

MONITORING METHOD AND MONITORING DEVICE BASED ON WEARABLE DEVICE AND ELECTRONIC DEVICE

CROSS-REFERENCE TO RELATED APPLICATION

5 This application claims a priority to Chinese Patent Application Serial No. 201811653436.5, filed on December 29, 2018, by BEIJING KINGSOFT INTERNET SECURITY SOFTWARE CO., LTD., and titled with "Monitoring Method And Monitoring Device Based On Wearable Device And Electronic Device", the entire content of which is incorporated herein by reference.

10 FIELD

 The present disclosure relates to a field of artificial intelligence, and more particularly, to a monitoring method and a monitoring device based on a wearable device and an electronic device.

BACKGROUND

15 Existing smart wearable devices are equipped with a communication function. In some special fields, such as child's wearing and community personnel corrections, remotely monitoring is an important means for a monitor to confirm whether a person under monitored is safe. In prior arts, a terminal (for example, a mobile phone) sends an instruction to a wearable device under monitored (for example, a child smart watch) to force the wearable device under monitored to
20 activate a voice service. Thus, the monitor may listen to voice around the person under monitored to determine a state of the person under monitored. However, the person under monitored cannot perceive that he/she is under monitored.

 Since monitoring between an existing smart wearable device and the terminal is performed by means of a phone, the monitor must continue to perform the monitoring by the phone.

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SUMMARY

 In view of this, embodiments of the present disclosure provide a monitoring method and a monitoring device based on a wearable device and an electronic device, which may effectively improve a monitoring efficiency for a monitor.

30 In a first aspect, embodiments of the present disclosure provide a monitoring method based on a wearable device, applied to a server. The monitoring method includes: receiving a voice file

uploaded by the wearable device; recognizing a speech contained in the voice file; generating a text file corresponding to the speech, the text file recording language and a time stamp corresponding to the speech; and sending the text file to a terminal device of a monitor, in which the terminal device is configured to cooperate with the server to monitor a user using the wearable device.

According to a specific implementation of embodiments of the present disclosure, after generating the text file corresponding to the speech and before sending the text file to the terminal device of the monitor, the monitoring method further includes: traversing the language recorded in the text file, and determining whether a preset keyword is contained in the language recorded in the text file; and in response to determining that the preset keyword is contained in the language recorded in the text file, highlighting the preset keyword in the text file.

According to a specific implementation of embodiments of the present disclosure, sending the text file to the terminal device of the monitor includes: determining whether a preset keyword is contained in the text file within a current time duration according to the time stamp recorded in the text file; and in response to determining that the preset keyword is contained in the text file within the current time duration, sending the text file within the current time duration to the terminal device of the monitor.

According to a specific implementation of embodiments of the present disclosure, after sending the text file to the terminal device of the monitor, the monitoring method includes: receiving a download request for downloading the voice file within a designated time duration; and sending the voice file within the designated time duration to the terminal device of the monitor according to the download request.

In a second aspect, embodiments of the present disclosure provide a monitoring method based on a wearable device, applied to a terminal device. The monitoring method includes: receiving a text file sent by a server, in which the text file records language and a time stamp corresponding to voice surrounding the wearable device, and the server is configured to cooperate with the terminal device to monitor a user using the wearable device; sending a download request for downloading a voice file within a designated time duration to the server; and downloading or caching locally the voice file within the designated time duration sent by the server, for playing.

According to a specific implementation of embodiments of the present disclosure, after receiving the text file sent by the server and before sending the download request for downloading

the voice file within the designated time duration to the server, the monitoring method further includes: traversing language recorded in the text file, and automatically locating a preset keyword in the text file.

According to a specific implementation of embodiments of the present disclosure, after the preset keyword is located in the text file, the monitoring method further includes: highlighting the preset keyword, and automatically obtaining the time stamp corresponding to the preset keyword.

In a third aspect, embodiments of the present disclosure provide a monitoring device based on a wearable device, applied to a server. The monitoring device includes: a first receiving module, configured to receive a voice file uploaded by the wearable device; a speech recognizing module, configured to recognize a speech contained in the voice file; a speech converting module, configured to generate a text file corresponding to the speech, the text file recording language and a time stamp corresponding to the speech; and a first sending module, configured to send the text file to a terminal device of a monitor, in which the terminal device is configured to cooperate with the server to monitor a user using the wearable device.

According to a specific implementation of embodiments of the present disclosure, the monitoring device further includes: a first traversing module, configured to traverse the language recorded in the text file, and determine whether a preset keyword is contained in the language recorded in the text file; and a first highlighting module, configured to highlight the preset keyword in the text file in response to determining that the preset keyword is contained in the language recorded in the text file.

According to a specific implementation of embodiments of the present disclosure, the first sending module includes: a keyword determining sub-module, configured to determine whether a preset keyword is contained in the text file within a current time duration according to the time stamp recorded in the text file; and a first sending sub-module, configured to send the text file within the current time duration to the terminal device of the monitor, in response to determining that the preset keyword is contained in the text file within the current time duration.

According to a specific implementation of embodiments of the present disclosure, the monitoring device further includes: a second receiving module, configured to receive a download request for downloading the voice file within a designated time duration; and a second sending module, configured to send the voice file within the designated time duration to the terminal device of the monitor according to the download request.

In a fourth aspect, embodiments of the present disclosure further provide a monitoring device based on a wearable device, applied to a terminal device. The monitoring device includes: a third receiving module, configured to receive a text file sent by a server, in which the text file records language and a time stamp corresponding to voice surrounding the wearable device, and the server is configured to cooperate with the terminal device to monitor a user using the wearable device; a third sending module, configured to send a download request for downloading a voice file within a designated time duration to the server; and a first playing module, configured to download or cache locally the voice file within the designated time duration sent by the server, for playing.

According to a specific implementation of embodiments of the present disclosure, the monitoring device further includes a first locating module, configured to traverse language recorded in the text file, and automatically locate a preset keyword in the text file.

According to a specific implementation of embodiments of the present disclosure, the monitoring device further includes: a second locating module, configured to automatically obtain the time stamp corresponding to the preset keyword.

In a fifth aspect, embodiments of the present disclosure further provide an electronic device. The electronic device includes a housing, a processor, a memory, a circuit board and a power supply circuit. The circuit board is enclosed by the housing; the processor and the memory are positioned on the circuit board. The power supply circuit is configured to provide power for respective circuits or components of the terminal device. The memory is configured to store executable program codes. The processor is configured to run a program corresponding to the executable program codes by reading the executable program codes stored in the memory, to perform the monitoring method of any one of the above implementations.

In a sixth aspect, embodiments of the present disclosure further provide a computer readable storage medium. The computer readable storage medium is configured to store one or more applications. The one or more applications are executable by one or more processors, to perform the monitoring method of any one of above implementations.

With the monitoring method and monitoring device based on a wearable device and the electronic device, the voice file uploaded by the wearable device is received by the server and the speech contained in the voice file is recognized by the server, to generate the text file corresponding to the speech. The text file records language and the time stamp corresponding to the speech. The text file is sent to the terminal device of the monitor. The terminal device receives

the text file sent by the server and sends the download request for downloading the voice file within the designated time duration to the server. The text file within the designated time duration is downloaded and cached locally for playing. Embodiments of the present disclosure may convert the voice file into the text file, without continuously monitoring, by the monitor, the person under
5 monitored. Therefore, effective monitoring information may be obtained, thereby effectively improving monitoring efficiency for the monitor.

BRIEF DESCRIPTION OF THE DRAWINGS

In order to further clearly describe the technical solution of embodiments of the present
10 disclosure, simply descriptions will be made to drawings necessitated by describing embodiments of the present disclosure. Obviously, the drawings described below are merely some embodiments of the present disclosure, and other drawings may be obtained by those skilled in the art without any inventive labors according to these drawings.

Fig. 1 is a flowchart illustrating a monitoring method based on a wearable device according to
15 Embodiment One of the present disclosure;

Fig. 2 is a flowchart illustrating an alternative implementation of a monitoring method based on a wearable device according to Embodiments One of the present disclosure;

Fig. 3 is a flowchart illustrating another alternative implementation of a monitoring method based on a wearable device according to Embodiments One of the present disclosure;

20 Fig. 4 is a flowchart illustrating still another alternative implementation of a monitoring method based on a wearable device according to Embodiments One of the present disclosure;

Fig. 5 is a flowchart illustrating a monitoring method based on a wearable device according to Embodiment Two of the present disclosure;

25 Fig. 6 is a flowchart illustrating an alternative implementation of a monitoring method based on a wearable device according to Embodiments Two of the present disclosure;

Fig. 7 is a block diagram illustrating a monitoring device based on a wearable device according to Embodiment Three of the present disclosure;

Fig. 8 is a block diagram illustrating an alternative implementation of a monitoring device based on a wearable device according to Embodiments Three of the present disclosure;

30 Fig. 9 is a block diagram illustrating another alternative implementation of a monitoring device based on a wearable device according to Embodiments Three of the present disclosure;

Fig. 10 is a block diagram illustrating still another alternative implementation of a monitoring device based on a wearable device according to Embodiments Three of the present disclosure;

Fig. 11 is a block diagram illustrating a monitoring device based on a wearable device according to Embodiment Four of the present disclosure;

5 Fig. 12 is a block diagram illustrating still an alternative implementation of a monitoring device based on a wearable device according to Embodiments Four of the present disclosure; and

Fig. 13 is a block diagram illustrating an embodiment of an electronic device according to the present disclosure.

10 DETAILED DESCRIPTION

Now, detailed description will be made to embodiments of the present disclosure with reference to drawings.

It should be noted that, the described embodiments are merely part, but not all, embodiments of the present disclosure. Based on the embodiments of the present disclosure, other embodiments
15 obtained by those skilled in the art without any inventive labor may be all covered by the scope of the present disclosure.

In a first aspect, the present disclosure provides a monitoring method based on a wearable device, applied to a server. Fig. 1 is a flowchart illustrating a monitoring method based on a wearable device according to Embodiment One of the present disclosure. As illustrated in Fig. 1,
20 the method according to embodiments may include the following.

At block 101, a voice file uploaded by the wearable device is received.

In embodiments, the wearable device may refer to a smart device having a communication function, such as a child smart watch. The wearable device may activate a communication mode and activate a microphone to pick up ambient voice information and to send the voice file
25 consisted of the voice information to a server, after receiving a monitoring request sent by a terminal device. The server may receive the voice file uploaded by the wearable device.

At block 102, a speech contained in the voice file is recognized.

At block 103, a text file corresponding to the speech is generated. The text file has language and a time stamp corresponding to the speech recorded therein.

30 In embodiments, with the language and the time stamp corresponding to the speech and contained in the text file, it is advantageous for the monitor to view when the speech

corresponding to the language is sent from surroundings of the person to be monitored.

At block 104, the text file is sent to the terminal device of the monitor. The terminal device is configured to cooperate with the server to monitor a user using the wearable device.

5 In embodiments, the server may perform noise reduction on the voice file received, and converts the voice file into the text file using a voice recognition technology. The text file has the language and the time stamp corresponding to the speech recorded therein. The server may send the text file to the terminal device of the monitor. In embodiments, the voice file may be converted into the text file, without continuously monitoring, by the monitor, the person under monitored. Therefore, effective monitoring information may be obtained, thereby effectively improving a
10 monitoring efficiency for the monitor.

As illustrated in Fig. 2, as a possible implementation of embodiments of the present disclosure, after generating the text file corresponding to the speech and before sending the text file to the terminal device of the monitor, the monitoring method further includes the following.

At block 1031, the language recorded in the text file is traversed, and it is determined whether
15 a preset keyword is contained in the language recorded in the text file.

At block 1032, when the preset keyword is contained in the language recorded in the text file, the preset keyword is highlighted in the text file.

In embodiments, the monitor may set a keyword of interest in advance. For example, when a guardian of a child monitors the child, the term “game” may be set as the preset keyword. After the
20 voice file is converted into the text file by the server, the language recorded in the text file is traversed. It is determined whether the preset keyword is contained in the language recorded in the text file. When the preset keyword is contained in the language recorded in the text file, the preset keyword is highlighted. The text file is sent to the terminal device of the monitor, such that the monitor may obtain the information of interest quickly after viewing the text file.

25 As illustrated in Fig. 3, as a possible implementation of embodiments of the present disclosure, sending the text file to the terminal device of the monitor includes the following.

At block 1041, according to the time stamp recorded in the text file, it is determined whether the preset keyword is contained in the text file within a current time duration.

At block 1042, when the preset keyword is contained in the voice file within the current time
30 duration, the voice file within the current time duration is sent to the terminal device of the monitor.

In embodiments, the monitor may set the keyword of interest in advance. For example, when the guardian of the child monitors the child, the term “game” may be set as the preset keyword. The monitor may set a time duration of monitoring in advance. Each time duration may be a time period. For example, when the guardian of the child monitors the child, a time duration from 8:00 to 9:00 may be set as a first time period, a time duration from 12:00 to 14:00 may be set as a second time period, and a time duration from 17:00 to 19:00 may be set as a third time period. The time period may also be determined according to the text file. For example, based on the preset time duration, when a time duration from a current time point to a time stamp when last language is recorded in the text file is greater than the preset time duration, it is determined that a time duration from a starting time of recording to the current time point as a time period. The server determines whether the preset keyword is contained in the text file within the current time period. When the preset keyword is contained in the text file within the current time period, the text file within the current time period is sent to the terminal device of the monitor, such that the monitor may obtain information of interest in real time.

As illustrated in Fig. 4, as still another possible implementation of embodiments, after sending the text file to the terminal device of the monitor, the monitoring method further includes the following.

At block 105, a download request for downloading the voice file within a designated time duration is received.

At block 106, according to the download request, the voice file within the designated time duration is sent to the terminal device of the monitor.

According to embodiments, after viewing the text file, for content of interest, the monitor may know the time duration when the speech information recorded in the language is generated according to the time stamp of the language. Therefore, the monitor may send the download request for downloading the voice file within the designated time duration according to the time duration. The server may receive the download request for downloading the voice file within the designated time period and send the voice file within the designated time duration to the terminal device of the monitor according to the download request. The voice file within the designated time duration may be played on a monitoring device by the monitor, such that the monitor may further confirm an accuracy of information within the designated time duration recorded in the text file.

In a second aspect, the present disclosure provides a monitoring method based on a wearable

device, applied to a terminal device. Fig. 5 is a flowchart illustrating a monitoring method based on a wearable device according to Embodiment Four of the present disclosure. As illustrated in Fig. 5, the monitoring method includes the following.

At block 201, a text file sent by a server is received. The text file has language and a time stamp corresponding to voice surrounding the wearable device recorded therein. The server is configured to cooperate with the terminal device to monitor a user using the wearable device.

At block 202, a download request for downloading a voice file within a designated time duration is sent to the server.

At block, 203, the voice file within the designated time duration sent by the server is downloaded and cached locally for playing.

In embodiments, the text file recording the language and the time stamp corresponding to the voice surrounding the wearable device sent by the server is received by the terminal device, to be viewed by the monitor. After the text file is viewed by the monitor, for content of interest, a time duration when speech information recorded in the language is generated may be known according to the time stamp corresponding to the language within the designated time duration. Therefore, the monitor may send a playing request for playing the voice file within the designated time duration to the server according to the time duration. The server may receive the playing request for playing the voice file within the designated time duration and send the voice file within the designated time duration to the terminal device according to the playing request. The terminal device may download and cache locally the voice file within the designated time duration for playing. Therefore, the monitor may further confirm an accuracy of information within the designated time duration recorded in the text file.

As illustrated in Fig. 6, as a possible implementation of embodiments, after receiving the text file sent by the server and before sending the download request for downloading the voice file within the designated time duration to the server, the monitoring method further includes the following.

At block 2011, the language recorded in the text file is traversed, and a preset keyword is automatically located in the text file.

At block 2012, the preset keyword is highlighted, and a time stamp corresponding to the preset keyword is obtained.

In embodiments, the monitor may set a keyword of interest in advance. After receiving the

text file sent by the server, the language recorded in the text file is traversed by the terminal device to automatically locate the preset keyword in the text file. The preset keyword is highlighted and the time stamp corresponding to the preset keyword is automatically obtained. Therefore, when the monitor views the text file, content of interest may be obtained quickly, and a time point or a time duration when the content of interest is generated may be known.

In a third aspect, the present disclosure provides a monitoring device based on a wearable device, applied to a server. Fig. 7 is a block diagram illustrating a monitoring device based on a wearable device according to Embodiment Three of the present disclosure. As illustrated in Fig. 7, the monitoring device according to embodiments includes a first receiving module 301, a speech recognizing module 302, a speech converting module 303 and a first sending module 304. The first receiving module 301 is configured to receive a voice file uploaded by the wearable device. The speech recognizing module 302 is configured to recognize a speech contained in the voice file. The speech converting module 303 is configured to generate a text file corresponding to the speech, the text file recording language and a time stamp corresponding to the speech. The first sending module 304 is configured to send the text file to a terminal device of a monitor, in which the terminal device is configured to cooperate with the server to monitor a user using the wearable device.

The device according to embodiments may be configured to execute technical solutions defined in method embodiments illustrated in Fig. 1, and principles and technical effects are similar to each other, which are not explained herein.

As illustrated in Fig. 8, as a possible implementation of embodiments, the monitoring device further includes a first traversing module 3031 and a first highlighting module 3032. The first traversing module 3031 is configured to traverse the language recorded in the text file, and determine whether a preset keyword is contained in the language recorded in the text file. The first highlighting module 3032 is configured to highlight the preset keyword in the text file in response to determining that the preset keyword is contained in the language recorded in the text file.

The device according to embodiments may be configured to perform technical solutions of method embodiments illustrated in Fig. 1 or Fig. 2, principle and technical effects are similar to each other, which are not explained herein.

As illustrated in Fig. 9, as another possible implementation of embodiments, the first sending module 304 includes a keyword determining sub-module 3041 and a first sending sub-module

3042. The keyword determining sub-module 3041 is configured to determine whether a preset keyword is contained in the text file within a current time duration according to the time stamp recorded in the text file. The first sending sub-module 3042 is configured to send the text file within the current time duration to the terminal device of the monitor, in response to determining
5 that the preset keyword is contained in the text file within the current time duration.

The device according to embodiments may be configured to perform technical solutions of method embodiments illustrated in Fig. 1 or Fig. 3, principle and technical effects are similar to each other, which are not explained herein.

As illustrated in Fig. 10, as still another possible implementation of embodiments, the
10 monitoring device further includes a second receiving module 305 and a second sending module 306. The second receiving module 305 is configured to receive a download request for downloading the voice file within a designated time duration. The second sending module 306 is configured to send the voice file within the designated time duration to the terminal device of the monitor according to the download request.

15 The device according to embodiments may be configured to perform technical solutions of method embodiments illustrated in Fig. 1 or Fig. 4, principle and technical effects are similar to each other, which are not explained herein.

In a fourth aspect, the present disclosure provides a monitoring device based on a wearable device, applied to a terminal device. Fig. 11 is a block diagram illustrating a monitoring device
20 based on a wearable device according to Embodiment Four of the present disclosure. As illustrated in Fig. 11, the monitoring device of embodiments includes a third receiving module 401, a third sending module 402 and a first playing module 403. The third receiving module 401 is configured to receive a text file sent by a server, in which the text file records language and a time stamp corresponding to voice surrounding the wearable device, and the server is configured to cooperate
25 with the terminal device to monitor a user using the wearable device. The third sending module 402 is configured to send a download request for downloading a voice file within a designated time duration to the server. The first playing module 403 is configured to download or cache locally the voice file within the designated time duration sent by the server, for playing.

The device according to embodiments may be configured to perform technical solutions of
30 method embodiments illustrated in Fig. 5, principle and technical effects are similar to each other, which are not explained herein.

As illustrated in Fig. 12, as a possible implementation of embodiments, the monitoring device further includes: a first locating module 404, a second highlighting module 405 and a second locating module 406. The first locating module 404 is configured to traverse language recorded in the text file, and automatically locate a preset keyword in the text file. The second highlighting module 405 is configured to highlight the preset keyword. The second locating module 406 is configured to automatically obtain the time stamp corresponding to the preset keyword.

The device according to embodiments may be configured to perform technical solutions of method embodiments illustrated in Fig. 5 or Fig. 6, principle and technical effects are similar to each other, which are not explained herein.

In a fifth aspect, Fig. 13 is a block diagram illustrating an embodiment of an electronic device according to the present disclosure. The electronic device may perform the flow of embodiments illustrated in Figs. 1-6. As illustrated in Fig. 13, the electronic device may include a housing 41, a processor 42, a memory 43, a circuit board 44, and a power supply circuit 45. The circuit board 44 is enclosed by the housing 41. The processor 42 and the memory 43 are positioned on the circuit board 44. The power supply circuit 45 is configured to provide power for respective circuits or components of the terminal device. The memory 43 is configured to store executable program codes. The processor 42 is configured to run a program corresponding to the executable program codes by reading the executable program codes stored in the memory 43, to perform the monitoring method based on a wearable device according to any one of above embodiments.

Details for executing the above blocks by the processor 42 and the blocks performed by the processor 42 by running the executable program codes may be seen descriptions of embodiments illustrated in Figs. 1 to 5, which are not explained herein.

The electronic device may have various forms, including but not limited to the followings.

(1) A mobile communication device. This type of device has a capacity of mobile communication, and has a main function to provide voice, data communication. This type of device includes a smart phone (such as an iPhone), a multimedia phone, a functional phone and a low-level phone.

(2) A super-mobile personal computer device. This type of device pertains to a personal computer, having a capacity of computing and processing and generally having a capacity of accessing mobile Internet. This type of device includes: PDA (Personal Digital Assistant), MID (Mobile Internet Device) and UMPC (Ultra-mobile Personal Computer) devices, such as an iPad.

(3) Portable entertainment equipment. This type of device may display or play multimedia content. This type of device includes: an audio and video player (such as iPod), a handheld game player, an E-book, intelligent playthings, and portable on-vehicle navigation equipment.

(4) A server. The server is a device for providing computing services. Components of the server include a processor, a hard disk, a memory, a systematical bus or the like. The server is similar to a general computer framework. Since it needs to provide highly reliable services, demands in aspects such as processing capacity, stability, reliability, security, extensibility, manageability are relatively high.

(5) Other electronic devices having a capacity of data interaction.

In a sixth aspect, embodiments of the present disclosure provide a computer readable storage medium, configured to store one or more applications. The one or more applications are executed by one or more processors to execute the method according to any one of the above implementations.

It is to be illustrated that, in the specification, terms such as “first” and “second” are configured herein for distinguishing one entity or operation from another entity or operation, but may not indicate or imply that these entities and operations have an actual relation and an actual sequence regarding to each other. Furthermore, the terms such as "include", "comprise" and any other variations are intended to be non-exclusive and covering-meaning, such that a process, a method, a subject or a device including or comprising a sequence of components not only includes or comprises those components, but includes or comprises other components that are not listed in the sequence, or further includes or comprises inherent components of the process, the method, the subject or the device. Without any more limitations, components defined by a sentence such as "include a... or comprise a..." are not exclusive to be included or comprised in the process, the method, the subject or the device, further they include or comprise other additional components.

Embodiments of the specification are described in relation with other embodiments. Similar parts of the embodiments may be referred to other embodiments. The description made to each embodiment emphasizes differences from other embodiments. Particularly, as being similar to the method embodiments, device embodiments are described simply. Details may be referred to corresponding parts of the device embodiments.

For the convenience of descriptions, the above devices are described as being separately divided into various units/modules. Certainly, the functions of each unit/module can be

implemented in the same software or software and/or hardware when implementing the present application.

It may be understood by those skilled in the art that, all of or a part of steps for achieving above method embodiments may be realized by instructing related software via computer programs. The computer programs may be stored in a computer readable storage medium. When the computer programs are executed, the method in above embodiments may be included. The storage medium may be a magnetic disk, an optical disk, a read-only storage memory (Read-Only notification bar display device, Memory notification bar display device, ROM) or a random storage memory (Random Access Memory notification bar display device, RAM), etc.

The above embodiments are merely specific embodiments of the present disclosure, but are not construed to limit a protection scope of the present disclosure. Changes and alternatives that may be easily conceived within the technical scope of the present disclosure by those skilled in the art should be covered by the scope of the present disclosure. Therefore, the scope of protection of this present disclosure should be determined by the scope of protection of the claims.

WHAT IS CLAIMED IS:

1. A monitoring method based on a wearable device, applied to a server and comprising:
receiving a voice file uploaded by the wearable device;
recognizing a speech contained in the voice file;
5 generating a text file corresponding to the speech, the text file recording language and a time stamp corresponding to the speech; and
sending the text file to a terminal device of a monitor, wherein the terminal device is configured to cooperate with the server to monitor a user using the wearable device.
- 10 2. The monitoring method of claim 1, after generating the text file corresponding to the speech and before sending the text file to the terminal device of the monitor, further comprising:
traversing the language recorded in the text file, and determining whether a preset keyword is contained in the language recorded in the text file; and
in response to determining that the preset keyword is contained in the language recorded in
15 the text file, highlighting the preset keyword in the text file.
3. The monitoring method of claim 1 or 2, wherein sending the text file to the terminal device of the monitor comprises:
determining whether a preset keyword is contained in the text file within a current time
20 duration according to the time stamp recorded in the text file; and
in response to determining that the preset keyword is contained in the text file within the current time duration, sending the text file within the current time duration to the terminal device of the monitor.
- 25 4. The monitoring method of any one of claims 1 to 3, after sending the text file to the terminal device of the monitor, further comprising:
receiving a download request for downloading the voice file within a designated time duration; and
sending the voice file within the designated time duration to the terminal device of the
30 monitor according to the download request.

5. A monitoring method based on a wearable device, applied to a terminal device and comprising:

receiving a text file sent by a server, wherein the text file records language and a time stamp corresponding to voice surrounding the wearable device, and the server is configured to cooperate with the terminal device to monitor a user using the wearable device;

sending a download request for downloading a voice file within a designated time duration to the server; and

downloading or caching locally the voice file within the designated time duration sent by the server, for playing.

6. The monitoring method of claim 5, after receiving the text file sent by the server and before sending the download request for downloading the voice file within the designated time duration to the server, further comprising:

traversing language recorded in the text file, and automatically locating a preset keyword in the text file.

7. The monitoring method of claim 6, wherein, after the preset keyword is located in the text file, the method further comprises:

highlighting the preset keyword, and automatically obtaining the time stamp corresponding to the preset keyword.

8. A monitoring device based on a wearable device, applied to a server and comprising:
a first receiving module, configured to receive a voice file uploaded by the wearable device;
a speech recognizing module, configured to recognize a speech contained in the voice file;
a speech converting module, configured to generate a text file corresponding to the speech,
the text file recording language and a time stamp corresponding to the speech; and

a first sending module, configured to send the text file to a terminal device of a monitor, wherein the terminal device is configured to cooperate with the server to monitor a user using the wearable device.

9. The monitoring device of claim 8, further comprising:

a first traversing module, configured to traverse the language recorded in the text file, and determine whether a preset keyword is contained in the language recorded in the text file; and

a first highlighting module, configured to highlight the preset keyword in the text file in response to determining that the preset keyword is contained in the language recorded in the text file.

10. The monitoring device of claim 8 or 9, wherein the first sending module comprises:

a keyword determining sub-module, configured to determine whether a preset keyword is contained in the text file within a current time duration according to the time stamp recorded in the text file; and

a first sending sub-module, configured to send the text file within the current time duration to the terminal device of the monitor, in response to determining that the preset keyword is contained in the text file within the current time duration.

11. The monitoring device of any one of claims 8 to 10, further comprising:

a second receiving module, configured to receive a download request for downloading the voice file within a designated time duration; and

a second sending module, configured to send the voice file within the designated time duration to the terminal device of the monitor according to the download request.

12. A monitoring device based on a wearable device, applied to a terminal device and comprising:

a third receiving module, configured to receive a text file sent by a server, wherein the text file records language and a time stamp corresponding to voice surrounding the wearable device, and the server is configured to cooperate with the terminal device to monitor a user using the wearable device;

a third sending module, configured to send a download request for downloading a voice file within a designated time duration to the server; and

a first playing module, configured to download or cache locally the voice file within the designated time duration sent by the server, for playing.

13. The monitoring device of claim 12, further comprising:

a first locating module, configured to traverse language recorded in the text file, and automatically locate a preset keyword in the text file.

5 14. The monitoring device of claim 13, further comprising:

a second highlighting module, configured to highlight the preset keyword; and

a second locating module, configured to automatically obtain the time stamp corresponding to the preset keyword.

10 15. An electronic device, comprising: a housing, a processor, a memory, a circuit board and a power supply circuit; wherein the circuit board is enclosed by the housing; the processor and the memory are positioned on the circuit board; the power supply circuit is configured to provide power for respective circuits or components of the terminal device; the memory is configured to store executable program codes; and the processor is configured to run a program corresponding to
15 the executable program codes by reading the executable program codes stored in the memory, to perform the monitoring method of any one of above claims.

16. A computer readable storage medium, configured to store one or more applications, wherein the one or more applications are executable by one or more processors, to perform the
20 monitoring method of any one of above claims.

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