

WHAT IS CLAIMED IS:

1. A method of exchanging contact information between prospective first and second users, the method comprising:

at a server having one or more processors and memory storing programs to be executed by the processors:

receiving first audio data and first user information from a first mobile device used by the first user and generating a first timestamp indicative of receipt of the first audio data and first user information at the server;

receiving second audio data and second user information from a second mobile device used by the second user and generating a second timestamp indicative of receipt of the second audio data and second user information at the server;

processing the first audio data to obtain first feature information;

processing the second audio data to obtain second feature information;

determining whether there is a match between the first user and the second user by comparing the respective feature information and timestamp associated with the first user and the second user; and

if there is a match between the first user and the second user, sending the first user information to the second mobile device and the second user information to the first mobile device, respectively.

2. The method according to claim 1, wherein the first audio data includes audio data of an environment surrounding the first mobile device and the second audio data includes audio data of an environment surrounding the second device.

3. The method according to claim 1, wherein the steps of processing the first audio data and the second audio data further include:

sequential sampling on a frequency of the first audio data to obtain at least one first sampling frequency;

5 defining the first sampling frequency obtained through the sequential sampling as the first feature information of the first audio data;

sequential sampling on a frequency of the second audio data to obtain at least one second sampling frequency; and

10 defining the second sampling frequency obtained through sequential sampling as the second feature information of the second audio data.

4. The method according to claim 3, wherein the step of determining whether there is a match between the first user and the second user further includes:

comparing whether a time difference between the first timestamp and the second timestamp is within a preset difference scope;

5 if the time difference is within the preset difference scope, comparing whether the first feature information of the first audio data and the second feature information of the second audio data have at least a predefined number of consecutive similar sampling frequencies, wherein a sampling frequency in the first feature information is deemed to be similar to a corresponding sampling frequency in the second feature information if a difference between the two sampling frequencies is less than a predefined threshold level; and

10 determining that there is a match between the first user and the second user if the first feature information of the first audio data and the second feature information of the second audio data have at least the predefined number of consecutive similar sampling frequencies.

5. The method according to claim 1, wherein the first user is any user logging in to an instant messaging application system through a first instant messaging client at the first mobile device; and the second user is any user, except the first user in the instant messaging application system, logging in to the instant messaging application system through a second

5 instant messaging client at the first mobile device.

6. The method according to claim 1, further comprising:

after receiving the first audio data and the first user information from the first mobile device: determining whether an average frequency of the first audio data is within a preset frequency scope and whether an average volume of the first audio data is within a preset

5 volume scope; and processing the first audio data to obtain the first feature information if the average frequency of the first audio data is within the preset frequency scope and the average volume of the first audio data is within the preset volume scope; and

after receiving the second audio data and the second user information from the second mobile device: determining whether an average frequency of the second audio data is within

10 the preset frequency scope and whether an average volume of the second audio data is within the preset volume scope; and processing the second audio data to obtain the second feature information if the average frequency of the second audio data is within the preset frequency scope and the average volume of the second audio data is within the preset volume scope.

7. The method according to claim 6, further comprising:

before sending the first user information to the second mobile device and the second user information to the first mobile device, respectively:

receiving and processing third audio data and third user information from a third mobile device used by a third user;

determining which of the first, second, and third audio data has a highest average volume;

designating, as a group administrator, one of the first, second, and third users whose associated audio data has the highest average volume;

designating, as candidate group members, users other than the group administrator;

sending user information of the candidate group members to an instant messaging client used by the group administrator; and

establishing an instant messaging group in response to a group establishment request message returned from the instant messaging client used by the group administrator, wherein the group establishment request message comprises group identity information of an instant messaging group to be established, and user information of at least one initial group member selected by the group administrator from the candidate group members.

8. The method according to claim 7, wherein the step of establishing an instant messaging group further includes:

sending the group identity information, user information of the group administrator, and user information of initial group members to an instant messaging client used by an initial group member;

designating the initial group member as a formal group member of the instant messaging group in response to an acceptance-to-join message from the instant messaging client used by the initial group member;

removing the user information of the initial group member in response to a refusal-to-join message from the instant messaging client used by the initial group member; and

establishing the instant messaging group according to the group identity information, user information of designated full group members, and the user information of the group administrator.

9. A method of exchanging contact information, the method comprising:

at a mobile device having one or more processors and memory storing programs to be executed by the processors:

capturing audio data in response to an instruction from a first user of the mobile device through an instant messaging client;

sending the captured audio data and user information of the first user to a remote server for matching audio data provided by other users within a predefined time window; and

receiving, from the remote server, user information of a second user whose associated audio data matches the audio data associated with the first user.

10. The method according to claim 9, wherein the first user is designated as a group administrator of an instant messaging group by the remote server, the method further comprising:

displaying group establishment prompt information, wherein the group establishment prompt information includes user information of candidate group members;

receiving group identity information of the instant messaging group provided by the first user, and user information of at least one initial group member selected by the first user among the user information of the candidate group members; and

returning a group establishment request message to the remote server, wherein the group establishment request message includes the group identity information of the instant messaging group, and the user information of the at least one initial group member.

11. The method according to claim 9, further comprising:

displaying group identity information of the instant messaging group and user information of initial group members including the first user;

detecting a user operation on the displayed information;

sending an acceptance-to-join message to the remote server if the user operation is to join the instant messaging group; and

sending a refusal-to-join message to the remote server if the user operation is not to join the instant messaging group.

12. A server that supports exchange of contact information between prospective first and second users, comprising:

one or more processors;

memory; and

5 a plurality of programs stored in the memory and to be executed by the one or more processors, the programs including instructions for:

receiving first audio data and first user information from a first mobile device used by the first user and generating a first timestamp indicative of receipt of the first audio data and first user information at the server;

10 receiving second audio data and second user information from a second mobile device used by the second user and generating a second timestamp indicative of receipt of the second audio data and second user information at the server;

processing the first audio data to obtain first feature information;

processing the second audio data to obtain second feature information;

15 determining whether there is a match between the first user and the second user by comparing the respective feature information and timestamp associated with the first user and the second user; and

if there is a match between the first user and the second user, sending the first user information to the second mobile device and the second user information to the first

20 mobile device, respectively.

13. The server according to claim 12, wherein the first audio data includes audio data of an environment surrounding the first mobile device and the second audio data includes audio data of an environment surrounding the second device.

14. The server according to claim 12, wherein the instructions for processing the first audio data and the second audio data further include:

a sampler module, configured to sequential sample a frequency of the first audio data to obtain at least one first sampling frequency and to sequential sample a frequency of the

5 second audio data to obtain at least one second sampling frequency; and

a defining module, configured to define the first sampling frequency obtained through sequential sampling as the first feature information of the first audio data and to define the second sampling frequency obtained through sequential sampling as the second feature information of the second audio data.

15. The server according to claim 14, wherein the instruction for determining whether there is a match between the first user and the second user further includes:

a judging module, configured to compare whether a time difference between the first timestamp and the second timestamp is within a preset difference scope, and if the time

5 difference is within the preset difference scope, compare whether the first feature information of the first audio data and the second feature information of the second audio data have at least a predefined number of consecutive similar sampling frequencies, wherein a sampling frequency in the first feature information is deemed to be similar to a corresponding sampling frequency in the first feature information if a difference between the two sampling
10 frequencies is less than a predefined threshold level; and determine that there is a match between the first user and the second user if the first feature information of the first audio data and the second feature information of the second audio data have at least the predefined number of consecutive similar sampling frequencies.

16. The server according to claim 12, wherein the first user is any user logging in to an instant messaging application system through a first instant messaging client at the first mobile device; and the second user is any user, except the first user in the instant messaging application system, logging in to the instant messaging application system through a second
5 instant messaging client at the first mobile device.

17. The server according to claim 12, wherein the instruction for processing the first audio data to obtain first feature information further instructions for determining whether an average frequency of the first audio data is within a preset frequency scope and whether an average volume of the first audio data is within a preset volume scope; and processing the
5 first audio data to obtain the first feature information if the average frequency of the first audio data is within the preset frequency scope and the average volume of the first audio data is within the preset volume scope; and

the instruction for processing the second audio data to obtain second feature information further instructions for determining whether an average frequency of the second
10 audio data is within the preset frequency scope and whether an average volume of the second audio data is within the preset volume scope; and processing the second audio data to obtain the second feature information if the average frequency of the second audio data is within the preset frequency scope and the average volume of the second audio data is within the preset volume scope.

18. The server according to claim 17, wherein the programs further include instructions for:

receiving and processing third audio data and third user information from a third mobile device used by a third user;

5 determining which of the first, second, and third audio data for audio data has a highest average volume;

designating, as a group administrator, one of the first, second, and third users whose associated audio data has the highest average volume;

designating, as candidate group members, users other than the group administrator;

10 sending user information of the candidate group members to an instant messaging client used by the group administrator; and

establishing an instant messaging group in response to a group establishment request message returned from the instant messaging client used by the group administrator, wherein the group establishment request message comprises group identity information of an instant messaging group to be established, and user information of at least one initial group member selected by the group administrator from the candidate group members.

19. The server according to claim 18, wherein the instruction for establishing an instant messaging group further includes instructions for:

20 sending the group identity information, user information of the group administrator, and user information of initial group members to an instant messaging client used by an initial group member;

designating the initial group member as a formal group member of the instant messaging group in response to an acceptance-to-join message from the instant messaging client used by the initial group member;

25 removing the user information of the initial group member in response to a refusal-to-join message from the instant messaging client used by the initial group member; and

establishing the instant messaging group according to the group identity information, user information of designated full group members, and the user information of the group administrator.

20. A mobile device for exchanging contact information, comprising:

one or more processors;

memory; and

programs stored in the memory and to be executed by the processors, the programs

5 including instructions for:

capturing audio data in response to an instruction from a first user of the mobile device through an instant messaging client;

10 sending the captured audio data and user information of the first user to a remote server for matching audio data provided by other users within a predefined time window; and

receiving, from the remote server, user information of a second user whose associated audio data matches the audio data associated with the first user.

21. The mobile device according to claim 20, wherein the first user is designated as a group administrator of an instant messaging group by the remote server and the programs
15 further include instructions for:

displaying group establishment prompt information, wherein the group establishment prompt information includes user information of candidate group members;

receiving group identity information of the instant messaging group provided by the first user, and user information of at least one initial group member selected by the first user
20 among the user information of the candidate group members; and

returning a group establishment request message to the remote server, wherein the group establishment request message includes the group identity information of the instant messaging group, and the user information of the at least one initial group member.

22. The mobile device according to claim 20, wherein the programs further include instructions for:

displaying group identity information of the instant messaging group and user information of initial group members including the first user;

5 detecting a user operation on the displayed information;

sending an acceptance-to-join message to the remote server if the user operation is to join the instant messaging group; and

sending a refusal-to-join message to the remote server if the user operation is not to join the instant messaging group.
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WHAT IS CLAIMED IS:

1. A method of exchanging contact information between prospective first and second users, the method comprising:

at a server having one or more processors and memory storing programs to be executed by the processors:

receiving first audio data and first user information from a first mobile device used by the first user and generating a first timestamp indicative of receipt of the first audio data and first user information at the server;

receiving second audio data and second user information from a second mobile device used by the second user and generating a second timestamp indicative of receipt of the second audio data and second user information at the server;

processing the first audio data to obtain first feature information;

processing the second audio data to obtain second feature information;

determining whether there is a match between the first user and the second user by comparing the respective feature information and timestamp associated with the first user and the second user; and

if there is a match between the first user and the second user, sending the first user information to the second mobile device and the second user information to the first mobile device, respectively;

wherein the steps of processing the first audio data and the second audio data further include:

sequential sampling on a frequency of the first audio data to obtain at least one first sampling frequency;

defining the first sampling frequency obtained through the sequential sampling as the first feature information of the first audio data;

sequential sampling on a frequency of the second audio data to obtain at least one second sampling frequency; and

defining the second sampling frequency obtained through sequential sampling as the second feature information of the second audio data.

2. The method according to claim 1, wherein the first audio data includes audio data of an environment surrounding the first mobile device and the second audio data includes audio data of an environment surrounding the second device.

3. The method according to claim 1, wherein the step of determining whether there is a match between the first user and the second user further includes:

comparing whether a time difference between the first timestamp and the second timestamp is within a preset difference scope;

if the time difference is within the preset difference scope, comparing whether the first feature information of the first audio data and the second feature information of the second audio data have at least a predefined number of consecutive similar sampling frequencies, wherein a sampling frequency in the first feature information is deemed to be similar to a corresponding sampling frequency in the second feature information if a difference between the two sampling frequencies is less than a predefined threshold level; and

determining that there is a match between the first user and the second user if the first feature information of the first audio data and the second feature information of the second audio data have at least the predefined number of consecutive similar sampling frequencies.

4. The method according to claim 1, wherein the first user is any user logging in to an instant messaging application system through a first instant messaging client at the first mobile device; and the second user is any user, except the first user in the instant messaging application system, logging in to the instant messaging application system through a second instant messaging client at the first mobile device.

5. A method of exchanging contact information between prospective first and second users, the method comprising:

at a server having one or more processors and memory storing programs to be executed by the processors:

receiving first audio data and first user information from a first mobile device used by the first user and generating a first timestamp indicative of receipt of the first audio data and first user information at the server;

receiving second audio data and second user information from a second mobile device used by the second user and generating a second timestamp indicative of receipt of the second audio data and second user information at the server;

processing the first audio data to obtain first feature information;

processing the second audio data to obtain second feature information;

determining whether there is a match between the first user and the second user by comparing the respective feature information and timestamp associated with the first user and the second user; and

if there is a match between the first user and the second user, sending the first user information to the second mobile device and the second user information to the first mobile device, respectively;

after receiving the first audio data and the first user information from the first mobile device : determining whether an average frequency of the first audio data is within a preset frequency scope and whether an average volume of the first audio data is within a preset volume scope; and processing the first audio data to obtain the first feature information if the average frequency of the first audio data is within the preset frequency scope and the average volume of the first audio data is within the preset volume scope; and

after receiving the second audio data and the second user information from the second mobile device: determining whether an average frequency of the second audio data is within the preset frequency scope and whether an average volume of the second audio data is within the preset volume scope; and processing the second audio data to obtain the second feature information if the average frequency of the second audio data is within the preset frequency scope and the average volume of the second audio data is within the preset volume scope.

6. The method according to claim 5, further comprising:

before sending the first user information to the second mobile device and the second user information to the first mobile device, respectively:

receiving and processing third audio data and third user information from a third mobile device used by a third user;

determining which of the first, second, and third audio data for audio data has a highest average volume;

designating, as a group administrator, one of the first, second, and third users whose associated audio data has the highest average volume;

designating, as candidate group members, users other than the group administrator;

sending user information of the candidate group members to an instant messaging client used by the group administrator; and

establishing an instant messaging group in response to a group establishment request message returned from the instant messaging client used by the group administrator, wherein the group establishment request message comprises group identity information of an instant messaging group to be established, and user information of at least one initial group member selected by the group administrator from the candidate group members.

7. The method according to claim 6, wherein the step of establishing an instant messaging group further includes:

- sending the group identity information, user information of the group administrator, and user information of initial group members to an instant messaging client used by an initial group member;

- designating the initial group member as a formal group member of the instant messaging group in response to an acceptance-to-join message from the instant messaging client used by the initial group member;

- removing the user information of the initial group member in response to a refusal-to-join message from the instant messaging client used by the initial group member; and

- establishing the instant messaging group according to the group identity information, user information of designated full group members, and the user information of the group administrator.

8. A server that supports exchange of contact information between prospective first and second users, comprising:

- one or more processors;

- memory; and

- a plurality of programs stored in the memory and to be executed by the one or more processors, the programs including instructions for:

- receiving first audio data and first user information from a first mobile device used by the first user and generating a first timestamp indicative of receipt of the first audio data and first user information at the server;

- receiving second audio data and second user information from a second mobile device used by the second user and generating a second timestamp indicative of receipt of the second audio data and second user information at the server;

- processing the first audio data to obtain first feature information;

- processing the second audio data to obtain second feature information;

determining whether there is a match between the first user and the second user by comparing the respective feature information and timestamp associated with the first user and the second user; and

if there is a match between the first user and the second user, sending the first user information to the second mobile device and the second user information to the first mobile device, respectively;

wherein the instructions for processing the first audio data and the second audio data further include:

a sampler module, configured to sequential sample a frequency of the first audio data to obtain at least one first sampling frequency and to sequential sample a frequency of the second audio data to obtain at least one second sampling frequency; and

a defining module, configured to define the first sampling frequency obtained through sequential sampling as the first feature information of the first audio data and to define the second sampling frequency obtained through sequential sampling as the second feature information of the second audio data.

9. The server according to claim 8, wherein the first audio data includes audio data of an environment surrounding the first mobile device and the second audio data includes audio data of an environment surrounding the second device.

10. The server according to claim 8, wherein the instruction for determining whether there is a match between the first user and the second user further includes:

a judging module, configured to compare whether a time difference between the first timestamp and the second timestamp is within a preset difference scope, and if the time difference is within the preset difference scope, compare whether the first feature information of the first audio data and the second feature information of the second audio data have at least a predefined number of consecutive similar sampling frequencies, wherein a sampling frequency in the first feature information is deemed to be similar to a corresponding sampling frequency in the second feature information if a difference between the two sampling frequencies is less than a predefined threshold level; and determine that there is a match between the first user and the second user if the first feature information of the first audio data and the second feature information of the second audio data have at least the predefined number of consecutive similar sampling frequencies.

11. The server according to claim 8, wherein the first user is any user logging in to an instant messaging application system through a first instant messaging client at the first mobile device; and the second user is any user, except the first user in the instant messaging application system, logging in to the instant messaging application system through a second instant messaging client at the first mobile device.

12. A server that supports exchange of contact information between prospective first and second users, comprising:

one or more processors;

memory; and

a plurality of programs stored in the memory and to be executed by the one or more processors, the programs including instructions for:

receiving first audio data and first user information from a first mobile device used by the first user and generating a first timestamp indicative of receipt of the first audio data and first user information at the server;

receiving second audio data and second user information from a second mobile device used by the second user and generating a second timestamp indicative of receipt of the second audio data and second user information at the server;

processing the first audio data to obtain first feature information;

processing the second audio data to obtain second feature information;

determining whether there is a match between the first user and the second user by comparing the respective feature information and timestamp associated with the first user and the second user; and

if there is a match between the first user and the second user, sending the first user information to the second mobile device and the second user information to the first mobile device, respectively;

wherein the instruction for processing the first audio data to obtain first feature information further instructions for determining whether an average frequency of the first audio data is within a preset frequency scope and whether an average volume of the first audio data is within a preset volume scope; and processing the first audio data to obtain the first feature information if the average frequency of the first audio data is within the preset

frequency scope and the average volume of the first audio data is within the preset volume scope; and

the instruction for processing the second audio data to obtain second feature information further instructions for determining whether an average frequency of the second audio data is within the preset frequency scope and whether an average volume of the second audio data is within the preset volume scope; and processing the second audio data to obtain the second feature information if the average frequency of the second audio data is within the preset frequency scope and the average volume of the second audio data is within the preset volume scope.

13. The server according to claim 12, wherein the programs further include instructions for:

receiving and processing third audio data and third user information from a third mobile device used by a third user;

determining which of the first, second, and third audio data for audio data has a highest average volume;

designating, as a group administrator, one of the first, second, and third users whose associated audio data has the highest average volume;

designating, as candidate group members, users other than the group administrator;

sending user information of the candidate group members to an instant messaging client used by the group administrator; and

establishing an instant messaging group in response to a group establishment request message returned from the instant messaging client used by the group administrator, wherein the group establishment request message comprises group identity information of an instant messaging group to be established, and user information of at least one initial group member selected by the group administrator from the candidate group members.

14. The server according to claim 13, wherein the instruction for establishing an instant messaging group further includes instructions for:

sending the group identity information, user information of the group administrator, and user information of initial group members to an instant messaging client used by an initial group member;

designating the initial group member as a formal group member of to the instant messaging group in response to an acceptance-to-join message from the instant messaging client used by the initial group member;

removing the user information of the initial group member in response to a refusal-to-join message from the instant messaging client used by the initial group member; and

establishing the instant messaging group according to the group identity information, user information of designated full group members, and the user information of the group administrator.