Title: METHOD AND APPARATUS FOR SYNCHRONIZING WEBPAGE INFORMATION

![Diagram](FIG. 2)

The present disclosure describes a method for synchronizing webpage information between a first terminal and a second terminal. A cloud server receives an upload request transmitted by the first terminal, wherein the upload request carries an account and webpage information of a webpage displayed on a first browser of the first terminal.

The cloud server transmits, according to the account, the webpage information of the webpage to a second terminal corresponding to the account, such that a second browser on the second terminal may open the webpage according to the webpage information.
METHOD AND APPARATUS FOR SYNCHRONIZING WEBPAGE INFORMATION

PRIORIT Y STATEMENT
[1] This application claims the benefit of Chinese Patent Application No. 201210311628.4, filed on August 29, 2012, the disclosure of which is incorporated herein in its entirety by reference.

FIELD OF THE INVENTION
[2] The present invention relates to Internet communications techniques, and more particularly, to a method and an apparatus for synchronizing webpage information.

BACKGROUND OF THE INVENTION
[3] With the rapid development of browser techniques, browsers have been widely used by most users. A user may browse a webpage using a browser. Or, the user may collect a webpage into his favorites when browsing the webpage, such that the webpage may be opened rapidly when the user wants to browse the webpage next time.

[4] At present, a user may have multiple terminals. At a first time, the user browses a webpage and collects the webpage in his favorites on one terminal. At a second time, the user may want to browse the webpage on another terminal. For example, the user browses a webpage and collects the webpage in his favorites on a computer in the office. When going back to home, the user may want to browse the webpage on a computer at home. At this time, the user has to find the webpage on the Internet again, which is inconvenient for the user to browse the webpage.

SUMMARY OF THE INVENTION
[5] Examples of the present invention provide a method and an apparatus for synchronizing webpage information.

[6] According to an example of the present disclosure, a method for synchronizing
webpage information between a first terminal and a second terminal is provided. The method includes:

receiving, by a cloud server, an upload request transmitted by the first terminal, wherein the upload request comprises an account and webpage information of a webpage displayed on a first browser of the first terminal; and

transmitting, by the cloud server, the webpage information of the webpage to the second terminal according to the account, such that a second browser of the second terminal opens the webpage according to the webpage information.

[7] According to another example of the present disclosure, a method for synchronizing webpage information between a first terminal and a second terminal is provided. The method includes:

transmitting, by the first terminal, an upload request to a cloud server, wherein the upload request comprises an account and webpage information of a webpage displayed on a first browser of the first terminal, such that the cloud server transmits the webpage information of the webpage to the second terminal according to the account and a second browser of the second terminal opens the webpage according to the webpage information.

[8] According to still another example of the present disclosure, a cloud server for synchronizing webpage information between a first terminal and a second terminal is provided. The cloud server includes: a processor and a memory; wherein the memory is communicatively connected with the processor and stores machine-readable instructions executable by the processor to:

receive an upload request transmitted by the first terminal, wherein the upload request comprises an account and webpage information of a webpage displayed on a first browser of the first terminal; and

transmit the webpage information of the webpage to the second terminal according to the account, such that a second browser of the second terminal opens the webpage according to the webpage information.

[9] According to yet another example of the present disclosure, a first terminal for synchronizing webpage information between the first terminal and a second terminal is provided. The first terminal includes: a processor and a memory; wherein the memory is communicatively connected with the processor and stores machine-readable instructions executable by the processor to:

transmit an upload request to a cloud server, wherein the upload request comprises
an account and webpage information of a first webpage displayed on a first browser of the first terminal, such that the cloud server transmits the webpage information of the webpage to the second terminal according to the account and a second browser of the second terminal opens the first webpage according to the webpage information.

[10] In the method and apparatus provided by the examples of the present disclosure, the first terminal obtains the webpage information of the webpage and transmits the account and the webpage information to the cloud server. The cloud server transmits the webpage information to the second terminal corresponding to the account. The second terminal receives the webpage information transmitted by the cloud server. Thus, when a user wants to browse the webpage on the second terminal, the user is able to open the webpage directly according to the webpage information, which is convenient for the user to browse the webpage.

BRIEF DESCRIPTION OF THE DRAWINGS

[11] FIG. 1 is a schematic diagram illustrating a cloud server for synchronizing webpage information according to an example of the present disclosure.

[12] FIG. 2 is a flowchart illustrating a method for synchronizing webpage information according to an example of the present disclosure.

[13] FIG. 3 is a flowchart illustrating a method for synchronizing webpage information according to an example of the present disclosure.

[14] FIG. 4 is a flowchart illustrating a method for synchronizing webpage information according to an example of the present disclosure.

[15] FIG. 5 is a flowchart illustrating a method for synchronizing webpage information according to an example of the present disclosure.

[16] FIG. 6 is a schematic diagram illustrating a user terminal 600 according to an example of the present disclosure.

DETAILED DESCRIPTION OF THE INVENTION

[17] The present disclosure will be described in further detail hereinafter with reference to accompanying drawings and examples to make the technical solution and merits therein clearer.

[18] For simplicity and illustrative purposes, the present disclosure is described by referring to examples. In the following description, numerous specific details are set
forth in order to provide a thorough understanding of the present disclosure. It will be
readily apparent however, that the present disclosure may be practiced without
limitation to these specific details. In other instances, some methods and structures
have not been described in detail so as not to unnecessarily obscure the present
disclosure. As used herein, the term "includes" means includes but not limited to, the
term "including" means including but not limited to. The term "based on" means based
at least in part on. In addition, the terms "a" and "an" are intended to denote at least one
of a particular element.

[19] In an example of the present disclosure, a user logs on a cloud server respectively
via a first terminal and a second terminal using the same account. The cloud server
receives an upload request transmitted by the first terminal, wherein the upload request
carries the account of the user and webpage information of a webpage displayed on a
first browser of the first terminal. The cloud server transmits the webpage information
of the webpage to the second terminal according to the account carried in the upload
request. Thus, when the user wants to browse the webpage on the second terminal, the
user can open the webpage on a second browser of the second terminal directly
according to the webpage information transmitted by the cloud server, which is
convenient for the user to browse the webpage on the second terminal.

[20] FIG. 1 is a schematic diagram illustrating an example of a cloud server which may
execute the method of the present disclosure. The cloud server may vary in terms of
capabilities or features. As shown in FIG. 1, the cloud server may include one or more
non-transitory processor-readable storage media 101, one or more processors 102 in
communication with the non-transitory processor-readable storage media 101. The
cloud server may further include a display and/or a keyboard.

[21] For example, the non-transitory processor-readable storage media 101 may be a
RAM memory, flash memory, ROM memory, EPROM memory, EEPROM memory,
registers, hard disk, a removable disk, a CD-ROM, or any other form of non-transitory
storage medium known in the art. The one or more non-transitory processor-readable
storage media 101 may store sets of instructions, or units and/or modules that comprise
the sets of instructions, for conducting operations described in the present application.

[22] The one or more non-transitory processor-readable storage media 101 may include
or may execute a variety of operating systems 141, including an operating system. The
one or more non-transitory processor-readable storage media 101 may also include or
may execute a variety of possible applications 142, such as a synchronizing application
143 executable by a processor to implement the methods provided by the present disclosure.

[23] The one or more processors 102 may be configured to execute the sets of instructions and perform the operations in examples of the present application.

[24] FIG. 2 is a flowchart illustrating a method for synchronizing webpage information according to the first example of the present disclosure. FIG. 2 is a simplified diagram according to an example of the present invention. This diagram is merely an example, which should not unduly limit the scope of the claims. One of ordinary skill in the art would recognize many variations, alternatives, and modifications.

[25] In this example, a user logs on a cloud server respectively via a first terminal and a second terminal using the same account, so as to synchronize webpage information between the first terminal and the second terminal. As shown in FIG. 2, the method includes the following operations.

[26] At block 201, the cloud server receives an upload request transmitted by the first terminal, wherein the upload request carries the account of the user and webpage information of a webpage displayed on a first browser of the first terminal.

[27] At block 202, the cloud server transmits, according to the account, the webpage information of the webpage to the second terminal corresponding to the account, such that a second browser on the second terminal may open the webpage according to the webpage information.

[28] In this example, the first terminal obtains the webpage information of the webpage displayed on the first browser and transmits the account and the webpage information of the webpage to the cloud server. The cloud server transmits the webpage information of the webpage to the second terminal corresponding to the account. The second terminal receives the webpage information of the webpage transmitted by the cloud server. Thus, the second browser on the second terminal can open the webpage according to the webpage information. As such, the user can browse the webpage on the second terminal directly according to the webpage information transmitted by the cloud server, which is convenient for the user to browse the webpage.

[29] In the example as shown in FIG. 2, the webpage information includes at least link information of the webpage.

[30] In addition, the upload request may be transmitted by the first terminal to the cloud server when the user issues an upload command to the first terminal. At this time, the cloud server may stores the account and the webpage information carried in the upload
request after receiving the upload request transmitted by the first terminal, and may transmit the webpage information to the second terminal after receiving a synchronizing request from the second terminal.

[31] Alternatively, if both the first terminal and the second terminal are online, i.e., both the first browser of the first terminal and the second browser of the second terminal are started, the upload request may be transmitted by the first terminal to the cloud server when the user adds/deletes a favorite item on a favorite bar of the first browser of the first terminal. At this time, the cloud server transmits the webpage information of the webpage corresponding to the favorite item added/deleted by the user to the second terminal after receiving the upload request. As such, the second browser of the second terminal may add/delete a favorite item on its favorite bar synchronously with the first browser.

[32] Hereinafter, the above two implementation manners are described in further detail with reference to examples.

[33] FIG. 3 is a flowchart illustrating a method for synchronizing webpage information according to a second example of the present disclosure. FIG. 3 is a simplified diagram according to one embodiment of the present invention. This diagram is merely an example, which should not unduly limit the scope of the claims. One of ordinary skill in the art would recognize many variations, alternatives, and modifications.

[34] As shown in FIG. 3, the method includes the following operations.

[35] At block 301, a first terminal obtains webpage information of a webpage displayed on a first browser, wherein the webpage information includes link information of the webpage and a position index of the webpage on a tag bar of the first browser.

[36] The link information of the webpage includes at least a Uniform/Universal Resource Locator (URL) of the webpage. The link information of the webpage may further include information such as a title of the webpage.

[37] When the webpage is opened by the first browser, contents of the webpage are displayed in a main window of the first browser. Meanwhile, a tag of the webpage is added in the tag bar of the first browser and a position index is configured for the tag of the webpage.

[38] The user may trigger, through issuing an upload command, the first terminal to obtain the link information of the webpage and the position index of the webpage on the tag bar.

[39] When the user closes the first browser, the first terminal may display a prompt
window including contents "whether upload current browser status to the cloud'Mn addition, a"Yes" button and a "No" button may also be displayed. The user may click the "Yes" button to issue the upload command to the first terminal or click the "No" button to notify the first terminal that the user does not want to upload the webpage information of the webpage.

[40] Besides the webpage information, the first terminal may also obtain navigation histories recorded by the first browser during a time period, e.g., between a first time and the current time. The first time may be the time that the first terminal uploads navigation histories last time, or the time that the first browser is opened this time. Thenavigation histories include link information of webpages opened during the time period and the time that the webpages were opened.

[41] After obtaining the navigation histories recorded between the first time and the current time, the first terminal may update the first time with the current time. Therefore, next time when the first terminal obtains navigation histories, the navigation histories having been uploaded this time will not be obtained again.

[42] The first terminal calls an interface of the first browser to read the navigation histories from the first browser.

[43] At block 302, the first terminal transmits an upload request to the cloud server, wherein the upload request includes at least the account and the webpage information of the webpage.

[44] In addition, the upload request may further include the navigation histories obtained by the first terminal.

[45] At block 303, the cloud server receives the upload request, stores a relationship between the account and the webpage information of the webpage included in the upload request.

[46] In particular, after receiving the upload request, the cloud server searches stored webpage information according to the account in the upload request. If there is webpage information of the webpage, the cloud server updates the stored webpage information of the webpage with the webpage information in the upload request. If there is no webpage information of the webpage, the cloud server stores a relationship between the account, the navigation histories and the upload time. The upload time may
be the time that the cloud server receives the upload request.

[48] At block 304, a second terminal transmits a synchronizing request to the cloud server, wherein the synchronizing request includes the account.

[49] In addition, the synchronizing request may further include a second time that the second terminal transmits the synchronizing request last time.

[50] At block 305, the cloud server receives the synchronizing request and obtains the webpage information of the webpage from the stored webpage information according to the account in the synchronizing request.

[51] In addition, if the synchronizing request further includes the second time, the cloud server obtains navigation histories recorded between the second time and the current time from the navigation histories stored in the cloud server according to the account and the second time in the synchronizing request.

[52] At block 306, the cloud server transmits a synchronizing response to the second terminal, wherein the synchronizing response includes the webpage information of the webpage.

[53] In addition, if the synchronizing request transmitted by the second terminal contains the second time, the synchronizing response further includes the navigation histories recorded between the second time and the current time.

[54] At block 307, the second terminal receives the synchronizing response and opens the webpage via a second browser according to the webpage information of the webpage in the synchronizing response.

[55] In particular, the second terminal receives the synchronizing response including the webpage information of the webpage. The webpage information includes the link information of the webpage and the position index of the tag of the webpage on the tag bar. The second terminal controls the second browser to open the webpage according to the link information, and adds a tag of the webpage on the tag bar according to the position index of the webpage.

[56] In addition, if the synchronizing response contains navigation histories, the second terminal transmits the navigation histories to a browser kernel of the second browser.

[57] When the webpage is opened using the second browser, if the kernel of the second browser determines that there are navigation histories related to the webpage recorded before the webpage is opened, the second browser configures a "back" button of the second browser as usable. If the user clicks the "back" button, the webpage jumps to a webpage corresponding to the navigation histories.
When the webpage is opened using the second browser, if the kernel of the second browser determines that there are navigation histories related to the webpage recorded after the webpage is opened, the second browser configures a "forward" button of the second browser as usable. If the user clicks the "forward" button, the webpage jumps to a webpage corresponding to the navigation histories.

In this example, the first terminal and the second terminal may be the same terminal. At this time, the terminal may upload the navigation histories of the browser to the cloud server following blocks 301 to 303. At another time, the terminal may obtain the navigation histories of the browser from the cloud server according to blocks 304 to 307.

In this example, the first terminal may also transmit the webpage to the cloud server. Accordingly, the second terminal directly obtains the webpage from the cloud server according to the account.

In this example, the account may be a user name or a 2-dimensional code of the user name for logging on the cloud server.

In this example, the first terminal obtains the webpage information of the webpage displayed by the first browser and transmits the account and the webpage information of the webpage to the cloud server. The cloud server transmits the webpage information of the webpage to the second terminal according to the account. The second terminal receives the webpage information of the webpage transmitted by the cloud server and controls the second browser to open the webpage according to the webpage information of the webpage. As such, the user is able to browse the webpage using the second browser directly according to the webpage information, which is convenient for the user to browse the webpage.

FIG. 4 is a flowchart illustrating a method for synchronizing webpage information according to an example of the present disclosure. FIG. 4 is a simplified diagram according to one embodiment of the present invention. This diagram is merely an example, which should not unduly limit the scope of the claims. One of ordinary skill in the art would recognize many variations, alternatives, and modifications.

In this example, both the first terminal and the second terminal are online, i.e., both the first browser of the first terminal and the second browser of the second terminal are started. The upload request may be transmitted by the first terminal to the cloud server when the user adds/deletes a favorite item on a favorite bar of the first browser of the first terminal. At this time, the cloud server transmits the webpage information of the
webpage corresponding to the favorite item added/deleted by the user to the second terminal after receiving the upload request. As such, the second browser of the second terminal may add/delete a favorite item on its favorite bar synchronously with the first browser.

[65] As shown in FIG. 4, the method includes the following operations.

[66] At block 401, when the first browser on the first terminal is started, the first terminal transmits a notification to a cloud server, wherein the notification carries an account and an identifier of the first terminal.

[67] Similarly, when the second browser in the second terminal is started, the second terminal transmits a notification carrying the account and an identifier of the second terminal to the cloud server.

[68] At block 402, the cloud server receives the notification and stores a relationship between the account and the identifier of the first terminal in the cloud server.

[69] Similarly, after receiving the notification transmitted by the second terminal, the cloud server also stores a relationship between the account and the identifier of the second terminal in the cloud server.

[70] Through the above blocks 401 and 402, the cloud server identifies that the first terminal and the second terminal are online.

[71] At block 403, the first browser receives an add command issued by the user and obtains webpage information of a webpage to be added to a favorite bar, wherein the webpage information includes at least link information of the webpage.

[72] The user may select a webpage to be added to the favorite bar from webpages displayed by the first browser and issues the add command to the first browser.

[73] The link information of the webpage may include a URL of the webpage.

[74] At block 404, the first terminal transmits an upload request to the cloud server, wherein the upload request includes the webpage information of the webpage corresponding to the favorite item being added to the favorite bar and the account.

[75] At block 405, the cloud server receives the upload request and obtains the identifier of the first terminal and the identifier of the second terminal from storage according to the account in the upload request.

[76] At block 406, the cloud server respectively transmits a synchronizing request to the first terminal and the second terminal according to the identifier of the first terminal and the identifier of the second terminal. The synchronizing request carries the webpage information of the webpage.
At block 407, the first terminal receives the synchronizing request and adds the favorite item corresponding to the webpage to the favorite bar of the first browser according to the webpage information carried in the synchronizing request.

In particular, the first terminal receives the synchronizing request carrying the webpage information of the webpage, draws a blank favorite item on the favorite bar of the first browser and fills the link information of the webpage in the favorite item.

It should be noted that, after obtaining the link information of the webpage to be added to the favorite bar in block 303, the first terminal may directly add a favorite item on the favorite bar of the first browser according to the link information of the webpage.

At this time, after receiving the upload request of the first terminal in block 306, the cloud server obtains the identifier of the second terminal and transmits the synchronizing request to the second terminal according to the identifier of the second terminal.

At block 408, the second terminal receives the synchronizing request and adds a favorite item of the webpage on a favorite bar of the second browser according to the link information of the webpage carried in the synchronizing request.

In particular, the second terminal receives the synchronizing request carrying the webpage information, draws a blank favorite item on the favorite bar of the second browser and fills the link information of the webpage in the favorite item.

In the example of the present disclosure, the first terminal obtains the link information of the webpage to be added into the favorite bar, and transmits the account and the link information of the webpage to the cloud server. The cloud server transmits the link information of the webpage to the second terminal according to the account.

The second terminal receives the link information of the webpage transmitted by the cloud server and adds the favorite item of the webpage on the favorite bar of the second browser according to the link information of the webpage. As such, when the user wants to browse the webpage on the second terminal, the user is able to open the webpage directly according to the favorite item of the webpage, which is convenient to browse the webpage.

Besides adding a webpage into the favorite bar, the user may also select a favorite item of a webpage on the first terminal and issue a deleting command to the first terminal to delete the favorite item of the webpage.

FIG. 5 is a flowchart illustrating a method for synchronizing webpage information according to an example of the present disclosure. FIG. 5 is a simplified diagram
according to one embodiment of the present invention. This diagram is merely an example, which should not unduly limit the scope of the claims. One of ordinary skill in the art would recognize many variations, alternatives, and modifications.

[86] As shown in FIG. 5, the method includes the following operations.

[87] At block 501, when the first browser on the first terminal is started, the first terminal transmits a notification to a cloud server, wherein the notification carries an account and an identifier of the first terminal.

[88] Similarly, when the second browser in the second terminal is started, the second terminal transmits a notification carrying the account and an identifier of the second terminal to the cloud server.

[89] At block 502, the cloud server receives the notification and stores a relationship between the account and the identifier of the first terminal in the cloud server.

[90] Similarly, after receiving the notification transmitted by the second terminal, the cloud server also stores a relationship between the account and the identifier of the second terminal in the cloud server.

[91] Through the above blocks 501 and 502, the cloud server identifies that the first terminal and the second terminal are online.

[92] At block 503, the first terminal receives a deleting command issued by the user, obtains a favorite item corresponding to a webpage selected by the user, and deletes the favorite item of the webpage from the favorite bar of the first browser.

[93] At block 504, the first terminal obtains link information of the webpage from the favorite item and transmits an upload request to the cloud server, wherein the upload request carries the account and the link information of the webpage.

[94] At block 505, the cloud server receives the upload request, obtains the identifier of the second terminal according to the account carried in the upload request, and transmits a deleting request to the second terminal according to the identifier of the second terminal, wherein the deleting request carries the link information of the webpage.

[95] At block 506, the second terminal receives the deleting command, obtains the link information of the webpage carried in the deleting command, and deletes the favorite item of the webpage from the favorite bar of the second browser.

[96] In the example of the present disclosure, the first terminal obtains the link information of the webpage to be deleted from the favorite bar, and transmits the account and the link information of the webpage to the cloud server via an upload
request. The cloud server transmits the link information of the webpage to the second terminal according to the account. The second terminal receives the link information of the webpage transmitted by the cloud server and deletes the favorite item of the webpage on the favorite bar of the second browser according to the link information of the webpage. As such, the webpage information on the first terminal and that on the second terminal are synchronized.

[97] In addition, in various examples of the present disclosure, when the first browser of the first terminal is closed, the first terminal transmits a close message carrying the account to the cloud server. The cloud server deletes the stored relationship between the account and the identifier of the first terminal. Thus, the cloud server identifies that the first terminal is not online.

[98] When the second browser of the first terminal is closed, the second terminal transmits a close message carrying the account to the cloud server. The cloud server deletes the stored relationship between the account and the identifier of the second terminal. Thus, the cloud server identifies that the second terminal is not online.

[99] In accordance with the above method, an example of the present disclosure further provides a user terminal which is able to execute the operations of the above described first terminal and second terminal.

[100] FIG. 6 is a schematic diagram illustrating an example of a user terminal 600 which may execute the method of the present disclosure. As shown in FIG. 6, the user terminal 600 may, for example, be a device such as a personal desktop computer or a portable device, such as a laptop computer, a tablet computer, a cellular telephone, or a smart phone.

[101] For example, the user terminal 600 may include one or more non-transitory processor-readable storage media 601 and one or more processors 602 in communication with the non-transitory processor-readable storage media 601. The user terminal 600 may further include a keypad/keyboard 603 and a display 604, as shown in FIG. 6.

[102] The non-transitory processor-readable storage media 601 may be a RAM memory, flash memory, ROM memory, EPROM memory, EEPROM memory, registers, hard disk, a removable disk, a CD-ROM, or any other form of non-transitory storage medium known in the art. The one or more non-transitory processor-readable storage media 601 may store sets of instructions, or units and/or modules that comprise the sets of instructions, for conducting operations described in the present application. The one
or more processors 602 may be configured to execute the sets of instructions and perform the operations in examples of the present application.

[103] In this example, the user logs on a cloud server via two user terminals 600 using the same account, so as to synchronize webpage information between the two terminals 600. Hereinafter, the two user terminals 600 are referred to as a first terminal and a second terminal. It should be noted that both the first terminal and the second terminal may be implemented according to the example shown in FIG. 6, and the first terminal and the second terminal may be the same terminal.

[104] In particular, the one or more processors 602 of the first terminal may be configured to execute the sets of instructions to perform the following operations:

- transmit an upload request to a cloud server, wherein the upload request includes an account and webpage information of a first webpage displayed on the first browser of the first terminal, such that the cloud server transmits the webpage information of the first webpage to the second terminal according to the account and the second browser of the second terminal opens the first webpage according to the webpage information.

[105] In one example, the upload request may further include navigation histories recorded by the first browser. At this time, before transmitting the upload request to the cloud server, the first terminal obtains the navigation histories recorded between a first time and a current time; wherein the first time is a time when the first terminal obtains the navigation histories last time. After obtaining the navigation histories recorded between the first time and the current time, the first terminal updates the first time with the current time.

[106] In one example, before transmitting the upload request to the cloud server, the first terminal transmits a notification carrying the account and an identifier of the first terminal to the cloud server, such that the cloud server stores a first relationship between the account and the identifier of the first terminal, wherein the cloud server further stores a second relationship between the account and an identifier of the second terminal. Thus, the cloud server identifies that the first terminal is online.

[107] The upload request may be transmitted by the first terminal when a favorite item corresponding to the first webpage is added on a favorite bar of the first browser. In response to the upload request transmitted by the first terminal, the cloud server obtains the identifier of the second terminal and transmits webpage information to the second terminal, such that the second terminal adds a favorite item on a favorite bar of the second browser according to the webpage information.
The upload request may be transmitted by the first terminal when a favorite item corresponding to the first webpage is deleted from a favorite bar of the first browser. In response to the upload request transmitted by the first terminal, the cloud server obtains the identifier of the second terminal and transmits webpage information to the second terminal, such that the second terminal deletes a favorite item from a favorite bar of the second browser according to the webpage information.

The one or more processors 602 of the first terminal may be configured to execute the sets of instructions to perform the following operations:

- transmit a synchronizing request carrying the account to the cloud server; and
- receive webpage information of a second webpage transmitted by the cloud server, such that the first browser of the first terminal opens the second webpage according to the webpage information.

What has been described and illustrated herein is a preferred example of the disclosure along with some of its variations. The terms, descriptions and figures used herein are set forth by way of illustration only and are not meant as limitations. Many variations are possible within the spirit and scope of the disclosure, which is intended to be defined by the following claims — and their equivalents — in which all terms are meant in their broadest reasonable sense unless otherwise indicated.
CLAIMS

1. A method for synchronizing webpage information between a first terminal and a second terminal, comprising:
   receiving, by a cloud server, an upload request transmitted by the first terminal, wherein the upload request comprises an account and webpage information of a webpage displayed on a first browser of the first terminal; and
   transmitting, by the cloud server, the webpage information of the webpage to the second terminal according to the account, such that a second browser of the second terminal opens the webpage according to the webpage information.

2. The method of claim 1, further comprising:
   after receiving the upload request, storing, by the cloud server, a first relationship between the webpage information of the webpage and the account in the cloud server;
   before transmitting the webpage information of the webpage to the second terminal according to the account, receiving, by the cloud server, a synchronizing request transmitted by the second terminal, wherein the synchronizing request carries the account;
   the transmitting the webpage information of the webpage to the second terminal according to the account comprises:
      obtaining, by the cloud server, the webpage information corresponding to the account carried in the synchronizing request according to the first relationship stored in the cloud server; and
      transmitting the obtained webpage information to the second terminal.

3. The method of claim 2, wherein the upload request further comprises navigation histories recorded by the first browser, and the synchronizing request transmitted by the second terminal further comprises a first time;
   the method further comprises:
      recording, by the cloud server, an upload time of the navigation histories; and
      storing, by the cloud server, a second relationship between the navigation histories, the upload time and the account in the cloud server;
   the transmitting the webpage information of the webpage to the second terminal
according to the account further comprises:

obtaining, by the cloud server, navigation histories uploaded between the first time and a current time according to the second relationship stored in the cloud server; and

transmitting the obtained navigation histories to the second terminal.

4. The method of claim 1, wherein before receiving the upload request, the method further comprises:

receiving, by the cloud server, a first notification message transmitted by the first terminal when the first browser is opened on the first terminal, wherein the upload request carries the account and an identifier of the first terminal;

storing, by the cloud server, a third relationship between the account and the identifier of the first terminal in the cloud server;

receiving, by the cloud server, a second notification message transmitted by the second terminal when the second browser is opened on the second terminal, wherein the upload request carries the account and an identifier of the second terminal; and

storing, by the cloud server, a fourth relationship between the account and the identifier of the second terminal in the cloud server.

5. The method of claim 4, wherein the upload request is transmitted by the first terminal when a favorite item corresponding to the webpage is added on a favorite bar on the first browser;

the transmitting the webpage information of the webpage to the second terminal according to the account comprises:

obtaining, by the cloud server, the identifier of the second terminal according to the fourth relationship and the account carried in the upload request;

transmitting, by the cloud server, a synchronizing request to the second terminal according to the identifier of the second terminal, wherein the synchronizing request carries the webpage information of the webpage; such that the second terminal adds a favorite item on a favorite bar of the second browser according to the webpage information.

6. The method of claim 4, wherein the upload request is transmitted by the first terminal when a favorite item corresponding to the webpage is deleted from a favorite
bar the first browser;
    the transmitting the webpage information of the webpage to the second terminal
according to the account comprises:
    obtaining, by the cloud server, the identifier of the second terminal according to
the fourth relationship and the account carried in the upload request;
    transmitting, by the cloud server, a synchronizing request to the second terminal
according to the identifier of the second terminal, wherein the synchronizing request
carries the webpage information of the webpage; such that the second terminal deletes a
favorite item from a favorite bar of the second browser according to the webpage
information.

7. A method for synchronizing webpage information between a first terminal and
a second terminal, comprising:
    transmitting, by the first terminal, an upload request to a cloud server, wherein the
upload request comprises an account and webpage information of a webpage displayed
on a first browser of the first terminal, such that the cloud server transmits the webpage
information of the webpage to the second terminal according to the account and a
second browser of the second terminal opens the webpage according to the webpage
information.

8. The method of claim 7, wherein the upload request further comprises
navigation histories recorded by the first browser;
    the method further comprises:
    before transmitting the upload request to the cloud server, obtaining, by the first
terminal, the navigation histories recorded between a first time and a current time;
wherein the first time is a time when the first terminal obtains the navigation histories
last time; and
    after obtaining the navigation histories recorded between the first time and the
current time, updating, by the first terminal, the first time with the current time.

9. The method of claim 7, further comprising:
    before transmitting the upload request to the cloud server, transmitting, a
notification carrying the account and an identifier of the first terminal to the cloud
server, such that the cloud server stores a first relationship between the account and the
identifier of the first terminal, wherein the cloud server further stores a second relationship between the account and an identifier of the second terminal.

10. The method of claim 9, wherein the upload request is transmitted by the first terminal when a favorite item corresponding to the webpage is added on a favorite bar the first browser;

in response to the upload request transmitted by the first terminal, the cloud server obtains the identifier of the second terminal and transmits webpage information to the second terminal, such that the second terminal adds a favorite item on a favorite bar of the second browser according to the webpage information.

11. The method of claim 9, wherein the upload request is transmitted by the first terminal when a favorite item corresponding to the webpage is deleted from a favorite bar the first browser;

in response to the upload request transmitted by the first terminal, the cloud server obtains the identifier of the second terminal and transmits webpage information to the second terminal, such that the second terminal deletes a favorite item on a favorite bar of the second browser according to the webpage information.

12. A cloud server for synchronizing webpage information between a first terminal and a second terminal, comprising: a processor and a memory; wherein the memory is communicatively connected with the processor and stores machine-readable instructions executable by the processor to:

receive an upload request transmitted by the first terminal, wherein the upload request comprises an account and webpage information of a webpage displayed on a first browser of the first terminal; and

transmit the webpage information of the webpage to the second terminal according to the account, such that a second browser of the second terminal opens the webpage according to the webpage information.

13. The cloud server of claim 12, wherein the memory further stores machine-readable instructions executable by the processor to:

after receiving the upload request, store a first relationship between the webpage information of the webpage and the account in the cloud server;
before transmitting the webpage information of the webpage to the second terminal according to the account, receive a synchronizing request transmitted by the second terminal, wherein the synchronizing request carries the account;

obtain the webpage information corresponding to the account carried in the synchronizing request according to the first relationship stored in the cloud server; and

transmit the obtained webpage information to the second terminal.

14. The cloud server of claim 13, wherein the upload request further comprises navigation histories recorded by the first browser, and the synchronizing request transmitted by the second terminal further comprises a first time;

the memory further stores machine-readable instructions executable by the processor to:

record an upload time of the navigation histories; and

store a second relationship between the navigation histories, the upload time and the account in the cloud server;

obtain navigation histories uploaded between the first time and a current time according to the second relationship stored in the cloud server; and

transmit the obtained navigation histories to the second terminal.

15. The cloud server of claim 12, wherein the memory further stores machine-readable instructions executable by the processor to:

before receiving the upload request,

receive a first notification message transmitted by the first terminal when the first browser is opened on the first terminal, wherein the upload request carries the account and an identifier of the first terminal;

store a third relationship between the account and the identifier of the first terminal in the cloud server;

receive a second notification message transmitted by the second terminal when the second browser is opened on the second terminal, wherein the upload request carries the account and an identifier of the second terminal; and

store a fourth relationship between the account and the identifier of the second terminal in the cloud server.

16. The cloud server of claim 15, wherein the upload request is transmitted by
the first terminal when a favorite item corresponding to the webpage is added on a favorite bar of the first browser;

the memory further stores machine-readable instructions executable by the processor to:

obtain the identifier of the second terminal according to the fourth relationship and the account carried in the upload request;

transmit a synchronizing request to the second terminal according to the identifier of the second terminal, wherein the synchronizing request carries the webpage information of the webpage; such that the second terminal adds a favorite item on a favorite bar of the second browser according to the webpage information.

17. The cloud server of claim 15, wherein the upload request is transmitted by the first terminal when a favorite item corresponding to the webpage is deleted from a favorite bar of the first browser;

the memory further stores machine-readable instructions executable by the processor to:

obtain the identifier of the second terminal according to the fourth relationship and the account carried in the upload request;

transmit a synchronizing request to the second terminal according to the identifier of the second terminal, wherein the synchronizing request carries the webpage information of the webpage; such that the second terminal deletes a favorite item on a favorite bar of the second browser according to the webpage information.

18. A first terminal for synchronizing webpage information between the first terminal and a second terminal, comprising: a processor and a memory; wherein the memory is communicatively connected with the processor and stores machine-readable instructions executable by the processor to:

transmit an upload request to a cloud server, wherein the upload request comprises an account and webpage information of a first webpage displayed on a first browser of the first terminal, such that the cloud server transmits the webpage information of the webpage to the second terminal according to the account and a second browser of the second terminal opens the first webpage according to the webpage information.

19. The first terminal of claim 18, wherein the upload request further comprises
navigation histories recorded by the first browser;

the memory further stores machine-readable instructions executable by the processor to: before transmitting the upload request to the cloud server, obtain the navigation histories recorded between a first time and a current time; wherein the first time is a time when the first terminal obtains the navigation histories last time; and

update the first time with the current time after obtaining the navigation histories recorded between the first time and the current time.

20. The first terminal of claim 18, wherein the memory further stores machine-readable instructions executable by the processor to:

before transmitting the upload request to the cloud server, transmit a notification carrying the account and an identifier of the first terminal to the cloud server, such that the cloud server stores a first relationship between the account and the identifier of the first terminal, wherein the cloud server further stores a second relationship between the account and an identifier of the second terminal.

21. The first terminal of claim 20, wherein the upload request is transmitted by the first terminal when a favorite item corresponding to the first webpage is added on a favorite bar of the first browser;

in response to the upload request transmitted by the first terminal, the cloud server obtains the identifier of the second terminal and transmits webpage information to the second terminal, such that the second terminal adds a favorite item on a favorite bar of the second browser according to the webpage information.

22. The first terminal of claim 20, wherein the upload request is transmitted by the first terminal when a favorite item corresponding to the first webpage is deleted from a favorite bar of the first browser;

in response to the upload request transmitted by the first terminal, the cloud server obtains the identifier of the second terminal and transmits webpage information to the second terminal, such that the second terminal deletes a favorite item on a favorite bar of the second browser according to the webpage information.

23. The first terminal of claim 18, wherein the memory further stores machine-readable instructions executable by the processor to:
transmit a synchronizing request carrying the account to the cloud server; and receive webpage information of a second webpage transmitted by the cloud server, such that the first browser of the first terminal opens the second webpage according to the webpage information.
FIG. 1

Cloud server

Operating System

Applications

Synchronizing application

Memory/Medium

Processor

FIG. 2

a cloud server receives an upload request transmitted by a first terminal, wherein the upload request carries an account and webpage information of a webpage displayed on a first browser of the first terminal

the cloud server transmits, according to the account, the webpage information of the webpage to a second terminal corresponding to the account, such that a second browser on the second terminal may open the webpage according to the webpage information
a first terminal obtains webpage information of a webpage displayed on a first browser, wherein the webpage information includes link information of the webpage and a position index of the webpage on a tag bar of the first browser

301

the first terminal transmits an upload request to the cloud server, wherein the upload request includes at least the account and the webpage information of the webpage

302

the cloud server receives the upload request, stores a relationship between the account and the webpage information of the webpage included in the upload request

303

the cloud server receives the upload request, stores a relationship between the account and the webpage information of the webpage included in the upload request

304

the cloud server receives the synchronizing request and obtains the webpage information of the webpage from the stored webpage information according to the account in the synchronizing request

305

the cloud server transmits a synchronizing response to the second terminal, wherein the synchronizing response includes the webpage information of the webpage

306

the second terminal receives the synchronizing response and opens the webpage via a second browser according to the webpage information of the webpage in the synchronizing response

307

FIG. 3
when the first browser on the first terminal is started, the first terminal transmits a notification to a cloud server, wherein the notification carries an account and an identifier of the first terminal.

the cloud server receives the notification and stores a relationship between the account and the identifier of the first terminal in the cloud server.

the first browser receives an add command of the user and obtains webpage information of a webpage to be added into a favorite bar, wherein the webpage information includes at least link information of the webpage.

the first terminal transmits an upload request to the cloud server, wherein the upload request includes the link information of the webpage and the account.

the cloud server receives the upload request and obtains the identifier of the first terminal and the identifier of the second terminal from storage according to the account in the upload request.

the cloud server respectively transmits a synchronizing request to the first terminal and the second terminal according to the identifier of the first terminal and the identifier of the second terminal.

the first terminal receives the synchronizing request and adds the webpage into the favorite bar of the first browser according to the link information of the webpage carried in the synchronizing request.

the second terminal receives the synchronizing request and adds a favorite item of the webpage on a favorite bar of the second browser according to the link information of the webpage carried in the synchronizing request.

FIG. 4
when the first browser on the first terminal is started, the first terminal transmits a notification to a cloud server, wherein the notification carries an account and an identifier of the first terminal

the cloud server receives the notification and stores a relationship between the account and the identifier of the first terminal in the cloud server

the first terminal receives a deleting command issued by the user, obtains a favorite item corresponding to a webpage selected by the user, and deletes the favorite item of the webpage from the favorite bar of the first browser

the first terminal obtains link information of the webpage from the favorite item and transmits an upload request to the cloud server, wherein the upload request carries the account and the link information of the webpage

the cloud server receives the upload request, obtains the identifier of the second terminal according to the account carried in the upload request, and transmits a deleting request to the second terminal according to the identifier of the second terminal, wherein the deleting request carries the link information of the webpage

the second terminal receives the deleting command, obtains the link information of the webpage carried in the deleting command, and deletes the favorite item of the webpage from the favorite bar of the second browser

FIG. 5

User terminal 600

Memory/Media 601

Processor 602

Keypad/keyboard 603

display 604

FIG. 6
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**

See the extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC: G06F, H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database consulted during the international search (name of data base and, where practicable, search terms used)

WPI, EPDOC, CNPAT, SIPOABS, CPEA, VEN, USTXT, WOTXT, EPTXT, CNKL, IEEE: web, page, webpage, cloud, server, terminal, account, user, browser, favorite, synch+, upload, navigation, history, display, time, add, delete

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tr>
<td>X</td>
<td>CN 102638581 A (QTZHI SOFTWARE (BEIJING) CO., LTD.) 15 August 2012(15.08.2012) abstract, claims 1-6, 11-19, 24-26, description, pages 4-12, figures 1, 2</td>
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<td>CN 102664932 A (QINGDAO CENTLING INFORMATION TECHNOLOGIES CO., LTD.) 12 September 2012(12.09.2012) abstract, description, pages 1-3, figure 1</td>
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<td>A</td>
<td>CN 1912869 A (TENCENT TECHNOLOGY (SHENZHEN) COMPANY LIMITED ) 14 February 2007(14.02.2007) the whole document</td>
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Further documents are listed in the continuation of Box C.

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

07 November 2013 (07.11.2013)

Date of mailing of the international search report

21 Nov. 2013 (21.11.2013)

Name and mailing address of the ISA/CN

The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088

Authorized officer

TIAN, Yue

Telephone No. (86-10)62413698
### INTERNATIONAL SEARCH REPORT

#### Information on patent family members

<table>
<thead>
<tr>
<th>Patent Documents referred in the Report</th>
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Form PCT/ISA /210 (patent family annex) (July 2009)
A. CLASSIFICATION OF SUBJECT MATTER

G06F 17/30 (2006.01) i
H04L 29/08 (2006.01) i