

METHOD AND DEVICE FOR ADDITION OF SONG LYRICS

[0001] This application claims priority to Chinese Patent Application No. 201711459291.0, filed with the National Intellectual Property Administration, PRC on December 28, 2017 and entitled "METHOD AND DEVICE FOR ADDITION OF SONG LYRICS", the entire contents of which are incorporated herein by reference.

TECHNICAL FIELD

[0002] The present disclosure relates to the technical field of information processing, and in particular, relates to a lyric adding method and apparatus.

BACKGROUND

[0003] A song recording application (generally referred to as karaoke software) is capable of capturing voice of a user, and may fuse the captured voice with an accompaniment to form an audio file for the user to play or share.

[0004] In the related art, when the user records a song using the song recording application, if the song recording application detects lyrics corresponding to the accompaniment, the lyrics corresponding to the accompaniment may be displayed in an application interface of the song recording application while the accompaniment is being played. The user may sing the song with reference to the lyrics displayed in the application interface. The accompaniment played by the song recording application may be acquired from a server, or may be uploaded by the user.

[0005] However, if failing to detect a lyric file corresponding to the accompaniment, the song recording application may not display the lyrics in the application interface, such that flexibility of accompaniment playback and flexibility of song recording are affected.

SUMMARY

[0006] Embodiments of the present disclosure provide a lyric adding method and apparatus, which may solve the problem that flexibilities of the song recording application during accompaniment playback and song recording are poor in the related art. The technical solutions are as follows:

[0007] In one aspect, a lyric adding method is provided. The method includes:

[0008] receiving a lyric adding instruction for a song accompaniment;

[0009] searching for lyrics associated with the song accompaniment, and displaying a search result, the search result comprising at least one piece of lyric information of the song accompaniment;

[0010] displaying, according to a received choosing operation for target lyric information in the search result, lyric data corresponding to the target lyric information in a lyric editing interface;

[0011] acquiring the lyric data displayed in the lyric editing interface; and

[0012] displaying the lyric data when the song accompaniment is being played.

[0013] Optionally, when the song accompaniment is being played, the method further comprises:

[0014] displaying a progress indicator, the progress indicator being configured to indicate a play progress of the song accompaniment; and

[0015] if a progress adjustment operation for the progress indicator is detected, adjusting the play progress of the song accompaniment according to the progress adjustment operation.

[0016] Optionally, after receiving the lyric adding instruction for the song accompaniment, the method further comprises:

[0017] displaying the lyric editing interface, a search icon being displayed in the lyric editing interface; and

[0018] searching for the lyrics associated with the song accompaniment comprises:

[0019] if an operation of clicking the search icon is detected, searching for the lyrics associated with the song accompaniment in a pre-stored accompaniment database, or searching for the lyrics associated with the song accompaniment by a predetermined search engine.

[0020] Optionally, displaying the lyric data corresponding to the target lyric information in the lyric editing interface comprises:

[0021] copying the lyric data corresponding to the target lyric information and pasting the lyric data in the lyric editing interface according to the choosing operation.

[0022] Optionally, after receiving the lyric adding instruction for the song accompaniment, the method further comprises:

[0023] displaying a name of the song accompaniment in a title bar in the lyric editing interface.

[0024] Optionally, prior to receiving the lyric adding instruction for the song accompaniment, the method further comprises:

[0025] upon receiving a play instruction for the song accompaniment, detecting whether a pre-stored accompaniment database records lyric data corresponding to the song accompaniment;

[0026] if the lyric data corresponding to the song accompaniment is not detected, displaying prompt information, the prompt information being configured to prompt to add the lyric data

corresponding to the song accompaniment; and

[0027] if a trigger operation for the prompt information is received, generating the lyric adding instruction.

[0028] Optionally, after acquiring the lyric data displayed in the lyric editing interface, the method further comprises:

[0029] recording a corresponding relationship between the lyric data and the song accompaniment in a pre-stored accompaniment database; and

[0030] upon receiving a play instruction for the song accompaniment again, playing the song accompaniment, and displaying the lyric data.

[0031] Optionally, after detecting whether the pre-stored accompaniment database records the lyric data corresponding to the song accompaniment, the method further comprises:

[0032] if the lyric data corresponding to the song accompaniment is detected, detecting whether the lyric data is data pre-acquired from a lyric editing interface; and

[0033] if the lyric data is the data pre-acquired from a lyric editing interface, displaying the prompt information.

[0034] Optionally, displaying the lyric data when the song accompaniment is being played comprises:

[0035] displaying the lyric data according to a display format of the lyric data in the lyric editing interface when the song accompaniment is being played.

[0036] In another aspect, a lyric adding apparatus is provided. The apparatus includes: a receiving module, a searching module, a first display module, an acquiring module, and a playing module; wherein

[0037] the receiving module is configured to receive a lyric adding instruction for a song accompaniment;

[0038] the searching module is configured to search for lyrics associated with the song accompaniment, and display a search result, the search result comprising at least one piece of lyric information of the song accompaniment;

[0039] the first displaying module comprises:

[0040] a receiving submodule, configured to receive a choosing operation for target lyric information in the search result;

[0041] a first displaying submodule, configured to display, according to the choosing operation, lyric data corresponding to the target lyric information in a lyric editing interface;

[0042] the acquiring module is configured to acquire the lyric data displayed in the lyric editing interface; and

[0043] the playing module is configured to display the lyric data when the song accompaniment

is being played.

[0044] Optionally, the playing module is further configured to display a progress indicator when the song accompaniment is being played, the progress indicator being configured to indicate a play progress of the song accompaniment; and

5 **[0045]** the apparatus further comprises:

[0046] an adjusting module, configured to, if a progress adjustment operation for the progress indicator is detected, adjust the play progress of the song accompaniment according to the progress adjustment operation.

[0047] Optionally, the first displaying module further comprises:

10 **[0048]** a second displaying submodule, configured to, upon receiving the lyric adding instruction for the song accompaniment, display the lyric editing interface, a search icon being displayed in the lyric editing interface; and

[0049] the searching module is configured to:

[0050] if an operation of clicking the search icon is detected, search for the lyrics associated with the song accompaniment in a pre-stored accompaniment database, or search for the lyrics associated with the song accompaniment by a predetermined search engine.

[0051] Optionally, the first displaying module is configured to:

[0052] copy the lyric data corresponding to the target lyric information and past the lyric data in the lyric editing interface according to the choosing operation.

20 **[0053]** Optionally, the first displaying module is further configured to:

[0054] upon receiving the lyric adding instruction for the song accompaniment, display a name of the song accompaniment in a title bar in the lyric editing interface.

[0055] Optionally, the apparatus further includes:

[0056] a first detecting module, configured to, upon receiving a play instruction for the song accompaniment, detect whether a pre-stored accompaniment database records lyric data corresponding to the song accompaniment;

[0057] a second displaying module, configured to, if the lyric data corresponding to the song accompaniment is not detected, display prompt information, the prompt information being configured to prompt to add the lyric data corresponding to the song accompaniment; and

30 **[0058]** a generating module, configured to, if a trigger operation for the prompt information is received, generate the lyric adding instruction.

[0059] Optionally, the apparatus further includes:

[0060] a storing module, configured to, upon acquiring the lyric data displayed in the lyric editing interface, record a corresponding relationship between the lyric data and the song accompaniment in a pre-stored accompaniment database;

[0061] wherein the playing module is further configured to, upon receiving a play instruction for the song accompaniment again, play the song accompaniment, and display the lyric data.

[0062] Optionally, the apparatus further includes:

[0063] a second detecting module, configured to, if the lyric data corresponding to the song accompaniment is detected, detect whether the lyric data is data pre-acquired from a lyric editing interface; and

[0064] wherein the second displaying module is further configured to, if the lyric data is the data pre-acquired from a lyric editing interface, display the prompt information.

[0065] Optionally, the playing module is configured to:

[0066] display the lyric data according to a display format of the lyric data in the lyric editing interface when the song accompaniment is being played.

[0067] In yet another aspect, a terminal is provided. The terminal includes a processor and a memory; wherein the memory stores at least one instruction, at least one program, a code set or an instruction set, the at least one instruction, the at least one program, the code set, or the instruction set being executed and loaded by the processor to implement the lyric adding method as defined in the aspects above.

[0068] In still another aspect, a computer-readable storage medium is provided. The computer-readable storage medium stores at least one instruction, at least one program, a code set or an instruction set, the at least one instruction, the at least one program, the code set, or the instruction set being executed and loaded by a processor to implement the lyric adding method as defined in the aspects above.

[0069] The technical solutions according to the embodiments of the present disclosure achieve the following beneficial effects:

[0070] Embodiments of the present disclosure provide a lyric adding method and apparatus. In the method, after a lyric adding instruction is received, lyrics associated with a song accompaniment may be searched, and a search result may be displayed; then lyric data chosen from the search result may be displayed in a lyric editing interface, and the lyric data may be acquired, such that the lyric data may be synchronously displayed when the song accompaniment is being played. Therefore, even if the lyrics corresponding to the accompaniment are not stored in the song recording application, the lyrics associated with the song accompaniment may also be searched, and the lyric data chosen by a user may be displayed when the song accompaniment is being played, such that flexibility of accompaniment playback and flexibility of song recording are effectively improved.

BRIEF DESCRIPTION OF THE DRAWINGS

[0071] For clearer descriptions of technical solutions according to the embodiments of the present disclosure, drawings that are to be referred for description of the embodiments are briefly described hereinafter. Apparently, the drawings described hereinafter merely illustrate some
5 embodiments of the present disclosure. Persons of ordinary skill in the art may also derive other drawings based on the drawings described herein without any creative effort.

[0072] FIG. 1 is a flowchart of a lyric adding method according to an embodiment of the present disclosure;

10 [0073] FIG. 2 is a flowchart of another lyric adding method according to an embodiment of the present disclosure;

[0074] FIG. 3 is a schematic diagram of displaying prompt information on a terminal according to an embodiment of the present disclosure.

[0075] FIG. 4 is a schematic diagram of a recording interface of a terminal according to an embodiment of the present disclosure;

15 [0076] FIG. 5 is a schematic diagram of displaying a lyric editing interface on a terminal according to an embodiment of the present disclosure;

[0077] FIG. 6 is a schematic diagram of lyric data displayed in a lyric editing interface according to an embodiment of the present disclosure;

20 [0078] FIG. 7 is a schematic diagram of displaying a search result on a terminal according to an embodiment of the present disclosure.

[0079] FIG. 8 is a schematic diagram of displaying editing complete prompt information on a terminal according to an embodiment of the present disclosure;

[0080] FIG. 9 is another schematic diagram of displaying prompt information on a terminal according to an embodiment of the present disclosure.

25 [0081] FIG. 10 is a schematic diagram of displaying prompt information in a recording interface of a terminal according to an embodiment of the present disclosure;

[0082] FIG. 11 is a schematic diagram of displaying a lyric editing interface on a terminal according to an embodiment of the present disclosure;

30 [0083] FIG. 12 is a schematic structural diagram of a lyric adding apparatus according to Embodiment 6 of the present application;

[0084] FIG. 13 is a schematic structural diagram of another lyric adding apparatus according to Embodiment 6 of the present application;

[0085] FIG. 14 is a schematic structural diagram of first displaying module according to an embodiment of the present disclosure; and

[0086] FIG. 15 is a schematic structural diagram of a terminal according to an embodiment of the present disclosure.

DETAILED DESCRIPTION

[0087] For clearer descriptions of the objectives, technical solutions, and advantages of the present disclosure, embodiments of the present disclosure are described hereinafter in detail with reference to the accompanying drawings.

[0088] In the related art, since a song recording application imposes a low requirement on an accompaniment uploaded by a user, and generally does not require the uploaded accompaniment to carry corresponding lyrics, a large number of accompaniments stored in the song recording application have no the corresponding lyrics. As a result, the song recording application may not synchronously display the lyrics when playing the accompaniment having no corresponding lyrics, such that flexibility of accompaniment playback is poor, and user experience of song recording by the user is unsatisfactory.

[0089] FIG. 1 is a flowchart of a lyric adding method according to an embodiment of the present disclosure. The method may be applied to a terminal on which a song recording application is installed. Referring to FIG. 1, the method may include the following steps.

[0090] In step 101, a lyric adding instruction for a song accompaniment is received.

[0091] The lyric adding instruction may be generated under trigger of a trigger operation performed by a user. The trigger operation may be a voice operation, for example, a voice "add lyrics", or may be a touch operation, for example, an operation of tapping a predetermined icon. The embodiment of the present disclosure sets no limitation to the type of the touch operation.

[0092] In step 102, lyrics associated with the song accompaniment are searched, and a search result is displayed.

[0093] The search result may include at least one piece of lyric information of the song accompaniment.

[0094] In step 103, lyrics data corresponding to the target lyric information is displayed in a lyric editing interface according to a received choosing operation for target lyric information in the search result.

[0095] The choosing operation may be a tap operation of the user in a display area for the target lyric information. Upon detecting the choosing operation, the terminal may acquire the lyric data corresponding to the target lyric information, and display the lyric data in the lyric editing interface.

[0096] In the embodiment of the present disclosure, the lyric editing interface may be a graph-text editing interface, and the user may directly input chosen lyric data in the lyric editing interface

by an edit operation. Correspondingly, the terminal may display the lyric data chosen by the user in the lyric editing interface. The edit operation may include a copy and paste operation, an input operation, a format edit operation, and the like. For example, upon copying a lyric text to be displayed, the user may input the lyric text to be displayed into the lyric editing interface by a paste operation. In addition, the user may further edit the lyric data displayed in the lyric editing interface. For example, the user may delete data or paste data; or the user may further adjust a format of data, for example, font, font size, color, line spacing, and the like of the text.

[0097] In step 104, the lyric data displayed in the lyric editing interface is acquired.

[0098] Further, the terminal may acquire and store the lyric data displayed in the lyric editing interface. As an optional implementation, upon receiving an editing complete instruction, the terminal may acquire the lyric data displayed in the lyric editing interface.

[0099] In step 105, the lyric data is displayed when the song accompaniment is being played.

[00100] Upon acquiring the lyric data, the terminal may synchronously display the acquired lyric data in a display interface thereof in the process of playing the song accompaniment and recording audio, such that the user may sing the song with reference to the lyric data.

[00101] In summary, the embodiment of the present disclosure provides a lyric adding method. In the method, the chosen lyric data is displayed in the lyric editing interface and the lyric data is acquired, such that the lyric data may be synchronously displayed when the song accompaniment is being played. Therefore, even if the lyrics corresponding to the accompaniment are not stored in the song recording application, the terminal may still search for the lyrics associated with the song accompaniment, and display the lyric data chosen by the user when the song accompaniment is being played, such that flexibility of accompaniment playback and flexibility of song recording are effectively improved.

[00102] FIG. 2 is a flowchart of another lyric adding method according to an embodiment of the present disclosure. The method may be applied to a terminal on which a song recording application is installed. Referring to FIG. 2, the method may include the following steps.

[00103] In step 201, a play instruction for a song accompaniment is received.

[00104] In the embodiment of the present disclosure, after the terminal starts the song recording application, the song recording application may display an accompaniment list, and the accompaniment list may display identifiers of a plurality of accompaniments (for example, names of the accompaniments). When desiring to sing a song corresponding to a song accompaniment, a user may tap the identifier of the song accompaniment by a tap operation, and the terminal may receive the play instruction for the song accompaniment.

[00105] Exemplarily, assuming that the accompaniment list displays the names of the plurality of accompaniments, the user taps, by the tap operation, the accompaniment with the name of "Prelude to Water Melody", then the terminal may receive the play instruction for the song accompaniment of "Prelude to Water Melody".

5 **[00106]** It should be noted that in practice, in addition to being triggered by the tap operation of the user, the play instruction may also be triggered by other types of operations, such as, a swipe operation, an operation of pressing a designated key, a voice operation, or the like, which is not limited in the embodiment of the present disclosure.

[00107] In step 202, upon receiving the play instruction for the song accompaniment, detecting
10 whether a pre-stored accompaniment database records lyric data corresponding to the song accompaniment.

[00108] If the lyric data corresponding to the song accompaniment is detected, step 203 is performed; and if the lyric data corresponding to the song accompaniment is not detected, step 204 is performed.

15 **[00109]** Upon receiving the play instruction, the terminal may detect whether the pre-stored accompaniment database records the lyric data corresponding to the song accompaniment. The accompaniment database may include database locally cached in the terminal, and may further include database in a song recording server corresponding to the song recording application.

[00110] Exemplarily, if the terminal detects that the lyric data corresponding to the song
20 accompaniment of "Prelude to Water Melody" is neither recorded in the locally cached database nor recorded in the database in the song recording server, the terminal may perform step 204.

[00111] In step 203, the corresponding lyric data is displayed when the song accompaniment is being played.

[00112] If detecting the lyric data corresponding to the song accompaniment in the
25 accompaniment database, the terminal may synchronously display the corresponding lyric data in the process of playing the song accompaniment and recording the audios, such that the user may sing the song with reference to the lyric data.

[00113] In addition, if a file format of the lyric data is a predetermined standard format, for example, a qrc format or a lrc format, when the terminal displays the lyric data, if a drag operation
30 of the user for the lyric data is detected, the terminal may synchronously adjust a play progress of the song accompaniment according to a drag amplitude of the drag operation.

[00114] In step 204, prompt information is displayed.

[00115] In the embodiment of the present disclosure, if failing to detect the lyric data corresponding to the song accompaniment in the accompaniment database, the terminal may display
35 the prompt information in the display interface thereof, wherein the prompt information may be

intended to prompt a user to add the lyric data corresponding to the song accompaniment.

[00116] Exemplarily, as illustrated in FIG. 3, if failing to detect the lyric data corresponding to the song accompaniment of "Prelude to Water Melody", the terminal may display the prompt information in the display interface thereof, wherein the prompt information includes a prompt text 01 and a lyric adding icon 02. The prompt text 01 may be intended to prompt the operation step of adding the lyric data to the user, and the lyric adding icon 02 may be intended to receive a trigger operation of the user.

[00117] In step 205, if a trigger operation for the prompt information is received, the lyric adding instruction is generated.

[00118] Upon displaying the prompt information, if the trigger operation for the prompt information is received, the terminal may determine that the user needs to autonomously add the lyric data, such that the lyrics add instruction may be generated. The trigger operation may be a voice operation, for example, a voice "add lyrics", or may be a touch operation, for example, when the prompt information includes the lyric adding icon, the trigger operation may be an operation of tapping the lyric adding icon.

[00119] Exemplarily, assuming that the user taps, by the tap operation, the lyric adding icon 02 as illustrated in FIG. 3, then the terminal may generate the lyrics add instruction according to the tap operation.

[00120] It should be noted that after the terminal displays the prompt information, if the user does not need to add the lyric data, the user may further trigger a reject add instruction by a predetermined operation, for example, the user may tap the "do not add" icon as illustrated in FIG. 3; upon detecting the reject add instruction, the terminal may directly start to play the song accompaniment and record the audios; or the terminal may display a recording icon (for example, a "solo" icon and a "chorus" icon as illustrated in FIG. 3), and then play the song accompaniment and record the audios if a trigger operation for the recording icon is detected. In addition, in the process of playing the song accompaniment and recording the audios, the terminal may continuously display the prompt information in the display interface thereof, such that the user may also trigger the lyric adding instruction by performing the trigger operation for the prompt information in the process of recording the audios.

[00121] Exemplarily, FIG. 4 is a schematic diagram of a recording interface of a terminal according to an embodiment of the present disclosure. As illustrated in FIG. 4, if failing to acquire the lyric data corresponding to the song accompaniment of "Prelude to Water Melody", the terminal may display the lyric adding icon 02 in the display interface thereof in the process of playing the song accompaniment of "Prelude to Water Melody" and recording the audios. If detecting that the user taps the tap operation of the lyric adding icon 02, the terminal may generate the lyrics add

instruction, and step 206 is performed.

[00122] In step 206, the lyric editing interface is displayed.

[00123] Upon receiving a lyric adding instruction, the terminal may display the lyric editing interface in the display interface thereof. The lyric editing interface may be a graph-text editing interface, and the user may input chosen lyric data into the lyric editing interface, for example, a lyric text, or the user may further input a special character, a facial expression, a picture, or the like, which is not limited in the embodiment of the present disclosure.

[00124] Exemplarily, if detecting that the user taps the lyric adding icon 02 as illustrated in FIG. 3 by the tap operation, the terminal may display a lyric editing interface 03 as illustrated in FIG. 5. The lyric editing interface 03 may further display an editing prompt text 031. The editing prompt text may prompt operation steps of adding and editing the lyric data to the user.

[00125] In step 207, the chosen lyric data is displayed in the lyric editing interface.

[00126] In the embodiment of the present disclosure, the chosen lyric data may refer to the lyric data input by the user by an edit operation into the lyric editing interface, or the lyric data chosen by the user by a choosing operation in the search result provided by the terminal. The edit operation may include a copy and paste operation, an input operation, a delete operation, a format edit operation, and the like, and the choosing operation is a tap operation. Upon determining the chosen lyric data, the terminal may display the chosen lyric data in the lyric editing interface; if detecting another edit operation (for example, a delete operation, a format edit operation, or the like) for the lyric data, the terminal may further synchronously update the lyric data displayed in the lyric editing interface according to the detected edit operation.

[00127] Exemplarily, assuming that upon triggering the terminal to start a browser, the user searches out a lyric text corresponding to the song accompaniment of "Prelude to Water Melody" by the browser, chooses the lyric text, and copies and pastes the lyric text to the lyric editing interface, then as illustrated in FIG. 6, the terminal may display lyric data 033 in the lyric editing interface 03, wherein the lyric data 033 is the lyric text input by the user by the paste operation. Furthermore, the user may further edit the lyric text 033 displayed in the lyric editing interface 03. For example, the user may delete some characters, or input a new character, or adjust font, font size or color of the text, or adjust a line spacing, a character spacing, and the like of the text. If detecting an edit operation of adjusting the line spacing of the user, and the line spacing indicated by the edit operation is 23 points, the terminal may adjust the line spacing of the lyric text 033 displayed in the lyric editing interface 03 to 23 points according to the operation of adjusting the line spacing.

[00128] As an optional implementation, as illustrated in FIG. 5 and FIG. 6, a search icon 032 may be displayed in the lyric editing interface 03; and upon displaying the lyric editing interface 03, if detecting the operation of tapping the search icon 032, the terminal may search for the lyrics

associated with the song accompaniment in a pre-stored accompaniment database, or may search for the lyrics associated with the song accompaniment by a search engine predetermined in the terminal, and may display the search result in the display interface of the terminal for the user's reference. The search result may include at least one piece of lyric information of the song accompaniment.

[00129] Furthermore, if the user chooses target lyric information in the search result, the terminal may receive the choosing operation for target lyric information, directly copy the lyric data of the target lyric information according to the choosing operation, and paste the lyric data of the target lyric information to the lyric editing interface. With no need of manual copying and pasting, operations of the user are simplified, and input efficiency of the lyric data is improved. After the terminal displays the chosen lyric data, the user may continuously edit the lyric data displayed in the lyric editing interface.

[00130] Exemplarily, if the user taps the search icon 032 as illustrated in FIG. 5, the terminal searches for the lyrics associated with the song accompaniment of "Prelude to Water Melody" by a search engine. In addition, as illustrated in FIG. 7, a search result 034 is displayed in the display interface. The search result 034 may include a plurality of pieces of lyric data associated with the song accompaniment. If the user chooses first lyric information of "Prelude to Water Melody, sung by: XX" by the tap operation in three pieces of lyric information as illustrated in the search result 034, the terminal may determine the first lyric information as the target lyric information, copy the lyric data of the target lyric information, and then paste the lyric data to the lyric editing interface 03.

[00131] It should be noted that in the embodiment of the present disclosure, the terminal may further display the name of the song accompaniment in a title bar in the lyric editing interface. For example, as illustrated in FIG. 5, the name of "Prelude to Water Melody" of the song accompaniment is displayed in a title bar 030 in the lyric editing interface 03, such that the user may understand in real time the song accompaniment corresponding to the lyric data to be input.

[00132] In step 208, if an editing complete instruction is received, the lyric data displayed in the lyric editing interface is acquired.

[00133] Upon completion of the edit operation for the lyric data, the user may trigger the editing complete instruction by the predetermined operation. Upon receiving the editing complete instruction, the terminal may acquire the lyric data currently displayed in the lyric editing interface. The predetermined operation triggering the editing complete instruction may be a voice operation, for example, "complete editing" in the voice; and the predetermined operation may be a touch operation, for example, an operation of tapping a designated icon.

[00134] Exemplarily, as illustrated in FIG. 6, when the user tapes a "complete" icon as illustrated

in FIG. 6, upon receiving the editing complete instruction, the terminal may acquire the lyric data displayed in the lyric editing interface 03, and the lyric data is the lyric text 033.

[00135] Optionally, upon receiving the editing complete instruction, and acquiring the lyric data displayed in the lyric editing interface, as illustrated in FIG. 8, the terminal may further display editing complete prompt information 035 in the display interface, wherein the editing complete prompt information 035 may be intended to prompt successful adding of the lyrics to the user. In addition, the display interface may further display the recording icon, for example, a "solo" icon and a "chorus" icon as illustrated in FIG. 8. Upon detecting the trigger operation for the recording icon, the terminal may play the song accompaniment and record the audios.

[00136] In step 209, the lyric data and a progress indicator are displayed when the song accompaniment is being played.

[00137] Furthermore, upon acquiring the lyric data displayed in the lyric editing interface, the terminal may synchronously display the lyric data in the process of playing the song accompaniment and recording the audios, such that the user may sing the song with reference to the lyric data. In addition, the terminal may further display a progress indicator. The progress indicator may be intended to indicate a play progress of the song accompaniment. The progress indicator may be a stripe-shaped indicator, an annular indicator, or the like, which is not limited in the embodiment of the present disclosure.

[00138] In the case where the terminal displays the lyric data, in one aspect, the lyric data may be displayed according to a predetermined fixed format, for example, the terminal may display the lyric data according to a fixed font, font size, and line spacing; and in another aspect, the terminal may further display the lyric data according to a display format of the lyric data in the lyric editing interface. Therefore, the user may flexibly adjust the display format of the lyric data when editing the lyric data in the lyric editing interface according to personal preferences, such that flexibility of lyric data displaying by the terminal is effectively improved, and user experience is bettered.

[00139] Exemplarily, assuming that the line spacing of the lyric text 033 displayed in the lyric editing interface 03 is 23 points when the terminal receives the editing complete instruction, then the terminal may display the lyric data according to the line space of 23 points in the process of playing the song accompaniment and recording the audios. In addition, as illustrated in FIG. 4, the terminal may further display a stripe-shaped progress indicator 04 in the process of playing the song accompaniment and recording the audios. A total length of the stripe-shaped progress indicator 04 may be intended to indicate a total time length of the song accompaniment (for example, 3 minutes and 40 seconds). A currently played time length (for example, 42 seconds) may be identified according to progress bars in different colors on the stripe-shaped progress indicator 04, and if a ratio of the currently played time length of the song accompaniment to the total time length of the

song accompaniment is n , the ratio of a length of the progress bar to the total length of the progress indicator should be equal to n .

[00140] It should be noted that in step 205, if the user triggers the lyric adding instruction by performing the trigger operation in the process of recording the audios, upon receiving the editing complete instruction and acquiring the lyric data displayed in the lyric editing interface, the terminal may directly return to an interface for recording the audios, and continuously play the song accompaniment and record the audios.

[00141] Alternatively, to reserve preparation time for the user, upon receiving the editing complete instruction, the terminal may further wait for a reserved time period, and then continuously play the song accompaniment and record the audios. For example, upon receiving the editing complete instruction, the terminal may wait for another 5 seconds, and then continuously play the accompaniment. In addition, in the process of waiting, the terminal may further display a countdown timer in the display interface thereof, such that the user prepares for continuous singing.

[00142] It should be noted that when the song accompaniment is being played, the terminal may display the lyric data, and may continuously display the prompt information as well. For example, the terminal may display the lyric adding icon, such that the user may also re-add the lyric data anytime, or may re-edit the lyric data in the process of recording the song.

[00143] In step 210, if a progress adjustment operation for the progress indicator is detected, the play progress of the song accompaniment is adjusted according to the progress adjustment operation.

[00144] In the embodiment of the present disclosure, the terminal may receive and respond the progress adjustment operation for the progress indicator, and the progress adjustment operation may be a swipe operation, a tap operation, or the like. Upon detecting the progress adjustment operation, the terminal may adjust the play progress of the song accompaniment according to the progress adjustment operation, such that the user may skip over a prelude or an interlude to directly sing the song, or the user may re-sing the recorded part. In this way, flexibility of accompaniment playback and flexibility of song recording are effectively improved, and user experience is bettered.

[00145] In the related art, in the process of playing the accompaniment and recording the audios, the user adjusts the play progress of the accompaniment by dragging the lyric data only when the format of the lyric data corresponding to the accompaniment is a predetermined standard format (for example, a qrc format or a lrc format). In the embodiment of the present disclosure, even if the accompaniment played by the terminal has no corresponding lyric data, or the lyric data corresponding to the accompaniment is not the lyric data in the standard format, the user may also flexibly adjust the play progress of the accompaniment by performing the progress adjustment operation for the progress indicator, such that flexibility of accompaniment playback and flexibility of song recording are effectively improved.

[00146] Exemplarily, as illustrated in FIG. 4, the progress indicator 04 may further include a progress controller 041. The user may change a display position on the progress indicator by dragging the progress controller 041, to achieve the effect of adjusting the play progress of the song accompaniment. For example, when the terminal detects that the user swipes the progress controller 041 to a position which is half of the total length of the progress indicator by a swipe operation, the play progress of the song accompaniment of "Prelude to Water Melody" may be adjusted according to the swipe operation, such that the song accompaniment of "Prelude to Water Melody" starts to be played at the point of 1 minute and 50 seconds.

[00147] It should be noted that the lyric adding method according to the embodiment of the present disclosure may be applied to the process of recording the audio, and may be further applied to the process of recording videos as well; and the method for adding the lyrics in the process of recording the videos may be referenced to the above steps, which is not described herein any further.

[00148] Exemplarily, after the user chooses a video recording option in a lyric recording interface, prior to recording the videos, if failing to detect the lyric data corresponding to the song accompaniment to be played in the accompaniment database, as illustrated in FIG. 9, the terminal may display prompt information in the display interface thereof, wherein the prompt information may include the lyric adding icon 02; furthermore, if the user does not add lyric data to the song accompaniment, and directly starts to record the videos, as illustrated in FIG. 10, the terminal may continuously display the lyric adding icon 02 in the recording interface thereof; and if the user taps the lyric adding icon 02 in the interface as illustrated in FIG. 9, and inputs the lyric data in the lyric editing interface, then as illustrated in FIG. 11, the terminal may synchronously display the lyric data 033 in the process of recording the videos, and the lyric adding icon 02 may be displayed in the recording interface.

[00149] In step 211, a corresponding relationship between the lyric data and the song accompaniment is recorded in a pre-stored accompaniment database.

[00150] In the embodiment of the present disclosure, upon acquiring the lyric data displayed in the lyric editing interface, the terminal may further store the corresponding relationship between the lyric data and the song accompaniment in the accompaniment database, for example, the corresponding relationship between the lyric data and the song accompaniment may be stored in the database locally cached in the terminal. Correspondingly, if the terminal receives the play instruction for the song accompaniment again, that is, when the lyric data corresponding to the song accompaniment is directly acquired from the accompaniment database, the terminal may synchronously display the lyric data corresponding to the song accompaniment when the song accompaniment is being played.

[00151] As an optional implementation according to the embodiment of the present disclosure,

after step 202, upon detecting the lyric data corresponding to the song accompaniment in the pre-stored accompaniment database, the terminal may continuously detect whether the lyric data is data pre-acquired from a lyric editing interface; if detecting that the lyric data is the data pre-acquired from a lyric editing interface, the terminal may display the prompt information in the display interface thereof. For example, the terminal may the lyric adding icon. If detecting that the lyric data is not the data pre-acquired from a lyric editing interface, the terminal does not need to display the prompt information.

[00152] The lyric data acquired by the terminal from the lyric editing interface is autonomously edited by the user, the format of the lyrics may not completely comply with the predetermined standard format, and content of the lyric data may not completely correct either. Therefore, upon detecting the lyric data corresponding to the song accompaniment to be played is the data acquired from the lyric editing interface, the terminal may continuously display the prompt information in the display interface thereof, such that the user may trigger the lyric adding instruction again according to the prompt information, and add the lyric data for the song accompaniment again.

[00153] It should be noted that sequences of steps of the lyric adding method according to the embodiment of the present disclosure may be appropriately adjusted, and the steps may be correspondingly increased or decreased according to actual situations. For example, step 202 may be deleted according to the situations, that is, upon receiving the play instructions, the terminal may directly display the prompt information; or step 211 may be performed before the step 209. A person skilled in the art would readily envisage method variations without departing from the technical scope disclosed in the present disclosure, and these method variations shall all fall within the protection scope of the present disclosure, which are thus not described herein any further.

[00154] In summary, the embodiment of the present disclosure provides a lyric adding method. In the method, the chosen lyric data is displayed in the lyric editing interface and the lyric data is acquired, such that the lyric data may be synchronously displayed when the song accompaniment is being played. Therefore, even if the lyrics corresponding to the accompaniment are not stored in the song recording application, the terminal may still search for the lyrics associated with the song accompaniment, and display the lyric data chosen by the user when the song accompaniment is being played, such that the user may sing the song with reference to the lyric data displayed in the display interface when recording the song. In this way, flexibility of accompaniment playback and flexibility of song recording are effectively improved. In addition, in the method according to the embodiment of the present disclosure, the amount of data stored in the accompaniment database may be increased, the song database is expanded, and the production cost of the accompaniment lyrics is lowered. Furthermore, the terminal may further display the progress indicator, such that the user may adjust the play progress of the accompaniment by the progress adjustment operation. In

this way, the accompaniment progress is accurately controlled, and flexibility of accompaniment playback and flexibility of song recording are effectively improved.

[00155] FIG. 12 is a schematic structural diagram of a lyric adding apparatus according to an embodiment of the present disclosure. The apparatus may be configured in the terminal where an application program for recording songs is installed. As illustrated in FIG. 12, the apparatus includes a receiving module 301, a searching module 302, a first displaying module 303, an acquiring module 304, and a playing module 305.

[00156] The receiving module 301 is configured to receive a lyric adding instruction for a song accompaniment.

[00157] The searching module 302 is configured to search for lyrics associated with the song accompaniment, and display a search result, wherein the search result includes at least one piece of lyric information of the song accompaniment.

[00158] The first displaying module 303 may include:

[00159] a receiving submodule 3031, configured to receive a choosing operation for target lyric information in the search result; and

[00160] a first displaying submodule 3032, configured to display, according to the choosing operation, lyric data corresponding to the target lyric information in a lyric editing interface.

[00161] The acquiring module 304 is configured to acquire the lyric data displayed in the lyric editing interface.

[00162] The playing module 305 is configured to display the lyric data when the song accompaniment is being played.

[00163] Optionally, the playing module 305 is further configured to display a progress indicator when the song accompaniment is being played, wherein the progress indicator is intended to indicate a play progress of the song accompaniment.

[00164] FIG. 13 is a schematic structural diagram of another lyric adding apparatus according to an embodiment of the present disclosure. As illustrated in FIG. 13, the apparatus may further include:

[00165] an adjusting module 306, configured to, if a progress adjustment operation for the progress indicator is detected, adjust the play progress of the song accompaniment according to the progress adjustment operation.

[00166] FIG. 14 is a schematic structural diagram of a first displaying module according to an embodiment of the present disclosure. As illustrated in FIG. 14, the first displaying module 303 may further include:

[00167] a second displaying submodule 3033, configured to, upon receiving the lyric adding instruction for the song accompaniment, display the lyric editing interface, wherein the lyric editing

interface displays a search icon.

[00168] Correspondingly, the searching module 302 may be specifically configured to, if an operation of clicking the search icon is detected, search for the lyrics associated with the song accompaniment in a pre-stored accompaniment database, or search for the lyrics associated with the song accompaniment by a predetermined search engine.

[00169] Optionally, the first displaying submodule 3032 may be specifically configured to:

[00170] copy the lyric data corresponding to the target lyric information according to the choosing operation, and paste the lyric data to the lyric editing interface.

[00171] Optionally, the first displaying submodule 303 may be further configured to:

[00172] display a name of the song accompaniment in a title bar in the lyric editing interface.

[00173] Further, as illustrated in FIG. 13, the apparatus may further include:

[00174] a first detecting module 307, configured to, upon receiving a play instruction for the song accompaniment, detect whether a pre-stored accompaniment database records lyric data corresponding to the song accompaniment;

[00175] a second displaying module 308, configured to, if the lyric data corresponding to the song accompaniment is not detected, display prompt information, wherein the prompt information is intended to prompt to add the lyric data corresponding to the song accompaniment; and

[00176] a generating module 309, configured to, if a trigger operation for the prompt information is received, generate the lyric adding instruction.

[00177] Optionally, as illustrated in FIG. 13, the apparatus may further include:

[00178] a storing module 310, configured to, upon acquiring the lyric data displayed in the lyric editing interface, record a corresponding relationship between the lyric data and the song accompaniment in a pre-stored accompaniment database.

[00179] Correspondingly, the playing module 305 may be further configured to, upon receiving a play instruction for the song accompaniment again, play the song accompaniment, and display the lyric data.

[00180] Optionally, as illustrated in FIG. 13, the apparatus may further include:

[00181] a second detecting module 311, configured to, if the lyric data corresponding to the song accompaniment is detected, detect whether the lyric data is data pre-acquired from a lyric editing interface.

[00182] Correspondingly, the second displaying module 308 may be further configured to, if the lyric data is the data pre-acquired from a lyric editing interface, display the prompt information.

[00183] Optionally, the playing module 305 may be specifically configured to:

[00184] display the lyric data according to a display format of the lyric data in the lyric editing interface when the song accompaniment is being played.

[00185] In summary, the embodiment of the present disclosure provides a lyric adding apparatus. In the apparatus, the chosen lyric data is displayed in the lyric editing interface and the lyric data is acquired, such that the lyric data may be synchronously displayed when the song accompaniment is being played. Therefore, even if the lyrics corresponding to the accompaniment are not stored in the song recording application, the apparatus may still search for the lyrics associated with the song accompaniment, and display the lyric data chosen by the user when the song accompaniment is being played, such that the user may sing the song with reference to the lyric data displayed in the display interface when recording the song. In this way, flexibility of accompaniment playback and flexibility of song recording are effectively improved. In addition, in the lyrics adding apparatus according to the embodiment of the present disclosure, the amount of data stored in the accompaniment database may be increased, the song database is expanded, and the production cost of the accompaniment lyrics is lowered. Furthermore, the terminal may further display the progress indicator, such that the user may adjust the play progress of the accompaniment by the progress adjustment operation. In this way, the accompaniment progress is accurately controlled, and flexibility of accompaniment playback and flexibility of song recording are effectively improved.

[00186] With respect to the apparatus in the above embodiment, details about performing corresponding operations by different modules and sub-modules have been described in the method embodiment, which are not given herein any further.

[00187] FIG. 15 is a structural block diagram of a terminal 1500 according to an exemplary embodiment of the present disclosure. The terminal 1500 may be a smart phone, a tablet computer, a Moving Picture Experts Group Audio Layer III (MP3) player, a Moving Picture Experts Group Audio Layer IV (MP4) player, a laptop computer, or a desktop computer. The terminal 1500 may also be referred to as a user equipment, a portable terminal, a laptop terminal, a desktop terminal, or the like.

[00188] Generally, the terminal 1500 includes a processor 1501 and a memory 1502.

[00189] The processor 1501 may include one or a plurality of processing cores, for example, a four-core processor, an eight-core processor, or the like. The processor 1501 may be practiced based on a hardware form of at least one of digital signal processing (DSP), field-programmable gate array (FPGA), and programmable logic array (PLA). The processor 1501 may further include a primary processor and a secondary processor. The primary processor is a processor configured to process data in an active state, and is also referred to as a central processing unit (CPU); and the secondary processor is a low-power consumption processor configured to process data in a standby state. In some embodiments, the processor 1501 may be integrated with a graphics processing unit (GPU), wherein the GPU is configured to render and draw the content to be displayed on the screen. In some embodiments, the processor 1501 may further includes an artificial intelligence (AI) processor,

wherein the AI processor is configured to process calculate operations related to machine learning.

[00190] The memory 1502 may include one or a plurality of computer-readable storage media, wherein the computer-readable storage medium may be non-transitory. The memory 1502 may include a high-speed random access memory, and a non-volatile memory, for example, one or a plurality of magnetic disk storage devices or flash storage devices. In some embodiments, the non-transitory computer-readable storage medium in the memory 1502 may be configured to store at least one instruction, wherein the at least one instruction is executed by the processor 1501 to implement the method for displaying a video picture in a large screen system according to the embodiments of the present disclosure.

[00191] In some embodiments, the terminal 1500 may optionally include a peripheral device interface 1503 and at least one peripheral device. The processor 1501, the memory 1502 and the peripheral device interface 1503 may be connected to each other via a bus or a signal line. The at least one peripheral device may be connected to the peripheral device interface 1503 via a bus, a signal line, or a circuit board. Specifically, the peripheral device includes at least one of a radio frequency circuit 1504, a touch display screen 1505, a camera assembly 1506, an audio circuit 1507, a positioning assembly 1508, and a power source 1509.

[00192] The peripheral device interface 1503 may be configured to connect the at least one peripheral device related to input/output (I/O) to the processor 1501 and the memory 1502. In some embodiments, the processor 1501, the memory 1502 and the peripheral device interface 1503 are integrated on the same chip or circuit board. In some other embodiments, any one or two of the processor 1501, the memory 1502, and the peripheral device interface 1503 may be practiced on a separate chip or circuit board, which is not limited in this embodiment.

[00193] The radio frequency circuit 1504 is configured to receive and transmit a radio frequency (RF) signal, which is also referred to as an electromagnetic signal. The radio frequency circuit 1504 communicates with a communication network or another communication device via the electromagnetic signal. The radio frequency circuit 1504 converts an electrical signal to an electromagnetic signal and sends the signal, or converts a received electromagnetic signal to an electrical signal. Optionally, the radio frequency circuit 1504 includes an antenna system, an RF transceiver, one or a plurality of amplifiers, a tuner, an oscillator, a digital signal processor, a codec chip set, a subscriber identification module card, or the like. The radio frequency circuit 1504 may communicate with another terminal based on a wireless communication protocol. The wireless communication protocol includes, but not limited to: a web, a metropolitan area network, an intranet, generations of mobile communication networks (including 2G, 3G, 4G and 5G), a wireless local area network, and/or a wireless fidelity (WiFi) network. In some embodiments, the radio frequency circuit 1504 may further include a near field communication (NFC)-related circuits, which is not

limited in the present disclosure.

[00194] The display screen 1505 may be configured to display a user interface (UI). The UE may include graphics, texts, icons, videos, and any combination thereof. When the display screen 1505 is a touch display screen, the display screen 1505 may further have the capability of acquiring a touch signal on a surface of the display screen 1505 or above the surface of the display screen 805. The touch signal may be input to the processor 1501 as a control signal, and further processed therein. In this case, the display screen 1505 may be further configured to provide a virtual button and/or a virtual keyboard or keypad, also referred to as a soft button and/or a soft keyboard or keypad. In some embodiments, one display screen 1505 may be provided, which is arranged on a front panel of the terminal 1500. In some other embodiments, at least two display screens 1505 are provided, which are respectively arranged on different surfaces of the terminal 1500 or designed in a folded fashion. In still some other embodiments, the display screen 1505 may be a flexible display screen, which is arranged on a bent surface or a folded surface of the terminal 1500. Even, the display screen 1505 may be further arranged to an irregular pattern which is non-rectangular, that is, a specially-shaped screen. The display screen 1505 may be fabricated from such materials as a liquid crystal display (LCD), an organic light-emitting diode (OLED), or the like.

[00195] The camera assembly 1506 is configured to capture an image or a video. Optionally, the camera assembly 1506 includes a front camera and a rear camera. Generally, the front camera is arranged on a front panel of the terminal, and the rear camera is arranged on a rear panel of the terminal. In some embodiments, at least two rear cameras are arranged, which are respectively any one of a primary camera, a depth of field (DOF) camera, a wide-angle camera and a long-focus camera, such that the primary camera and the DOF camera are fused to implement the background virtualization function, and the primary camera and the wide-angle camera are fused to implement the panorama photographing and virtual reality (VR) photographing functions or other fused photographing functions. In some embodiments, the camera assembly 1506 may further include a flash. The flash may be a single-color temperature flash or a double-color temperature flash. The double-color temperature flash refers to a combination of a warm-light flash and a cold-light flash, which may be used for light compensation under different color temperatures.

[00196] The audio circuit 1507 may include a microphone and a speaker. The microphone is configured to capture an acoustic wave of a user and an environment, and convert the acoustic wave to an electrical signal and output the electrical signal to the processor 1501 for further processing, or output to the radio frequency circuit 1504 to implement voice communication. For the purpose of stereo capture or noise reduction, a plurality of such microphones may be provided, which are respectively arranged at different positions of the terminal 1500. The microphone may also be a microphone array or an omnidirectional capturing microphone. The speaker is configured to convert

an electrical signal from the processor 1501 or the radio frequency circuit 1504 to an acoustic wave. The speaker may be a traditional thin-film speaker, or may be a piezoelectric ceramic speaker. When the speaker is a piezoelectric ceramic speaker, an electrical signal may be converted to an acoustic wave audible by human beings, or an electrical signal may be converted to an acoustic wave inaudible by human beings for the purpose of ranging or the like. In some embodiments, the audio circuit 1507 may further includes a headphone plug.

[00197] The positioning assembly 1508 is configured to determine a current geographical position of the terminal 1500 to implement navigation or a local based service (LBS). The positioning assembly 1508 may be the global positioning system (GPS) from the United States, the Beidou positioning system from China, the Grenas satellite positioning system from Russia or the Galileo satellite navigation system from the European Union.

[00198] The power source 1509 is configured to supply power for the components in the terminal 1500. The power source 1509 may be an alternating current, a direct current, a disposable battery, or a rechargeable battery. When the power source 1509 includes a rechargeable battery, the rechargeable battery may support wired charging or wireless charging. The battery supporting wired charging is a battery that is chargeable by wired charging, and the battery supporting wireless charging is a battery that is chargeable by wireless charging. The rechargeable battery may also support the supercharging technology.

[00199] In some embodiments, the terminal may further include one or a plurality of sensors 1510. The one or plurality of sensors 1510 include, but not limited to: an acceleration sensor 1511, a gyroscope sensor 1512, a pressure sensor 1513, a fingerprint sensor 1514, an optical sensor 1515 and a proximity sensor 1516.

[00200] The acceleration sensor 1511 may detect accelerations on three coordinate axes in a coordinate system established for the terminal 1500. For example, the acceleration sensor 1511 may be configured to detect components of a gravity acceleration on the three coordinate axes. The processor 1501 may control the touch display screen 1505 to display the user interface in a horizontal view or a longitudinal view based on a gravity acceleration signal acquired by the acceleration sensor 1511. The acceleration sensor 1511 may be further configured to acquire motion data of a game or a user.

[00201] The gyroscope sensor 1512 may detect a direction and a rotation angle of the terminal 1500, and the gyroscope sensor 1512 may collaborate with the acceleration sensor 1511 to capture a 3D action performed by the user for the terminal 1500. Based on the data acquired by the gyroscope sensor 1512, the processor 1501 may implement the following functions: action sensing (for example, modifying the UE based on an inclination operation of the user), image stabilization during the photographing, game control and inertial navigation.

[00202] The force sensor 1513 may be arranged on a side frame of the terminal and/or on a lowermost layer of the touch display screen 1505. When the force sensor 1513 is arranged on the side frame of the terminal 1500, a grip signal of the user against the terminal 1500 may be detected, and the processor 1501 implements left or right hand identification or perform a shortcut operation based on the grip signal acquired by the force sensor 1513. When the force sensor 1513 is arranged on the lowermost layer of the touch display screen 1505, the processor 1501 implement control of an operable control on the UI based on a force operation of the user against the touch display screen 1505. The operable control includes at least one of a button control, a scroll bar control, an icon control, and a menu control.

[00203] The fingerprint sensor 1514 is configured to acquire fingerprints of the user, and the processor 1501 determines the identity of the user based on the fingerprints acquired by the fingerprint sensor 1514, or the fingerprint sensor 1514 determines the identity of the user based on the acquired fingerprints. When it is determined that the identity of the user is trustable, the processor 1501 authorizes the user to implement related sensitive operations, wherein the sensitive operations include unlocking the screen, checking encrypted information, downloading software, paying and modifying settings, and the like. The fingerprint sensor 1514 may be arranged on a front face a back face or a side face of the terminal 1500. When the terminal 1500 is provided with a physical key or a manufacturer's logo, the fingerprint sensor 1514 may be integrated with the physical key or the manufacturer's logo.

[00204] The optical sensor 1515 is configured to acquire the intensity of ambient light. In one embodiment, the processor 1501 may control a display luminance of the touch display screen 1505 based on the intensity of ambient light acquired by the optical sensor 1515. Specifically, when the intensity of ambient light is high, the display luminance of the touch display screen 1505 is up-shifted; and when the intensity of ambient light is low, the display luminance of the touch display screen 1505 is down-shifted. In another embodiment, the processor 1501 may further dynamically adjust photographing parameters of the camera assembly 1506 based on the intensity of ambient light acquired by the optical sensor.

[00205] The proximity sensor 1516, also referred to as a distance sensor, is generally arranged on the front panel of the terminal 1500. The proximity sensor 1516 is configured to acquire a distance between the user and the front face of the terminal 1500. In one embodiment, when the proximity sensor 1516 detects that the distance between the user and the front face of the terminal 1500 gradually decreases, the processor 1501 controls the touch display screen 1505 to switch from an active state to a rest state; and when the proximity sensor 1516 detects that the distance between the user and the front face of the terminal 1500 gradually increases, the processor 1501 controls the touch display screen 1505 to switch from the rest state to the active state.

[00206] A person skilled in the art may understand that the structure of the terminal as illustrated in FIG. 15 does not construe a limitation on the terminal 1500. The terminal may include more components over those illustrated in FIG. 15, or combinations of some components, or employ different component deployments.

5 **[00207]** An exemplary embodiment of the present disclosure provides a computer-readable storage medium. The computer-readable storage medium stores at least one instruction, at least one program, a code set, or an instruction set; wherein the at least one instruction, the at least one program, the code set, or the instruction set is executed and loaded by a processor to implement the lyric adding method as described in the above embodiments.

10 **[00208]** The foregoing descriptions are merely preferred embodiments of the present disclosure, and are not intended to limit the present disclosure. Within the spirit and principles of the disclosure, any modifications, equivalent substitutions, improvements, etc., are within the protection scope of the present disclosure.

CLAIMS

What is claimed is:

1. A lyric adding method, comprising:

receiving a lyric adding instruction for a song accompaniment;

5 searching for lyrics associated with the song accompaniment, and displaying a search result, the search result comprising at least one piece of lyric information of the song accompaniment;

displaying, according to a received choosing operation for target lyric information in the search result, lyric data corresponding to the target lyric information in a lyric editing interface;

acquiring the lyric data displayed in the lyric editing interface; and

10 displaying the lyric data when the song accompaniment is being played.

2. The method according to claim 1, wherein when the song accompaniment is being played, the method further comprises:

15 displaying a progress indicator, the progress indicator being configured to indicate a play progress of the song accompaniment; and

if a progress adjustment operation for the progress indicator is detected, adjusting the play progress of the song accompaniment according to the progress adjustment operation.

3. The method according to claim 1, wherein after receiving the lyric adding instruction for the song accompaniment, the method further comprises:

20 displaying the lyric editing interface, a search icon being displayed in the lyric editing interface; and

searching for the lyrics associated with the song accompaniment comprises:

25 if an operation of clicking the search icon is detected, searching for the lyrics associated with the song accompaniment in a pre-stored accompaniment database, or searching for the lyrics associated with the song accompaniment by a predetermined search engine.

4. The method according to claim 1, wherein displaying the lyric data corresponding to the target lyric information in the lyric editing interface comprises:

30 copying the lyric data corresponding to the target lyric information and pasting the lyric data in the lyric editing interface according to the choosing operation.

5. The method according to any one of claims 1 to 4, wherein after receiving the lyric adding

instruction for the song accompaniment, the method further comprises:

displaying a name of the song accompaniment in a title bar in the lyric editing interface.

6. The method according to any one of claims 1 to 4, wherein prior to receiving the lyric adding instruction for the song accompaniment, the method further comprises:

upon receiving a play instruction for the song accompaniment, detecting whether a pre-stored accompaniment database records lyric data corresponding to the song accompaniment;

if the lyric data corresponding to the song accompaniment is not detected, displaying prompt information, the prompt information being configured to prompt to add the lyric data corresponding to the song accompaniment; and

if a trigger operation for the prompt information is received, generating the lyric adding instruction.

7. The method according to any one of claims 1 to 4, wherein after acquiring the lyric data displayed in the lyric editing interface, the method further comprises:

recording a corresponding relationship between the lyric data and the song accompaniment in a pre-stored accompaniment database; and

upon receiving a play instruction for the song accompaniment again, playing the song accompaniment, and displaying the lyric data.

8. The method according to claim 6, wherein after detecting whether the pre-stored accompaniment database records the lyric data corresponding to the song accompaniment, the method further comprises:

if the lyric data corresponding to the song accompaniment is detected, detecting whether the lyric data is data pre-acquired from a lyric editing interface; and

if the lyric data is the data pre-acquired from a lyric editing interface, displaying the prompt information.

9. The method according to any one of claims 1 to 4, wherein displaying the lyric data when the song accompaniment is being played comprises:

displaying the lyric data according to a display format of the lyric data in the lyric editing interface when the song accompaniment is being played.

10. A lyric adding apparatus, comprising: a receiving module, a searching module, a first display module, an acquiring module, and a playing module; wherein

the receiving module is configured to receive a lyric adding instruction for a song accompaniment;

the searching module is configured to search for lyrics associated with the song accompaniment, and display a search result, the search result comprising at least one piece of lyric information of the

5 song accompaniment;

the first displaying module comprises:

a receiving submodule, configured to receive a choosing operation for target lyric information in the search result; and

10 a first displaying submodule, configured to display, according to the choosing operation, lyric data corresponding to the target lyric information in a lyric editing interface;

the acquiring module is configured to acquire the lyric data displayed in the lyric editing interface; and

the playing module is configured to display the lyric data when the song accompaniment is being played.

15

11. The apparatus according to claim 10, wherein

the playing module is further configured to display a progress indicator when the song accompaniment is being played, the progress indicator being configured to indicate a play progress of the song accompaniment; and

20 the apparatus further comprises:

an adjusting module, configured to adjust, if a progress adjustment operation for the progress indicator is detected, the play progress of the song accompaniment according to the progress adjustment operation.

25 12. The apparatus according to claim 10, wherein the first displaying module further comprises:

a second displaying submodule, configured to display, upon receiving the lyric adding instruction for the song accompaniment, the lyric editing interface, a search icon being displayed in the lyric editing interface; and

the searching module is configured to:

30 if an operation of clicking the search icon is detected, search for the lyrics associated with the song accompaniment in a pre-stored accompaniment database, or search for the lyrics associated with the song accompaniment by a predetermined search engine.

13. The apparatus according to claim 10, wherein the first displaying module is configured to:

35 copy the lyric data corresponding to the target lyric information and past the lyric data in the

lyric editing interface according to the choosing operation.

14. The apparatus according to any one of claims 10 to 13, wherein the first displaying module is further configured to:

5 display, upon receiving the lyric adding instruction for the song accompaniment, a name of the song accompaniment in a title bar in the lyric editing interface.

15. The apparatus according to any one of claims 10 to 13, further comprising:

10 a first detecting module, configured to detect, upon receiving a play instruction for the song accompaniment, whether a pre-stored accompaniment database records lyric data corresponding to the song accompaniment;

a second displaying module, configured to display prompt information if the lyric data corresponding to the song accompaniment is not detected, the prompt information being configured to prompt to add the lyric data corresponding to the song accompaniment; and

15 a generating module, configured to generate the lyric adding instruction if a trigger operation for the prompt information is received.

16. The apparatus according to any one of claims 10 to 13, further comprising:

20 a storing module, configured to record, upon acquiring the lyric data displayed in the lyric editing interface, a corresponding relationship between the lyric data and the song accompaniment in a pre-stored accompaniment database;

wherein the playing module is further configured to play the song accompaniment and display the lyric data upon receiving a play instruction for the song accompaniment again.

25 17. The apparatus according to claim 15, further comprising:

a second detecting module, configured to detect, if the lyric data corresponding to the song accompaniment is detected, whether the lyric data is data pre-acquired from a lyric editing interface; and

30 wherein the second displaying module is further configured to display the prompt information if the lyric data is the data pre-acquired from a lyric editing interface.

18. The apparatus according to any one of claims 10 to 13, wherein the playing module is configured to:

35 display the lyric data according to a display format of the lyric data in the lyric editing interface when the song accompaniment is being played.

19. A terminal, comprising a processor and a memory; wherein the memory stores at least one instruction, at least one program, a code set or an instruction set, the at least one instruction, the at least one program, the code set, or the instruction set being executed and loaded by the processor to
5 implement the lyric adding method according to any one of claims 1 to 9.

20. A computer-readable storage medium, wherein the computer-readable storage medium stores at least one instruction, at least one program, a code set or an instruction set, the at least one instruction, the at least one program, the code set, or the instruction set being executed and loaded by a processor
10 to implement the lyric adding method according to any one of claims 1 to 9.