MEDIA DATA GENERATION METHOD AND APPARATUS, ELECTRONIC DEVICE AND STORAGE MEDIUM

[0001] The present application claims priority to Chinese Patent Application No. 202410295348.1, filed on March 14, 2024, which is incorporated herein by reference in its entirety as a part of the present application.

TECHNICAL FIELD

[0002] Embodiments of the present disclosure relate to a media data generation method and apparatus, an electronic device, and a storage medium.

BACKGROUND

[0003] With the development of computer technologies, more and more users have demands for media data creation.

SUMMARY

[0004] The present disclosure provides a media data generation method and apparatus, an electronic device, and a storage medium, which may optimize an interaction manner for generating media data, and improve user experience.

[0005] In a first aspect, an embodiment of the present disclosure provides a media data generation method, including:

[0006] displaying a candidate material area of an interaction page;

[0007] displaying, in response to an interaction event for the candidate material area, the candidate material area and a parameter setting area, the parameter setting area including a parameter setting item, where the interaction event is configured to trigger a display event of the parameter setting area;

[0008] acquiring, in response to a parameter setting event in the parameter setting area, parameter content corresponding to the parameter setting item, and displaying the parameter content at a corresponding position of the parameter setting item, where the parameter content is configured to generate media data; and

[0009] switching, in response to a display event for a generation result area, the candidate material area to be in a folded state, displaying the parameter setting area and the generation result area, and displaying the media data in the generation result area.

[0010] In a second aspect, an embodiment of the present disclosure further provides a media data

generation apparatus, including:

[0011] a first display module, configured to display a candidate material area of an interaction page;

[0012] a second display module, configured to display, in response to an interaction event for the candidate material area, the candidate material area and a parameter setting area, the parameter setting area including a parameter setting item, where the interaction event is configured to trigger a display event of the parameter setting area;

[0013] a parameter acquiring module, configured to acquire, in response to a parameter setting event in the parameter setting area, parameter content corresponding to the parameter setting item, and display the parameter content at a corresponding position of the parameter setting item, where the parameter content is configured to generate media data; and

[0014] a third display module, configured to switch, in response to a display event for a generation result area, the candidate material area to be in a folded state, display the parameter setting area and the generation result area, and display the media data in the generation result area.

[0015] In a third aspect, an embodiment of the present disclosure further provides an electronic device, including:

[0016] one or more processors; and

[0017] a storage apparatus, configured to store one or more programs,

[0018] where the one or more programs, when executed by the one or more processors, are configured to cause the one or more processors to implement the media data generation method according to any embodiment of the present disclosure.

[0019] In a fourth aspect, an embodiment of the present disclosure further provides a storage medium including computer-executable instructions, where the computer-executable instructions, when executed by a computer processor, are configured to perform the media data generation method according to any embodiment of the present disclosure.

BRIEF DESCRIPTION OF DRAWINGS

[0020] The foregoing and other features, advantages, and aspects of the embodiments of the present disclosure will become more apparent in combination with the drawings and with reference to the following specific implementations. Throughout the drawings, the same or similar reference numerals refer to the same or similar elements. It should be understood that the drawings are schematic and that parts and elements are not necessarily drawn to scale.

[0021] Fig. 1 is a schematic flowchart of a media data generation method according to an embodiment of the present disclosure;

[0022] Fig. 2 is a schematic diagram of a layout of an interaction page according to an embodiment of the present disclosure;

[0023] Fig. 3 is a schematic diagram of display of an interaction page according to an embodiment of the present disclosure;

[0024] Fig. 4 is a schematic diagram of page interaction according to an embodiment of the present disclosure;

[0025] Fig. 5 is a schematic diagram of another page interaction according to an embodiment of the present disclosure;

[0026] Fig. 6 is a schematic diagram of another page interaction according to an embodiment of the present disclosure;

[0027] Fig. 7 is a schematic diagram of another page interaction according to an embodiment of the present disclosure;

[0028] Fig. 8 is a schematic diagram of another page interaction according to an embodiment of the present disclosure;

[0029] Fig. 9 is a schematic flowchart of another media data generation method according to an embodiment of the present disclosure;

[0030] Fig. 10 is a schematic diagram of another page interaction according to an embodiment of the present disclosure;

[0031] Fig. 11 is a schematic diagram of a structure of a media data generation apparatus according to an embodiment of the present disclosure; and

[0032] Fig. 12 is a schematic diagram of a structure of an electronic device according to an embodiment of the present disclosure.

[0033] A preset display area is represented by a rectangular box.

DETAILED DESCRIPTION

[0034] Embodiments of the present disclosure will be described in more details below with reference to the drawings. Although some embodiments of the present disclosure are shown in the drawings, it should be understood that the present disclosure may be implemented in various forms and should not be construed as limited to the embodiments set forth herein. On the contrary, these embodiments are provided for a more thorough and complete understanding of the present disclosure. It should be understood that the drawings and embodiments of the present disclosure are only used for illustrative purposes, and are not used to limit the scope of protection of the present disclosure.

[0035] It should be understood that the various steps described in the method implementations of the present disclosure may be executed in different orders, and/or executed in parallel. In addition, the method implementations may include additional steps and/or omit the execution of the steps as shown. The scope of the present disclosure is not limited in this regard.

[0036] As used herein, the term "include/comprise" and its variations are open-ended inclusions, that is,

"include/comprise but not limited to". The term "based on" is "at least partially based on". The term "one embodiment" means "at least one embodiment"; the term "another embodiment" means "at least one other embodiment"; the term "some embodiments" means "at least some embodiments". Relevant definitions of other terms will be given in the following description.

[0037] It should be noted that concepts such as "first" and "second" mentioned in the present disclosure are only used to distinguish different apparatuses, modules, or units, and are not used to limit the order of functions performed by these apparatuses, modules, or units or interdependence therebetween.

[0038] It should be noted that modifiers of "one" and "multiple/a plurality of" mentioned in the present disclosure are illustrative and not restrictive, and those skilled in the art should understand that unless otherwise clearly indicated in the context, they should be understood as "one or multiple/a plurality of".

[0039] The names of messages or information exchanged between multiple apparatuses in the implementations of the present disclosure are only used for illustrative purposes, and are not used to limit the scope of these messages or information.

[0040] It may be understood that before using the technical solutions disclosed in the embodiments of the present disclosure, the user should be informed of the type, range of use, use scenarios, etc., of personal information involved in the present disclosure, and the authorization of the user should be obtained in an appropriate manner according to relevant laws and regulations.

[0041] For example, in response to receiving an active request from a user, prompt information is sent to the user to clearly prompt the user that the requested operation will require access to and use of the user's personal information. In this way, the user may independently choose, according to the prompt information, whether to provide the personal information to software or hardware, such as an electronic device, an application, a server, or a storage medium, that performs the operations of the technical solutions of the present disclosure.

[0042] As an optional but non-limiting implementation, in response to receiving the active request from the user, the prompt information may be sent to the user in the form of, for example, a pop-up window, in which the prompt information may be presented in text. In addition, the pop-up window may also include a selection control for the user to select "agree" or "disagree" to provide the personal information to the electronic device.

[0043] It may be understood that the above process of notifying and obtaining user authorization is only illustrative, and does not limit the implementations of the present disclosure, and other methods that satisfy relevant laws and regulations may also be applied to the implementations of the present disclosure.

[0044] It may be understood that the data involved in the present technical solution (including but not limited to the data itself, acquisition or use of the data) should comply with requirements of corresponding laws, regulations, and related provisions.

[0045] In some embodiments, the media data may be generated based on the prompt information and media materials such as images and videos. Since most users may lack professional knowledge, the

prompt information and/or the media materials need to be adjusted repeatedly to generate the media data that meets the expectations. In order to achieve the repeated adjustment of the prompt information and/or the media materials, it may be necessary to switch back and forth between a parameter setting page and a generation result page to adjust the prompt information and/or the media materials on the parameter setting page and browse the generated media data on the generation result page, which is poor in user experience.

[0046] Fig. 1 is a schematic flowchart of a media data generation method according to an embodiment of the present disclosure. The embodiment of the present disclosure is applicable to a case of generating media data. The method may be performed by a media data generation apparatus, which may be implemented in the form of software and/or hardware, and optionally, implemented by an electronic device, which may be a mobile terminal, a PC, a server, or the like.

[0047] As shown in Fig. 1, the method includes:

[0048] S110, displaying a candidate material area of an interaction page.

[0049] In the embodiment of the present disclosure, the candidate material area includes candidate materials, and the candidate materials are configured to provide parameter reference content, so as to generate media data with similar effects to the candidate materials based on the parameter reference content. For example, the candidate materials include images or videos.

[0050] In some embodiments, the interaction page includes the candidate material area, a parameter setting area, and a generation result area.

[0051] The parameter setting area includes parameter setting items, and the parameter setting items include one or more of a material input item, a prompt input item, a shot setting item, and a model setting item. The model setting item includes prompt relevance, negative prompt, and the like. The generation result area is configured to display the media data. For example, the media data is sequentially displayed in the generation result area according to the generation time.

[0052] Fig. 2 is a schematic diagram of a layout of an interaction page according to an embodiment of the present disclosure. As shown in Fig. 2, the interaction page 200 includes a candidate material area 210, a parameter setting area 220, and a generation result area 230, and the candidate material area 210 and the generation result area 230 are located at two sides of the parameter setting area 220, respectively. For example, in the interaction page 200, the candidate material area 210 is set at the left side of the parameter setting area 220, and the generation result area 230 is set at the right side of the parameter setting area 220.

[0053] Exemplarily, displaying the candidate material area of the interaction page includes:

[0054] acquiring the interaction page, and determining layout information of the candidate material area in the interaction page based on a preset display area, where the preset display area is configured to represent a screen display range; and displaying the candidate material area within the preset display area according to the layout information, where the parameter setting area and the generation result area are located outside the preset display area.

[0055] A length and a height of the candidate material area are adjusted based on a length and a height of the preset display area, and the candidate material area is displayed within the preset display area. Fig. 3 is a schematic diagram of display of an interaction page according to an embodiment of the present disclosure. As shown in Fig. 3, a candidate material area 310 is displayed within a screen display range 300, and a partial area of a parameter setting area 320 and an entire area of a generation result area 330 are located outside the screen display range 300. In some embodiments, the parameter setting area and the generation result area are both located outside the screen display range.

[0056] S120, displaying, in response to an interaction event for the candidate material area, the candidate material area and a parameter setting area, the parameter setting area including a parameter setting item, where the interaction event is configured to trigger a display event of the parameter setting area.

[0057] In the embodiment of the present disclosure, the interaction event for the candidate material area includes: an interaction event for a first control in the candidate material area, or an interaction event for a second control corresponding to a target material in the candidate material area. The target material represents a selected candidate material in the candidate material area.

[0058] The first control represents a control in the candidate material area that is configured to trigger a state switch event of the parameter setting area. The state switch event represents a switch between a folded state and an expanded state. The folded state represents a state in which a target area in the interaction page is not displayed within the preset display area. For example, the folded state may be understood as that the target area is not displayed on the screen. Correspondingly, the expanded state represents a state in which the target area in the interaction page is displayed within the preset display area. For example, the expanded state may be understood as that the target area is displayed on the screen. The target area may include at least one of the candidate material area, the parameter setting area, and the generation result area.

[0059] For example, if the parameter setting area is in the folded state, the parameter setting area is switched to be in the expanded state in response to a click event of the first control; and if the parameter setting area is in the expanded state, the parameter setting area is switched to be in the folded state in response to the click event of the first control.

[0060] In response to a mouse hover event for a target material in the candidate material area, the second control is displayed at a position corresponding to the target material. The second control is configured to trigger the display event of the parameter setting area.

[0061] Exemplarily, displaying the candidate material area and the parameter setting area in response to the interaction event for the candidate material area includes: in response to the interaction event for the candidate material area, reducing the candidate material area, and determining a first display area in the preset display area that does not overlap with the candidate material area; and controlling the parameter setting area to slide into the first display area, so as to display the reduced candidate material area and the parameter setting area in the preset display area. Controlling the parameter setting area to slide into the

first display area includes: controlling the parameter setting area to slide into the first display area from a boundary of the first display area at a set speed.

[0062] Fig. 4 is a schematic diagram of page interaction according to an embodiment of the present disclosure. As shown in Fig. 4, in response to a click event of a first control 420 in a candidate material area 410, a navigation bar is hidden, the candidate material area 410 is slid to the left side of the page to enter a display area of the original navigation bar, and a first display area 440 in a preset display area 430 that does not overlap with the candidate material area 410 is determined; and a parameter setting area 450 is controlled to slide to the left side of the screen to enter the first display area 440, so as to display the reduced candidate material area 410 and the parameter setting area 450 in the preset display area 430. In this way, a material creation scenario where the parameters are adjusted while the materials being browsed is entered.

[0063] Fig. 5 is a schematic diagram of another page interaction according to an embodiment of the present disclosure. As shown in Fig. 5, in response to a mouse hover event for a target material in a candidate material area 510, a second control 520 is displayed at a position corresponding to the target material. In response to a click event of the second control 520, parameter reference content 500 corresponding to the target material is acquired, the candidate material area 510 is reduced, and a first display area 540 in a preset display area 530 that does not overlap with the candidate material area 510 is determined; and a parameter setting area 550 is controlled to slide to the left side of the screen to enter the first display area 540, so as to display the reduced candidate material area 510 and the parameter setting area 550 in the preset display area 530. The parameter reference content 500 is displayed at a corresponding position of a parameter setting item in the parameter setting area 550.

[0064] S130, acquiring, in response to a parameter setting event in the parameter setting area, parameter content corresponding to the parameter setting item, and displaying the parameter content at a corresponding position of the parameter setting item, where the parameter content is configured to generate media data.

[0065] The parameter setting event represents a parameter setting operation for the parameter setting area. The parameter setting operation includes setting the parameter content for the parameter setting item. The parameter content includes prompt information, material information, and target setting information; and the material information includes at least one of a video, an image, and an audio. The target setting information is configured to adjust the prompt information and/or the material information. For example, with the aid of a content generation capability of AIGC (Artificial Intelligence Generated Content) technology, the media data is generated based on the prompt information, the material information, and the target setting information. For example, the media data includes a video, an image or the like.

[0066] Exemplarily, in response to the parameter setting event in the parameter setting area, the prompt information, the material information, and the target setting information that correspond to the parameter setting item are acquired, and the prompt information, the material information, and the target setting

information are displayed at the corresponding position of the parameter setting item, where the target setting information is configured to adjust the prompt information and the material information.

[0067] In some embodiments, if the candidate material area and the parameter setting area are displayed in the preset display area, and the parameter content is displayed at the corresponding position of the parameter setting item in the parameter setting area, when a selection event for a target material in the candidate material area is detected, an information page of the target material and the parameter setting area are displayed. The information page of the target material includes the second control. In response to the click event of the second control, the parameter reference content corresponding to the target material is acquired, and original parameter content at the corresponding position of the parameter setting item is updated based on the parameter reference content.

[0068] Optionally, after the information page of the target material and the parameter setting area are displayed, if a close event for the parameter setting area is detected, the information page of the target material is enlarged, and the parameter setting area is moved out of the preset display area, so as to display the enlarged information page of the target material within the preset display area.

[0069] S140, switching, in response to a display event for a generation result area, the candidate material area to be in a folded state, displaying the parameter setting area and the generation result area, and displaying the media data in the generation result area.

[0070] In the embodiment of the present disclosure, the display event for the generation result area includes a click event for a generation control in the parameter setting area. Optionally, the interaction page further includes a navigation bar, and the display event for the generation result area may be triggered by a click event for a generation control in the navigation bar.

[0071] Exemplarily, in response to the display event for the generation result area, a second display area in the preset display area is determined according to a position of the candidate material area, and the candidate material area is switched to be in the folded state; and the parameter setting area is controlled to slide into the second display area, and the generation result area is controlled to slide into the preset display area, so as to display the parameter setting area and the generation result area in the preset display area. The media data is displayed in the generation result area.

[0072] Fig. 6 is a schematic diagram of another page interaction according to an embodiment of the present disclosure. As shown in Fig. 6, in response to a click event of a generation control 620 in a parameter setting area 610, a display event of a generation result area 630 is triggered. When it is detected that the display event of the generation result area 630 is triggered, a second display area 600 in the preset display area is determined according to a current position of a candidate material area 640, and the candidate material area 640 is switched to be in the folded state, that is, the candidate material area 640 in the interaction page is hidden, and the candidate material area 640 is not displayed in the preset display area. The parameter setting area 610 in the interaction page is controlled to slide towards the second display area 600 to leave a display position for the generation result area 630 in the preset display area,

and the generation result area 630 is controlled to slide into the preset display area, so as to display the parameter setting area 610 and the generation result area 630 in the preset display area, where the parameter setting area 610 and the generation result area 630 do not overlap with each other. The media data is displayed in the generation result area 630. In this way, a switch from the material creation scenario to a result adjustment scenario is achieved. In the result adjustment scenario, the parameters may be adjusted while the generated media data being viewed. In the material creation scenario, the parameters may be adjusted while the candidate materials being browsed.

[0073] Fig. 7 is a schematic diagram of another page interaction according to an embodiment of the present disclosure. As shown in Fig. 7, an interaction page 700 is displayed, where the interaction page 700 includes a navigation bar 710, a candidate material area 720, and a parameter setting area 730, and in response to a click event of a generation control 750 in the navigation bar 710, a display event of a generation result area 740 is triggered. After it is detected that the display event of the generation result area 740 is triggered, an adjustment process of page layout is the same as that in the above embodiment, and details are not repeated here. The parameter setting area and the result generation area are quickly called up through the generation control in the navigation bar, and a video generation operation may be directly performed.

[0074] In the embodiment of the present disclosure, after the parameter setting area and the generation result area are displayed, the method further includes:

[0075] determining, in response to a click event for a return control in the interaction page, a third display area in the preset display area according to a position of the generation result area, and switching the generation result area to be in the folded state; and

[0076] controlling the parameter setting area to slide into the third display area, and switching the candidate material area to be in an expanded state, so as to display the candidate material area and the parameter setting area in the preset display area.

[0077] Fig. 8 is a schematic diagram of another page interaction according to an embodiment of the present disclosure. As shown in Fig. 8, a click operation of a return control 810 in an interaction page 800 is detected, a third display area 830 in the preset display area is determined according to a position of a generation result area 820, and the generation result area 820 is switched to be in the folded state. A parameter setting area 840 is controlled to slide towards the third display area 830, and a candidate material area 850 is switched to be in the expanded state, so as to display the candidate material area 850 and the parameter setting area 840 in the preset display area. In this way, a switch from the result adjustment scenario to the material creation scenario is achieved.

[0078] Optionally, the navigation bar further includes a creation control, and after the parameter setting area and the generation result area are displayed, the method further includes: in response to a click event for the creation control in the navigation bar, determining a third display area in the preset display area according to the position of the generation result area, and switching the generation result area to be in the

folded state; and controlling the parameter setting area to slide into the third display area, and switching the candidate material area to be in the expanded state, so as to display the candidate material area and the parameter setting area in the preset display area.

[0079] Optionally, in a case where the candidate material area and the parameter setting area are displayed in the preset display area, in response to the click event for the first control in the candidate material area, the parameter setting area is switched to be in the folded state, and the candidate material area is enlarged according to the preset display area, so as to display the candidate material area in the preset display area.

[0080] According to the technical solution of the embodiment of the present disclosure, the candidate material area of the interaction page is displayed, and then the candidate material area and the parameter setting area are displayed according to the interaction event in the candidate material area, so that the parameters may be adjusted while the candidate materials being browsed; the parameter content corresponding to the parameter setting item is acquired based on the parameter setting area, so as to generate the media data based on the parameter content after the generation event is triggered; and the parameter setting area and the generation result area are displayed according to the display event of the generation result area, so that the generation results may be browsed while the parameters being adjusted. Therefore, in the embodiment of the present disclosure, the page switching frequency in the process of generating the media data is reduced, the interaction manner for generating the media data is optimized, and the user experience is improved.

[0081] Fig. 9 is a schematic flowchart of another media data generation method according to an embodiment of the present disclosure. In this embodiment, on the basis of the above embodiments, a step of updating the parameter content in the parameter setting area is additionally defined.

[0082] As shown in Fig. 9, the method includes:

[0083] S910, displaying a candidate material area of an interaction page.

[0084] S920, displaying, in response to an interaction event for the candidate material area, the candidate material area and a parameter setting area, the parameter setting area including a parameter setting item, where the interaction event is configured to trigger a display event of the parameter setting area.

[0085] S930, switching, in response to a selection event for a target material in the candidate material area, the candidate material area to an information page of the target material to display the information page of the target material and the parameter setting area, where the information page of the target material includes a second control.

[0086] The information page of the target material may be a detail page of the target material.

[0087] Exemplarily, in a case where the candidate material area and the parameter setting area are displayed, if the selection event for the target material in the candidate material area is detected, the candidate material area is replaced with the information page of the target material, so as to display the information page of the target material in an area corresponding to the candidate material area.

[0088] S940, acquiring, in response to a click event for the second control in the information page of the target material, parameter reference content corresponding to the target material, and displaying the parameter reference content at a corresponding position of the parameter setting item in the parameter setting area.

[0089] The parameter reference content represents a set of parameters required for generating the target material. For example, the parameter reference content includes prompt information, material information, and target setting information that correspond to the target material.

[0090] S950, acquiring, in response to an adjustment event for the parameter reference content in the parameter setting area, parameter adjustment content corresponding to the parameter setting item.

[0091] The adjustment event represents an operation of modifying parameter content of at least one parameter setting item in the parameter setting area. According to the adjustment operation for the parameter reference content in the parameter setting area, the parameter setting item to be modified and the parameter adjustment content are determined. The parameter adjustment content represents the parameter content of the adjusted parameter setting item.

[0092] S960, updating the parameter reference content according to the parameter adjustment content, to update the parameter content of the parameter setting item.

[0093] Fig. 10 is a schematic diagram of another page interaction according to an embodiment of the present disclosure. As shown in Fig. 10, a click operation corresponding to a target material in a candidate material area 1010 is detected, a selection event for the target material is triggered, and an information page 1020 of the target material and a parameter setting area 1030 are displayed. The information page 1020 of the target material includes a second control 1050. In response to a click event for the second control 1050, parameter reference content 1040 corresponding to the target material is acquired, and the parameter reference content 1040 is displayed at a corresponding position of a parameter setting item in the parameter setting area 1030, so as to generate media data similar to the target material based on the parameter reference content 1040.

[0094] Optionally, in a case where the information page of the target material and the parameter setting area are displayed in the preset display area, if a close event for a parameter setting page is detected, the parameter setting page is closed, and the information page of the target material is enlarged according to the preset display area, so as to display the information page of the target material within the preset display area.

[0095] Optionally, in a case where the information page of the target material is displayed within the preset display area, if the click event for the second control is detected, the information page of the target material is reduced, a fourth display area in the preset display area that does not overlap with the information page of the target material is determined, and the parameter setting area is controlled to slide into the fourth display area, so as to display the information page of the target material and the parameter setting area in the preset display area.

[0096] S970, switching, in response to a display event for a generation result area, the candidate material area to be in a folded state, displaying the parameter setting area and the generation result area, generating media data based on the updated parameter content, and displaying the media data in the generation result area.

[0097] According to the technical solution of the embodiment of the present disclosure, the target material is selected, and the parameter setting area is filled based on the parameter reference content of the target material, so that the parameter configuration manner of the target material is used for reference to generate the media data with similar effects to the target material, which may reduce the difficulty in setting parameters in the process of generating the media data, and improve the user experience.

[0098] Fig. 11 is a schematic diagram of a structure of a media data generation apparatus according to an embodiment of the present disclosure. The apparatus may be implemented in the form of software and/or hardware, and optionally, implemented by an electronic device, which may be a mobile terminal, a PC, a server, or the like.

[0099] As shown in Fig. 11, the apparatus includes: a first display module 1110, a second display module 1120, a parameter acquiring module 1130, and a third display module 1140.

[0100] The first display module 1110 is configured to display a candidate material area of an interaction page;

[0101] the second display module 1120 is configured to display, in response to an interaction event for the candidate material area, the candidate material area and a parameter setting area, the parameter setting area including a parameter setting item, where the interaction event is configured to trigger a display event of the parameter setting area;

[0102] the parameter acquiring module 1130 is configured to acquire, in response to a parameter setting event in the parameter setting area, parameter content corresponding to the parameter setting item, and display the parameter content at a corresponding position of the parameter setting item, where the parameter content is configured to generate media data; and

[0103] the third display module 1140 is configured to switch, in response to a display event for a generation result area, the candidate material area to be in a folded state, display the parameter setting area and the generation result area, and display the media data in the generation result area.

[0104] Optionally, the first display module 1110 is further configured to:

[0105] acquire the interaction page, and determine layout information of the candidate material area in the interaction page based on a preset display area, where the preset display area is configured to represent a screen display range; and

[0106] display the candidate material area within the preset display area according to the layout information, where the parameter setting area and the generation result area are located outside the preset display area.

[0107] Optionally, the interaction event for the candidate material area includes:

[0108] a click event for a first control in the candidate material area, or a click event for a second control corresponding to a target material in the candidate material area.

[0109] Optionally, the second display module 1120 is further configured to:

[0110] reduce, in response to the interaction event for the candidate material area, the candidate material area, and determine a first display area in the preset display area that does not overlap with the candidate material area; and

[0111] control the parameter setting area to slide into the first display area, so as to display the reduced candidate material area and the parameter setting area in the preset display area.

[0112] Optionally, the parameter acquiring module 1130 is further configured to:

[0113] acquire, in response to the parameter setting event in the parameter setting area, prompt information, material information, and target setting information that correspond to the parameter setting item, and display the prompt information, the material information, and the target setting information at a corresponding position of the parameter setting item, where the target setting information is configured to adjust the prompt information and/or the material information.

[0114] Optionally, the display event for the generation result area includes:

[0115] a click event for a generation control in the parameter setting area.

[0116] Optionally, the interaction page includes the candidate material area, the parameter setting area, and the generation result area; and the third display module 1140 is further configured to:

[0117] determine, in response to the display event for the generation result area, a second display area in the preset display area according to a position of the candidate material area, and switch the candidate material area to be in the folded state; and

[0118] control the parameter setting area to slide into the second display area, and control the generation result area to slide into the preset display area, so as to display the parameter setting area and the generation result area in the preset display area.

[0119] Optionally, after the parameter setting area and the generation result area are displayed, the method further includes:

[0120] determining, in response to a click event for a return control in the interaction page, a third display area in the preset display area according to the position of the generation result area, and switching the generation result area to be in the folded state; and

[0121] controlling the parameter setting area to slide into the third display area, and switching the candidate material area to be in the expanded state, so as to display the candidate material area and the parameter setting area in the preset display area.

[0122] Optionally, after the candidate material area and the parameter setting area are displayed, the method further includes:

[0123] switching, in response to a selection event for a target material in the candidate material area, the candidate material area to an information page of the target material to display the information page of the

target material and the parameter setting area, where the information page of the target material includes a second control; and

[0124] acquiring, in response to a click event for the second control in the information page of the target material, parameter reference content corresponding to the target material, and displaying the parameter reference content at a corresponding position of the parameter setting item in the parameter setting area.

[0125] The media data generation apparatus provided by the embodiment of the present disclosure may perform the media data generation method provided by any embodiment of the present disclosure, and has functional modules and beneficial effects corresponding to the method as performed.

[0126] It is worth noting that the units and modules included in the above apparatus are only divided according to functional logic, but are not limited to the above division, as long as the corresponding functions may be implemented; in addition, the specific names of the functional units are only for the convenience of distinguishing from each other, and are not used to limit the scope of protection of the embodiments of the present disclosure.

[0127] Fig. 12 is a schematic diagram of a structure of an electronic device according to an embodiment of the present disclosure. Reference is made to Fig. 12 below, which illustrates a schematic diagram of a structure of an electronic device (e.g., a terminal device or a server in Fig. 12) 1200 suitable for implementing the embodiments of the present disclosure. The terminal device in the embodiment of the present disclosure may include, but is not limited to, mobile terminals such as a mobile phone, a notebook computer, a digital broadcast receiver, a PDA (personal digital assistant), a tablet computer, a PMP (portable multimedia player), a vehicle-mounted terminal (e.g., a vehicle-mounted navigation terminal), etc., and fixed terminals such as a digital TV, a desktop computer, etc. The electronic device shown in Fig. 12 is only an example, and should not impose any limitation on the functions and the range of use of the embodiments of the present disclosure.

[0128] As shown in Fig. 12, the electronic device 1200 may include a processing apparatus (e.g., a central processing unit, a graphics processor, etc.) 1201, which may perform various appropriate actions and processing according to a program stored in a read-only memory (ROM) 1202 or a program loaded from a storage apparatus 1208 into a random-access memory (RAM) 1203. In the RAM 1203, various programs and data required for operations of the electronic device 1200 are also stored. The processing apparatus 1201, the ROM 1202, and the RAM 1203 are interconnected by means of a bus 1204. An input/output (I/O) interface 1205 is also connected to the bus 1204.

[0129] Usually, the following apparatuses may be connected to the I/O interface 1205: an input apparatus 1206 including, for example, a touch screen, a touchpad, a keyboard, a mouse, a camera, a microphone, an accelerometer, a gyroscope, etc.; an output apparatus 1207 including, for example, a liquid crystal display (LCD), a speaker, a vibrator, etc.; the storage apparatus 1208 including, for example, a magnetic tape, a hard disk, etc.; and a communication apparatus 1209. The communication apparatus 1209 may allow the electronic device 1200 to have wireless or wired communication with other devices to

exchange data. Although Fig. 12 shows the electronic device 1200 having various apparatuses, it should be understood that it is not required to implement or have all of the apparatuses as shown. Alternatively, more or fewer apparatuses may be implemented or provided.

[0130] In particular, according to the embodiments of the present disclosure, the processes described above with reference to the flowcharts may be implemented as computer software programs. For example, the embodiments of the present disclosure include a computer program product, which includes a computer program carried on a non-transitory computer-readable medium, where the computer program includes program code for performing the method shown in the flowchart. In such an embodiment, the computer program may be downloaded and installed from a network via the communication apparatus 1209, or installed from the storage apparatus 1208, or installed from the ROM 1202. When the computer program is executed by the processing apparatus 1201, the above-mentioned functions defined in the method of the embodiment of the present disclosure are executed.

[0131] The names of messages or information exchanged between multiple apparatuses in the implementations of the present disclosure are only used for illustrative purposes, and are not used to limit the scope of these messages or information.

[0132] The electronic device provided by the embodiment of the present disclosure belongs to the same inventive concept as the media data generation method provided by the above embodiment, and for the technical details not described in detail in this embodiment, reference may be made to the above embodiment, and this embodiment has the same beneficial effects as the above embodiment.

[0133] An embodiment of the present disclosure provides a computer storage medium having a computer program stored thereon, where the program, when executed by a processor, implements the media data generation method provided by the above embodiment.

[0134] It should be noted that the computer-readable medium mentioned above in the present disclosure may be a computer-readable signal medium, a computer-readable storage medium, or any combination thereof. The computer-readable storage medium may be, for example, but not limited to, an electrical, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, device, or any combination thereof. More specific examples of the computer-readable storage medium may include, but are not limited to: an electrically connected portable computer disk with one or more wires, a hard disk, a random-access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or flash memory), an optical fiber, a portable compact disk read-only memory (CD-ROM), an optical storage device, a magnetic storage device, or any suitable combination thereof. In the present disclosure, the computer-readable storage medium may be any tangible medium that contains or stores a program, which may be used by or in combination with an instruction execution system, apparatus, or device. In the present disclosure, the computer-readable signal medium may include a data signal propagated on a baseband or as a part of a carrier, and computer-readable program code is carried therein. This propagated data signal may take many forms, including but not limited to, an

electromagnetic signal, an optical signal, or any suitable combination thereof. The computer-readable signal medium may also be any computer-readable medium other than the computer-readable storage medium, and the computer-readable signal medium may send, propagate, or transmit the program used by or in combination with the instruction execution system, apparatus, or device. The program code contained on the computer-readable medium may be transmitted in any suitable medium, including but not limited to: a wire, an optical cable, a radio frequency (RF), etc., or any suitable combination thereof.

[0135] In some implementations, clients and servers may communicate using any currently known or future developed network protocol, such as the hypertext transfer protocol (HTTP), and may be interconnected with any form or medium of digital data communication (for example, a communication network). Examples of the communication network include a local area network ("LAN"), a wide area network ("WAN"), an internet (for example, the Internet), a peer-to-peer network (for example, an Ad-Hoc network), and any network currently known or to be developed in the future.

[0136] The computer-readable medium may be contained in the electronic device or may exist alone without being assembled into the electronic device.

[0137] The computer-readable medium carries one or more programs that, when executed by the electronic device, cause the electronic device to:

[0138] display a candidate material area of an interaction page;

[0139] display, in response to an interaction event for the candidate material area, the candidate material area and a parameter setting area, the parameter setting area including a parameter setting item, where the interaction event is configured to trigger a display event of the parameter setting area;

[0140] acquire, in response to a parameter setting event in the parameter setting area, parameter content corresponding to the parameter setting item, and display the parameter content at a corresponding position of the parameter setting item, where the parameter content is configured to generate media data; and

[0141] switch, in response to a display event for a generation result area, the candidate material area to be in a folded state, display the parameter setting area and the generation result area, and display the media data in the generation result area.

[0142] The computer program code for performing the operations of the present disclosure may be written in one or more programming languages or a combination thereof, the programming languages including but not limited to object-oriented programming languages such as Java, Smalltalk, C++, and conventional procedural programming languages such as "C" language or similar programming languages. The program code may be executed entirely on a computer of a user, partly on the computer of the user, as a stand-alone software package, partly on the computer of the user and partly on a remote computer, or entirely on the remote computer or a server. In the case of the remote computer, the remote computer may be connected to the computer of the user through any kind of network, including a local area network (LAN) or a wide area network (WAN), or it may be connected to an external computer (for example, connected via the Internet using an Internet service provider).

[0143] The flowcharts and block diagrams in the drawings illustrate the possibly implemented architectures, functions, and operations of the system, the method, and the computer program product according to various embodiments of the present disclosure. In this regard, each block in the flowchart or block diagram may represent a module, a program segment, or a part of code, which contains one or more executable instructions for implementing the specified logical functions. It should also be noted that, in some alternative implementations, the functions marked in the blocks may also occur in an order different from that marked in the drawings. For example, two blocks shown in succession may actually be executed substantially in parallel, or they may sometimes be executed in the reverse order, depending on the functions involved. It should also be noted that each block in the block diagram and/or the flowchart, and a combination of the blocks in the block diagram and/or the flowchart may be implemented by a dedicated hardware-based system that executes specified functions or operations, or may be implemented by a combination of dedicated hardware and computer instructions.

[0144] The units involved in the embodiments of the present disclosure may be implemented by software or hardware. The name of a unit does not constitute a limitation on the unit itself under certain circumstances.

[0145] The functions described above herein may be performed at least in part by one or more hardware logic components. For example, without limitation, exemplary types of hardware logic components that may be used include: field programmable gate arrays (FPGAs), application specific integrated circuits (ASICs), application specific standard products (ASSPs), system on chips (SOCs), complex programmable logic devices (CPLDs), etc.

[0146] In the context of the present disclosure, a machine-readable medium may be a tangible medium that may contain or store a program for use by or in combination with an instruction execution system, apparatus, or device. The machine-readable medium may be a machine-readable signal medium or a machine-readable storage medium. The machine-readable medium may include, but is not limited to, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, or device, or any suitable combination thereof. More specific examples of the machine-readable storage medium may include: an electrical connection based on one or more wires, a portable computer disk, a hard disk, a random-access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or flash memory), an optical fiber, a portable compact disk read-only memory (CD-ROM), an optical storage device, a magnetic storage device, or any suitable combination thereof.

[0147] The above description is only preferred embodiments of the present disclosure and an explanation of the technical principles as employed. Those skilled in the art should understand that the scope of disclosure involved in the present disclosure is not limited to the technical solutions formed by the specific combination of the above technical features, and should also cover, without departing from the above disclosed concept, other technical solutions formed by any combination of the above technical features or their equivalent features. For example, a technical solution formed by replacing the above features with

technical features having similar functions disclosed in the present disclosure (but not limited to).

[0148] In addition, although the various operations are depicted in a particular order, this should not be understood as requiring the operations to be performed in the particular order as shown or in a sequential order. Under certain circumstances, multitasking and parallel processing may be advantageous. Likewise, although the above discussion contains a number of specific implementation details, these should not be construed as limiting the scope of the present disclosure. Certain features that are described in the context of separate embodiments may also be implemented in combination in a single embodiment. Conversely, various features described in the context of a single embodiment may also be implemented in multiple embodiments individually or in any suitable sub-combination.

[0149] Although the subject matter has been described in language specific to structural features and/or logical actions of the method, it should be understood that the subject matter defined in the appended claims is not necessarily limited to the specific features or actions described above. On the contrary, the specific features and actions described above are only example forms for implementing the claims.

CLAIMS

1. A media data generation method, comprising:

displaying a candidate material area of an interaction page;

displaying, in response to an interaction event for the candidate material area, the candidate material area and a parameter setting area, the parameter setting area comprising a parameter setting item, wherein the interaction event is configured to trigger a display event of the parameter setting area;

acquiring, in response to a parameter setting event in the parameter setting area, parameter content corresponding to the parameter setting item, and displaying the parameter content at a corresponding position of the parameter setting item, wherein the parameter content is configured to generate media data; and

switching, in response to a display event for a generation result area, the candidate material area to be in a folded state, displaying the parameter setting area and the generation result area, and displaying the media data in the generation result area.

2. The method of claim 1, wherein displaying the candidate material area of the interaction page comprises:

acquiring the interaction page, and determining layout information of the candidate material area in the interaction page based on a preset display area, wherein the preset display area is configured to represent a screen display range; and

displaying the candidate material area within the preset display area according to the layout information, wherein the parameter setting area and the generation result area are located outside the preset display area.

3. The method of claim 2, wherein the interaction event for the candidate material area comprises:

a click event for a first control in the candidate material area, or a click event for a second control that is in the candidate material area and is corresponding to a target material.

4. The method of claim 3, wherein displaying, in response to the interaction event for the candidate material area, the candidate material area and the parameter setting area comprises:

reducing, in response to the interaction event for the candidate material area, the candidate material area, and determining a first display area in the preset display area that does not overlap with the candidate material area; and

controlling the parameter setting area to slide into the first display area, so as to display the reduced candidate material area and the parameter setting area in the preset display area.

5. The method of claim 4, wherein acquiring, in response to the parameter setting event in the parameter setting area, the parameter content corresponding to the parameter setting item comprises:

acquiring, in response to the parameter setting event in the parameter setting area, prompt information, material information, and target setting information that correspond to the parameter setting item, and displaying the prompt information, the material information, and the target setting information at the corresponding position of the parameter setting item, wherein the target setting information is configured to adjust the prompt information and/or the material information.

6. The method of any one of claims 1 to 5, wherein the display event for the generation result area comprises:

a click event for a generation control in the parameter setting area.

7. The method of any one of claims 1 to 6, wherein the interaction page comprises the candidate material area, the parameter setting area, and the generation result area; and switching, in response to the display event for the generation result area, the candidate material area to be in the folded state, and displaying the parameter setting area and the generation result area comprises:

determining, in response to the display event for the generation result area, a second display area in a preset display area according to a position of the candidate material area, and switching the candidate material area to be in the folded state; and

controlling the parameter setting area to slide into the second display area, and controlling the generation result area to slide into the preset display area, so as to display the parameter setting area and the generation result area in the preset display area.

8. The method of any one of claims 1 to 7, wherein after displaying the parameter setting area and the generation result area, the method further comprises:

determining, in response to a click event for a return control in the interaction page, a third display area in a preset display area according to a position of the generation result area, and switching the generation result area to be in the folded state; and

controlling the parameter setting area to slide into the third display area, and switching the candidate material area to be in an expanded state, so as to display the candidate material area and the parameter setting area in the preset display area.

9. The method of any one of claims 1 to 8, wherein after displaying the candidate material area and the parameter setting area, the method further comprises:

switching, in response to a selection event for a target material in the candidate material area, the candidate material area to an information page of the target material to display the information page of the target material and the parameter setting area, wherein the information page of the target material comprises a second control; and

acquiring, in response to a click event for the second control in the information page of the target material, parameter reference content corresponding to the target material, and displaying the parameter reference content at the corresponding position of the parameter setting item in the parameter setting area.

10. A media data generation apparatus, comprising:

a first display module, configured to display a candidate material area of an interaction page;

a second display module, configured to display, in response to an interaction event for the candidate material area, the candidate material area and a parameter setting area, the parameter setting area comprising a parameter setting item, wherein the interaction event is configured to trigger a display event of the parameter setting area;

a parameter acquiring module, configured to acquire, in response to a parameter setting event in the parameter setting area, parameter content corresponding to the parameter setting item, and display the parameter content at a corresponding position of the parameter setting item, wherein the parameter content is configured to generate media data; and

a third display module, configured to switch, in response to a display event for a generation result area, the candidate material area to be in a folded state, display the parameter setting area and the generation result area, and display the media data in the generation result area.

11. An electronic device, comprising:

one or more processors; and

a storage apparatus, configured to store one or more programs,

wherein the one or more programs, when executed by the one or more processors, are configured to cause the one or more processors to implement the media data generation method of any one of claims 1 to 9.

12. A storage medium comprising computer-executable instructions, wherein the computer-executable instructions, when executed by a computer processor, are configured to cause the computer processor to implement the media data generation method of any one of claims 1 to 9.