

CLAIMS

1. ——— A method, comprising:
receiving, by a service device from a user equipment, a recording scene parameter of a scene of recording at least one of a behavior or a voice of a user, the recording scene parameter including at least one of scene location information or scene environment information, the service device being a node of a blockchain network;
analyzing, by the service device, the recording scene parameter with respect to a threshold;
in response to the recording scene parameter meets the threshold, notifying, by the service device, the user equipment to generate a multimedia file including the one or more of the behavior or the voice of the user;
receiving, by the service device, the multimedia file containing one or more of the behavior or the voice of the user;
obtaining, by the service device, at least one of a facial feature or a voiceprint feature of the user from the multimedia file;
constructing, by the service device, a target transaction based on the multimedia file and the at least one of the facial feature or the voiceprint feature of the user;
broadcasting, by the service device, the target transaction to the blockchain network for each node in the blockchain network to add the target transaction to a blockchain based on a consensus mechanism; and
adding the target transaction into a copy of the blockchain stored at the service device.

2. ——— The method of claim 1, further comprising:
receiving, by the user equipment, an evidence acquisition instruction of the user;
recording, by the user equipment, the one or more of the behavior and the voice of the user into the multimedia file in response to the evidence acquisition instruction.

3. ——— The method according to claim 1, wherein the multimedia file includes one or more of an audio file, a video file, a text file, and an image file.

4. ~~The method according to claim 2, wherein,~~
~~the receiving the evidence acquisition instruction includes:~~
~~receiving the evidence acquisition instruction entered by the user~~
~~through a target account registered on the service device; and~~
~~the recording the one or more of the behavior and the voice of the user into the~~
~~multimedia file includes:~~
~~authenticating an identity of the user based on identity authentication~~
~~information corresponding to the target account; and~~
~~in response to successfully authenticating the identity of the user,~~
~~recording the one or more of the behavior and the voice of the user into the multimedia file.~~

5. ~~The method according to claim 2, wherein the recording the one or~~
~~more of the behavior and the voice of the user into the multimedia file includes:~~
~~detecting, by the user equipment, a recording scene parameter of a scene of the~~
~~recording; and~~
~~sending, by the user equipment, the recording scene parameter to the service~~
~~device.~~

6. ~~The method according to claim 5, wherein the recording scene~~
~~parameter includes at least one of scene location information, scene environment information,~~
~~a voice feature of the user, and an expression feature of the user.~~

7. ~~The method according to claim 1, wherein the constructing the target~~
~~transaction based on the multimedia file includes:~~
~~constructing the target transaction containing the multimedia file.~~

8. ~~The method according to claim 1, wherein the constructing the target~~
~~transaction based on the multimedia file specifically includes:~~
~~storing the multimedia file;~~
~~obtaining a target hash corresponding to the multimedia file by using a hash~~
~~algorithm based on the multimedia file; and~~
~~constructing the target transaction containing the target hash.~~

9. ~~The method according to claim 8, wherein the obtaining the target hash includes:~~

~~calculating the target hash using the multimedia file and storage location information of the storing the multimedia file as input of the hash algorithm.~~

10. ~~The method according to claim 1, comprising:~~

~~receiving, by the user equipment, an evidence acquisition instruction entered by the user through a target account registered on the service device, the target account including a trusted facial feature and a trusted voiceprint feature;~~

~~in response to that the multimedia file includes an audio component,~~

~~extracting, by the service device, a voiceprint feature of the user from the multimedia file,~~

~~comparing the extracted voiceprint feature with the trusted voiceprint feature,~~

~~adding a consistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are consistent with one another, and~~

~~adding an inconsistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are inconsistent with one another;~~

~~in response to that the multimedia file includes a visual component,~~

~~extracting, by the service device, a facial feature of the user from the multimedia file,~~

~~comparing the extracted facial feature with the trusted facial feature,~~

~~adding a consistency result into the target transaction in response to that the extracted facial feature and the trusted facial feature are consistent with one another, and~~

~~adding an inconsistency result into the target transaction in response to that the extracted facial feature and the trusted facial feature are inconsistent with one another; or~~

~~in response to that the multimedia file includes an audio component and a visual component,~~

~~extracting, by the service device, a voiceprint feature and a facial feature of the user from the multimedia file;~~

~~comparing the extracted voiceprint feature with the trusted voiceprint feature;~~

~~comparing the extracted facial feature with the trusted facial feature;~~

~~adding a consistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are consistent with one another and the extracted facial feature and the trusted facial feature are consistent with one another; and~~

~~adding an inconsistency result into the target transaction in response to at least one of that the extracted voiceprint feature and the trusted voiceprint feature are inconsistent with one another and that the extracted facial feature and the trusted facial feature are inconsistent with one another.~~

11. — The method according to claim 10, further comprising:

~~in response to that the service device adds an inconsistency result into the target transaction, obtaining identity information of the user based on one or more of the extracted voiceprint feature and the extracted facial feature of the user; and~~

~~adding, by the service device, the identity information of the user into the target transaction.~~

12. — The method according to claim 1, further comprising:

~~adding, by the service device, a time stamp into the target transaction.~~

13. — A method, comprising:

~~receiving, by a user equipment, an evidence acquisition instruction of a user;~~

~~detecting, by the user equipment, a recording scene parameter of a scene of recording one or more of a behavior or a voice of the user, the recording scene parameter including at least one of scene location information or scene environment information;~~

~~sending, by the user equipment, the recording scene parameter to a service device for the service device to analyze the recording scene parameter with respect to a threshold, the service device being a node of a blockchain network;~~

~~receiving, by the user equipment from the service device, a result of the analyzing the recording scene parameter with respect to the threshold;~~

~~in response to the result indicating that the recording scene parameter meets the threshold, recording, by the user equipment, one or more of the behavior or the voice of the user into a multimedia file in response to the evidence acquisition instruction; and~~

~~sending, by the user equipment, the multimedia file to the service device for the service device to:~~

~~———extract at least one of a facial feature or a voiceprint feature of the user from the multimedia file,—~~

~~———construct a target transaction based on the multimedia file and the at least one of the facial feature or the voiceprint feature of the user,—~~

~~———broadcast the target transaction to the blockchain network for each node in the blockchain network to add the target transaction to a blockchain based on a consensus mechanism, and~~

~~———add the target transaction into a copy of the blockchain stored at the service device.~~

14. — The method according to claim 13, wherein,

~~the receiving the evidence acquisition instruction includes:~~

~~receiving, by the user equipment, the evidence acquisition instruction entered by the user through a target account registered on the service device, the target account including a trusted facial feature and a trusted voiceprint feature; and~~

~~the constructing, by the service device, the target transaction includes:~~

~~comparing each of the at least one of the voiceprint feature and the facial feature with a respective one of the trusted voiceprint feature or the trusted facial feature,~~

~~adding a result of the comparing into the target transaction.~~

15. — The method according to claim 13, wherein,

~~the receiving the evidence acquisition instruction includes:~~

~~receiving the evidence acquisition instruction entered by the user through a target account registered on the service device; and~~

~~the recording the one or more of the behavior and the voice of the user into the multimedia file includes:~~

~~authenticating an identity of the user based on identity authentication information corresponding to the target account; and~~

~~in response to successfully authenticating the identity of the user, recording the one or more of the behavior and the voice of the user into the multimedia file.~~

16. — ~~An apparatus, the apparatus being a node in a blockchain network, and the apparatus including a non-transitory computer-readable storage medium for tangibly storing computer program instructions capable of being executed by a computer processor, the computer program instructions defining acts comprising:~~

~~receiving from a user equipment, a recording scene parameter of a scene of recording at least one of a behavior or a voice of a user, the recording scene parameter including at least one of scene location information or scene environment information;~~

~~analyzing the recording scene parameter with respect to a threshold;~~

~~in response to the recording scene parameter meets the threshold, notifying the user equipment to generate a multimedia file including one or more of the behavior or the voice of the user;~~

~~receiving the multimedia file from the user equipment, the multimedia file containing one or more of the behavior or the voice of the user;~~

~~obtaining at least one of a facial feature or a voiceprint feature of the user from the multimedia file;~~

~~constructing a target transaction based on the multimedia file and the at least one of the facial feature or the voiceprint feature of the user;~~

~~broadcasting the target transaction to the blockchain network for each node in the blockchain network to add the target transaction to a blockchain based on a consensus mechanism; and~~

~~adding the target transaction into a copy of the blockchain stored at the apparatus.~~

~~17. — The apparatus according to claim 16, wherein the constructing the target transaction includes:~~

~~storing the multimedia file on a storage location; and~~

~~constructing the target transaction based on the multimedia file by calculating a target hash based on the multimedia file and the storage location.~~

~~18. — A computer device, comprising a memory and a processor, the memory containing executable instruction, which when executed by the processor configure the processor to implement acts including:~~

~~obtaining an evidence acquisition instruction of a user through a target account registered on a service device, the service device being a node of a blockchain network;~~

~~receiving, from user equipment, a recording scene parameter of a scene of recording one or more of a behavior or a voice of a user, the recording scene parameter including at least one of scene location information or scene environment information, the service device being a node of a blockchain network;~~

~~analyzing the recording scene parameter with respect to a threshold;~~

~~in response to the recording scene parameter meets the threshold, notifying the user equipment to generate a multimedia file including the one or more of the user's behavior or voice into a multimedia file; and~~

~~receiving the multimedia file from the user equipment;~~

~~obtaining at least one of a facial feature or a voiceprint feature of the user from the multimedia file;~~

~~constructing a target transaction based on the multimedia file and the at least one of the facial feature or the voiceprint feature of the user;~~

~~broadcasting the target transaction to the blockchain network for each node in the blockchain network to add the target transaction into a blockchain based on a consensus mechanism;~~

~~adding the target transaction into a copy of the blockchain stored at the service device.~~

1. A blockchain ledger-based evidence acquisition method, comprising:

receiving (S100), by user equipment, an evidence acquisition instruction entered by a user through a target account, the target account being registered on a service device prior to the receiving;

recording (S102), by the user equipment, one or more of a behavior and a voice of the user into a multimedia file in response to the evidence acquisition instruction;

sending (S104), by the user equipment, the multimedia file to the service device, the service device being a node in a blockchain network; and

constructing (S106), by the service device, a target transaction based on the multimedia file and broadcasting the target transaction to the blockchain network for each node in the blockchain network to add the target transaction to a blockchain based on a consensus mechanism;

wherein the method further comprises:

pre-obtaining, by the service device, a facial feature and a voiceprint feature of an owner of the target account as a trusted facial feature and a trusted voiceprint feature corresponding to the target account; and,

before the broadcasting, by the service device, the target transaction to the blockchain network, any of the following operations:

in response to that the multimedia file is an audio file, extracting, by the service device, a voiceprint feature of the user from the multimedia file; comparing the extracted voiceprint feature with the trusted voiceprint feature; adding a consistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are consistent with one another; and adding an inconsistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are inconsistent with one another;

in response to that the multimedia file is a video file or an image file, extracting, by the service device, a facial feature of the user from the multimedia file; comparing the extracted facial feature with the trusted facial feature; adding a consistency result into the target transaction in response to that the extracted facial feature and the trusted facial feature are consistent with one another; and adding an inconsistency result into the target transaction in response to that the extracted facial feature and the trusted facial feature are inconsistent with one another; or

in response to that the multimedia file is an audio and video file, extracting, by the service device, a voiceprint feature and a facial feature of the user from the multimedia file; comparing the extracted voiceprint feature with the trusted voiceprint feature; comparing the extracted facial feature with the trusted facial feature; adding a consistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are consistent with one another and the extracted facial feature and the trusted facial feature are consistent with one another; and adding an inconsistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are inconsistent with one another or the extracted facial feature and the trusted facial feature are inconsistent with one another.

2. The method according to claim 1, wherein the multimedia file specifically includes: any one of an audio file, a video file, a text file, and an image file.

3. The method according to claim 1, wherein the recording, by the user equipment, the one or more of the behavior and the voice of the user into the multimedia file specifically includes: after successfully authenticating an identity of the user based on identity authentication information corresponding to the target account, recording, by the user equipment, the one or more of the behavior and the voice of the user into the multimedia file.

4. The method according to claim 1, wherein the recording, by the user equipment, the one or more of the behavior and the voice of the user into the multimedia file specifically includes:

detecting, by the user equipment, a recording scene to obtain a recording scene parameter;

sending, by the user equipment, the recording scene parameter to the service device;

determining, by the service device, a coercion representation value based on the recording scene parameter, the coercion representation value being used to represent a probability that the user is in a coerced state, and the coercion representation value being positively related to the probability that the user is in the coerced state;

determining, by the service device, whether the coercion representation value is less than a specified threshold; and

in response to that the coercion representation value is less than the specified threshold, notifying, by the service device, the user equipment to record the one or more of the behavior and the voice of the user into the multimedia file.

5. The method according to claim 4, wherein the recording scene parameter includes at least one of scene location information, scene environment information, a voice feature of the user, and an expression feature of the user.

6. The method according to claim 1, wherein the constructing, by the service device, the target transaction based on the multimedia file specifically includes:

constructing, by the service device, the target transaction containing the multimedia file.

7. The method according to claim 1, wherein the constructing, by the service device, the target transaction based on the multimedia file specifically includes:

storing, by the service device, the multimedia file, and determining a target hash corresponding to the multimedia file by using a hash algorithm based on the multimedia file; and

constructing, by the service device, the target transaction containing the target hash.

8. The method according to claim 7, wherein the determining, by the service device, the target hash corresponding to the multimedia file by using the hash algorithm based on the multimedia file specifically includes:

calculating, by the service device, the target hash corresponding to the multimedia file by using the hash algorithm and using the multimedia file and storage location information thereof as input of the hash algorithm.

9. The method according to claim 1, further comprising, before the broadcasting, by the service device, the target transaction to the blockchain network:

in response to that the service device adds an inconsistency result into the target transaction, querying and obtaining identity information of the user based on one or more of the extracted voiceprint feature and the extracted facial feature of the user; and

adding, by the service device, the identity information of the user into the target transaction.

10. The method according to claim 1, further comprising, before the broadcasting, by the service device, the target transaction to the blockchain network:

adding, by the service device, a time stamp of a current time into the target transaction.

11. One or more computer-readable storage media storing instructions thereon which, when executed by a service device being a node in a blockchain network, cause the service device to carry out a blockchain ledger-based evidence acquisition method comprising:

receiving, by the service device, a multimedia file sent by user equipment, the multimedia file being obtained by recording one or more of a user's behavior and voice by the user equipment in response to an evidence acquisition instruction received by the user equipment and entered by the user through a target account registered on the service device; and

constructing (S106) a target transaction based on the multimedia file and broadcasting the target transaction to the blockchain network for each node in the blockchain network to add the target transaction to a blockchain based on a consensus mechanism; wherein the method further comprises:

pre-obtaining, by the service device, a facial feature and a voiceprint feature of an owner of the target account as a trusted facial feature and a trusted voiceprint feature corresponding to the target account; and,

before the broadcasting the target transaction to the blockchain network, any of the following operations:

in response to that the multimedia file is an audio file, extracting a voiceprint feature of the user from the multimedia file; comparing the extracted voiceprint feature with the trusted voiceprint feature; adding a consistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are consistent with one another; and adding an inconsistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are inconsistent with one another;

in response to that the multimedia file is a video file or an image file, extracting a facial feature of the user from the multimedia file; comparing the extracted facial feature with the trusted facial feature; adding a consistency result into the target transaction in response to that the extracted facial feature and the trusted facial feature are consistent with one another; and adding an inconsistency result into the target transaction in response to that the extracted facial feature and the trusted facial feature are inconsistent with one another; or

in response to that the multimedia file is an audio and video file, extracting a voiceprint feature and a facial feature of the user from the multimedia file; comparing the extracted voiceprint feature with the trusted voiceprint feature; comparing the extracted facial feature with the trusted facial feature; adding a consistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are consistent with one another and the extracted facial feature and the trusted facial feature are consistent with one another; and adding an inconsistency result into the target transaction in response to that the extracted voiceprint feature and the trusted voiceprint feature are inconsistent with one another or the extracted facial feature and the trusted facial feature are inconsistent with one another.

12. A blockchain ledger-based evidence acquisition system comprising a blockchain network, user equipment, and any node in the blockchain network being a service device, wherein the system is configured to carry out the method of any of claims 1 to 10.