calculate, at a set rate, the amount of return for points that are given or paid offline or online according to a user's product purchase or service use, and either convert the calculated amount of point return into a cash currency stepwisely or convert the calculated amount of point return into a virtual currency recordable on a blockchain according to accumulated points, thereby securing stability and complementarity to support virtual currency transactions.

TECHNICAL SOLUTION

[0013] To achieve the above objects, ~~a~~ blockchain-based virtual currency intermediation and distribution system using point return ~~according to an embodiment of the present invention include~~, the system comprising: one or more user terminals configured to take into consideration, at a set rate, the amount of return for points that are given or paid for a purchase of a specific product and a payment for the purchase of the product or that are accumulated as a reward for performing interactive advertisements through SNS and blogs based on the advertisement information provided, and configured to request the amount of point return to be converted into ~~either~~ a cash currency ~~or a~~, additionally purchase a virtual currency for points accumulated using a private key provided, or request the amount of point return to be converted into a virtual currency recordable on a

blockchain, which is allocated according to the points ~~accumulated~~ through the execution of a drive application; an operation server configured to receive a unit price and a purchase amount of

the product from the user terminals, calculate the purchase amount for each user terminal, transmit the points allocated according to the purchase of the product to the user terminal collectively or dividedly, provide the drive application(app) to the user terminal to check whether or not the user terminal performs the interactive advertisements through SNS and blogs of the user terminal based on the advertisement information provided from an advertiser server, provide a corresponding point as a reward for performing the interaction advertisements to the user terminal, calculate a cash currency conversion amount for the accumulated points, ~~and transmits, to the user terminal, the calculated virtual currency conversion amount to be transmitted in response to the request for the blockchain virtual currency conversion;~~ generate an encryption block according to a transaction history based on each private key information for update information according to blockchain virtual currency conversion, and a transaction including the purchase and sale of the virtual currency transmitted, and transmit a virtual currency conversion amount calculated to the user terminal; a DB server configured to receive information on the purchase amount of the product of the user terminal and the receipt of the points requested to be given from the operation server in real time, store information on the payment of the points, calculate the point information based on the received

purchase amount, and store cash currency and virtual currency payment reference information based on cash currency conversion information and blockchain virtual currency conversion requirement reference information according to the points; ~~the~~ an intermediary server configured to generate and transmit a private key to the user terminal in response to a request for

conversion and additional purchase or sale of the virtual currency with respect to the calculated virtual currency conversion amount for the points in cooperation with the operation server, and perform a payment agency service ~~by connecting to a~~ in cooperation with a virtual currency exchange ~~so that a payment~~ for the actual virtual currency purchase ~~can be made~~ based on the cash currency converted for the points through the private key and the virtual currency amount calculated in response to the request for the blockchain virtual currency conversion; an advertiser terminal configured to serve as an object that pays a compensation according to the point as a reward for performing the interactive advertisements online, and provide a title, a description, a search tag, a category, a compensation amount, and target-type information on a description image of the advertisement, and pay a compensation set according to the user's performing the interactive advertisements; and an advertisement server configured to receive and register a title, a description, a search tag, a category, a compensation amount, and a description image of an advertisement that an advertiser of the advertiser terminal wants to promote, expose them in the order of the registration dates and ratings, allow for a search using the category and the search tag to perform user management, compensation deposit, performance inspection, and evaluation management, and spend advertising expenses

according to the user's performing the interaction advertisements through SNS and blogs of the user terminal~~.~~, wherein the intermediary server allows; a currency exchange module to calculate a monetary amount corresponding to the virtual currency, perform a settlement for the monetary amount in consideration of a preset fee rate, and calculate a currency exchange amount of the virtual currency based on the settlement amount in response to a signal indicative of a request for the conversion and additional purchase or sale of the virtual currency by the user terminal in cooperation with the operation server; allows an encryption processing module to encrypt, using a private key for a virtual account, the settlement monetary amount corresponding to the currency exchange amount of the virtual currency calculated by the currency exchange module in response to a request for the conversion, and additional purchase of the virtual currency by the user terminal, and store an encryption block; and allows an intermediary processing module to perform a settlement for a payment amount for the purchase or sale of the virtual currency through the private key for the virtual account of the encryption block stored in the encryption processing module, and perform a payment or deposit transaction of the purchase or sale amount of the virtual currency.

ADVANTAGEOUS EFFECTS

[0014] The blockchain-based virtual currency intermediation and distribution system using point return according to an embodiment of the present invention has an effect in that it registers information to promote advertisements of an advertiser, performs the advertisements using the registered information, generates a visitor code through a user's store visit, verification, and duplicate use prevention using offline and online channels, converts points to be provided according to the advertisements into a cash currency stepwisely through a visitor code verification function, and checking the prevention of duplicate use to convert the points into a virtual currency recordable on a blockchain, according to accumulated points, thereby avoiding incurrence of unreasonable advertising expenses of the advertiser.

[0015] In addition, the blockchain-based virtual currency intermediation and distribution system using point return according to an embodiment of the present invention has an effect in that it can calculate, at a set rate, the amount of return for points that are given or paid offline or online according to a user’s product purchase or service use, and either convert the calculated amount of point return into a

[CLAIMS]

[Claim 1]

A blockchain-based virtual currency intermediation and distribution system using point return, the system comprising:

one or more user terminals (100) configured to take into consideration, at a set rate, the amount of return for points that are given or paid for a purchase of a specific product and a payment for the purchase of the product or that are accumulated as a reward for performing interactive advertisements through SNS and blogs based on the advertisement information provided, and configured to request the amount of point return to be converted into ~~either~~ a cash currency ~~or a~~, additionally purchase a virtual currency for points accumulated using a private key provided, or request the amount of point return to be converted into a virtual currency recordable on a blockchain, which is allocated according to points ~~accumulated~~ through the execution of a drive application;

an operation server (200) configured to receive a unit price and a purchase amount of the product from the user terminals (100), calculate the purchase amount for each user terminal (100), transmit the points allocated according to the purchase of the product to the user terminal (100) collectively or dividedly, provide the drive application

(app) to the user terminal to check whether or not the user terminal performs the interactive advertisements through SNS and blogs of the user terminal based on the advertisement

information provided from an advertiser server, provide a corresponding point as a reward for performing the interaction advertisements to the user terminal (100), calculate a cash currency conversion amount for the accumulated points, generate an encryption block according to a transaction history based on each private key information for update information according to blockchain virtual currency conversion, and a transaction including the purchase and sale of the virtual currency transmitted, and transmit, a virtual currency conversion amount calculated to the user terminal (100), the calculated virtual currency conversion amount to be transmitted in response to the request for the blockchain virtual currency conversion;

a DB server (300) configured to receive information on the purchase amount of the product of the user terminal (100) and the receipt of the points requested to be given from the operation server (200) in real time, store information on the payment of the points, calculate the point information based on the received purchase amount, and store cash currency and virtual currency payment reference information based on cash currency conversion information and blockchain virtual currency conversion requirement reference information according to the points;

an intermediary server (400) configured to generate and transmit a private key to the user terminal (100) in response

to a request for conversion and additional purchase or sale of the virtual currency with respect to the calculated virtual currency conversion amount for the points in cooperation with the operation server (200), and perform a payment agency service ~~by connecting to a~~ in cooperation with a virtual currency exchange ~~so that~~

~~a payment~~ for the actual virtual currency purchase ~~can be made~~ based on the cash currency converted for the points through the private key and the virtual currency amount calculated in response to the request for the blockchain virtual currency conversion;

an advertiser terminal (500) configured to serve as an object that pays a compensation according to the point as a reward for performing the interactive advertisements online, and provide a title, a description, a search tag, a category, a compensation amount, and target-type information on a description image of the advertisement, and pay a compensation set according to the user's performing the interactive advertisements; and

an advertisement server (600) configured to receive and register a title, a description, a search tag, a category, a compensation amount, and a description image of an advertisement that an advertiser of the advertiser terminal (400) wants to promote, expose them in the order of the registration dates and ratings, allow for a search using the category and the search tag to perform user management, compensation deposit, performance inspection, and evaluation management, and spend advertising expenses according to the user’s performing the interaction advertisements through SNS and blogs of the user terminal (100)~~.~~,

wherein the intermediary server (400) allows; a currency exchange module (430) to calculate a monetary amount corresponding to the virtual currency, perform a settlement for the monetary amount in consideration of a preset fee rate, and calculate a currency exchange amount of the virtual currency based on the settlement amount in response to a signal indicative of a request for the conversion and additional purchase or sale of the virtual currency by the user terminal (100) in cooperation with the operation server (200); allows an encryption processing module (450) to encrypt, using a private key for a virtual account, the settlement monetary amount corresponding to the currency exchange amount of the virtual currency calculated by the currency exchange module (430) in response to a request for the conversion, and additional purchase of the virtual currency by the user terminal (100), and store an encryption block; and allows an intermediary processing module (470) to perform a settlement for a payment amount for the purchase or sale of the virtual currency through the private key for the virtual account of the encryption block stored in the encryption processing module (450), and perform a payment or deposit transaction of the purchase or sale amount of the virtual currency.

~~**[Claim 2]**~~

The blockchain-based virtual currency intermediation and distribution system using point return according to claim 1, wherein each of the user terminals (100) further comprises:

a microcomputer (110) configured to control the overall operation of the user terminal 100 in order to take into consideration, at a set rate, the amount of return for the points that are given for the purchase of a specific product and the payment for the purchase of the product or that are accumulated as a reward for performing interactive advertisements through SNS and blogs based on the advertisement information provided, and request the amount of point return to be converted into either the cash currency or the virtual currency recordable on the blockchain allocated according to points accumulated through the execution of the drive application (app);

a memory unit (130) configured to store the points that are given for the purchase of the product and the payment for the purchase of the product and the points that are accumulated as a reward for performing the interactive advertisements through SNS and blogs based on the advertisement information of the advertiser server, or receives a private key from the intermediary server (400) through a communication network (700) to store a corresponding key for the purpose of converting the accumulated points into a virtual currency recordable on the

~~blockchain and performing a virtual currency transaction including the additional purchase or sale of the virtual currency, in response to a control signal from the microcomputer (110);~~

~~an execution unit (150) configured to execute the drive application (app) for the accumulation of the points, and the purchase and conversion of the virtual currency, which is provided by the operation server (200) according to the control signal of the microcomputer (110) in response to the control signal from the microcomputer (110), allow a user of the user terminal (100) to perform the purchase of the specific product, the payment for the purchase of the product, and the interactive advertisements through SNS and blogs based on the advertisement information of the advertiser server or use the accumulated points stored in the memory unit, and transmit execution information on whether to convert the points into the currency recordable on the blockchain and additionally purchase the virtual currency through the private key provided from the intermediary server 400 through the operation server (200) at an additional cost; and~~

~~a selection unit (170) configured to designate a corresponding drive application (app) provided from the operation server 200 through the execution unit 150 in response to the control signal from the microcomputer 110 to~~

allow the corresponding drive application (app) to be executed, designate either a corresponding selection signal to convert the pointers given for the purchase of the product into the cash currency or a corresponding icon to execute SNS and blogs based on the advertisement information of the advertiser server, and designate a corresponding selection signal for the additional purchase of the virtual currency of the blockchain or the sale of the converted virtual currency through the intermediary server 400 based on the points accumulated and stored in the memory unit 130.

[Claim 3]

The blockchain-based virtual currency intermediation and distribution system using point return according to claim 1, wherein the operation server (200) further comprises:

a control unit 210 configured to control the overall operation of the operation server 200 in order to receive a unit price and a purchase amount of the product from the user terminals (100), calculats the purchase amount for each user terminal (100), transmit the points allocated according to the purchase of the product to the user terminal (100) collectively or dividedly, provide the drive application to the user terminal to check whether or not the user terminal performs the interactive advertisements through SNS and blogs of the user terminal based on the advertisement information provided from the advertiser server, provide a corresponding

point as a reward for performing the interaction advertisements to the user terminal (100), calculate a cash currency conversion amount for the accumulated points, and transmit and display, to the user terminal (100), the calculated virtual currency conversion amount to be transmitted to the intermediary server (400) in response to the request for the blockchain virtual currency conversion;

a transceiver unit (230) configured to transmit the drive application (app) for performing the interactive advertisements and the blockchain-based transactions to the user terminal (100) to allow the drive application to be displayed on the user terminal in response to a control signal from the control unit (210); configured to receive a result of performing the interactive advertisements according to the purchase of the product and performance of the advertisements by a user of the user terminal (100) from the user terminal, and transmit points allocated according to the purchase of the product and the performance of the advertisements to the user terminal; or configured to receive information on a request for the conversion of the pointers of the user terminal 100 into a cash currency and a blockchain virtual currency and a request for additional purchase and sale of the virtual currency from the user terminal, transmit a point-converted amount to the user terminal (100), transmit information on the blockchain

~~virtual currency conversion to the intermediary server (400), receive private keys according to the request for the additional purchase and sale of the virtual currency from the intermediary server, and transmit a corresponding private key to the user terminal (100) or transmit state information on the blockchain virtual currency conversion and the purchase and sale of the virtual currency to the intermediary server;~~

~~a storage unit (250) configured to receive the advertisement information from the advertiser terminal (500) through the advertisement server (600) in response to the control signal from the control unit (210) and store corresponding advertisement information therein; or configured to classify and store points to be paid for each product, classify remaining points for each user and for each product with respect to the points to be paid for each product, and store information on the remaining points according to corresponding point payment;~~

~~a point setting unit (270) configured to store points allocated according to the purchase of the product and points allocated according to interactive advertisement activities based on the advertisement information in response to the control signal of the control unit (210), or classify and set point payment amounts for providing points for each sale product and additionally set an additional point amount according to the purchase of a plurality of products; and~~

a generation unit (290) configured to generate information on the user terminal (100) according to the blockchain virtual currency conversion and the additional purchase and sale of the virtual currency in response to the control signal of the control unit (210), generate an encryption block according to a transaction history based on the private key information transmitted from the intermediary server 400, and monitor a virtual currency transaction history between the user terminal and the intermediary server (400) in real time to update and generates related information to allow the updated information according to a corresponding transaction to be stored in the storage unit (250).

[Claim 4]

The blockchain-based virtual currency intermediation and distribution system using point return according to claim 1, wherein the intermediary server (400) comprises:

a control module (410) configured to control the overall operation of the intermediary server (400) in order to generate and transmit a private key to the user terminal (100) in response to a request for conversion and additional purchase or sale of the virtual currency by the user terminal 100 with respect to the converted and calculated virtual currency amount for the points in cooperation with the operation server (200), and perform a payment agency service

by connecting to a virtual currency exchange so that a payment for the actual virtual currency purchase can be made based on the cash currency converted for the points through the private key and the virtual currency amount calculated in response to the request for the blockchain virtual currency conversion;

a currency exchange module (430) configured to calculate a monetary amount corresponding to the virtual currency, perform a settlement for the monetary amount in consideration of a preset fee rate, and calculate a currency exchange amount of the virtual currency based on the settlement amount in response to a signal indicative of a request for the conversion and additional purchase or sale of the virtual currency by the user terminal (100) in response to a control signal from the control module (410);

an encryption processing module (450) configured to encrypt, using a private key for a virtual account, the settlement monetary amount corresponding to the currency exchange amount of the virtual currency calculated by the currency exchange module (430) in response to a request for the conversion, and additional purchase of the virtual currency by the user terminal (100), and store an encryption block in response to the control signal from the control module (410).

an intermediary processing module (470) configured to perform a settlement for a payment amount for the purchase or sale of the virtual currency through the private key for the virtual account of the encryption block stored in the encryption processing module (450) at the request of the user terminal (100) in response to the control signal from the control module (410), and perform a payment or deposit transaction of the purchase or sale amount of the virtual currency; and

a communication module (490) configured to transmit a processing history according to a settled result of the payment amount or the deposit amount for the purchase or sale of the virtual currency to the operation server (200) and the user terminal (100) in response to the control signal of the control module (410).