

COMMUNICATION TOOL BASED DATA TRANSFER METHOD AND SYSTEM

The present application claims priority to Chinese Patent Application No. 201510316622.X, filed on June 10, 2015 and entitled "COMMUNICATION TOOL BASED DATA TRANSFER METHOD AND SYSTEM", which is incorporated herein by reference in its entirety.

Technical Field

The present application relates to the field of computer technologies, and in particular, to a communication tool based data transfer method and system.

Background Art

With rapid development of computer technologies, Instant Messaging (IM) software (for example, WeChat and QQ) is increasingly applied in work and daily life of people, and has become common communication software in work and daily life of people.

In the process of using IM software, a user can communicate with other group members in a chat group by means of texts, voices, videos and the like, and all the group members in the chat group can view the chat information. However, chat groups in existing instant messaging software have limited functions, and user satisfaction is not high. Particularly, instant messaging software still does not support some specific data services.

Summary of the Invention

The present application is intended to solve, at least to some extent, one of the technical problems in the related art.

To this end, a first objective of the present application is to provide a communication tool based data transfer method. The method enables users to complete data transfer in the communication tool, thereby enriching the functions of the communication tool, facilitating data transfer between the users, improving data transfer efficiency, and improving user satisfaction.

A second objective of the present application is to provide a communication tool based payment method.

A third objective of the present application is to provide a communication tool based data transfer system.

A fourth objective of the present application is to provide a communication tool based payment system.

5 To achieve the above objectives, an embodiment in a first aspect of the present application provides a communication tool based data transfer method, wherein multiple session participating users take part in a same session in the communication tool, and the method includes the following steps: receiving initiation requests that are used for initiating data transfer projects and sent by M session participating users in the multiple session participating users, M
10 being a positive integer; receiving participation responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users, N being a positive integer; acquiring participation results of the M session participating users and the N session participating users corresponding to the data transfer projects; and selecting Q session participating users as Q target data points from the M session
15 participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer.

In the communication tool based data transfer method according to the embodiment of the present application, initiation requests that are used for initiating data transfer projects and sent by M session participating users in multiple session participating users are received; participation
20 responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users are received; participation results of the M session participating users and the N session participating users correspondingly taking part in the data transfer projects are then acquired; and Q session participating users are selected as Q target data points from the M session participating users and the N session participating
25 users according to the participation results and preset conditions. Therefore, the users are enabled to complete data transfer in the communication tool, thereby enriching the functions of the

communication tool, facilitating data transfer between the users, and improving data transfer efficiency.

To achieve the above objectives, an embodiment in a second aspect of the present application provides a communication tool based payment method, wherein multiple session participating
5 users take part in a same session in the communication tool, and the method includes the following steps: receiving initiation requests that are used for initiating payment projects and sent by M session participating users in the multiple session participating users, M being a positive integer; receiving participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple session participating users, N being a
10 positive integer; acquiring participation results of the M session participating users and the N session participating users corresponding to the payment projects; selecting Q session participating users as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer; and paying to the Q target accounts according to accounts of the M session participating
15 users and the N session participating users.

In the communication tool based payment method according to the embodiment of the present application, initiation requests that are used for initiating payment projects and sent by M session participating users in multiple session participating users are received; participation responses that are used for participating in the payment projects and sent by N session
20 participating users in the multiple session participating users are received; then, participation results of the M session participating users and the N session participating users corresponding to the participated projects are acquired; and then Q session participating users are selected as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions; and the Q target accounts are paid to
25 according to accounts of the M session participating users and the N session participating users. Therefore, the users are enabled to complete payment and settlement of the participated projects

in the communication tool, thereby enriching the functions of the communication tool, facilitating payment and settlement, and improving payment and settlement efficiencies.

To achieve the above objectives, an embodiment in a third aspect of the present application provides a communication tool based data transfer system, which includes a communication tool server that provides the communication tool, multiple client terminals on which the communication tool runs, and a data transfer server, wherein multiple session participating users take part in a same session in the communication tool. The communication tool server is configured to receive initiation requests that are used for initiating data transfer projects and sent by M session participating users in the multiple session participating users and receive participation responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users, and forward the initiation requests and the participation responses to the data transfer server, where M and N are positive integers; the data transfer server is configured to acquire participation results of the M session participating users and the N session participating users corresponding to the data transfer projects; and select Q session participating users as Q target data points from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer.

In the communication tool based data transfer system according to the embodiment of the present application, the communication tool server receives initiation requests that are used for initiating data transfer projects and sent by M session participating users in multiple session participating users and receives participation responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users, and forwards the initiation requests and the participation responses to the data transfer server; the data transfer server then acquires participation results of the M session participating users and the N session participating users correspondingly taking part in the data transfer projects, and selects Q session participating users as Q target data points from the M session participating users and the N session participating users according to the participation results and

preset conditions. Therefore, the users are enabled to complete data transfer in the communication tool, thereby facilitating data transfer between the users and improving data transfer efficiency.

To achieve the above objectives, an embodiment in a fourth aspect of the present application provides a communication tool based payment system, which includes a communication tool server that provides the communication tool, multiple client terminals on which the communication tool runs, and a payment server, wherein multiple session participating users take part in a same session in the communication tool. The communication tool server is configured to receive initiation requests that are used for initiating payment projects and sent by M session participating users in the multiple session participating users and receive participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple session participating users, and forward the initiation requests and the participation responses to the payment server, where M and N are positive integers; the payment server is configured to acquire participation results of the M session participating users and the N session participating users corresponding to the payment projects; select Q session participating users as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer; and pay to the Q target accounts according to accounts of the M session participating users and the N session participating users.

In the communication tool based payment system according to the embodiment of the present application, the communication tool server receives initiation requests that are used for initiating payment projects and sent by M session participating users in multiple session participating users and receives participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple session participating users, and forwards the initiation requests and the participation responses to the payment server; the payment server then acquires participation results of the M session participating users and the N session participating users corresponding to the payment projects; selects Q session participating users as Q target

accounts from the M session participating users and the N session participating users according to the participation results and preset conditions; and pays to the Q target accounts according to accounts of the M session participating users and the N session participating users. Therefore, the users are enabled to complete payment and settlement of the participated projects in the communication tool, thereby enriching the functions of the communication tool, facilitating payment and settlement, and improving payment and settlement efficiencies.

Brief Description of the Drawings

FIG. 1 is a flowchart of a communication tool based data transfer method according to an embodiment of the present application.

FIG. 2 is a flowchart of completing data transfer between participating users by a data transfer server according to an embodiment of the present application.

FIG. 3 is a flowchart of a communication tool based payment method according to an embodiment of the present application.

FIG. 4 is a flowchart of completing payment by a payment server according to an embodiment of the present application.

FIG. 5 is a schematic structural diagram of a communication tool based data transfer system according to an embodiment of the present application.

FIG. 6 is a schematic structural diagram of a communication tool based payment system according to an embodiment of the present application.

Detailed Description

Embodiments of the present application will be described in detail in the following, and examples of the embodiments are shown in the accompanying drawings, where identical or similar reference numerals represent identical or similar elements or elements having identical or similar functions throughout the text. The embodiments described in the following through the accompanying drawings are exemplary and intended to explain the present application, and are not intended to limit the present application.

A communication tool based data transfer method, a payment method, and systems thereof according to embodiments of the present application are described below with reference to the accompanying drawings.

FIG. 1 is a flowchart of a communication tool based data transfer method according to an embodiment of the present application. As shown in FIG. 1, the communication tool based data transfer method includes:

S101. A communication tool server receives initiation requests that are used for initiating data transfer projects and sent by M session participating users in multiple session participating users.

M is a positive integer, and M may be 1 or a positive integer greater than 1.

The multiple session participating users take part in a same session in the communication tool, and the communication tool is instant messaging software.

Specifically, the communication tool server may receive initiation requests that are used for initiating data transfer projects and sent by one or more session participating users in the multiple session participating users.

For example, in a chat group of instant messaging software, users in the chat group may initiate auctions according to requirements during chatting, and a server of the instant messaging software receives auction initiation requests from one or more users in the chat group. It is assumed that the server of the instant messaging software receives auction initiation requests from a user A and a user B in the chat group, and the server of the instant messaging software checks whether the user A or the user B satisfies an essential condition for initiating an auction project by a user. If it is determined by checking that the user A does not satisfy the auction initiation condition, an anomaly prompt is displayed on the interface of the instant messaging software. If the user B satisfies the initiation condition, an auction is initiated according to the initiation request from the user B, and the other session participating users in the chat group can view the auction initiated by the user B.

In an embodiment of the present invention, after the communication tool server receives the initiation requests for initiating data transfer projects from the M session participating users in the

multiple session participating users and successfully creates the data transfer projects, the communication tool server can send participation invitations to the other session participating users in the session, and mark participation conditions in the participation invitations.

Specifically, after successfully creating the data transfer projects, the communication tool
5 server can send related information of the data transfer projects to the communication tool of the other session participating users, the related information of the data transfer projects is displayed in a chat group corresponding to the communication tool of the session participating users, the nicknames of the participating users initiating the data transfer projects are displayed in the chat group of the communication tool, and the participation conditions are marked in the chat group,
10 such that the other session participating users are enabled to determine, according to the participation conditions, whether to take part in the data transfer projects.

S102. The communication tool server receives participation responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users.

15 N is a positive integer.

Specifically, after one or more participating users successfully initiate data transfer projects in the communication tool, related information of one or more data transfer projects is displayed in a session of the communication tool, and the other session participating users in a same session may take part in one or more data transfer projects selectively according to requirements.

20 The communication tool server receives participation responses that are used for participating in the data transfer projects and sent by one or more session participating users in the multiple session participating users.

S103. The data transfer server acquires participation results of the M session participating users and the N session participating users correspondingly taking part in the data transfer
25 projects.

The participation results are randomly generated or generated according to the content input by the users participating in the data transfer projects.

Specifically, after acquiring, from the participating users, the initiation requests for data transfer projects and the participation responses for participating in the data transfer projects, the communication tool server forwards the acquired content to the data transfer server, and the data transfer server acquires, according to the content, corresponding participation results of the data transfer projects.

Further, in an embodiment of the present invention, the data transfer server can also generate a result presenting interface according to the participation results of the M session participating users and the N session participating users correspondingly taking part in the data transfer projects, and display the result presenting interface to the M session participating users and the N session participating users, such that the users can view the participation results of the data transfer projects.

S104. The data transfer server selects Q session participating users as Q target data points from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer.

The preset conditions are made by the data transfer server for the data transfer projects and are related to the data transfer projects. The data transfer server sets different preset conditions for different data transfer projects. For example, if a data transfer project is an auction project, the data transfer server may set a condition for the auction project as that the auctioned item is sold to the participating user offering the highest bid, and select the session participating user initiating the auction as the target data point.

In an embodiment of the present invention, after acquiring the corresponding participation results of the data transfer projects, the data transfer server can also select, according to the participation results and the corresponding preset conditions for participating in the data transfer projects, Q session participating users as Q target data points from the multiple session participating users correspondingly taking part in the data transfer projects.

For example, it is assumed that currently only one user (a user A) initiates an auction project, and the other three users (users B, C, and D) in a same session take part in the auction project

initiated by the user A. The data transfer server acquires participation results of the four users taking part in the auction project. It is assumed that a preset condition, stored in the data transfer server, for the auction project is that: the auctioned item is sold to the participating user offering the highest bid, and the session participating user initiating the auction is selected as the target data point. If it is determined, according to the participation results of the auction project, that the user B offers the highest bid, the data transfer server selects the account of the user B as the target data point.

In an embodiment of the present invention, after selecting Q session participating users as Q target data points, the data transfer server can complete data transfer between the participating users through the steps shown in FIG. 2, which specifically include:

S105. The data transfer server generates M first data transfer lists according to the initiation requests.

The M first data transfer lists point from source data points of the M session participating users to intermediate data points.

S106. The data transfer server generates N second data transfer lists according to the participation responses.

The N second data transfer lists point from source data points of the N session participating users to intermediate data points.

S107. The data transfer server generates Q third data transfer lists according to the participation results, the preset conditions, and the Q target data points.

The Q third data transfer lists point from the intermediate data points to the Q target data points.

Specifically, the data transfer server can rank according to the participation results of the users corresponding to the Q target data points, allocate corresponding data transfer amounts to the Q target data points, respectively, according to the preset conditions and the ranking results, and generate Q third data transfer lists according to the Q target data points and the data transfer amounts respectively allocated to the Q target data points.

For example, currently four users (users A, B, C, and D) each spend 10bonus points to take part in a project of solving riddles with bonus points, it is assumed that there are altogether 10riddles, and the users contest against each other to try to solve the riddles first. If the participation results of the riddle solving project acquired by the data transfer server are that: the user A solves two riddles, the user B solves three riddles, the user C solves four riddles, and the user D solves one riddle, and it is assumed that the preset condition made by the data transfer server for the riddle solving project is that: the user solving the most riddles is awarded 60% of the bonus points and the user solving the second most riddles is awarded 40% of the bonus points, the data transfer server allocates 24bonus points to the user C and allocates 16bonus points to the user B according to the participation results and the preset condition.

S108. The data transfer server performs data export on data points of the M session participating users and the N session participating users and performs data import on the Q target data points according to the M first data transfer lists, the N second data transfer lists, and the Q third data transfer lists.

In the data transfer process performed by the data transfer server, the exported data transfer amounts of the M session participating users and the N session participating users when taking part in the data transfer projects are equal, where data in the data transfer projects may be bonus points, virtual currencies and the like.

It should be noted that, the communication tool server and the data transfer server in this embodiment may be a same server and may also be different servers.

Further, it should be noted that, the application scenarios of the communication tool based data transfer method according to the embodiment of the present application are not limited to auction and riddle solving scenarios, and the method may also be applied in other scenarios requiring data transfer.

In the communication tool based data transfer method according to the embodiment of the present application, initiation requests that are used for initiating data transfer projects and sent by M session participating users in multiple session participating users are received; participation

responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users are received; participation results of the M session participating users and the N session participating users correspondingly taking part in the data transfer projects are acquired; and Q session participating users are selected as Q target data points from the M session participating users and the N session participating users according to the participation results and preset conditions. Therefore, the users are enabled to complete data transfer in the communication tool, thereby facilitating data transfer between the users and improving data transfer efficiency.

FIG. 3 is a flowchart of a communication tool based payment method according to an embodiment of the present application.

As shown in FIG. 3, the communication tool based payment method includes:

S301. A communication tool server receives initiation requests that are used for initiating payment projects and sent by M session participating users in multiple session participating users.

M is a positive integer, and M may be 1 or a positive integer greater than 1.

The multiple session participating users take part in a same session in the communication tool, and the communication tool is instant messaging software.

Specifically, the communication tool server may receive initiation requests that are used for initiating payment projects and sent by one or more session participating users in the multiple session participating users.

For example, in a chat group of instant messaging software, users in the chat group may initiate auctions according to requirements during chatting, and a server of the instant messaging software receives auction initiation requests from one or more users in the chat group. It is assumed that the server of the instant messaging software receives auction initiation requests from a user A and a user B in the chat group, and the server of the instant messaging software can judge, according to a preset initiation condition, whether the corresponding user A or user B satisfies the auction initiation condition. If the server of the instant messaging software

determines that the user A does not satisfy the initiation condition, an anomaly prompt is displayed to the user on the interface of the instant messaging software. If the user B satisfies the initiation condition, an auction is initiated according to the initiation request from the user B, and the other users in the chat group can view the auction initiated by the user B.

5 In an embodiment of the present invention, after the communication tool server receives the initiation requests for initiating payment projects from the M session participating users in the multiple session participating users and successfully creates the payment projects, the communication tool server can send participation invitations to the other session participating users in the session, and mark participation conditions in the participation invitations.

10 Specifically, after successfully creating the payment projects, the communication tool server can send related information of the payment projects to the communication tool of the other session participating users, the related information of the payment projects is displayed in a chat group corresponding to the communication tool of the session participating users, the nicknames of the participating users initiating the payment projects are displayed in the chat group of the
15 communication tool, and the participation conditions are marked in the chat group, such that the other session participating users are enabled to determine, according to the participation conditions, whether to take part in the payment projects.

 S302. The communication tool server receives participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple
20 session participating users.

 N is a positive integer.

 Specifically, after one or more participating users successfully initiate payment projects in the communication tool, related information of one or more payment projects is displayed in a session of the communication tool, and the other session participating users in a same session
25 may take part in one or more payment projects selectively according to requirements.

The communication tool server receives participation responses that are used for participating in the payment projects and sent by one or more session participating users in the multiple session participating users.

5 S303. The payment server acquires participation results of the M session participating users and the N session participating users corresponding to the participated projects.

The participation results are randomly generated or generated according to the content input by the users participating in the payment projects.

Specifically, after acquiring, from the participating users, the initiation requests for payment projects and the participation responses for participating in the payment projects, the
10 communication tool server forwards the acquired content to the payment server, and the payment server acquires, according to the content, corresponding participation results of the payment projects.

Further, in an embodiment of the present invention, the payment server can also generate a result presenting interface according to the participation results of the M session participating
15 users and the N session participating users correspondingly taking part in the payment projects, and display the result presenting interface to the M session participating users and the N session participating users, such that the users can view the participation results of the payment projects.

20 S304. The payment server selects Q session participating users as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer.

The preset conditions are made by the payment server for the payment projects and are related to the payment projects. The payment server sets different preset conditions for different payment projects. For example, if a payment project is auction, the payment server may set an
25 auction condition as that the auctioned item is sold to the participating user offering the highest bid, and select the session participating user initiating the auction as the target data point.

In an embodiment of the present invention, after acquiring the corresponding participation results of the payment projects, the payment server can also select, according to the participation results and the corresponding preset conditions for participating in the payment projects, Q session participating users as Q target data points from the multiple session participating users correspondingly taking part in the payment projects.

For example, it is assumed that currently only one user (a user A) initiates an auction project, and the other three users (users B, C, and D) in a same session take part in the auction project initiated by the user A. The payment server acquires participation results of the four users taking part in the auction project. It is assumed that a preset condition, stored in the payment server, for the auction project is that: the auctioned item is sold to the participating user offering the highest bid, and the session participating user initiating the auction is selected as the target data point. If it is determined, according to the participation results of the auction project, that the user B offers the highest bid, the payment server selects the account of the user B as the target data point.

S305. The payment server pays to the Q target accounts according to accounts of the M session participating users and the N session participating users.

In an embodiment of the present invention, after selecting Q session participating users as Q target data points, the payment server can complete payment to the Q target accounts through the steps shown in FIG. 4, which specifically include:

S3051. The payment server generates M payer matching lists according to the initiation requests.

The M payer matching lists point from accounts of the M session participating users to intermediate accounts.

S3052. The payment server generates N payer matching lists according to the participation responses.

The N payer matching lists point from accounts of the N session participating users to intermediate accounts.

S3053. The payment server generates Q payee matching lists according to the participation results, the preset conditions, and the Q target accounts.

The Q payee matching lists point from the intermediate accounts to the Q target accounts.

In an embodiment of the present invention, the payment server can rank according to the participation results of the users corresponding to the Q target accounts, allocate corresponding amounts of money to the Q target accounts, respectively, according to the preset conditions and the ranking results, and generate Q payee matching lists according to the Q target accounts and the amounts of money respectively allocated to the Q target accounts.

S3054. The payment server deducts from the accounts of the M session participating users and the N session participating users and pays to the Q target accounts according to the M payer matching lists, the N payer matching lists, and the Q payee matching lists.

The payment amounts of the M session participating users and the N session participating users when taking part in the payment projects are equal.

For example, a user A in a chat group of instant messaging software initiates a weekend trip project, introductions about the location, gathering time, scenic spots, and expenses of the weekend trip project initiated by the user A are displayed in the chat group, and a joining button is also displayed in the chat group. It is assumed that users C, D, and E in the chat group take part in the weekend trip project initiated by the user A, the instant messaging server acquires participation situations of the users in the chat group and forwards the corresponding participation situations to the payment server, the payment server acquires participation results of the weekend trip project initiated by the user A and determines the account of the user A as a target account according to the participation results and a preset condition, the payment server generates a payer matching list of the user A, payer matching lists of the users C, D, and E, and a payee matching list of the user A, and the payment server deducts from the accounts of the participating users C, D, and E and pays to the account of the user A according to the payer matching lists and the payee matching list.

It should be noted that, the communication tool server and the payment server in this embodiment may be a same server and may also be different servers.

In the communication tool based payment method according to the embodiment of the present application, initiation requests that are used for initiating payment projects and sent by M session participating users in multiple session participating users are received; participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple session participating users are received; participation results of the M session participating users and the N session participating users corresponding to the participated projects are acquired; Q session participating users are selected as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions; and the Q target accounts are paid to according to accounts of the M session participating users and the N session participating users. Therefore, the users are enabled to complete payment and settlement of the participated projects in the communication tool, thereby enriching the functions of the communication tool, facilitating payment and settlement, and improving payment and settlement efficiencies.

To implement the above embodiments, the present application further provides a communication tool based data transfer system.

FIG. 5 is a schematic structural diagram of a communication tool based data transfer system according to an embodiment of the present application.

As shown in FIG. 5, the communication tool based data transfer system includes a communication tool server 11 that provides the communication tool, multiple client terminals 12 on which the communication tool runs, and a data transfer server 13.

The communication tool server 11 is configured to receive initiation requests that are used for initiating data transfer projects and sent by M session participating users in multiple session participating users and receive participation responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating

users, and forward the initiation requests and the participation responses to the data transfer server.

M and N are positive integers, M may be 1 or a positive integer greater than 1, and N may be 1 or a positive integer greater than 1.

5 The multiple session participating users take part in a same session in the communication tool, and the communication tool is instant messaging software.

Specifically, the communication tool server 11 may receive initiation requests that are used for initiating data transfer projects and sent by one or more session participating users in the multiple session participating users.

10 In an embodiment of the present invention, after the communication tool server 11 receives the initiation requests for initiating data transfer projects from the M session participating users in the multiple session participating users and successfully creates the data transfer projects, the communication tool server 11 can send participation invitations to the other session participating users in the session, and mark participation conditions in the participation invitations.

15 The data transfer server 13 is configured to acquire participation results of the M session participating users and the N session participating users corresponding to the data transfer projects; and select Q session participating users as Q target data points from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer.

20 The participation results are randomly generated or generated according to the content input by the users participating in the data transfer projects.

In an embodiment of the present invention, the data transfer server 13 can also generate a result presenting interface according to the participation results of the M session participating users and the N session participating users correspondingly taking part in the data transfer
25 projects, and display the result presenting interface to the M session participating users and the N session participating users, such that the users can view the participation results of the data transfer projects.

Further, after acquiring the corresponding participation results of the data transfer projects, the data transfer server 13 can also select, according to the participation results and the corresponding preset conditions for participating in the data transfer projects, Q session participating users as Q target data points from the multiple session participating users correspondingly taking part in the data transfer projects.

To complete data transfer between the users, the data transfer server 13 is configured to: generate M first data transfer lists according to the initiation requests, the M first data transfer lists pointing from source data points of the M session participating users to intermediate data points; generate N second data transfer lists according to the participation responses, the N second data transfer lists pointing from source data points of the N session participating users to intermediate data points; generate Q third data transfer lists according to the participation results, the preset conditions, and the Q target data points, the Q third data transfer lists pointing from the intermediate data points to the Q target data points.

Specifically, in the process of generating the Q third data transfer lists, the data transfer server 13 can also rank according to the participation results of the users corresponding to the Q target data points, and allocate corresponding data transfer amounts to the Q target data points, respectively, according to the preset conditions and the ranking results; and generate Q third data transfer lists according to the Q target data points and the data transfer amounts respectively allocated to the Q target data points.

After generating the M first data transfer lists, the N second data transfer lists, and the Q third data transfer lists, the data transfer server 13 can perform data export on data points of the M session participating users and the N session participating users and perform data import on the Q target data points according to the M first data transfer lists, the N second data transfer lists, and the Q third data transfer lists.

In the data transfer process, the exported data transfer amounts of the M session participating users and the N session participating users when taking part in the data transfer projects are equal.

It should be noted that, the communication tool server and the data transfer server in the data transfer system may be a same server and may also be different servers.

In the communication tool based data transfer system according to the embodiment of the present application, the communication tool server receives initiation requests that are used for
5 initiating data transfer projects and sent by M session participating users in multiple session participating users and receives participation responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users, and forwards the initiation requests and the participation responses to the data transfer server; the data transfer server acquires participation results of the M session participating
10 users and the N session participating users correspondingly taking part in the data transfer projects, and selects Q session participating users as Q target data points from the M session participating users and the N session participating users according to the participation results and preset conditions. Therefore, the users are enabled to complete data transfer in the communication tool, thereby facilitating data transfer between the users and
15 improving data transfer efficiency.

To implement the above embodiments, the present application further provides a communication tool based payment system.

FIG. 6 is a schematic structural diagram of a communication tool based payment system according to an embodiment of the present application.

20 As shown in FIG. 6, the communication tool based payment system includes a communication tool server 21 that provides the communication tool, multiple client terminals 22 on which the communication tool runs, and a payment server 23.

The communication tool server 21 is configured to receive initiation requests that are used for initiating payment projects and sent by M session participating users in multiple session
25 participating users and receive participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple session participating users, and forward the initiation requests and the participation responses to the payment server.

M and N are positive integers, M may be 1 or a positive integer greater than 1, and N may be 1 or a positive integer greater than 1.

Specifically, the communication tool server 21 receives initiation requests that are used for initiating payment projects and sent by one or more session participating users. After one or more session participating users initiate payment projects, the other one or more users in a same session may take part in the corresponding payment projects according to requirements.

In an embodiment of the present invention, after the communication tool server 21 receives the initiation requests for initiating payment projects from the M session participating users in the multiple session participating users and successfully creates the payment projects, the communication tool server 21 can send participation invitations to the other session participating users in the session, and mark participation conditions in the participation invitations.

The payment server 23 is configured to acquire participation results of the M session participating users and the N session participating users corresponding to the payment projects; select Q session participating users as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer; and pay to the Q target accounts according to accounts of the M session participating users and the N session participating users.

Further, to enable the users to view the participation results of the payment projects, the payment server is further configured to generate a result presenting interface according to the participation results of the M session participating users and the N session participating users correspondingly taking part in the payment projects, and display the result presenting interface to the M session participating users and the N session participating users, such that the users can view the participation results of the payment projects.

Further, after acquiring the corresponding participation results of the payment projects, the payment server 23 can also select, according to the participation results and the corresponding preset conditions for participating in the payment projects, Q session participating users as Q

target data points from the multiple session participating users correspondingly taking part in the payment projects.

To complete payment between the participating users, the payment server 23 is further configured to generate M payer matching lists according to the initiation requests, the M payer
5 matching lists pointing from the accounts of the M session participating users to intermediate accounts; generate N payer matching lists according to the participation responses, the N payer matching lists pointing from the accounts of the N session participating users to intermediate accounts; and generate Q payee matching lists according to the participation results, the preset conditions, and the Q target accounts, the Q payee matching lists pointing
10 from the intermediate accounts to the Q target accounts.

Specifically, in the process of generating the Q payee matching lists, the payment server 23 can rank according to the participation results of the users corresponding to the Q target accounts, and allocate corresponding amounts of money to the Q target accounts, respectively, according to the preset conditions and the ranking results; and generate Q payee matching lists
15 according to the Q target accounts and the amounts of money respectively allocated to the Q target accounts.

After generating the M payer matching lists, the N payer matching lists, and the Q payee matching lists, the payment server 23 can deduct from the accounts of the M session participating users and the N session participating users and pay to the Q target accounts
20 according to the M payer matching lists, the N payer matching lists, and the Q payee matching lists.

In the process of completing payment between the users by the payment server 23, the payment amounts of the M session participating users and the N session participating users when taking part in the payment projects are equal.

25 It should be noted that, the communication tool server and the payment server in this embodiment may be a same server and may also be different servers.

In the communication tool based payment system according to the embodiment of the present application, the communication tool server receives initiation requests that are used for initiating payment projects and sent by M session participating users in multiple session participating users and receives participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple session participating users, and forwards the initiation requests and the participation responses to the payment server; the payment server acquires participation results of the M session participating users and the N session participating users corresponding to the payment projects, selects Q session participating users as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions, and pays to the Q target accounts according to accounts of the M session participating users and the N session participating users. Therefore, the users are enabled to complete payment and settlement of the participated projects in the communication tool, thereby enriching the functions of the communication tool, facilitating payment and settlement, and improving payment and settlement efficiencies.

Reference throughout this specification to the terms "an embodiment," "some embodiments," "an example," "a specific example," or "some examples," means that a specific feature, structure, material, or characteristic described in connection with such embodiment or example is included in at least one embodiment or example of the present application. The expressions of these terms throughout this specification are not necessarily referring to a same embodiment or example. Furthermore, the specific features, structures, materials, or characteristics may be combined in any suitable manner in one or more embodiments or examples. Moreover, in a case without mutual contradiction, persons skilled in the art can perform incorporation and combination on different embodiments or examples described in the specification with features of the different embodiments or examples.

In addition, terms such as "first" and "second" are used only for purposes of description and are not intended to indicate or imply relative importance or to imply the number of indicated

technical features. Thus, the feature defined with "first" and "second" may explicitly or implicitly include at least one such feature. In the description of the present application, "a plurality of" refers to at least two, for example, two, three, etc., unless otherwise expressly specified.

The description of any process or method in the flowcharts or in other manners herein may be understood as being indicative of including one or more modules, segments or parts for embodying the codes of executable instructions of the steps in particular logic functions or processes, and that the scope of the preferred embodiments of the present application includes other implementations, where the functions may be executed in sequences different from those shown or discussed, including executing the functions according to the related functions in a substantially simultaneous manner or in a reverse sequence, which should be understood by those skilled in the art to which the embodiments of the present application pertain.

The logic and/or steps shown in the flowcharts or described in other manners here may be, for example, understood as a sequencing list of executable instructions for implementing logic functions, which may be embodied in any computer readable medium, for use by an instruction executing system, device or apparatus (such as a system based on a computer, a system including a processor, or other systems capable of fetching instructions from an instruction executing system, device or apparatus and executing the instructions), or for use in combination with the instruction executing system, device or apparatus. As used herein, "a computer readable medium" can be any apparatus that can contain, store, communicate, propagate or transmit programs for use by an instruction executing system, device or apparatus, or can be used in combination with the instruction executing system, device or apparatus. More detailed examples of the computer readable medium include (non-exhaustive list): an electrical connecting portion (electronic apparatus) having one or more wirings, a portable computer disk (magnetic device), a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or flash memory), an optical fiber device, and a portable compact disk read-only memory (CDROM). Furthermore, a computer readable medium may be paper on which the programs may be printed or other appropriate media, as the programs may be acquired

electronically through optically scanning the paper or other appropriate media and then compiling, interpreting, or processing in other appropriate manners, as necessary, and then the programs are stored in the computer memory.

It should be understood that each of the parts of the present application may be implemented
5 by hardware, software, firmware, or a combination thereof. In the above embodiments, multiple steps or methods may be realized by software or firmware that is stored in the memory and executed by an appropriate instruction executing system. For example, if it is realized by hardware, it may be realized by any one of the following technologies known in the art or a combination thereof as in another embodiment: a discrete logic circuit having a logic gate circuit
10 for realizing logic functions of data signals, an application-specific integrated circuit having an appropriate combined logic gate circuit, a programmable gate array (PGA), and a field programmable gate array (FPGA), etc.

It would be appreciated by those of ordinary skill in the art that all or some of the steps of the method in the above embodiments may be performed by relevant hardware as instructed by a
15 program. The program may be stored in a computer readable storage medium. When the program is run, one or a combination of the steps of the method in the embodiments is performed.

In addition, in the embodiments of the present application, the functional units may be integrated in one processing module, or the functional units may be present separately and physically, or two or more units may be integrated in one module. The above-mentioned
20 integrated module may be implemented in the form of hardware or in the form of a software functional module. If the integrated module is implemented in the form of the software functional module and sold or used as an independent product, the integrated module may also be stored in a computer readable storage medium.

The storage medium mentioned above may be a read-only memory, a magnetic disk or an
25 optical disc. Although embodiments of the present application have been shown and described above, it would be appreciated by those of ordinary skill in the art that the above embodiments are exemplary and shall not be construed to limit the present application, and changes,

modifications, replacements and variations can be made in the embodiments without departing from the scope of the present application.

CLAIMS

1. A communication tool based data transfer method, wherein multiple session participating users take part in a same session in the communication tool, the method comprising the following steps:

5 receiving initiation requests that are used for initiating data transfer projects and sent by M session participating users in the multiple session participating users, M being a positive integer;

receiving participation responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users, N being a positive integer;

10 acquiring participation results of the M session participating users and the N session participating users corresponding to the data transfer projects; and

selecting Q session participating users as Q target data points from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer.

15 2. The communication tool based data transfer method of claim 1, further comprising:

generating M first data transfer lists according to the initiation requests, the M first data transfer lists pointing from source data points of the M session participating users to intermediate data points;

20 generating N second data transfer lists according to the participation responses, the N second data transfer lists pointing from source data points of the N session participating users to intermediate data points;

generating Q third data transfer lists according to the participation results, the preset conditions, and the Q target data points, the Q third data transfer lists pointing from the intermediate data points to the Q target data points.

25 3. The communication tool based data transfer method of claim 2, further comprising:

performing data export on data points of the M session participating users and the N session participating users and performing data import on the Q target data points according

to the M first data transfer lists, the N second data transfer lists, and the Q third data transfer lists.

4. The communication tool based data transfer method of claim 2, wherein the step of generating Q third data transfer lists according to the participation results, the preset
5 conditions, and the Q target data points specifically comprises:

ranking according to the participation results of the users corresponding to the Q target data points, and allocating corresponding data transfer amounts to the Q target data points, respectively, according to the preset conditions and the ranking results; and

generating Q third data transfer lists according to the Q target data points and the data
10 transfer amounts respectively allocated to the Q target data points.

5. The communication tool based data transfer method of claim 1 or 2, wherein the participation results are randomly generated or generated according to the content input by the users participating in the data transfer projects.

6. The communication tool based data transfer method of claim 1, further comprising:

15 generating a result presenting interface according to the participation results of the M session participating users and the N session participating users corresponding to the data transfer projects, and displaying the result presenting interface to the M session participating users and the N session participating users.

7. The communication tool based data transfer method of claim 4, wherein the exported data
20 transfer amounts of the M session participating users and the N session participating users when taking part in the data transfer projects are equal.

8. The communication tool based data transfer method of claim 1, after the step of receiving initiation requests for initiating data transfer projects from M session participating users in the multiple session participating users, further comprising:

25 sending participation invitations to the other session participating users in the session, and marking participation conditions in the participation invitations.

9. The communication tool based data transfer method of claim 1, wherein M and Q are both 1.

10. The communication tool based data transfer method of claim 1, wherein the communication tool is instant messaging software.

5 11. A communication tool based payment method, wherein multiple session participating users take part in a same session in the communication tool, the method comprising the following steps:

receiving initiation requests that are used for initiating payment projects and sent by M session participating users in the multiple session participating users, M being a positive integer;

10 receiving participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple session participating users, N being a positive integer;

acquiring participation results of the M session participating users and the N session participating users corresponding to the payment projects;

15 selecting Q session participating users as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer; and

paying to the Q target accounts according to accounts of the M session participating users and the N session participating users.

20 12. The communication tool based payment method of claim 11, further comprising:

generating M payer matching lists according to the initiation requests, the M payer matching lists pointing from the accounts of the M session participating users to intermediate accounts;

25 generating N payer matching lists according to the participation responses, the N payer matching lists pointing from the accounts of the N session participating users to intermediate accounts;

generating Q payee matching lists according to the participation results, the preset conditions, and the Q target accounts, the Q payee matching lists pointing from the intermediate accounts to the Q target accounts.

13. The communication tool based payment method of claim 12, wherein the step of paying to the Q target accounts according to accounts of the M session participating users and the N session participating users specifically comprises:

deducting from the accounts of the M session participating users and the N session participating users and paying to the Q target accounts according to the M payer matching lists, the N payer matching lists, and the Q payee matching lists.

14. The communication tool based payment method of claim 12, wherein the step of generating Q payee matching lists according to the participation results, the preset conditions, and the Q target accounts specifically comprises:

ranking according to the participation results of the users corresponding to the Q target accounts, and allocating corresponding amounts of money to the Q target accounts, respectively, according to the preset conditions and the ranking results; and

generating Q payee matching lists according to the Q target accounts and the amounts of money respectively allocated to the Q target accounts.

15. The communication tool based payment method of claim 11 or 12, wherein the participation results are randomly generated or generated according to the content input by the users participating in the payment projects.

16. The communication tool based payment method of claim 11, further comprising:

generating a result presenting interface according to the participation results of the M session participating users and the N session participating users corresponding to the payment projects, and displaying the result presenting interface to the M session participating users and the N session participating users.

17. The communication tool based payment method of claim 14, wherein the payment amounts of the M session participating users and the N session participating users when taking part in the payment projects are equal.

18. The communication tool based payment method of claim 11, after the step of receiving initiation requests for initiating payment projects from M session participating users in the multiple session participating users, further comprising:

sending participation invitations to the other session participating users in the session, and marking participation conditions in the participation invitations.

19. The communication tool based payment method of claim 11, wherein M and Q are both 1.

20. The communication tool based payment method of claim 11, wherein the communication tool is instant messaging software.

21. A communication tool based data transfer system, comprising a communication tool server that provides the communication tool, multiple client terminals on which the communication tool runs, and a data transfer server, multiple session participating users taking part in a same session in the communication tool, wherein

the communication tool server is configured to receive initiation requests that are used for initiating data transfer projects and sent by M session participating users in the multiple session participating users and receive participation responses that are used for participating in the data transfer projects and sent by N session participating users in the multiple session participating users, and forward the initiation requests and the participation responses to the data transfer server, where M and N are positive integers;

the data transfer server is configured to acquire participation results of the M session participating users and the N session participating users corresponding to the data transfer projects; and select Q session participating users as Q target data points from the M session participating users and the N session participating users according to the participation results and preset conditions, where Q is a positive integer.

22. The communication tool based data transfer system of claim 21, wherein the data transfer server is configured to:

generate M first data transfer lists according to the initiation requests, the M first data transfer lists pointing from source data points of the M session participating users to intermediate data points;

generate N second data transfer lists according to the participation responses, the N second data transfer lists pointing from source data points of the N session participating users to intermediate data points;

generate Q third data transfer lists according to the participation results, the preset conditions, and the Q target data points, the Q third data transfer lists pointing from the intermediate data points to the Q target data points.

23. The communication tool based data transfer system of claim 22, wherein the data transfer server is further configured to:

perform data export on data points of the M session participating users and the N session participating users and perform data import on the Q target data points according to the M first data transfer lists, the N second data transfer lists, and the Q third data transfer lists.

24. The communication tool based data transfer system of claim 22, wherein the data transfer server is specifically configured to:

rank according to the participation results of the users corresponding to the Q target data points, and allocate corresponding data transfer amounts to the Q target data points, respectively, according to the preset conditions and the ranking results; and

generate Q third data transfer lists according to the Q target data points and the data transfer amounts respectively allocated to the Q target data points.

25. The communication tool based data transfer system of claim 21 or 22, wherein the participation results are randomly generated or generated according to the content input by the users participating in the data transfer projects.

26. The communication tool based data transfer system of claim 21, wherein the data transfer server is further configured to generate a result presenting interface according to the participation results of the M session participating users and the N session participating users corresponding to the data transfer projects, and display the result presenting interface to the M session participating users and the N session participating users.

27. The communication tool based data transfer system of claim 24, wherein the exported data transfer amounts of the M session participating users and the N session participating users when taking part in the data transfer projects are equal.

28. The communication tool based data transfer system of claim 21, wherein the communication tool server is further configured to send participation invitations to the other session participating users in the session, and mark participation conditions in the participation invitations.

29. The communication tool based data transfer system of claim 21, wherein M and Q are both 1.

30. The communication tool based data transfer system of claim 21, wherein the communication tool is instant messaging software.

31. A communication tool based payment system, comprising a communication tool server that provides the communication tool, multiple client terminals on which the communication tool runs, and a payment server, multiple session participating users taking part in a same session in the communication tool, wherein

the communication tool server is configured to receive initiation requests that are used for initiating payment projects and sent by M session participating users in the multiple session participating users and receive participation responses that are used for participating in the payment projects and sent by N session participating users in the multiple session participating users, and forward the initiation requests and the participation responses to the payment server, where M and N are positive integers;

the payment server is configured to acquire participation results of the M session participating users and the N session participating users corresponding to the payment projects; select Q session participating users as Q target accounts from the M session participating users and the N session participating users according to the participation results and preset conditions, Q being a positive integer; and pay to the Q target accounts according to accounts of the M session participating users and the N session participating users.

32. The communication tool based payment system of claim 31, wherein the payment server is further configured to:

generate M payer matching lists according to the initiation requests, the M payer matching lists pointing from the accounts of the M session participating users to intermediate accounts;

generate N payer matching lists according to the participation responses, the N payer matching lists pointing from the accounts of the N session participating users to intermediate accounts;

generate Q payee matching lists according to the participation results, the preset conditions, and the Q target accounts, the Q payee matching lists pointing from the intermediate accounts to the Q target accounts.

33. The communication tool based payment system of claim 32, wherein the payment server is specifically configured to:

deduct from the accounts of the M session participating users and the N session participating users and pay to the Q target accounts according to the M payer matching lists, the N payer matching lists, and the Q payee matching lists.

34. The communication tool based payment system of claim 32, wherein the payment server is specifically configured to:

rank according to the participation results of the users corresponding to the Q target accounts, and allocate corresponding amounts of money to the Q target accounts, respectively, according to the preset conditions and the ranking results; and

generate Q payee matching lists according to the Q target accounts and the amounts of money respectively allocated to the Q target accounts.

35. The communication tool based payment system of claim 31 or 32, wherein the participation results are randomly generated or generated according to the content input by the users participating in the payment projects.

36. The communication tool based payment system of claim 31, wherein the payment server is further configured to generate a result presenting interface according to the participation results of the M session participating users and the N session participating users corresponding to the payment projects, and display the result presenting interface to the M session participating users and the N session participating users.

37. The communication tool based payment system of claim 34, wherein the payment amounts of the M session participating users and the N session participating users when taking part in the payment projects are equal.

38. The communication tool based payment system of claim 31, wherein the communication tool server is further configured to send participation invitations to the other session participating users in the session, and mark participation conditions in the participation invitations.

39. The communication tool based payment system of claim 31, wherein M and Q are both 1.

40. The communication tool based payment system of claim 31, wherein the communication tool is instant messaging software.