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(54) Title: A METHOD FOR CONNECTING DISPARATE FORUMS AND SOCIALLY CONNECTING THEIR MEMBERS

(57) Abstract: Method for connecting between Internet users, of more than one forum, such that each user has a local identity membership in the one or more forums. An auxiliary server is provided for connecting to servers of the forums and at least one unified identity and at least one unified profile are generated for each of the users on a database that is provided for the auxiliary server for storing the users' unified identities and unified profiles. Then a fixed logical link is established between the unified identity of the user in the database and each local identity of the user in the corresponding forum. Finally at least a first user of the users is allowed to communicate with at least a second user of the users regardless of prior forum membership of the first user by utilizing the unified identity of the first user.



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A METHOD FOR CONNECTING DISPARATE FORUMS

AND SOCIALLY CONNECTING THEIR MEMBERS

Field of the Invention

The present invention relates to the field of forums and discussion boards. More particularly, the invention relates to a method for allowing a member present in a forum, having a single identifying profile, to interact with other members connected to other forums without having to leave the forum, or log in to the other forums, where the single identity represents and identifies the user.

Background of the invention

As of today millions of Internet users around the world are members of forums, where many of them have memberships to more than one forum. An Internet forum is a facility for holding discussions, or the web application software used to provide the facility. The members of a forum may be active in discussions, ask questions, answer question, exchange data, or socialize in and through the forum. Although a sense of virtual community often develops around forums that have regular members, most of these forum communities are literally isolated from one another and act as a "network island", where all the discussions and sessions are held internally in the forum by community members. Meaning that, only members, who are registered and have filled a profile list, may participate

in the forum's sessions. Any new user wishing to become a member of the community is required to fill a profile list before given a username login. Furthermore, if any of the participating members of a given forum wishes to join another forum, he is required to log independently to that forum with the appropriate user login and the accompanying profile of that forum. In any case the discussions in more than one forum cannot be combined or interlinked.

It is an object of the present invention to provide a method which allows a connected member of a given forum to connect to other forums and members of other forums from within the given forum.

It is another object of the present invention to provide a method for allowing a user to login, signup or adjoin into more than one forum using a single signup, identity, account, and login.

It is still another object of the present invention to provide a method for allowing a user to be a member of more than one forum while identifying the user with the same single profile.

It is still another object of the present invention to provide a method for integrating and processing information and logical connections made by users of different forums.

Other objects and advantages of the invention will become apparent as the description proceeds.

Summary of the Invention

The present invention relates to a method for connecting between Internet users, of more than one forum, each having a local identity membership in said one or more forums, comprising the steps of: (a) providing an auxiliary server for connecting to servers of said forums; (b) generating at least one unified identity and at least one unified profile for each of said users on said database; (c) providing a database for said auxiliary server for storing said users' unified identities and unified profiles; (d) establishing a fixed logical link between the unified identity of said user in said database and each local identity of said user in the corresponding forum; and (e) allowing at least a first user of said users to communicate with at least a second user of said users regardless of prior forum membership of said first user by utilizing said unified identity of said first user.

Preferably, the auxiliary server is transparent to the users.

Preferably, the users of the forum are offered a list of other forums for connecting to.

Preferably, the users of the forum are offered a list of other users they may connect with.

Preferably, the unified profile of the first user is retrieved from the database of the auxiliary server for displaying to the second user.

Preferably, the unified profile of the first user is displayed to the second user on said second user's presently connected forum.

Preferably, a part of the unified profile of the first user is displayed to the second user on said second user's presently connected forum.

Preferably, the unified identity allows the first user to log into the second forum.

Preferably, the fixed logical link between the unified identity of the auxiliary server and the local identity of the user is used for updating said local identity when said unified identity is updated.

Preferably, the fixed logical link between the unified identity of the auxiliary server and the local identity of the user is used for updating said unified identity whenever said local identity is updated.

Preferably, the auxiliary server keeps track of the activity of the logged users across different forums using their unified identity, for processing and deriving information.

Preferably, the unified profile of the first user is created when said first user of a first forum requests to connect to a second user of a second forum.

Preferably, the unified profile of the user is created when said user requests a unified profile.

Preferably, profile is partially hidden from the second user.

Preferably, the unified identity has a fixed logical link for each local identity of the user.

Brief Description of the Drawings

The above and other characteristics and advantages of the invention will be better understood through the following illustrative and non-limitative detailed description of preferred embodiments thereof, with reference to the appended drawings, wherein:

- Fig. 1 is a schematic diagram generally illustrating the method for connecting between forums; and
- Fig. 2 is a block diagram of the authentication method used in the unified login process according to one embodiment of the invention.

Detailed Description of Preferred Embodiments

All references made hereinafter to the term forum includes any one, or any combination thereof, of the followings: Internet forums, web forums, message boards, discussion boards, discussion forums, bulletin boards, boards, wikis, community blogs, blog networks, blogs, chat rooms, discussion groups, news groups, fora (the Latin plural), or forums.

All references made hereinafter to the term unified login includes any one, or any combination thereof, of the followings: unified login, unified signup, unified registration, one click registration, automatic registration, single sign-on, one click signup, one click login, automatic login, or automated signup.

Fig. 1 is a schematic diagram generally illustrating the method for connecting between forums. In this diagram user 20 is an enlisted member of one of the forums 12 facilitated in server 10. Server 10 may facilitate a number of forums which may be logically disconnected, fully connected, or partially connected. In addition, server 10 maintains a database 11 storing

the forums' member local profile and local identity. When user 20 connects to one of the forums 12 facilitated in server 10, his local identity is loaded for associating the user 20 with his "cyber" local profile. Typically, the local profile is filled by a user as one of the enlisting steps to become a member, and creating a local identity, before his initial connection to the forum 12, after which he receives a username and password, referred to hereinafter as log name, for connecting to the forum 12, referred to hereinafter as log or login. Once the user 20 has logged to one of the forums 12 of server 10 he may participate in the active discussions, read information, send a question, or generally socialize in the forum 12. The user's 20 local profile may be displayed to any other participant of the forum 12 upon request, thus the other users may have a better picture of user 20. Nevertheless, some of the forums display only a partial or full local profile only to registered members. Auxiliary server 40, according to a preferred embodiment of the invention, stores on database 41 member's unified profiles and unified identities of members of participating forums wishing to connect to other forums using the invention. The stored unified profiles of database 41 may be enhancements of the member local profiles, where the additional information is supplied by the users, or is generated by other sources based on the identifying information. Server 30 facilitates another forum 32 and a database 31 with the local profiles of the members of forum 32 similar to database 11 and server 10. Once a user 20 wishes to connect from forum 12 to forum 32, a unified identity and a unified profile

are generated in server 40 and stored in database 41. The forum 12 is required to provide server 40 with the user's local profile and/or local identity, or at least a portion of those. The unified profile of database 41 is intended for replacing the local profile of database 11, and from this instance on the displayed profile, in the forum 12, of user 20 is originated from database 41. The unified identity of database 41 is intended for creating a fixed logical link between the server of the participating forum, such as server 10, and server 40 for the purpose of identifying the user who communicates between forums. When a request is sent to view a profile of a member who has a unified profile in database 41, the server of the forum automatically retrieves the user's unified profile from database 41 for display. Therefore, any update in the user's unified profile data stored in database 41 is displayed in all the forums this user is a local member of. Once the logical link for user 20 is established, user 20 can connect to the other participating forums, such as forum 32. The unified identity allows a unified login to the participating forums. In other words the unified identity allows the user to log into any participating forum without registering locally in the forum. The list of participating forums may be found in auxiliary server 40. For example, when user 20 logs into forum 12 on server 10 he may connect from forum 12 and server 10 to forum 32 on server 30, as both forums are participating forums. Thus user 20 may join forum 32 from forum 12 without creating a local identity and filling another local profile.

As understood the unified identity may be used for representing the same member in different forums, furthermore, existing identities of the same user in different forums may be combined into the unified identity. Nevertheless, a member may also have multiple unified identities, or multiple modes of the same unified identity for representing the member in different groups of forums.

Fig. 2 is a block diagram of the authentication method used in the unified login process according to one embodiment of the invention. As understood, many embodiments may be used for the unified login process; however, for the sake of enablement an embodiment of this process is described where one of the goals of this process is to verify that both the source and the destination systems are valid. Furthermore, the described process is also intended for preventing forced user addition to a specific forum, or an attempt to add a user into a forum without proper authorization from the auxiliary server. In step 1 user 20 of Fig. 1, which is logged in forum 12, requests to join forum 32. In step 2, user 20 is redirected to a "login-remote" page on server 40, by sending his browser a new assembled URL with the new location. The assembled URL also includes an 'API public key', 'Return URL' and 'Referrer URL'. The 'API public key' is a unique public Key code generated for each participating forum in order to identify the forum with server 40. The 'Return URL' is

the URL for redirecting back the user, which in this case is a URL of "login-verify" page of forum 32 on server 30. The 'Referrer URL' is the URL that the user is redirected to after authentication is successful, which in this case is a URL of forum 32 on server 30. In step 3a server 40 verifies if a unified identity of user 20 exists in database 41. If the unified identity has not been created or the link to the local identity of user 20 on forum 32 has not been made, then in step 3 server 40 creates a logical link from the unified identity (creating it first if needed) to the a yet unspecific local identity as described in relation to Fig.1, without the Local Identity ID. The logical connection includes an 'Association Temporary Key', which is a temporary key generated per logical link between a participating forum and auxiliary server 40 or may be generated per Unified login attempt to a specific participating forum, and an 'Association Permanent Key' which is a permanent key generated per logical link between a participating forum and auxiliary server 40. Both types of keys are secret keys, only known in their raw form to server 40. In one of the embodiments, the user may require a notification before such logical link is generated, and the user is prompted for a verification before the link creation. In step 4, After verifying that a logical link is established, server 40 generates a secret 'Login-KeyCode' which is a key generated from the 'Association Temporary Key' and the 'Association Permanent Key', either hashed or encrypted, for the purpose of helping server 30 of forum 32 verify that a unified login request is indeed from server 40. In step 5 the user is redirect back using

the Return URL, with the following additional variables in the URL: 'Unified Identity ID' which is an identifier of a member's Unified Identity on server 40, 'Login-KeyCode' created in step 4, and 'Referrer URL' received in step 1. In step 6, Server 30 of forum 32, contacts, via RPC, XMLRPC, HTTP, HTTPS or any accepted method, server 40 and authenticates the passed details of step 4. This is done by sending back the 'Login-KeyCode', 'Unified Identity ID' and 'API private Key' to server 40, asking for confirmation that the login attempt originated from server 40. In step 7, Server 40 verifies that the Unified login attempt received by server 10, in steps 4 and 5, had originated from it, by regenerating the 'Login-KeyCode' for user 20, based on: 'Association Temporary Key' and 'Association Permanent Key' as stored in database 41 for the latest unified login attempt for the specific user 20 based on the 'Unified Identity ID' sent by server 30 at step 5. In order to verify that the verification request originated from the correct forum on server 30, Server 40 first verifies that the passed 'API private Key' is correct. This key is used to identify which logical link should be used when retrieving the 'Association Temporary Key' and 'Association Permanent Key' needed for this step. In step 8, after server 40 authenticates the login attempt, server 40 sends back to server 30 the following data: 'Association Permanent Key', Unified Identity's Email, Username and additional optional data for storing in the local identity. In step 9, server 30 verifies that the specific user has a local identity on the forum based on 'Unified Identity ID'. If not, then in step 91

server 30 creates a local identity and automatically connects it with the 'Unified Identity ID'. Once a user local identity is created, the 'Unified Identity ID' and additional Unified identity's details are saved into the local identity. In step 92, Server 30 sends the local identity ID to server 40 with the 'API Private Key' for server 40 to store the ID in the logical link. In step 93, once a local identity exists the user is logged in based on the local identity of forum 32, after which the user is redirected to 'Referrer URL'.

In one of the embodiments of the invention the process of connecting to a number of different forums using an auxiliary server is done user-transparent where the user is not aware of the presence of the auxiliary server.

In another embodiment of the invention the auxiliary server may be implemented on a number of servers, or on one of the existing servers of a participating forum.

In yet another embodiment of the invention, the local database of the participating forum is updated automatically when the unified profile is updated. Thus, if a user wishes to update one of the profile's fields, such as forum signature and personal avatar, he is only required to update the unified profile.

In yet another embodiment of the invention the auxiliary server keeps track of the logged users across different forums using their unified identity, especially their activities and the time they spend in each forum. This information may be used to better accommodate the users. Furthermore, the seniorities, aggregated from different forums, of the users may be recorded by the auxiliary server and displayed in his profile. In addition the tracking may be used for computational purposes to offer better social matching and interaction experience.

In yet another embodiment of the invention the active users of a forum may be offered a list of other forums they may wish to enter. The offered list may be composed of forums having topics similar to topics of interest of user, either defined by user or deduced based on the user's past forums activity. Furthermore, the offered list may be composed of forums where the friends of the user are presently active.

In yet another embodiment the user may wish to create a unified profile without requesting to connect to a different forum, in order to take advantage of the enhanced profile tools such as the social network advantages associated with the unified profile.

In yet another embodiment the unified profile may be partially hidden from the other users, according to the forums requirements, the member's preferences, or according to the other users' affiliation to the member.

In yet another embodiment the user may wish to directly signup and connect to the auxiliary server for creating a unified identity, even without yet having a local identity on any forum, in order to receive from the auxiliary server a list of participating forums or members matching the user's interests.

While some embodiments of the invention have been described by way of illustration, it will be apparent that the invention can be carried into practice with many modifications, variations and adaptations, and with the use of numerous equivalents or alternative solutions that are within the scope of persons skilled in the art, without departing from the spirit of the invention or exceeding the scope of the claims.

CLAIMS

1. A method for connecting between Internet users, of more than one forum, each having a local identity membership in said one or more forums, comprising the steps of:
 - a. providing an auxiliary server for connecting to servers of said forums;
 - b. generating at least one unified identity and at least one unified profile for each of said users on said database;
 - c. providing a database for said auxiliary server for storing said users' unified identities and unified profiles;
 - d. establishing a fixed logical link between the unified identity of said user in said database and each local identity of said user in the corresponding forum; and
 - e. allowing at least a first user of said users to communicate with at least a second user of said users regardless of prior forum membership of said first user by utilizing said unified identity of said first user.
2. A method according to claim 1, where the auxiliary server is transparent to the users.

3. A method according to claim 1, where the users of the forum are offered a list of other forums for connecting to.
4. A method according to claim 1, where the users of the forum are offered a list of other users they may connect with.
5. A method according to claim 1, where the unified profile of the first user is retrieved from the database of the auxiliary server for displaying to the second user.
6. A method according to claim 5, where the unified profile of the first user is displayed to the second user on said second user's presently connected forum.
7. A method according to claim 5, where a part of the unified profile of the first user is displayed to the second user on said second user's presently connected forum.
8. A method according to claim 1, where the unified identity allows the first user to log into the second forum.
9. A method according to claim 1, where the fixed logical link between the unified identity of the auxiliary server and the local identity of

the user is used for updating said local identity when said unified identity is updated.

10. A method according to claim 1, where the fixed logical link between the unified identity of the auxiliary server and the local identity of the user is used for updating said unified identity whenever said local identity is updated.

11. A method according to claim 1, where the auxiliary server keeps track of the activity of the logged users across different forums using their unified identity, for processing and deriving information.

12. A method according to claim 1, where the unified profile of the first user is created when said first user of a first forum requests to connect to a second user of a second forum.

13. A method according to claim 1, where the unified profile of the user is created when said user requests a unified profile.

14. A method according to claim 6, where the profile is partially hidden from the second user.

15.A method according to claim 1, where the unified identity has a fixed logical link for each local identity of the user.

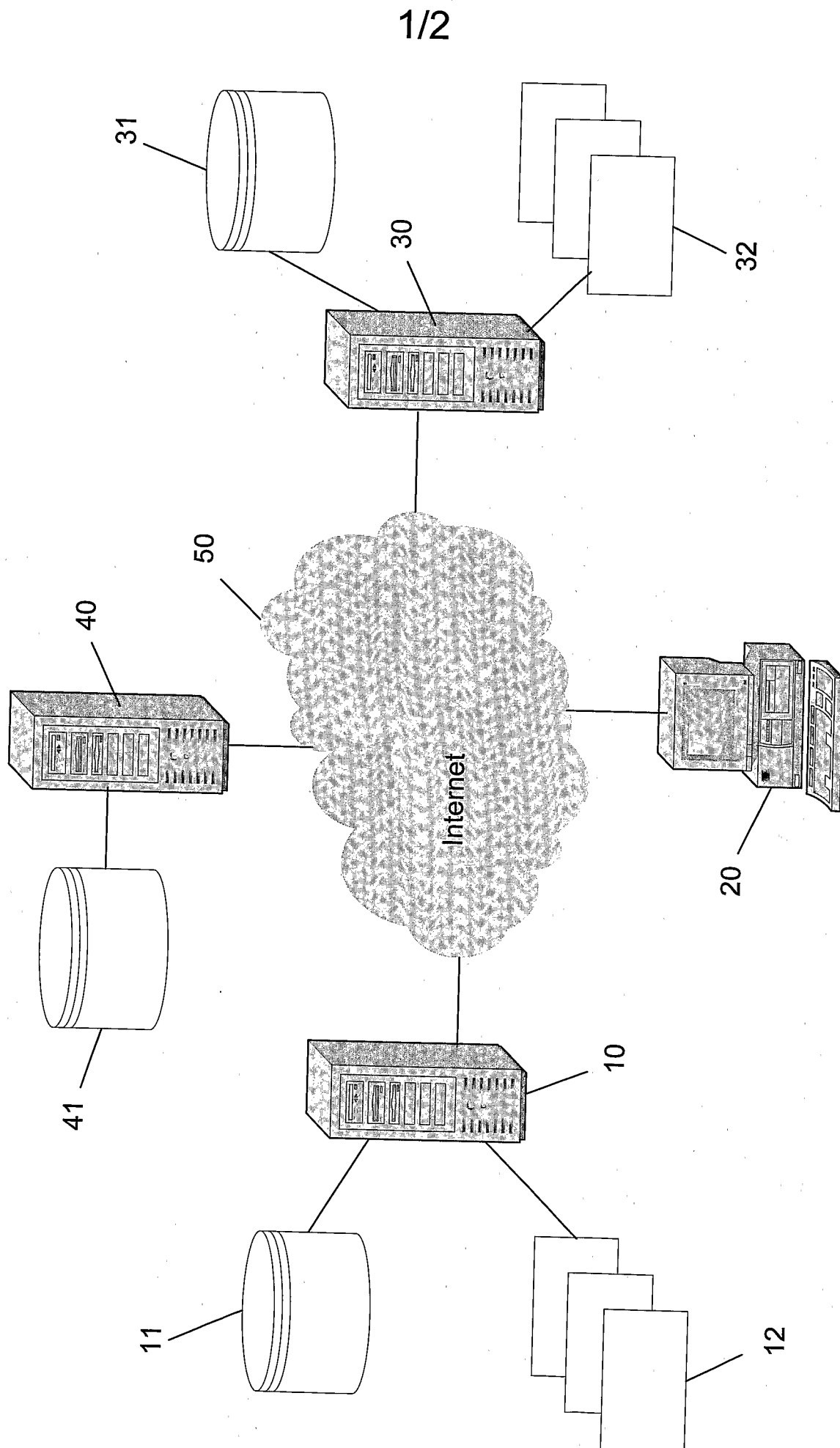


Fig. 1

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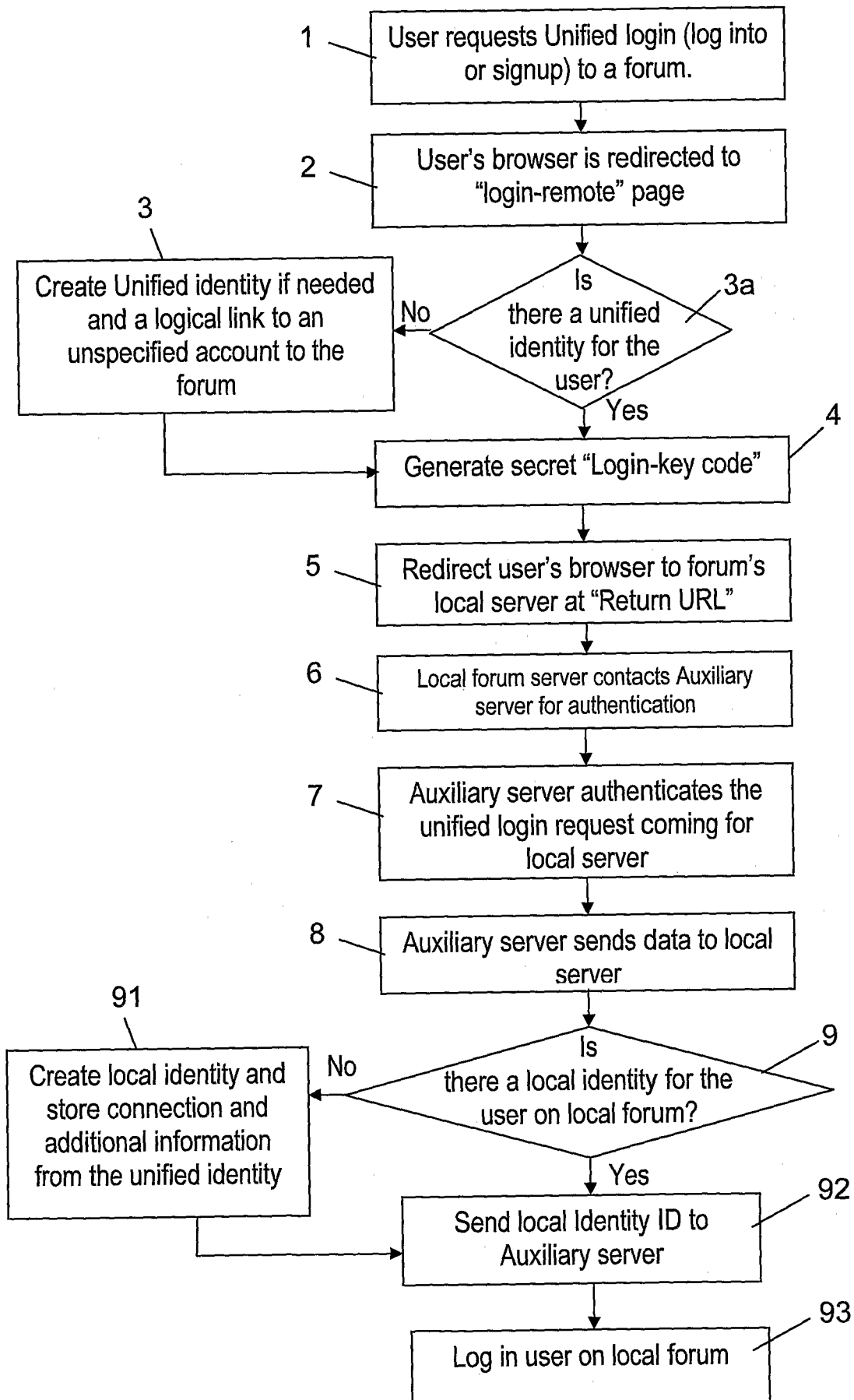


Fig. 2