SKILL SELECTION METHOD AND APPARATUS FOR VIRTUAL OBJECT, AND DEVICE, MEDIUM AND PROGRAM PRODUCT

[0001] This application claims priority to Chinese Patent Application No. 202011140965.2, entitled "SKILL SELECTION METHOD AND APPARATUS FOR VIRTUAL OBJECT, AND DEVICE, MEDIUM AND PROGRAM PRODUCT" filed on October 22, 2020, which is incorporated herein by reference in its entirety.

FIELD

[0002] Embodiments of this application relate to the field of virtual environments, and in particular, to a method and an apparatus for selecting an ability of a virtual object, a device, a medium, and a program product.

BACKGROUND

[0003] A battle game refers to a kind of games in which multiple user accounts compete in the same scene. For example, the battle game may be a multiplayer online battle arena (MOBA) game, in the MOBA game, a player may control a virtual object to cast an ability to attack an opponent virtual object.

[0004] In the conventional technology, when casting an ability, a virtual prop is cast, to hurt an attacked object within a prop function trigger range, and the ability may be evolved in a level basis. For example, when a virtual object is upgraded from a first level to a second level, a player may select one ability from three abilities configured for the virtual object to raise the level thereof, so as to raise an attribute value of the ability, which may improve an attack effect of the ability.

[0005] However, through the foregoing manner of configuring abilities for a virtual object, ability effects configured for the virtual object cannot be adjusted in a virtual battle usually, which affects an entire ability effect of the virtual battle, resulting in reduced diversity of ability combinations.

SUMMARY

[0006] A method and an apparatus for selecting an ability of a virtual object, a device, a medium, and a program product are provided according to embodiments of this application, to

improve diversity of ability combinations in a virtual battle. The technical solutions are described as follows.

[0007] In an aspect, a method for selecting an ability of a virtual object is provided, which is performed by a computer device, the method includes:

displaying a first ability identifier of a first ability, the first ability being configured for the virtual object at a first level in a virtual battle;

displaying at least two second ability identifiers in a case that the virtual object is changed from the first level to a second level in the virtual battle, second abilities corresponding to the second ability identifiers being corresponding to the second level, and the at least two second ability identifiers including a target second ability identifier; and

replacing the first ability with a second ability corresponding to the target second ability identifier in response to a selection operation on the target second ability identifier.

[0008] In another aspect, an apparatus for selecting an ability of a virtual object is provided, which includes a display module and a receiving module. The display module is configured to display a first ability identifier of a first ability, the first ability is configured for the virtual object at a first level in a virtual battle. The display module is further configured to display at least two second ability identifiers in a case that the virtual object is changed from the first level to a second level in the virtual battle, second abilities corresponding to the second ability identifiers correspond to the second level, and the at least two second ability identifiers include a target second ability identifier. The receiving module is configured to replace the first ability with a second ability corresponding to the target second ability identifier in response to a selection operation on the target second ability identifier.

[0009] In another aspect, a computer device is provided, which includes a processor and a memory, the memory stores at least one instruction, at least one program, a code set, or an instruction set. The at least one instruction, the at least one program, the code set, or the instruction set is loaded and executed by the processor to implement the method for selecting an ability of a virtual object provided in the foregoing embodiments.

[0010] In another aspect, a computer-readable storage medium is provided, which stores at least one instruction, at least one program, a code set, or an instruction set. The at least one instruction, the at least one program, the code set, or the instruction set is loaded and executed by a processor to implement the method for selecting an ability of a virtual object provided in the foregoing embodiments.

[0011] In another aspect, a computer program product or a computer program is provided, the computer program product or the computer program includes computer instructions. The computer instructions are stored in a computer-readable storage medium. A processor of a computer device reads the computer instructions from the computer-readable storage medium and executes the computer instructions to cause the computer device to perform the method for selecting an ability of a virtual object described in any one of the foregoing embodiments.

[0012] The technical solutions provided in the embodiments of this application achieve at least the following beneficial effects. At least two second ability identifiers are displayed in a case that a virtual object is changed to a second level, and a selected second ability replaces a first ability as an evolved ability of the virtual object. Because the second ability is selected from at least two candidate second abilities, diversity of evolution of the ability is increased, and strategization of a virtual battle is improved, so that a problem of weak strategization of the virtual battle caused by undiversified ability configuration can be avoided, thereby improving experience of a player in the virtual battle.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] To describe the technical solutions in the embodiments of this application more clearly, the drawings used for describing the embodiments are briefly described below. Apparently, the drawings in the following descriptions show merely some embodiments of this application, and a person of ordinary skill in the art may obtain other drawings according to these drawings without creative efforts.

[0014] FIG. 1 is a schematic diagram of an interface of an ability trigger process according to an exemplary embodiment of this application.

[0015] FIG. 2 is a schematic diagram of an interface of ability evolution in the conventional art.

[0016] FIG. 3 is a schematic diagram of an interface of ability evolution according to an exemplary embodiment of this application.

[0017] FIG. 4 is a structural block diagram of a computer system according to an exemplary embodiment of this application.

[0018] FIG. 5 is a flowchart of a method for selecting an ability of a virtual object according to an exemplary embodiment of this application.

[0019] FIG. 6 is a schematic diagram of an interface for displaying second ability identifiers in the form of switching paths according to the embodiment shown in FIG. 5.

[0020] FIG. 7 is a flowchart of a method for selecting an ability of a virtual object according to another exemplary embodiment of this application.

[0021] FIG. 8 is a schematic diagram of ability combination according to the embodiment shown in FIG. 7.

[0022] FIG. 9 is a schematic diagram of an interface of a virtual battle according to the embodiment shown in FIG. 7.

[0023] FIG. 10 is a flowchart of a method for selecting an ability of a virtual object according to another exemplary embodiment of this application.

[0024] FIG. 11 is a schematic diagram of a display interface of configuration prompt information according to the embodiment shown in FIG. 10.

[0025] FIG. 12 is an overall flowchart of a method for selecting an ability of a virtual object according to an exemplary embodiment of this application.

[0026] FIG. 13 is a structural block diagram of an apparatus for selecting an ability of a virtual object according to an exemplary embodiment of this application.

[0027] FIG. 14 is a structural block diagram of an apparatus for selecting an ability of a virtual object according to another an exemplary embodiment of this application.

[0028] FIG. 15 is a structural block diagram of a terminal according to an exemplary embodiment of this application.

DESCRIPTION OF EMBODIMENTS

[0029] To make objects, technical solutions, and advantages of this application clearer, the embodiments of this application will be described in detail in the following with reference to the drawings.

[0030] First, terms involved in the embodiments of this application are briefly introduced.

[0031] A virtual environment is displayed (or provided) when an application is run on a terminal. The virtual environment may be a simulated environment of a real world, or may be a semi-simulated semi-fictional environment, or may be an entirely fictional environment. The virtual environment may be any one of a two-dimensional virtual environment, a 2.5-dimensional virtual environment, and a three-dimensional virtual environment, which is not limited in this application.

[0032] A virtual object is a movable object in a virtual environment. The movable object may be a virtual character, a virtual animal, a cartoon character, or the like, such as a character, an animal, or the like displayed in a three-dimensional virtual environment. For example, the virtual object is a three-dimensional model created based on a skeletal animation technology. Each virtual role has a respective shape and size in the three-dimensional virtual environment, and occupies some space in the three-dimensional virtual environment. The embodiments of this application are described by using an example in which a virtual object is a master virtual object controlled by a user, and the master virtual object generally refers to one or more master virtual objects in a virtual environment.

[0033] Multiplayer Online Battle Arena Games (MOBA) is an arena in which different virtual teams on at least two opponent camps occupy respective map regions in a virtual environment, and compete against each other using a specific victory condition as a goal. The victory condition includes, but is not limited to at least one of the following: occupying forts or destroying forts of the opponent camps, killing virtual roles in the opponent camps, ensuring own survivals in a specified scene and time, seizing a specific resource, or outscoring the opponent within a specified time. The battle arena game may take place in rounds. The same map or different maps may be used in different rounds of the battle arena game. Each virtual team includes one or more virtual roles, for example, 1 virtual role, 2 virtual roles, 3 virtual roles, or 5 virtual roles. A duration of a round of the MOBA game is from a time point at which the game starts to a time point at which the victory condition is met.

[0034] An ability refers to a capability for hurting an opponent virtual object that is configured for a virtual object in a virtual battle. Usually, a virtual object is simultaneously configured with at least two abilities at a moment in a virtual battle. For example, at a beginning stage of the virtual battle, the virtual object is configured with two initial abilities, and after the virtual object reaches a specific level or conforms to a specific requirement, the virtual object is configured with three abilities. An ability configured for the virtual object may be evolved to a high level.

[0035] Schematically, referring to FIG. 1, a virtual environment interface 100 includes a master virtual role 110, and the master virtual role 110 is currently configured with three abilities in a virtual battle, namely an ability 111, an ability 112, and an ability 113. When a player triggers the ability 111, a virtual object casts a flying prop 120 in a virtual environment as an ability effect, and the flying prop 120 may hurt an opponent virtual object within a range of the ability effect.

[0036] In the conventional technology, abilities configured for a virtual object in a virtual battle do not change, but are evolved as the level of the virtual object upgraded. For example, FIG. 2 is a schematic diagram of an interface of performing ability evolution in the conventional technology. As shown in FIG. 2, a virtual battle interface 200 displays abilities 210 configured for a virtual object, which include an ability 211 (hurt), an ability 212 (move), and an ability 213 (hurt). The level of the current virtual object is upgraded from a fourth level to a fifth level with increase in a value of the level in a virtual battle, and therefore an upgrading control 220 is displayed at an upper left corner of each of the ability 211 (hurt), the ability 212 (move), and the ability 213 (hurt), and is configured to instruct to select at least one ability from the three abilities 210 for upgrading. As shown in FIG. 2, the ability 211 is at a first level, the ability 212 is at a first level, and the ability 213 is at a second level, if a player selects an upgrading control 220 corresponding to the ability 212 (move), the ability 212 is upgraded to a second level. When the ability 212 (move) is upgraded from the first level to the second level, an upgrading effect corresponding thereto is increasing an attribute value of the ability. For example, the ability 212 (move) corresponds to a moving distance of 3 meters at the first level, and corresponds to a moving distance of 3.5 meters at the second level.

[0037] However, in the foregoing manner, only the levels of the abilities are evolved, while the abilities themselves configured for the virtual object in the virtual battle are fixed, and cannot be combined again, resulting in low diversity of ability configuration.

[0038] However, in the embodiments of this application, in a case that a virtual object is changed to a second level in a virtual battle, a capability of upgrading a first ability configured for the virtual object to a second ability is provided, and at least two candidate second abilities are provided when the first ability is evolved, so that a player can select one second ability from the at least two candidate second abilities to replace the currently configured first ability as a new ability configured for the virtual object.

[0039] Schematically, referring to FIG. 3, FIG. 3 is a schematic diagram of an interface of ability evolution according to an exemplary embodiment of this application. As shown in FIG. 3, a virtual battle interface 300 displays an ability 310 configured for a virtual object in a virtual battle, which includes an ability 311 (leaf) and an ability 312 (photosynthesis) that are unlocked, and an ability key position 313 has not been unlocked. In a case that the virtual object is changed to a second level in the virtual battle, it is prompted in the virtual battle interface 300 that the ability 311 and the ability 312 may be evolved. For example, highlighted blinking display is performed around peripheries of identifiers of the ability 311 and the ability 312. The player may select at least one ability from the ability 311 and the ability 312 for evolving. Schematically, if the player selects and

the ability 311 for evolving, an ability 321 (pollen puff) and an ability 322 (leaf tornado) are displayed at a preset position on a periphery of the ability 311, and the ability 321 and the ability 322 are evolved abilities that the player can select to replace the ability 311. Schematically, if the player selects the ability 321 (pollen puff), the ability 321 replaces the ability 311 originally configured for the virtual object as an ability evolution result of the virtual object.

[0040] FIG. 4 is a structural block diagram of a computer system according to an exemplary embodiment of this application. The computer system 400 includes a first terminal 420, a server 440, and a second terminal 460.

[0041] The first terminal 420 installs and runs an application supporting a virtual environment. The application may be any one of a virtual reality application, a three-dimensional map program, a military simulation program, a First Person Shooting Game (FPS) game, a MOBA game, a multiplayer shooting survival game, and a battle royale shooting game. The first terminal 420 is a terminal used by a first user, and the first user uses the first terminal 420 to control a first master virtual role located in the virtual environment to perform activities, which include, but are not limited to, at least one of adjusting body posture, walking, running, jumping, casting abilities, picking-up, attacking, or dodging attacks from other virtual roles. Schematically, the first master virtual role is a first virtual character, for example, a simulated character role or a cartoon character role. Schematically, the first master virtual role casts a regional ability in the virtual environment, and the virtual environment picture moves from a location at which the master virtual role is located to a target region selected by a regional ability indicator. The regional ability indicator is configured to select a cast region in a case that the master virtual role casts an ability.

[0042] The first terminal 420 is connected to the server 440 by a wireless network or a wired network.

[0043] The server 440 includes at least one of one server, multiple servers, a cloud computing platform, and a virtualization center. For example, the server 440 includes a processor 444 and a memory 442. The memory 442 includes a receiving module 4421, a control module 4422, and a transmitting module 4423. The receiving module 4421 is configured to receive a request transmitted by a client, such as a team forming request; the control module 4422 is configured to control rendering of the virtual environment picture; and the transmission module 4423 is configured to send a message notification to the client, such as a team success notification. The server 440 is configured to provide a backend service for an application supporting a three-dimensional virtual environment. In an embodiment, the server 440 is responsible for primary computing work, and the first terminal 420 and the second terminal 460 are responsible for

secondary computing work; or the server 440 is responsible for secondary computing work, and the first terminal 420 and the second terminal 460 are responsible for primary computing work; or the server 440, the first terminal 420, and the second terminal 460 perform collaborative computing by using a distributed computing architecture among each other.

[0044] The second terminal 460 is connected to the server 440 by a wireless network or a wired network.

[0045] The second terminal 460 installs and runs an application supporting a virtual environment. The second terminal 460 is used by a second user, and the second user uses the second terminal 460 to control a second master virtual role located in the virtual environment to perform activities. Schematically, the second master virtual role is a second virtual character, for example, a simulated character role or a cartoon character role.

[0046] In an embodiment, the first virtual character role and the second virtual character role are located in the same virtual environment. In an embodiment, the first virtual character role and the second virtual character role may belong to the same team, the same organization, have a friend relationship, or have a temporary communication permission.

[0047] In an embodiment, the applications installed on the first terminal 420 and the second terminal 460 are the same, or the applications installed on the two terminals are the same type of applications in different control system platforms. The first terminal 420 may be generally one of multiple terminals, and the second terminal 460 may be generally one of multiple terminals. In this embodiment, only the first terminal 420 and the second terminal 460 are used as an example for description. The device types of the first terminal 420 and the second terminal 460 are the same or different. The following embodiment is described by using an example in which the terminal includes a smartphone.

[0048] A person skilled in the art may learn that there may be more or fewer terminals. For example, there may be only one terminal, or there are dozens of, hundreds of, or more terminals. The number and the device type of the terminal are not limited in the embodiments of this application.

[0049] FIG. 5 is a flowchart of a method for selecting an ability of a virtual object according to an exemplary embodiment of this application. The method is applied to a computer device. The computer device may be implemented as the first terminal 420 or the second terminal 460 as shown in FIG. 4, or another terminal in the computer system 400. The method includes the following steps 501 to 503.

[0050] In step 501, a first ability identifier of a first ability is displayed, the first ability is configured for the virtual object at a first level in a virtual battle.

[0051] The first ability corresponds to the first level, that is, the first ability is an ability configured by the computer device for the virtual object when the virtual object is at the first level. In some embodiments, a single ability corresponds to a single level, or a single ability corresponds to multiple levels. When a single ability corresponds to multiple levels, ability effects of an ability at different levels are the same or different. Schematically, if the player may select an ability "leaf" no matter the virtual object is at the first level or the second level, when the virtual object is at the first level, the leaf ability is at the first stage of evolution, and when the virtual object is at the second level, the leaf ability is at the second stage of evolution. If the virtual object is switched to the second level, at least two abilities are provided for the player to select, which include the ability "leaf" at the second stage of evolution. That is, when the virtual object is switched from the first level to the second level, the player may select to evolve the ability "leaf" at the first stage into the leaf ability at the second stage, or may select to evolve the ability "leaf" at the first stage into another ability different from the ability "leaf".

[0052] In this embodiment of this application, a description is made by using an example in which abilities provided at different levels are different from each other. Abilities provided at an nth level are preset. For example, at the first level, abilities provided for the player to select are obtained from a first ability set, and at the second level, abilities provided for the player to select are obtained from a second ability set, where both the first ability set and the second ability set are preset. Alternatively, abilities provided at the nth level are associated with abilities selected by the player at an $(n-1)^{th}$ level, and n is a positive integer greater than 1. For example, when an ability selected by the player at the first level is the ability "leaf", abilities provided for the player to select at the second level are an ability "pollen puff" and an ability "leaf tornado", and the ability "pollen puff" and the ability "leaf tornado" are associated with the ability "leaf".

[0053] In some embodiments, the first ability identifier is implemented as at least one of an icon of the first ability, a name of the first ability, and an attribute of the first ability. That is, if the first ability identifier is displayed in a battle interface of the virtual battle, it indicates that the virtual object is currently configured with the first ability. In an embodiment, the first ability identifier is used for indicating an ability configuration of the virtual object, and/or the first ability identifier is used for controlling the virtual object to cast an ability. For example, if the player selects the first ability identifier, the virtual object is triggered to cast the first ability in the virtual battle.

[0054] In an embodiment, the first ability is an initial configured ability of the virtual object participating in the virtual battle, or the first ability is an ability configured by the player for the virtual object during historical level switching of the virtual object. If the first ability is the initial configured ability of the virtual object, the first ability is a preset ability, or the first ability is an ability randomly selected from an initial ability set.

[0055] In some embodiments, a virtual battle interface is displayed, and the virtual battle interface is an interface of observing a virtual environment by the virtual object when participating in the virtual battle. In an embodiment, the virtual battle interface includes a virtual environment picture and a control (for example, the foregoing first ability identifier), where the control is displayed on a virtual environment interface in a superimposed manner.

[0056] In step 502, at least two second ability identifiers are displayed in a case that the virtual object is changed from the first level to a second level in the virtual battle, second abilities corresponding to the second ability identifiers correspond to the second level, and the at least two second ability identifiers include a target second ability identifier.

[0057] In some embodiments, the second level is a particular level at which an ability evolution event exists, or the second level is a level at which an evolution event can be provided within a preset level range. Schematically, the highest level of the virtual object is a level 50, and when the virtual object is at a level lower than the level 30, the virtual object has an opportunity for ability evolution each time the virtual object is raised by one level. In some embodiments, the first level is the level 5, and the second level is the level 10. That is, the virtual object is upgraded level by level starting from the level 5, and when the virtual object is upgraded to the level 10, at least two second ability identifiers are displayed at a preset display position corresponding to the first ability identifier.

[0058] In the foregoing example, a description is made by using an example in which levels are implemented as digital levels. In some embodiments, levels of the virtual object may also be implemented as preset names, which is not limited in this embodiment of this application.

[0059] In some embodiments, as the level of the virtual object changes, the appearance of the virtual object changes. For example, if the virtual object is implemented as a virtual elf, the virtual elf is evolved with the battle process in the virtual battle, and changes the appearance following the evolution.

[0060] The at least two second ability identifiers are used for providing at least two second abilities to the virtual object to replace the first ability, and the second abilities correspond to the

second level to which the virtual object evolves. Schematically, the virtual object is currently in a primary state and configured with the ability "leaf", and when the virtual object is evolved into an intermediate state, the ability "pollen puff" and the ability "leaf tornado" are displayed, where the ability "pollen puff" and the ability "leaf tornado" are abilities corresponding to the second level. In addition, in some embodiments, the ability "pollen puff" and the ability "leaf tornado" corresponds to the second level, and the ability "pollen puff" and the ability "leaf tornado" correspond to the ability "leaf". That is, the ability "leaf" is an ability corresponding to a current key position in the primary state, and the ability "pollen puff" and the ability "leaf tornado" are abilities corresponding to the current key position in the intermediate state.

[0061] In an embodiment, the at least two second ability identifiers displayed in the interface are identifiers corresponding to at least two preset second abilities; or the at least two second ability identifiers displayed in the interface are identifiers corresponding to at least two second abilities selected from a preset ability library corresponding to the second level.

[0062] In some embodiments, the at least two ability identifiers are displayed at a preset display position corresponding to the first ability identifier. In an embodiment, the foregoing preset display position includes a position corresponding to the display key position of the first ability in the virtual environment interface, or the foregoing preset display position is a position corresponding to the first ability identifier in an ability configuration interface, the foregoing ability configuration interface is an interface retrieved through a preset control, and the player may configure the current ability in the ability configuration interface.

[0063] In some embodiments, the at least two second ability identifiers may be displayed in any one of the following three manners.

[0064] In a first manner, the at least two second ability identifiers are displayed in a sector display manner with the first ability identifier as a surrounding center.

[0065] In a second manner, at least two switching paths are displayed with the first ability identifier as a path start point, where the at least two second ability identifiers are used as end points of the switching paths. Schematically, a description is made by using an example in which the second ability identifiers are displayed in the form of switching paths. FIG. 6 is a schematic diagram of an interface for displaying at least two second ability identifiers according to an exemplary embodiment of this application. As shown in FIG. 6, a first ability identifier 610 is displayed in a virtual battle interface 600, a current first ability is a to-be-evolved ability, a switching path 621 and a switching path 622 are displayed corresponding to the first ability

identifier 610, a path end point of the switching path 621 is a second ability identifier 631, and a path end point of the switching path 622 is a second ability identifier 632.

[0066] In a third manner, the at least two second ability identifiers are displayed in a superimposed manner at a display position of the first ability identifier. Each second ability identifier displays a scaled-down complete ability identifier, or each second ability identifier displays a partial identifier obtained by tailoring. Schematically, a description is made by using two second ability identifiers as an example, when the two ability identifiers are displayed, a left half identifier of one of the second ability identifiers is obtained through tailoring, a right half identifier of the other second ability identifier is obtained through tailoring, and the left half identifier and the right half identifier obtained through tailoring are spliced and are displayed on the first ability identifier in a superimposed manner. The size of an identifier obtained by splicing the left half identifier and the right half identifier obtained through tailoring is the same as the size of the first ability identifier; or the size of the identifier obtained by splicing the left half identifier and the right half identifier obtained through tailoring is greater than the identifier size of the first ability identifier.

[0067] In an embodiment, the second abilities may include at least one of the following three types.

[0068] (1). The second abilities are the same as the first ability. In some embodiments, the second abilities are abilities obtained by raising the level of the first ability, that is, the level of the first ability is different from that of the second abilities, and the raise in the level causes attribute values corresponding to the second abilities to be raised, while the ability effects of the second abilities are the same as that of the first ability. For example, if the ability effect of the first ability is an accelerating effect, an a corresponding accelerating attribute value is speed raise by 4%, and the ability effect at the second level is also an accelerating effect, and a corresponding accelerating attribute value is speed raise by 6%.

[0069] In an embodiment, the foregoing ability effects include at least one of an ability name, a display effect of an ability cast in a virtual environment, an attribute effect, an ability configuration structure, and the like.

[0070] An ability configuration structure is used for indicating an effect combination generated by an ability, and if ability configuration structures of different second abilities are different, it indicates that the different second abilities may generate different effects. In some embodiments, the ability configuration structure of the second ability includes at least one of configuration information such as attribute, function, rarity, attack performance, defense

performance, subsidiarity corresponding to the second ability. Schematically, for example, the ability configuration structure includes the function of the ability, and the at least two second abilities are the ability "pollen puff" and the ability "leaf tornado", the ability configuration structure of the ability "pollen puff" is hurting and restoration, that is, the ability "pollen puff" may be used for both remedy hurting for a teammate and providing health point restoration for the teammate; and the ability configuration structure of the ability "leaf tornado" is hurting and accelerating, that is, and the ability "leaf tornado" may be used for both hurting an opponent and providing an accelerating runway to increase a moving speed.

[0071] (2). The second abilities partially the same as the first ability. In some embodiments, the ability effect of the first ability is partially the same as those of the second abilities, the second abilities are abilities obtained by evolving the first ability, and the ability evolution changes some ability effects of the ability. In an embodiment, attribute values corresponding to the ability effects of the second abilities partially the same as that of the first ability may be raised, or may be kept the same as that of the first ability. For example, the ability effect of the first ability is the accelerating effect, and corresponding accelerating attribute value is speed raise by 4%, and the ability effects of the second abilities include the accelerating effect and the restoration effect, where the restoration effect is used to restore a virtual state of the virtual object, for example, a health point, an energy point, or a mana point, and the accelerating attribute value corresponding to the foregoing accelerating effect may be the same as that of the first ability, that is, speed raise by 4%, or may be different from that of the first ability, for example, speed raise by 6%. Alternatively, the ability effects of the first ability are the accelerating effect and the restoration effect, where if the accelerating attribute value corresponding to the accelerating effect is speed raise by 4%, and the restoration attribute value corresponding to the restoration effect is health point restoration of 100 points, an ability effect of a second ability A is the accelerating effect, and a corresponding accelerating attribute value is speed raise by 10%, and an ability effect of a second ability B is the restoration effect, and a corresponding restoration attribute value is health point restoration of 500 points.

[0072] (3). The second abilities are completely different from the first ability. In some embodiments, the ability effect of the first ability is completely different from those of the second abilities, the second abilities are abilities obtained by evolving the first ability, and the ability evolution changes all ability effects of the ability. For example, the second ability is not an advanced ability obtained after the attribute value is increased based on the first ability, but another ability that is set different from the first ability in both the presentation form and the attribute value. For example, the ability effect of the first ability is the accelerating effect, and a corresponding

accelerating attribute value is speed raise by 4%, and the ability effects of the second abilities are a transfer effect, and a corresponding transfer attribute value is a transfer range of 100 meters.

[0073] In an embodiment, ability configuration structures of at least two second abilities corresponding to the foregoing at least two second ability identifiers are different from each other.

[0074] In step 503, the first ability is replaced with a second ability corresponding to the target second ability identifier in response to a selection operation on the target second ability identifier.

[0075] In this embodiment of this application, the foregoing at least two second ability identifiers include the target second ability identifier, and the target second ability identifier is a second ability identifier selected by the player to replace the first ability identifier.

[0076] In an embodiment, the selection operation is implemented through a touch on the interface, or the selection operation is implemented through a physical key. Schematically, a click operation on the second ability identifier on the virtual battle interface is received, and the click operation is used as the selection operation on the target second ability identifier. The foregoing selection operation may be also implemented by a long-press operation, a double-click operation (including at least one of a single-finger double-click operation or a two-or-more-finger double-click operation), a hover operation, a drag operation, and a combination thereof, which is not limited herein.

[0077] In some embodiments, the first ability identifier is displayed at a target display key position in the virtual environment interface, and in a case that the selection operation on the target second ability identifier is received, display of the first ability identifier in the target display key position is canceled according to the selection operation, and the target second ability identifier is displayed at the target display key position. When the target second ability identifier is displayed at the target display key position, it indicates that the first ability configured for the virtual object is replaced with the second ability corresponding to the target second ability identifier.

[0078] In view of the above, in the method for selecting an ability of a virtual object provided in this embodiment of this application, at least two second ability identifiers are displayed when a virtual object is changed to a second level, and a selected second ability replaces a first ability as an evolved ability of the virtual object. Because the second ability is selected from at least two candidate second abilities, diversity of ability evolution is increased, and strategization of a virtual battle is improved, so that a problem of weak strategization of the virtual battle caused by

undiversified ability configuration can be avoided, thereby improving experience of a player in the virtual battle.

[0079] In some embodiments, the at least two second abilities are determined from the ability set corresponding to its own role of the virtual object and the second level. FIG. 7 is a flowchart of a method for selecting an ability of a virtual object according to another exemplary embodiment of this application. An example in which the method is applied to a terminal is used for description. As shown in FIG. 7, the method includes the following steps 701 to 705.

[0080] In step 701, a first ability identifier of a first ability is displayed, where the first ability is configured for a virtual object in a virtual battle, and a level of the virtual object in the virtual battle is a first level.

[0081] The first ability corresponds to the first level, that is, the first ability is configured for the virtual object when the virtual object is at the first level. In some embodiments, a single ability corresponds to a single level, or a single ability corresponds to multiple levels. If a single ability corresponds to multiple levels, ability effects of an ability at different levels are the same or different. Schematically, the player may select the ability "leaf" no matter the virtual object is at the first level or the second level, if the virtual object is at the first level, the ability "leaf" is at the first stage of evolution, and if the virtual object is at the second level, the ability "leaf" is at the second stage of evolution. In a case that the virtual object is switched to the second level, at least two abilities are provided for the player to select, which include the ability "leaf" at the second stage of evolution.

[0082] In some embodiments, the first ability identifier is implemented as at least one of an icon of the first ability, a name of the first ability, and an attribute of the first ability. That is, if the first ability identifier is displayed in a battle interface of the virtual battle, it indicates that the virtual object is currently configured with the first ability. In an embodiment, the first ability identifier is used for indicating an ability configuration of the virtual object, and/or the first ability identifier is used for controlling the virtual object to cast an ability. For example, when the player selects the first ability identifier, the virtual object is triggered to cast the first ability in the virtual battle.

[0083] In step 702, in a case that the virtual object is changed from the first level to a second level in the virtual battle, an ability set corresponding to the virtual object and the second level is determined.

[0084] The ability set corresponds to a role of the virtual object, and the ability set corresponds to the second level, that is, the role of the virtual object corresponds to an entire ability set, and the ability set corresponding to the second level is a subset of the entire ability set.

[0085] In an embodiment, the virtual object corresponds to a role identifier, the second level corresponds to a level identifier, and an ability set corresponding to both the role identifier and the level identifier is searched for and used as an ability set from which the second abilities are selected.

[0086] In step 703, at least two second abilities are determined from the ability set.

[0087] In some embodiments, the at least two second abilities may be determined from the ability set in any one of the following four manners.

[0088] In a first manner, the at least two second abilities are randomly determined from the ability set. Schematically, the quantity of second abilities provided for the player to select is preset, and the at least two second abilities are randomly determined from the ability set according to the quantity.

[0089] In a second manner, historical behavior data corresponding to the virtual object is obtained, where the historical behavior data includes historical ability trigger data of the virtual object, and at least two abilities triggered for the most number of times are determined from the ability set according to the historical behavior data as the at least two second abilities. In an embodiment, the historical behavior data further includes historical ability selection data of the virtual object, that is, the number of times that the player selects an ability in historical virtual battles.

[0090] In a third manner, the at least two second abilities selected by the player are determined from the ability set according to settings of the player. For example, before the virtual battle begins, the player presets to-be-provided second abilities in an ability setting interface.

[0091] In a fourth manner, the at least two second abilities selected by the player are determined from the ability set according to an equipment attribute of a virtual equipment configured for the virtual object in the current virtual battle. In an example, if the equipment attribute is a physical attribute, the at least two second abilities matching the physical attribute are selected from the ability set, and if the equipment attribute is a magic attribute, the at least two second abilities matching the magic attribute are selected from the ability set.

[0092] In step 704, at least two second ability identifiers corresponding to the at least two second abilities are displayed at a preset display position.

[0093] In this embodiment of this application, the preset display position corresponds to the first ability identifier. In an embodiment, the preset display position may be a position within a preset sector range with the first ability identifier as a surrounding center; or the preset display position may be a position at a preset distance to the first ability identifier with the first ability identifier as a start point; the preset display position may be a display position of the first ability identifier, which is not limited herein.

[0094] In an embodiment, if the virtual object is configured with at least two first abilities, the virtual battle interface displays at least two first ability identifiers, and the player may evolve the at least two first abilities in different evolution stages. Schematically, referring to FIG. 8, a virtual battle interface includes two first abilities, namely an ability "leaf" 810 and an ability "photosynthesis" 820. When a virtual object is evolved from a primary state into an intermediate state, a player selects the ability "leaf" 810 from the ability "leaf" 810 and the ability "photosynthesis" 820 to perform evolution, and during evolution of the ability "leaf" 810, two candidate second abilities are included, namely an ability "pollen puff" 831 and an ability "leaf tornado" 832. In an exemplary embodiment, the player selects the ability "pollen puff" 831, so that the virtual object is configured with the ability "pollen puff" 831 and the ability "photosynthesis" 820.

[0095] When the virtual object is evolved from the intermediate state into an advanced state, the player selects the ability "photosynthesis" 820 from the ability "pollen puff" 831 and the ability "photosynthesis" 820 to perform evolution, and during evolution of the ability "photosynthesis" 820, two candidate second abilities are included, namely an ability "cotton guard" 841 and an ability "cotton spore" 842. In an exemplary embodiment, the player selects the ability "cotton guard" 841, so that the virtual object is configured with the ability "pollen puff" 831 and the ability "cotton guard" 841.

[0096] For the foregoing different selections, in a case that the virtual object is evolved into the advanced state, there may be the following four possible ability configuration manners:

1. the ability "pollen puff" 831 and the ability "cotton guard" 841;
2. the ability "pollen puff" 831 and the ability "cotton spore" 842;
3. the ability "leaf tornado" 832 and the ability "cotton guard" 841; and
4. the ability "leaf tornado" 832 and the ability "cotton spore" 842.

[0097] In some embodiments, when the virtual object is evolved from the intermediate state into the advanced state, the player does not evolve the ability "photosynthesis" 820, but continues to

evolve the ability "pollen puff" 831, that is, there may be more ability configuration manners, which is not limited in this embodiment of this application.

[0098] It is to be noted that, in the foregoing example, a description is made by using an example in which the player selects one ability from two abilities to perform evolution. In some embodiments, after the level of the virtual object is switched, the player can evolve a designated ability, but cannot select one of multiple abilities to perform evolution.

[0099] In step 705, the first ability is replaced with a second ability corresponding to the target second ability identifier in response to a selection operation on the target second ability identifier.

[0100] In this embodiment of this application, the at least two second ability identifiers include the target second ability identifier.

[0101] In an embodiment, in a case that switching paths are displayed between the first ability identifier and the second ability identifiers, a slide operation between the first ability identifier and the target ability identifier is used as the selection operation, where a slide start position of the slide operation is on the first ability identifier, and a slide ending position of the slide operation is on the target second ability identifier.

[0102] In some embodiments, if a second ability is selected, the selected second ability needs to be first understood to specific extent. Therefore, the slide operation between the first ability identifier and the second ability identifier is received, and an ability effect preview animation of the target second ability identifier is displayed according to the slide operation; and in a case that the slide operation ends and the slide ending position of the slide operation is on the target second ability identifier, the slide operation is determined as the selection operation on the target second ability identifier.

[0103] Schematically, referring to FIG.9, FIG. 9 is a schematic diagram of a virtual battle interface according to an exemplary embodiment of this application. As shown in FIG. 9, the virtual battle interface 900 displays a first ability identifier 910, a second ability identifier 920, and a second ability identifier 930, there is a switching path 921 between the first ability identifier 910 and the second ability identifier 920, and when a slide operation on the switching path 921 is received, an ability effect preview animation 940 is displayed on a periphery of the second ability identifier 920. In the embodiment shown in FIG. 9, after viewing the ability effect preview animation 940, the player determines that a second ability corresponding to the second ability

identifier 920 needs to be selected. Therefore, the slide operation is ends on the second ability identifier 920, to select the second ability.

[0104] In some embodiments, display of the first ability identifier is canceled according to the selection operation, and the target second ability identifier is displayed at the target display key position of the first ability identifier.

[0105] In view of the above, in the method for selecting an ability of a virtual object provided in this embodiment of this application, at least two second ability identifiers are displayed when a virtual object is changed to a second level, and a selected second ability replaces a first ability as an evolved ability of the virtual object. Because the second ability is selected from at least two candidate second abilities, diversity of ability evolution is increased, and strategization of a virtual battle is improved, so that a problem of weak strategization of the virtual battle caused by undiversified ability configuration can be avoided, thereby improving experience of a player in the virtual battle.

[0106] In the method provided in this embodiment, the second ability identifiers of the at least two second abilities are determined from the ability set and displayed, so that the selection diversity and the selectable range of the second abilities are improved, thereby improving the combination capability of ability configuration.

[0107] In the method provided in this embodiment, during ability switching, the ability effect preview animation is presented according to the slide operation, so that ability effects of candidate abilities can be presented in advance for the player to determine and select the second abilities, thereby improving the ability selection efficiency.

[0108] In some embodiments, ability configuration prompt information is further displayed on a periphery of the second ability identifier. FIG. 10 is a flowchart of a method for selecting an ability of a virtual object according to another exemplary embodiment of this application. A description is made by using an example in which the method is applied to a terminal. As shown in FIG. 10, the method includes the following steps 1001 to 1004.

[0109] In step 1001, a first ability identifier of a first ability is displayed, the first ability is configured for the virtual object at a first level in a virtual battle.

[0110] In some embodiments, the first ability identifier is implemented as at least one of an icon of the first ability, a name of the first ability, and an attribute of the first ability. That is, if the first ability identifier is displayed in a battle interface of the virtual battle, it indicates that the virtual object is currently configured with the first ability. In an embodiment, the first ability identifier is

used for indicating an ability configuration of the virtual object, and/or the first ability identifier is used for controlling the virtual object to cast an ability. For example, if the player selects the first ability identifier, the virtual object is triggered to cast the first ability in the virtual battle.

[0111] In step 1002, in a case that the virtual object is changed from the first level to a second level in the virtual battle, at least two second ability identifiers are displayed at a preset display position corresponding to the first ability identifier, where second abilities corresponding to the second ability identifiers correspond to the second level.

[0112] In some embodiments, as the level of the virtual object changes, the appearance of the virtual object changes with the level. For example, if the virtual object is implemented as a virtual elf, the virtual elf is evolved with the battle process in the virtual battle, and changes the appearance following the evolution.

[0113] The at least two second ability identifiers are used for providing at least two second abilities to the virtual object to replace the first ability, and the second abilities correspond to the second level to which the virtual object evolves. Schematically, the virtual object is currently in a primary state, and is configured with an ability "leaf", and when the virtual object is evolved into an intermediate state, an ability "pollen puff" and an ability "leaf tornado" are displayed at a preset display position corresponding to an ability identifier of the ability "leaf", where the ability "pollen puff" and the ability "leaf tornado" are abilities corresponding to the second level. In addition, in some embodiments, the ability "pollen puff" and the ability "leaf tornado" corresponds to the second level and the ability "leaf". That is, the ability "leaf" corresponds to a current key position in the primary state, and the ability "pollen puff" and the ability "leaf tornado" correspond to the current key position in the intermediate state.

[0114] In an embodiment, the at least two second ability identifiers displayed in the interface are identifiers corresponding to at least two preset second abilities; or the at least two second ability identifiers displayed in the interface are identifiers corresponding to at least two second abilities selected from a preset ability library corresponding to the second level.

[0115] In step 1003, ability configuration prompt information is displayed at a preset positions on a periphery of each of the second ability identifiers in a case that the at least two second ability identifiers are displayed, where the ability configuration prompt information is used for indicating the ability configuration structure of the second ability.

[0116] In some embodiments, the ability configuration structure of the second ability includes at least one of configuration information such as attribute, function, rarity, attack performance, defense performance, and subsidiarity corresponding to the second ability.

[0117] Schematically, referring to FIG. 11, a virtual battle interface 1100 displays a first ability identifier 1110 and a second ability identifier 1120. Ability configuration prompt information 1130 is displayed at a preset position on a periphery of the second ability identifier 1120, as shown in FIG. 11, in a lower left corner of the second ability identifier 1120, referring to the ability configuration prompt information 1130 in FIG. 11, and the ability configuration prompt information 1130 is used for indicating that a second ability corresponding to the second ability identifier 1120 belongs to an attack ability and the second ability belongs to a rare ability.

[0118] In an embodiment, the ability configuration prompt information is used for indicating configuration information through color, frequent blinking, highlighting, pattern, shape, or another manner.

[0119] In step 1004, the first ability is replaced with a second ability corresponding to the target second ability identifier in response to a selection operation on the target second ability identifier.

[0120] The foregoing target second ability identifier is an identifier selected by the player from the at least two second ability identifiers.

[0121] In some embodiments, in a case that the first ability is replaced with the second ability according to the foregoing selection operation, ability operation guide information is displayed in a virtual environment interface, and the foregoing ability operation guide information is used for prompting operation-related content of the second ability corresponding to the target second ability identifier. In an embodiment, the content presented by the foregoing operation guide information includes at least one of a casting path, a casting range, a trigger manner, a trigger effect, and other information of the second ability. In an embodiment, the presentation form of the foregoing operation guide information includes one of an animation form, a text form, a voice form, and the like.

[0122] In view of the above, in the method for selecting an ability of a virtual object provided in this embodiment of this application, at least two second ability identifiers are displayed when a virtual object is changed to a second level, and a selected second ability replaces a first ability as an evolved ability of the virtual object. Because the second ability is selected from at least two candidate second abilities, diversity of ability evolution is increased, and strategization of a

virtual battle is improved, so that a problem of weak strategization of the virtual battle caused by undiversified ability configuration can be avoided, thereby improving experience of a player in the virtual battle.

[0123] In the method provided in this embodiment, the ability configuration prompt information is displayed in the preset position on the periphery of the second ability identifier, to indicate the configuration structure of the second ability corresponding to the second ability identifier, and before selecting the second ability identifier, the player initially understands the second ability, to avoid a problem of a low selection accuracy due to that the second ability is blindly selected.

[0124] Schematically, referring to FIG.12, FIG. 12 is an overall flowchart of a method for selecting an ability of a virtual object according to an exemplary embodiment of this application. As shown in FIG. 12, the method includes the following steps 1201 to 1208.

[0125] In step 1201, a role is upgraded.

[0126] That is, a virtual object participating in a virtual battle in a virtual environment is upgraded or evolved. Schematically, in an example in which the virtual object is implemented as a virtual elf, upgrading the role refers to evolving the virtual elf.

[0127] In step 1202, it is determined whether to reach an ability configuration level.

[0128] Ability configuration refers to a process that the player configures an ability for the virtual object. That is, at some levels, the player may configure an ability for the virtual object, and at other levels after upgrading, the player does not have the capability of configuring an ability for the virtual object.

[0129] In step 1203, ability configuration is enabled if the virtual object reaches the ability configuration level.

[0130] In an embodiment, two candidate ability options, that is, an ability configuration A and an ability configuration B are provided to the player, that is, the player may select one of the ability configuration A and the ability configuration B to perform ability configuration.

[0131] In step 1204, the player selects an ability configuration to be learned.

[0132] In an embodiment, the ability configuration A and the ability configuration B are used for replacing an original ability as new to-be-learned abilities of the virtual object. The player selects one of the ability configuration A and the ability configuration B as a new configured ability of the virtual object.

[0133] In step 1205, an old ability at the same key position is removed.

[0134] Because the ability configuration A and the ability configuration B are used for replacing the old ability, the old ability at the key position is first removed, so as to add an ability selected by the player to the key position.

[0135] In step 1206, the ability configuration learned by the player is determined.

[0136] In step 1207, the ability configuration A is mapped to the key position in a case that the player learns the ability configuration A.

[0137] In step 1208, the ability configuration B is mapped to the key position in a case that the player learns the ability configuration B.

[0138] In view of the above, in the method for selecting an ability of a virtual object provided in this embodiment of this application, at least two second ability identifiers are displayed when a virtual object is changed to a second level, and a selected second ability replaces a first ability as an evolved ability of the virtual object. Because the second ability is selected from at least two candidate second abilities, diversity of ability evolution is increased, and strategization of a virtual battle is improved, so that a problem of weak strategization of the virtual battle caused by undiversified ability configuration can be avoided, thereby improving experience of a player in the virtual battle.

[0139] FIG. 13 is a structural block diagram of an apparatus for selecting an ability of a virtual object according to an exemplary embodiment of this application. As shown in FIG. 13, the apparatus includes: a display module 1310 and a receiving module 1320. The display module 1310 is configured to display a first ability identifier of a first ability, the first ability is configured for the virtual object at a first level in a virtual battle. The display module 1310 is further configured to display at least two second ability identifiers in a case that the virtual object is changed from the first level to a second level in the virtual battle, second abilities corresponding to the second ability identifiers correspond to the second level. The receiving module 1320 is configured to replace, in response to receiving a selection operation on a target second ability identifier selected from the at least two second ability identifiers, the first ability with a second ability corresponding to the target second ability identifier.

[0140] In an embodiment, the display module 1310 is further configured to: cancel displaying the first ability identifier at a target display key position; and display the target second ability identifier at the target display key position of the first ability identifier.

[0141] In an embodiment, the at least two second abilities correspond to different ability configuration structures, and each of the ability configuration structures is used for indicating an effect combination generated by a second ability; and the first ability and the second abilities have different ability effects.

[0142] In an embodiment, as shown in FIG. 14, the display module 1310 includes: a determining unit 1311 and a display unit 1312. The determining unit 1311 is configured to: determine an ability set corresponding to the virtual object and the second level; and determine the at least two second abilities from the ability set. The display unit 1312 is configured to display the at least two second ability identifiers corresponding to the at least two second abilities at a preset display position corresponding to the first ability identifier.

[0143] In an embodiment, the determining unit 1311 is further configured to: obtain historical behavior data corresponding to the virtual object, where the historical behavior data includes historical ability trigger data of the virtual object; and determine at least two abilities triggered for the most number of times from the ability set according to the historical behavior data as the at least two second abilities.

[0144] In an embodiment, the display module 1310 is further configured to display the at least two second ability identifiers in a sector display manner with the first ability identifier as a surrounding center; or the display module 1310 is further configured to display at least two switching paths with the first ability identifier as a path start point, where the at least two second ability identifiers are used as end points of the switching paths; or the display module 1310 is further configured to display the at least two second ability identifiers in a display position of the first ability identifier in a superimposed manner.

[0145] In an embodiment, the receiving module 1320 is further configured to use a slide operation between the first ability identifier and the target second ability identifier as the selection operation in a case that the switching paths is displayed between the first ability identifier and the second ability identifiers, where a slide start position of the slide operation is on the first ability identifier, and a slide ending position of the slide operation is on the target second ability identifier.

[0146] In an embodiment, the receiving module 1320 is further configured to receive the slide operation between the first ability identifier and the target second ability identifier; and the display module 1310 is further configured to: display an ability effect preview animation of the target second ability identifier according to the slide operation; and determine the slide operation as the selection operation on the target second ability identifier in response to end of the slide operation and a slide ending position of the slide operation is on the target second ability identifier.

[0147] In an embodiment, the display module 1310 is further configured to display ability configuration prompt information at a preset position on a periphery of each of the second ability identifier in a case that the at least two second ability identifiers are displayed, where the ability configuration prompt information is used for indicating the ability configuration structures of the second abilities.

[0148] In view of the above, in the apparatus for selecting an ability of a virtual object provided in this embodiment of this application, at least two second ability identifiers are displayed when a virtual object is changed to a second level, and a selected second ability replaces a first ability as an evolved ability of the virtual object. Because the second ability is selected from at least two candidate second abilities, diversity of ability evolution is increased, and strategization of a virtual battle is improved, so that a problem of weak strategization of the virtual battle caused by undiversified ability configuration can be avoided, thereby improving experience of a player in the virtual battle.

[0149] It is to be noted that the apparatus for selecting an ability of a virtual object provided in the foregoing embodiments is illustrated by taking the foregoing divided functional modules as an example. In practice, the functions may be allocated to and completed by different functional modules according to requirements, that is, the internal structure of the device is divided into different functional modules, to implement all or some of the content described above.

[0150] A terminal is further provided in this application, the terminal includes a processor and a memory, the memory stores at least one instruction, and the at least one instruction is loaded and executed by the processor to implement steps of the method for selecting an ability of a virtual object performed by the first terminal or by the second terminal. The terminal may be a terminal provided in FIG. 15 below.

[0151] FIG. 15 shows a structural block diagram of a terminal 1500 according to an exemplary embodiment of this application. The terminal 1500 may be: a smartphone, a pad, a Moving Picture Experts Group Audio Layer III (MP3) player, a Moving Picture Experts Group Audio Layer IV (MP4) player, a laptop, or a desktop. The terminal 1500 may also be referred to as other names such as user equipment, a portable terminal, a laptop terminal, and a desktop terminal.

[0152] Generally, the terminal 1500 includes: a processor 1501 and a memory 1502. The processor 1501 may include one or more processing cores, such as a 4-core processor or an 8-core processor. The memory 1502 may include one or more computer-readable storage medium, which may be non-transitory. The memory 1502 may also include a high-speed random access memory, as well as non-volatile memory, such as one or more disk storage devices and flash storage devices. In

some embodiments, a non-transitory computer-readable storage medium in the memory 1502 is configured to store at least one instruction, the at least one instruction is executed by the processor 1501 to implement the method for selecting an ability of a virtual object provided in the method embodiments of this application.

[0153] In some embodiments, the terminal 1500 also optionally includes: a peripheral interface 1503 and at least one peripheral device. The processor 1501, the memory 1502 and the peripheral interface 1503 may be connected by a bus or a signal line. Each peripheral device may be connected to the peripheral interface 1503 by a bus, signal line, or a circuit board. Specifically, the peripheral device includes at least one of: a radio frequency (RF) circuit 1504, a touchscreen 1505, a camera 1506, an audio circuit 1507, a positioning assembly 1508, or a power supply 1509. The peripheral interface 1503 may be configured to connect at least one peripheral related to input/output (I/O) to the processor 1501 and the memory 1502. The RF circuit 1504 is configured to receive and transmit radio frequency (RF) signals, also referred to as electromagnetic signals. The RF circuit 1504 communicates with a communication network and other communication devices through the electromagnetic signals. The RF circuit 1504 converts an electric signal into an electromagnetic signal for transmission, or converts a received electromagnetic signal into an electric signal. The display screen 1505 is configured to display a user interface (UI). The camera assembly 1506 is configured to capture images or videos. The audio circuit 1507 may include a microphone and a speaker. The positioning assembly 1508 is configured to position a current geographic location of the terminal 1500 to implement navigation or location based service (LBS). The power supply 1509 is configured to supply power the various assemblies in the terminal 1500.

[0154] In some embodiments, the terminal 1500 also includes one or more sensors 1510. The one or more sensors 1510 include, but are not limited to: an acceleration sensor 1511, a gyroscope sensor 1512, a pressure sensor 1513, a fingerprint sensor 1514, an optical sensor 1515, and a proximity sensor 1516.

[0155] It will be appreciated by those skilled in the art that the structure shown in FIG. 15 does not limit the terminal 1500 and may include more or fewer assemblies, or some assemblies may be combined, or different assembly arrangements may be employed.

[0156] The memory further includes one or more programs. The one or more programs are stored in the memory. The one or more programs are used for performing the method for selecting an ability of a virtual object provided in the embodiments of this application.

[0157] A computer-readable storage medium is further provided according to an embodiment of this application. The storage medium stores at least one instruction, and the at least

one instruction is loaded and executed by a processor, to implement the method for selecting an ability of a virtual object according to the foregoing method embodiments.

[0158] A computer program product or a computer program is further provided according to an embodiment of this application. The computer program product or the computer program includes computer instructions, and the computer instructions are stored in a computer-readable storage medium. A processor of a computer device reads the computer instructions from the computer-readable storage medium and executes the computer instructions to cause the computer device to perform the method for selecting an ability of a virtual object described in any one of the foregoing embodiments.

[0159] The sequence numbers of the foregoing embodiments of this application are merely for description purpose, and are not intended to indicate the preference among the embodiments.

[0160] A person of ordinary skill in the art may understand that all or some of the steps of the embodiments may be implemented by hardware or a program instructing related hardware. The program may be stored in a computer-readable storage medium. The storage medium may include: a read-only memory, a magnetic disk, or an optical disc.

[0161] The foregoing descriptions are merely preferred embodiments of this application, and are not intended to limit this application. Any modification, equivalent replacement, or improvement made within the spirit and principle of this application shall fall within the protection scope of this application.

CLAIMS

1. A method for selecting an ability of a virtual object, performed by a computer device, the method comprising:

displaying a first ability identifier of a first ability, the first ability being configured for a virtual object at a first level in a virtual battle;

displaying at least two second ability identifiers in a case that the virtual object is changed from the first level to a second level in the virtual battle, second abilities corresponding to the at least two second ability identifiers being corresponding to the second level, and the at least two second ability identifiers comprising a target second ability identifier; and

replacing the first ability with a second ability corresponding to the target second ability identifier in response to a selection operation on the target second ability identifier.

2. The method according to claim 1, wherein the replacing the first ability with a second ability corresponding to the target second ability identifier comprises:

canceling displaying the first ability identifier at a target display key position; and

displaying the target second ability identifier at the target display key position.

3. The method according to claim 2, wherein

the at least two second abilities correspond to different ability configuration structures, and each of the ability configuration structures is used for indicating an effect combination generated by a second ability; and

the first ability and the at least two second abilities have different ability effects.

4. The method according to any one of claims 1 to 3, wherein the displaying at least two second ability identifiers comprises:

determining an ability set corresponding to the virtual object and the second level;

determining the at least two second abilities from the ability set; and

displaying the at least two second ability identifiers corresponding to the at least two second abilities at a preset display position, wherein the preset display position corresponds to the first

ability identifier.

5. The method according to claim 4, wherein the determining the at least two second abilities from the ability set comprises:

obtaining historical behavior data corresponding to the virtual object, wherein the historical behavior data comprises historical ability trigger data of the virtual object; and

determining, according to the historical behavior data, at least two abilities triggered for the most number of times from the ability set as the at least two second abilities.

6. The method according to any one of claims 1 to 4, wherein the displaying at least two second ability identifiers comprises:

displaying the at least two second ability identifiers in a sector display manner with the first ability identifier as a surrounding center; or

displaying at least two switching paths with the first ability identifier as a path start point, wherein the at least two second ability identifiers are used as end points of the switching paths; or

displaying the at least two second ability identifiers in a superimposed manner at a display position of the first ability identifier.

7. The method according to claim 6, further comprising:

taking a slide operation between the first ability identifier and the target second ability identifier as the selection operation in a case that the switching paths are displayed between the first ability identifier and the second ability identifiers.

8. The method according to claim 7, wherein the taking a slide operation between the first ability identifier and the target second ability identifier as the selection operation comprises:

receiving the slide operation between the first ability identifier and the target second ability identifier;

displaying an ability effect preview animation of the target second ability identifier according to the slide operation; and

determining the slide operation as the selection operation on the target second ability identifier in a case that the slide operation ends and a slide ending position of the slide operation is on the target second ability identifier.

9. The method according to any one of claims 1 to 4, further comprising:

displaying ability configuration prompt information at a preset position on a periphery of each of the second ability identifiers in a case that the at least two second ability identifiers are displayed, wherein the ability configuration prompt information is used for indicating the ability configuration structure of the second ability.

10. An apparatus for selecting an ability of a virtual object, comprising:

a display module, configured to display a first ability identifier of a first ability, the first ability being configured for the virtual object at a first level in a virtual battle, wherein

the display module is further configured to display at least two second ability identifiers in a case that the virtual object is changed from the first level to a second level in the virtual battle, second abilities corresponding to the at least two second ability identifiers being corresponding to the second level, and the at least two second ability identifiers comprising a target second ability identifier; and

a receiving module, configured to replace the first ability with a second ability corresponding to the target second ability identifier in response to a selection operation on the target second ability identifier.

11. The apparatus according to claim 10, wherein the display module is further configured to: cancel displaying the first ability identifier at a target display key position; and display the target second ability identifier at the target display key position.

12. The apparatus according to claim 11, wherein

the at least two second abilities correspond to different ability configuration structures, and each of the ability configuration structures is used for an indicating effect combination generated by a second ability; and

the first ability and the second abilities have different ability effects.

13. A computer device, comprising a processor and a memory, the memory storing at least one instruction, at least one program, a code set or an instruction set, wherein

the at least one instruction, the at least one program, the code set or the instruction set is loaded and executed by the processor to implement the method for selecting an ability of a virtual object according to any one of claims 1 to 9.

14. A computer-readable storage medium, storing at least one instruction, at least one program, a code set, or an instruction set, wherein

the at least one instruction, the at least one program, the code set, or the instruction set is loaded and executed by a processor to implement the method for selecting an ability of a virtual object according to any one of claims 1 to 9.

15. A computer program product, the computer program product comprising a computer program/instruction, wherein

the computer program/instruction is stored in a computer-readable storage medium, a processor of a computer device reads the computer program/instruction from the computer-readable storage medium, and the processor executes the computer program/instruction to cause the computer device to implement the method for selecting an ability of a virtual object according to any one of claims 1 to 9.