a computer device (which may be a personal computer, a server, or a network device, etc.) to perform the methods described in various embodiments or portions of the embodiments.

Claims:

1. A file sending device in an instant messaging application, wherein the device comprises:

a file information obtaining module, configured to obtain at least one type of file information included in a session message edited or sent on a session interface via a server, wherein at least one type of the file information in the session message is identified for searching locally when a format of the session message includes a first preset character and at least one type of the file information and a second preset character;

a candidate file obtaining module, configured to obtain a plurality of candidate files according to at least one type of the file information, wherein each candidate file is obtained from searching locally by the server for a file containing at least one type of the file information, or each candidate file is obtained by sending a file search request to the server;

a candidate file display module, configured to display a portion of a plurality of candidate files with a higher matching degree in a floating window according to the matching degree between the plurality of candidate files searched and at least one type of the file information identified for a selection operation;

a file sending module configured to send a candidate file to a current session via an instant messaging application , wherein the candidate file is selected by a client terminal from the portion of the plurality of candidate files according to the selection operation; and

a message deleting module configured to, after sending the file selected by a user, delete the session message edited or sent on the session interface of the instant messaging application.

2. The device of claim 1, wherein the file information obtaining module further includes a preset character identifying unit that configured to identify whether the first preset character and the second preset character are contained in the session message edited or sent on the session interface of the instant messaging application.
3. The device of any one of claims 1 to 2, wherein the file information obtaining module further includes a file information determining unit that is configured to confirm at least one type of the file information identified by the first preset character and the second preset character.
4. The device of claim 1, wherein the file information obtaining module further includes a message converting unit that is configured to:

where if the session message edited or sent on the session interface is a voice message, convert, by the client terminal, the voice message into a text message.
5. The device of claim 1, wherein at least one type of the file information includes one or more selected from a group consisting of a file name, an author, a date of creation, and a date of modification.
6. The device of claim 1, wherein the candidate file display module is further configured to display at least a part of a file name of the candidate file in a list form.
7. The device of claim 1, wherein the selection operation includes any one selected from a group consisting of clicking a file, sliding a file, and dragging a file.
8. The device of any one of claims 1 to 7, wherein the session message is a string type.
9. The device of any one of claims 1 to 8, wherein the first or second preset character is identified via a regular expression.

10. The device of any one of claims 1 to 8, wherein the first or second preset character is identified by calling a character matching function.
11. The device of claim 1, wherein identifying whether the first preset character and the second preset character contained in the session message edited or sent on the session interface of an instant messaging application is identified in real time.
12. The device of claim 1, wherein identifying whether the first preset character and the second preset character contained in the session message edited or sent on the session interface of the instant messaging application is identified after clicking a send icon by the user and the session message has been edited or sent through an server.
13. The device of any one of claims 1 to 12, wherein the first preset character is defined a non-meaning character.
14. The device of any one of claims 1 to 12, wherein the second preset character is defined a non-meaning character.
15. The device of any one of claims 1 to 14, wherein the first preset character is the same with a second preset character.
16. The device of any one of claims 1 to 14, wherein the first preset character is different from a second preset character.
17. A file sending device in an instant messaging application, wherein the device including:

a file search request receiving module configured to receive a file search request edited or sent by a client terminal, wherein the file search request includes at least one type of file information, wherein at least one type of the file information in a session message is identified for searching locally when a format of the session message includes a first preset character and at least one type of the file information and a second preset

character; and

a searching and sending module configured to search a plurality of candidate files that matches the file information, and send the plurality of candidate files to the client terminal to display a portion of the plurality of candidate files with a higher matching degree in a floating window according to the matching degree between the plurality of candidate files searched and at least one type of the file information identified for a selection operation at the client terminal, wherein each candidate file is obtained from searching locally by a server for a file containing the file information, or each candidate file is obtained by sending a file search request to the server;

wherein the searching and sending module is further configured to send a candidate file to a current session via an instant messaging application, the candidate file selected by a user according to the selection operation on the displayed candidate files by the user; and

a message deleting module configured to, after sending the candidate file selected by the user, delete the session message edited or sent on a session interface of the instant messaging application.

18. The device of claim 17, wherein the device further includes a file sending request receiving module.
19. The device of claim 18, wherein the file sending request receiving module is configured to receive a file sending request edited or sent by the client terminal.
20. The device of claim 19, wherein the file sending request includes at least one type of the file information of a file to be edited or sent by the client terminal in an instant messaging application and a destination client terminal to receive the file.
21. The device of claim 20, wherein the device further includes a file sending module.

22. The device of claim 21, wherein the file sending module is configured to send the file corresponding to at least one type of the file information to the destination client terminal.
23. The device of claim 17, wherein the file search request is received in real time.
24. The device of claim 17, wherein the searching and sending module is further configured to search for the file containing at least one type of the file information stored at local by calling an interface provided by a system.
25. The device of claim 17, wherein the searching and sending module is further configured to search for the file containing at least one type of the file information stored at a third party database.
26. The device of any one of claims 17 to 25, wherein at least one type of the file information includes a file name.
27. The device of any one of claims 17 to 25, wherein at least one type of the file information includes an author.
28. The device of any one of claims 17 to 25, wherein at least one type of the file information includes a date of creation.
29. The device of any one of claims 17 to 25, wherein at least one type of the file information includes a date of modification.
30. The device of any one of claims 17 to 29, wherein at least one type of the file information is associated with the first preset character and the second preset character with a certain format.
31. The device of claim 17, wherein first or second preset character is identified via a regular

expression.

32. The device of any one of claims 30 to 31, wherein first or second preset character is identified by calling a character matching function.

33. The device of any one of claims 17 to 32, wherein the first preset character is defined a non-meaning character.

34. The device of any one of claims 17 to 32, wherein the second preset character is defined a non-meaning character.

35. The device of any one of claims 17 to 34, wherein a first preset character is the same with a second preset character.

36. The device of any one of claims 17 to 34, wherein the first preset character is different from a second preset character.

37. A client terminal for an instant messaging application, including:

a memory for storing data; and

a processor configured to:

obtain at least one type of file information included in a session message edited or sent on a session interface via a server, wherein at least one type of the file information in the session message is identified for searching locally when a format of the session message includes a first preset character and at least one type of the file information and a second preset character;

obtain a plurality of candidate files according to the file information,

wherein each candidate file is obtained from searching locally by the server for a file containing the file information, or each candidate file is obtained by sending a file search request to the server;

display the portion of a plurality of candidate files with a higher matching degree in a floating window according to the matching degree between the plurality of candidate files searched and at least one of the file information identified for a selection operation;

confirm and send a candidate file to a current session via an instant messaging application, wherein the candidate file is selected by the client terminal from the portion of the plurality of candidate files; and

after sending the file selected by a user, delete the session message edited or sent on the session interface of the instant messaging application.

38. The client terminal of claim 37, wherein the processor is configured to identify whether the first preset character and the second preset character are contained in the session message edited or sent on the session interface via the server.

39. The client terminal of any one of claims 37 to 38, wherein the processor is configured to confirm at least one type of the file information identified by the first preset character and the second preset character.

40. The client terminal of claim 37, wherein the processor is configured to:

where if the session message edited or sent on the session interface is a voice message, convert, by the client terminal, the voice message into a text message.

41. The client terminal of claim 37, wherein at least one type of the file information includes

one or more selected from a group consisting of a file name, an author, a date of creation, and a date of modification.

42. The client terminal of claim 37, wherein the processor is configured to display at least a part of a file name of the candidate file in a list form.
43. The client terminal of claim 37, wherein the selection operation includes any one selected from a group consisting of clicking a file, sliding a file, and dragging a file.
44. The client terminal of any one of claims 37 to 46, wherein the first or second preset character is identified via a regular expression.
45. The client terminal of any one of claims 37 to 46, wherein the first or second preset character is identified by calling a character matching function.
46. The client terminal of claim 37, wherein identifying whether the first preset character and the second character contained in the session message edited or sent on the session interface of the instant messaging application is identified in real time.
47. The client terminal of claim 37, wherein identifying whether the first preset character and the second preset character contained in the session message edited or sent on the session interface of the instant messaging application is identified after clicking a send icon by the user and the session message has been edited or sent through an server.
48. The client terminal of any one of claims 39 to 50, wherein the first preset character is defined a non-meaning character.
49. The client terminal of any one of claims 39 to 50, wherein the second preset character is defined a non-meaning character.

50. The client terminal of any one of claims 37 to 49, wherein the first preset character is the same with a second preset character.

51. The client terminal of any one of claims 39 to 52, wherein the first preset character is different from a second preset character.

52. A server for an instant messaging application, including:

a memory for storing data; and

a processor configured to:

receive a file search request edited or sent by a client terminal, wherein the file search request includes at least one type of file information, wherein at least one type of the file information in a session message is identified for searching locally when a format of the session message includes a first preset character and at least one type of the file information and a second preset character; and

send a plurality of candidate files that matches at least one type of the file information to the client terminal to display a portion of the plurality of candidate files with a higher matching degree in a floating window according to the matching degree between the plurality of candidate files searched and at least one type of the file information identified for a selection operation at the client terminal, wherein each candidate file is obtained from searching locally by the server for a file containing at least one type of the file information, or each candidate file is obtained by sending a file search request to the server;

send a candidate file to a current session via an instant messaging application, the candidate file selected by a user according to the selection operation on the displayed candidate files by the user; and

delete the session message edited or sent on a session interface of the instant messaging application, after sending the candidate file selected by the user.

53. The server of claim 52, wherein the processor is further configured to:

receive a file sending request edited or sent by the client terminal, wherein the file sending request includes at least one type of the file information of a file to be edited or sent by the client terminal in an instant messaging application and a destination client terminal to receive the file; and

send the file corresponding to at least one type of the file information to the destination client terminal.

54. The server of claim 52, wherein the file search request is received in real time.

55. The server of claim 52, wherein the processor is further configured to search for the file containing at least one type of the file information stored at local by calling an interface provided by a system.

56. The server of claim 52, wherein the processor is further configured to search for the file containing at least one type of the file information stored at a third party database.

57. The server of any one of claims 52 to 56, wherein at least one type of the file information includes a file name.

58. The server of any one of claims 52 to 56, wherein at least one type of the file information includes an author.

59. The server of any one of claims 52 to 56, wherein at least one type of the file information

includes a date of creation.

60. The server of any one of claims 52 to 56, wherein at least one type of the file information includes a date of modification.
61. The server of any one of claims 52 to 60, wherein at least one type of the file information is associated with the first preset character and the second preset character with a certain format.
62. The server of any one of claims 52 to 61, wherein first or second preset character is identified via a regular expression.
63. The server of any one of claims 52 to 61, wherein the first or second preset character is identified by calling a character matching function.
64. The server of any one of claims 52 to 63, wherein the first preset character is defined a non-meaning character.
65. The server of any one of claims 52 to 63, wherein the second preset character is defined a non-meaning character.
66. The server of any one of claims 52 to 65, wherein the first preset character is the same with the second preset character.
67. The server of any one of claims 52 to 65, wherein the first preset character is different from the second preset character.
68. A computer-readable storage medium storing computer readable instructions for use, in the execution in a computer, of the steps of:

obtaining at least one type of file information included in a session message edited or

sent on a session interface via an server, wherein at least one type of the file information in the session message is identified for searching locally when a format of the session message includes a first preset character and at least one type of the file information and a second preset character;

obtaining a plurality of candidate files according to at least one type of the file information, to display a portion of a plurality of candidate files with a higher matching degree in a floating window according to the matching degree between the plurality of candidate files searched and at least one type of the file information identified for a selection operation, wherein each candidate file is obtained from searching locally by the server for a file containing at least one type of the file information, or each candidate file is obtained by sending a file search request to the server;

confirming and sending a candidate file to a current session via an instant messaging application, wherein the candidate file is selected by a client terminal from the portion of the plurality of candidate files; and

after sending the file selected by a user, deleting the session message edited or sent on the session interface of the instant messaging application.

69. The computer-readable storage medium of claim 68, wherein the computer readable instructions further include the steps of:

identifying, by the client terminal, whether the first preset character and the second preset character are contained in the session message edited or sent on the session interface of the instant messaging application; and

confirming, by the client terminal, at least one type of the file information identified by the first preset character and the second preset character.

70. The computer-readable storage medium of claim 68, wherein the computer readable

instructions further include the steps of:

where if the session message edited or sent on the session interface is a voice message, converting, by the client terminal, the voice message into a text message.

71. The computer-readable storage medium of claim 68, wherein the computer readable instructions further include the steps of creating a floating window on the current session interface area by calling an interface provided by a system for displaying a list of candidate files.
72. The computer-readable storage medium of claim 68, wherein computer readable instructions further include the steps of creating a floating window on an input area of the session interface by calling an interface provided by a system for displaying a list of candidate files.
73. The computer-readable storage medium of any one of claims 71 to 72, wherein the floating window further includes a list box for displaying candidate files.
74. The computer-readable storage medium of any one of claims 71 to 73, wherein the list of candidate files is displayed with the match degree from high to low between the candidate file found in the search and at least one type of the file information.
75. The computer-readable storage medium of claim 68, wherein at least one type of the file information includes one or more selected from a group consisting of a file name, an author, a date of creation, and a date of modification.
76. The computer-readable storage medium of claim 68, wherein the computer readable instructions further include the steps of displaying at least a part of a file name of the candidate file in a list form.
77. The computer-readable storage medium of claim 68, wherein the selection operation

includes any one selected from a group consisting of clicking a file, sliding a file, and dragging a file.

78. The computer-readable storage medium of any one of claims 68 to 77, wherein the session message is a string type.
79. The computer-readable storage medium of any one of claims 68 to 78, wherein the first or second preset character is identified via a regular expression.
80. The computer-readable storage medium of any one of claims 68 to 79, wherein the first or second preset character is identified by calling a character matching function.
81. The computer-readable storage medium of claim 69, wherein identifying whether the first preset character and the second preset character contained in the session message edited or sent on the session interface of the instant messaging application is identified in real time.
82. The computer-readable storage medium of claim 69, wherein identifying whether the first preset character and the second preset character contained in the session message edited or sent on the session interface of the instant messaging application is identified after clicking a send icon by a user and the session message has been edited or sent through an server.
83. The computer-readable storage medium of any one of claims 68 to 82, wherein the first preset character is defined a non-meaning character.
84. The computer-readable storage medium of any one of claims 68 to 82, wherein the second preset character is defined a non-meaning character.
85. The computer-readable storage medium of any one of claims 68 to 84, wherein the first preset character is the same with the second preset character.

86. The computer-readable storage medium of any one of claims 68 to 84, wherein the first preset character is different from the second preset character.

87. A computer-readable storage medium computer-readable storage medium storing computer-readable instructions for use, in the execution in a computer, of the steps:

receiving, by a server, a file search request edited or sent by a client terminal, wherein the file search request includes at least one type of file information, wherein at least one type of the file information in a session message is identified for searching locally when a format of the session message includes a first preset character and at least one type of the file information and a second preset character ; and

sending, by the server, a plurality of candidate files to the client terminal to display a portion of a plurality of candidate files with a higher matching degree in a floating window according to the matching degree between the plurality of candidate files searched and the at least one type of the file information identified for a selection operation at the client terminal, wherein each candidate file is obtained from searching locally by the server for a file containing the at least one type of the file information , or each candidate file is obtained by sending a file search request to the server;

sending a candidate file to a current session via an instant messaging application, the candidate file selected by a user according to the selection operation on the displayed candidate files by the user; and

deleting the session message edited or sent on a session interface of the instant messaging application, after sending the candidate file selected by the user.

88. The computer-readable storage medium of claim 87, wherein the computer readable instructions further include the steps of:

receiving, by the server, a file sending request edited or sent by the client terminal,

wherein the file sending request includes the at least one type of the file information of a file to be edited or sent by the client terminal in an instant messaging application and a destination client terminal to receive the file; and

sending, by the server, the file corresponding to the at least one type of the file information to the destination client terminal.

89. The computer-readable storage medium of claim 87, wherein the file search request is received in real time.
90. The computer-readable storage medium of claim 87, wherein the computer readable instructions further include the steps of searching for the file containing the at least one type of the file information stored at local by calling an interface provided by a system.
91. The computer-readable storage medium of claim 87, wherein the computer readable instructions further include the steps of searching for the file containing the at least one type of the file information stored at a third party database.
92. The computer-readable storage medium of any one of claims 87 to 91, wherein the at least one type of the file information includes a file name.
93. The computer-readable storage medium of any one of claims 87 to 92, wherein the at least one type of the file information includes an author.
94. The computer-readable storage medium of any one of claims 87 to 93, wherein the at least one type of the file information includes a date of creation.
95. The computer-readable storage medium of any one of claims 87 to 91, wherein the at least one type of the file information includes a date of modification.
96. The computer-readable storage medium of any one of claims 87 to 95, wherein the at least

one type of the file information is associated with the first character and the second character with a certain format.

97. The computer-readable storage medium of any one of claims 87 to 96, wherein the first or second preset character is identified via a regular expression.

98. The computer-readable storage medium of any one of claims 96 to 97, wherein the first or second preset character is identified by calling a character matching function.

99. The computer-readable storage medium of any one of claims 87 to 98, wherein the first preset character is defined a non-meaning character.

100. The computer-readable storage medium of any one of claims 87 to 98, wherein the second preset character is defined a non-meaning character.

101. The computer-readable storage medium of any one of claims 87 to 100, wherein the first preset character is the same with a second preset character.

102. The computer-readable storage medium of any one of claims 87 to 100, wherein the first preset character is different from a second preset character.

103. A file sending method in an instant messaging application, including:

obtaining, by a client terminal, at least one type of the file information included in a session message edited or sent on a session interface via a server, wherein at least one type of the file information in the session message is identified for searching locally when a format of the session message includes a first preset character and at least one type of the file information and a second preset character;

obtaining, by the client terminal, a plurality of candidate files according to the at least one type of the file information, to display at least a portion of the candidate file for a

selection operation, wherein each candidate file is obtained from searching locally by the server for a file containing the at least one type of the file information, or each candidate file is obtained by sending a file search request to the server;

confirming and sending, a candidate file to a current session via an instant messaging application, wherein the candidate file is selected by a client terminal from the portion of the plurality of candidate files; and

after sending the file selected by a user, deleting the session message edited or sent on the session interface of the instant messaging application.

104. The method of claim 103, wherein the method further includes:

identifying, by the client terminal, whether the first preset character and the second preset character is contained in the session message edited or sent on the session interface of the instant messaging application; and

confirming, by the client terminal, the at least one type of the file information identified by the preset character.

105. The method of claim 103, wherein the method further includes:

where if the session message edited or sent on the session interface is a voice message, converting, by the client terminal, the voice message into a text message.

106. The method of claim 103, wherein the method further includes creating a floating window on the current session interface area by calling an interface provided by a system for displaying a list of candidate files.

107. The method of claim 103, wherein the method further includes creating a floating window on an input area of the session interface by calling an interface provided by a system for

displaying a list of candidate files.

108. The method of any one of claims 106 to 107, wherein the floating window further includes a list box for displaying candidate files.

109. The method of any one of claims 106 to 108, wherein the list of candidate files is displayed with the match degree from high to low between the candidate file found in the search and the at least one type of the file information.

110. The method of claim 103, wherein the at least one type of the file information includes one or more selected from a group consisting of a file name, an author, a date of creation, and a date of modification.

111. The method of claim 103, wherein the method further includes displaying, by the client terminal, at least a part of a file name of the candidate file in a list form.

112. The method of claim 103, wherein the selection operation includes any one selected from a group consisting of clicking a file, sliding a file, and dragging a file.

113. The method of any one of claims 103 to 112, wherein the session message is a string type.

114. The method of any one of claims 104 to 113, wherein the first or second preset character is identified via a regular expression.

115. The method of any one of claims 104 to 113, wherein the first or second preset character is identified by calling a character matching function.

116. The method of claim 103, wherein identifying whether the first preset character and the second preset character contained in the session message edited or sent on the session interface of the instant messaging application is identified in real time.

117. The method of claim 103, wherein identifying whether the first preset character and the

second preset character contained in the session message edited or sent on the session interface of the instant messaging application is identified after clicking a send icon by a user and the session message has been edited or sent through an server.

118. The method of any one of claims 103 to 117, wherein the first preset character is defined a non-meaning character.

119. The method of any one of claims 103 to 117, wherein the second preset character is defined a non-meaning character.

120. The method of any one of claims 103 to 119, wherein the first preset character is the same with a second preset character.

121. The method of any one of claims 103 to 119, wherein the first preset character is different from a second preset character.

122. A file sending method in an instant messaging application, including:

receiving, by a server, a file search request edited or sent by a client terminal, wherein the file search request includes at least one type of the file information, wherein at least one type of the file information in a session message is identified for searching locally when a format of the session message includes a first preset character and at least one type of the file information and a second preset character;

sending, by the server, a plurality of candidate files to the client terminal to display a portion of a plurality of candidate files with a higher matching degree in a floating window according to the matching degree between the plurality of candidate files searched and the at least one type of the file information identified for a selection operation at the client terminal, wherein each candidate file is obtained from searching locally by the server for a file containing the at least one type of the file information at least one type of the file information, or each candidate file is obtained by sending a

file search request to the server;

sending a candidate file to a current session via an instant messaging application, the candidate file selected by a user according to the selection operation on the displayed candidate files by the user; and

deleting the session message edited or sent on a session interface of the instant messaging application, after sending the candidate file selected by the user.

123. The method of claim 122, wherein the method further includes:

receiving, by the server, a file sending request edited or sent by the client terminal, wherein the file sending request includes the at least one type of the file information of a file to be edited or sent by the client terminal in an instant messaging application and a destination client terminal to receive the file; and

sending, by the server, the file corresponding to the at least one type of the file information to the destination client terminal.

124. The method of claim 122, wherein the file search request is received in real time.

125. The method of claim 122, wherein the method further includes searching for the file containing the at least one type of the file information stored at local by calling an interface provided by a system.

126. The method of claim 122, wherein the method further includes searching for the file containing the at least one type of the file information stored at a third party database.

127. The method of any one of claims 122 to 126, wherein the at least one type of the file information includes a file name.

128. The method of any one of claims 122 to 126, wherein the at least one type of the file information includes an author.
129. The method of any one of claims 122 to 126, wherein the at least one type of the file information includes a date of creation.
130. The method of any one of claims 122 to 126, wherein the at least one type of the file information includes a date of modification.
131. The method of any one of claims 122 to 126, wherein the at least one type of the file information is associated with the first preset character and the second preset character with a certain format.
132. The method of any one of claims 122 to 131, wherein the first or second preset character is identified via a regular expression.
133. The method of any one of claims 131 to 132, wherein the first or second preset character is identified by calling a character matching function.
134. The method of any one of claims 122 to 133, wherein the first preset character is defined a non-meaning character.
135. The method of any one of claims 122 to 133, wherein the second preset character is defined a non-meaning character.
136. The method of any one of claims 122 to 135, wherein the first preset character is the same with a second preset character.
137. The method of any one of claims 122 to 135, wherein the first preset character is different from a second preset character.

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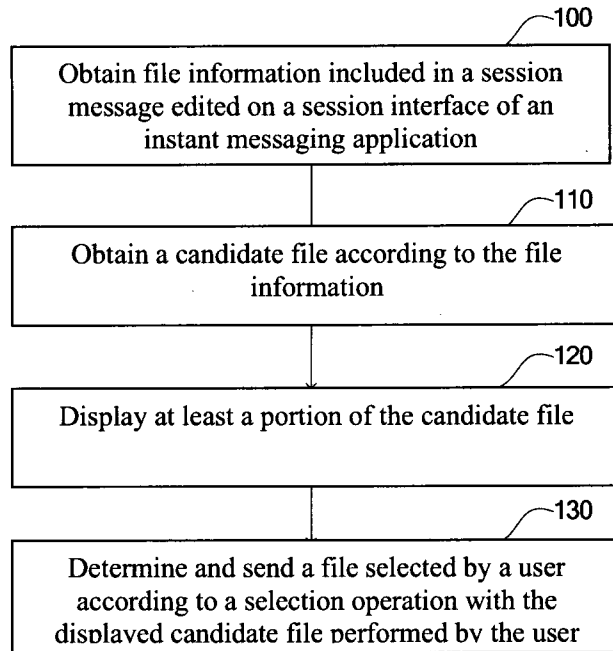


FIG. 1

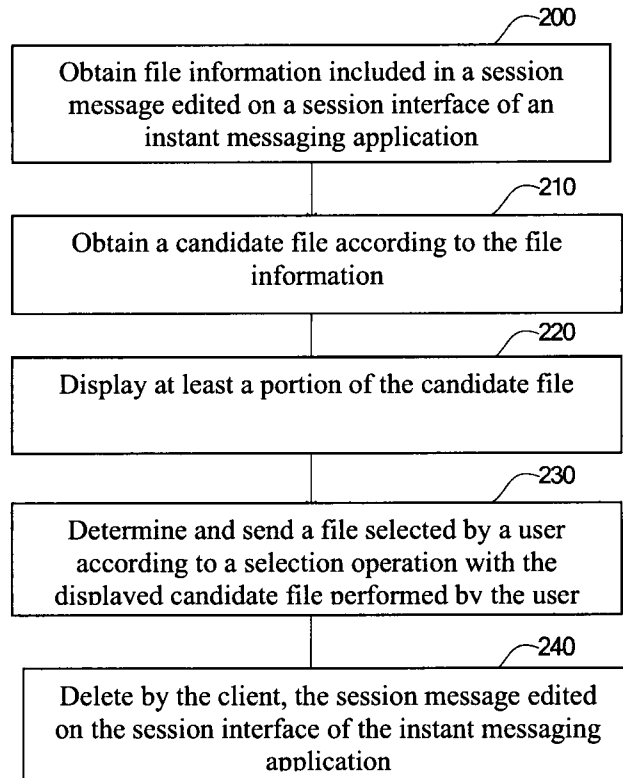


FIG. 2

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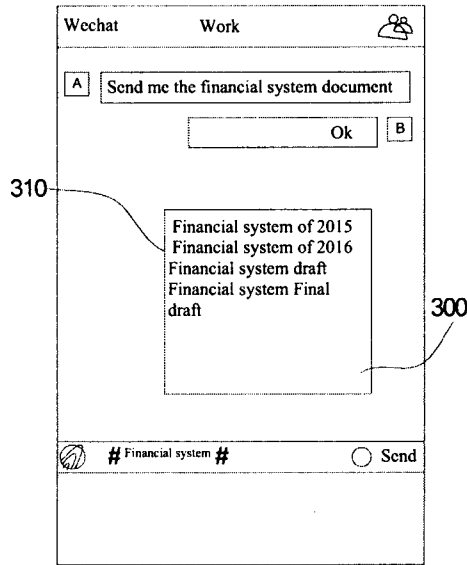


FIG. 3

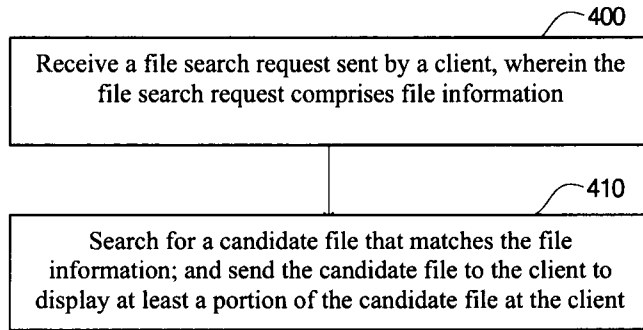


FIG. 4

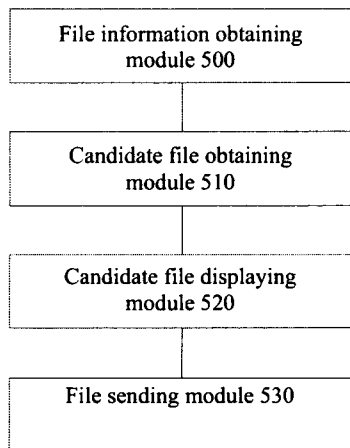


FIG. 5

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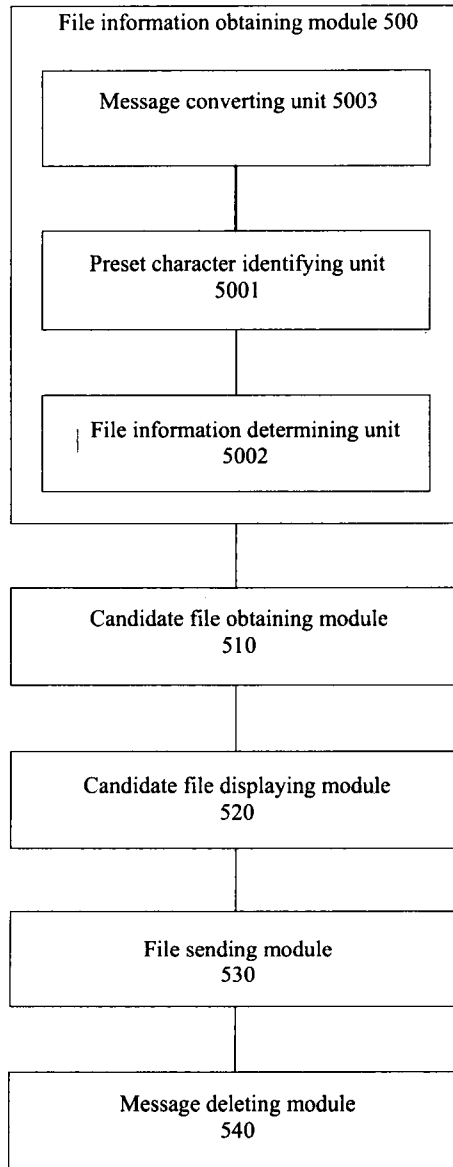


FIG. 6

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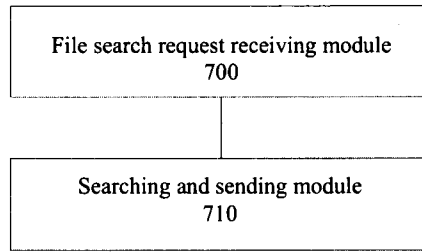


FIG. 7

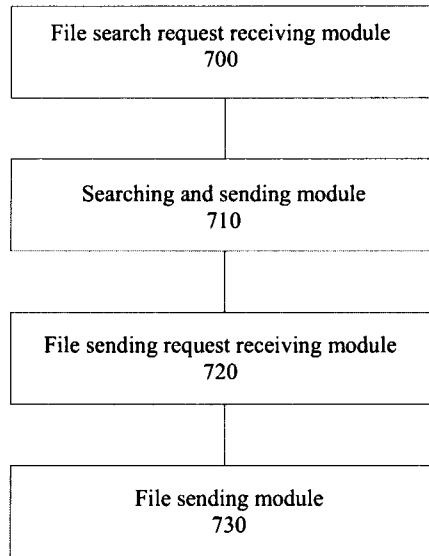


FIG. 8

200
Obtain file information included in a session message edited on a session interface of an instant messaging application

210
Obtain a candidate file according to the file information

220
Display at least a portion of the candidate file

230
Determine and send a file selected by a user according to a selection operation with the displayed candidate file performed by the user

240
Delete by the client, the session message edited on the session interface of the instant messaging application