

INFORMATION DISPLAY METHODS, APPARATUS, DEVICE, STORAGE MEDIUM AND PRODUCT

[0001] This application claims the priority to and benefits of the Chinese Patent Application, No. 202410813876.1, which was filed on June 21, 2024. All the aforementioned patent applications are hereby incorporated by reference in their entireties.

TECHNICAL FIELD

[0002] Embodiments of the present disclosure relate to an information display method, an apparatus, a device, a storage medium and a product.

BACKGROUND

[0003] With the development of mobile Internet, the progress of network technologies and the popularization of intelligent terminals, more and more users watch live streaming. A streamer may explain an object in a live streaming video interface during live streaming, and a user may complete an interactive event based on the object.

SUMMARY

[0004] Embodiments of the present disclosure provide an information display method, an apparatus, a device, a storage medium and a product, which may optimize an existing information display solution for live streaming.

[0005] In a first aspect, an embodiment of the present disclosure provides an information display method, applied to a first device, including:

[0006] displaying a first object information set in a first preset page, where the first object information set includes first object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;

[0007] displaying target prompt information at a position adjacent to first object information of a first target preset object, where the first target preset object is the preset object in the preset object set, business data of the first target preset object satisfies a preset requirement, and the target prompt information is used for prompting to set the first target preset object as a preset object with a target object attribute, so that second object information of the preset object with the target object attribute includes a target label, and the second object information of the preset object with the target object attribute is displayed at a target position in a second object information set, the second object information set is displayed in a

second preset page of a second device, and the second preset page is associated with the target live streaming video interface.

[0008] In a second aspect, an embodiment of the present disclosure provides an information display method, applied to a second device, including:

[0009] displaying a second object information set in a second preset page, where the second object information set includes second object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;

[0010] in response to determining that a fourth target preset object is set as a preset object with a target object attribute, displaying a target label and/or second target information in second object information of the fourth target preset object, and displaying the second object information of the fourth target preset object at a target position in the second object information set, where the fourth target preset object is a preset object in the preset object set, and the second target information is recommendation information used for reflecting that the fourth target preset object is set as the preset object with the target object attribute.

[0011] In a third aspect, an embodiment of the present disclosure further provides an information display apparatus, configured on a first device, including:

[0012] an information set display module, configured to display a first object information set in a first preset page, where the first object information set includes first object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;

[0013] a prompt information display module, configured to display target prompt information at a position adjacent to first object information of a first target preset object, where the first target preset object is the preset object in the preset object set, business data of the first target preset object satisfies a preset requirement, and the target prompt information is used for prompting to set the first target preset object as a preset object with a target object attribute, so that second object information of the preset object with the target object attribute includes a target label, and the second object information of the preset object with the target object attribute is displayed at a target position in a second object information set, the second object information set is displayed in a second preset page of a second device, and the second preset page is associated with the target live streaming video interface.

[0014] In a fourth aspect, an embodiment of the present disclosure further provides an information display apparatus, configured on a second device, including:

[0015] an object information set display module, configured to display a second object information set in a second preset page, where the second object information set includes second object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;

[0016] an information display module, configured to, in response to determining that a fourth target preset object is set as a preset object with a target object attribute, display a target label and/or second

target information in second object information of the fourth target preset object, and display the second object information of the fourth target preset object at a target position in the second object information set, where the fourth target preset object is a preset object in the preset object set, and the second target information is recommendation information used for reflecting that the fourth target preset object is set as the preset object with the target object attribute.

[0017] In a fifth aspect, an embodiment of the present disclosure further provides an electronic device, and the electronic device includes:

[0018] one or more processors;

[0019] a storage apparatus, configured to store one or more programs,

[0020] when the one or more programs are executed by the one or more processors, the one or more processors are caused to implement the information display method provided by the embodiments of the present disclosure.

[0021] In a sixth aspect, an embodiment of the present disclosure further provides a storage medium including computer-executable instructions, and when the computer-executable instructions are executed by a computer processor, the information display method provided by the embodiments of the present disclosure is performed.

[0022] In a seventh aspect, an embodiment of the present disclosure further provides a computer program product, including a computer program, and when the computer program is executed by a processor, the information display method provided by the embodiments of the present disclosure is implemented.

BRIEF DESCRIPTION OF DRAWINGS

[0023] The above and other features, advantages and aspects of various embodiments of the present disclosure will become more apparent when taken in conjunction with the drawings and with reference to the following detailed description. Throughout the drawings, the same or similar reference numbers refer to the same or similar elements. It should be understood that the drawings are schematic and that the components and elements are not necessarily drawn to scale.

[0024] Fig. 1 is a schematic flowchart of an information display method provided by an embodiment of the present disclosure;

[0025] Fig. 2 is a schematic diagram of an interface provided by an embodiment of the present disclosure;

[0026] Fig. 3 is a schematic flowchart of another information display method provided by an embodiment of the present disclosure;

[0027] Fig. 4 is a schematic diagram of interface interaction provided by an embodiment of the present disclosure;

- [0028] Fig. 5 is a schematic flowchart of another information display method provided by an embodiment of the present disclosure;
- [0029] Fig. 6 is a schematic diagram of an interface provided by an embodiment of the present disclosure;
- [0030] Fig. 7 is a schematic diagram of an interface change process provided by an embodiment of the present disclosure;
- [0031] Fig. 8 is a schematic diagram of an interface provided by an embodiment of the present disclosure;
- [0032] Fig. 9 is a schematic structural diagram of an information display apparatus provided by an embodiment of the present disclosure;
- [0033] Fig. 10 is a schematic structural diagram of another information display apparatus provided by an embodiment of the present disclosure;
- [0034] Fig. 11 is a schematic structural diagram of an electronic device provided by an embodiment of the present disclosure.

DETAILED DESCRIPTION

- [0035] Embodiments of the present disclosure will be described in more detail below with reference to the drawings. Although certain embodiments of the present disclosure are shown in the drawings, it should be understood that the present disclosure may be implemented in various forms and should not be construed as limited to the embodiments set forth herein; on the contrary, these embodiments are provided for a more thorough and complete understanding of the present disclosure. It should be understood that the drawings and embodiments of the present disclosure are only for exemplary purposes, and are not intended to limit the protection scope of the present disclosure.
- [0036] It should be understood that steps described in method implementations of the present disclosure may be performed in different orders and/or in parallel. Furthermore, the method implementations may include additional steps and/or omit performing illustrated steps. The scope of the present disclosure is not limited in this regard.
- [0037] As used herein, the term "include/comprise" and variations thereof are open-ended inclusions, i.e., "include/comprise but not limited to". The term "based on" is "based at least in part on". The term "one embodiment" means "at least one embodiment"; the term "another embodiment" means "at least one other embodiment"; the term "some embodiments" means "at least some embodiments". Relevant definitions of other terms will be given in the description below.
- [0038] It should be noted that concepts such as "first" and "second" mentioned in the present disclosure are only used to distinguish different apparatuses, modules or units, and are not used to limit an order or interdependence of the functions performed by these apparatuses, modules or units.

- [0039] It should be noted that modifications of "one" and "multiple" mentioned in the present disclosure are illustrative rather than restrictive, and those skilled in the art should understand that unless otherwise clearly indicated in the context, they should be understood as "one or multiple".
- [0040] Names of messages or information exchanged between multiple apparatuses in implementations of the present disclosure are for illustrative purposes only, and are not intended to limit the scope of these messages or information.
- [0041] It may be understood that before using the technical solutions disclosed in the embodiments of the present disclosure, the user should be informed of the type, range of use, use scenarios, etc. of personal information involved in the present disclosure and obtain the authorization of the user in an appropriate manner in accordance with relevant laws and regulations.
- [0042] For example, when receiving an active request from a user, prompt information is sent to the user to clearly prompt the user that the operation requested to be performed will require access to and use of personal information of the user. As such, 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 present disclosure.
- [0043] 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. Furthermore, 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.
- [0044] It may be understood that the above process of notifying and acquiring the authorization of the user is only illustrative and does not limit the implementations of the present disclosure, and other methods that satisfy the relevant laws and regulations may also be applied in the implementations of the present disclosure.
- [0045] It may be understood that the data involved in the technical solution (including but not limited to the data itself, acquisition or use of the data) should comply with requirements of corresponding laws, regulations and related provisions.
- [0046] Fig. 1 is a schematic flowchart of an information display method provided by an embodiment of the present disclosure. The embodiment of the present disclosure is applicable to a case of displaying prompt information when setting a target object attribute for a preset object associated with a live streaming video interface. The method may be performed by an information display apparatus, which may be implemented in the form of software and/or hardware. Optionally, the method is implemented by an electronic device (a first device), which may be a mobile terminal, such as a mobile phone, a tablet computer, and a personal digital assistant, and may also be a device, such as a personal computer (PC) or a server.

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

[0048] Step 101, displaying a first object information set in a first preset page, where the first object information set includes first object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface.

[0049] Exemplarily, the first preset page is a page in a first preset client, and the first preset client may be a client used by a manager, an operator, a streamer or other related persons corresponding to the target live streaming video interface. The first preset page may be an application page or a web page in the first preset client displayed in the first device, which is not specifically limited. A user oriented to the first preset page may be a related person of the above manager or operator, and may also be a streamer user (hereinafter collectively referred to as a live streaming user for ease of distinguishing from a viewer). The first device may be an electronic device used by the live streaming user. An electronic device used by the viewer may be denoted as a second device. The live streaming video interface may be an interface used to display a live streaming, such as an interface of a live streaming room. The target live streaming video interface may be a live streaming video interface corresponding to a live streaming hosted by the live streaming user, and may also be a live streaming video interface viewed by the viewer when viewing the live streaming. For the same live streaming, a display form or display style of the target live streaming video interface in the first device and the second device may be the same or different, which is not limited in the embodiments of the present disclosure.

[0050] Exemplarily, the preset object set may be a set of objects (denoted as preset objects) that may be explained or trigger preset interaction operations in the target live streaming video interface. The preset objects may include products, items, services or information, etc. The preset interaction operation is, for example, an acquisition operation, and taking the preset object as a product for an example, the preset interaction operation may be a purchase operation, an add-to-shopping cart operation, a collection operation or an evaluation operation, etc. The preset object set generally includes a plurality of preset objects, and the preset objects may include an object currently being explained, and may also include an object that has been explained or an object to be explained. Before the live streaming starts, that is, before the target live streaming video interface is displayed in the first device and the second device, the live streaming user may set the preset object set, such as setting which preset objects are included in the preset object set, an initial sequence number of each preset object, etc.

[0051] Exemplarily, the object information may include object attribute information and/or image resource information of the preset object, and may also include other information related to the preset object. The object attribute information may include an object identification (such as a product name, etc.), an object acquisition cost (such as a product price), an object inventory (such as whether there is stock or a remaining quantity, etc.), an object feature (such as a selling point of a product), a brand, a model, a material or an ingredient, etc. The image resource information may include information about resources such as an image and/or a video associated with the preset object, such as a schematic diagram

of the product (such as a product photo) or a product explanation video (such as a live streaming replay video of the product), etc. The first object information is specifically object information of the preset object displayed in the first preset page, and a specific display manner of each piece of first object information in the first object information set is not limited, and may be displayed in the form of a list or a matrix, for example, a product list. The first preset page may be displayed when the target live streaming video interface is in a live streaming state, and may also be displayed when the target live streaming video interface is in a non-live streaming state, and display manners of the first object information set in the first preset page may be different for the live streaming state and the non-live streaming state. For example, in the live streaming state, the first object information of the preset object that is being explained is displayed at a first position in the first object information set; and in the non-live streaming state, there is no first object information of the preset object that is being explained.

[0052] Step 102, displaying target prompt information at a position adjacent to first object information of a first target preset object, where the first target preset object is the preset object in the preset object set, business data of the first target preset object satisfies a preset requirement, and the target prompt information is used for prompting to set the first target preset object as a preset object with a target object attribute, so that second object information of the preset object with the target object attribute includes a target label, and the second object information of the preset object with the target object attribute is displayed at a target position in a second object information set, the second object information set is displayed in a second preset page of a second device, and the second preset page is associated with the target live streaming video interface.

[0053] Exemplarily, the business data may be business-related data of the preset object to which the business data belongs, and the business data of the first target preset object is data related to a business of the first target preset object. Optionally, the business data includes one or more pieces of preset business attribute information, and the preset business attribute information may specifically be an attribute value of a preset business attribute. The preset business attribute may be a statistical dimension of data generated when the user triggers a preset interaction operation for the preset object, such as an object evaluation statistical dimension, an object acquisition quantity statistical dimension, and an object repeated acquisition operation statistical dimension, etc. Accordingly, the preset business attribute information may include at least one of object evaluation statistical information, object acquisition quantity statistical information, and object repeated acquisition operation statistical information. It should be noted that when performing data statistics, the preset interaction operation may be a preset interaction operation triggered for the preset object in the target live streaming video interface, and may also be a preset interaction operation triggered for the preset object outside the target live streaming video, such as a product purchase operation triggered in a store page to which the product belongs. Taking the preset object as a product for an example, the preset business attribute may include a product praise rate, a cumulative product sales volume, and a product repurchase frequency, etc.

[0054] Exemplarily, the preset requirement may be set according to an attribute value range of the preset business attribute, for example, if the attribute value of the preset business attribute is within a preset value range, the preset requirement is satisfied. Optionally, the preset requirement includes that the attribute value of at least one preset business attribute is greater than a corresponding preset attribute threshold. For example, that the business data of the first target preset object satisfies the preset requirement includes: the attribute value of at least one preset business attribute of the first target preset object is greater than the corresponding preset attribute threshold. Taking the preset object as a product for an example, the preset requirement may be, for example, at least one selected from the group consisting of: the product praise rate is greater than a preset praise rate threshold, the cumulative product sales volume is greater than a preset sales volume threshold, or the product repurchase frequency is greater than a preset repurchase frequency threshold.

[0055] Exemplarily, there may be one or more first target preset objects. Optionally, preset objects whose business data satisfies the preset requirement are selected from the preset object set and denoted as candidate preset objects, and in response to a number of the candidate preset objects being greater than or equal to a preset candidate object number threshold, the candidate preset objects may be further selected. For example, the preset candidate objects are scored based on the business data of the preset objects, and candidate preset objects with a same number as the preset candidate object number threshold and with higher scores are selected as the first target preset objects based on the scores. Specifically, the candidate preset objects are sorted in a descending order according to the scores, and candidate preset objects ranked before N are selected as the first target preset objects, where N is the preset candidate object number threshold.

[0056] Exemplarily, the second preset page may be displayed in the second device. The second preset page is a page in a second preset client, and the second preset client may be a client used by the viewer. The viewer may view the second preset page when the target live streaming video interface is in the live streaming state, and the second preset page may be an application page or a web page in the second preset client displayed in the second device, which is not specifically limited. The second object information is specifically object information of the preset object displayed in the second preset page, and a specific display manner of each piece of second object information in the second object information set is not limited, and may be displayed in the form of a list or a matrix, for example, a product list. For the same preset object, the corresponding first object information and second object information may be the same or different, which is not specifically limited.

[0057] Exemplarily, the target object attribute may be an object attribute actively set by the live streaming user for the preset object, and the second object information of the preset object set with the target object attribute includes the target label and is displayed at the target position in the second object information set. Optionally, content of the target label is related to the target object attribute, so that the viewer may quickly locate the preset object displayed at the target position, and quickly determine the

target object attribute of the preset object through the target label, thereby improving object locating efficiency and viewing efficiency. The target object attribute may be an attribute used to attract attention of the viewer, and may be a preset object that the live streaming focuses on recommending to the viewer, such as a main product. The target label may be, for example, a label with words "main recommendation".

[0058] Exemplarily, the target position may be a front position in the second object information set, such as an m th position from top to bottom, where m is less than or equal to M , M may be, for example, 2 or 5, and a value of M may be determined according to a number of preset objects allowed to be set with the target object attribute.

[0059] Exemplarily, the target prompt information is used for prompting to set the first target preset object as the preset object with the target object attribute, and specific content, a display form, etc. of the target prompt information are not limited, for example, the target prompt information may be in the form of an icon or text. Taking the display form as a text form for an example, the content may be "it is recommended to set as the main product".

[0060] In the embodiments of the present disclosure, the target prompt information is displayed at a position adjacent to the first object information of the first target preset object, and the adjacent position may be an upper adjacent position, a lower adjacent position, a left adjacent position or a right adjacent position of the first object information of the first target preset object, which is not specifically limited.

[0061] Fig. 2 is a schematic diagram of an interface provided by an embodiment of the present disclosure. As shown in Fig. 2, taking the preset object as a product for an example, a first object information set 202 is displayed in a first preset page 201, the first object information set 202 includes first object information of preset objects in a preset object set (including a product a, a product b, a product c, etc.), and target prompt information 204 is displayed at a position (such as a lower adjacent position) adjacent to first object information 203 of a first target preset object (such as the product b). The first preset page 201 may be the first preset page when the target live streaming video interface is in a non-live streaming state.

[0062] According to the information display method provided by the embodiments of the present disclosure, in a first device, a first object information set is displayed in a first preset page, where the first object information set includes first object information of preset objects in a preset object set, and the preset object set is associated with a target live streaming video interface; target prompt information is displayed at a position adjacent to first object information of a first target preset object, where business data of the first target preset object satisfies a preset requirement, and the target prompt information is used for prompting to set the first target preset object as a preset object with a target object attribute, so that second object information of the preset object with the target object attribute includes a target label, and the second object information of the preset object with the target object attribute is displayed at a target position in a second object information set, the second object information set is displayed in a second preset page associated with the target live streaming video interface in a second device. By

adopting the above technical solution, when the business data of the preset object associated with the target live streaming video interface satisfies the preset requirement, the corresponding target prompt information is displayed, which helps to improve efficiency of setting the target object attribute of the preset object.

[0063] In some embodiments, the business data includes at least two pieces of preset business attribute information, content of the target prompt information is determined according to target preset business attribute information of the first target preset object, and the target preset business attribute information is preset business attribute information determined based on a sorting result after sorting the at least two pieces of preset business attribute information of the first target preset object according to a preset sorting manner. Therefore, the content of the target prompt information is determined according to prominent preset business attribute information, which may enhance a prompting effect.

[0064] Exemplarily, a corresponding scoring method is set for the preset business attribute corresponding to each piece of preset business attribute information, and then a sorting score corresponding to each piece of preset business attribute information of the first target preset object is determined, sorting is performed according to the sorting score, preset business attribute information with a highest sorting score is determined as the target preset business attribute information, and the content of the target prompt information is determined according to the target preset business attribute information. For example, the target prompt information includes the target preset business attribute information. As exemplified above, the preset business attribute may include a product praise rate, a cumulative product sales volume, and a product repurchase frequency. Assuming that the product praise rate has a highest sorting score, the target prompt information may include a specific praise rate value, such as the target prompt information "the product praise rate is 99%, it is recommended to set as the main product".

[0065] In some embodiments, the preset business attribute information includes an attribute value of a preset business attribute, and the preset requirement includes that the attribute value of at least one preset business attribute is greater than a corresponding preset attribute threshold. The preset sorting manner is determined based on at least one selected from the group consisting of: a proportion by which the attribute value of the preset business attribute exceeds the corresponding preset attribute threshold; and when there are a plurality of first target preset objects, a number of first target preset objects with a same preset business attribute to which corresponding target preset business attribute information belongs among the plurality of first target preset objects. Therefore, the target preset business attribute information may be determined more accurately and reasonably.

[0066] Exemplarily, assuming that a preset attribute threshold corresponding to a certain preset business attribute is A, and an attribute value of the preset business attribute of the first target preset object is a, the above proportion is $(a-A)/A$. For example, assuming that a preset praise rate threshold corresponding to a product praise rate is 0.9, and a praise rate value of a certain product X is 0.99, the proportion of exceeding is 10%; assuming that a preset sales volume threshold corresponding to a cumulative product

sales volume is 10000, and a cumulative sales volume of the product X is 12000, the proportion of exceeding is 20%; assuming that a preset repurchase frequency threshold corresponding to a product repurchase frequency is 1000, and a repurchase frequency of the product X is 1300, the proportion of exceeding is 30%. If the preset sorting manner is determined based on the proportion, a sorting result is: the product repurchase frequency, the cumulative product sales volume, and the product praise rate, and a product repurchase frequency of 1300 is determined as the target preset business attribute information.

[0067] Exemplarily, there may be a plurality of first target preset objects, such as 10 first target preset objects. Among the 10 first target preset objects, there are x first target preset objects whose preset business attribute to which the corresponding target preset business attribute information belongs is the product praise rate, there are y first target preset objects whose preset business attribute to which the corresponding target preset business attribute information belongs is the cumulative product sales volume, and there are z first target preset objects whose preset business attribute to which the corresponding target preset business attribute information belongs is the product repurchase frequency, then $x+y+z=10$. Taking x, y and z all being greater than 1, and values of x, y and z being uniform as constraint conditions, sorting of each first target preset object is optimized, and then a sorting result corresponding to each first target preset object is determined. The sorting result at this time may only include preset business attribute information ranked first.

[0068] Optionally, the sorting manner may be determined comprehensively by combining the above proportion and number. For example, an initial sorting result of each first target preset object is first determined according to the above proportion, and then the initial sorting result is adjusted according to the above number to obtain a final sorting result of each first target preset object.

[0069] In some embodiments, the method further includes: displaying a corresponding preset setting control at a position associated with the first object information in the first object information set; in response to a preset setting operation input based on a preset setting control corresponding to a second target preset object, setting the second target preset object to have the target object attribute, where the second target preset object is the preset object in the preset object set; and adding display of the target label in first object information of the second target preset object, and displaying the first object information of the second target preset object at a first target position in the first object information set, where the first target position is one of target positions. Therefore, the streamer user may be supported in setting a certain preset object in the preset object set as the preset object with the target object attribute, and a setting effect may be directly viewed in the first preset page, thereby improving convenience of setting operations.

[0070] Exemplarily, the associated position of the first object information may be a right side of the first object information or a position in a display area where the first object information is located. The preset setting control may be used to directly or indirectly input the preset setting operation. For example, the preset setting operation is a trigger operation for the preset setting control; for another example, in

response to the trigger operation for the preset setting control, a preset attribute setting control is displayed, and the preset setting operation is a trigger operation for the preset attribute setting control.

[0071] In some embodiments, when the target live streaming video interface is in a live streaming state, in response to the second target preset object being a preset object that is not being explained, the first target position is a next position of first object information or second object information of a preset object that is being explained; and when the target live streaming video interface is not in the live streaming state, the first target position is a first position in the first object information set. Therefore, when the target live streaming video interface is in different states, the first target position is different. For the live streaming state, the display priority of the object information of the preset object being explained is higher than the display priority of the object information of the preset object with the target object attribute, which is convenient for the user to quickly locate and view the preset object being explained.

[0072] Exemplarily, for the live streaming state, in response to the preset object that is being explained being the preset object with the target object attribute, the first target position is the first position in the first object information set.

[0073] In some embodiments, in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, setting the second target preset object to have the target object attribute includes: in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, when a number of preset objects with the target object attribute in the preset object set is less than a preset number threshold, setting the second target preset object to have the target object attribute. Therefore, the number of preset objects set with the target object attribute may be constrained by the preset number threshold, so as to avoid displaying too much object information of preset objects with the target object attribute at the target position.

[0074] Exemplarily, the preset number threshold may be set according to actual requirements, and may be a fixed value, such as 3, or may be determined according to a product of a total number of preset objects in the preset object set and a preset ratio value, the preset ratio value may be, for example, 0.04, for example, when the total number is 100, the preset number threshold is 4.

[0075] In some embodiments, in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, setting the second target preset object to have the target object attribute includes: in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, when the number of preset objects with the target object attribute in the preset object set is equal to the preset number threshold, displaying replacement inquiry information; and in response to a confirmation operation for the replacement inquiry information, canceling the target object attribute of the preset object which is set earliest to have the target object attribute, and setting the second target preset object to have the target object attribute. Therefore, when the number of preset objects with the target object attribute reaches an upper limit and the user needs to set a new preset object with the target object attribute, the oldest preset object with the target object attribute

may be quickly replaced by inputting the confirmation operation for the replacement inquiry information, thereby improving setting efficiency.

[0076] Optionally, the method may further include: in response to a cancel operation for the replacement inquiry information, canceling the preset setting operation. Therefore, the original preset object with the target object attribute may be retained.

[0077] Fig. 3 is a schematic flowchart of another information display method provided by an embodiment of the present disclosure. The embodiment of the present disclosure is optimized based on various optional solutions in the above embodiments. Specifically, the method includes the following steps.

[0078] Step 301, displaying a first object information set in a first preset page.

[0079] The first object information set includes first object information of preset objects in a preset object set, and the preset object set is associated with a target live streaming video interface.

[0080] Step 302, displaying target prompt information at a position adjacent to first object information of a first target preset object, where content of the target prompt information is determined according to target preset business attribute information of the first target preset object.

[0081] Business data of the first target preset object satisfies a preset requirement, and the target prompt information is used for prompting to set the first target preset object as a preset object with a target object attribute.

[0082] Step 303, displaying a corresponding preset setting control at a position associated with the first object information in the first object information set.

[0083] Fig. 4 is a schematic diagram of interface interaction provided by an embodiment of the present disclosure. As shown in Fig. 4, taking the preset object as a product for an example, the target live streaming video interface is in a live streaming state, a first preset page 402 is displayed on an upper layer of a target live streaming video interface 401, and the first object information set is displayed in the first preset page 402. The figure shows first object information of three preset objects (including a product a, a product b, and a product c), where sequence numbers of the product a and the product b are 2, 1, and 3, respectively, the product a is a preset object that is being explained, and both the product a and the product b already have a target object attribute (for example, a main recommendation attribute), that is, they are main products. A target label "main recommendation" and first target information "98% praise" are displayed in the first object information of the product a, and a target label "main recommendation" and first target information "hot sale 20,000" are displayed in the first object information of the product b. Target prompt information 404 is displayed at a position (such as a lower adjacent position) adjacent to first object information 403 of the first target preset object (such as the product c). The content of the target prompt information 404 is determined according to the target preset business attribute information, for example, the target preset business attribute information is "32,000 repurchases", and the target prompt information 404 is "32,000 repurchases, it is recommended to set as the main product".

- [0084] Step 304, in response to a preset setting operation input based on a preset setting control corresponding to a second target preset object, determining whether a number of preset objects with the target object attribute in the preset object set is less than a preset number threshold, if yes, executing step 305; otherwise, executing step 306.
- [0085] As shown in Fig. 4, the live streaming user clicks on a preset setting control 405 corresponding to the second target preset object (the product c, which is also the first target preset object) to display a setting panel 406, displays a preset attribute setting control 407 in the setting panel 406, and after clicking on the preset attribute setting control 407, determines whether the number of preset objects with the target object attribute in the preset object set is less than the preset number threshold. Assuming that the preset number threshold is 2, since both the current product a and the current product b have the target object attribute, the preset number threshold has been reached, and step 306 needs to be executed. If the preset number threshold is 3, which is less than the preset number threshold, step 305 may be executed.
- [0086] Step 305, setting the second target preset object to have the target object attribute, adding display of the target label in first object information of the second target preset object, and displaying the first object information of the second target preset object at a first target position in the first object information set.
- [0087] Optionally, the method may further include: in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, when the second target preset object is the first target preset object, adding display of first target information in the first object information of the second target preset object, and setting second object information of the second target preset object to display second target information in response to the second object information of the second target preset object being displayed in the second preset page, where the first target information and the second target information are recommendation information used for reflecting that the second target preset object is set as the preset object with the target object attribute, and content of the first target information and the second target information is determined according to the target preset business attribute information of the second target preset object. Therefore, when the preset object with the displayed target prompt information is set as the preset object with the target object attribute, the target information is displayed on both the first device side and the second device side to prompt the reason why the preset object is set as the preset object with the target object attribute, which is convenient for the live streaming user to manage the preset object more efficiently, and is convenient for the viewer to obtain information of the preset object with the target object attribute more comprehensively and conveniently.
- [0088] Exemplarily, the content of the first target information and the second target information is determined according to the target preset business attribute information of the second target preset object, and a manner of determining the target preset business attribute information of the second target preset object may be the same or similar to the manner of determining the target preset business attribute information of the first target preset object, which will not be repeated here.

- [0089] Step 306, displaying replacement inquiry information.
- [0090] Exemplarily, as shown in Fig. 4, replacement inquiry information 408 is displayed.
- [0091] Step 307, in response to a confirmation operation for the replacement inquiry information, canceling the target object attribute of the preset object which is set earliest to have the target object attribute, setting the second target preset object to have the target object attribute, adding the display of the target label in the first object information of the second target preset object, and displaying the first object information of the second target preset object at the first target position in the first object information set.
- [0092] Exemplarily, as shown in Fig. 4, after the live streaming user selects "confirm", the main recommendation attribute of the product a is cancelled, the product c is set to have the main recommendation attribute, and the first object information of the product c is displayed at the first target position in the first object information set. Since it is in the live streaming state, the first target position is a next position of the first object information of the preset object that is being explained, that is, the next position of the first object information of the product a, and the first object information of the product b is moved down by one position.
- [0093] According to the information display method provided by the embodiments of the present disclosure, when the business data of the preset object associated with the target live streaming video interface satisfies the preset requirement, the corresponding target prompt information is displayed, and the content of the target prompt information is determined according to the target preset business attribute information of the first target preset object, which helps to improve the efficiency of setting the target object attribute of the preset object. When setting the preset object with the target object attribute, it is determined whether the number is less than the preset number threshold, and if not, the replacement inquiry information is displayed to facilitate the live streaming user to quickly replace the oldest preset object with the target object attribute, thereby further improving the setting efficiency and convenience.
- [0094] In some embodiments, the method may further include: in response to a position setting operation for a third target preset object, displaying first object information of the third target preset object below first object information of the preset object with the target object attribute, and setting second object information of the third target preset object to be displayed below second object information of the preset object with the target object attribute. Therefore, the display priority of the object information of the preset object with the target object attribute may be made higher, thereby facilitating the user to quickly view the object information of the preset object with the target object attribute.
- [0095] Exemplarily, the position setting operation may be, for example, a pinning operation. Optionally, the method may further include: in response to the position setting operation for the third target preset object, changing an original sequence number of the third target preset object to a first sequence number, and increasing original sequence numbers of preset objects whose original sequence numbers are before the original sequence number of the third target preset object by 1 in sequence.

- [0096] It should be noted that, in the embodiments of the present disclosure, after the second target preset object is set to have the target object attribute, the original sequence number of the second target preset object remains unchanged.
- [0097] Any two of the first target preset object, the second target preset object, the third target preset object, and the fourth target preset object in the embodiments of the present disclosure may be the same or different.
- [0098] Fig. 5 is a schematic flowchart of another information display method provided by an embodiment of the present disclosure. The embodiment of the present disclosure is applicable to a case of displaying prompt information when setting a target object attribute for a preset object associated with a live streaming video interface. The method may be performed by an information display apparatus, which may be implemented in the form of software and/or hardware. Optionally, the method is implemented by an electronic device (a second device), which may be a mobile terminal, such as a mobile phone, a tablet computer, and a personal digital assistant, and may also be a device, such as a personal computer (PC).
- [0099] As shown in Fig. 5, the method includes:
- [0100] Step 501, displaying a second object information set in a second preset page, where the second object information set includes second object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface.
- [0101] In the embodiments of the present disclosure, for related concepts, such as the second preset page, the second object information set, the preset object set, and the second object information, reference may be made to relevant content above, which will not be repeated here.
- [0102] Step 502, in response to determining that a fourth target preset object is set as a preset object with a target object attribute, displaying a target label and second target information in second object information of the fourth target preset object, and displaying the second object information of the fourth target preset object at a target position in the second object information set, where the second target information is recommendation information used for reflecting that the fourth target preset object is set as the preset object with the target object attribute.
- [0103] The fourth target preset object is a preset object in the preset object set, and the fourth target preset object is set by the live streaming user to have the target object attribute on the first device side.
- [0104] Exemplarily, the target label and the second target information are displayed in the second object information of the fourth target preset object. The target label in the embodiments of the present disclosure may be the same as the target label described above, the target position may be the same as the target position described above, and the second target information may be the same or different from the second target information described in the solution of the first device side above.
- [0105] The second target information in the embodiments of the present disclosure may be displayed when the target prompt information (the content of the target prompt information is determined according to the target preset business attribute information of the fourth target preset object) is displayed at a

position adjacent to the first object information of the fourth target preset object and thus the fourth target preset object is set to have the target object attribute; in addition, the live streaming user may be allowed to set any preset object to have the target object attribute, therefore, it is also possible that the fourth target preset object is set by the live streaming user to have the target object attribute when the target prompt information is not displayed at the position adjacent to the first object information of the fourth target preset object, and in this case, the second target information may also be displayed. The content of the second target information may be determined according to the target preset business attribute information of the fourth target preset object. Optionally, in a case where business data of the fourth target preset object satisfies the preset requirement, the content of the second target information is determined according to the target preset business attribute information of the fourth target preset object, where the business data includes at least two pieces of preset business attribute information, and the target preset business attribute information is preset business attribute information determined based on a sorting result after sorting the at least two pieces of preset business attribute information of the fourth target preset object according to the preset sorting manner. Therefore, the content of the second target information may be determined more reasonably. The manner of determining the target preset business attribute information may be the same as that described above, and details are not repeated here.

[0106] Optionally, the second target information may also be independently set by the live streaming user, so as to improve the flexibility of displaying the second target information.

[0107] Fig. 6 is a schematic diagram of an interface provided by an embodiment of the present disclosure. As shown in Fig. 6, a second preset page 602 is displayed on an upper layer of a target live streaming video interface 601, and a second object information set is displayed in the second preset page 602. A product c and a product b in the figure are set as preset objects with a target object attribute, and a target label and second target information are displayed in second object information of the product c and the product b, for example, "main recommendation" and "32,000 repurchases" are displayed in the second object information of the product c, and "main recommendation" and "hot sale 20,000" are displayed in the second object information of the product b, and the second object information of the product c and the product b is displayed at target positions in the second object information set. The target live streaming video interface is in a live streaming state, and the target positions are below second object information of a preset object (a product a) being explained. Optionally, when the product c becomes the preset object being explained, the second object information of the product c is displayed at a first position in the second object information set.

[0108] According to the information display method provided by the embodiments of the present disclosure, in a second device, a second object information set is displayed in a second preset page, where the second object information set includes second object information of preset objects in a preset object set, and the preset object set is associated with a target live streaming video interface; if it is determined that a fourth target preset object is set as a preset object with a target object attribute, a target label and

second target information are displayed in the second object information of the fourth target preset object, and the second object information of the fourth target preset object is displayed at a target position in the second object information set, where the target label is related to the target object attribute, and the second target information is recommendation information used for reflecting that the fourth target preset object is set as the preset object with the target object attribute. By adopting the above technical solution, the target label associated with the target object attribute and the second target information used for representing the reason for being set as the preset object with the target object attribute are displayed in the object information of the preset object with the target object attribute associated with the target live streaming video interface, and the object information is displayed at the target position, which helps to improve the efficiency of locating and viewing the object information of the preset object with the target object attribute, and to obtain more comprehensive information related to the target object attribute.

[0109] In some embodiments, a viewer may enter the target live streaming video interface from a preset entrance, for example, in response to a trigger operation for the preset entrance in a target page, the target live streaming video interface is displayed, and the second preset page is displayed on an upper layer of the target live streaming video interface, where page content in the target page is associated with a fifth target preset object. For example, the target page is a media content display page, and the page content includes a video introducing the fifth target preset object; for another example, the target page is a search result display page, and the page content includes object information of the fifth target preset object as a search result. Second object information of the fifth target preset object is displayed at a preset position (such as a first position) in the second object information set in the second preset page; where, in a case where the fifth target preset object does not have the target object attribute, the target position is below the preset position; and in a case where the fifth target preset object has the target object attribute, the target label and the second target information in the second object information of the fifth target preset object are replaced with a preset label, and the preset label is associated with the preset entrance. Therefore, after the user enters the target live streaming video interface from the target page that displays the relevant information of the preset object in the preset object set, the object information of the preset object in the target page may be preferentially displayed, thereby improving the coherence of information browsing.

[0110] Exemplarily, the preset label may be, for example, a label with words "just watched".

[0111] In some embodiments, the method may further include: in response to a change in a popularity attribute of the fourth target preset object that is being explained, replacing the target label and/or the second target information displayed in the second object information of the fourth target preset object that is being explained with popularity information of the fourth target preset object that is being explained, and when the popularity attribute does not continue to change for a preset time period, replacing the popularity information with the target label and/or the second target information. Therefore, the same display area may be reused, thereby improving the utilization rate of page space, and the user may be

prompted whether to focus on the target label and/or the second target information or the popularity information currently, thereby improving the timeliness and acquisition efficiency of information.

[0112] Exemplarily, the popularity attribute may be determined based on statistics of triggering a preset interaction operation in the target live streaming video interface, such as a sales volume of a product in the live streaming room, and when the sales volume changes, for example, when the viewer adds a new order, the popularity attribute changes, and the popularity information may be specifically an animation effect determined according to an attribute value or an attribute change value of the popularity attribute. The preset time period may be set according to an actual situation, such as 30 seconds.

[0113] Fig. 7 is a schematic diagram of an interface change process provided by an embodiment of the present disclosure. As shown in Fig. 7, a product c is the fourth target preset object that is being explained, and the target label and second target information 701 are currently displayed. When the sales volume of the product c increases, for example, from 98 to 99, the target label and the second target information 701 are replaced with popularity information 702 of the product c, such as an animation effect of sales volume x99. When the sales volume continues to change within 30 seconds, the displayed popularity information changes dynamically, for example, to an animation effect of sales volume x100, and timing is restarted. When the sales volume does not change after 30 seconds, the target label and the second target information 701 may be re-displayed.

[0114] In some embodiments, the method further includes: in response to a display instruction for a preset object unit of the fourth target preset object that is being explained, displaying the preset object unit in the target live streaming video interface, and displaying object image information of the fourth target preset object that is being explained, and the target label and/or the second target information in the preset object unit. Therefore, the object image information of the preset object with the target object attribute, and the target label and/or the second target information may be simultaneously displayed in the preset object unit, so that the viewer may view the target label and/or the second target information without viewing the second preset page, thereby improving the efficiency of obtaining information related to the target object attribute.

[0115] Exemplarily, the preset object unit may be displayed in the live streaming video interface in the form of a card or the like.

[0116] Fig. 8 is a schematic diagram of an interface provided by an embodiment of the present disclosure. As shown in Fig. 8, a preset object unit 802 is displayed in a target live streaming video interface 801, a product that is currently being explained is high heels, and the product is a main product, that is, has a target object attribute, so a picture (object picture information) of the high heels and a target label 803 are displayed in the preset object unit 802.

[0117] Fig. 9 is a schematic structural diagram of an information display apparatus provided by an embodiment of the present disclosure. As shown in Fig. 9, the apparatus includes:

- [0118] an information set display module 901, configured to display a first object information set in a first preset page, where the first object information set includes first object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;
- [0119] a prompt information display module 902, configured to display target prompt information at a position adjacent to first object information of a first target preset object, where the first target preset object is the preset object in the preset object set, business data of the first target preset object satisfies a preset requirement, and the target prompt information is used for prompting to set the first target preset object as a preset object with a target object attribute, so that second object information of the preset object with the target object attribute includes a target label, and the second object information of the preset object with the target object attribute is displayed at a target position in a second object information set, the second object information set is displayed in a second preset page of a second device, and the second preset page is associated with the target live streaming video interface.
- [0120] According to the information display apparatus provided by the embodiments of the present disclosure, when the business data of the preset object associated with the target live streaming video interface satisfies the preset requirement, the corresponding target prompt information is displayed, which helps to improve efficiency of setting the target object attribute of the preset object.
- [0121] Optionally, the business data includes at least two pieces of preset business attribute information, content of the target prompt information is determined according to target preset business attribute information of the first target preset object, and the target preset business attribute information is preset business attribute information determined based on a sorting result after sorting the at least two pieces of preset business attribute information of the first target preset object according to a preset sorting manner.
- [0122] Optionally, the preset business attribute information includes an attribute value of a preset business attribute, and the preset requirement includes that the attribute value of at least one preset business attribute is greater than a corresponding preset attribute threshold;
- [0123] where the preset sorting manner is determined based on at least one selected from the group consisting of:
- [0124] a proportion by which the attribute value of the preset business attribute exceeds the corresponding preset attribute threshold; or
- [0125] when there are a plurality of first target preset objects, a number of first target preset objects with a same preset business attribute to which corresponding target preset business attribute information belongs among the plurality of first target preset objects.
- [0126] Optionally, the business data includes preset business attribute information, and the preset business attribute information includes at least one selected from the group consisting of: object evaluation statistical information, object acquisition quantity statistical information, or object repeated acquisition operation statistical information.
- [0127] Optionally, the apparatus further includes:

- [0128] a preset setting control display module, configured to display a corresponding preset setting control at a position associated with the first object information in the first object information set;
- [0129] an attribute setting module, configured to: in response to a preset setting operation input based on a preset setting control corresponding to a second target preset object, set the second target preset object to have the target object attribute, where the second target preset object is the preset object in the preset object set; and
- [0130] a first display module, configured to add display of the target label in first object information of the second target preset object, and display the first object information of the second target preset object at a first target position in the first object information set, where the first target position is one of target positions.
- [0131] Optionally, in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, setting the second target preset object to have the target object attribute includes:
- [0132] in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, when a number of preset objects with the target object attribute in the preset object set is less than a preset number threshold, setting the second target preset object to have the target object attribute.
- [0133] Optionally, in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, setting the second target preset object to have the target object attribute includes:
- [0134] in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, when the number of preset objects with the target object attribute in the preset object set is equal to the preset number threshold, displaying replacement inquiry information; and
- [0135] in response to a confirmation operation for the replacement inquiry information, canceling the target object attribute of the preset object which is set earliest to have the target object attribute, and setting the second target preset object to have the target object attribute.
- [0136] Optionally, the apparatus further includes:
- [0137] a second display module, configured to: in response to a preset setting operation input based on a preset setting control corresponding to the second target preset object, when the second target preset object is the first target preset object, add display of first target information in the first object information of the second target preset object, and set second object information of the second target preset object to display second target information in response to the second object information of the second target preset object being displayed in the second preset page, where the first target information and the second target information are recommendation information used for reflecting that the second target preset object is set as the preset object with the target object attribute, and content of the first target information and the

second target information is determined according to target preset business attribute information of the second target preset object.

[0138] Optionally, the apparatus further includes:

[0139] a third display module, configured to: in response to a position setting operation for a third target preset object, display first object information of the third target preset object below first object information of the preset object with the target object attribute, and set second object information of the third target preset object to be displayed below second object information of the preset object with the target object attribute, where the third target preset object is the preset object in the preset object set.

[0140] Optionally, when the target live streaming video interface is in a live streaming state, in response to the second target preset object being a preset object that is not being explained, the first target position is a next position of the first object information or the second object information of the preset object that is being explained; and when the target live streaming video interface is not in the live streaming state, the first target position is a first position in the first object information set

[0141] Fig. 10 is a schematic structural diagram of another information display apparatus provided by an embodiment of the present disclosure. As shown in Fig. 10, the apparatus includes:

[0142] an object information set display module 1001, configured to display a second object information set in a second preset page, where the second object information set includes second object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;

[0143] an information display module 1002, configured to: in response to determining that a fourth target preset object is set as a preset object with a target object attribute, display a target label and second target information in second object information of the fourth target preset object, and display the second object information of the fourth target preset object at a target position in the second object information set, where the fourth target preset object is a preset object in the preset object set, and the second target information is recommendation information used for reflecting that the fourth target preset object is set as the preset object with the target object attribute.

[0144] According to the information display apparatus provided by the embodiments of the present disclosure, the target label associated with the target object attribute and the second target information used for representing the reason for being set as the preset object with the target object attribute are displayed in the object information of the preset object with the target object attribute associated with the target live streaming video interface, and the object information is displayed at the target position, which helps to improve the efficiency of locating and viewing the object information of the preset object with the target object attribute, and to obtain more comprehensive information related to the target object attribute.

[0145] Optionally, the apparatus further includes:

[0146] an information display change module, configured to: in response to a change in a popularity attribute of the fourth target preset object that is being explained, replace the target label and/or the second

target information displayed in the second object information of the fourth target preset object that is being explained with popularity information of the fourth target preset object that is being explained, and when the popularity attribute does not continue to change for a preset time period, replace the popularity information with the target label and/or the second target information.

[0147] Optionally, when business data of the fourth target preset object satisfies a preset requirement, content of the second target information is determined according to target preset business attribute information of the fourth target preset object;

[0148] where the business data includes at least two pieces of preset business attribute information, and the target preset business attribute information is preset business attribute information determined based on a sorting result after sorting the at least two pieces of preset business attribute information of the fourth target preset object according to a preset sorting manner.

[0149] Optionally, the apparatus further includes:

[0150] a preset object unit display module, configured to: in response to a display instruction for a preset object unit of the fourth target preset object that is being explained, display the preset object unit in the target live streaming video interface, and display object image information of the fourth target preset object that is being explained, and the target label and/or the second target information in the preset object unit.

[0151] Optionally, the apparatus further includes:

[0152] a second preset page display module, configured to: in response to a trigger operation for a preset entrance in a target page, display the target live streaming video interface, and display the second preset page on an upper layer of the target live streaming video interface, where page content in the target page is associated with a fifth target preset object;

[0153] a fourth display module, configured to display second object information of the fifth target preset object at a preset position in the second object information set; where, when the fifth target preset object does not have the target object attribute, the target position is below the preset position; and when the fifth target preset object has the target object attribute, the target label and the second target information in the second object information of the fifth target preset object are replaced with a preset label, and the preset label is associated with the preset entrance.

[0154] The information display apparatus provided by the embodiments of the present disclosure may perform the information display method provided by any embodiment of the present disclosure, and has corresponding functional modules for performing the method and beneficial effects.

[0155] It is worth noting that the units and modules included in the above apparatus are only divided according to functional logic, but are not limited to the above division, as long as the corresponding functions may be realized. In addition, the specific names of the functional units are only for the convenience of distinguishing from each other, and are not used to limit the protection scope of the embodiments of the present disclosure.

[0156] Fig. 11 is a schematic structural diagram of an electronic device provided by an embodiment of the present disclosure. Reference is made to Fig. 11 below, which illustrates a schematic structural diagram of an electronic device (such as a terminal device or a server in Fig. 11) 1100 suitable for implementing the embodiments of the present disclosure. The terminal device in the embodiments of the present disclosure may include, but is not limited to, mobile terminals, such as a mobile phone, a notebook computer, a digital broadcast receiver, a personal digital assistant (PDA), a tablet computer (PAD), a portable multimedia player (PMP), and a vehicle-mounted terminal (such as a vehicle navigation terminal), and fixed terminals, such as a digital TV and a desktop computer. The electronic device shown in Fig. 11 is only an example, and should not impose any limitation on the function and scope of use of the embodiments of the present disclosure.

[0157] As shown in Fig. 11, the electronic device 1100 may include a processing apparatus (such as a central processing unit and a graphics processor) 1101, which may perform various appropriate actions and processing according to a program stored in a read-only memory (ROM) 1102 or a program loaded from a storage apparatus 1108 into a random access memory (RAM) 1103. The RAM 1103 further stores various programs and data required for operations of the electronic device 1100. The processing apparatus 1101, the ROM 1102, and the RAM 1103 are connected to each other through a bus 1104. An editing/output (I/O) interface 1105 is also connected to the bus 1104.

[0158] Usually, the following apparatuses may be connected to the I/O interface 1105: an input apparatus 1106 including, for example, a touch screen, a touchpad, a keyboard, a mouse, a camera, a microphone, an accelerometer, and a gyroscope; an output apparatus 1107 including, for example, a liquid crystal display (LCD), a speaker, and a vibrator; the storage apparatus 1108 including, for example, a magnetic tape and a hard disk; and a communication apparatus 1109. The communication apparatus 1109 may allow the electronic device 1100 to perform wireless or wired communication with other devices to exchange data. Although Fig. 11 shows the electronic device 1100 having various apparatuses, it should be understood that it is not required to implement or have all of the illustrated apparatuses. Alternatively, more or fewer apparatuses may be implemented or provided.

[0159] In particular, according to the embodiments of the present disclosure, the process described above with reference to the flowchart may be implemented as a computer software program. For example, the embodiments of the present disclosure include a computer program product, which includes a computer program carried on a non-transitory computer-readable medium, where the computer program includes program code for performing the method shown in the flowchart. In such an embodiment, the computer program may be downloaded and installed from a network through the communication apparatus 1109, or installed from the storage apparatus 1108, or installed from the ROM 1102. When the computer program is executed by the processing apparatus 1101, the above-mentioned functions defined in the method of the embodiments of the present disclosure are executed.

[0160] Names of messages or information exchanged between multiple apparatuses in implementations of the present disclosure are for illustrative purposes only, and are not intended to limit the scope of these messages or information.

[0161] The electronic device provided by the embodiments of the present disclosure belongs to the same inventive concept as the information display method provided by the above embodiments. For technical details not described in detail in this embodiment, reference may be made to the above embodiments, and this embodiment has the same beneficial effects as the above embodiments.

[0162] An embodiment of the present disclosure provides a computer storage medium, on which a computer program is stored, and when the program is executed by a processor, the information display method provided by the above embodiments is implemented.

[0163] An embodiment of the present disclosure provides a computer program product, including a computer program, and when the program is executed by a processor, the information display method provided by the above embodiments is implemented.

[0164] It should be noted that the above computer-readable medium in the present disclosure may be a computer-readable signal medium, a computer-readable storage medium, or any combination of the two. The computer-readable storage medium may be, for example, but is not limited to, an electrical, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, or device, or any combination of the above. More specific examples of the computer-readable storage medium may include, but are not limited to: an electrically connected portable computer magnetic disk having one or more wires, a hard disk, a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or flash memory), an optical fiber, a portable compact disk read-only memory (CD-ROM), an optical storage device, a magnetic storage device, or any suitable combination of the above. In the present disclosure, the computer-readable storage medium may be any tangible medium that contains or stores a program, which may be used by or in combination with an instruction execution system, apparatus, or device. In the present disclosure, the computer-readable signal medium may include a data signal propagated in a baseband or as a part of a carrier wave, and computer-readable program code is carried in the data signal. The data signal propagated in this manner may be in multiple forms, and includes, but is not limited to, an electromagnetic signal, an optical signal, or any suitable combination of the above. The computer-readable signal medium may also be any computer-readable medium other than the computer-readable storage medium, and the computer-readable signal medium may send, propagate, or transmit the program used by or in combination with the instruction execution system, apparatus, or device. The program code contained on the computer-readable medium may be transmitted in any suitable medium, including but not limited to: a wire, an optical cable, a radio frequency (RF), etc., or any suitable combination of the above.

[0165] The above computer-readable medium may be included in the above electronic device, or may exist alone without being assembled into the electronic device.

[0166] The above computer-readable medium carries one or more programs, and when the one or more programs are executed by the electronic device, the electronic device is caused to implement any information display method in the embodiments of the present disclosure.

[0167] The computer program code for performing the operations of the present disclosure may be written in one or more programming languages or a combination thereof, where the programming languages include, but are not limited to, object-oriented programming languages, such as Java, Smalltalk, and C++, and further include conventional procedural programming languages, such as "C" language or similar programming languages. The program code may be executed entirely on a computer of a user, partly executed on a computer of a user, executed as an independent software package, partly executed on a computer of a user and partly executed on a remote computer, or entirely executed on a remote computer or server. In the case of the remote computer, the remote computer may be connected to the computer of the user through any kind of network, including a local area network (LAN) or a wide area network (WAN), or may be connected to an external computer (for example, connected through the Internet with the aid of an Internet service provider).

[0168] The flowcharts and block diagrams in the drawings illustrate the possibly implemented architectures, functions, and operations of the system, the method, and the computer program product according to various embodiments of the present disclosure. In this regard, each block in the flowchart or block diagram may represent a module, program segment, or part of code, which contains one or more executable instructions for implementing the specified logical functions. It should also be noted that, in some alternative implementations, the functions marked in the blocks may also occur in an order different from that marked in the drawings. For example, two blocks shown in succession may actually be 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 the flowchart, and a combination of the blocks in the block diagram and/or the flowchart may be implemented by a dedicated hardware-based system that executes specified functions or operations, or may be implemented by a combination of dedicated hardware and computer instructions.

[0169] The involved units described in the embodiments of the present disclosure may be implemented by software or by hardware. The name of a module does not constitute a limitation on the module itself under certain circumstances, for example, the information set display module may also be described as "a module for displaying a first object information set in a first preset page".

[0170] The functions described above herein may be performed at least partly by one or more hardware logic components. For example, without limitation, exemplary types of hardware logic components that may be used include: a field programmable gate array (FPGA), an application specific integrated circuit (ASIC), an application specific standard product (ASSP), a system on chip (SOC), a complex programmable logical device (CPLD), etc.

[0171] In the context of the present disclosure, a machine-readable medium may be a tangible medium that may contain or store a program for use by or in combination with an instruction execution system, apparatus, or device. The machine-readable medium may be a machine-readable signal medium or a machine-readable storage medium. The machine-readable medium may include, but is not limited to, an electrical, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, or device, or any suitable combination of the above. More specific examples of the machine-readable storage medium would include an electrical connection based on one or more wires, a portable computer disk, a hard disk, a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or flash memory), an optical fiber, a portable compact disk read-only memory (CD-ROM), an optical storage device, a magnetic storage device, or any suitable combination of the above.

[0172] The above description is only preferred embodiments of the present disclosure and an explanation of the technical principles employed. Those skilled in the art should understand that the scope of disclosure involved in the present disclosure is not limited to the technical solutions formed by the specific combination of the above technical features, and should also cover other technical solutions formed by any combination of the above technical features or their equivalent features without departing from the above disclosure concept. For example, the above features and the technical features provided in the present disclosure (but not limited to) with similar functions may be replaced each other to form a technical solution.

[0173] Furthermore, although the various operations are depicted in a particular order, this should not be understood as requiring the operations to be performed in the particular order shown or in a sequential order. Under certain circumstances, multitasking and parallel processing may be advantageous. Likewise, although the above discussion contains several specific implementation details, these should not be construed as limitations on the scope of the present disclosure. Certain features that are described in the context of separate embodiments may also be implemented in combination in a single embodiment. Conversely, various features that are described in the context of a single embodiment may also be implemented in multiple embodiments individually or in any suitable sub-combination.

[0174] Although the subject matter has been described in language specific to structural features and/or logical actions of the method, it should be understood that the subject matter defined in the appended claims is not necessarily limited to the specific features or actions described above. Conversely, the specific features and actions described above are only example forms of implementing the claims.

CLAIMS

1. An information display method, applied to a first device, comprising:

displaying a first object information set in a first preset page, wherein the first object information set comprises first object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface; and

displaying target prompt information at a position adjacent to first object information of a first target preset object, wherein the first target preset object is the preset object in the preset object set, business data of the first target preset object satisfies a preset requirement, and the target prompt information is used for prompting to set the first target preset object as a preset object with a target object attribute, so that second object information of the preset object with the target object attribute comprises a target label, and the second object information of the preset object with the target object attribute is displayed at a target position in a second object information set, the second object information set is displayed in a second preset page of a second device, and the second preset page is associated with the target live streaming video interface.

2. The method of claim 1, wherein the business data comprises at least two pieces of preset business attribute information, content of the target prompt information is determined according to target preset business attribute information of the first target preset object, and the target preset business attribute information is preset business attribute information determined based on a sorting result after sorting the at least two pieces of preset business attribute information of the first target preset object according to a preset sorting manner.

3. The method of claim 2, wherein the preset business attribute information comprises an attribute value of a preset business attribute, and the preset requirement comprises that the attribute value of at least one preset business attribute is greater than a corresponding preset attribute threshold;

wherein the preset sorting manner is determined based on at least one selected from the group consisting of:

a proportion by which the attribute value of the preset business attribute exceeds the corresponding preset attribute threshold; or

when there are a plurality of first target preset objects, a number of first target preset objects with a same preset business attribute to which corresponding target preset business attribute information belongs among the plurality of first target preset objects.

4. The method of claim 1, wherein the business data comprises preset business attribute information, and the preset business attribute information comprises at least one selected from the group consisting of: object evaluation statistical information, object acquisition quantity statistical information, or object repeated acquisition operation statistical information.

5. The method of any of claims 1 to 4, further comprising:

displaying a corresponding preset setting control at a position associated with the first object information in the first object information set;

in response to a preset setting operation input based on a preset setting control corresponding to a second target preset object, setting the second target preset object to have the target object attribute, wherein the second target preset object is the preset object in the preset object set; and

adding display of the target label in first object information of the second target preset object, and displaying the first object information of the second target preset object at a first target position in the first object information set, wherein the first target position is one of target positions.

6. The method of claim 5, wherein the in response to a preset setting operation input based on a preset setting control corresponding to a second target preset object, setting the second target preset object to have the target object attribute comprises:

in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, when a number of preset objects with the target object attribute in the preset object set is less than a preset number threshold, setting the second target preset object to have the target object attribute.

7. The method of claim 6, wherein the in response to a preset setting operation input based on a preset setting control corresponding to a second target preset object, setting the second target preset object to have the target object attribute comprises:

in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, when the number of preset objects with the target object attribute in the preset object set is equal to the preset number threshold, displaying replacement inquiry information; and

in response to a confirmation operation for the replacement inquiry information, canceling the target object attribute of the preset object which is set earliest to have the target object attribute, and setting the second target preset object to have the target object attribute.

8. The method of claim 5, further comprising:

in response to the preset setting operation input based on the preset setting control corresponding to the second target preset object, when the second target preset object is the first target preset object, adding display of first target information in the first object information of the second target preset object, and setting second object information of the second target preset object to display second target information in response to the second object information of the second target preset object being displayed in the second preset page, wherein the first target information and the second target information are recommendation information used for reflecting that the second target preset object is set as the preset object with the target object attribute, and content of the first target information and the second

target information is determined according to target preset business attribute information of the second target preset object.

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

in response to a position setting operation for a third target preset object, displaying first object information of the third target preset object below first object information of the preset object with the target object attribute, and setting second object information of the third target preset object to be displayed below second object information of the preset object with the target object attribute, wherein the third target preset object is the preset object in the preset object set.

10. The method of claim 5, wherein when the target live streaming video interface is in a live streaming state, in response to the second target preset object being a preset object that is not being explained, the first target position is a next position of the first object information or the second object information of the preset object that is being explained; and when the target live streaming video interface is not in the live streaming state, the first target position is a first position in the first object information set.

11. An information display method, applied to a second device, comprising:

displaying a second object information set in a second preset page, wherein the second object information set comprises second object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;

in response to determining that a fourth target preset object is set as a preset object with a target object attribute, displaying a target label and second target information in second object information of the fourth target preset object, and displaying the second object information of the fourth target preset object at a target position in the second object information set, wherein the fourth target preset object is a preset object in the preset object set, and the second target information is recommendation information used for reflecting that the fourth target preset object is set as the preset object with the target object attribute.

12. The method of claim 11, further comprising:

in response to a change in a popularity attribute of the fourth target preset object that is being explained, replacing the target label and/or the second target information displayed in the second object information of the fourth target preset object that is being explained with popularity information of the fourth target preset object that is being explained, and when the popularity attribute does not continue to change for a preset time period, replacing the popularity information with the target label and/or the second target information.

13. The method of claim 11 or 12, wherein when business data of the fourth target preset object satisfies a preset requirement, content of the second target information is determined according to target preset business attribute information of the fourth target preset object;

wherein the business data comprises at least two pieces of preset business attribute information, and the target preset business attribute information is preset business attribute information determined based on a sorting result after sorting the at least two pieces of preset business attribute information of the fourth target preset object according to a preset sorting manner.

14. The method of any of claims 11 to 13, further comprising:

in response to a display instruction for a preset object unit of the fourth target preset object that is being explained, displaying the preset object unit in the target live streaming video interface, and displaying object image information of the fourth target preset object that is being explained, and the target label and/or the second target information in the preset object unit.

15. The method of any of claims 11 to 15, further comprising:

in response to a trigger operation for a preset entrance in a target page, displaying the target live streaming video interface, and displaying the second preset page on an upper layer of the target live streaming video interface, wherein page content in the target page is associated with a fifth target preset object;

displaying second object information of the fifth target preset object at a preset position in the second object information set; wherein, when the fifth target preset object does not have the target object attribute, the target position is below the preset position; and when the fifth target preset object has the target object attribute, the target label and the second target information in the second object information of the fifth target preset object are replaced with a preset label, and the preset label is associated with the preset entrance.

16. An information display apparatus, configured on a first device, comprising:

an information set display module, configured to display a first object information set in a first preset page, wherein the first object information set comprises first object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;

a prompt information display module, configured to display target prompt information at a position adjacent to first object information of a first target preset object, wherein the first target preset object is the preset object in the preset object set, business data of the first target preset object satisfies a preset requirement, and the target prompt information is used for prompting to set the first target preset object as a preset object with a target object attribute, so that second object information of the preset object with the target object attribute comprises a target label, and the second object information of the preset object with the target object attribute is displayed at a target position in a second object information set, the second object information set is displayed in a second preset page of a second device, and the second preset page is associated with the target live streaming video interface.

17. An information display apparatus, configured on a second device, comprising:

an object information set display module, configured to display a second object information set in a second preset page, wherein the second object information set comprises second object information of a preset object in a preset object set, and the preset object set is associated with a target live streaming video interface;

an information display module, configured to, in response to determining that a fourth target preset object is set as a preset object with a target object attribute, display a target label and second target information in second object information of the fourth target preset object, and display the second object information of the fourth target preset object at a target position in the second object information set, wherein the fourth target preset object is a preset object in the preset object set, and the second target information is recommendation information used for reflecting that the fourth target preset object is set as the preset object with the target object attribute.

18. An electronic device, comprising:

one or more processors;

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

when the one or more programs are executed by the one or more processors, the one or more processors are caused to implement the information display method of any of claims 1 to 15.

19. A storage medium comprising computer-executable instructions, wherein when the computer-executable instructions are executed by a computer processor, the information display method of any of claims 1 to 15 is performed.

20. A computer program product, comprising a computer program, wherein when the computer program is executed by a processor, the information display method of any of claims 1 to 15 is implemented.