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### (54) SYSTEM AND METHOD FOR RENTING

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VIRTUAL ARTICLES

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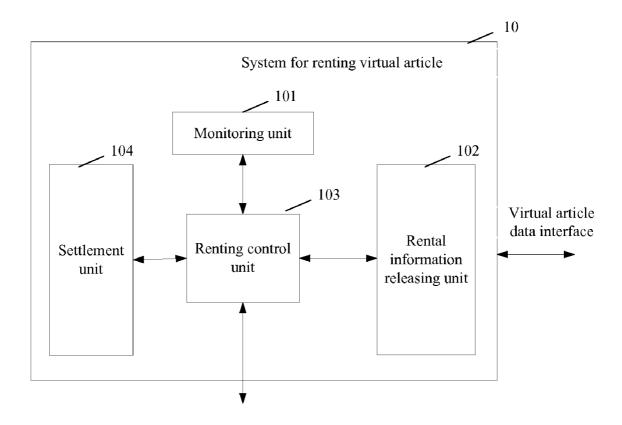
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- (51) **Int. Cl.**A63F 9/24 (2006.01)
- (57) ABSTRACT

A system for renting virtual article includes: a renting control unit, configured to rent a virtual article according to a hiring request, and stop renting the virtual article according to a stop-renting request; a monitoring unit, configured to monitor rented condition of the virtual article, and send the stop-renting request to the renting control unit if a stop-renting criterion is met.



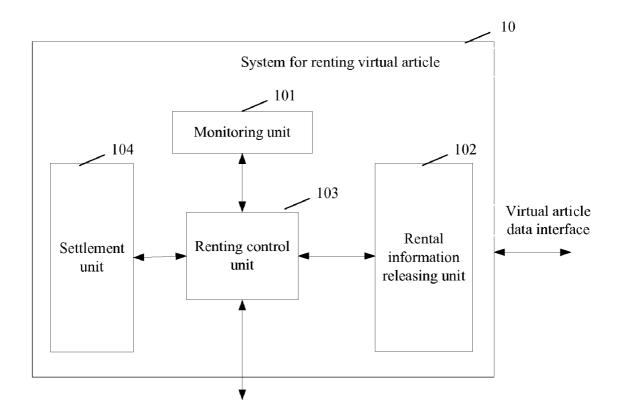


Fig.1

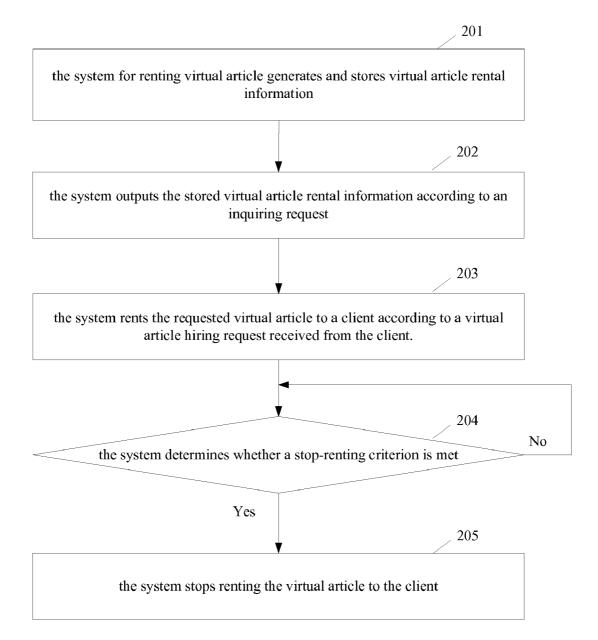


Fig.2

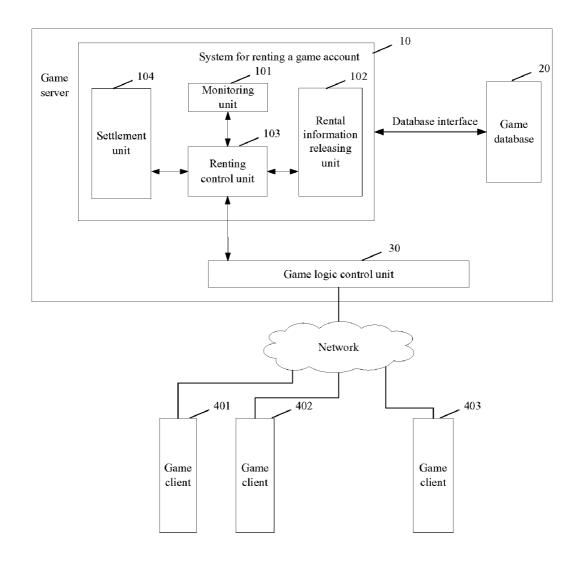


Fig.3

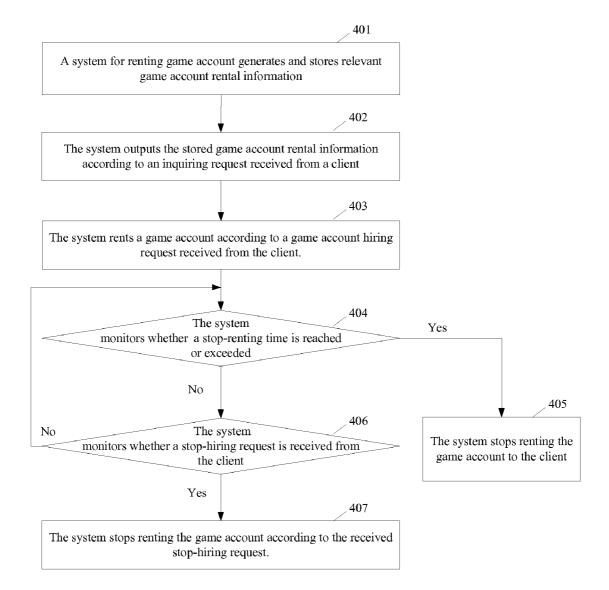


Fig.4

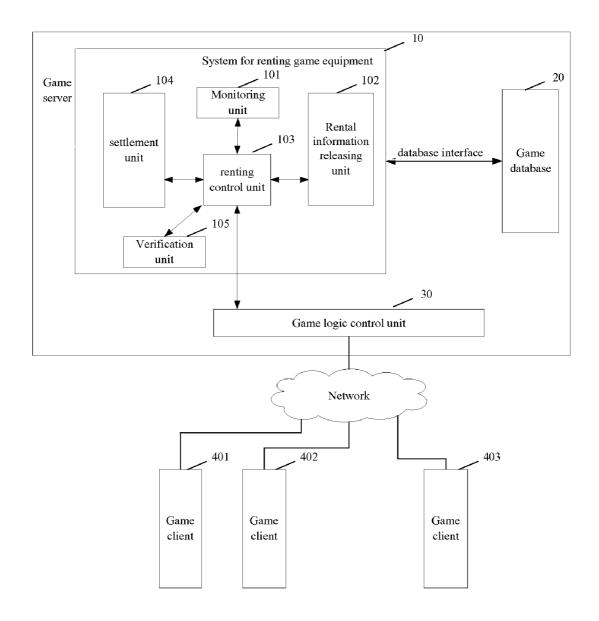


Fig.5

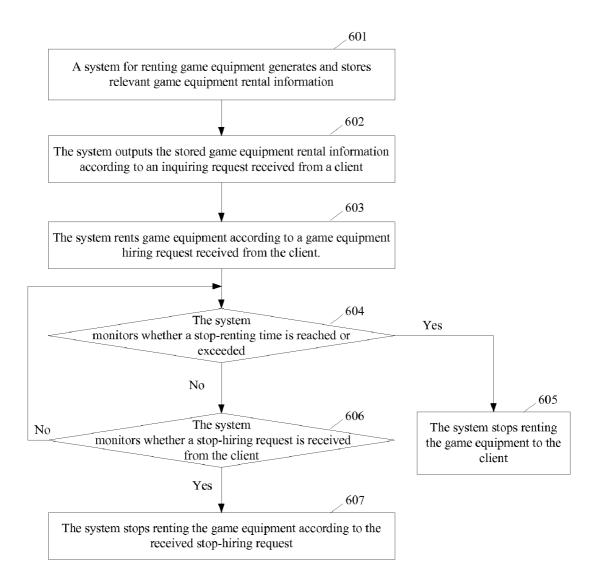


Fig.6

## SYSTEM AND METHOD FOR RENTING VIRTUAL ARTICLES

## CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of International Application No. PCT/CN2007/000251, filed Jan. 23, 2007. This application claims the benefit of Chinese Patent Application No. 200610065189.8, filed Mar. 27, 2006. The disclosures of the above applications are incorporated herein by reference.

### **FIELD**

**[0002]** The present disclosure relates to virtual article data processing and to a system and a method for renting virtual article.

### BACKGROUND

[0003] The statements in this section merely provide background information related to the present disclosure and may not constitute prior art.

[0004] At present, along with rapid development of network and communication technology, various virtual articles are increasing. Typical examples of virtual articles are virtual articles used in network games. The virtual articles in network games may be virtual equipments used in the game, or game accounts for playing the game.

[0005] At present, for a network game, in accordance with existing game modes, after a client being registered at a game server, a player using the client is limited to use the registered game account to level up step by step according to game leveling rules set by the game server. The player can obtain relevant game equipment according to right of a corresponding level, and enjoy the game of a certain level. However, in actual applications, some users want to start the game at a certain level directly to enjoy corresponding game instead of leveling himself step by step. Therefore, the existing solution is unable to meet the requirements for some game users who do not have a right to enjoy a higher game level but want to enjoy the game of the higher game level. In addition, according to the existing solution, some virtual article resources may not be used or be used seldom, which leads to system resources waste.

### **SUMMARY**

[0006] A system for renting virtual article is provided by various embodiments and includes:

[0007] a renting control unit, configured to rent a virtual article according to a hiring request, and stop renting the virtual article according to a stop-renting request; and

[0008] a monitoring unit, configured to monitor rented condition of the virtual article, and send the stop-renting request to the renting control unit if a stop-renting criterion is met.

[0009] A method for renting virtual article is provided by various embodiments and includes:

[0010] renting a virtual article according to a hiring request; and

[0011] stopping renting the virtual article if a rented condition of the virtual article meets a stop-renting criterion.

[0012] A computer-readable storage medium having a program recorded thereon, wherein the program makes a computing device operate as:

[0013] means A for renting a virtual article according to a hiring request;

 $\ensuremath{[0014]}$  means B for monitoring rented condition of the virtual article, and

[0015] means C for stopping renting the virtual article if means B determines that a stop-renting criterion is met.

[0016] The system and method for renting virtual article provided by the various embodiments may provide virtual article rental services such as a game account rental service and a game equipment rental service to enable users who want to start a game at a higher game level to rent virtual articles provided by a higher game level, thereby improving user experiences and avoiding system resource waste caused by low utilization of such virtual article resources as a game account and/or a game equipment.

[0017] Further areas of applicability will become apparent from the description provided herein. It should be understood that the description and specific examples are intended for purposes of illustration only and are not intended to limit the scope of the present disclosure.

#### **DRAWINGS**

[0018] The drawings described herein are for illustration purposes only and are not intended to limit the scope of the present disclosure in any way.

[0019] FIG. 1 is a schematic diagram of a system for renting virtual article in accordance with the various embodiments;

[0020] FIG. 2 is a flowchart of a method for renting virtual article in accordance with the various embodiments;

[0021] FIG. 3 is a schematic diagram of a system for renting a game account in accordance with the various embodiments; [0022] FIG. 4 is a flowchart of a method for renting a game account in accordance with the various embodiments;

[0023] FIG. 5 is a schematic diagram of a system for renting game equipment in accordance with the various embodiments; and

[0024] FIG. 6 is a flowchart of a system for renting game equipment in accordance with the various embodiments.

### DETAILED DESCRIPTION

[0025] The following description is merely exemplary in nature and is not intended to limit the present disclosure, application, or uses.

[0026] The various embodiments provide a system for renting virtual article. The system receives a virtual article hiring request from a renter, and rents virtual article requested to the renter according to the virtual article hiring request. The system also stops renting the virtual article to the renter if rented condition of the virtual article meets a stop-renting criterion.

[0027] FIG. 1 shows a schematic diagram of a system for renting virtual article in accordance with the various embodiments. As shown in FIG. 1, the system communicates with a client. For example, the system receives a renting request for renting virtual article, an inquiring request for inquiring rental information of a virtual article, a hiring request or a stophiring request from the client, and sends response messages and other notification messages to the client.

[0028] Referring to FIG. 1, the system may include a renting control unit 103 and a monitoring unit 101. The renting control unit 103 may be a Central Processing Unit (CPU) of the system, and is configured to receive hiring requests, renting requests or inquiring requests from clients. The renting

control unit 103 may also control other units of the system, e.g., a monitoring unit 101 to implement respective functions of the units, rent virtual articles requested to renters according to hiring requests received, stop renting virtual articles according to stop-renting requests sent by the monitoring unit 101, or search and output virtual article rental information stored in a storage unit according to inquiring requests received. The monitoring unit 101, which is connected to the renting control unit 103, is configured to monitor rental condition of a virtual article, and send a stop-renting request to the renting control unit 103 if rental condition of the virtual article meets a stop-renting criterion.

[0029] In various other embodiments, the system for renting virtual article may further include a storage unit which may be configured as a separate unit or may be a data base within the system (such as a game database in a game server). The storage unit is configured to store virtual article data information used during a virtual article rental procedure. For example, the storage unit stores virtual article rental information, supports invoking property information of the virtual articles, a hiring side and a renting side, and supports modifying the property information.

[0030] In various other embodiments, the system may further include a rental information releasing unit 102 and a settlement unit 104. The rental information releasing unit 102, which is connected to the renting control unit 103, is configured to generate virtual article rental information according to virtual article hiring requests, and send the virtual article rental information to the storage unit for storage. The settlement unit 104, which is connected to the renting control unit 103, is configured to calculate rent of a rented virtual article.

[0031] In addition, the system for renting virtual article may further include a verification unit, which is connected to the renting control unit 103, configured to determine whether a hiring side meets a hiring criterion contained in the virtual article rental information according to a verification instruction sent by the renting control unit 103, and return a verification result to the renting control unit 103.

[0032] Note that, the system for renting virtual article may be set in a game server. The hiring side may be a client, and the renting side may be another client or the game server.

[0033] FIG. 2 shows a flowchart illustrating a virtual article rental procedure in accordance with various embodiments.

[0034] Block 201: A system for renting virtual article generates virtual article rental information according to a renting request received from a renting side or according to a hiring criterion set by the system, and stores the virtual article rental information.

[0035] Block 202: The system receives an inquiring request from the hiring side and outputs the virtual article rental information stored according to the inquiring request.

[0036] Block 203: The system receives a virtual article hiring request from the hiring side and rents a virtual article requested to the hiring side according to the virtual article hiring request.

[0037] Block 204: The system monitors rented condition of the rented virtual article, and determines whether the rented condition of the rented virtual article meets a stop-renting criterion. If the rented condition of the rented virtual article meets the stop-renting criterion, Block 205 is performed; otherwise, repeats Block 204.

[0038] Block 205: The system stops renting the virtual article to the hiring side.

[0039] The implementation of Blocks 201 to 205 may be hereinafter described in detail.

[0040] In Block 201, the procedure of generating the virtual article rental information and storing the virtual article rental information may include the following.

[0041] The renting side sends to the system a virtual article renting request carrying a virtual article identifier, a renting side identifier and a hiring criterion.

[0042] After receiving the virtual article renting request, the renting control unit of the system forwards the virtual article renting request to the rental information releasing unit.

[0043] The rental information releasing unit generates and stores virtual article rental information corresponding to the virtual article according to the information in the virtual article renting request received, and returns a response to the renting control unit.

[0044] The renting control unit returns a response to the renting side.

[0045] In Block 202, the procedure of outputting the virtual article rental information stored according to the inquiring request may include the following.

[0046] The hiring side sends to the system an inquiring request for inquiring virtual article rental information. The inquiring request carries inquiring criterion information.

[0047] The inquiring criterion information may include a virtual article identifier, level information of the virtual article, and/or other information of the virtual article.

[0048] The renting control unit of the system searches the virtual article rental information stored via the rental information releasing unit and find out the virtual article rental information that meets the inquiring criterion information, and returns a response according to a searching result to the hiring side.

[0049] In Block 203, the procedure of renting the virtual article requested according to the virtual article hiring request may include the following.

[0050] The hiring side sends to the system a virtual article hiring request carrying a virtual article identifier, a renting side identifier and a hiring side identifier.

[0051] The renting control unit of the system searches property information of the hiring side and the virtual article rental information stored according to the identifiers included in the hiring request, and determines whether the hiring side meets the hiring criterion included in the virtual article rental information. If the hiring side meets the hiring criterion, the renting control unit freezes information of the hiring side such as available fund of deposit amount of the hiring side, modifies usage attributes information with respect to the virtual article included in the property information of the hiring side and the renting side, returns a hiring success response to the hiring side, and sends a renting success message to the renting side. If the hiring side does not meet the hiring criterion included in the virtual article rental information, the renting control unit returns a hiring rejecting response to the hiring side.

[0052] In Block 204, the stop-renting criterion may include a stop-renting time, or, an event that the system receives a stop-hiring request sent by the hiring side, etc. Therefore, the procedure of monitoring the rented condition of the virtual article rented may include the following.

[0053] As soon as the hiring side determines to rent a virtual article from the system, the monitoring unit starts to monitor a rent time limit of the rented virtual article, and determines whether the stop-renting time of the virtual article is reached

or exceeded. If the stop-renting time of the virtual article is reached or exceeded, the monitoring unit sends a notification to the renting control unit indicating that the stop-renting time is reached or exceeded, and the renting control unit stops renting the virtual article to the hiring side accordingly. If the stop-renting time of virtual article is not reached, the renting control unit determines whether a stop-hiring request is received from the hiring side. If a stop-hiring request is received from the hiring side, the renting control unit stops renting the virtual article to the hiring side; otherwise, the monitoring unit continues to monitor the rent time limit of the virtual article.

[0054] When the system detects that the stop-renting time is reached or exceeded, a procedure of stopping renting the virtual article may include the following.

[0055] After receiving the notification sent by the monitoring unit indicating that the stop-renting time is reached or exceeded, the renting control unit sends a settlement request to the settlement unit. The settlement unit calculates the rent of the rented virtual article according to the settlement request, and returns a settlement result to the renting control unit.

**[0056]** The renting control unit modifies the usage attributes information with respect to the virtual article included in the property information of the hiring side and the renting side according to the settlement result, returns a stoprenting response to the hiring side, and sends a stop-renting message to the renting side.

[0057] In response to a stop-hiring request from the hiring side, a procedure of stopping renting the virtual article may include the following.

[0058] After receiving the stop-hiring request sent by the hiring side, the renting control unit of the system for renting virtual article sends a settlement request to the settlement unit. The settlement unit calculates the rent of the rented virtual article according to the settlement request, and returns a settlement result to the renting control unit.

[0059] The renting control unit modifies the usage attributes information with respect to the virtual article included in the property information of the hiring side and the renting side according to the settlement result, returns a stoprenting response to the hiring side, and sends a stop-renting message to the renting side.

[0060] The virtual article in various embodiments includes various objects, such as game account, game equipment and other virtual entities which can be rented in a network communication. The above virtual article rental solution may be hereinafter described in detail by taking a game account and game equipment of a game system as an example respectively.

[0061] In various embodiments, the virtual article is a game account.

[0062] The game account functions as a passport for a game client (being a hiring side or a renting side) logging in a game server. After logging in a game server via a game account, the game client may obtain rights of a game level corresponding to the game account and enjoy services corresponding to the game level. Thus for a game client, an important meaning of renting a game account is using the services corresponding to the game level of the game account. FIG. 3 shows a schematic diagram of a system for renting game account in accordance with an embodiment. Referring to FIG. 3, the structure of the system for renting game account is similar to the structure of a system for renting virtual article proposed in the above

various embodiments, and may include a renting control unit 103, a monitoring unit 101, a rental information releasing unit 102 and a settlement unit 104. The system for renting game account may be configured in a game server 10, connected to a game database 20 of the game server 10 and a game logic control unit 30, and communicate information with a game client via the game logic control unit 30.

[0063] The renting control unit 103 functions as a Central Processing Unit (CPU) of the system for renting game account and is configured to control other units of the system to implement their respective functions, rent a game account requested to a hiring side according to hiring requests received from the hiring side, stop renting the game accounts to the hiring side according to stop-renting requests sent by the monitoring unit 101, and search and output game account rental information stored in the game database 20 according to inquiring requests received from the hiring side. The monitoring unit 101 is configured to monitor a rented condition of a game account, and send a stop-renting request to the renting control unit 103 when the rented condition of the game account meets a stop-renting criterion. The rental information releasing unit 102 is configured to generate game account rental information according to a game account renting request received from the renting side, and store the game account rental information in the game database 20 connected to the rental information releasing unit 102. The settlement unit 104 is configured to calculate rent of the rented game

[0064] The game database 20 is configured to store data information associated with the game account and other game data information including property information of the renting side and the hiring side, game account information and renting information of the game account. Data processing during a game account renting procedure may include storing the renting information of the rented game account, invoking property information of the game account, modifying the property information of the hiring side and the renting side of the game account, the property information of the game account, etc. Information communicated between the system for renting game account and the game client may include game account renting requests sent by the renting side, inquiring request for inquiring game account rental information sent by the hiring side, game account hiring requests sent by the hiring side, stop-hiring requests sent by the hiring side, and response messages and notification messages from the system to the renting side and/or the hiring side, etc.

[0065] In addition, the system for renting game account may further include a verification unit (not shown) configured to determine whether the hiring side meets a hiring criterion included in the game account rental information according to a verification instruction sent by the renting control unit 103, and return a verification result to the renting control unit 103. For example, the verification unit determines whether available fund of the hiring side is greater than deposit amount included in the hiring criterion, and determines whether a game level of the hiring side meets level requirement in the hiring criterion, etc.

[0066] FIG. 4 shows a flowchart for renting a game account in accordance with various embodiments. As shown in FIG. 4, several blocks may be included.

[0067] Block 401: The system for renting game account generates game account rental information according to a game account renting request received from a renting side and stores the game account renting information.

[0068] Block 402: The system receives an inquiring request from a hiring side and outputs the game account rental information stored according to the inquiring request.

[0069] Block 403: The system receives a game account hiring request from the hiring side and rents the game account to the hiring side according to the game account hiring request.

[0070] Block 404: The system determines whether a renting time of the game account has reached or exceeded a stop-renting time. If the stop-renting time of the game account has been reached or exceeded, Block 405 is performed; otherwise, Block 406 is performed.

[0071] Block 405: The system stops renting the game account.

[0072] Block 406: The system determines whether a stophiring request is received from the hiring side. If a stop-hiring request is received from the hiring side, Block 407 is performed; otherwise, Block 404 is performed.

[0073] Block 407: The system stops renting the game account according to the stop-hiring request received from the hiring side.

[0074] Steps 401 to 407 will be described in detail hereinafter. In Block 401, the procedure of generating and storing the game account rental information may include the following.

[0075] The renting side sends to the game server a game account renting request carrying a game account identifier, a renting side identifier, a hiring criterion, etc.

[0076] A game logic control unit of the game server forwards the game account renting request to the system for renting game account. A renting control unit of the system for renting game account forwards the game account renting request to a rental information releasing unit of the system.

[0077] The rental information releasing unit searches a game account information table stored in a game database, and determines whether the game account renting request is legal.

[0078] The game account information table and a property information table of game users may be stored in the game database, and are shown in Table 1 and Table 2 respectively.

TABLE 1

Game user's identifier	Available fund	Frozen fund	Levels	Others
Zhang San	200	0	10	
Li Si	60	15	11	
Wang Wu	50	0	7	

TABLE 2

Game account identifier	Game user's identifier	password	Game identifier	Other properties
111 222 333	Zhang San Li Si Wang Wu	***	Dou dizhu Red alert Daha Xiyou	

[0079] The procedure of the rental information releasing unit determining whether the game account renting request is legal may include: determining whether the game account requested exists in the game database, and determining whether the Game user's identifier of the game account is identical to the renting side identifier. If the above two con-

ditions are met, the game account renting request is legal; otherwise, the game account renting request is illegal.

[0080] If the game account renting request is legal, the rental information releasing unit stores game account rental information of the game account in the game database, and returns a response to the renting control unit.

[0081] The rental information releasing unit may store the game account rental information in the game database by adding the game account rental information to a game account rental information table. The game account rental information table is shown in Table 3.

TABLE 3

Renting record identifier	Renting side identifier	Game account identifier	Password	Hiring criterion
1	Zhang San	111	***	Deposit: 50 yuan; rent: 1 yuan/day; stop-renting time: 30 day; applying game level: level 10 and higher
2	Li Si	222	***	Deposit: 50 yuan; rent: 2 yuan/day; stop-renting time: 10 day; applying game level: level 5 and higher

[0082] The renting control unit returns a response to the renting side via a game logic control unit of the system for renting game account.

[0083] If the renting request is illegal, the rental information releasing unit returns a rejecting response to the renting control unit. The renting control unit returns a rejecting response to the renting side via the game logic control unit.

[0084] In Block 402, the procedure of outputting the game account rental information according to the game account inquiring request received from the hiring side may include the following.

[0085] The hiring side sends to the game server an inquiring request for inquiring game account rental information. The inquiring request carries inquiring criterion information.

**[0086]** The inquiring criterion information may include a game account identifier, level information of the game account, a renting side identifier, a game identifier, other information of the game account, etc. For example, the game identifier may be Dou dizhu.

[0087] The logic control unit of the game server forwards the game account inquiring request to the system for renting game account. The renting control unit of the system for renting game account searches game account rental information that meets the inquiring criterion information from the game database via the rental information releasing unit, and returns a response message to the hiring side according to the searching result.

[0088] If the game account rental information that meets the inquiring criterion information is found, the renting control unit sends the game account rental information that meets the inquiring criterion information to the hiring side.

[0089] In Block 403, the procedure of renting the game account requested to the hiring side according to a hiring request received from the hiring side may include the following

**[0090]** The hiring side sends to the game server a game account hiring request carrying a game account identifier, a renting side identifier and a hiring side identifier.

[0091] The game logic control unit forwards the game account hiring request to the system for renting game account. The renting control unit of the system for renting game account searches game account rental information and property information of the hiring side from the game database according to the game account hiring request received, and determines whether the hiring side meets the hiring criterion in the game account rental information.

[0092] The renting control unit determines whether the hiring side meets the hiring criterion in the game account rental information by determining whether a current available fund of the hiring side is greater than or equal to a deposit amount included in the hiring criterion, or by determining whether a game level of the hiring side meets a level requirement in the hiring criterion. The present is not limited to the above examples, and other hiring criterion may also be available in actual applications.

[0093] If the hiring side meets the hiring criterion in the game account rental information, the renting control unit freezes the available fund in the property information of the hiring side, stores the property information of the hiring side and stores a current password, i.e., an old password, of the game account in the game account rental information table.

[0094] The renting control unit generates a new password for the game account, replaces the old password in the game account information table by the new password, generates and sends a response message to the hiring side via the game logic control unit, and sends a renting success message to the renting side via the game logic control unit.

[0095] If the hiring side does not meet the hiring criterion in the game account rental information, the renting control unit returns a hiring rejecting response to the hiring side via the game logic control unit.

[0096] In various embodiments, the renting control unit is configured to determine whether the hiring side meets the hiring criterion in the renting information. In other various embodiments, a verification unit separately configured in the system for renting game account may be configured to determine whether the hiring side meets the hiring criterion in the renting information, and return a verification result to the renting control unit. In addition, in various embodiments, the renting control unit is configured to generate a new password for the hiring side. In other applications, the hiring side may send a request to change the password.

[0097] In Block 404, the procedure of the system for renting game account monitoring the renting time of the game account may include the following.

[0098] As soon as the hiring side determines to rent the game account from the system for renting game account, the monitoring unit starts to monitor a renting time of the game account. The monitoring unit may be a timer.

[0099] The monitoring unit determines whether the renting time has reached or exceeded the stop-renting time of the game account. If the stop-renting time of the game account has been reached or exceeded, the monitoring unit sends a notification to the renting control unit indicating that the stop-renting time has been reached or exceeded, and the renting control unit stops renting the game account to the hiring side accordingly. If the stop-renting time of virtual article is

not reached or exceeded, the renting control unit controls the monitoring unit to continue monitoring the renting time of the virtual article.

[0100] In block 405, the procedure of stopping renting the game account may include the following.

[0101] When receiving the notification indicating that the stop-renting time has been reached or exceeded from the monitoring unit, the renting control unit searches the game account rental information table and the game account information table in the game database, and compares the property information of the game account in the two tables. That is, the renting control unit compares the property information of the game account before the game account is rented with that of the game account after the game account is rented.

[0102] The renting control unit sends a settlement request to a settlement unit. The settlement unit calculates the rent of the rented game account according to the settlement request received, and returns a settlement result to the renting control unit

[0103] When sending the settlement request to the settlement unit, the renting control unit may determine the information should be provided to the settlement unit according to a renting mode set by the renting side in the hiring criterion. For example, the renting control unit may send the renting side identifier, the hiring side identifier and the rent of the game account simultaneously to the settlement unit. When the renting side gives a rent of a unit time, the renting control unit needs to provide the settlement unit with the rent of unit time and renting time length. The renting control unit may record a start-renting time and a stop-renting time, and computes a time difference between the start-renting time and the stop-renting time to get the renting time length.

[0104] The renting control unit unfreezes the available fund frozen in the property information table of game users in the game database, modifies the available fund and frozen fund of the hiring side and the renting side in the property information table according to the settlement result, replaces the password in the game account information table by the password in the game account rental information table, and deletes information of the hiring side and password of the hiring side in the game account rental information table.

[0105] The renting control unit modifies the available fund and frozen fund of the hiring side and the renting side in the property information table includes: reducing the available fund of the hiring side in the property information table by the rent of the game account, and adding the rent of the game account to the available fund of the renting side in the property information table.

[0106] The renting control unit returns a stop-renting response to the hiring side via the game logic control unit, and sends a corresponding stop-renting notification message to the renting side.

[0107] In Block 407, the procedure of stopping renting the game account according to the stop-hiring request sent by the hiring side may include the following.

[0108] The hiring side sends to the game server a stophiring request carrying a game account identifier, the renting side identifier, the hiring side identifier, etc.

[0109] The game logic control unit of the game server forwards the received stop-hiring request to the system for renting game account. The renting control unit of the system for renting game account searches relevant game account rental information stored in the game database according to the received stop-hiring request, and determines whether the

stop-hiring request is legal. If the stop-hiring request is legal, the system for renting game account stops renting the game account, and the procedure is similar to that of Block **405**. If the stop-hiring request is illegal, the renting control unit returns a stop-hiring rejecting response to the hiring side via the game logic control unit.

[0110] The renting control unit determines whether the stop-hiring request is legal by determining whether there is renting information matching the renting side identifier, the hiring side identifier and the game account in the stop-hiring request. If there is renting information matching the renting side identifier, the hiring side identifier and the game account in the stop-hiring request, the stop-hiring request is legal; otherwise, the stop-hiring request is illegal.

[0111] In addition, when the renting side has rented the game account to the hiring side and the renting side and the hiring side a log in the game server using the game account simultaneously, the login procedure may include the following.

[0112] A1: A game client (being the hiring side or the renting side) sends to the game logic control unit of the game server a login request carrying an identifier of the game client.

[0113] A2: The game logic control unit searches the game account information table in the game database, and determines whether the user's identifier of the game account is equal to the identifier in the login request. If the user's identifier of the game account is equal to the identifier in the login request, it is determined that the game client sending the login request is the renting side, and A6 is performed; otherwise, A3 is performed.

[0114] A3: The game logic control unit searches the game account rental information table in the game database, and determines whether the identifier in the login request is equal to the hiring side identifier in the renting information of the game account. If the identifier in the login request is equal to the hiring side identifier, it is determined that the game client sending the login request is the hiring side, 4 is performed; otherwise, 5 is performed.

[0115] As above, the game account rental information table records the information of the renting side and the hiring side of the game account.

[0116] A4: The game logic control unit sends a notification to the renting side to notify the renting side that the game account is being used.

[0117] A5: The game logic control unit sends a rejecting login response to the game client.

[0118] A6: The game logic control unit allows the game client to log in.

[0119] In addition, the renting side of the game account may acquire usage condition of the game account during the game account renting procedure, which mainly includes the following.

[0120] The game logic control unit stores login information of the hiring side in the game database when the hiring side logs in the game server using the rented game account.

[0121] The renting side sends a request for acquiring usage condition of the game account to the renting control unit. The renting control unit searches the usage condition of the game account stored in the game database, and returns the usage condition to the renting side.

[0122] In other various embodiments the virtual article described is game equipment.

[0123] The game equipment includes virtual equipment obtained by a game user during a game. The game equipment

can be controlled and used by the game user during a game. The game equipment may include such virtual equipment as a god staff, a thunder god umbrella and a god-leg shoe. If a hiring side rents game equipment from a game server, the hiring side may use the rented game equipment at its own game level and enjoy game experiences better. Referring to FIG. 5, structure of a system for renting game equipment is similar to that of a system for renting virtual article described above, and may include a renting control unit 103, a monitoring unit 101, a rental information releasing unit 102 and a settlement unit 104. The system for renting game equipment may be located in a game server 10 and connected to a game database 20 of the game server 10, connected to a game logic control unit 30, and may communicate with a game client (being a hiring side or a renting side) via the game logic control unit 30.

[0124] The renting control unit 103 functions as a Central Processing Unit (CPU) of the system for renting game equipment and is configured to control other units of the system to implement their respective functions, rent game equipment requested to a hiring side according to hiring requests received from the hiring side, stop renting the game equipment to the hiring side according to stop-renting requests sent by the monitoring unit 101, and search and output game equipment rental information stored in the game database 20 according to inquiring requests received from the hiring side. The monitoring unit 101 is configured to monitor a rented condition of game equipment, and send a stop-renting request to the renting control unit 103 when the rented condition of the game equipment meets a stop-renting criterion. The rental information releasing unit 102 is configured to generate game equipment rental information according to a game equipment renting request received from the renting side, and store the game equipment rental information in the game database 20 connected to the rental information releasing unit 102. The settlement unit 104 is configured to calculate rent of the rented game equipment.

[0125] In addition, the system for renting game equipment may further include a verification unit configured to determine whether the hiring side meets a hiring criterion included in the game equipment rental information according to a verification instruction sent by the renting control unit 103, and return a verification result to the renting control unit 103. For example, the verification unit determines whether available fund of the hiring side is greater than deposit amount included in the hiring criterion, and determines whether a game level of the hiring side meets level requirement in the hiring criterion, etc.

[0126] The game database 20 is configured to store data information associated with the game equipment and other game data information including property information of the renting side and the hiring side, game equipment information and renting information of the game equipment. Data processing during a game equipment renting procedure may include storing the renting information of the rented game equipment, invoking property information of the game equipment, modifying the property information of the hiring side and the renting side of the game equipment, the property information of the game equipment, etc. The information communicated between the system for renting game equipment and the game client may include inquiring request for inquiring game equipment rental information sent by the hiring side, game equipment hiring requests sent by the hiring side, stop-hiring requests sent by the hiring side, and response messages and notification messages from the system to the renting side and/or the hiring side, etc.

[0127] In addition, the system for renting game equipment may further include a transaction unit for processing transactions associated with rented game equipment between the hiring side and the renting side.

[0128] Various embodiments describe a system for renting game equipment, and a method for renting game equipment in accordance with various embodiments is also described hereinafter in detail. FIG. 6 shows a flowchart for renting game equipment in accordance with various embodiments. As shown in FIG. 6, several blocks may be included.

[0129] Block 601: The system for renting game equipment generates game equipment rental information according to a game equipment renting request received from a renting side and stores the game equipment renting information.

[0130] Block 602: The system receives an inquiring request from a hiring side and outputs the game equipment rental information stored according to the inquiring request.

[0131] Block 603: The system receives a game equipment hiring request from the hiring side and rents the game equipment to the hiring side according to the game equipment hiring request.

[0132] Block 604: The system determines whether a renting time of the game equipment has reached or exceeded a stop-renting time. If the stop-renting time of the game equipment has been reached or exceeded, Block 605 is performed; otherwise, Block 606 is performed.

[0133] Block 605: The system stops renting the game equipment.

[0134] Block 606: The system determines whether a stophiring request is received from the hiring side. If a stop-hiring request is received from the hiring side, Block 607 is performed; otherwise, Block 604 is performed.

[0135] Block 607: The system stops renting the game equipment according to the stop-hiring request received from the hiring side.

[0136] Steps 601 to 607 will be described in detail hereinafter In Block 601, the procedure of generating and storing the game equipment rental information may include the following.

[0137] The renting side sends to the game server a game equipment renting request carrying a game equipment identifier, a renting side identifier, a hiring criterion, etc.

[0138] The renting side may be a game server or a game client. The hiring criterion may include renting time of the game equipment, rent of the game equipment, deposit and applying game level.

[0139] A game logic control unit of the game server forwards the game equipment renting request to the system for renting game equipment. A renting control unit of the system for renting game equipment forwards the game equipment renting request to a rental information releasing unit of the system.

[0140] The rental information releasing unit stores the game equipment rental information in a game database, and returns a response to the renting control unit.

**[0141]** The rental information releasing unit may store the game equipment rental information in the game database by adding the game equipment rental information to a game equipment rental information table. The game equipment rental information table is shown in Table 4.

TABLE 4

renting side account	Game equipment identifier	Renting time	Rent	Applying level	Deposit
1000 22334	A001 A002	7 days 30 days		Level 10 and higher Level 8 and	100
22334	A002	30 days	15		85

[0142] Each row of Table 4 forms one renting information record of game equipment. The renting information record includes such fields as a renting side account, a game equipment identifier, a renting time, a rent, a deposit and applying level. In addition, detailed information of the renting side account and game equipment may be linked by such identifier fields as the renting side account and game equipment identifier shown in Table 4. For example, according to the game equipment identifier field a game equipment property information table shown in Table 5 may be linked, and detailed information of the game equipment may be acquired.

TABLE 5

Game equipment identifier	Game equipment	Attack+	Defense+	Applying level	
A001	God staff	35	12	Level 10 and higher	
A002	Thunder god umbrella	20	20	Level 8 and higher	
A003	God-leg shoe	25	3	Level 3 and higher	

[0143] The renting control unit modifies state of a corresponding game equipment of the renting side in game data information stored in the game database as a renting state, and returns a response to the renting side.

[0144] The state of game equipment may include an available state, an unavailable state and/or renting state. Modifying state information of game equipment of the renting side may be changing the state of the game equipment of the renting side from an available state to a renting state, in order to limit the renting side using the game equipment during a game equipment renting procedure. A method for modifying the state of game equipment includes: the renting control unit controlling the renting control unit to modify the value of a state field in the game property information of the game equipment of the renting side stored in the game database.

[0145] In Block 602, the procedure of outputting the game equipment rental information according to the game equipment inquiring request received from the hiring side may include the following.

[0146] The hiring side sends to the game server an inquiring request for inquiring game equipment rental information. The inquiring request carries inquiring criterion information. A game logic control unit of the game server forwards the inquiring request to the renting control unit of the system for renting game equipment.

**[0147]** The inquiring criterion information may include a game equipment identifier, applying level, and/or other information. For example, when a user San Zhang requests to inquire a god staff, the identifier A001 of the god staff is included in the inquiring criterion information.

[0148] The renting control unit searches game equipment rental information that meets the inquiring criterion information from the game database via the rental information releasing unit, and returns a response message to the hiring side according to the searching result.

[0149] If the game equipment rental information that meets the inquiring criterion information is found, the renting control unit sends the game equipment rental information that meets the inquiring criterion information to the hiring side.

[0150] In Block 603, the procedure of renting the game equipment requested to the hiring side according to a hiring request received from the hiring side may include the following.

[0151] The hiring side sends to the game server a game equipment hiring request carrying a game equipment identifier, a renting side identifier and a hiring side identifier. The game logic control unit forwards the game equipment hiring request to the system for renting game equipment.

[0152] The renting control unit forwards the game equipment hiring request to a verification unit. The verification unit searches relevant game equipment rental information and property information of the hiring side from the game database, and determines whether the hiring side meets a hiring criterion of the game equipment.

[0153] The property information of hiring side may be as shown in Table 1. The renting control unit determines whether the hiring side meets the hiring criterion in the game equipment rental information by determining whether a current available fund of the hiring side is greater than or equal to a deposit amount included in the hiring criterion, or by determining whether a game level of the hiring side meets a level requirement in the hiring criterion. The present is not limited to the above examples, and other hiring criterion may also be available in actual applications.

[0154] If the hiring side meets the hiring criterion of the game equipment, the verification unit returns a verification success response to the renting control unit. The renting control unit freezes available fund of the hiring side in the property information table, modifies game data information of the hiring side and the renting side stored in the game database. For example, the renting control unit modifies state of the game equipment in the game data information of the renting side as a renting state, modifies state of the game equipment in the game data information of the hiring side as a rented state, returns a response to the hiring side, and sends a renting notification to the renting side.

[0155] If the hiring side does not meet the hiring criterion of the game equipment, the verification unit returns a verification failure response to the renting control unit. The renting control unit returns a rejecting response to the hiring side via the game logic control unit.

[0156] In Block 604, the procedure of the system for renting game equipment monitoring the renting time of the game equipment may include the following.

[0157] As soon as the hiring side determines to rent the game equipment from the system for renting game equipment, the monitoring unit starts to monitor a renting time of the game equipment. The monitoring unit may be a timer.

[0158] The monitoring unit determines whether the renting time has reached or exceeded the stop-renting time of the game equipment. If the stop-renting time of the game equipment has been reached or exceeded, the monitoring unit sends a notification to the renting control unit indicating that the stop-renting time has been reached or exceeded, and the rent-

ing control unit stops renting the game equipment to the hiring side accordingly. If the stop-renting time of virtual article is not reached or exceeded, the renting control unit controls the monitoring unit to continue monitoring the renting time of the virtual article.

[0159] In the period that the game equipment is rented, the system needs to monitor whether operations performed by the hiring side on the rented game equipment is legal, and this procedure may include the following.

[0160] B1: The hiring side sends to the game server an operating request. The game logic control unit of the game server forwards the operating request to the renting control unit.

[0161] B2: In response to the operating request, the renting control unit forwards the operating request to the monitoring unit. The monitoring unit determines whether operations included in the operating request belongs to an operation range allowed with respect to the rented game equipment. If the operations are allowed, B3 is performed; otherwise, B5 is performed.

[0162] The monitoring unit may determine whether the operations included in the operating request are legal according to an operation information table of game equipment as shown in Table 6.

TABLE 6

Operation identifier	Operation description	allowing the operation
V001	Sell	No
V002	Deposit	No
V003	Player PK	Yes

[0163] In accordance with the above Table 6, the monitoring unit may determine whether a type of operation is allowed for the hiring side. For example, as shown in Table 6, the game equipment is not allowed to be sold by the hiring side.

[0164] B3: The monitoring unit returns to the renting control unit a response to allow the operations included in the operating request.

**[0165]** B4: The renting control unit returns to the game logic control unit a response to allow the operations included in the operating request. The game logic control unit allows the hiring side to perform corresponding operations on the game equipment.

[0166] B5: The monitoring unit returns to the renting control unit a response to reject the operations included in the operating request.

[0167] B6: The renting control unit returns to the game logic control unit a response to reject the operations included in the operating request. The game logic control unit rejects the hiring side to perform corresponding operations on the game equipment.

[0168] In Block 605, the procedure of stopping renting the game account may include the following.

[0169] When receiving the notification indicating that a stop-renting time has been reached or exceeded from the monitoring unit, the renting control unit sends a stop-renting notification to the hiring side via the game logic control unit.

[0170] The hiring side sends a response message to the game server. The game logic control unit of the game server forwards the response message to the system for renting game equipment. In response to the response message, the renting

control unit of the system for renting game equipment sends a settlement request to the settlement unit.

[0171] The settlement unit calculates the rent of the game equipment, and returns a settlement result to the renting control unit.

[0172] The renting control unit unfreezes available fund frozen in the property information table of the hiring side in the game database, modifies available fund and frozen fund of the hiring side and the renting side in the property information table according to the settlement result, and modifies state of the game equipment of the hiring side and the renting side.

[0173] The renting control unit modifies the available fund and frozen fund of the hiring side and the renting side in the property information table includes: reducing the available fund of the hiring side in the property information table by the rent of the game equipment, and adding the rent of the game equipment to the available fund of the renting side in the property information table.

[0174] The renting control unit returns a stop-renting response to the hiring side via the game logic control unit, and sends a corresponding stop-renting notification message to the renting side.

[0175] In Block 607, the procedure of stopping renting the game equipment according to the stop-hiring request sent by the hiring side may include the following.

[0176] The hiring side sends to the game server a stophiring request carrying a game equipment identifier, the renting side identifier, the hiring side identifier, etc.

[0177] The game logic control unit of the game server forwards the received stop-hiring request to the system for renting game equipment. The renting control unit of the system for renting game equipment receives the stop-hiring request and sends a settlement request to a settlement unit.

[0178] The settlement unit calculates the rent of the game equipment, and returns a settlement result to the renting control unit.

[0179] The renting control unit unfreezes available fund frozen in the property information table of the hiring side in the game database, modifies available fund and frozen fund of the hiring side and the renting side in the property information table according to the settlement result, and modifies state of the game equipment of the hiring side and the renting side.

[0180] The renting control unit modifies the available fund and frozen fund of the hiring side and the renting side in the property information table includes: reducing the available fund of the hiring side in the property information table by the rent of the game equipment, and adding the rent of the game equipment to the available fund of the renting side in the property information table.

[0181] The renting control unit returns a stop-renting response to the hiring side via the game logic control unit, and sends a corresponding stop-renting notification message to the renting side.

[0182] In addition, before the stop-renting time is reached, the hiring side may also request to buy the game equipment from the renting side, i.e., the hiring side transacts the game equipment with the renting side. Because the renting side may be a game server or a game client, the transaction between the hiring side and the renting side may include: the hiring side buying the game equipment from the game server that functions as the renting side, or the hiring side buying the game equipment from the game client that functions as the renting side.

[0183] When the renting side is a game server, the procedure of the hiring side buying the game equipment from the game server that functions as the renting side may include the following.

[0184] al: The hiring side sends to the game server a buying request for buying the rented game equipment. The game logic control unit of the game server forwards the buying request to the system for renting game equipment.

[0185] a2: In response to the buying request, the renting control unit of the system for renting game equipment sends a settlement request to the settlement unit. The settlement unit calculates the rent of game equipment rented by the hiring side, and returns a settlement result to the renting control unit.

[0186] a3: The renting control unit unfreezes available fund frozen in the property information table of the hiring side in the game database, modifies available fund and frozen fund of the hiring side and the renting side in the property information table according to the settlement result, and modifies property information of the game equipment of the hiring side and the renting side.

[0187] a4: The renting control unit sends a transaction request to a transaction unit. The transaction unit performs a transaction of selling the game equipment from the game server to the hiring side, and returns a transaction result to the renting control unit.

[0188] a5: The renting control unit modifies fund information in the user information table and the fund information of the hiring side, modifies property information of the game equipment of the hiring side and the renting side.

[0189] a6: The renting control unit returns a transaction result to the hiring side.

[0190] When the renting side is another game client, the procedure of the hiring side buying the game equipment from the game client that functions as the renting side may include the following.

[0191] S1: The hiring side sends to the game server a buying request for buying the rented game equipment. The game logic control unit of the game server forwards the buying request to the system for renting game equipment.

[0192] S2: In response to the buying request, the renting control unit of the system for renting game equipment forwards the request to the renting side.

[0193] S3: The renting control unit determines whether a response message for allowing the transaction is returned by the renting side. If a response message for allowing the transaction is returned by the renting side, S4 is performed; otherwise, S8 is performed.

[0194] The processes from S4 to S7 are the same as that from A2 to A5 described above.

[0195] S8: The renting control unit returns a transaction result to the hiring side and the renting side respectively.

[0196] The previous description of the disclosed various embodiments is provided to enable those skilled in the art to make or use the present disclosure. Various modifications to these various embodiments will be readily apparent to those skilled in the art and generic principles defined herein may be applied to other various embodiments without departing from the scope of the disclosure. Thus, the scope of this disclosure is not intended to be limited to the various embodiments shown herein but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.

[0197] It is also noted that each of the various embodiments described can be directed by an article of manufacture comprising a computer-readable storage medium. Another imple-

mentation is using hardware. In many cases, the former may be a better choice. Therefore, a skilled person in the art should understand that the disclosure related to a method for renting virtual article can be realized by a computer-readable recording medium, which stores programs for enabling a computing device, e.g., a personal computer, a server or a network device, to execute a procedure corresponding to the disclosure

What is claimed is:

- 1. A system for renting virtual article, comprising:
- a renting control unit (103), configured to rent a virtual article according to a hiring request, and stop renting the virtual article according to a stop-renting request;
- a monitoring unit (101), configured to monitor rented condition of the virtual article, and send the stop-renting request to the renting control unit (103) if a stop-renting criterion is met.
- 2. The system of claim 1, further comprising:
- a rental information releasing unit (102), configured to communicate with the renting control unit (103) and generate virtual article rental information of the virtual article according to a renting request.
- 3. The system of claim 2, further comprising:
- a storage unit, configured to store the virtual article rental information generated by the rental information releasing unit (102); wherein
- the renting control unit (103) is further configured to search and output the virtual article rental information stored in the storage unit according to an inquiring request.
- **4**. The system of claim **1**, further comprising:
- a settlement unit (104), configured to communicate with the renting control unit (103) and calculate a rent of the virtual article.
- 5. The system of claim 2, further comprising:
- a verification unit, configured to verify whether a hiring side sending the hiring request meets a hiring criterion included in the virtual article rental information according to a verification instruction sent by the renting control unit (103), and return a verification result to the renting control unit (103).
- 6. The system of claim 1, wherein the virtual article comprises at least one of a game account and game equipment.
  - 7. A method for renting virtual article, comprising: renting a virtual article according to a hiring request; and stopping renting the virtual article if a rented condition of the virtual article meets a stop-renting criterion.
- **8**. The method of claim **7**, wherein the renting the virtual article comprises:
  - modifying usage attributes information of the virtual article included in property information of a hiring side sending the hiring request and a renting side renting the virtual article, and sending a renting success message to the hiring side and the renting side respectively when the hiring side meets a hiring criterion included in virtual article rental information of the virtual article.
  - 9. The method of claim 7, further comprising:
  - calculating a rent of the virtual article, modifying the usage attributes information of the virtual article included in the property information of the hiring side and the renting side, and sending a stop-renting message to the hiring side and the renting side respectively.
- 10. The method of claim 7, wherein the virtual article comprises a game account, and the renting the virtual article according to the hiring request comprises:

- freezing available fund of deposit amount in property information of a hiring side, storing the property information of the hiring side and an old password of the game account in game account rental information, generating a new password for the game account, replacing the old password in the game account information stored in a game database (20) with the new password, generating and sending a response message to the hiring side, and sending a renting notification to the renting side.
- 11. The method of claim 10, wherein the stopping renting the virtual article comprises:
  - calculating a rent of the virtual article, obtaining a calculated result, unfreezing the frozen available fund of in the property information of the hiring side, modifying fund information in the property information of the hiring side and the renting side according to the calculated result, replacing the new password in the game account information with the old password in the game account rental information, deleting information of the hiring side and password in the game account rental information, and sending a stop-renting message to the hiring side and the renting side respectively.
  - 12. The method of claim 10, further comprising:
  - before renting the virtual article, inquiring the game account rental information and the property information of the hiring side according to the hiring request;
  - if the hiring side meets a hiring criterion included in the game account rental information, freezing the available fund of deposit amount in the property information of the hiring side; otherwise, returning a rejecting response to the hiring side.
  - 13. The method of claim 10, further comprising:
  - receiving a login request from a game user during a period that the game account is rented;
  - inquiring the game account information corresponding to the login request, and determining whether an identifier of the renting side of the game account is equal to an identifier of the game user in the login request;
  - if the identifier of the renting side of the game account is not equal to the identifier of the game user, searching the game account rental information, and determining whether the identifier of the game user in the login request is equal to an identifier of the hiring side in the game account rental information;
  - if the identifier of the game user in the login request is equal to the identifier of the hiring side in the game account rental information, allowing the game user to log in, and sending a notification to the renting side to notify that the game account is being used; if the identifier of the game user in the login request is not equal to the identifier of the hiring side in the game account rental information, sending a rejecting response to the game user;
  - if the identifier of the renting side of the game account is equal to the identifier of the game user, allowing the game user to log in.
- **14**. The method of claim **7**, wherein the virtual article comprises game equipment, the renting the virtual article according to the hiring request comprises:
  - freezing available fund of deposit amount in property information of a hiring side, modifying usage attributes information of the game equipment included in property information of the hiring side and a renting side, returning a response to the hiring side, and sending a renting notification to the renting side.

- 15. The method of claim 14, wherein the stopping renting the virtual article comprises:
  - calculating a rent of the game equipment, unfreezing the frozen available fund in the property information of the hiring side, and modifying fund information and the usage attributes information of the game equipment in the property information of the hiring side and the renting side according to a settlement result.
  - 16. The method of claim 14, further comprising:
  - before renting the virtual article, inquiring game equipment rental information and the property information of the hiring side according to the hiring request;
  - if the hiring side meets a hiring criterion included in the game equipment rental information, freezing the available fund of deposit amount in the property information of the hiring side; otherwise, returning a rejecting response to the hiring side.
  - 17. The method of claim 14, further comprising:
  - determining whether an operating request for operating the game equipment sent by the hiring side is legal;
  - allowing the operating request if the operating request is legal; and
  - rejecting the operating request if the operating request is illegal.
- **18**. A computer-readable storage medium having a program recorded thereon, wherein the program makes a computing device operate as:
  - means A for renting a virtual article according to a hiring request;
  - means B for monitoring rented condition of the virtual article, and
  - means C for stopping renting the virtual article if means B determines that a stop-renting criterion is met.
- 19. The computer-readable storage medium of claim 18, wherein the virtual article comprises a game account, and the means A comprises:
  - freezing available fund of deposit amount in property information of a hiring side, storing the property information of the hiring side and an old password of the game account in game account rental information, generating a new password for the game account, replacing the old password in the game account information stored in a game database with the new password, generating and sending a response message to the hiring side, and sending a renting notification to the renting side.
- 20. The computer-readable storage medium of claim 19, wherein the means C comprises:
  - calculating a rent of the virtual article, obtaining a calculated result, unfreezing the frozen available fund of in the property information of the hiring side, modifying fund information in the property information of the hiring side and the renting side according to the calculated result, replacing the new password in the game account information with the old password in the game account rental information, deleting information of the hiring side and password in the game account rental information, and sending a stop-renting message to the hiring side and the renting side respectively.
- 21. The computer-readable storage medium of claim 19, further comprising means D for:
  - before renting the virtual article, inquiring the game account rental information and the property information of the hiring side according to the hiring request;

- if the hiring side meets a hiring criterion included in the game account rental information, freezing the available fund of deposit amount in the property information of the hiring side; otherwise, returning a rejecting response to the hiring side.
- 22. The computer-readable storage medium of claim 19, further comprising means E for:
  - receiving a login request from a game user during a period that the game account is rented;
  - inquiring the game account information corresponding to the login request, and determining whether an identifier of the renting side of the game account is equal to an identifier of the game user in the login request;
  - if the identifier of the renting side of the game account is not equal to the identifier of the game user, searching for the game account rental information, and determining whether the identifier of the game user in the login request is equal to an identifier of the hiring side in the game account rental information:
  - if the identifier of the game user in the login request is equal to the identifier of the hiring side in the game account rental information, allowing the game user to log in, and sending a notification to the renting side to notify that the game account is being used; if the identifier of the game user in the login request is not equal to the identifier of the hiring side in the game account rental information, sending a rejecting response to the game user;
  - if the identifier of the renting side of the game account is equal to the identifier of the game user, allowing the game user to log in.
- 23. The computer-readable storage medium of claim 18, wherein the virtual article comprises game equipment, the means A comprises:
  - freezing available fund of deposit amount in property information of a hiring side, modifying usage attributes information of the game equipment included in property information of the hiring side and a renting side, returning a response to the hiring side, and sending a renting notification to the renting side.
- **24**. The computer-readable storage medium of claim **23**, wherein the means C comprises:
  - calculating a rent of the game equipment, unfreezing the frozen available fund in the property information of the hiring side, and modifying fund information and the usage attributes information of the game equipment in the property information of the hiring side and the renting side according to a settlement result.
- **25**. The computer-readable storage medium of claim **23**, further comprising means F for:
  - before renting the virtual article, inquiring game equipment rental information and the property information of the hiring side according to the hiring request;
  - if the hiring side meets a hiring criterion included in the game equipment rental information, freezing the available fund of deposit amount in the property information of the hiring side; otherwise, returning a rejecting response to the hiring side.
- **26**. The computer-readable storage medium of claim **23**, further comprising means G for:
  - determining whether an operating request for operating the game equipment sent by the hiring side is legal;
  - allowing the operating request if the operating request is legal; and
  - rejecting the operating request if the operating request is illegal.

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