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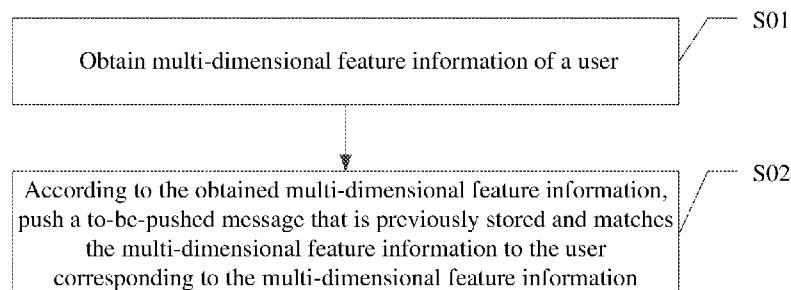


FIG. 1

- (57) Abstract: Methods and apparatus for pushing messages are provided herein. In an exemplary method implemented by a server, multi-dimensional feature information of a user belonging to a user group can be obtained. A to-be-pushed message can be determined from previously-stored pushing messages, by matching the multi-dimensional feature information with a previously-stored pushing message of the previously-stored pushing messages. The to-be-pushed message can be checked to be shared to the user group containing the user. The to-be-pushed message can be pushed to the user of the user group corresponding to the multi-dimensional feature information. The to-be-pushed message can include an advertisement.



METHOD AND APPARATUS FOR PUSHING MESSAGES

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application claims priority to Chinese Patent Application No.201310488828.1, filed on October 17, 2013, the entire content of which is incorporated hereinby reference.

FIELD OF THE DISCLOSURE

[0002] The present disclosure generally relates tothe field of Internet technology and, more particularly, relates to methods and apparatus for pushing messages.

BACKGROUND

[0003] With development of computer technology and with various electronic platforms becoming increasingly intelligent, using an electronic platform to push messagehas become one of the main channels for a business to publish messages and for users to access messages.

[0004] Conventionalmethods for pushingadvertisement fora business may include selectively releasing advertisement based on a keyword inputted by a user (e.g.,advertising by searching on a browser engine), and releasing advertisementaccording tocontent features of the platform, e.g., by pushingadvertisements based on certain communities such as ondouban.com(douban.comis a Chinese social networking service website).

[0005] However, when pushing advertisement by the keyword-matching technology, only advertisements according to the need of the keyword inputted by the user can be outputted, whilenon-inputted characteristics of the user cannot be usedto determine potentialneeds of the

5 user. Thus, output results are often relatively narrow. In addition, pushing advertisement by the platform-release technology for displaying advertisement requires high cost and high requirement for technical specialization with high operation intensity.

BRIEF SUMMARY OF THE DISCLOSURE

[0006] One aspect of the present disclosure includes methods for pushing messages. An
10 exemplary method can be implemented by a server. In the exemplary method, multi-dimensional feature information of a user belonging to a user group can be obtained. A to-be-pushed message can be determined from previously-stored pushing messages, by matching the multi-dimensional feature information with a previously-stored pushing message of the previously-stored pushing messages. The to-be-pushed message can be checked to be shared to
15 the user group containing the user. The to-be-pushed message can be pushed to the user of the user group corresponding to the multi-dimensional feature information. The to-be-pushed message can include an advertisement.

[0007] Another aspect of the present disclosure includes apparatus for pushing messages. An exemplary apparatus can include an information-obtaining module, and a message-pushing
20 module. The information-obtaining module can be configured to obtain multi-dimensional feature information of a user belonging to a user group. The message-pushing module can be configured to determine a to-be-pushed message from previously-stored pushing messages by matching the multi-dimensional feature information with a previously-stored pushing message of the previously-stored pushing messages. The to-be-pushed message can be checked to be shared
25 to the user group containing the user. The message-pushing module can be further configured to

5 push the to-be-pushed message to the user of the user group corresponding to the multi-dimensional feature information. The to-be-pushed message can include an advertisement.

[0008] Other aspects of the present disclosure can be understood by those skilled in the art in light of the description, the claims, and the drawings of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

10 [0009] The following drawings are merely examples for illustrative purposes according to various disclosed embodiments and are not intended to limit the scope of the disclosure.

[0010] FIG. 1 depicts a flow diagram of an exemplary method for pushing messages in accordance with various disclosed embodiments;

[0011] FIG. 2 depicts a flow diagram of another exemplary method for pushing messages
15 in accordance with various disclosed embodiments;

[0012] FIG. 3 depicts a flow diagram of another exemplary method for pushing messages in accordance with various disclosed embodiments;

[0013] FIG. 4 depicts a structure diagram of an exemplary apparatus for pushing messages in accordance with various disclosed embodiments;

20 [0014] FIG. 5 depicts a structure diagram of another exemplary apparatus for pushing messages in accordance with various disclosed embodiments;

[0015] FIG. 6 depicts a structure diagram of another exemplary apparatus for pushing messages in accordance with various disclosed embodiments;

[0016] FIG. 7 depicts an exemplary environment incorporating certain disclosed
25 embodiments;

5 [0017] FIG. 8 depicts an exemplary computer system consistent with the disclosed embodiments;

[0018] FIG. 9 depicts an exemplary relationship between an advertiser, a group administrator, and a platform in accordance with various disclosed embodiments;

10 [0019] FIG. 10 depicts an exemplary process for advertising in accordance with various disclosed embodiments;

[0020] FIG. 11 depicts an exemplary page structure for group administrator in accordance with various disclosed embodiments;

[0021] FIG. 12 depicts an exemplary interface displaying multi-dimensional feature information shared by users in a group in accordance with various disclosed embodiments;

15 [0022] FIG. 13 depicts an exemplary interface for a group administrator to review an advertisement in accordance with various disclosed embodiments;

[0023] FIG. 14 depicts an exemplary interface for displaying commission income to a group administrator in accordance with various disclosed embodiments;

20 [0024] FIGS. 15A-15C depict exemplary interfaces for displaying advertisements and related cost in accordance with various disclosed embodiments; and

[0025] FIG. 16 depicts an exemplary process for matching and releasing an advertisement in accordance with various disclosed embodiments.

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DETAILED DESCRIPTION

[0026] Reference will now be made in detail to exemplary embodiments of the disclosure, which are illustrated in the accompanying drawings. Wherever possible, the same reference numbers will be used throughout the drawings to refer to the same or like parts.

[0027] The present disclosure can address certain problems in server technology. Using the server as disclosed, messages such as advertisements can be selected and precisely matched to a user based on user information in multiple dimensions, such as historical data, attribute of the user group of the user. Optionally, when the user belongs to a user group, the message can be reviewed by a group admin to determine whether the message is appropriate for the user in the user group.

[0028] FIG. 7 depicts an exemplary environment 700 incorporating exemplary methods and apparatus for pushing messages in accordance with various disclosed embodiments. As shown in FIG. 7, the environment 700 can include a server 704, a terminal 706, and a communication network 702. The server 704 and the terminal 706 may be coupled through the communication network 702 for information exchange, such as pushing/receiving a message, etc. Although only one terminal 706 and one server 704 are shown in the environment 700, any number of terminals 706 or servers 704 may be included, and other devices may also be included.

[0029] The communication network 702 may include any appropriate type of communication network for providing network connections to the server 704 and terminal 706 or among multiple servers 704 or terminals 706. For example, the communication network 702 may include the Internet or other types of computer networks or telecommunication networks, either wired or wireless.

5 [0030] A terminal, as used herein, may refer to any appropriate user terminal with certain computing capabilities, e.g., a personal computer (PC), a work station computer, a hand-held computing device (e.g., a tablet), a mobile terminal (e.g., a mobile phone or a smart phone), or any other client-side computing device.

[0031] A server, as used herein, may refer to one or more server computers configured to
10 provide certain server functionalities, e.g., obtaining multi-dimensional feature information of a user, and pushing a to-be-pushed message matching the multi-dimensional feature information to the user. A server may also include one or more processors to execute computer programs in parallel.

[0032] The server 704 and the terminal 706 may be implemented on any appropriate
15 computing platform. FIG. 8 shows a block diagram of an exemplary computer system 800 capable of implementing the server 704 and/or the terminal 706. As shown in FIG. 8, the exemplary computer system 800 may include a processor 802, a storage medium 804, a monitor 806, a communication module 808, a database 810, peripherals 812, and one or more bus 814 to couple the devices together. Certain devices may be omitted and other devices may be included.

20 [0033] The processor 802 can include any appropriate processor or processors. Further, the processor 802 can include multiple cores for multi-thread or parallel processing. The storage medium 804 may include memory modules, e.g., Read-Only Memory (ROM), Random Access Memory (RAM), and flash memory modules, and mass storages, e.g., CD-ROM, U-disk, removable hard disk, etc. The storage medium 804 may store computer programs for
25 implementing various processes (e.g., obtaining multi-dimensional feature information of a user, pushing a to-be-pushed message matching the multi-dimensional feature information to the user, etc.), when executed by the processor 802.

5 [0034] The monitor 806 may include display devices for displaying contents in the computing system 800, e.g., displaying a message on the terminal 706 for a user to view the message, displaying a message on the server 704 or the terminal 706 for a group administrator to view the message. The peripherals 812 may include I/O devices such as keyboard and mouse.

[0035] Further, the communication module 808 may include network devices for
10 establishing connections through the communication network 702. The database 810 may include one or more databases for storing certain data and for performing certain operations on the stored data, e.g., storing messages, looking up and finding a message matching the multi-dimensional feature information of a user, etc.

[0036] In operation, the server 704 may be configured to provide structures and functions
15 for certain actions and operations. In various embodiments, a terminal involved in the disclosed methods and apparatus, such as a computer device of a user receiving a message, can include the terminal 706, while a server involved in the disclosed methods and apparatus can include the server 704. The methods and apparatus disclosed in accordance with various embodiments can be executed by a computer system. In one embodiment, the disclosed methods and apparatus
20 can be implemented by a server.

[0037] Various embodiments provide methods and apparatus for pushing messages. FIG. 1 depicts a flow diagram of an exemplary method for pushing messages in accordance with various disclosed embodiments. As shown in FIG. 1, the method for pushing messages can include the following exemplary steps.

25 [0038] In Step S01, multi-dimensional feature information of a user is obtained. For example, a server can obtain multi-dimensional feature information of a user. Multi-dimensional feature information can refer to information of the user in multiple dimensions or aspects, the

5 dimensions including time, social relationship, activities, and the like. Thus, multi-dimensional feature information can include the basic identification information of the user, and further can include historical data, user group of the user, activities of the user, and the like. Thus, multi-dimensional feature information can provide significantly more information about the user, in comparison with the user's basic identification information.

10 [0039] In one embodiment, the multi-dimensional feature information of the user that is obtained by the server can include some or all of personal information registered by the user on a user interaction platform. The user interaction platform can be provided by third-party software. For example, the personal information registered by the user on the user interaction platform can include basic identification information of the user including age, location, birthplace, preference,
15 current status and/or other appropriate information of the user. The multi-dimensional feature information of the user can further include a user group that a user account of the user belongs to (e.g., a QQ Group that the user belongs to) on the user interaction platform provided by the third-party software, and/or group attribute information of the user group that the user account of the user belongs to including, e.g., obvious or explicit feature information including group name,
20 group announcements, group description, group classification, group label and/or other appropriate information. QQ Group is a form of social communication network users can form in QQ space. QQ space is a social network platform provided by Tencent Technology Company Limited, Shenzhen, China.

[0040] The multi-dimensional feature information of the user can further include usage
25 scenario(s) of the user group, interest of group members, relationships between the group members, and/or other appropriate information, and such information can be obtained by the server in the background via retrieving (or calling) historical data corresponding to triggered

5 operation event(s) that the user (or the user group of the user) maps to, based on authorization by the user. The information can together build an attribute library corresponding to each user. Based on the information, the server can obtain user's own multi-dimensional feature information corresponding to each user, respectively.

[0041] In Step S02, according to the obtained multi-dimensional feature information, a
10 to-be-pushed message that is previously stored and matches the multi-dimensional feature information is pushed to a user corresponding to the multi-dimensional feature information. A to-be-pushed message that is previously stored can also be referred to as a previously-stored pushing message.

[0042] In the present disclosure, a message can be any appropriate piece of information
15 item that can be pushed to a user to communicate the content of the information item. In various embodiments, a message can include an advertisement. Before a message is pushed, or during the pushing of the message, the message can be referred to as a to-be-pushed message. After the message is pushed, the message can be referred to as a previously-pushed message. A 'pushed message' from a server can refer to a message that is released and pushed by the server.
20 In certain embodiments, when a 'pushed message' released by the server is pushed to the user, a group administrator of the user group of the user can optionally check (i.e., examine, or review) the message before the user receives the message. For example, a group administrator of a user group of the user can determine whether the 'pushed message' released by the server can be accepted, and whether the server can complete the pushing of the message to the user. When the
25 group administrator of the user group determines that the 'pushed message' released by the server can be accepted, the server can complete the pushing of the message to the user.

5 [0043] In one embodiment, based on the obtained multi-dimensional feature information, the server can lookup and find a to-be-pushed message matching the multi-dimensional feature information and previously stored in a database. The server can push the to-be-pushed message to a user or a user group corresponding to the multi-dimensional feature information.

[0044] Further, the server can push a preset number of messages to the corresponding
10 user or user group within a preset time interval. According to the obtained multi-dimensional feature information, the server can identify the number of the messages that the user or the user group corresponding to the multi-dimensional feature information previously receives within the preset time interval. When the number of the messages that the user or the user group
corresponding to the multi-dimensional feature information previously receives within the preset
15 time interval does not exceed a preset threshold value, the to-be-pushed message matching the multi-dimensional feature information can be pushed to the user or the user group corresponding to the multi-dimensional feature information. When the number of the messages that the user or the user group corresponding to the multi-dimensional feature information previously
receives within the preset time interval exceeds the preset threshold value, the to-be-pushed
20 message matching the multi-dimensional feature information is no longer pushed to the user during the preset time interval. After entering a next preset time interval, the to-be-pushed message can be pushed to the user according to user needs. The beneficial effects of the method as disclosed above can be relatively more significant during the scenario of pushing
advertisement to the user, because the server can thus avoid pushing too many messages such as
25 advertisements and affecting normal network life of the user.

[0045] In one embodiment, the obtaining of the multi-dimensional feature information by the server can include obtaining identification information that is previously configured for

5 identifying attribute(s) of the user. For example, such identification information can include registration name, registration nickname, QQ number or QQ account number, and/or microblog account number that are registered by the user. The identification information can further include personal information entered during registering, e.g., age, gender, hobby, and the like. According to the obtained identification information, including registration name, registration nickname,
10 QQ number, and/or microblog account number of the user, and based on the authorization by the user, the server can retrieve (or call) the historical data corresponding to operation event(s) previously triggered by the user. According to the obtained identification information and retrieved (or called) historical data, the multi-dimensional feature information corresponding to the user can be obtained. For example, according to the QQ number of the user, the server can
15 obtain activities of the user based on the QQ number and during a certain time interval, the activities including, e.g., a talk or a log posted, information forwarded, voting participated in. The preference or recent demand of the user that corresponds to the QQ number can thus be obtained.

[0046] Further, according to the obtained identification information, the server can divide users into one or more user sections or user subdivisions. For example, the server can put or
20 assign users having common identification information into a user section, and can add (i.e., create) a user section identifier to each user section of users according to the common identification information. According to the obtained identification information and the retrieved historical data, and with reference to (i.e., by referring to) the added user section identifier, the multi-dimensional feature information corresponding to the user can be obtained. For example,
25 the server can assign users having identification information as female and "shoe obsession" (or "shoe complex") into a user section, and add a user section identifier of "female shoe obsession"

5 to the users of the user section. In addition, the server can use the added user section identifier as a portion of the multi-dimensional feature information corresponding to the user.

[0047] In various embodiments, a user group can include a group on a user interaction platform provided by the third-party software, e.g., a QQ group in QQ space. On the user interaction platform, the user can configure his/her user account such that the user can be a
10 member of the user group. A user group can include one or more users (i.e., members). The specific members and group attribute information of the user group can be determined and managed by the third-party software that enables the user interaction platform.

[0048] In comparison with a user group, a user section can be established by a server for pushing messages, by dividing multiple users based on certain information. The certain
15 information can include, but be not limited to, identification information. A user section can be the same or different from a user group, which can be determined by the server based on actual needs, without limitation.

[0049] Therefore, in some cases, a user section can be different from a user group. In those cases, users from different user groups can be assigned to the same user section, and users
20 from the same user group can be assigned to different user sections. Further, the user's multi-dimensional feature information can include a user group containing the user, group attribute information of the user group, and/or the user section identifier of a user section that the user is assigned to.

[0050] In one embodiment, after obtaining the user's own corresponding multi-
25 dimensional feature information, the server can targetedly push a corresponding message to the user group. Further, in order to push messages more accurately, the server can targetedly push a

5 corresponding message to an individual user in the user group according to personal characteristics of the user.

[0051] In various embodiments, multi-dimensional feature information of a user can be obtained. According to the obtained multi-dimensional feature information, a previously-stored to-be-pushed message that matches the multi-dimensional feature information can be pushed to
10 the user corresponding to the multi-dimensional feature information. Compared with conventional methods for pushing messages, the method in accordance with various embodiments can have beneficial effects of precisely and accurately pushing message. Thus, cost can be saved. Further, because the server can push a certain number of messages to the user within a preset time interval, the server can thus avoid pushing too many messages such as
15 advertisements and affecting normal network life of the user. Thus, human-machine interactivity can be improved.

[0052] FIG. 2 depicts a flow diagram of another exemplary method for pushing messages in accordance with various disclosed embodiments. Compared with various other disclosed embodiments (e.g., as shown in FIG. 1), in this case, the method can further include Step S11,
20 where keyword(s) are set, or configured, for a to-be-pushed message. Other steps in this case can be similar to or the same as relevant steps as described in other embodiments.

[0053] Based on various other disclosed embodiments (e.g., as shown in FIG. 1), referring to FIG. 2, before Step S02 where, based on the obtained multi-dimensional feature information, a to-be-pushed message that is previously stored and matches the multi-dimensional
25 feature information is pushed to a user corresponding to the multi-dimensional feature information, the method for pushing messages can further include the following process.

[0054] In Step S11, a keyword is set for the to-be-pushed message.

5 [0055] According to characteristics of the to-be-pushed message, the server can set one or more keywords for the to-be-pushed message, in order to facilitate the matching of the to-be-pushed message with the multi-dimensional feature information of the user. Accordingly, efficiency and accuracy of the matching can be improved. Thus, efficiency of pushing message can be improved.

10 [0056] In one example, the to-be-pushed message can include "various travel information during the National Day". Thus, a keyword "National Day Travel" can be set for the to-be-pushed message. In another example, the to-be-pushed message can include "a seminar for security issues of the Internet which is held by an expert panel composed of authoritative experts from various fields". Thus a keyword "Network Security Seminar", or the like, can be set for the
15 to-be-pushed message.

[0057] In one embodiment, the sequence of setting the keyword for the to-be-pushed message and Step S01 (i.e., obtaining multi-dimensional feature information of a user) is not limited. In FIG. 2, for illustrative purposes, Step S11 is performed before Step S01. However, Step S11 can be performed after Step S01 and before Step S02.

20 [0058] After the server obtains the multi-dimensional feature information of the user and sets the keyword for the to-be-pushed message, the server can first look for and find the keyword of to-be-pushed message that matches the multi-dimensional feature information, and then obtain the to-be-pushed message corresponding to the keyword of to-be-pushed message that matches the multi-dimensional feature information. Next, the server can push the obtained to-be-pushed
25 message to the user corresponding to the multi-dimensional feature information.

[0059] Thus, in various embodiments as disclosed above, a keyword can be set for a to-be-pushed message, to achieve the beneficial effect of improving efficiency and accuracy of

5 matching the to-be-pushed message with the user. Accordingly, efficiency of pushing message can be improved.

 [0060] FIG. 3 depicts a flow diagram of another exemplary method for pushing messages in accordance with various disclosed embodiments. Compared with various other disclosed embodiments (e.g., as shown in FIGS. 1-2), in this case, the method can further include Step S03,
10 where a click-through rate (CTR) of a previously-pushed message is obtained. Other steps in this case can be similar to or the same as relevant steps as described in other embodiments.

 [0061] Based on various other disclosed embodiments (e.g., as shown in FIG. 2), referring to FIG. 3, after Step S02 where, based on the obtained multi-dimensional feature information, a to-be-pushed message that is previously stored and matches the multi-dimensional
15 feature information is pushed to a user corresponding to the multi-dimensional feature information, the method for pushing messages can further include the following process.

 [0062] In Step S03, a click-through rate (CTR) of a previously-pushed message is obtained. After the server, according to the to-be-pushed message matching the multi-dimensional feature information of the user, pushes a corresponding message to the
20 corresponding user group or user, the server can perform statistics and obtain the CTR of the previously-pushed message. Thus, according to the obtained CTR of the previously-pushed message, the server can obtain the effect of pushing the message. Further, the server can feed the obtained CTR of the previously-pushed message back to a message-pushing party, such that the message-pushing party can improve the program or scheme for pushing messages or
25 perform any other subsequent work, according to the CTR of the previously-pushed message that is fed back by the server.

5 [0063] In various embodiments, a message-pushing party can be a party (e.g., an advertising company) that pushes a message. When a server feeds an obtained CTR of a message back to a message-pushing party, the server can feed the obtained CTR of the message back to a message-pushing party that previously pushes the message. Thus, the message-pushing party can also be referred to as a party that corresponds to the message that is previously pushed.

10 [0064] Thus, in various embodiments, a CTR of a previously-pushed message can be obtained, to improve intelligence of a device and provide certain reference for subsequently improving the method for pushing a to-be-pushed message.

[0065] Based on various embodiments as described above (e.g., as shown in FIGS. 1-3), in one embodiment, after the server pushes a message to a corresponding user group or user, and
15 before the user or all of the users in the user group receive the pushed message, a group administrator of the user group that the user belongs to can first receive the message pushed by the server. At this time, the group administrator can review the pushed message, and can targetedly select the pushed message released by the server according to feature(s) of the user group including, e.g., overall feature and implicit preference of the user group. When the group
20 administrator believes none of the pushed message(s) currently released by the server is appropriate for the user group, the group administrator can choose not to push, to the user group, the pushed message currently released by the server.

[0066] Further, in various embodiments, the server can have a function of budget control for the cost required for pushing messages. As described above in certain embodiments, the
25 server can push a preset number of messages to a corresponding user or user group within a preset time interval, which can be one of the methods for controlling cost of pushing message by the server.

5 [0067] In one embodiment, the server can perform a word segmentation process for the pushed message, via the keyword(s) set for the pushed message, and via the keywords mentioned in the pushed message that meet a preset rule (e.g., having commercial value). Meanwhile, the server can perform a word segmentation process for the name, classification, announcement and introduction of the user group that meet a preset rule (e.g., having commercial value). During
10 the actual releasing of pushed message, the pushed message and the user group can be matched. Because the number of the user groups matched by each keyword cannot be infinite, the calculation can use the number of the matched user groups divided by 2, for example, to obtain the current budget ceiling. During the filling out of daily budget by the group administrator, the daily budget may not exceed the budget ceiling.

15 [0068] In the present disclosure, a word segmentation process can include a process of dividing written text into meaningful units such as words. In various embodiments as disclosed herein, a word segmentation process can be performed on any appropriate information item including, e.g., a message, or a document of a user group, to obtain keywords in the information item. In the example depicted above, the server can perform a word segmentation process for the
20 pushed message to obtain the keywords in the pushed message that meet a preset rule (e.g., having commercial value). In addition, certain keyword(s) can be previously set for the pushed message (e.g., as shown in FIGS. 2-3). Meanwhile, the server can perform a word segmentation process for the name, classification, announcement and introduction of the user group to obtain keywords that meet a preset rule (e.g., having commercial value).

25 [0069] Take releasing an advertisement by the server, as an example. Assuming 2000 user groups in total are matched in a database, when the advertisement is 100% released to the 2000 user groups, an advertising cost of 1000 Yuan can be consumed. Thus, for example, a

5 budget ceiling allowed for the advertising publisher can be 500 Yuan. Thus, the server can send an advertisement-application message to all of the 2000 user groups. In various embodiments, an advertisement-application message can refer to a message containing an advertisement application. An advertisement application can refer to an application for advertising, i.e., an application for releasing an advertisement.

10 [0070] For each of the user groups, when one user group accepts the advertisement application, the cost needed by the group administrator of the user group can be deducted in real time from the budget of the advertising publisher for the current day. When the budget of the advertising publisher is 0 (i.e., zero), a group administrator that subsequently receives the pushed message released by the server, when receiving the advertisement, can receive a notification
15 that "the advertisement is full and cannot continue to be received", such that the purpose of controlling budget cost using the server can be achieved.

[0071] FIG. 4 depicts a structure diagram of an exemplary apparatus for pushing messages in accordance with various disclosed embodiments. In various embodiments, the disclosed apparatus can be installed on a server and accordingly be implemented by the server.
20 As shown in FIG. 4, the apparatus for pushing messages can include an information-obtaining module 01, and/or a message-pushing module 02. Certain modules may be omitted and other modules may be included.

[0072] The information-obtaining module 01 is configured to obtain multi-dimensional feature information of a user. The information-obtaining module 01 can obtain multi-dimensional
25 feature information of a user. In one embodiment, the multi-dimensional feature information of the user that is obtained by the server can include some or all of personal information registered by the user on (or based on) a user interaction platform provided by third-party software, the

5 personal information including, e.g., basic identification information of the user including age, location, birthplace, preference(s), current status and/or other appropriate information of the user. The multi-dimensional feature information of the user can further include a user group that a user account of the user belongs to on (or based on) the user interaction platform provided by the third-party software (e.g., a QQ Group that the user belongs to), and/or group attribute
10 information of the user group that the user account of the user belongs to including, e.g., obvious feature information including group name, group announcements, group description, group classification, group label and/or other appropriate information. The multi-dimensional feature information of the user can further include usage scenario(s) of the user group, interest of group members, relationships between the group members, and/or other appropriate information, and
15 such information can be obtained by the server in the background via retrieving historical data corresponding to triggered operation event(s) that the user (or the user group of the user) maps to, based on authorization by the user.

[0073] Some or all of the information as above can together build an attribute library corresponding to each user. Based on the above information, the information-obtaining module
20 01 can obtain user's own multi-dimensional feature information corresponding to each user, respectively.

[0074] The message-pushing module02 is configured to, according to the obtained multi-dimensional feature information, push a to-be-pushed message that is previously stored and matches the multi-dimensional feature information to the user corresponding to the multi-
25 dimensional feature information.

[0075] In one embodiment, according to the multi-dimensional feature information obtained by the information-obtaining module 01, the message-pushing module 02 can look up

5 and find a to-be-pushed message matching the multi-dimensional feature information and previously stored in a database. The message-pushing module 02 can push the to-be-pushed message to the user or the user group corresponding to the multi-dimensional feature information.

[0076] Further, the message-pushing module 02 can push a preset number of messages to the corresponding user or user group within a preset time interval. According to the multi-

10 dimensional feature information obtained by the information-obtaining module 01, the message-pushing module 02 can identify the number of the messages that the user or the user group corresponding to the multi-dimensional feature information previously receives within the preset time interval. When the number of the messages that the user or the user group corresponding to the multi-dimensional feature information previously receives within the preset time interval does

15 not exceed a preset threshold value, the message-pushing module 02 can push the to-be-pushed message matching the multi-dimensional feature information to the user or the user group corresponding to the multi-dimensional feature information. When the number of the messages that the user or the user group corresponding to the multi-dimensional feature information previously receives within the preset time interval exceeds the preset threshold value, the

20 message-pushing module 02 no longer pushes the matching to-be-pushed message to the user during the preset time interval. After entering a next preset time interval, the message-pushing module 02 can push the to-be-pushed message to the user according to user needs. The beneficial effects of the process as disclosed above can be relatively more significant during the scenario of pushing advertisement to the user, because the server can thus avoid pushing too
25 many messages such as advertisements and affecting normal network life of the user.

[0077] In one embodiment, the obtaining of the multi-dimensional feature information by the information-obtaining module 01 can include obtaining identification information that is

5 previously configured for identifying attribute(s) of the user. For example, such identification information can include registration name, registration nickname, QQ number or QQ account number, and/or microblog account number that are registered by the user. The identification information can further include personal information entered during registering, e.g., age, gender, hobby, and the like. According to the obtained identification information, including registration
10 name, registration nickname, QQ number, and/or microblog account number of the user, and based on the authorization by the user, the information-obtaining module 01 can retrieve the historical data corresponding to operation event(s) previously triggered by the user. According to the obtained identification information and the retrieved historical data, the information-obtaining module 01 can obtain the multi-dimensional feature information corresponding to the
15 user. For example, according to the obtained QQ number of the user, the information-obtaining module 01 can obtain activities of the user based on the QQ number and during a certain time interval, the activities including, e.g., a talk or a log posted, information forwarded, voting participated in. The preference or recent demand of the user that corresponds to the QQ number can thus be obtained.

20 [0078] Further, according to the obtained identification information, the information-obtaining module 01 can divide users into user sections. For example, the information-obtaining module 01 can put or assign users having common identification information into a user section, and can add (i.e., create) a user section identifier to each user section of users according to the common identification information. According to the obtained identification information and the
25 retrieved historical data, and with reference to the added user section identifier, the information-obtaining module 01 can obtain the multi-dimensional feature information corresponding to the user. For example, the information-obtaining module 01 can assign users having identification

5 information as “female” and “shoe obsession” into a user section, and add a user section identifier of "female shoe obsession" to the users of the user section. In addition, the information-obtaining module 01 can use the added user section identifier as a portion of the multi-dimensional feature information corresponding to the user.

[0079] In one embodiment, after the information-obtaining module 01 obtains the user's
10 own corresponding multi-dimensional feature information, the message-pushing module 02 can targetedly push a corresponding message to the user group. Further, in order to push messages more accurately, the message-pushing module 02 can targetedly push a corresponding message to an individual user in the user group according to personal characteristics of the user.

[0080] In various embodiments, multi-dimensional feature information of a user can be
15 obtained. According to the obtained multi-dimensional feature information, a previously-stored to-be-pushed message that matches the multi-dimensional feature information can be pushed to the user corresponding to the multi-dimensional feature information. Compared with conventional methods for pushing messages, the method and apparatus in accordance with various embodiments can have beneficial effects of precisely and accurately pushing messages.
20 Thus, cost can be saved. Further, because the server can push a certain number of messages to the user within a preset time interval, the server can thus avoid pushing too many messages such as advertisements and affecting normal network life of the user. Thus, human-machine interactivity can be improved.

[0081] FIG. 5 depicts a structure diagram of another exemplary apparatus for pushing
25 messages in accordance with various disclosed embodiments. Compared with various other disclosed embodiments (e.g., as shown in FIG. 4), in this case, the apparatus can further include

5 a keyword-setting module 03. Other modules or steps in this case can be similar to or the same as relevant modules steps as described in other embodiments.

[0082] Referring to FIG. 5, the apparatus for pushing messages can further include a keyword-setting module 03 configured to set a keyword for a to-be-pushed message. According to characteristics of the to-be-pushed message, the keyword-setting module 03 can set one or
10 more keywords for the to-be-pushed message, in order to facilitate the matching of the to-be-pushed message with the multi-dimensional feature information of the user. Accordingly, efficiency and accuracy of the matching can be improved. Thus, efficiency of pushing message can be improved.

[0083] In one example, the to-be-pushed message can include "various travel information
15 during the National Day". Thus, the keyword-setting module 03 can set a keyword "National Day Travel" for the to-be-pushed message. In another example, the to-be-pushed message can include "a seminar for security issues of the Internet which is held by an expert panel composed of authoritative experts from various fields". Thus, the keyword-setting module 03 can set a keyword "Network Security Seminar", or the like, for the to-be-pushed message.

20 [0084] In one embodiment, the sequence of the keyword-setting module 03 setting the keyword for the to-be-pushed message and the information-obtaining module 01 obtaining multi-dimensional feature information of a user is not limited. The keyword-setting module 03 can set the keyword for the to-be-pushed information before the information-obtaining module 01 obtains the multi-dimensional feature information of the user, or after the information-obtaining
25 module 01 obtains the multi-dimensional feature information of the user.

[0085] After the information-obtaining module 01 obtains the multi-dimensional feature information of the user and the keyword-setting module 03 sets the keyword for the to-be-pushed

5 message, the message-pushing module 02 can first look for and find the keyword of to-be-pushed message that matches the multi-dimensional feature information, and can then obtain the to-be-pushed message corresponding to the keyword of to-be-pushed message that matches the multi-dimensional feature information. Next, the message-pushing module 02 can push the obtained to-be-pushed message to the user corresponding to the multi-dimensional feature information.

10 [0086] Thus, in various embodiments as disclosed above, a keyword can be set for a to-be-pushed message, to achieve the beneficial effect of improving efficiency and accuracy of matching the to-be-pushed message with a user. Accordingly, efficiency of pushing message can be improved.

[0087] FIG. 6 depicts a structure diagram of another exemplary apparatus for pushing
15 messages in accordance with various disclosed embodiments. Compared with various other disclosed embodiments (e.g., as shown in FIGS. 4-5), in this case, the method can further include a click-through-rate-obtaining module 04, i.e., a CTR-obtaining module 04. Other modules or steps in this case can be similar to or the same as relevant modules or steps as described in other embodiments.

20 [0088] Referring to FIG. 6, the apparatus for pushing messages can further include a CTR-obtaining module 04 configured to obtain a CTR of a previously-pushed message. After the message-pushing module 02, pushes a corresponding message to the corresponding user group or user according to the to-be-pushed message matching the multi-dimensional feature information of the user, the CTR-obtaining module 04 can perform statistics and obtain the CTR of the
25 previously-pushed message. Thus, according to the obtained CTR of the previously-pushed message, the effect of pushing the message can be obtained. Further, the CTR-obtaining module 04 can feed the obtained CTR of the previously-pushed message back to a message-

5 pushing party, such that the message-pushing party can improve the corresponding program or scheme for pushing the message or perform any other subsequent work according to the CTR of the previously-pushed message that is fed back by the CTR-obtaining module 04.

[0089] Thus, in various embodiments, a CTR of a previously-pushed message can be obtained, to improve intelligence of a device and provide certain reference for subsequently
10 improving the method for pushing the to-be-pushed message.

[0090] Based on various embodiments as described above (e.g., as shown in FIGS. 4-6), in one embodiment, after an apparatus for pushing messages pushes a message to a corresponding user group or user, and before the user or all of the users in the user group receive the pushed message, a group administrator of the user group that the user belongs to can first receive the
15 message pushed by the server (or the apparatus for pushing messages). At this time, the group administrator can review the pushed message, and can targetedly select the pushed message released by the apparatus for pushing messages, according to feature(s) of the user group including, e.g., overall feature and implicit preference of the user group. When the group administrator believes none of the pushed message(s) currently released by the apparatus for
20 pushing messages is appropriate for the user group, the group administrator can choose not to push, to the user group, the pushed message currently released by the apparatus for pushing messages.

[0091] Further, in various embodiments, the apparatus for pushing messages can have a function of budget control for the cost required for pushing messages. As described above in
25 certain embodiments, the apparatus for pushing messages can push a preset number of messages to a corresponding user or user group within a preset time interval, which can be one of the methods for controlling cost of pushing message by the apparatus for pushing messages.

5 [0092] In one embodiment, the apparatus for pushing messages can perform a word segmentation process for the pushed message, via the keyword(s) set for the pushed message, and via the keywords mentioned in the pushed message that meet a preset rule (e.g., having commercial value). Meanwhile, the apparatus for pushing messages can perform a word segmentation process for the name, classification, announcement and introduction of the user group that meet a preset rule (e.g., having commercial value). That is, the apparatus for pushing messages can perform a word segmentation process for the name, classification, announcement and introduction of the user group via the keywords mentioned in such information that meet a preset rule (e.g., having commercial value). During the actual releasing of a pushed message, the pushed message and the user group can be matched. For example, after the word segmentation process is performed, the keywords of the pushed message and the keywords of the user group can be matched. Because the number of the user groups matched by each keyword cannot be infinite, the number of the matched user groups can be divided by 2, for example, to calculate and obtain the current budget ceiling. During the filling out of daily budget by the group administrator, the daily budget may not exceed the budget ceiling.

20 [0093] Take releasing an advertisement by the apparatus for pushing messages, as an example. Assuming 2000 user groups in total are matched in a database, when the advertisement is 100% released to the 2000 user groups, an advertising cost of 1000 Yuan can be consumed. Thus, for example, a budget ceiling allowed for the advertising publisher can be 500 Yuan. Thus, the apparatus for pushing messages can send an advertisement-application message to all of the 2000 user groups. For each of the user groups, when one user group accepts the advertisement application, the cost needed by the group administrator of the user group can be deducted in real time from the budget of the advertising publisher for the current day. When the budget of the

5 advertising publisher is 0 (i.e., zero), a group administrator that subsequently receives the pushed message released by the apparatus for pushing messages, when receiving the advertisement, can receive a notification that "the advertisement is full and cannot continue to be received", such that the purpose of controlling budget cost using the apparatus for pushing messages can be achieved.

10 [0094] In certain embodiments, a message can include an advertisement. Methods for pushing matching an advertisement are provided. Using the disclosed methods, commercial advertisements can be accurately and precisely pushed, via various weak ties having a commercial value (e.g., the weak ties contained in QQ groups), by observing from another group dimension (e.g., information of a user group) other than personal attribute of a user, and by
15 superimposing human judgment of a group administrator.

[0095] To implement the disclosed methods, a message-releasing exchange can be established. The message-releasing exchange can be a software platform enabling various parties to perform certain operations on a message. The parties can include a communication platform, a group administrator, and an advertiser.

20 [0096] During a message-exchange operation, an advertiser can release contents of an advertisement. A company, e.g., Tencent, that offers a platform such as a social network platform or a communication platform, can review the advertisement. Next, a group administrator of a QQ group can review or check the advertisement. The mode of releasing the advertisement can use a T+2 mode, where the pushing of the advertisement can occur on a releasing date plus two
25 days. Such non-real-time exchange (i.e., having one or more days between the releasing and the pushing of the advertisement) can reduce difficulty in matching advertisement with the user. After the advertisement is successfully pushed and displayed, the group administrator can obtain

5 a certain commission according the effect of the advertisement, such that the motivation of the group administrator can be ensured.

[0097] The advertisement can be released to the user group under the name of the group administrator. The group administrator can obtain a certain commission according the effect of the advertisement, such that the motivation of the group administrator can be ensured. The
10 number of advertisements to be released each day can be limited, in order to protect user experience of the group members to the maximum.

[0098] An apparatus for advertising can include an apparatus for group administrator review and payment (implemented on a server or terminal device of the group administrator), an apparatus for advertiser release and settlement (implemented on a server or terminal device of the
15 advertiser), and/or an apparatus for matching and releasing advertisement (implemented on a server of the communication platform). In one embodiment, the apparatus for matching and releasing advertisement can include the apparatus for pushing messages in accordance with various embodiments, e.g., as shown in FIGS. 4-6. Each of the above apparatus included in the apparatus for advertising can be respectively installed and implemented on an appropriate
20 computer system of a corresponding party (i.e., the group administrator, the advertiser, or the platform). Alternatively, more than one of the above apparatus included in the apparatus for advertising can be installed and implemented on one appropriate computer system. In one example, the apparatus for group administrator review and payment and the apparatus for matching and releasing advertisement can be installed on one server. In this case, the group
25 administrator can use the server to launch the apparatus for group administrator review and payment to perform actions. In another example, the group administrator can use a terminal device or another server to launch the apparatus for group administrator review and payment to

5 perform actions, and communicate with the apparatus for matching and releasing advertisement in the mean time via a communication network.

[0099] Accordingly, a process for advertising can involve a group administrator, an advertiser and a platform. FIG. 9 depicts an exemplary relationship between an advertiser, a group administrator, and a platform incorporating certain disclosed embodiments. FIG. 10
10 depicts an exemplary process for advertising in accordance with various disclosed embodiments. As shown in FIG. 10, after an advertiser, i.e., an apparatus for advertiser release and settlement, creates an advertisement, the advertisement can be sent to apparatus for matching and releasing advertisement, e.g., the Tencent server. The Tencent server can match the advertisement with a potential user group and, accordingly, the group administrator of the user group. After the group
15 administrator confirms that the advertisement can be shared to the user group, and thus there is a need for releasing the advertisement to the user group, the Tencent server can push the advertisement to users of the user group, under the name of the group administrator, such that the users can be notified that the advertisement is previously approved by the group administrator.

[00100] FIG. 11 depicts an exemplary page structure for group administrator in
20 accordance with various disclosed embodiments. The page structure can describe the information organization structure used by the apparatus for group administrator review and payment. Information related to group administrator review and payment can be displayed to the group administrator using the page structure.

[00101] The apparatus for group administrator review and payment can function as
25 follows. Multi-dimensional feature information shared by users in a group can be obtained by the server of the platform. Certain information exchange between the platform and the group administrator can be performed in order for the server to obtain the multi-dimensional feature

5 information. The multi-dimensional feature information shared by users in a group can include group attribute(s). The group attributes can be defined, and can include explicit group-attribute identifiers, hidden group-attribute identifiers, and/or advertising-attribute identifiers from the social-attributes of the users in the group.

[00102] The explicit group-attribute identifiers can include feature information including
10 group name, group announcements, group description, group classification, and/or group label.

[00103] The hidden group-attribute identifiers can be obtained by aggregating attributes of group members. For example, common individual attributes (such as age, geography, etc.) shared by 60% of the group members can be used for classifying users and can be added into an attribute database.

15 [00104] The advertising-attribute identifiers can be defined or created by using information supplied by the group administrator or a group owner. The group administrator or group owner can have the best knowledge of the usage scenario(s) of the user group, interest of group members, and social relationships between the group members. Such information can often be obtained via social relationships rather than the Internet.

20 [00105] By obtaining the three types of information using the methods as above, multi-dimensional feature information shared by users in a group can be obtained. FIG. 12 depicts an exemplary interface displaying multi-dimensional feature information shared by users in a group in accordance with various disclosed embodiments. The interface as shown in FIG. 12 can be used by the group administrator. The multi-dimensional feature information shared by users in a
25 group can be shown on the interface in the form of various keywords describing group attribute(s). Optionally, the group administrator can identify certain keywords (e.g., the keywords in the circle 1201 in FIG. 12) in the multi-dimensional feature information that can

5 indicate the interest of group members. For example, a keyword 1202 in FIG. 12 indicates the interest of group members, and the keyword can be of commercial value. Such interest of group members can be included in the multi-dimensional feature information of the group members.

[00106] In one embodiment, every day at 9 am, the group administrator that receives advertising resources allocated by the system can receive a review notification. The system can
10 include the server of the communication platform. After the group administrator enters (i.e., launches) the apparatus for group administrator review and payment, the group administrator can be informed of which group(s) have received which advertisement(s). Each group can receive at most 3 applications for advertising. According to the characteristics of the group, the group administrator can targetedly select the appropriate advertisements to be pushed. When the group
15 administrator believes none of the pushed message(s) is appropriate for the user group, the group administrator can choose not to push the advertisements to the user group. FIG. 13 depicts an exemplary interface for a group administrator to review an advertisement in accordance with various disclosed embodiments. As shown in FIG. 13, the group administrator can choose to share the advertisement to the members of the QQ group by clicking on the 'Share to QQ group'
20 button, when the group administrator determines the advertisement is appropriate to the members of the QQ group.

[00107] Optionally, the group administrator can obtain a commission income according to the CTR of the advertisement. A higher CTR can result in a commission income for the group administrator.

25 [00108] Optionally, the commission income can be calculated and settled on a monthly basis. The system can automatically deduct personal income tax from the commission income. The group administrator can withdraw payment of the commission income via a bank card or a

5 third-party payment platform. FIG. 14 depicts an exemplary interface for displaying commission income to a group administrator in accordance with various disclosed embodiments.

[00109] The apparatus for advertiser release and settlement can function as follows. In various embodiments, an advertiser can make a payment using an advance-payment method as used on the Internet. Optionally, the advertisers can log in via the web page of the apparatus for
10 advertiser release and settlement, to start creating an advertisement. Contents of the advertisement can include text, images, links, and/or the like.

[00110] Optionally, the advertiser can define the targeted groups of the contents of the advertisement, via setting keyword for releasing the advertisement. The advertiser can select a specific date and time for releasing, and can set scheduling, wait time, or queue of multiple
15 advertisements.

[00111] Optionally, the advertiser can be permitted to set an upper limit of daily consumption or cost, in order to control the cost of advertising. FIGS. 15A-15C depict exemplary interfaces for displaying advertisements and related cost to an advertiser in accordance with various disclosed embodiments. The interfaces as shown in FIGS. 15A-15C
20 can be used by an advertiser for monitoring and managing the releasing of advertisements. When the advertiser clicks on one entry, the corresponding advertising content, the user sections or user groups that the advertising can target, and the plan of releasing the advertisement can be displayed.

[00112] Optionally, the advertising cost can be settled according to actual releasing of
25 advertisement on the current day. The cost associated with unreleased advertisement can be returned to the account of the advertiser early morning on the next day.

5 [00113] The apparatus for matching and releasing advertisement can be installed and implemented on the server of the platform, and can function as follows. The server can perform a word segmentation process for the pushed message, to obtain the keywords in the pushed message that have commercial value. The server can also obtain the keyword(s) set for the pushed message by the server or the advertiser. Meanwhile, the server can perform a word
10 segmentation process for the name, classification, announcement and introduction of the user group having commercial value. During the actual releasing of pushed message, the keywords of the pushed message and of the user group can be matched.

[00114] Assuming testing results show that advertisement acceptance rate by group administrators is about 50%, in order to ensure the advertising cost of the current day can be
15 fully consumed, the number of groups matching the advertisement can be doubled relative to the number of groups that can receive and accept the advertisement.

[00115] Because the number of the user groups matched by each keyword cannot be infinite, the calculation can use the number of the matched user groups divided by 2, for example, to obtain the current budget ceiling. During the filling out of daily budget by the group
20 administrator, the daily budget may not exceed the budget ceiling.

[00116] Assuming 2000 user groups in total are matched in a database, when the advertisement is 100% released to the 2000 user groups, an advertising cost of 1000 Yuan can be consumed. Thus, for example, a budget ceiling allowed for the advertising publisher can be 500 Yuan. Thus, the server can send an advertisement-application message to all of the 2000 user
25 groups. In various embodiments, an advertisement-application message can refer to a message containing an advertisement application. An advertisement application can refer to an application for advertising, i.e., an application for releasing an advertisement.

5 [00117] For each of the user groups, when one user group accepts the advertisement application, the cost needed by the group administrator of the user group can be deducted in real time from the budget of the advertising publisher for the current day. When the budget of the advertising publisher is 0 (i.e., zero), a group administrator that subsequently receives the pushed message released by the server, when receiving the advertisement, can receive a notification that
10 "the advertisement is full and cannot continue to be received", such that the purpose of controlling budget cost using the server can be achieved. FIG. 16 depicts an exemplary process for matching and releasing an advertisement in accordance with various disclosed embodiments. As shown in FIG. 16, date can be expressed using 1.1 as January 1, 1.2 as January 2, etc. In certain drawings, group administrator can be referred to as 'group admin'. Advertisement can be
15 referred to as 'ad'.

[00118] It should be noted that, herein, the terms "comprises," "comprising," or any other variation thereof, are intended to cover a non-exclusive inclusion, such that a process comprising a series of elements, method, article, or apparatus that comprises only those elements, but also include other elements not expressly listed or for such further comprises a process, method,
20 article, or apparatus inherent elements. Without more constraints, by the statement "includes one" element defined does not exclude the existence of additional identical elements in the element, including the process, method, article, or apparatus.

[00119] In various embodiments, the methods as disclosed can be implemented by software coupled with certain necessary universal hardware platform. The methods as disclosed
25 can also be implemented by hardware. Part or all of the steps in the methods in accordance with various embodiments can be accomplished using a program/software to instruct related hardware. The program/software can be stored in a (non-transitory) computer-readable storage medium

5 including, e.g., ROM/RAM, magnetic disk, optical disk, or the apparatus for pushing messages
as shown in FIGS. 4-6, etc. The program/software, or the apparatus for pushing messages as
shown in FIGS. 4-6 can include coded instructions to instruct a computer system, e.g., a terminal
device, to execute the methods in accordance with various embodiments. The computer system
or the terminal device can include, e.g., mobile phone, computer, server, or network equipment,
10 or the apparatus for pushing messages as shown in FIGS. 4-6, etc.

[00120] The embodiments disclosed herein are exemplary only. Other applications,
advantages, alternations, modifications, or equivalents to the disclosed embodiments are obvious
to those skilled in the art and are intended to be encompassed within the scope of the present
disclosure.

15

INDUSTRIAL APPLICABILITY AND ADVANTAGEOUS EFFECTS

[00121] Without limiting the scope of any claim and/or the specification, examples of industrial applicability and certain advantageous effects of the disclosed embodiments are listed for illustrative purposes. Various alternations, modifications, or equivalents to the technical solutions of the disclosed embodiments can be obvious to those skilled in the art and can be included in this disclosure.

[00122] The disclosed methods and apparatus for pushing messages can be used in a variety of computer applications that need to targetedly push messages, in order to receive great public notice or achieve high click-through rate (CTR). The messages can include, but be not limited to, advertisements. The computer applications that involve targetedly pushing messages can include, but be not limited to, browser, social network services, or search engine on a mobile phone, a tablet computer, a personal computer, a personal digital assistant, a car-carried-computer, internet television, or any other desired terminal devices.

[00123] Using the methods in accordance with various embodiments, multi-dimensional feature information of a user can be obtained. According to the obtained multi-dimensional feature information, a previously-stored to-be-pushed message that matches the multi-dimensional feature information can be pushed to the user corresponding to the multi-dimensional feature information. Compared with conventional methods for pushing messages, the method in accordance with various embodiments can have beneficial effects of precisely and accurately pushing message. Thus, cost can be saved. Further, because the server can push a certain number of messages to the user within a preset time interval, the server can thus avoid pushing too many messages such as advertisements and affecting normal network life of the user. Thus, human-machine interactivity can be improved.

5 [00124] Further, a keyword can be set for a to-be-pushed message, to achieve the beneficial effect of improving efficiency and accuracy of matching the to-be-pushed message with the user. Accordingly, efficiency of pushing message can be improved.

[00125] Further, a CTR of a previously-pushed message can be obtained, in order to improve intelligence of a device and provide certain reference for subsequently improving the
10 method for pushing a to-be-pushed message.

[00126] In certain embodiments, after the server pushes a message to a corresponding user group or user, and before the user or all of the users in the user group receive the pushed message, a group administrator of the user group that the user belongs to can first receive the message pushed by the server. At this time, the group administrator can review the pushed message, and
15 can targetedly select the pushed message released by the server according to feature(s) of the user group including, e.g., overall feature and implicit preference of the user group. When the group administrator believes none of the pushed message(s) currently released by the server is appropriate for the user group, the group administrator can choose not to push, to the user group, the pushed message currently released by the server. In addition, in certain embodiments, the
20 server can have a function of budget control for the cost required for pushing messages, such that the advertiser can conveniently control budget cost of advertising via the server.

Reference Sign List

Information-obtaining module 01

Message-pushing module 02

Keyword-setting module 03

CTR-obtaining module 04

Environment 700

Communication network 702

Server 704

Terminal 706

System 800

Processor 802

Storage medium 804

Monitor 806

Communications 808

Database 810

Peripherals 812

Bus 814

WHAT IS CLAIMED IS:

1. A method for pushing messages, implemented by a server, comprising:
 - obtaining multi-dimensional feature information of a user belonging to a user group;
 - determining a to-be-pushed message from previously-stored pushing messages by matching the multi-dimensional feature information with a previously-stored pushing message of the previously-stored pushing messages, wherein the to-be-pushed message is checked to be shared to the user group containing the user; and
 - pushing the to-be-pushed message to the user of the user group corresponding to the multi-dimensional feature information, the to-be-pushed message comprising an advertisement.
2. The method according to claim 1, wherein the obtaining of the multi-dimensional feature information of the user comprises:
 - obtaining identification information that is previously configured for identifying an attribute of the user;
 - according to the obtained identification information, calling historical data corresponding to an operation event previously triggered by the user; and
 - according to the obtained identification information and the called historical data, obtaining the multi-dimensional feature information corresponding to the user.
3. The method according to claim 2, wherein the obtaining of the multi-dimensional feature information of the user further comprises:
 - according to the obtained identification information, dividing a plurality of users into one or more user sections by assigning users having common identification information into a user section, and adding a user section identifier to the users of each user section of the one or more

user sections according to the common identification information, the plurality of users including the user belonging to the user group; and

according to the obtained identification information and the called historical data, and by referring to the added user section identifier, obtaining the multi-dimensional feature information corresponding to the user.

4. The method according to claim 1, wherein before pushing the to-be-pushed message to the user of the user group corresponding to the multi-dimensional feature information, the method further comprises:

setting a keyword for the to-be-pushed message.

5. The method according to claim 4, wherein the pushing of the to-be-pushed message to the user of the user group corresponding to the multi-dimensional feature information comprises:

according to the obtained multi-dimensional feature information, finding a keyword of a to-be-pushed message, the keyword matching the multi-dimensional feature information;

obtaining the to-be-pushed message corresponding to the keyword of the to-be-pushed message that matches the multi-dimensional feature information; and

pushing the obtained to-be-pushed message to the user corresponding to the multi-dimensional feature information.

6. The method according to claim 1, wherein the pushing of the to-be-pushed message to the user of the user group corresponding to the multi-dimensional feature information comprises:

according to the obtained multi-dimensional feature information, identifying a number of pushed messages that the user corresponding to the multi-dimensional feature information previously receives within a preset time interval; and

when the number of the pushed messages that the user corresponding to the multi-dimensional feature information previously receives within the preset time interval does not exceed a preset threshold value, pushing the to-be-pushed message matching the multi-dimensional feature information to the user corresponding to the multi-dimensional feature information.

7. The method according to claim 1, wherein, after pushing the to-be-pushed message to the user of the user group corresponding to the multi-dimensional feature information, the method further comprises:

obtaining a click-through rate (CTR) of a previously-pushed message.

8. The method according to any claim of claims 1-7, wherein the multi-dimensional feature information comprises:

group attribute information of the user group that the user belongs to, based on a user interaction platform provided by third-party software.

9. An apparatus for pushing messages, comprising:

an information-obtaining module configured to obtain multi-dimensional feature information of a user belonging to a user group; and

a message-pushing module configured to:

determine a to-be-pushed message from previously-stored pushing messages by matching the multi-dimensional feature information with a previously-stored pushing message of the previously-stored pushing messages, wherein the to-be-pushed message is checked to be shared to the user group containing the user; and

push the to-be-pushed message to the user of the user group corresponding to the multi-dimensional feature information, the to-be-pushed message comprising an advertisement.

10. The apparatus according to claim 9, wherein the information-obtaining module is configured to:

obtain identification information that is previously configured for identifying an attribute of the user;

according to the obtained identification information, call historical data corresponding to an operation event previously triggered by the user; and

according to the obtained identification information and the called historical data, obtain the multi-dimensional feature information corresponding to the user.

11. The apparatus according to claim 10, wherein the information-obtaining module is further configured to:

according to the obtained identification information, divide a plurality of users into one or more user sections by assigning users having common identification information into a user section, and add a user section identifier to the users of each user section of the one or more user sections according to the common identification information; and

according to the obtained identification information and the called historical data, and by referring to the added user section identifier, obtain the multi-dimensional feature information corresponding to the user.

12. The apparatus according to claim 9, further comprising:

a keyword-setting module configured to set a keyword for the to-be-pushed message.

13. The apparatus according to claim 12, wherein the message-pushing module is further configured to:

according to the obtained multi-dimensional feature information, find a keyword of a to-be-pushed message, the keyword matching the multi-dimensional feature information;

obtain the to-be-pushed message corresponding to the keyword of the to-be-pushed message that matches the multi-dimensional feature information; and

push the obtained to-be-pushed message to the user corresponding to the multi-dimensional feature information.

14. The apparatus according to claim 9, wherein the message-pushing module is further configured to:

according to the obtained multi-dimensional feature information, identify a number of pushed messages that the user corresponding to the multi-dimensional feature information previously receives within a preset time interval; and

when the number of the pushed messages that the user corresponding to the multi-dimensional feature information previously receives within the preset time interval does not

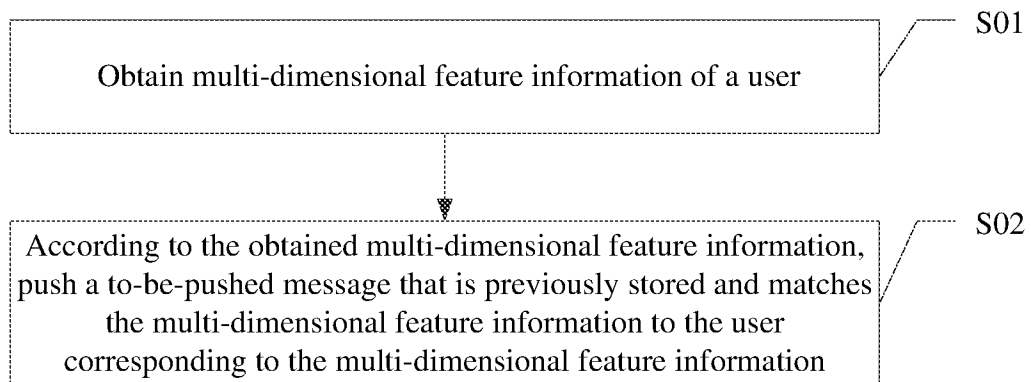
exceed a preset threshold value, push the to-be-pushed message matching the multi-dimensional feature information to the user corresponding to the multi-dimensional feature information.

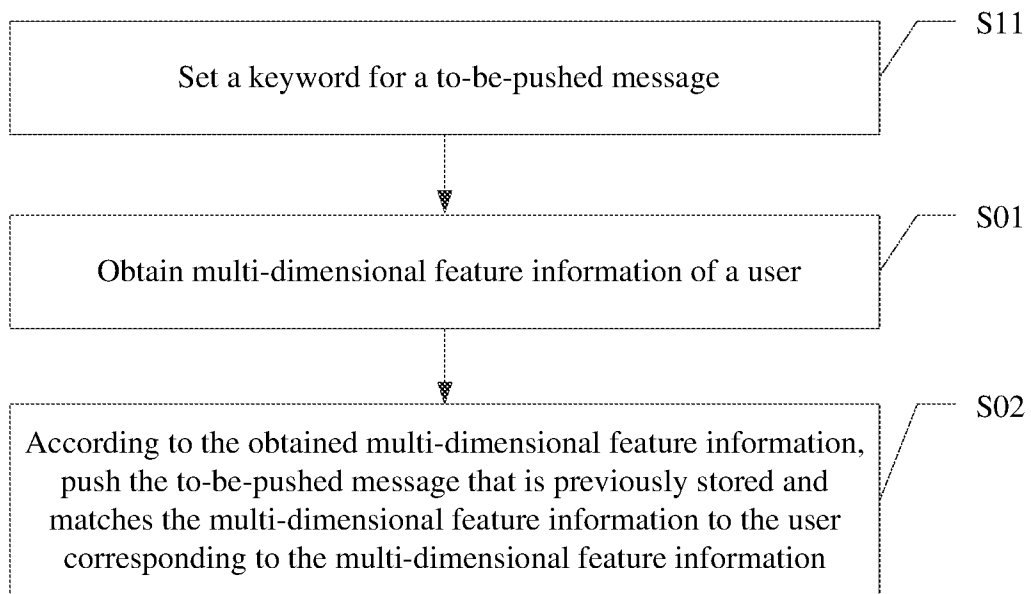
15. The apparatus according to claim 9, further comprising:

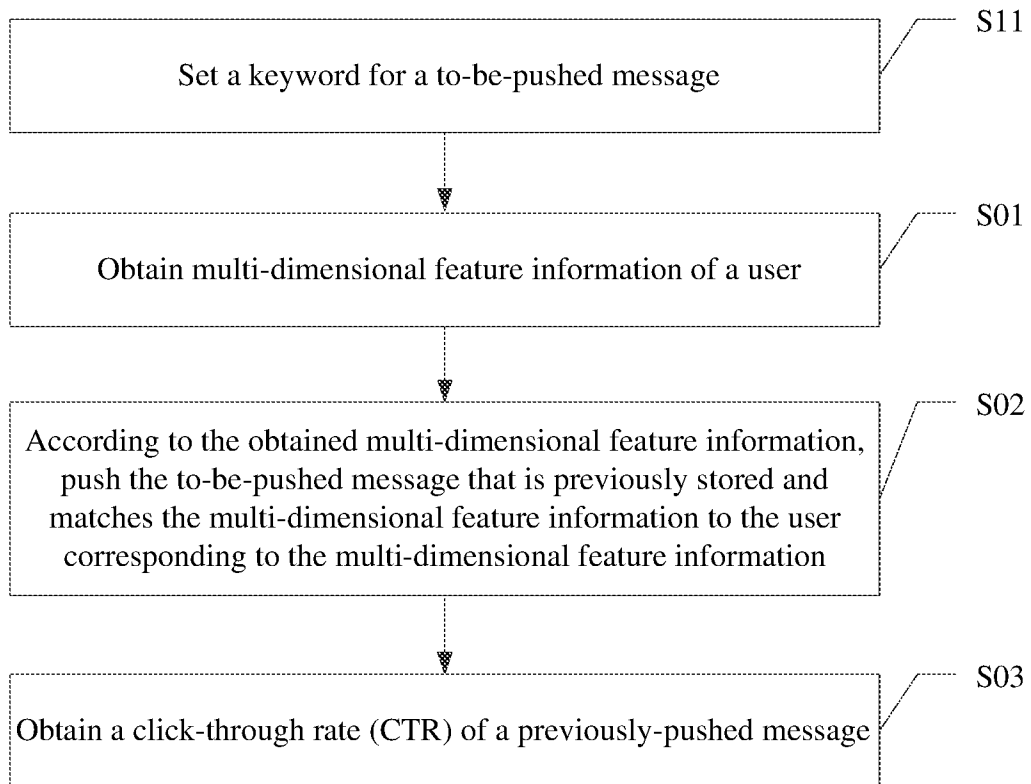
aCTR-obtaining module configured to obtain a CTR of a previously-pushed message.

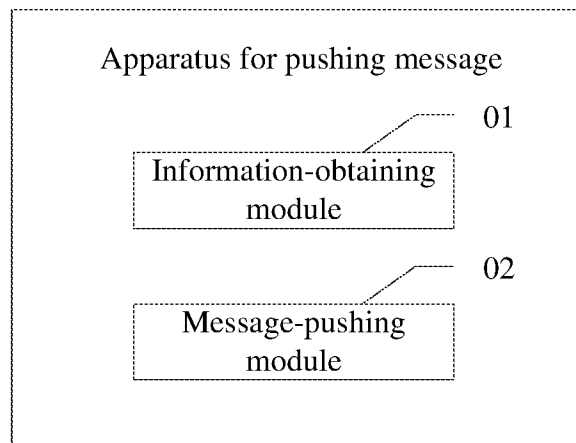
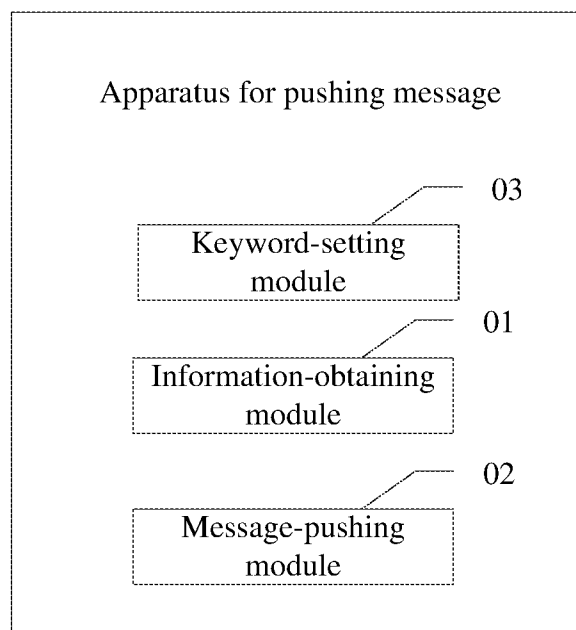
16. The apparatus according to any claim of claims 9-15, wherein the multi-dimensional feature information comprises:

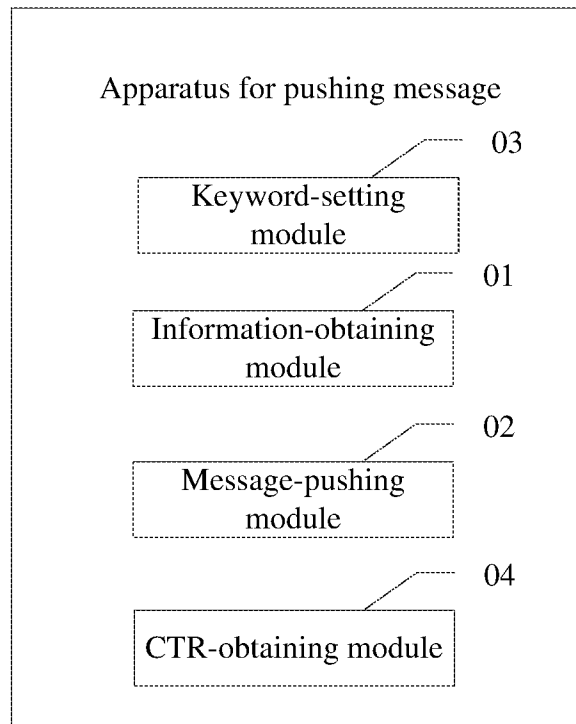
group attribute information of the user group that the user belongs to, based on a user interaction platform provided by third-party software.

**FIG. 1**

**FIG. 2**

**FIG. 3**

**FIG. 4****FIG. 5**

**FIG. 6**

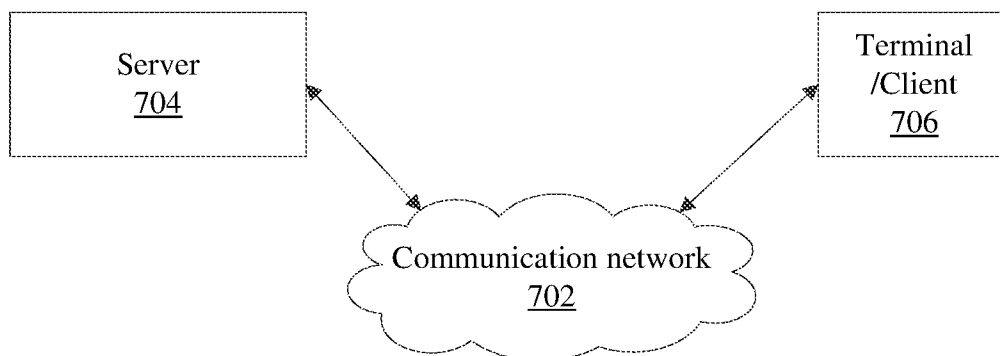
700

FIG. 7

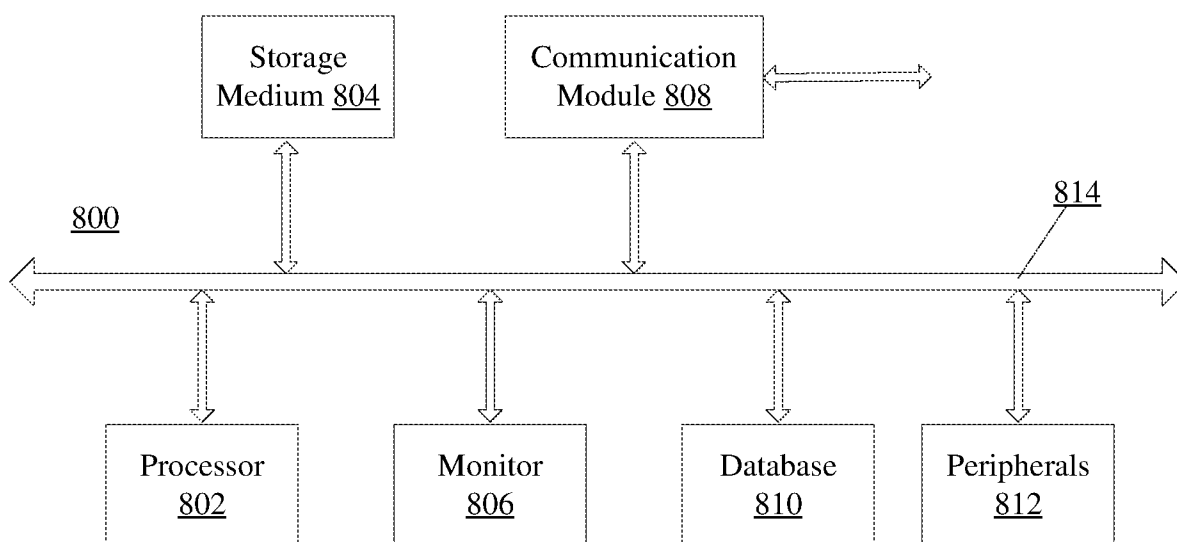


FIG. 8

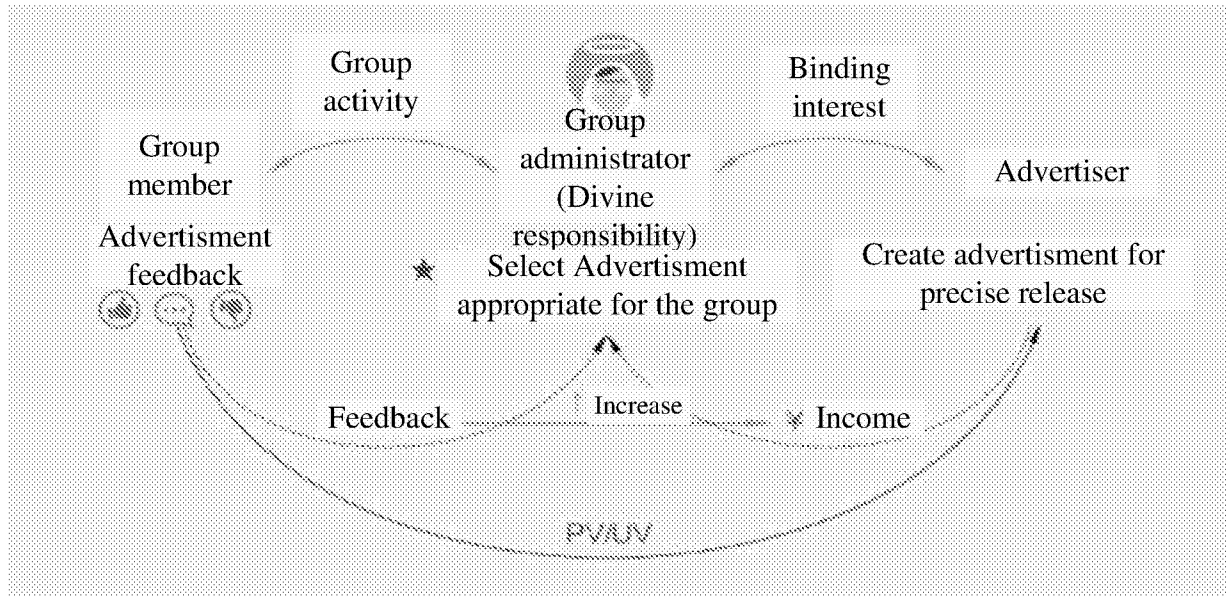


FIG. 9

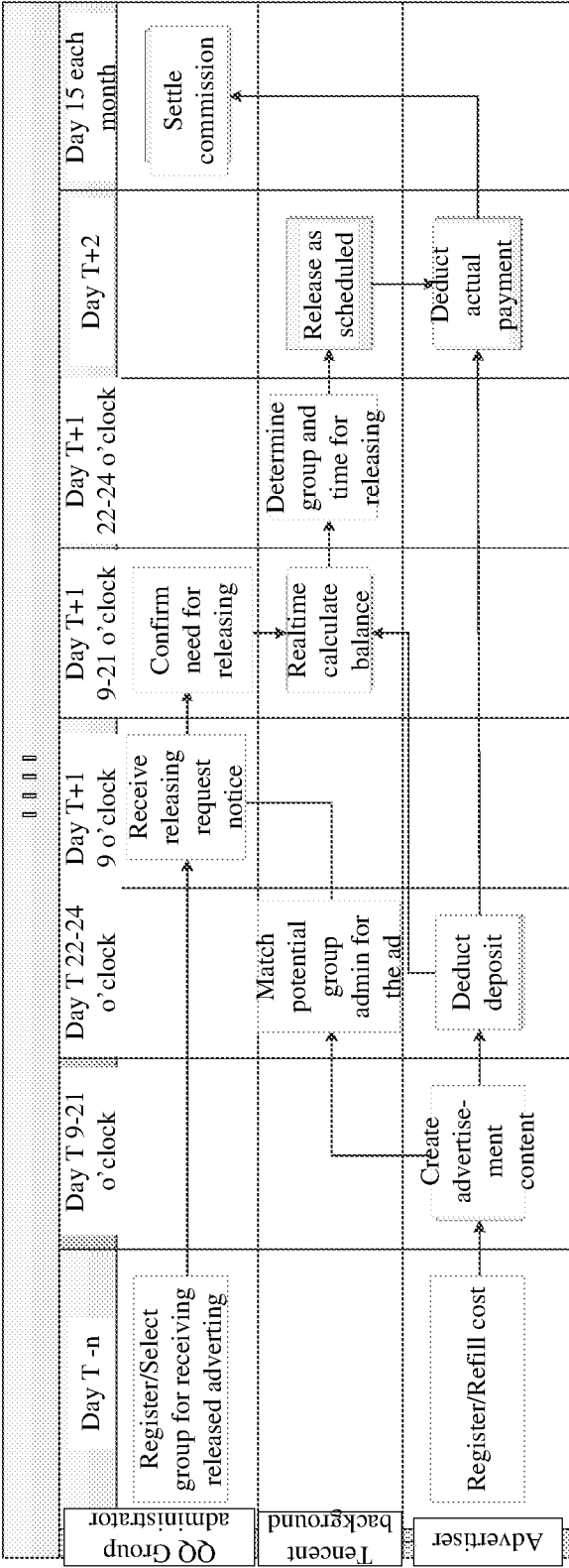


FIG. 10

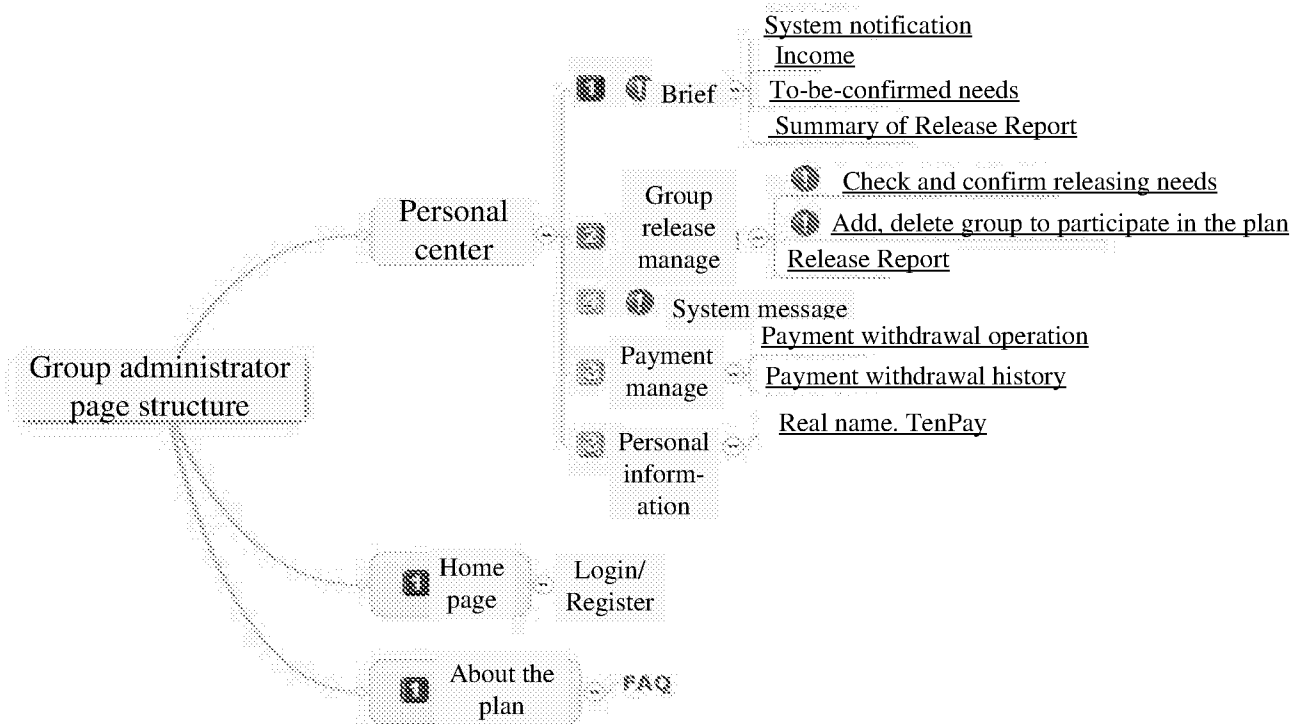


FIG. 11

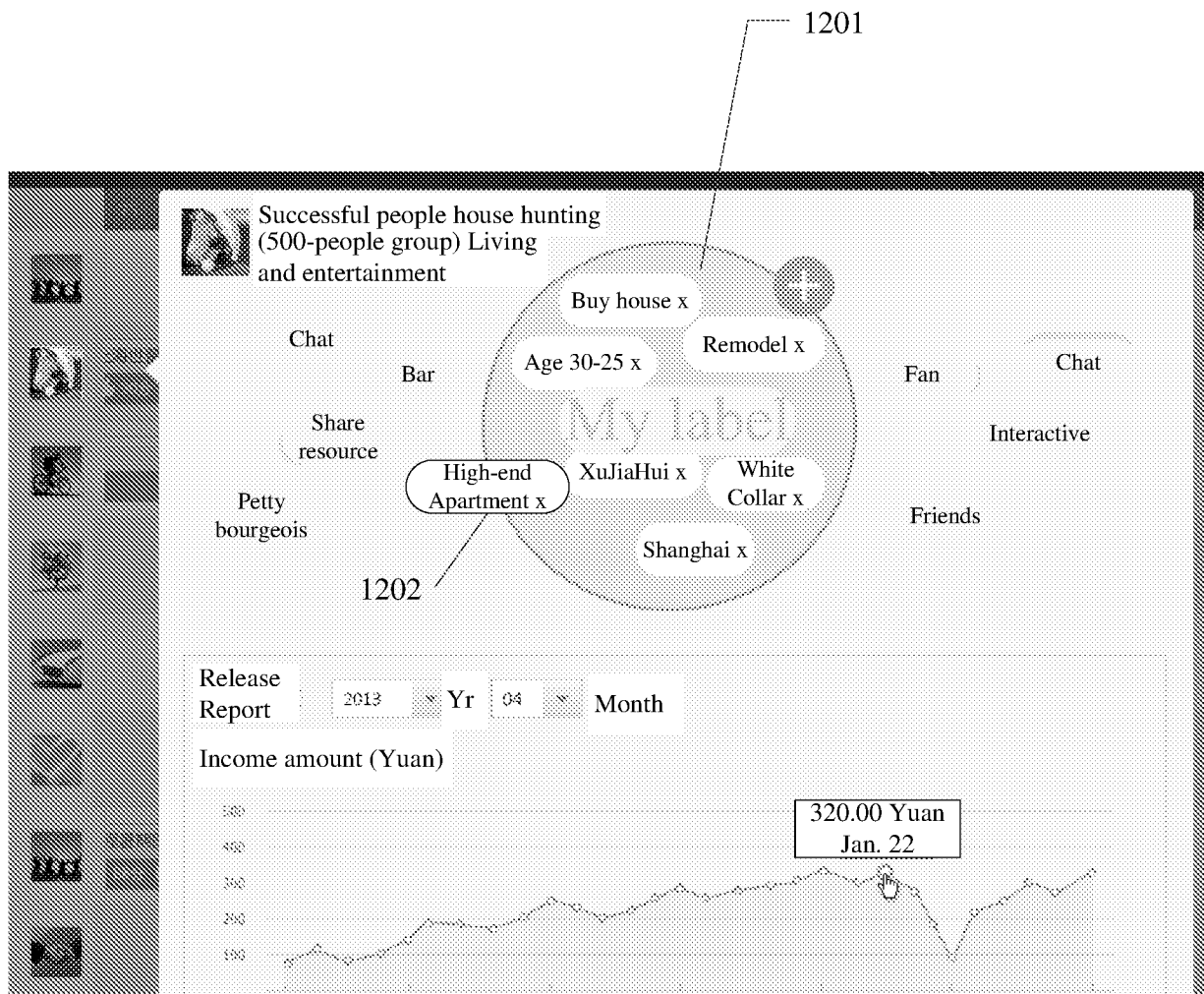


FIG. 12

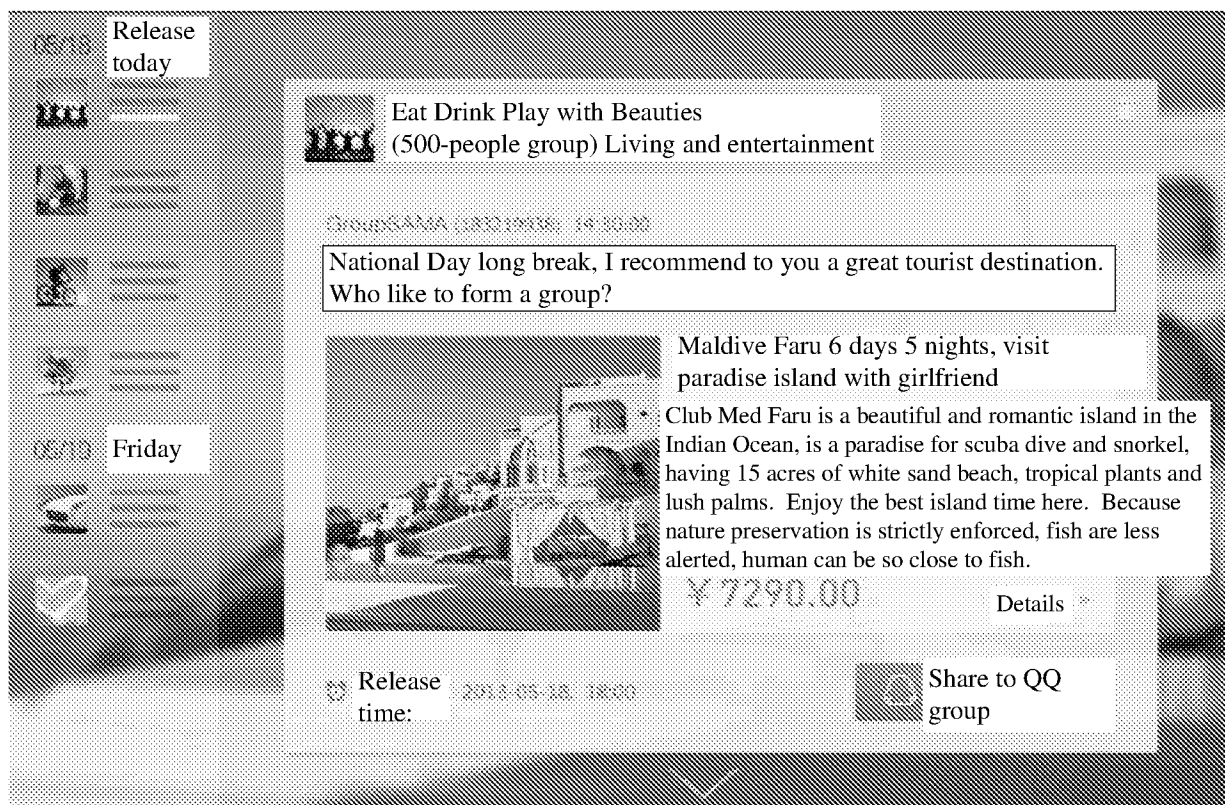


FIG. 13

Balance details

Date	Type	Sub-Type	Income/payment amount (Yuan)	Balance (Yuan)
2013-02-28	Withdraw	--	-1000.00	1000.00
	Tax withheld	--	-1.20	1000.00
	Income	BMW Shanghai auto friend (9876543210)	100.00	1000.00
2013-02-27	Income	Penguin Likes to Play Ball (9876543210)	100.00	1000.00
2013-02-25	Income	Penguin Likes to Play Ball (9876543210)	100.00	1000.00
2013-02-20	Withdraw	--	-1000.00	1000.00
	Tax withheld	--	-1.20	1000.00
2013-02-10	Income	Penguin Likes to Play Ball (9876543210)	100.00	1000.00
2013-02-01	Income	BMW Shanghai auto friend (9876543210)	100.00	1000.00
	Income	Penguin Likes to Play Ball (9876543210)	100.00	1000.00

FIG. 14

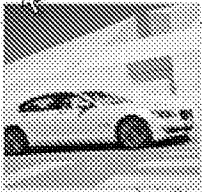
Number	Advertisement topic	Status	Released (Yuan)	Daily budget (Yuan)	Actual cost (Yuan)
12719000125	BMW New Year Special	To be released	0	500.00	1118.80
1271900013	BMW New Year Special Journey	In release	100	500.00	1118.80
1271900018	BMW New Year Special Journey	In release	100	500.00	1118.80
1271900017	BMW New Year Special	Release completed	180	500.00	22000.00
1271900016	BMW New Year Special	To be released	0	500.00	1118.80
Advertising content Release target Release plan New Year special, new journey. Invite BMW7 and MINI owner to purchase New BMW7 Service 			50	500.00	1118.80
			50	500.00	1118.80
		completed	1800	500.00	22000.00
		completed	180	500.00	22000.00
		In release	10	500.00	1118.80
			2 3 4 5 6 7 ... Next page		

FIG. 15A

1271000010	BMW New Year Special	To be released	0	500.00	1118.80
1271000011	Release target Advertising content -Simultaneously target Malaysia, self-guided, Shanghai white collar group; -target Guangzhou white collar group; -Simultaneously target Cambodia, Thailand group;	Release plan	50	500.00	1118.80
			50	500.00	1118.80
		completed	1800	500.00	22000.00
1271000012	BMW New Year	Release completed	180	500.00	22000.00
1271000013	BMW New Year	In release	10	500.00	1118.80

< Previous page 2 3 4 5 6 7 ... Next page >

FIG. 15B

1271400010	BMW New Year Special	To be released	0	500.00	1118.80
Advertising content	Release target	Release plan	50	500.00	1118.80
Release date	2013/01/01 - 2013/03/23		50	500.00	1118.80
Release time	08 : 00 - 12 : 00				
Daily budget	500 Yuan	completed	1800	500.00	22000.00
1271400012	BMW New Year Special	Release completed	180	500.00	22000.00
1271400013	BMW New Year	In release	10	500.00	1118.80

FIG. 15C

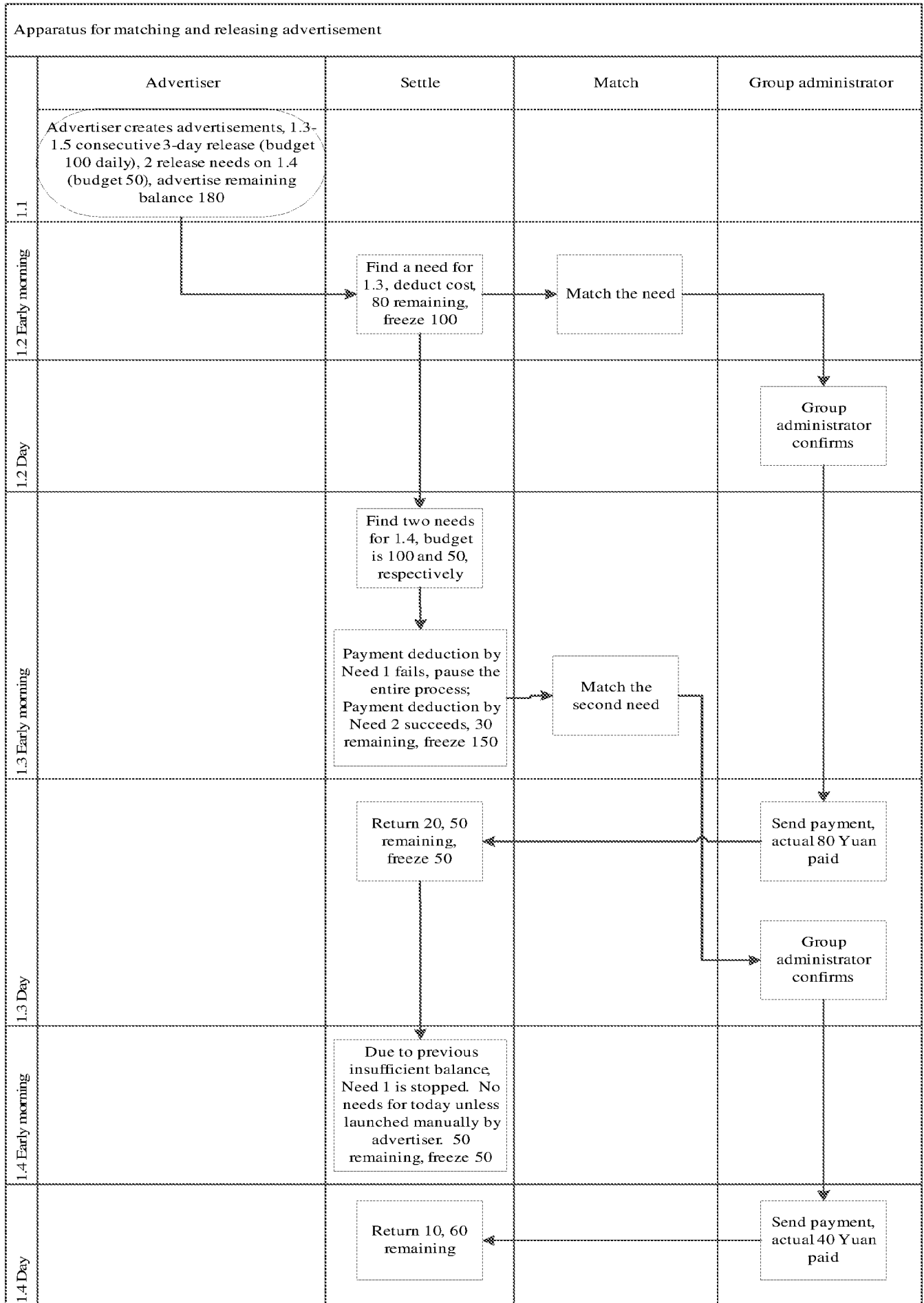


FIG. 16

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2014/086607

A. CLASSIFICATION OF SUBJECT MATTER

G06F 17/30(2006.01)i

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)

G06F

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

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

CNKI,CNPAT,WPI,EPODOC:push,send,information, info, message, data, user, customer, feature, server, match, group, software, threshold, advertisement

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 101193037 A (TENCENT TECHNOLOGY SHENZHEN CO., LTD.) 04 June 2008 (2008-06-04) description page 3 line 21-page 6 line 21	1-16
X	CN 101997894 A (ALIBABA GROUP HOLDING CO., LTD.) 30 March 2011 (2011-03-30) description paragraphs [0029]-[0057]	1-16
X	CN 102801817 A (SHENZHEN XUEZHIQUAN GROUP CO., LTD.) 28 November 2012 (2012-11-28) description paragraphs [0025]-[0061]	1-16
X	CN 102333084 A (SHENZHEN TRIOLION TECHNOLOGY CO., LTD.) 25 January 2012 (2012-01-25) description paragraphs [0024]-[0032]	1-16



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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“E” earlier application or patent but published on or after the international filing date

“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

“O” document referring to an oral disclosure, use, exhibition or other means

“P” document published prior to the international filing date but later than the priority date claimed

“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

03 December 2014

Date of mailing of the international search report

17 December 2014

Name and mailing address of the ISA/CN

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Telephone No. (86-10)82245268

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2014/086607

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	101193037	A	04 June 2008	INCHE	200800758	A	11 September 2009
CN	101997894	A	30 March 2011	HK	1149863	A0	14 October 2011
CN	102801817	A	28 November 2012		Non	e	
CN	102333084	A	25 January 2012		Non	e	