

METHOD, APPARATUS, DEVICE, STORAGE MEDIUM AND PROGRAM PRODUCT FOR INTERACTION

[0001] This application claims priority to Chinese Patent Application No. 202411896638.8, filed on December 20, 2024, and entitled "METHOD, APPARATUS, DEVICE, STORAGE MEDIUM AND PROGRAM PRODUCT FOR INTERACTION", which is hereby incorporated by reference in its entirety.

TECHNICAL FIELD

[0002] Example embodiments of the disclosure generally relate to the field of computers, and in particular, to a method, an apparatus, an electronic device, a computer-readable storage medium, and a computer program product for interaction.

BACKGROUND

[0003] Currently, more and more applications are designed to provide various services to users. For example, a user may post, browse, and view media items in an application. The media items may include various types of content such as videos, images, image sets, text, audio, and the like. To improve the degree of interaction with users, the application may further provide an element related to a virtual resource in a user interface. The application may perform an interaction task related to the virtual resource in response to the element being triggered. The application may provide a viewing entry associated with the virtual resource to the user in response to the interaction task being completed.

SUMMARY

[0004] In a first aspect of the disclosure, a method for interaction is provided. The method includes: presenting an interactive interface element in a user interface, the interactive interface element including a first element and a second element, an appearance style of the first element being determined based on a type of a virtual resource corresponding to an interaction task, and presented content of the second element including an identification of the virtual resource; and updating the interactive interface element in response to a change in completion progress of the interaction task.

[0005] In a second aspect of the disclosure, an apparatus for interaction is provided. The apparatus includes: an element presenting module configured to present an interactive interface element in a user interface, the interactive interface element including a first element and a second element, an appearance style of the first element being determined based on a type of a virtual resource corresponding to an interaction task, and presented content of the second element including an identification of the virtual resource; and an element updating module configured to update the interactive interface element in response to a change in completion progress of the interaction task.

[0006] In a third aspect of the disclosure, an electronic device is provided. The device includes at least one processor; and at least one memory, the at least one memory being coupled to the at least one processor and storing instructions executable by the at least one processor. The instructions, when executed by the at least one

processor, cause the electronic device to perform the method of the first aspect.

[0007] In a fourth aspect of the disclosure, a computer-readable storage medium is provided. The computer-readable storage medium has stored thereon computer-executable instructions which, when executed by a processor, implement the method of the first aspect.

[0008] In a fifth aspect of the disclosure, a computer program product is provided. The computer program product includes computer-executable instructions which, when executed by a processor, implement the method of the first aspect.

[0009] It should be understood that the content described in this Summary section is neither intended to identify key or essential features of the embodiments of the disclosure, nor is it intended to limit the scope of the disclosure. Other features of the disclosure will be readily envisaged through the following description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The above and other features, advantages, and aspects of the embodiments of the disclosure will become more apparent in combination with the drawings and with reference to the following detailed description. In the drawings, the same or similar reference symbols refer to the same or similar elements, where:

[0011] Fig. 1 shows a schematic diagram of an example environment in which the embodiments of the disclosure may be implemented;

[0012] Fig. 2 shows a schematic diagram of an example user interface according to some embodiments of the disclosure;

[0013] Fig. 3A shows an example of presenting an interactive interface element according to some embodiments of the disclosure;

[0014] Fig. 3B shows an example of presenting an interactive interface element according to some other embodiments of the disclosure;

[0015] Fig. 3C shows an example of a plurality of appearance styles of an interactive interface element according to some embodiments of the disclosure;

[0016] Fig. 4 shows an example according to some embodiments of the disclosure;

[0017] Fig. 5 shows a schematic diagram of an example obtaining interface for a virtual resource according to some embodiments of the disclosure;

[0018] Fig. 6 shows a flowchart of a method for interaction according to some embodiments of the disclosure;

[0019] Fig. 7 shows an illustrative structural block diagram of an apparatus for interaction according to some embodiments of the disclosure; and

[0020] Fig. 8 shows a block diagram of an electronic device in which one or more embodiments of the disclosure may be implemented.

DETAILED DESCRIPTION OF EMBODIMENTS

[0021] The embodiments of the disclosure will be described in more detail below with reference to the drawings. Although some embodiments of the disclosure are shown in the drawings, it should be understood that the disclosure may be implemented in various forms and should not be construed as limited to the embodiments set forth herein. Instead, these embodiments are provided for a more thorough and complete understanding of the

disclosure. It should be understood that the drawings and embodiments of the disclosure are only for illustrative purposes, and are not intended to limit the protection scope of the disclosure.

[0022] In the description of the embodiments of the disclosure, the term "include/comprise" and similar terms should be understood as open-ended inclusions, that is, "include/comprise but not limited to". The term "based on" should be understood as "at least partially based on". The term "an embodiment" or "the embodiment" should be understood as "at least one embodiment". The term "some embodiments" should be understood as "at least some embodiments". The following may also include other explicit and implicit definitions.

[0023] Herein, performing a step "in response to A" does not mean that the step is performed immediately after "A", but may include one or more intermediate steps, unless explicitly stated.

[0024] It may be understood that the data involved in the technical solution (including but not limited to the data itself, obtaining or use of the data) should comply with the requirements of corresponding laws, regulations and related provisions.

[0025] It may be understood that before using the technical solutions disclosed in the embodiments of the disclosure, the user should be informed of the type, range of use, use scenarios, etc., of personal information involved in the disclosure and the authorization of the user should be obtained in an appropriate manner in accordance with relevant laws and regulations.

[0026] 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, so that the user may independently choose, based on 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 disclosure.

[0027] 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 whether to "agree" or "disagree" to provide the personal information to the electronic device.

[0028] 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 disclosure, and other methods that satisfy the relevant laws and regulations may also be applied to the implementations of the disclosure.

[0029] Fig. 1 shows a schematic diagram of an example environment 100 in which the embodiments of the disclosure may be implemented. In this example environment 100, an application 120 is installed on a terminal device 110. A user 140 may interact with the application 120 via the terminal device 110 and/or an attachment device of the terminal device 110.

[0030] In some embodiments, the application 120 may be a content sharing application (for example, a video application mainly for video sharing), which may provide the user 140 with various services related to media items (which may also be referred to as media content, media content items, content items, etc.), including browsing, commenting, forwarding, creation (for example, capturing and/or editing), posting, and the like of the media items. In some embodiments, the application 120 may also be any other appropriate application in which media content may be displayed. The media content may include one or more types of content, such as video,

image, gif, image set, audio, text, and the like.

[0031] In the environment 100 of Fig. 1, if the application 120 is active, the terminal device 110 may present an interface 150 of the application 120. The interface 150 may include various interfaces that may be provided by the application 120, such as a content presentation interface, a content creation interface, a content posting interface, a message interface, a personal homepage, and the like. The application 120 may provide a content viewing function to view various types of content posted in the application 120.

[0032] In some embodiments, the terminal device 110 communicates with the server 130 to implement provision of the services of the application 120. The terminal device 110 may be any type of mobile terminal, fixed terminal, or portable terminal, including a mobile phone, a desktop computer, a laptop computer, a notebook computer, a netbook computer, a tablet computer, a media computer, a multimedia tablet, a personal communication system (PCS) device, a personal navigation device, a personal digital assistant (PDA), an audio/video player, a digital camera/video camera, a positioning device, a television receiver, a radio broadcast receiver, an e-book device, a gaming device, or any combination of the foregoing, including the accessories and peripherals of these devices or any combination thereof. In some embodiments, the terminal device 110 may also support any type of user-specific interface (such as "wearable" circuit, etc.). The server 130 may be various types of computing systems/servers that may provide computing power, including but not limited to mainframes, edge computing nodes, computing devices in cloud environments, and the like.

[0033] It should be understood that the structures and functions of the elements in the environment 100 are described for illustrative purposes only, and do not imply any limitation on the scope of the disclosure.

[0034] As mentioned above, the application may provide an interface element related to a virtual resource in a user interface. The interface element may be used to indicate an interaction task related to the virtual resource. The application may provide a user with a viewing entry associated with the virtual resource in response to the interaction task being completed. Traditionally, an interface element related to a virtual resource is usually presented in a user interface of an application with a fixed appearance style, and the fixed appearance style may not be a style that users are interested in, which reduces the probability of users triggering the element. In addition, traditionally, a fixed appearance style (for example, presenting a circular progress bar on the periphery of the element) is also commonly used to indicate the completion progress of an interaction task. This also cannot intuitively present specific information of the completion progress to the user, and there may be problems of unclear expression and difficulty for the user to understand.

[0035] In view of this, an improved solution for interaction is proposed according to the embodiments of the disclosure. According to the solution of the embodiments of the disclosure, an interactive interface element is presented in a user interface, wherein the interactive interface element includes a first element and a second element. An appearance style of the first element is determined based on a type of a virtual resource corresponding to an interaction task, and presented content of the second element includes an identification of the virtual resource. The interactive interface element is updated in response to a change in completion progress of the interaction task.

[0036] According to the above embodiments, in the presentation of the interactive interface element, the appearance style of the element may be determined based on the specific type and identification of the virtual resource, which makes the appearance of the interactive interface element more diverse, and allows the user to

quickly know the virtual resource corresponding to the interaction task from the appearance. In addition, the content to be presented may also be dynamically updated based on the completion progress of the interaction task, and the state of task may be quickly fed back during the execution of the interaction task, which may improve the user experience when the user executes the interaction task.

[0037] Some example embodiments of the disclosure will be further described below with reference to the drawings. It should be noted that the interfaces shown in the drawings of the disclosure are only examples, and there may be various interface designs. The graphic elements on an interface may have different arrangements and different visual representations, one or more of the elements may be omitted or replaced, and there may also be one or more other elements. The embodiments of the disclosure are not limited in this regard.

[0038] The method for interaction according to the disclosure may be implemented on the terminal device 110. It should be noted that the operations performed by the terminal device 110 may be specifically performed by a related application (for example, the application 120) installed on the terminal device 110. Some operations described with reference to the terminal device 110 may need the assistance of the server 130 to be completed.

[0039] In the embodiments of the disclosure, the terminal device 110 may present various user interfaces of the application, and present the interactive interface element in the user interface. Referring to Fig. 2, Fig. 2 shows a schematic diagram of an example user interface 200 according to some embodiments of the disclosure. The terminal device 110 may present an interactive interface element 210 in the user interface 200. The user interface 200 may be, for example, a user interface presented by the application 120. In some embodiments, the interactive interface element may be presented in any appropriate user interface or page of the application 120, which is configurable. The embodiments of the disclosure do not limit the user interface or page presented by the interactive interface element.

[0040] In the embodiments of the disclosure, the interactive interface element is configured to include at least a first element and a second element. Referring to Fig. 3A, Fig. 3A shows an example 300A of presenting an interactive interface element according to some embodiments of the disclosure. Example 300A shows an example of an interactive interface element, which includes an element 301 (which may correspond to the first element) and an element 302 (which may correspond to the second element). An appearance style of the element 301 is determined based on a type of a virtual resource corresponding to an interaction task. The element 302 is configured as a content presentation area, and the presented content therein may be updated based on a task state of the interaction task. In an initial stage of the interaction task, the presented content of the element 302 includes an identification of the virtual resource.

[0041] Here, the interaction task may be any appropriate task configured in a user interaction procedure. By way of example only, the interaction task may be a content browsing task, for example, browsing content (for example, a video) for a period of time, or the interaction task may include performing an interaction behavior, such as liking, following, or commenting on, the presented content, or other configurable interaction tasks. It may be understood that the disclosure does not limit the specific interaction task.

[0042] The virtual resource, which may sometimes be called as an incentive, refers to a resource or an incentive that the user may obtain after completing the interaction task. Examples of the virtual resource may include but be not limited to physical or virtual objects, coupons, incentive points, and the like. In some embodiments, the appearance style of the element 301 may be configured to present an image or icon corresponding to the type of

the virtual resource. The presented content of the element 302 includes the identification of the virtual resource. The identification of the virtual resource may include an icon, a thumbnail, a name, a number, or the like, corresponding to the virtual resource. The virtual resource associated with the interaction task is configurable. The disclosure does not limit the specific virtual resource.

[0043] The virtual resource is selected from multiple candidate virtual resources based on respective priorities of the multiple candidate virtual resources. The multiple candidate virtual resources may be predetermined, and the respective priorities of the multiple candidate virtual resources may also be predetermined. The respective priorities of the multiple candidate virtual resources may be predetermined by a related user, or may be determined by the terminal device 110 on its own based on respective resource information of the multiple candidate virtual resources.

[0044] In some embodiments, when presenting the interactive interface element, a ceasing control for the interactive interface element may also be provided. Referring to Fig. 3A, example 300A of the interactive interface element may include a ceasing control 303. The terminal device 110 may cease presenting the interactive interface element in response to receiving a trigger on the ceasing control 303.

[0045] In some embodiments, the terminal device 110 may further present, in association with the interactive interface element, prompt information indicating the interaction task in response to determining that the interactive interface element is presented. As an example, if the interaction task is a content browsing task, the prompt information may include the text "Watch videos to obtain resources, resources can be obtained for watching videos for XX seconds ". It may be understood that the prompt information here and the texts in other subsequent information are only examples, and may actually include any appropriate text.

[0046] In some embodiments, the terminal device 110 may directly present the prompt information indicating the interaction task in response to determining that the interactive interface element is presented. Alternatively, the terminal device 110 may also present the prompt information indicating the interaction task in response to determining that the interactive interface element is presented and that a presentation duration of the interactive interface element reaches a predetermined duration (which may be any appropriate duration). For example, the terminal device 110 may present, in association with the interactive interface element, the prompt information indicating the interaction task in response to the interactive interface element being presented for several seconds.

[0047] Referring to Fig. 3B, Fig. 3B shows an example 300B of presenting an interactive interface element according to some other embodiments of the disclosure. Example 300B includes an interactive interface element and prompt information 304 indicating an interaction task, where the interactive interface element includes an element 301 and an element 302. Although not shown in Fig. 3B, in the case where the interactive interface element and the prompt information are presented at the same time, the terminal device 110 may present a ceasing control for the interactive interface element and the prompt information.

[0048] In some embodiments, the terminal device 110 may further cease presenting the prompt information in response to the prompt information indicating the interaction task being presented for a predetermined duration (which may be any appropriate duration). The specific presentation duration of different prompt information may be configured according to the specific application and scenario. For example, the terminal device 110 may cease presenting the prompt information in response to the prompt information indicating the interaction task being presented for several seconds. Therefore, by providing the prompt information, the interaction task may

be better guided, which may help the user better understand the interaction task, and contribute to the improvement of the user experience.

[0049] The state in which the interactive interface element and the associated prompt information are presented together may be referred to as an expanded state of the interactive interface element, as in the example shown in Fig. 3B. The presentation of the interactive interface element alone may be referred to as a collapsed state of the interactive interface element, as in the example shown in Fig. 3A. Generally, the presentation duration of the expanded state may be limited (the specific duration is configurable), which may avoid disturbance of excessive information. After the presentation of the expanded state is completed, the interactive interface element may be presented in the collapsed state.

[0050] In some embodiments, within a predetermined period of time (which may be, for example, any appropriate period of time such as 1 day, 3 days, 1 week, etc.), if it is determined that the interactive interface element has been presented but the interaction task has not been performed, then the next time the interactive interface element needs to be presented (for example, the next time the user interface is presented, the next time the application is launched, etc.), another virtual resource may be selected from the multiple candidate virtual resources, and the interactive interface element may be determined and presented based on the selected virtual resource. Among the multiple candidate virtual resources, the priority of the currently selected virtual resource may be, for example, only second to the priority of the previously selected virtual resource. In this case, when presenting the interactive interface element, an appearance style of the first element of the interactive interface element presented by the terminal device 110 is determined based on a type of the virtual resource corresponding to the interaction task, and presented content of the second element includes an identification of the currently selected virtual resource.

[0051] Referring to Fig. 3C, Fig. 3C shows an example 300C of multiple appearance styles of an interactive interface element according to some embodiments of the disclosure. If the interactive interface element included in the user interface last time is the interactive interface element 310, and it is detected that the interaction task has not been performed, the interactive interface element presented by the terminal device 110 this time may be the interactive interface element 320. An appearance style of an element 311 of the interactive interface element 310 is determined based on a type of resource A, and presented content of an element 312 includes a name of the resource A. An appearance style of the element 321 of the interactive interface element 320 is determined based on a type of a resource B, and presented content of the element 322 includes a name of the resource B. The priority of the resource B may be, for example, only second to the priority of the resource A. Therefore, in the case where the interaction task has not been triggered, the terminal device 110 may determine the appearance style of the interactive interface element in turns based on the respective priorities of the multiple candidate virtual resources. Therefore, based on the multiple virtual resources, interactive interface elements with different appearance styles may be provided, which helps to improve the possibility of executing the interaction task.

[0052] In some embodiments, the terminal device 110 may further determine the appearance style and the presented content of the first element and the second element in the interactive interface element in response to detecting that the interaction task has started to be executed, and keep the appearance style within a predetermined period of time. For example, if the interaction task has been performed during the presentation of the interactive interface element 310 in example 300C, the appearance styles of the interactive interface elements

subsequently presented by the terminal device 110 within the predetermined period of time may all be determined based on the resource A previously presented in the interactive interface element 310.

[0053] The terminal device 110 also updates the interactive interface element in response to the change in the completion progress of the interaction task. For example, after detecting that the execution of the interaction task has started, the terminal device 110 may update the interactive interface element based on the completion progress of the interaction task. In some embodiments, in the updated interactive interface element, the appearance style of the first element is updated based on the type of the virtual resource, and the updated first element may present an image corresponding to the type of the virtual resource and the guidance information for obtaining the virtual resource. The guidance information may include, for example, the text "obtaining virtual resource XX". In the updated interactive interface element, the presented content of the second element is determined based on the completion progress of the interaction task.

[0054] In some embodiments, if it is determined that the interaction task is in progress, the terminal device 110 may update the interactive interface element to cause the second element to present the in-progress state of the interaction task. The terminal device 110 may update the interactive interface element to cause the second element to present any appropriate content, such as a countdown or a progress bar, to indicate the in-progress state of the interaction task. If it is determined that the interaction task has been completed, the terminal device 110 may update the interactive interface element to cause the second element to present the guidance information of the incentive path corresponding to the interaction task. The incentive path here indicates the obtaining manner of the virtual resource. The terminal device 110 may update the interactive interface element to cause the second element to present the text "to obtain ", "to obtain the resource", etc., so that the second element presents the guidance information for the incentive path corresponding to the interaction task. Therefore, the second element may intuitively display the completion state of the interaction task, which may help to improve the user experience when the user executes the interaction task.

[0055] In some embodiments, in response to determining that the interaction task has been completed, the terminal device 110 may further present, in association with the interactive interface element, the prompt information indicating the completion state of the interaction task and the viewing entry for the incentive path corresponding to the interaction task. As an example, the prompt information may include the text "got the chance to obtain resources ", "get one chance to obtain resources ", and the like. The terminal device 110 may further cease presenting the prompt information and may maintain presenting the updated interactive interface element in response to the prompt information indicating the completion state of the interaction task being presented for a predetermined duration (which may be any appropriate duration). For example, the terminal device 110 may cease presenting the prompt information and maintain presenting the updated interactive interface element in response to the prompt information indicating the completion state of the interaction task being presented for 15 seconds. In some embodiments, the viewing entry and the prompt information are set to be presented at the same time. In this case, the terminal device 110 may synchronously cease presenting the viewing entry in response to determining to cease presenting the prompt information.

[0056] Fig. 4 shows an example 400 according to some embodiments of the disclosure. Example 400 shows an interactive interface element presented at different stages and prompt information that may be presented in association therewith.

[0057] As shown in example 400, in the initial stage, the terminal device 110 may present an interactive interface element 405 in the user interface. The interactive interface element 405 includes an element 401 (corresponding to the first element) and an element 402 (corresponding to the second element). An appearance style of the element 401 is determined based on a type of resource A, and presented content of the element 402 includes a name of the resource A. After the interactive interface element 405 is presented for a period of time, the terminal device 110 switches to present a box 410. The box 410 includes the interactive interface element 405 and prompt information 411 indicating an interaction task. If it is determined that the interaction task is in progress, the terminal device 110 will present an interactive interface element 415 to cause the element 402 therein to provide an indication regarding the state of the interaction task. For example, the element 402 of the interactive interface element 415 presents a countdown of "XX minutes and XX seconds", which may change with time and may indicate that the interaction task is in an in-progress state.

[0058] If it is determined that the current interaction task has been completed, the terminal device 110 may present a box 420. The box 420 includes the interactive interface element 405, and may further include prompt information 422 indicating a completion state of the interaction task and a viewing entry 424 of an incentive path corresponding to the interaction task. If the box 420 is presented, the terminal device 110 may cease presenting the prompt information 422 in response to the prompt information 422 being presented for a predetermined duration. For example, the terminal device 110 may switch to present an interactive interface element 425. In some embodiments, the terminal device 110 may also directly present the interactive interface element 425 in response to the interaction task being completed. The element 402 of the interactive interface element 425 presents guidance information (for example, the text "to obtain") of the incentive path corresponding to the interaction task.

[0059] In some embodiments, the terminal device 110 may determine that the trigger on the incentive path is received in response to receiving a trigger on the interactive interface element or receiving a trigger on the viewing entry 424 of the incentive path. The terminal device 110 may present an interaction interface for obtaining the virtual resource (which for example, may be referred to as an obtaining interface of the virtual resource) in response to receiving the trigger on the incentive path. Referring to Fig. 5, Fig. 5 shows a schematic diagram of an example obtaining interface 500 of a virtual resource according to some embodiments of the disclosure. Example 500 includes a return control 520, an obtaining control 510, and multiple candidate virtual resources (for example, resource A to resource I shown in the figure). The terminal device 110 may return to present the user interface in response to receiving a trigger on the return control 520, and the user interface may be, for example, the aforementioned user interface presented with the interactive interface element. The terminal device 110 may obtain the virtual resource in response to receiving a trigger on the obtaining control 510.

[0060] The terminal device 110 may present, in association with the interactive interface element, guidance information indicating guidance for obtaining the virtual resource and the viewing entry of the incentive path corresponding to the interaction task in response to determining that the interaction task has been completed and that no trigger on the incentive path is detected within a predetermined duration (which may be any appropriate duration). This guidance information may include, for example, the text "XX users have obtained the virtual resource XX", "participating XX times, can obtain the virtual resource XX", "by participating, there is a chance to obtain resource XX", and the like. Continuing to refer to Fig. 4, the terminal device 110 may present a box

430-1, a box 430-2, or a box 430-3 in response to determining that the interaction task has been completed and that no trigger on the incentive path is detected within a predetermined duration.

[0061] Specifically, if the user may obtain the virtual resource and there are other users who have obtained the virtual resource, the terminal device 110 may present the box 430-1. The box 430-1 includes the interactive interface element 405, guidance information 432-1, and a viewing entry 434-1. If the user may obtain the virtual resource and there is an accumulation task for the virtual resource, the terminal device 110 may present the box 430-2. The box 430-2 includes the interactive interface element 405, guidance information 432-2, and a viewing entry 434-2. If the user may obtain the virtual resource, the terminal device 110 may present the box 430-3. The box 430-3 includes the interactive interface element 405, guidance information 432-3, and a viewing entry 434-3. It may be understood that if the presentation conditions of the box 430-1, the box 430-2, and the box 430-3 are all satisfied, the terminal device 110 may present the box 430-1, the box 430-2, and the box 430-3 in turn based on a predetermined policy. Therefore, a variety of guidance information may be provided to guide the user to obtain the virtual resource, which helps to improve the possibility of the user obtaining the virtual resource.

[0062] In some embodiments, within a predetermined period of time, the terminal device 110 may cumulatively obtain a predetermined number of interaction tasks. For example, the terminal device 110 may cumulatively obtain three interaction tasks every day. The terminal device 110 may present, in association with the interactive interface element, prompt information indicating a new interaction task in response to a current interaction task (the current interaction task may be, for example, an interaction task assigned for the first time within the predetermined period of time) being completed and a new interaction task being obtainable (that is, an interaction task assigned after the previous interaction task is completed). This prompt information may include, for example, the text "Watch videos to obtain resources. Get one change if watching more Y minutes ". As an example, if the first interaction task of the day has been completed, the terminal device 110 may determine that the second interaction task may be obtained, and the terminal device 110 may present a box 440, where the box 440 includes the interactive interface element 405 and prompt information 442 indicating the second interaction task.

[0063] In the process of executing the new interaction task, the terminal device 110 may present an interactive interface element 445. The terminal device 110 may present a box 450 in response to the new interaction task being completed. The box 450 includes the interactive interface element 405, prompt information 452 indicating a completion state of the interaction task, and a viewing entry 454 of an incentive path corresponding to the interaction task.

[0064] In some embodiments, if multiple interaction tasks within the predetermined period of time are all completed (for example, three interaction tasks may be assigned every day, and the three interaction tasks are all completed), the terminal device 110 may present, in association with the interactive interface element, prompt information indicating the completion state of the multiple interaction tasks and a prompt for issuing a subsequent interaction task. The prompt information may include, for example, the text "Congratulations on completing all tasks", "All tasks have been completed", "No more tasks today", and the like. The prompt for issuing the subsequent interaction task may include the text "participate tomorrow", "Come back tomorrow", and the like. Therefore, the prompt for issuing the subsequent task may be presented, and the prompt may help the user quickly understand the time point of executing the subsequent interaction task, which helps to improve the user experience when the user executes the interaction task.

[0065] The terminal device 110 may cease presenting the prompt information and maintain presenting the updated interactive interface element in response to the prompt information indicating the completion state of the multiple interaction tasks being presented for a predetermined duration (which may be any appropriate duration). As an example, the terminal device 110 may present a box 455 in response to determining that each of the multiple interaction tasks within the predetermined period of time has been completed. The box 455 includes the interactive interface element, prompt information 456 indicating the completion state of the multiple interaction tasks presented in association with the interactive interface element, and a prompt 458 for issuing a subsequent interaction task. For example, the terminal device 110 may cease presenting the prompt information 456 and the issuing prompt 458 and maintain presenting the interactive interface element in response to the prompt information 456 being presented for a predetermined duration.

[0066] To sum up, according to various embodiments of the disclosure, in the presentation of the interactive interface element, the appearance style of the element may be determined based on the specific type and identification of the virtual resource, which makes the appearance of the interactive interface element more diverse, and allows the user to quickly know the virtual resource corresponding to the interaction task from the appearance. In addition, the content to be presented may also be dynamically updated based on the completion progress of the interaction task, and the task state may be quickly fed back during the execution of the interaction task, which may improve the user experience when the user executes the interaction task.

[0067] Fig. 6 shows a flowchart of a method 600 for interaction according to some embodiments of the disclosure. The method 600 may be implemented at the terminal device 110.

[0068] At block 610, the terminal device 110 presents an interactive interface element in a user interface, the interactive interface element including a first element and a second element, an appearance style of the first element being determined based on a type of a virtual resource corresponding to an interaction task, and presented content of the second element including an identification of the virtual resource.

[0069] At block 620, the terminal device 110 updates the interactive interface element in response to a change in completion progress of the interaction task.

[0070] In some embodiments, in the updated interactive interface element, the presented content of the second element is determined based on the completion progress of the interaction task.

[0071] In some embodiments, in the updated interactive interface element, the appearance style of the first element is updated based on the type of the virtual resource.

[0072] In some embodiments, updating the interactive interface element based on the completion progress of the interaction task includes: updating, in response to the interaction task being in progress, the interactive interface element to cause the second element to present an in-progress state of the interaction task; and updating, in response to the interaction task being completed, the interactive interface element to cause the second element to present first guidance information for an incentive path corresponding to the interaction task, the incentive path indicating an obtaining manner of the virtual resource.

[0073] In some embodiments, the virtual resource is selected from multiple candidate virtual resources based on respective priorities of the multiple candidate virtual resources.

[0074] In some embodiments, the method 600 further includes: presenting, in association with the interactive interface element, first prompt information in response to determining that the interactive interface element is

presented, the first prompt information indicating the interaction task; and ceasing presenting the first prompt information in response to the first prompt information being presented for a first predetermined duration.

[0075] In some embodiments, the method 600 further includes: presenting, in association with the interactive interface element, second prompt information and a viewing entry for the incentive path corresponding to the interaction task in response to determining that the interaction task is completed, the second prompt information indicating a completion state of the interaction task; and ceasing presenting the second prompt information and maintaining presentation of the updated interactive interface element, in response to the second prompt information being presented for a second predetermined duration.

[0076] In some embodiments, the method 600 further includes: presenting, in association with the interactive interface element, third prompt information in response to determining that each of multiple interaction tasks within a predetermined period of time has been completed, the third prompt information indicating completion state of the multiple interaction tasks and a prompt for issuing a subsequent interaction task; and ceasing presenting the third prompt information and maintaining presentation of the updated interactive interface element in response to the third prompt information being presented for a third predetermined duration.

[0077] In some embodiments, the method 600 further includes: presenting, in association with the interactive interface element, second guidance information and the viewing entry for the incentive path corresponding to the interaction task in response to determining that the interaction task is completed and that no trigger on the incentive path is detected within a fourth predetermined duration, the second guidance information indicating guidance for obtaining the virtual resource.

[0078] In some embodiments, the interaction task includes an interaction task assigned for the first time within a predetermined period of time, or an interaction task assigned after a previous interaction task is completed.

[0079] The embodiments of the disclosure further provide a corresponding apparatus for implementing the above method or process. Fig. 7 shows an illustrative structural block diagram of an apparatus 700 for interaction according to some embodiments of the disclosure. The apparatus 700 may be implemented as or included in the terminal device 110. Each module/component in the apparatus 700 may be implemented by hardware, software, firmware, or any combination thereof.

[0080] As shown in Fig. 7, the apparatus 700 includes an element presenting module 710 configured to present an interactive interface element in a user interface, the interactive interface element including a first element and a second element, an appearance style of the first element being determined based on a type of a virtual resource corresponding to an interaction task, and presented content of the second element including an identification of the virtual resource. The apparatus 700 also includes an element updating module 720 configured to update the interactive interface element in response to a change in a completion progress of the interaction task.

[0081] In some embodiments, in the updated interactive interface element, the presented content of the second element is determined based on the completion progress of the interaction task.

[0082] In some embodiments, in the updated interactive interface element, the appearance style of the first element is updated based on the type of the virtual resource.

[0083] In some embodiments, the element updating module 720 is further configured to: update, in response to the interaction task being in progress, the interactive interface element to cause the second element to present an in-progress state of the interaction task; and update, in response to the interaction task being completed, the

interactive interface element to cause the second element to present first guidance information for an incentive path corresponding to the interaction task, the incentive path indicating an obtaining manner of the virtual resource.

[0084] In some embodiments, the virtual resource is selected from multiple candidate virtual resources based on respective priorities of the multiple candidate virtual resources.

[0085] In some embodiments, the apparatus 700 further includes: a first information presenting module configured to present, in association with the interactive interface element, first prompt information in response to determining that the interactive interface element is presented, the first prompt information indicating the interaction task; and a first ceasing module configured to cease presenting the first prompt information in response to the first prompt information being presented for a first predetermined duration.

[0086] In some embodiments, the apparatus 700 further includes: a second information presenting module configured to present, in association with the interactive interface element, second prompt information and a viewing entry for the incentive path corresponding to the interaction task in response to determining that the interaction task is completed, the second prompt information indicating a completion state of the interaction task; and a second ceasing module configured to cease presenting the second prompt information and maintain presentation of the updated interactive interface element, in response to the second prompt information being presented for a second predetermined duration.

[0087] In some embodiments, the apparatus 700 further includes: a third information presenting module configured to present, in association with the interactive interface element, third prompt information in response to determining that each of multiple interaction tasks within a predetermined period of time has been completed, the third prompt information indicating completion state of the multiple interaction tasks and a prompt for issuing a subsequent interaction task; and a third ceasing module configured to cease presenting the third prompt information and maintain presentation of the updated interactive interface element, in response to the third prompt information being presented for a third predetermined duration.

[0088] In some embodiments, the apparatus 700 further includes: an information presenting module configured to present, in association with the interactive interface element, second guidance information and the viewing entry of the incentive path corresponding to the interaction task in response to determining that the interaction task is completed and that no trigger on the incentive path is detected within a fourth predetermined duration, the second guidance information indicating guidance for obtaining the virtual resource.

[0089] In some embodiments, the interaction task includes an interaction task assigned for the first time within a predetermined period of time, or an interaction task assigned after a previous interaction task is completed.

[0090] The modules included in the apparatus 700 may be implemented in various ways, including software, hardware, firmware, or any combination thereof. In some embodiments, one or more modules may be implemented using software and/or firmware, such as machine-executable instructions stored on a storage medium. In addition to machine-executable instructions or as an alternative, some or all modules in the apparatus 700 may be implemented at least partially by one or more hardware logic components. As an example, rather than a limitation, example types of hardware logic components that may be used include field programmable gate arrays (FPGAs), application specific integrated circuits (ASICs), application specific standards (ASSPs), system on chips (SOCs), complex programmable logic devices (CPLDs), and so on.

[0091] It should be understood that one or more steps in the above method may be performed by an appropriate electronic device or a combination of electronic devices. Such an electronic device or a combination of electronic devices may include, for example, the terminal device 110 in Fig. 1.

[0092] Fig. 8 shows a block diagram of an electronic device 800 in which one or more embodiments of the disclosure may be implemented. It should be understood that the electronic device 800 shown in Fig. 8 is only illustrative and should not constitute any limitation on the functionality and scope of the embodiments described herein. The electronic device 800 shown in Fig. 8 may be used to implement the terminal device 110 in Fig. 1 or the apparatus 700 in Fig. 7.

[0093] As shown in Fig. 8, the electronic device 800 is in a form of a general electronic device. The components of the electronic device 800 may include, but are not limited to, one or more processing units or processors 810, a memory 820, a storage device 830, one or more communication units 840, one or more input devices 850, and one or more output devices 860. The processor 810 may be an actual or virtual processor and may execute various processes based on the programs stored in the memory 820. In a multi-processor system, multiple processors execute computer-executable instructions in parallel to improve the parallel processing capability of the electronic device 800.

[0094] The electronic device 800 typically includes multiple computer storage medium. Such medium may be any available medium that is accessible to the electronic device 800, including, but not limited to, volatile and non-volatile medium, removable and non-removable medium. The memory 820 may be a volatile memory (for example, a register, cache, a random access memory (RAM)), a non-volatile memory (such as a read-only memory (ROM), an electrically erasable programmable read-only memory (EEPROM), a flash memory), or any combination thereof. The storage device 830 may be any removable or non-removable medium, and may include a machine-readable medium such as a flash drive, a disk, or any other medium, which may be used to store information and/or data and may be accessed within the electronic device 800.

[0095] The electronic device 800 may further include additional removable/non-removable, volatile/non-volatile memory medium. Although not shown in Fig. 8, a disk driver for reading from or writing to a removable, non-volatile disk (such as a "floppy disk"), and an optical disk driver for reading from or writing to a removable, non-volatile optical disk may be provided. In these cases, each driver may be connected to the bus (not shown) by one or more data medium interfaces. The memory 820 may include a computer program product 825, which has one or more program modules configured to perform various methods or acts of the various embodiments of the disclosure.

[0096] The communication unit 840 enables communication with other electronic devices via the communication medium. Additionally, the functions of the components of the electronic device 800 may be implemented by a single computing cluster or multiple computing machines, which may communicate via communication connections. Therefore, the electronic device 800 may use a logical connection with one or more other servers, a network personal computer (PC), or another network node to operate in a networked environment.

[0097] The input device 850 may be one or more input devices, such as a mouse, a keyboard, a tracking ball, and the like. The output device 860 may be one or more output devices, such as a display, a speaker, a printer, and the like. The electronic device 800 may also communicate with one or more external devices (not shown), such as a storage device, a display device, etc., with one or more devices that enable the user to interact with the

electronic device 800, or with any devices (for example, a network card, a modem, etc.) that enable the electronic device 800 to communicate with one or more other electronic devices, as needed, via the communication unit 840. Such communication may be performed via input/output (I/O) interfaces (not shown).

[0098] According to an illustrative implementation of the disclosure, a computer-readable storage medium is provided, having computer-executable instructions stored thereon, where the computer-executable instructions are executed by a processor to implement the method described above. According to an illustrative implementation of the disclosure, there is further provided a computer program product, the computer program product being tangibly stored on a non-transitory computer-readable medium and including computer-executable instructions, the computer-executable instructions being executed by a processor to implement the method described above.

[0099] Various aspects of the disclosure are described herein with reference to the flowcharts and/or block diagrams of the method, apparatus, device, and computer program product implemented according to the disclosure. It should be understood that each block of the flowchart and/or block diagram, and any combination of the blocks in the flowchart and/or block diagram, may be implemented by computer-readable program instructions.

[0100] These computer-readable program instructions may be provided to the processing unit of a general-purpose computer, a special-purpose computer, or other programmable data processing apparatus to produce a machine, such that when these instructions are executed by the processing unit of the computer or other programmable data processing apparatus, an apparatus for implementing the functions/actions specified in one or more blocks of the flowchart and/or block diagram is produced. These computer-readable program instructions may also be stored in a computer-readable storage medium, these instructions causing the computer, the programmable data processing apparatus, and/or other devices to work in a specific manner, such that the computer-readable medium having the instructions stored thereon includes an article of manufacture, which includes instructions for implementing various aspects of the functions/actions specified in one or more blocks of the flowchart and/or block diagram.

[0101] The computer-readable program instructions may be loaded onto a computer, other programmable data processing apparatus, or other devices, such that a series of operations and steps are performed on the computer, other programmable data processing apparatus, or other devices to produce a computer-implemented process, such that the instructions executed on the computer, other programmable data processing apparatus, or other devices implement the functions/actions specified in one or more blocks of the flowchart and/or block diagram.

[0102] The flowcharts and block diagrams in the drawings show the possibly implemented architectures, functions, and operations of the system, the method, and the computer program product according to multiple implementations of the disclosure. In this regard, each block in the flowchart or block diagram may represent a module, program segment, or part of an instruction, which includes one or more executable instructions for implementing the specified logical functions. In some updated implementations, the functions marked in the blocks may also occur in an order different from that marked in the drawings. For example, two consecutive blocks may actually be performed substantially in parallel, or they may sometimes be performed in the reverse order, depending on the functions involved. It should also be noted that each block in the block diagram and/or flowchart, and any combination of the blocks in the block diagram and/or flowchart, may be implemented by a

dedicated hardware-based system that performs the specified functions or actions, or may be implemented by a combination of dedicated hardware and computer instructions.

[0103] The implementations of the disclosure have been described above, and the above description is illustrative, non-exhaustive, and not limited to the disclosed implementations. Many modifications and variations will be apparent to those of ordinary skill in the art without departing from the scope and spirit of the described implementations. The terms used herein are chosen to best explain the principles of the implementations, the practical applications, or the improvements to the technologies in the market, or to enable other persons of ordinary skill in the art to understand the implementations disclosed herein.

CLAIMS

1. A method for interaction, comprising:
presenting an interactive interface element in a user interface, the interactive interface element comprising a first element and a second element, an appearance style of the first element being determined based on a type of a virtual resource corresponding to an interaction task, and presented content of the second element comprising an identification of the virtual resource; and
updating the interactive interface element in response to a change in completion progress of the interaction task.
2. The method of claim 1, wherein in the updated interactive interface element, the appearance style of the first element is updated based on the type of the virtual resource.
3. The method of claim 1 or 2, wherein in the updated interactive interface element, the presented content of the second element is determined based on the completion progress of the interaction task.
4. The method of any of claims 1 to 3, wherein updating the interactive interface element comprises:
updating, in response to the interaction task being in progress, the interactive interface element to cause the second element to present an in-progress state of the interaction task; and
updating, in response to the interaction task being completed, the interactive interface element to cause the second element to present first guidance information for an incentive path corresponding to the interaction task, the incentive path indicating an obtaining manner of the virtual resource.
5. The method of any of claims 1 to 4, wherein the virtual resource is selected from a plurality of candidate virtual resources based on respective priorities of the plurality of candidate virtual resources.
6. The method of any of claims 1 to 5, further comprising:
presenting, in association with the interactive interface element, first prompt information in response to determining that the interactive interface element is presented, the first prompt information indicating the interaction task; and
ceasing presenting the first prompt information in response to the first prompt information being presented for a first predetermined duration.
7. The method of any of claims 1 to 6, further comprising:
presenting, in association with the interactive interface element, second prompt information and a viewing entry for an incentive path corresponding to the interaction task in response to determining that the interaction task is completed, the second prompt information indicating a completion state of the interaction task; and
ceasing presenting the second prompt information and maintaining presentation of the updated

interactive interface element, in response to the second prompt information being presented for a second predetermined duration.

8. The method of any of claims 1 to 7, further comprising:

presenting, in association with the interactive interface element, third prompt information in response to determining that each of a plurality of interaction tasks within a predetermined period of time has been completed, the third prompt information indicating completion state of the plurality of interaction tasks and a prompt for issuing a subsequent interaction task; and

ceasing presenting the third prompt information and maintaining presentation of the updated interactive interface element, in response to the third prompt information being presented for a third predetermined duration.

9. The method of claim 4 or 7, further comprising:

presenting, in association with the interactive interface element, second guidance information and the viewing entry for the incentive path corresponding to the interaction task in response to determining that the interaction task is completed and that no trigger on the incentive path is detected within a fourth predetermined duration, the second guidance information indicating guidance for obtaining the virtual resource.

10. The method of any of claims 1 to 9, wherein the interaction task comprises an interaction task assigned for the first time within a predetermined period of time, or an interaction task assigned after a previous interaction task is completed.

11. An apparatus for interaction, comprising:

an element presenting module configured to present an interactive interface element in a user interface, the interactive interface element comprising a first element and a second element, an appearance style of the first element being determined based on a type of a virtual resource corresponding to an interaction task, and presented content of the second element comprising an identification of the virtual resource; and

an element updating module configured to update the interactive interface element based on a completion progress of the interaction task, wherein in the updated interactive interface element, the presented content of the second element is determined based on the completion progress of the interaction task.

12. An electronic device, comprising:

at least one processor; and

at least one memory, the at least one memory being coupled to the at least one processor and storing instructions executable by the at least one processor, the instructions, when executed by the at least one processor, causing the electronic device to perform the method of any of claims 1 to 10.

13. A computer-readable storage medium having stored thereon computer-executable instructions executable by a processor to implement the method of any of claims 1 to 10.

14. A computer program product comprising computer-executable instructions which, when executed by a processor, implement the method of any of claims 1 to 10.