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ABSTRACT

A data processing method, device and system are provided. The method includes: scanning, by an electronic device, a user within a preset range, and analyzing, by the electronic device, a scanning result to obtain inquiry interest of the user; inquiring, by the electronic device, a commodity database based on the inquiry interest, and selecting, by the electronic device, commodities meeting the inquiry interest; and playing, by the electronic device, commodity information of the selected commodities for the user.

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DATA PROCESSING METHOD, DEVICE AND SYSTEM

This application claims priority to Chinese Patent Application No. 201410219695.2, entitled "DATA PROCESSING METHOD, DEVICE AND SYSTEM", filed with State Intellectual Property Office of PRC on May 22, 2014, which is incorporated herein by reference in its entirely.

FIELD

[0001] The present disclosure relates to the field of communication technology, and in particular to a date processing method, device and system.

BACKGROUND

[0002] With rapid development of electronic technology, an ever increasing number of products or service provider select electronic devices to display commodities, so as the commodities can be promoted and recommended in different regions and countries rapidly and conveniently.

[0003] Presently, two general methods for recommending commodities are as follows.

[0004] In a first method, the electronic device is configured to only play commodity information of the commodities. In this case, after the commodity information of the commodity which interests a user, the user can access the commodity via an offline physical store or an online electronic business platform.

[0005] In a second method, in addition to playing the commodity information, the electronic device is configured to function as an intermediary to establish a connection between a user and a commodity provider in a real-time manner. In this case, after the commodity information of the commodity which interests the user, the user establishes a connection with the electronic device via an intelligent terminal held by the user (such as a cell phone, a PDA, a tablet computer and a laptop computer), and requests the electronic device to find the commodity provider corresponding to the commodity which interests the user. The real-time access relation between the user and the commodity provider is established with the help of the electronic device.

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[0006] Where the electronic device may be a data displayer, the user may be a data user, the commodity provider may be a data provider, and the data process may be a data manager.

[0007] As can be seen from the above method for recommending the commodities, in the conventional art, the electronic device recommends commodity information to a user in a passive manner, resulting in less views of the commodity information. It is desirable to provide a technical solution for increasing views of the commodity.

SUMMARY

[0008] In view of this, it is provided a data processing method, device and system in the embodiments of the disclosure, for increasing views of commodity information by recommending the specific commodity information to users actively.

[0009] To solve the above problems, technical solutions provided in the embodiments of the disclosure are as follows.

[0010] In a first aspect, it is provided a data processing method in an embodiment of the disclosure, which includes:

scanning, by an electronic device, a user within a preset range, and analyzing, by the electronic device, a scanning result to obtain inquiry interest of the user;

inquiring, by the electronic device, a commodity database based on the inquiry interest, and selecting, by the electronic device, commodities meeting the inquiry interest; and

playing, by the electronic device, commodity information of the selected commodities for the user.

[0011] In a first possible approach of implementation of the first aspect, the scanning result may be a user type, and the process of analyzing the scanning result to obtain the inquiry interest of the user may include:

pre-establishing and pre-storing mapping between the user type and commodity category the commodities; and

searching for the commodity category corresponding to the scanning result, and setting the commodity category as the inquiry interest of the user.

[0012] In a second possible approach of implementation of the first aspect, the scanning

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result may be identity information of the user, and the process of analyzing the scanning result to obtain the inquiry interest of the user may include:

pre-collecting and pre-storing identity information of a registered user; and

searching for, based on the scanning result, registration information of the user and/or information published by the user on a public network, and setting the information as the inquiry interest of the user.

[0013] In a third possible approach of implementation of the first aspect, the electronic device may include multiple display units, and the process of playing, by the electronic device, the commodity information of the selected commodities for the user may include:

playing, by each of the display units, the commodity information of different commodities for different users.

[0014] In conjunction with the first aspect or any one of the first to the third possible implementations in the first aspect, in a fourth possible implementation, the commodity stored in the commodity database may include a commodity code, and the method may further include:

converting, by the electronic device, the commodity code of the commodity into a bar code, and displaying, by the electronic device, the bar code at a certain position when playing the commodity information.

[0015] In conjunction with the fourth possible approach of implementation of the first aspect, in a fifth possible implementation, the method may further include:

setting, by the electronic device, a display color of the bar code based on a commodity attribute of the commodity.

[0016] In conjunction with the first aspect or any one of the first to the third possible implementations in the first aspect, in a sixth possible implementation, the commodity stored in the commodity database may include a commodity code, and the method may further include:

receiving, by the electronic device, an access request input by the user, where the access request includes a commodity code of the commodity to be accessed; and

searching for, by the electronic device, a data provider corresponding to the commodity

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to be accessed based on the commodity code, and establishing, by the electronic device, an access relation between the user and the data provider in a real-time manner.

[0017] In conjunction with the first aspect or any one of the first to the third possible implementations in the first aspect, in a seventh possible implementation, the commodity stored in the commodity database may include a commodity code, and the method may further include:

receiving, by the electronic device, an access request input by the user via an intelligent terminal, where the access request includes a commodity code of the commodity to be accessed;

searching for, by the electronic device, offer information corresponding to the commodity to be accessed based on the commodity code, and sending, by the electronic device, the offer information to the intelligent terminal; and

storing, by the intelligent terminal, the offer information, and performing, by the intelligent terminal, commodity transaction using the offer information.

[0018] In conjunction with the first aspect or any one of the first to the third possible implementations in the first aspect, in an eighth possible implementation, the method may further include:

identifying, by the electronic device, intention of the user to access the commodity, terminating, by the electronic device, in playing the commodity information for the user in the case that the user is not a potential user.

[0019] In conjunction with the first aspect or any one of the first to the third possible implementations in the first aspect, in a ninth possible implementation, the method may further include:

recording, by the electronic device, one or more of surrounding environment information, commodity playing times and commodity access times.

[0020] In conjunction with the first aspect or any one of the first to the third possible implementations in the first aspect, in a tenth possible implementation, the method may further include:

receiving, by the electronic device, payment information of at least one user, where the

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payment information includes payment amount and a commodity code of the commodity to be paid;

forwarding, by the electronic device, the payment information to a data processor;

determining, by the data processor, payees and proportions of the payees based on the commodity code of the commodity to be paid; and

dividing, by the data processor, the payment amount based on the proportions of the payees, and distributing, by the data processor, the corresponding amount to each of the payees.

[0021] In conjunction with the tenth possible approach of implementation of the first aspect, in an eleventh possible implementation, the payment information may further include offer information, and the process of distributing, by the data processor, the payment amount based on the proportions of the payees may include:

dividing, by the data processor, the payment amount based on the proportions of the payees and the offer information.

[0022] In conjunction with the tenth possible approach of implementation of the first aspect, in a twelfth possible implementation, before the process of dividing, by the data processor, the payment amount, the method may further include:

acquiring, by the data processor, payment currency types of the user and the payee, and converting, by the data processor, the payment currency types into a certain type.

[0023] In conjunction with the tenth possible approach of implementation of the first aspect, in a thirteenth possible implementation, the payment information may further include identity information of the user, and the method may further include:

verifying, by the data processor, whether payment amount of each of the users meets a preset condition, identifying, by the data processor, the user based on the identity information of the user if the payment amount of the user does not meet the preset condition.

[0024] In a second aspect, it is provided a data processing device in an embodiment of the disclosure, which includes:

scanning unit, configured to scan a user within a preset range;

analyzing unit, configured to analyze a scanning result obtained by the scanning unit to

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obtain inquiry interest of the user;

inquiring unit, configured to inquire a commodity database based on the inquiry interest and select commodities meeting the inquiry interest; and

playing unit, configured to play commodity information of the selected commodities for the user.

[0025] In a first possible approach of implementation of the second aspect, the scanning result may be a user type, and the analyzing unit may include:

a mapping establishing unit, configured to establish and store mapping between the user type and a commodity category of the commodity; and

a finding unit, configured to search for the commodity category corresponding to the scanning result and set the commodity category as the inquiry interest of the user.

[0026] In a second possible approach of implementation of the second aspect, the scanning result may be identity information of the user, and the analyzing unit may include:

a collecting unit, configured to collect and store identity information of a registered user; and

a searching unit, configured to search for, based on the scanning result, registration information of the user and/or information published by the user on a public network, and set the information as the inquiry interest of the user.

[0027] In a third possible approach of implementation of the second aspect, the device may include multiple display units, and the playing unit may be configured to play the commodity information of different commodities for different users via each of the display units.

[0028] In conjunction with the second aspect or any one of the first to the third possible implementations in the second aspect, in a fourth possible implementation, the commodity stored in the commodity database may include a commodity code, the device may further include:

a converting unit, configured to convert the commodity code of the commodity into a bar code, and

the playing unit is configured to display the bar code at a certain position when playing the commodity information.

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[0029] In conjunction with the fourth possible approach of implementation of the second aspect, in a fifth possible implementation, the device may further include:

a setting unit, configured to set a display color of the bar code based on a commodity attribute of the commodity.

[0030] In conjunction with the second aspect or any one of the first to the third possible implementations in the second aspect, in a sixth possible implementation, the commodity stored in the commodity database may include a commodity code, and the device may further include:

a first receiving unit, configured to receive an access request input by the user, where the access request includes a commodity code of the commodity to be accessed; and

an access relation establishing unit, configured to search for a data provider corresponding to the commodity to be accessed based on the commodity code, and establish an access relation between the user and the data provider in a real-time manner.

[0031] In conjunction with the second aspect or any one of the first to the third possible implementations in the second aspect, in a seventh possible implementation, the commodity stored in the commodity database may include a commodity code, and the device may further include:

a second receiving unit, configured to receive an access request input by the user via an intelligent terminal, where the access request includes a commodity code of the commodity to be accessed; and

a sending unit, configured to search for offer information corresponding to the commodity to be accessed based on the commodity code, and send the offer information to the intelligent terminal, where the intelligent terminal stores the offer information and makes commodity transaction using the offer information.

[0032] In conjunction with the second aspect or any one of the first to the third possible implementations in the second aspect, in an eighth possible implementation, the device may further include:

an identifying unit, configured to identify intention of the user to access the commodity, and terminate in playing the commodity information for the user in the case that the user is not a potential user.

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[0033] In conjunction with the second aspect or any one of the first to the third possible implementations in the second aspect, in a ninth possible implementation, the device may further include:

a recording unit, configured to record one or more of surrounding environment information, commodity playing times and commodity access times.

[0034] In conjunction with the second aspect or any one of the first to the third possible implementations in the second aspect, in a tenth possible implementation, the device may further include:

a third receiving unit, configured to receive payment information of at least one user, where the payment information includes payment amount and a commodity code of the commodity to be paid; and

a forwarding unit, configured to forward the payment information to a data processor, where the data processor determines payees and proportions of the payees based on the commodity code of the commodity to be paid, divides the payment amount based on the proportions of the payees, and distributes the corresponding amount to each of the payees.

[0035] In a third aspect, it is provided a data processing system in an embodiment of the disclosure, which includes a data processor and the data processing device in the second aspect, where

the data processing device is configured to receive payment information of at least one user and forward the payment information to the data processor, where payment information includes payment amount and a commodity code of the commodity to be paid; and

the data processor is configured to determine payees and proportions of the payees based on the commodity code of the commodity to be paid, divide the payment amount based on the proportions of the payees, and distribute the corresponding amount to each of the payees.

[0036] In a first possible approach of implementation of the third aspect, the payment information may further include offer information, and the data processor may be configured to divide the payment amount based on the proportions of the payees and the offer information.

[0037] In conjunction with the third aspect or the first possible approach of implementation of the third aspect, in a second possible implementation, before dividing the payment amount,

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the data processor may be further configured to acquire payment currency types of the user and the payee, and convert the payment currency types into a certain type.

[0038] In conjunction with the third aspect or the first possible approach of implementation of the third aspect, in a third possible implementation, the payment information may further include identity information of the user, and the data processor may be further configured to:

verify whether payment amount of each of the users meets a preset condition, and identify the user based on the identity information of the user if the payment amount of the user does not meet the preset condition.

[0039] In the data processing solutions provided in the embodiments of the disclosure, the electronic device not only can play the commodity information, but also can collect and analyze the scanning result to obtain the requirement of the user around the electronic device actively, attract the attention of the user by searching for and playing the commodity information meeting the user requirement, and provide the user with specific commodities actively, thereby increase the views of the commodity information.

BRIEF DESCRIPTION OF THE DRAWINGS

[0040] In order to illustrate the technical solutions in the embodiments of the disclosure, drawings to be used in describing the embodiments of the disclosure will be described briefly hereinafter. Apparently, the drawings described hereinafter are only a few of embodiments of the disclosure, and other drawings may be obtained by those ordinary skilled in the art based on those drawings without creative labor.

[0041] Figure 1 is a flow chart of a data processing method according to an embodiment of the disclosure;

[0042] Figure 2 is a flow chart of a process of analyzing a scanning result to obtain inquiry interest of a user according to an embodiment of the disclosure;

[0043] Figure 3 is a flow chart of a process of analyzing a scanning result to obtain inquiry interest of a user according to an embodiment of the disclosure;

[0044] Figure 4 is a flow chart of a data processing method according to an embodiment of the disclosure;

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[0045] Figure 5 is a schematic diagram of an implementation of an electronic device playing commodity information according to the disclosure;

[0046] Figure 6 is a flow chart of a data processing method according to an embodiment of the disclosure;

[0047] Figure 7 is a flow chart of a data processing method according to an embodiment of the disclosure;

[0048] Figure 8 is a flow chart of a data processing method according to an embodiment of the disclosure;

[0049] Figure 9 is a flow chart of a data processing method according to an embodiment of the disclosure;

[0050] Figure 10 is a flow chart of a data processing method according to an embodiment of the disclosure; and

[0051] Figure 11 is a schematic structural diagram of a data processing device according to the disclosure.

DETAILED DESCRIPTION

[0052] Hereinafter, the technical solution in the embodiment of the present disclosure will be described clearly and completely in conjunction with the drawings in the embodiment of the present disclosure. Apparently, the described embodiments are only a few of the embodiments of the present disclosure, but not all the embodiments. All the other embodiments obtained by those skilled in the art based on the embodiment in the present disclosure without creative labor will fall within the scope of protection of the present disclosure.

[0053] Before the description of the technical solutions of the disclosure, specific application scenes for the solutions of the disclosure are explained.

[0054] When being used by a product or service provider to present and recommend a commodity, an electronic device functions basically to store commodity information of the commodity to be presented, and to play the commodity information based on a preset rule. The electronic device may present the commodities periodically in an order in which the

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commodity information is stored, and the electronic device may also present the commodities periodically based on priorities of the commodity information, which is not defined in the disclosure.

[0055] It is to be noted that, to present the commodity information, the electronic device may be selected by a data provider (i.e., the above product or service provider, which may specifically be a commodity direct business or a commodity alliance business, which is not defined in the disclosure) to play the commodity information, and a direct link is established between the data provider and the electronic device, in accordance with the solution disclosed in the Chinese Patent ZL201110082382.3. The commodity information played by the electronic device is adjusted directly by the data provider, thereby improving transmission and display flexibility of the commodity information. Alternatively, playing time and playing order for the commodity information may be set in accordance with the solution disclosed in the Chinese Patent Application CN201210015905.7, thereby improving display flexibility of the commodity information.

[0056] In the conventional art, the electronic device can only present the commodity information to the user passively. That is to say, the electronic device can only passively wait the user to initiate an access request, and thus the view of the commodity information is lowered. With this, the solution of the disclosure is proposed to recommend the specific commodity to the user actively, thereby increase views of the commodity presented by the electronic device.

[0057] Referring to Figure 1, a flow chart of a data processing method according to a first embodiment of the disclosure is shown, which may include following steps 101 to 103.

[0058] In step 101, an electronic device scans a user within a preset range and analyzes a scanning result to obtain inquiry interest of the user.

[0059] In an embodiment of the disclosure, the function of the electronic device is optimized, to allow the electronic device to identify a user by environmental remote sensing, analyzes the scanning result to obtain a requirement of the user. And thus the electronic device plays commodity information meeting the requirement for the identified user, thereby improving the probability that the user accesses the commodity.

[0060] This step is to analyze the scanning result to obtain the requirement of the user, and

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the analyzing may include following two actions.

[0061] (1) The electronic device scans the users around the electronic device.

[0062] Generally, a scanning range for the electronic device may be preset. For example, in the case that the electronic device scans the users using a video camera, a camera, a scanner, a Near Field Communication (NFC), WiFi and the like, the furthest scanning distance for the video camera, the camera, the scanner, the NFC or WiFi may be determined as the boundary of the preset scanning range, which is not limited in the embodiment of the disclosure.

[0063] (2) The electronic device analyzes the scanning result to obtain the requirement of the user.

[0064] In this step, based on different types of the users, the requirement of the user may be obtained roughly, and may also be obtained finely. For example, the user is a non-registered user (which is also referred to as a normal user), that is to say, only the type of the user can be identified based on the scanning result, the requirement of the user may be obtained roughly, for playing specific commodity information for the user. Alternatively, the user is a registered user, that is to say, the identity of the user can be identified based on the scanning result, and the requirement of the user may be obtained finely, for playing more specific commodity information for the user.

[0065] It is to be noted that, the method for analyzing the scanning result to obtain the requirement of the user is not described in detail here, and reference may be made to the description given hereinafter.

[0066] In step 102, the electronic device inquires a commodity database based on the inquiry interest and selects commodities meeting the inquiry interest.

[0067] In step 103, the electronic device displays commodity information of the selected commodities for the user.

[0068] After the inquiry interest of the user is obtained in step 101, the preset commodity database may be inquired, commodities meeting the requirement of the user may be selected from the commodity database, and the commodity information of the selected commodities may be played by the electronic device for the user to view.

[0069] It is to be noted that, the commodity information of any commodity that can be played by the electronic device are stored in the commodity database. The commodity

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information may be commodity details, a commodity code, a data provider, an offer information, useful-life or the like, which is not limited in the embodiment of the disclosure.

[0070] Further, for the commodity information of the selected commodity to be played by the electronic device, following description is given in the embodiment of the disclosure.

[0071] (1) The electronic device may include multiple display units, and before the commodity information is displayed, the display order for the multiple display units may be set.

[0072] If the areas of the multiple display units are the same, the play order for the display units may be set as an order from left to right and from top to bottom. For example, the electronic device includes four display units which are numbered as 1, 2, 3 and 4 respectively from left to right and from top to bottom, and in accordance with the priorities of the selected commodities, the commodity with the highest priority is played by the display unit numbered as 1, and so on, and the commodity with the lowest priority is played by the display unit numbered as 4. Alternatively, the play order may be set as an order from right to left and from top to bottom, the commodity with the highest priority is played by the display unit numbered as 2, and the commodity with the lowest priority is played by the display unit numbered as 3. Alternatively, the play order may be set based on the visual variation of the user viewing the electronic device, the commodity with the highest priority is played by the display unit which is viewed by the user firstly, and so on.

[0073] If the areas of the multiple display units are different, the play order for the display units may be set as a descending order of the area of the display units. That is to say, the commodity with the highest priority is played by the display unit with the largest area, and so on, and the commodity with the lowest priority is played by the display unit with the smallest area.

[0074] Practically, the play order for the display units may be set by combining both the above conditions. For example, the electronic device includes four display units, and the areas of the two of the display units are. The play order for the display units may be set based on the area of the display units, and for the two display units having the same area, the play order may be set based on other rules. The play order for the display units may be set as required, which is not limited in the embodiment of the disclosure.

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[0075] (2) The electronic device may select multiple commodities meeting the requirement of a single user, and the priority for each of the commodities may be set before the commodity information is displayed.

[0076] The priority for each of the commodities may be set based on the order in which the commodity is selected. That is to say, the commodity that is selected firstly has the highest priority, and so on. Alternatively, the priority for each of the commodities may be set based on the correlation between the selected commodity and the requirement of the user. That is to say, the commodity with the highest correlation has the highest priority, and so on. Alternatively, the priority for each of the commodities may be set based on the charge paid by the data provider corresponding to the selected commodity. That is to say, the commodity with the highest payment amount has the highest priority, and so on. In this regard, the priority for each of the commodities may be set as required, which is not limited in the embodiment of the disclosure.

[0077] After the play priority of the commodity is set, the electronic device may play the commodity information of each commodity in the order of the priority if the electronic device includes only one display unit; and the display unit to play the commodity may be set using the above solution if the electronic device includes multiple display units, which is not described in detail here.

[0078] (3) The electronic device may select the commodities for multiple users at the same time, and before the commodity information is played, the priority for each of the commodities may be set.

[0079] The priority may be set based on the order in which the users are analyzed. That is to say, the commodity corresponding to the user which is analyzed firstly has the highest priority, and so on. Alternatively, the priority may be set based on the priority of the analyzed user. That is to say, the commodity corresponding to the user with the highest priority has the highest priority, and so on. Alternatively, the priority may be set based on the payment amount paid by the data provider corresponding to the selected commodity. That is to say, the commodity corresponding to the data provider that pays the largest payment amount has the highest priority, and so on. In this regard, the priority for each of the commodities may be set as required, which is not limited in the embodiment of the disclosure.

[0080] After the play priority of the commodity is set, the electronic device may play the

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commodity information of each commodity in the order of the priority if the electronic device includes only one display unit; and the display unit to play the commodity may be set using the above solution if the electronic device includes multiple display units, i.e., each display unit play the commodity information of different commodities for different users, which is not described in detail here.

[0081] In the data processing method according to the embodiment of the disclosure, in addition to playing the commodity information, the electronic device determines the requirement of each of the users around the electronic device, finds and plays the commodity information meeting the requirement of the user to attract the user's attention, thereby providing actively specific commodities for the users and increase views of the commodity information.

[0082] It is to be noted that, before collecting and analyzing the scanning result to obtain the requirement of the user, the electronic device may present no commodity information. That is to say, the electronic device does not play the specific commodity information for the identified user until the commodity information meeting the requirement of the user is found, and the electronic device play no commodity information in any other cases (for example, in the case that the user has not been identified, or in the case that the specific commodity information has been played for the identified user for a period of time). Alternatively, before collecting and analyzing the scanning result to obtain the requirement of the user, the electronic device may play fixedly the commodity information of some commodities, or play periodically the commodity information of some commodities in accordance with the solution disclosed in the Chinese Patent Application CN201210015905.7, which is not limited in the embodiment of the disclosure.

[0083] Hereinafter, in conjunction with the type of the user and the method for scanning the users by the electronic device, the process of analyzing the scanning result to obtain the requirement of the user in above step 101 is explained.

[0084] In a first method, the users are non-registered users, and the users are scanned via a video camera, a camera or the like.

[0085] When the users enter the preset range which can be scanned by the electronic device, the electronic device may shoot each of the users and obtain an image of the user, classify the users based on the images of the users, and determine which preset type each of the users

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belongs to. That is to say, the scanning result is the type of the user. Accordingly, the electronic device may determine the requirement of each of the users based on the type of the user.

[0086] It is to be noted that, based on the gender, the preset type may include man and woman. Based on the age group, the preset type may include childhood, youth, middle age and old age. Based on the dressing, the preset type may include sports, business and relaxation. The preset type may include other types based on other practical requirements, which is not limited in the embodiment of the disclosure.

[0087] Referring to Figure 2, a flow chart of a process of analyzing the scanning result to obtain inquiry interest of a user according to an embodiment of the disclosure is shown, which includes steps 201 and 202.

[0088] In step 201, mapping between the user type and a commodity category of the commodity is established and stored in advance.

[0089] In step 202, the commodity category corresponding to the scanning result is found, and the commodity category is set as the inquiry interest of the user.

[0090] In an embodiment, after the users are divided into different types of users based on practical requirements, the mapping between the user type and the commodity category is established. After the user type is obtained by scanning, the commodity category corresponding to the user type may be found, and the commodity category is deduced coarsely as the inquiry interest of the user. For example, the user type is sport, and the sport product or service is determined as the requirement of the user.

[0091] It is to be noted that, one user type may be mapped to one commodity category, and multiple user types may be mapped to one commodity category, which is not limited in the embodiment of the disclosure. Generally, the more the use types are (such as collectively including female, middle age, business and the like), the finer the commodity category that may be found finally is, the finer the requirement of the user is deduced, and the more pertinent the commodity recommendation is.

[0092] Further, the user type may be added to the commodity information as an attribute, and the commodity with this attribute may be searched after the user type is analyzed by the electronic device.

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[0093] In a second method, the users are registered users, and the users are scanned via a video camera, a camera, a scanner, an NFC, WiFi or the like.

[0094] Based on the information used by the user in registration, the process of scanning the users includes following cases.

[0095] If the user registers using biological feature information such as human face, finger, iris or voice, the head image of the user may be captured using a video camera, a camera or the like, and the identity of the user may be determined using the face detection technique. Alternatively, the finger and/or iris feature of the user is collected using a scanner, and the identity of the user is identified and determined based on the finger and/or iris feature of the user. Alternatively, the voice of the user is collected using a camera or other voice collecting device, and the identity of the user is determined based on the voice of the user.

[0096] If the user registers using a phone number, the connection between the electronic device and the phone of the user may be established using an NFC, WiFi or the like, and the identity of the user is determined based on the phone number of the user.

[0097] In total, in an embodiment, the scanning result is the user identity, and accordingly, based on the public network, the electronic device may search the published information (which may be practically the information filled by the user in registration, the information issued by the user, the information on the user published on other public networks) of the user with this identity information, and analyze the information to obtain the user requirement.

[0098] Referring to Figure 3, a flow chart of a process of analyzing the scanning result to obtain inquiry interest of a user according to an embodiment of the disclosure is shown, which includes following steps 301 and 302.

[0099] In step 301, identity information of a registered user is collected and stored in advance.

[0100] In step 302, registration information of the user and/or information published by the user is searched for on a public network based on the scanning result, and the information is set as the inquiry interest of the user.

[0101] In an embodiment, the electronic device collects and stores the identity information of each of the registered users in advance (practically, the identity information of the registered user may be stored in the cloud, and the electronic device may read the identity

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information from the cloud as required). With this, the identity of the user may be identified correctly based on the information such as the biological information or the phone number, then the information published by the user may be searched on the public network (which may be the social platform such as Facebook, Google, Linked-in or Microblog), and the inquiry interest of the user may be obtained by analyzing the information.

[0102] It is to be noted that, the information published by the user may be the registration information of the user. For example, based on the graduation school, the major or the company filled by the user in registration, or based on the personal preference filled by the user in registration, the user requirement is determined. In addition, the information published by the user may also be the information issued by the user, such as the message issued by the user directly, the message forwarded by the user, the message commended by the user and the message praised by the user. Based on the information issued by the user, the user requirement may be determined. To improve the accuracy for determining the user requirement in the disclosure, the electronic device searches and analyzes the information published by the user recently, and determined the user requirement based on the published information. For example, if the user publishes a message for buying anniversary presents in the Microblog recently, the current inquiry interest of the user may be deduced.

[0103] Referring to Figure 4, a flow chart of a data processing method according to a second embodiment of the disclosure is shown, which may include following steps 401 to 404.

[0104] In step 401, an electronic device scans a user within a preset range, and analyzes a scanning result to obtain inquiry interest of the user.

[0105] In step 402, the electronic device inquires a commodity database based on the inquiry interest, and selects commodities meeting the inquiry interest.

[0106] Steps 401 and 402 are the same as the steps 101 and 102 respectively, and are not described in detail here.

[0107] In step 403, the electronic device acquires commodity code of the commodity, and converts the commodity code into a bar code.

[0108] As described above, each commodity has a commodity code. If the commodity code is contained in the commodity information stored in the database of the commodity, the

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commodity code of the commodity may be obtained in selection of the commodity meeting the user requirement. In an embodiment, to facilitate the user accessing the commodity of interest, the commodity code may be converted into a bar code. The bar code may be a one-dimensional code, a two-dimensional code, a three-dimensional code or the like. As a preferable embodiment, the commodity code may be converted into a quick response (QR) code.

[0109] In step 404, the electronic device sets a display position for each bar code, and displays the bar code corresponding to the commodity when playing the commodity information of the selected commodity for the user.

[0110] To display the bar code for the user while playing the commodity information, the display position for the bar code may be preset after the commodity code is converted into the bar code, and the bar code is displayed on a specified position. Thus, the electronic device may play the commodity information for the user as shown in Figure 5. Accordingly, the user may scan the bar code of the commodity of interest using a hand-hold intelligent terminal to obtain the commodity code, and send the access request including the commodity code to the electronic device, for requesting to establish the access relation with the data provider of the commodity. For this, reference may be made to the description as follow.

[0111] It is to be noted that, the specified position may be at the lower left corner of the playing image as shown in Figure 5. Alternatively, based on the practical situation of the played commodity information, a position rarely affects the displaying of the commodity information is selected to add the bar code, which is not limited in the embodiment of the disclosure.

[0112] For the process of playing the commodity information of the selected commodity, reference may be made to the above description, which is not described in detail here. That is, as compared with the first embodiment as shown in Figure 1, the bar code of the played commodity is further displayed for the user, and the bar code is the commodity code.

[0113] It is to be noted that, based on the solution in which the commodity code is converted into the bar code for displaying, the commodity code may be converted into any sign or image in an embodiment of the disclosure. Optionally, partial code information of the commodity information may be embedded into the obtained sign or image. The pattern into which the commodity code may be converted is not limited in the embodiment of the

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disclosure. The commodity code is not limited to letter, symbol or specific shape, as long as it can be identified by the intelligent terminal.

[0114] Referring to Figure 6, a flow chart of a data processing method according to a third embodiment of the disclosure is shown, which may include following steps 501 to 505.

[0115] In step 501, an electronic device scans a user within a preset range and analyzes a scanning result to obtain inquiry interest the users.

[0116] In step 502, the electronic device inquires a commodity database based on the inquiry interest and selects commodities meeting the inquiry interest.

[0117] In step 503, the electronic device displays commodity information of the selected commodities for the user.

[0118] Steps 501 and 503 are the same as the steps 101 and 103 respectively, and are not described in detail here.

[0119] In step 504, the electronic device receives an access request input by the user, where the access request includes a commodity code of the commodity to be accessed.

[0120] In step 505, the electronic device finds a data provider corresponding to the commodity to be accessed based on the commodity code and establishes an access relation between the user and the data provider in a real-time manner.

[0121] After the commodity information played by the electronic device for the user is searched, the user may send the access request to the electronic device if the user is interested in the commodity, to allow the electronic device to establish the access relation between the user and the commodity provider. The access request includes at least the commodity code of the commodity to be accessed.

[0122] If the electronic device uses the solution as shown in the second embodiment, the user may obtain the commodity code by scanning the bar code, and sends the access request to the electronic device. If no bar code is displayed in the play image of the electronic device, the commodity code may be obtained by referring to the solution disclosed in the Chinese Patent Application CN201310560958.1, and establish the real-time access relation between the user and the data provider, which is not described in detail here.

[0123] Referring to Figure 7, a flow chart of a data processing method according to a fourth

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embodiment the disclosure is shown, which may include following steps 601 to 606.

[0124] In step 601, an electronic device scans a user within a preset range and analyzes a scanning result to obtain inquiry interest of the user.

[0125] In step 602, the electronic device inquires a commodity database based on the inquiry interest and selects commodities meeting the inquiry interest.

[0126] In step 603, the electronic device displays commodity information of the selected commodities for the user.

[0127] Steps 601 and 603 are the same as the steps 101 and 103 respectively, and are not described in detail here.

[0128] In step 604, the electronic device receives an access request input by the user via an intelligent terminal, where the access request includes a commodity code of the commodity to be accessed.

[0129] In step 605, the electronic device finds offer information corresponding to the commodity to be accessed based on the commodity code and sends the offer information to the intelligent terminal.

[0130] In an embodiment of the disclosure, the electronic device may find deal information or discount information corresponding to the commodity to be accessed based on the commodity code, and send the deal information or the discount information to the intelligent terminal.

[0131] In step 606, the intelligent terminal stores the offer information, and performs commodity transaction using the offer information.

[0132] As shown in the third embodiment as shown in Figure 6, upon requesting from the user, the electronic device establishes the access relation between the user and the data provider. And upon requesting from the user, the electronic device downloads the offer information provided by the data provider into the user terminal, so that the user performs commodity transaction at the electronic device or commercial network of the data provider by using the offer information as required.

[0133] It is to be noted that, in addition to storing the offer information of the commodity, the intelligent terminal may further select the offer information from the stored offer

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information which is most suitable for the current transaction, and recommend it for using by the user. Alternatively, the intelligent terminal may track the offer status. For example, the offer information of a data provider is that the user may obtain one free lunch after N times of successful transaction. Based on the status of this offer information, after the user makes the deal with the data provider for N times, the terminal promotes the user to get the free lunch. Alternatively, the intelligent terminal may transfer the offer information of the terminal itself to other related terminals. For example, the miles of the airline may be transferred to the related families or friends.

[0134] As can be seen from the third and the fourth embodiment of the data processing method, among the commodity information played by the electronic device, some are provided for the user for accessing the transaction, and some are provided for the user for use in downloading. The user may know the attribute of the commodity played by the electronic device in following ways.

[0135] (1) The user is promoted with characters. That is, the attribute of the commodity is identified by characters at the specified position in the played image.

[0136] (2) A special operation is performed on the bar code, to allow the bar code to be presented in different colors. That is to say, the attribute of the commodity is identified using the color of the bar code. For example, the red bar code represents the commodity discount coupon, the yellow bar code represents the commodity limited release, the green bar code represents the commodity clearance sale, and the blue bar code represents the lowest price of the commodity. Correspondingly, before playing the commodity, in addition to setting the display position for the bar code, the electronic device sets or adjusts the display color of the bar code based on the attribute of the commodity. In this way, the user obtains both the commodity code and the commodity attribute by scanning the bar code using the intelligent terminal.

[0137] Referring to Figure 8, a flow chart of a data processing method according to a fifth embodiment of the disclosure is shown, which may include following steps 701 to 704.

[0138] In step 701, an electronic device scans a user within a preset range and analyzes a scanning result to obtain inquiry interest of the user.

[0139] Step 701 is the same as step 101, and is not described in detail here.

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[0140] In step 702, the electronic identifies intention of an access to a commodity by the user. If the user is a potential user, the method proceeds to step 703; or else, if the user is not a potential user, the process of playing the commodity information for the user is terminated.

[0141] In step 703, the electronic device inquires a commodity database based on the inquiry interest and selects commodities meeting the inquiry interest.

[0142] In step 704, the electronic device displays commodity information of the selected commodities for the user.

[0143] Steps 703 and 704 are the same as steps 102 and 103 respectively, and are not described in detail here.

[0144] To further increase the access rate of the commodity information, and to avoid the waste of the processing resource due to the process of providing service for the user which has no intention to access or transact, in addition to analyzing the scanning result to obtain the inquiry interest of the user, the intention of the user to access the commodity is further identified in the embodiment. If the user is a potential user, the user access the commodity and makes the transaction (or the probability that the successful transaction is made is higher) after the commodity is recommended to the user. Then the commodity meeting the user requirement may be found using the solution in the disclosure, and the commodity information may be played for the user. If the user is not a potential user, the user does not access the commodity or makes the transaction successfully (or the probability that the transaction is made successfully is lower) after the commodity is recommended to the user, and then the process of providing service for the user may be stopped.

[0145] Generally, the solution in an embodiment is mainly applicable to the registered users. The non-potential user may be identified by setting a blacklist. For example, if the total number of times that a user does not access the recommended commodity in a certain period of time beyond a preset value, or if the percentage of the total un-access times to the recommended total times beyond a preset value, the user may be added to the blacklist. Alternatively, if the total number of times that the user does not perform the commodity transaction successfully in a certain period of time beyond a preset value, or if the percentage of the total unsuccessful transaction times to the recommended total times beyond a preset value, the user may be added to the blacklist. In addition, the non-potential user may be identified by searching the credit information of the user on the public network, which is not

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limited in the embodiment of the disclosure.

[0146] It is to be noted that, the process of identifying the intention of the user to access the commodity in the disclosure may be shown in Figure 8. The process is performed after or before the inquiry interest of the user is obtained by analyzing the scanning result, and may also be performed when the user requests to access the commodity information via the electronic device (i.e., this process may be performed in any stage before the transaction is made successfully, for example, this process is performed when it is found that the user only wants to learn about the price of the commodity but not intends to buy the commodity), which is not limited in the embodiment of the disclosure.

[0147] Referring to Figure 9, a flow chart of a data processing method according to a sixth embodiment of the disclosure is shown, which may include following steps 801 to 804.

[0148] In step 801, an electronic device scans a user within a preset range and analyzes a scanning result to obtain inquiry interest of the user.

[0149] In step 802, the electronic device inquires a commodity database based on the inquiry interest and selects commodities meeting the inquiry interest.

[0150] In step 803, the electronic device displays commodity information of the selected commodities for the user.

[0151] Steps 801 to 803 are the same as the steps 101 to 103 respectively, and are not described in detail here.

[0152] In step 804, the electronic records at least one of surrounding environment information, commodity playing times and commodity access times.

[0153] In an embodiment, in addition to playing the specific commodity information for the user actively, the electronic device may records information such as the surrounding environment information, the commodity playing times and the commodity access times, for use in the subsequent data analysis, which are described one by one hereinafter.

[0154] (1) Surrounding environment information

[0155] The surrounding environment information may be people type, people flow rate, peak hour of people flow and trough hour of people flow at the position around the electronic device. The electronic device records the information, and provides the information to the

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data provider, for the data provided to user in selecting the electronic device by which the commodity information is to be played (i.e., the play position of the commodity) and the play time of the commodity information. Alternatively, the electronic device provides the information to the data processor, for the data processor to use in determining the price of the electronic device or the display unit.

[0156] (2) Commodity playing times and of commodity access times

[0157] Based on the commodity playing tines and the commodity access times, the access rate of the commodity at the electronic device may be calculated as the check result of the electronic device. The access rate may be provided to the data provider, for the data provider to use in selecting the electronic device. Alternatively, the access rate may be provided to the data processor, for the data processor to use in determining the prices of the electronic device and the display unit.

[0158] Referring to Figure 10, a flow chart of a data processing method according to a seventh embodiment of the disclosure is shown, which may include following steps 901 to 907.

[0159] In step 901, an electronic device scans a user within a preset range and analyzes a scanning result to obtain inquiry interest of the user.

[0160] In step 902, the electronic device inquires a commodity database based on the inquiry interest and selects commodities meeting the inquiry interest.

[0161] In step 903, the electronic device displays commodity information of the selected commodities for the user.

[0162] Steps 901 to 903 are the same as the steps 101 to 103 respectively, and are not described in detail here.

[0163] In step 904, the electronic device receives payment information of the user, where the payment information includes payment amount and a commodity code of the commodity to be paid.

[0164] In step 905, the electronic device forwards the payment information to a data processor.

[0165] In step 906, the data processor determines payees and proportions of the payees

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based on the commodity code of the commodity to be paid.

[0166] In step 907, the data processor divides the payment amount based on the proportions of the payees, and distributes the corresponding amount to each of the payees.

[0167] In an embodiment, the electronic device may assist the data processor (which may be a background server of the data processor) to achieve multi-payment. That is, if the user is interest in the commodity information recommended by the electronic device, accesses and purchases the corresponding commodity, following cases will occur during the payment.

[0168] In a first case, multiple payers pay at the same time. For example, at least two users access and purchase simultaneously the commodity provided by the same data provider, the electronic device needs to process simultaneously the payment request from the multiple payers during the payment.

[0169] In a second case, multiple payees receive a payment at the same time. For example, one commodity accessed and purchased by the user is provided by multiple providers (for example, the payment for a holiday commodity includes traffic payment, hotel payment, scenic spot payment and the like; alternatively, the payment of a toothbrush recommended in a market via the electronic device includes the market bonus, toothbrush provider bonus, data displayer bonus and the like), the electronic device needs to allocate the money for the multiple payees during the payment.

[0170] In either of the above cases, after receiving the payment information of the user, the electronic device forwards the payment information to the data processor for multi-payment process.

[0171] Specifically, based on the commodity code of the commodity to be paid, the data processor determines the payee corresponding to the commodity (as can be seen from the above example, the payee may be the data provider, the data processor, the data displayer or the like), which is not limited in the disclosure. The payees and the proportions of the payees are stored by the data processor after the negotiation between the payees. If the commodity corresponds to only one payee (the corresponding proportion of the payee is 100%), the received payment amount is distributed directly to the payee. If the commodity corresponds to at least two payees, the payment amount is divided based on the proportions of the payees, and the amount obtained by the division is distributed to the each of the payees.

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[0172] As compared with the conventional art in which only the payment process between a single payer and a single payee can be processed, the solution in an embodiment of the disclosure improves the efficiency of the payment process, and ensures the real-time performance of the payment process, so that the payees receive their payment in time.

[0173] Based on the solution provided in the seventh embodiment as shown in Figure 10, it is further provided following solutions in an embodiment of the disclosure, which are described one by one hereinafter.

[0174] In payment, the user may use offer information stored in a terminal of the user to offset partially or completely the payment amount. Accordingly, in the payment information sent by the user to the electronic device, the offer information is further included. Thus, the process of dividing the payment amount by the data processor may be as follows.

[0175] The data processor divides the payment amount based on the proportions of the payees, identifies the payee corresponding to the offer information, and offsets the partial amount to the payee using the offer. That is, the payment received by the payee corresponding to the offer information is the payment after the dividing process and the offsetting process, and the payment received by each of the other payees if the payment after the dividing process.

[0176] Alternatively, to facilitate the user operation, the user is supported to pay using various types of currencies (such as RMB, Euro, US dollar, Bitcoin, gold and silver) in the embodiment of the disclosure. Accordingly, the payee is allowed to receive the payment using various types of currencies. With this, the user and the payee may pay using different types of currencies. Accordingly, before dividing the payment amount, the data processor acquires the types of the currencies for payment of the user and the payee. If the types are different, the types may be converted into the specified type, and then the dividing process is performed.

[0177] It is to be noted that, the specified type may be one of the types used by the user and the payee (for example, the user pays using RMB, three payees receives the payment using RMB, US dollar and Bitcoin, and RMB may be determined as the specified currency type), and may also be a common currency type that is preset, which is not limited in the embodiment of the disclosure. Further, if a certain common currency type is preset, and neither of the user or the payee uses this currency type, the currency type may be converted using the solution in an embodiment even if the currency types used by the user and the payee

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are the same, which is not limited in the embodiment of the disclosure.

[0178] In payment, cases in which the payment amount of the user is not enough or the deduction is unsuccessful may occur. To ensure that the multi-payment of the embodiment of the disclosure is performed normally, the identity information of the user may be further included in the payment information sent by the user to the electronic device. With this, the data processor may processes as follows.

[0179] The data processor judges whether the payment amount of the user meets the preset condition, i.e., whether the payment amount of the user meets the commodity quotation, whether the deduction is successful, and the like. If the preset condition is met, the data processor may process based on the above multi-payment solution. If the preset condition is not met, the user may be identified based on the identity information of the user.

[0180] If the case in which the preset condition is not met during the multi-payment process, the data processor may performs as follows.

[0181] In a first case, there are a single payer and a single payee, or there are a single payer and multiple payees. In this case, after identifying the user, the data processor may wait for a preset period of time. If the user corrects within a preset time, and the corrected payment amount meets the preset condition, the data processor performs based on the above multi-payment solution. If the user does not correct within the preset time, or the corrected payment amount still does not meet the preset condition, a promotion may be sent to the user, and the user performs again, or the multi-payment process is ended, which is not limited in the embodiment of the disclosure.

[0182] In a second case, there are multiple payers and a single payee, or there are multiple payers and multiple payees. In this case, like the first case, if the identified user corrects within a preset time, and the corrected payment amount meets the preset condition, the data processor performs based on the above multi-payment solution. If identified the user does not correct within the preset time, or the corrected payment amount still does not meet the preset condition, in addition to sending a promotion to the user, in conjunction with the payment amount of other identified users, the multi-payment process is performed on these users. .

[0183] Alternatively, after determination on the preset condition, the multi-payment process may be performed on the un-identified user, for ensuring that the user experiences of these

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users. For the identified users, the process may be performed based on the correction case after a preset time as described above.

[0184] Accordingly, it is provided a data processing device, as shown in Figure 11, which may include a scanning unit 1001, an analyzing unit 1002, an inquiring unit 1003, and a playing unit 1004.

[0185] The scanning unit1001 is configured to scan a user within a preset range.

[0186] The analyzing unit 1002 is configured to analyze a scanning result obtained by the scanning unit to obtain inquiry interest of the user.

[0187] The inquiring unit 1003 is configured to inquire a commodity database based on the inquiry interest and select commodities meeting the inquiry interest.

[0188] The playing unit 1004 is configured to play commodity information of the selected commodities for the user.

[0189] The data processing device in the embodiment of the disclosure may be the electronic device described above. The data processing device provided in the embodiment of the disclosure not only has the function of playing the commodity information, but also can collect and analyze the scanning result to obtain the requirement of the user around the electronic device actively, attract the attention of the user by finding and playing the commodity information meeting the user requirement, and provide the user actively with specific commodity actively, thereby increase views of the commodity information.

[0190] Correspondingly to the above method embodiment, it is further provided two possible implementations for the analyzing unit as follows.

[0191] In a first implementation, the scanning result is a user type, and the analyzing unit includes a mapping establishing unit and a finding unit.

[0192] The mapping establishing unit is configured to establish and store mapping between the user type and a commodity category of the commodity in advance.

[0193] The finding unit is configured to find the commodity category corresponding to the scanning result and set the commodity category as the inquiry interest of the user.

[0194] In a second implementation, the scanning result is identity information of the user, and the analyzing unit includes a collecting unit and a searching unit.

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[0195] The collecting unit is configured to collect and store identity information of a registered user in advance.

[0196] The searching unit is configured to search for, based on the scanning result, information used by the user in registration and/or information published by the user on a public network, and set the information as the inquiry interest of the user.

[0197] Optionally, the electronic device may include multiple display units, and the playing unit is configured to play the commodity information of different commodities for different users via each of the display units.

[0198] Correspondingly to the above second method embodiment as shown in Figure 4, it is further provided another data processing device. If the commodity stored in the commodity database includes the commodity code, an embodiment may include a converting unit based on the embodiment shown in Figure 11.

[0199] The converting unit is configured to convert the commodity code of the commodity into a bar code.

[0200] The playing unit is configured to add the bar code to the electronic device at a certain position for displaying when playing the commodity information.

[0201] Optionally, to facilitate the user determining the attribute of the played commodity, the commodity is identified using the character or the colored bar code. Correspondingly to the solution in which the commodity attribute is determined based on the color of the bar code, the data processing device may further include a setting unit.

[0202] The setting unit is configured to set a display color of the bar code based on a commodity attribute of the commodity.

[0203] Correspondingly to the above the data processing method as shown in Figure 6, it is further provided yet another data processing device. If the commodity stored in the commodity database includes the commodity code, an embodiment may include a first receiving unit and an access relation establishing unit based on the embodiment shown in Figure 11.

[0204] The first receiving unit is configured to receive an access request input by the user, where the access request includes a commodity code of the commodity to be accessed.

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[0205] The access relation establishing unit is configured to find a data provider corresponding to the commodity to be accessed based on the commodity code, and establish an access relation between the user and the data provider in a real-time manner.

[0206] Correspondingly to the above data processing method embodiment as shown in Figure 7, it is further provided yet another embodiment of the data processing device. If the commodity stored in the commodity database includes the commodity code, an embodiment may include a second receiving unit and a sending unit based on the embodiment shown in Figure 11.

[0207] The second receiving unit is configured to receive an access request input by the user via an intelligent terminal, where the access request includes a commodity code of the commodity to be accessed.

[0208] The sending unit is configured to find offer information corresponding to the commodity to be accessed based on the commodity code, and send the offer information to the intelligent terminal, where the intelligent terminal stores the offer information and performs commodity transaction using the offer information.

[0209] Correspondingly to the above data processing method embodiment as shown in Figure 8, it is further provided yet another embodiment of the data processing device. If the commodity stored in the commodity database includes the commodity code, an embodiment may include an identifying unit based on the embodiment.

[0210] The identifying unit is configured to identify sincerity of the user to access the commodity, and terminate in playing the commodity information for the user in the case that the user is not a potential user.

[0211] Correspondingly to the above data processing method embodiment as shown in Figure 9, it is further provided yet another embodiment of the data processing device. If the commodity stored in the commodity database includes the commodity code, an embodiment may include a recording unit based on the embodiment.

[0212] The recording unit is configured to record one or more of surrounding environment information, commodity playing times and commodity access times.

[0213] Correspondingly to the above data processing method embodiment as shown in Figure 10, it is further provided yet another embodiment of the data processing device. If the

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commodity stored in the commodity database includes the commodity code, an embodiment may include a third receiving unit and a forwarding unit based on the embodiment.

[0214] The third receiving unit is configured to receive payment information of at least one user, where the payment information includes payment amount and a commodity code of the commodity to be paid.

[0215] The forwarding unit is configured to forward the payment information to a data processor, where the data processor determines payees and proportions of the payees based on the commodity code of the commodity to be paid, divide the payment amount based on the proportions of the payees, and distributes the corresponding amount to each of the payees.

[0216] Corresponding to the above multi-payment solution, it is further provided a data processing system in an embodiment of the disclosure, which may include a data processor and the above data processing device.

[0217] The data processing device is configured to receive payment information of at least one user and forward the payment information to the data processor, where payment information includes payment amount and a commodity code of the commodity to be paid.

[0218] The data processor is configured to determine payees and proportions of the payees based on the commodity code of the commodity to be paid, divide the payment amount based on the proportions of payees, and distribute the corresponding amount to each of the payees.

[0219] Optionally, the payment information may further include offer information, and the data processor may be configured to divide the payment amount based on the proportions of payees and the offer information.

[0220] Optionally, the data processor is further configured to, before dividing the payment amount, acquire payment currency types of the user and the payee, and convert the payment currency types into a certain type.

[0221] Optionally, the payment information may further include identity information of the user, and the data processor may be further configured to: judge whether payment amount of each of the users meets a preset condition, and identify the user based on the identity information of the user if the payment amount of the user does not meet the preset condition.

[0222] It is to be noted that, in the present specification, the embodiments are described in progressive manner. Each embodiment mainly focuses on an aspect difference from other

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embodiments, and reference can be made to these similar parts among the embodiments. The apparatus embodiment substantially corresponds to the method embodiment, so the related parts between the apparatus embodiment and the method embodiment may be understood with reference to the illustration of the method embodiment. The device embodiment described above is only exemplary, units illustrated as separate components may be physically separated or not. Components displayed as units may be physical units or not, i.e., the components may locate at one location or may be distributed on multiple network units. Part or all of the modules may be selected to implement the solutions of the embodiment based on actual requirement. Those skilled in the art may understand and implement the disclosure without any creative work.

[0223] The above are only preferable embodiments of the disclosure, but are not meant to limit the embodiment of the disclosure. Any modifications, equivalent alternations and improvements are contained in the scope of protection of the embodiment of the disclosure, which fall within the spirit and principle of the embodiment of the disclosure.

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CLAIMS

1. A device for displaying commodity information for one or more commodities to a plurality of users, the device comprising:

a scanning unit, configured to scan a plurality of users within a preset scanning range of the unit to obtain, as a scanning result, information for each scanned user;

an analyzing unit, configured to analyze the scanning result to obtain inquiry information for each scanned user;

an inquiring unit, configured to inquire a commodity database based on the inquiry information to select commodity information for one or more commodities based on the inquiry information; and

a playing unit, configured to output the commodity information for the one or more selected commodities for display for each scanned user,

wherein the device comprises a plurality of display units, and the playing unit is configured to play the commodity information of different commodities for different users via each of the display units, and

wherein the analyzing unit comprises:

a collecting unit, configured to collect and store identity information of registered users; and

a searching unit, configured to search for, based on the scanning result, the identity information of the registered users and information published by the users on a public network, and set the identity information of the user and/or the information published by the user as the inquiry information of the user.

2. The device according to claim 1, wherein the scanning result comprises user type information, and the analyzing unit comprises:

a mapping establishing unit, configured to establish and store a mapping between the user type information and a commodity category for each of the one or more commodities; and

a finding unit, configured to search for a commodity category corresponding to the scanning result and set the commodity category as the inquiry information of the user.

3. The device according to claim 1 or 2, wherein the commodity information stored in the commodity database comprises a commodity code, the device further comprises:

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a converting unit, configured to convert the commodity code of the commodity into a bar code, and

the playing unit is configured to display the bar code at a certain position in the display units when playing the commodity information.

4. The device according to claim 3, further comprising:

a setting unit, configured to set a display color of the bar code based on a commodity attribute of the commodity.

5. The device according to claim 1 or 2, wherein the commodity information stored in the commodity database comprises a commodity code, and wherein the device further comprises:

a first receiving unit, configured to receive an access request inputted by the user, wherein the access request comprises the commodity code of the commodity to be accessed; and an

access relation establishing unit, configured to search for a data provider corresponding to the commodity to be accessed based on the commodity code, and establish an access relation between the user and the data provider in a real-time manner.

6. The device according to claim 5, wherein the device further comprises:

a second receiving unit, configured to receive the access request inputted by the user via an intelligent terminal, wherein the access request comprises the commodity code of the commodity to be accessed; and

a sending unit, configured to:

search for offer information corresponding to the commodity to be accessed based on the commodity code; and

send the offer information to the intelligent terminal, wherein the intelligent terminal stores the offer information and performs commodity transaction using the offer information.

7. The device according to any one of claims 1 to 6, further comprising:

an identifying unit, configured to identify intention of each scanned user to access the commodity, and terminate in playing the commodity information for the user in the case that the user is not a potential user.

8. The device according to any one of claims 1 to 7, further comprising:

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a recording unit, configured to record one or more of surrounding environment information, commodity playing times and commodity access times.

9. The device according to claims 6, further comprising:

a third receiving unit, configured to receive payment information of at least one user, wherein the payment information comprises payment amount and the commodity code of the commodity to be paid; and

a forwarding unit, configured to forward the payment information to a data processor,

wherein the data processor determines payees and proportions of the payees based on the commodity code of the commodity to be paid, divides the payment amount based on the proportions of the payees, and distributes the corresponding amount to each of the payees.

10. A data processing system, comprising a data processor and the device according to claim 1, wherein:

the data processor is configured to receive payment information of at least one user and forward the payment information to the data processor, wherein payment information comprises payment amount and a commodity code of the commodity to be paid; and

the data processor is configured to determine payees and proportions of the payees based on the commodity code of the commodity to be paid, divide the payment amount based on the proportions of the payees, and distribute the corresponding amount to each of the payees.

11. The system according to claim 10, wherein the payment information further comprises offer information, and the data processor is configured to divide the payment amount based on the proportions of the payees and the offer information.

12. The system according to claim 10 or 11, wherein, before dividing the payment amount,

the data processor is further configured to acquire payment currency types of the user and the payee, and convert the payment currency types into a certain type.

13. The system according to claim 10 or 11, wherein the payment information further comprises the identity information of the user, and the data processor is further configured to:

verify whether payment amount of each of the users meets a preset condition; and

identify the user based on the identity information of the user if the payment amount of the user does not meet the preset condition.

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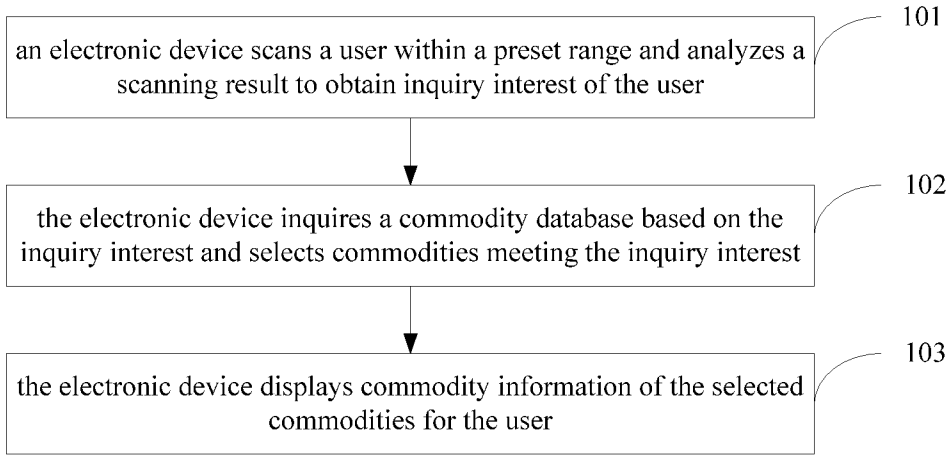

FIG. 1

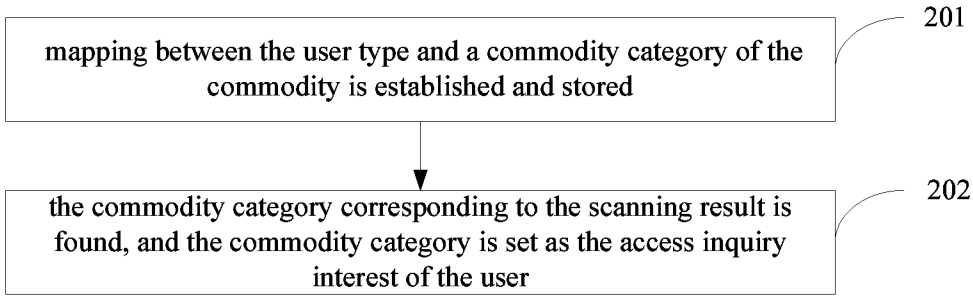

FIG. 2

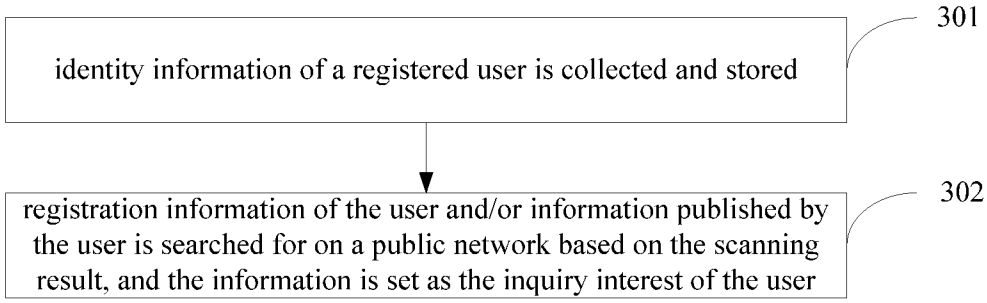

FIG. 3

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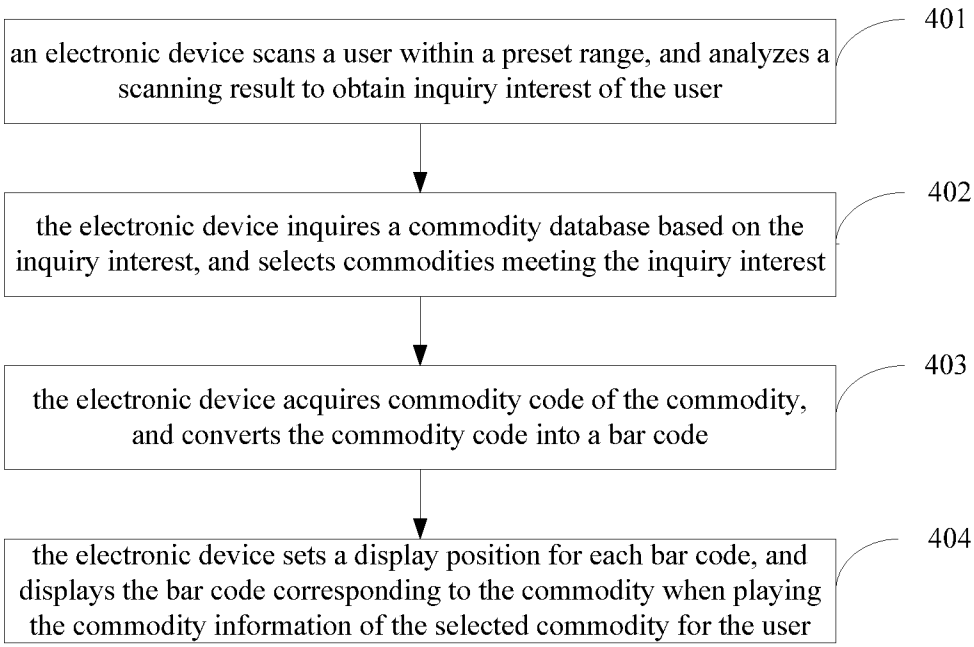

FIG. 4

FIG. 5

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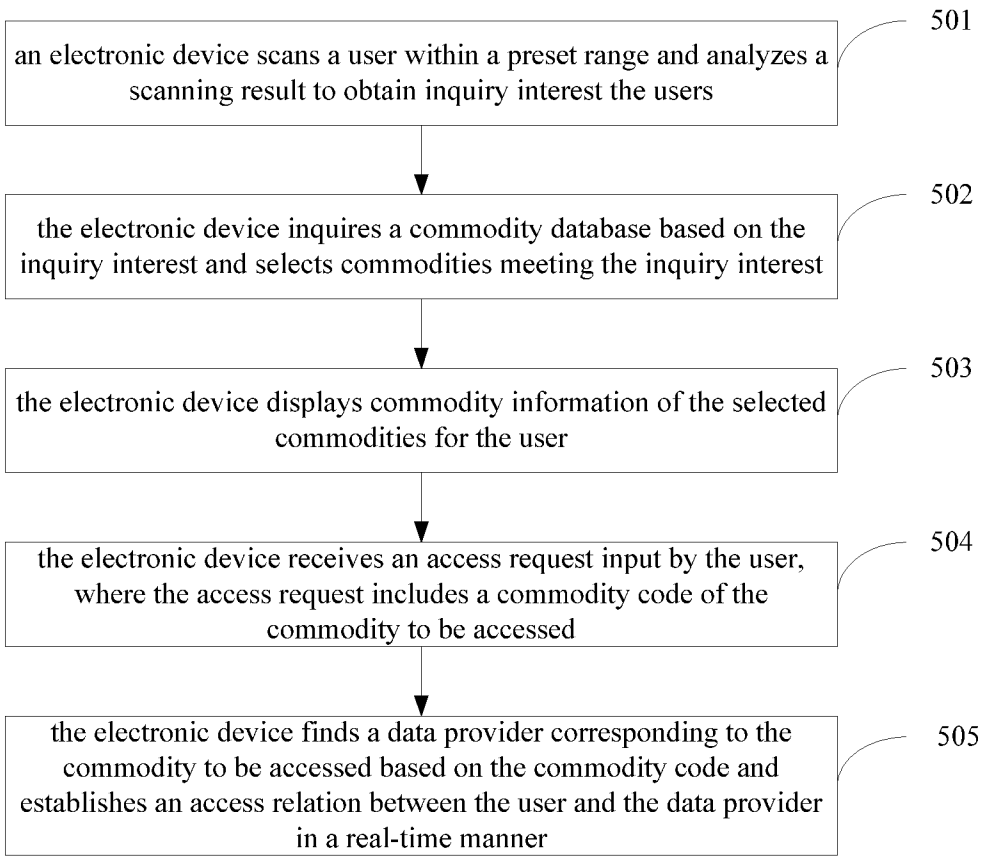

FIG. 6

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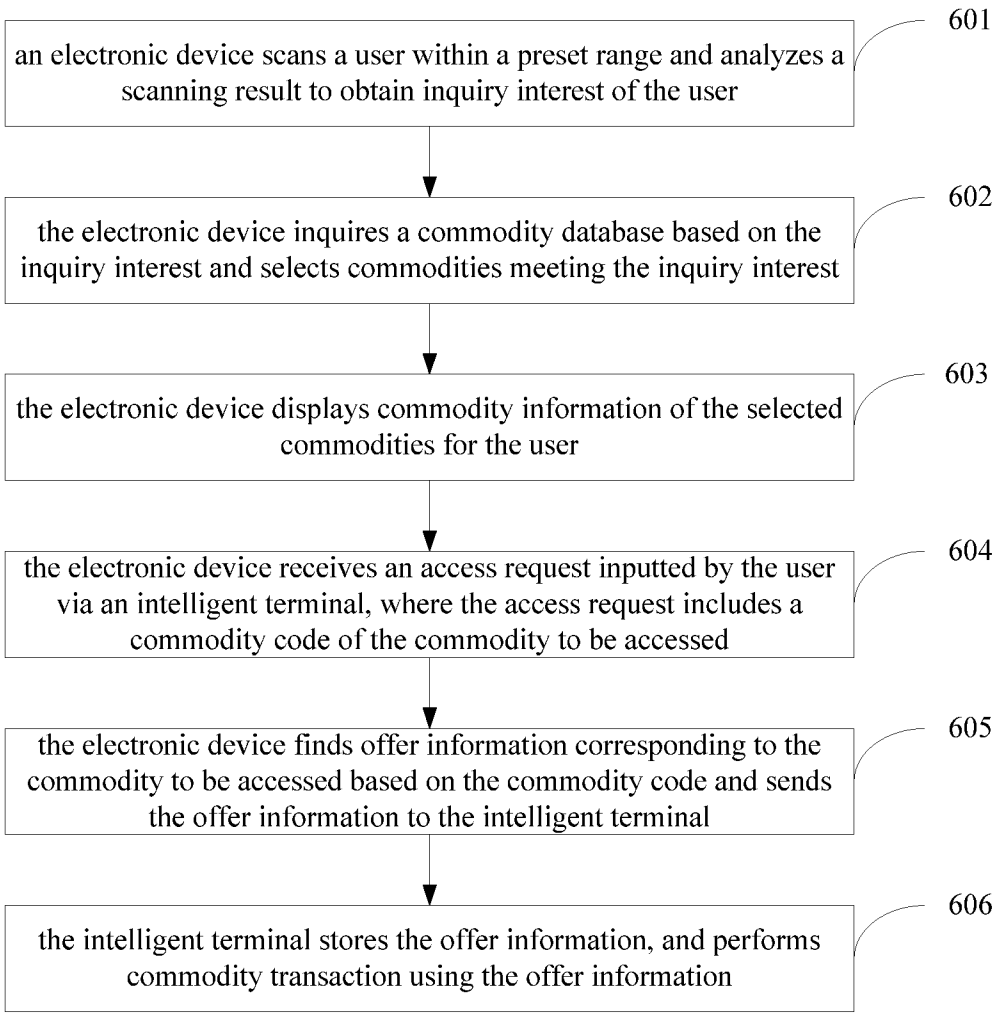

FIG. 7

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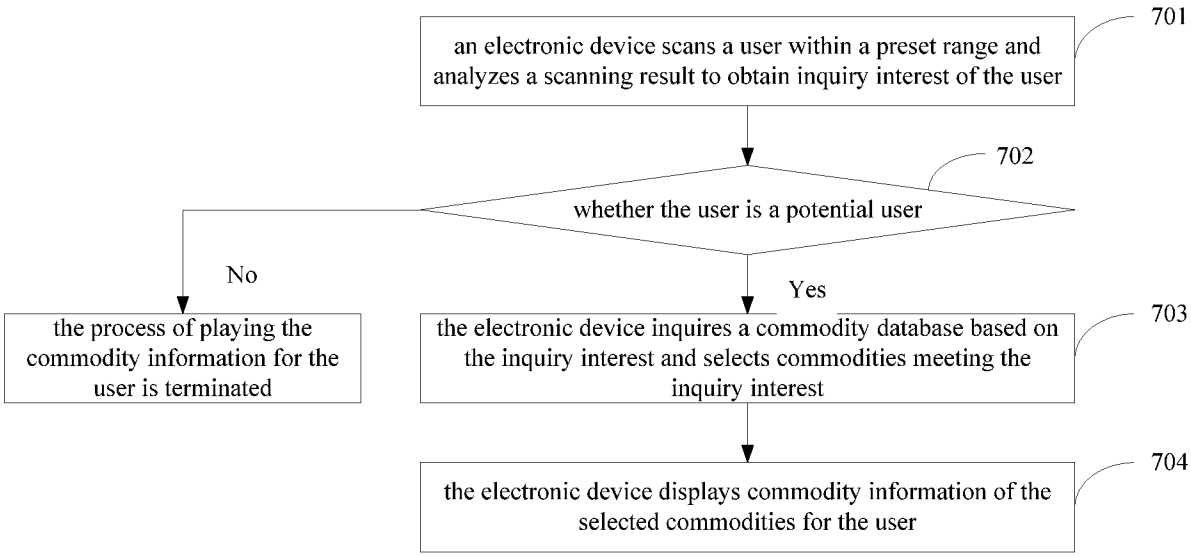

FIG. 8

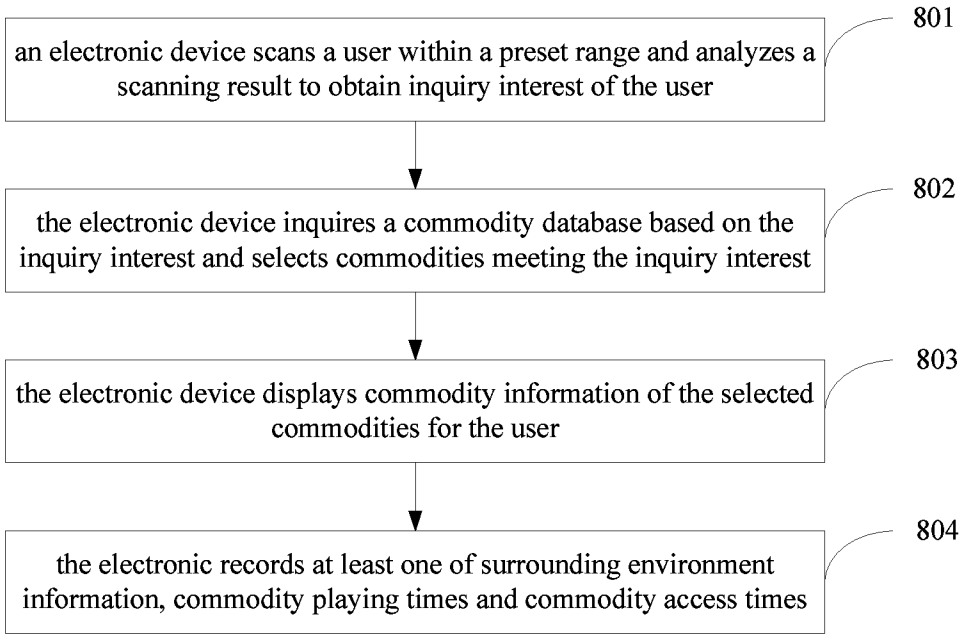

FIG. 9

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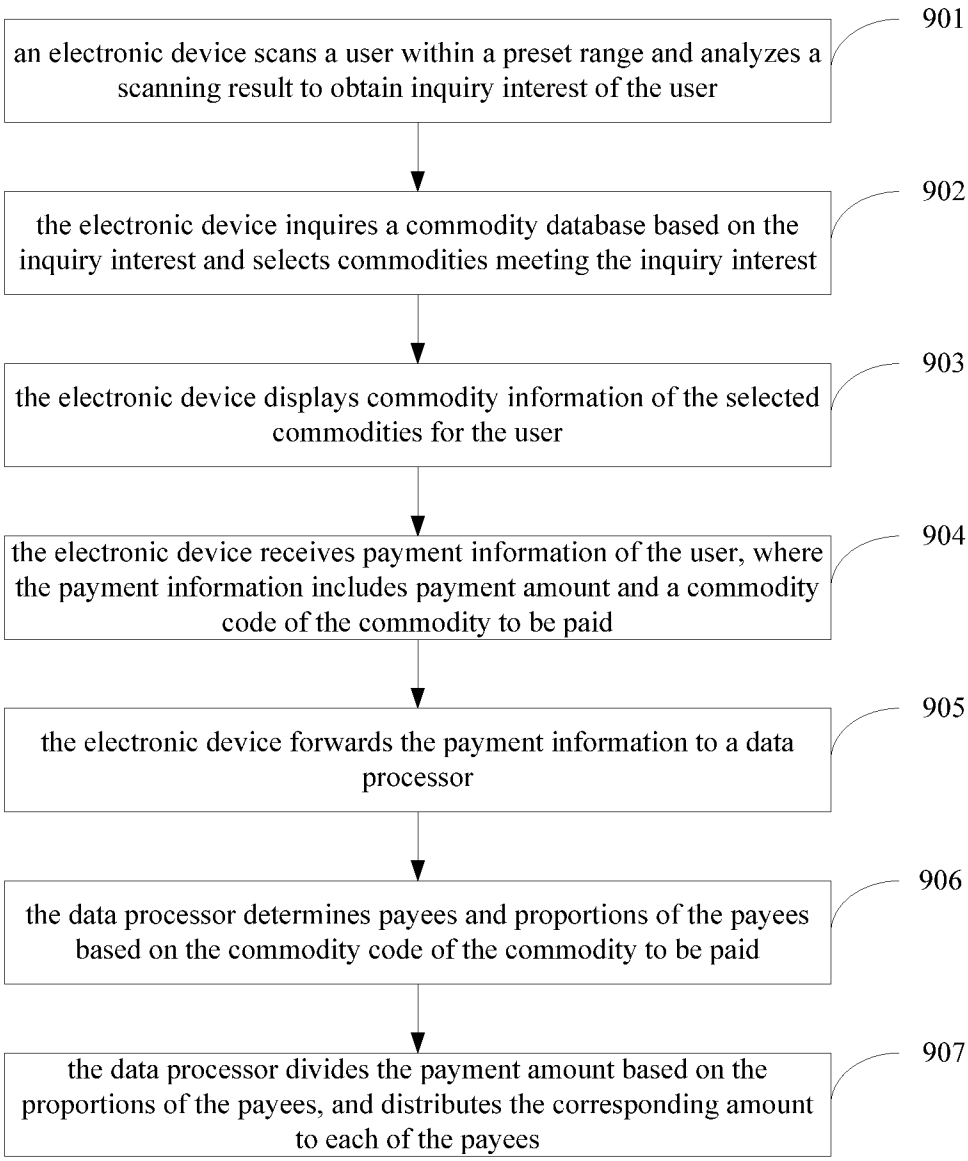

FIG. 10

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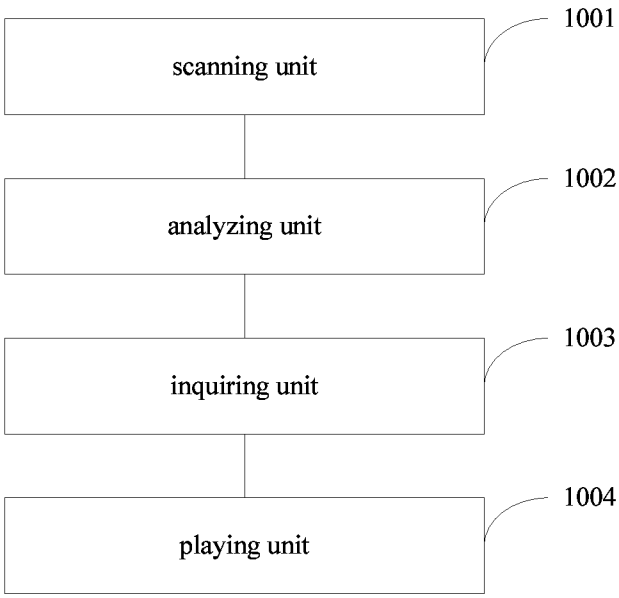

FIG. 11