[Document Name] Written Description

[Title of invention]System, program, information processing device and methods for controlling exchange value per unit of a value exchange medium.

[TECHNICAL FIELD]

【0001】

Relativity of the systems, programs, information processing devices, and methods for controlling the exchange value per unit of a value exchange medium.

[BACKGROUND OF THE INVENTION]

【0002】

In societies where people live while they are productive, consuming, and community-based, with the progress of ICT (Information Communication Technology) have facilitated the circulate of a wide variety of "value," both for and without charge, across times(generations) and places (nations). In human history, not only economies but also our societies have been shaped by the effective transfer of "value" among people. As a tool for effectively distributing such "value" among people, we have evolved "currency". For example, for a long time, a legal currency issued by a state or an organization trusted by the state has been widely used as a major "currency". Recently, virtual currency utilizing a block chain technique has begun to be used.

【0003】

Such a "currency" is said to have, as one of the basic functions, a function serving as an objective measure of the exchange value of products or services, that is, a value scale function. In this regard, for example, Patent Document 1 discloses a technique for fixing the rate of exchanging between virtual currency and legal currency.

[Prior Technic Documents]

[Patent Document]

【0004】

[Patent Document 1] Patent No. 6352463 written description

[SUMMARY OF THE INVENTION]

[Problem to be solved by the Invention]

【0005】

However, in various monetary system currently used by the public, including a virtual monetary system, a mechanism for controlling a variation (e.g., temporal variation, geographical variation, etc.) of a size (exchange value per unit) of a value (e.g., a economic value, a exchange value, purchasing power, etc.) included per unit of currency as a basis of value scale function is not included. Therefore, various adverse effects such as rapid fluctuations of the value of money occur.

【0006】

It is therefore an object of the present invention is to provide the capability of controlling the value exchange medium by size (exchange value per unit), value (e.g., economic value, exchange value, purchasing power, etc.) contained per unit of a value exchange medium on which a value scale function is based.

[Ways for solving the problems]

【0007】

The system according to one embodiment of the present invetion is a system including a plurality of mutually communicatively connected information processing apparatuses in which a first value exchange medium and a second value exchange medium that can be linked to user identification information are distributed, wherein the first value exchange medium and the second value exchange medium are exchangeable between a plurality of user identification information, the first value exchange medium is issued on the basis of operation information of the information processing apparatus for acquiring a first economic value that is set so as not to receive a first value exchange medium as a consideration for transfer between the plurality of user identification information, and the second value exchange medium is increased or decreased in accordance with the exchange rate between the first value exchange medium and the second value exchange medium.

【0008】

According to this aspect, the variation of the exchange value per unit of the second value exchange medium can be controlled by balancing the exchange value per unit of the first value exchange medium issued based on the evaluation amount of the value provided and obtained, free-of-charge. As a result, the variation of the exchange value per unit of the second value exchange medium can be suppressed and the exchange value per unit can be stabilized.

【0009】

A method according to an aspect of the present invention is a method for causing a computer for managing exchange of a second value exchange medium recorded in a second ledger in association with first value exchange medium and user identification information, wherein the first value exchange medium and the second value exchange medium are exchangeable arbitrarily among a plurality of user identification information, wherein the first value exchange medium is issued based on an of a free-of-charge exchange value transferred between a plurality of user identification information, and wherein the second value exchange medium fluctuates by a predetermined amount so as to cancel at least a portion of the fluctuated portion when a market rate of a desired exchange rate, which is an exchange rate between the first value exchange medium and the second value exchange value, is a target exchange rate to the computer A step of accepting a first exchange request for exchanging the first medium exchange value to the second medium exchange medium at the first desired exchange rate, a step of accepting a second exchange request for exchanging the second market rate exchange medium to the first value exchange medium at the second desired exchange rate, a step of generating a first value exchange request for exchanging the first medium exchange value at the medium exchange rate, a step of generating a second market rate exchange request for exchanging the second value exchange medium to the first value exchange medium at the market rate exchange rate, a first value exchange request, a step of executing a first commitment process between the second exchange request satisfying the predetermined first commitment condition, a second medium exchange request, and a step of executing a second commitment process between the first exchange request satisfying the predetermined second commitment condition.

【0010】

According to this aspect, the variation of the exchange value per unit of the second value exchange medium can be controlled by balancing the exchange value per unit of the first value exchange medium issued based on the evaluation amount of the value provided and obtained free-of-charge-of-charge. As a result, the variation of the

exchange value per unit of the second value exchange medium can be suppressed and the exchange value per unit can be stabilized.

【0011】

The method according to an embodiment of the present invention causes a computer, which is a node of a network in which a first value exchange medium recorded in the first ledger in association with user identification information and a second value exchange medium recorded in the second ledger in association with the user identification information circulate, to perform the steps of: acquiring a market exchange rate, which is a market rate of a desired exchange rate, which is an exchange rate between a first value exchange medium and a second value exchange medium desired by a user; determining whether a predetermined increase condition related to a market exchange rate is satisfied; and, when it is determined that the predetermined increase condition is satisfied, performing an increase step of generating second update-information for updating the second ledger, which is second update-information for increasing a second value exchange medium associated with at least one user identification information by a predetermined increase quantity.

【0012】

According to this aspect, the variation of the exchange value per unit of the second value exchange medium can be controlled by balancing the exchange value per unit of the first value exchange medium. As a result, the variation of the exchange value per unit of the second value exchange medium can be suppressed and the exchange value per unit can be stabilized.

【0013】

The method according to an embodiment of the present invention causes a computer, which is a node of a network in which a first value exchange medium recorded in the first ledger in association with user identification information and a second value exchange medium recorded in the second ledger in association with the user identification information are circulate, to perform the steps of: acquiring a market exchange rate, which is a market rate of a desired exchange rate, which is an exchange rate between a first value exchange medium and a second value exchange medium desired by a user; determining whether a predetermined decrease condition related to a market exchange rate is satisfied; and when it is determined that predetermined a decrease condition is satisfied, performing a decrease step of generating second update-information for updating the second ledger, which is second update-information for increasing a second value exchange medium associated with at least one user identification information by a predetermined increase quantity.

【0014】

According to this aspect, the variation of the exchange value per unit of the second value exchange medium can be controlled by balancing the exchange value per unit of the first value exchange medium. As a result, the variation of the exchange value per unit of the second value exchange medium can be suppressed and the exchange value per unit can be stabilized.

【0015】

A method according to an embodiment of the present invetion is a method of causing a computer, which is a node of a network in which first value exchange medium recorded in a first ledger in association with user identification information is circulate, to execute a step of issuing a first value exchange medium of a first predetermined quantity

based on operation information of a node for acquiring a first economic value set not to receive a first value exchange medium as a consideration for transfer between a plurality of user identification information, and a step of write-off of a second predetermined quantity based on an act of extracting a second economic value generated from the network, wherein the first predetermined quantity is determined based on the second predetermined quantity.

【0016】

According to this aspect, the variation of the exchange value per unit of the first value exchange medium to be issued and write-off can be controlled based on the evaluation amount of the value provided and obtained free-of-charge and the consumed amount of the value obtained at a charge. This allows the exchange value per unit of the first value exchange medium to be varied arbitrarily.

【0017】

The method according to an embodiment of the present invention causes a computer, which is a node of a network in which first value exchange medium recorded in a first ledger in association with user identification information is circulate, to execute the steps of: acquiring a first economic value set not to receive a first value exchange medium as a consideration for transfer between a plurality of pieces of user identification information; transmitting operation information in the step of acquiring a first economic value to an information processing apparatus for managing a first ledger; and, in association with the step of acquiring a first economic value, accepting an act of extracting a second economic value generated from the network with consuming first value exchange medium from another information processing apparatus.

【0018】

According to this aspect, it becomes possible to quantify the size of the evaluation of the value provided and obtained free-of-charge, also becomes possible to make the consumption amount of the value obtained at a charge to the quantified evaluation based on the consumption amount. As a result, a first value exchange medium based on evaluations as a controllable economic value can be issued.

[Effect of the Invention]

【0019】

According to the present invention, it is possible to provide a value exchange medium capable of controlling the size (exchange value per unit) of a value (e.g., a economic value, a exchange value, purchasing power, etc.) contained per unit of a value exchange medium on which a value scale function is based.

[Brief description of the diagrams]

【0020】

FIG.1. 1 is a diagram for explaining an outline of a value exchange medium circulation system 1 according to an embodiment of the present invention.

FIG. 2 is a conceptual diagram for explaining examples of mutual relationships among economic activities, value, and value exchange medium.

FIG. 3 is a diagram for explaining examples of the functions of the first value exchange medium and the second value exchange medium.

FIG. 4 shows an exemplary configuration of the value exchange medium circulation system 1.

FIG. 5 is a diagram showing an exemplary hardware configuration of the servers 10 and the user device 20.

FIG. 6 is a block diagram showing an example of the functional configuration of the server 10.

FIG. 7A shows an exemplary account-information table.

FIG. 7B shows an exemplary search history table.

FIG. 7C shows an exemplary value table.

FIG. 7D shows an exemplary second economic activity run-request table.

FIG. 7E is a diagram illustrating an exemplary block table.

FIG. 7F shows an exemplary basement number of first economic activity table.

FIG. 7G shows an exemplary basement price of the second economic activity table.

FIG. 7H shows an exemplary second economic activity table.

FIG. 7I shows an exemplary first evaluation table.

FIG. 7J shows an exemplary purchasing power-to-evaluation ratio table.

FIG. 7K shows an exemplary exchange request table.

FIG. 7L shows an exemplary issuance based on debt table.

FIG. 7M shows an exemplary third economic activity table.

FIG. 7N shows an exemplary first ledger.

FIG. 7O shows an exemplary second evaluation table.

FIG. 7P shows an exemplary second ledger.

FIG. 7Q shows another exemplary second ledger.

FIG. 7R shows an exemplary credit issuance table.

FIG. 8 is a block diagram showing an exemplary functional configuration of the user device 20.

FIG. 9 is a diagram illustrating exemplary operation sequences of the paid exchangeable value registering process.

FIG. 10 is a diagram showing an exemplary paid exchangeable value input screen 300 A-1.

FIG. 11 is a shows exemplary operation sequences of the free-of-charge exchangeable value registering process.

FIG. 12 shows an exemplary free-of-charge exchangeable value input screen 300 A-2.

FIG. 13 is a diagram illustrating exemplary operation sequences of the free-of-charge exchangeable value providing and acquiring process.

FIG. 14 is a diagram showing an exemplary operation flow of the purchasing power-to-evaluation ratio calculation process.

FIG. 15 is a diagram illustrating exemplary operation sequences of the issuance based on evaluation process.

FIG. 16 is a diagram showing an example of an issuance information screen 300B for displaying issue information.

FIG. 17 is a diagram showing an exemplary operation sequence of the first value exchange medium remittance process.

FIG. 18 is a diagram showing an example of the remittance instruction input screen 300C.

FIG. 19 is a diagram showing an example of the remittance notification screen 300D.

FIG. 20 is a diagram showing an exemplary operation sequence of the settlement (third economic activity) process in accordance with the use of the paid exchangeable value.

FIG. 21 is a diagram showing an example of the usage information display screen 300E.

FIG. 22 is a diagram for explaining an exemplary process when second economic activity is performed in the value exchange medium circulation system 1.

FIG. 23 is a diagram showing an exemplary third economic activity purchasing power reference table.

FIG. 24 is a schematic diagram illustrating exemplary operation sequences related to the credit issuance process.

FIG. 25 is a diagram illustrating exemplary operation sequences related to the process of transmitting and registering exchange request.

FIG. 26 is a diagram showing an exemplary first exchange request input screen 500A displayed in the wallet managing application X1.

FIG. 27 is a diagram showing an exemplary input screen 500B of the second exchange request displayed in the wallet managing application X2.

FIG. 28 is a diagram for explaining the exchange request.

FIG. 29 is a diagram showing an exemplary operation flow of the second value exchange medium increasing process.

FIG. 30 is a diagram showing an exemplary operation flow of the desired exchange rate correction processing at the time of the increasing processing.

FIG. 31 is a diagram showing an exemplary operation flow of the process of restricting the modification of the second desired exchange rate.

FIG. 32 is a diagram showing an exemplary operation flow of the second value exchange medium reduction process.

FIG. 33 is a diagram showing an exemplary operation flow of the desired exchange rate correction processing at the time of the reduction processing.

FIG. 34 is a diagram showing an exemplary operation flow of the process of restricting the modification of the first desired exchange rate.

[DETAILED DESCRIPTION OF THE INVENTION]

【0021】

Preferred embodiments of the present invention is described with reference to the accompanying diagrams. (In the diagrams, the same reference numerals denote the same or similar components.

【0022】

In the present embodiment, the "size of value (e.g., economic value, exchange value, purchasing power, etc.) included per unit of value exchange medium" may be referred to as "exchange value per unit". The "size of value (e.g., economic value, exchange value, purchasing power, etc.) included per unit of value exchange medium", that is, "exchange value per unit" may be referred to as "value scale standard", "unit economic value", "purchasing power per unit", "value of money", "standard measures of price", "credit computation unit", or "weights and measures of value", etc.

【0023】

(1) SUMMARY

(1-1) Configuration

Figure 1

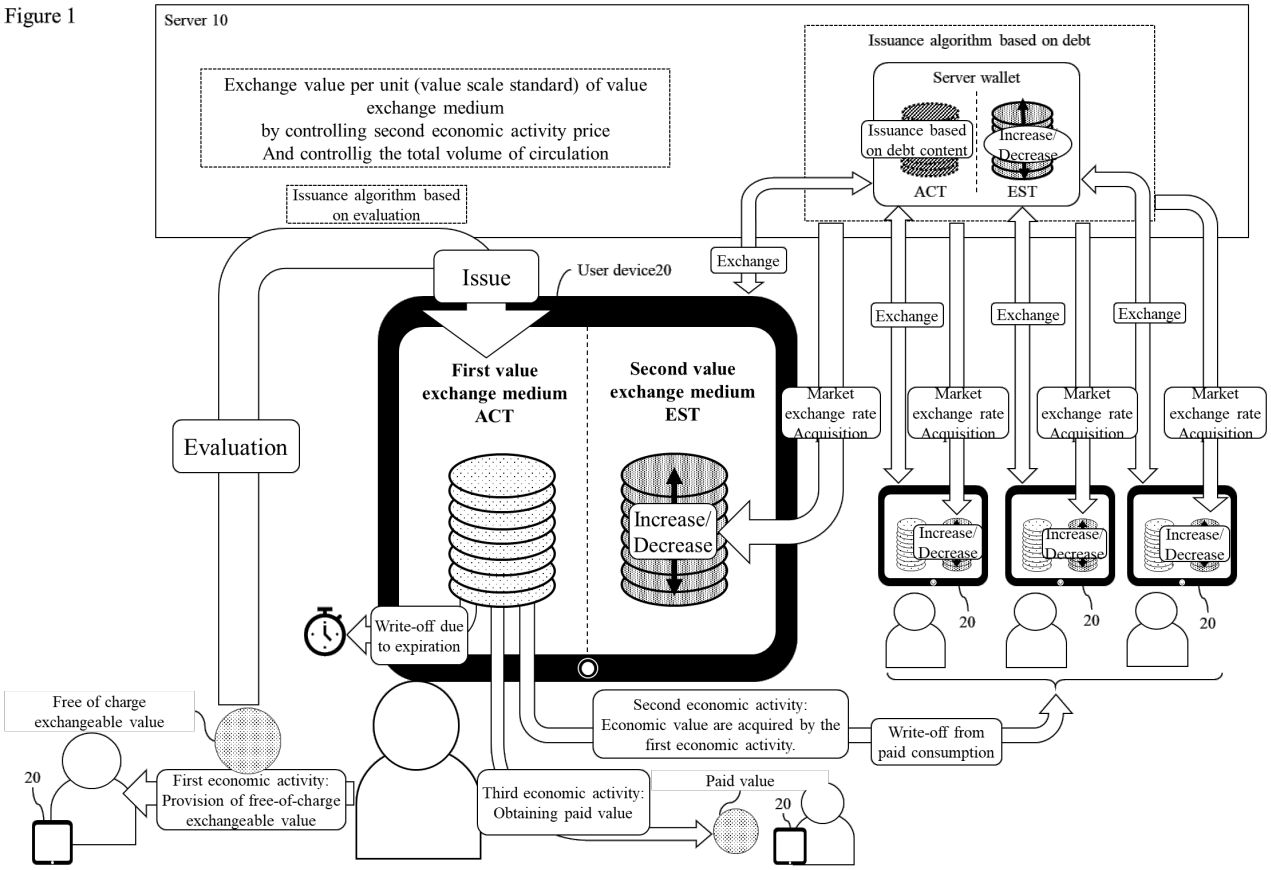


FIG. 1 is a diagram for explaining an outline of a value exchange medium circulation system 1 according to an embodiment of the present invention.

【0024】

The value exchange medium circulation system 1 includes, for example, servers 10 and a user device 20, which are connected via communication networks N such as the Internet so as to be able to transmit and receive information to and from each other. The server 10 is, for example, a system administrator, and the user device 20 is, for example, an information processing device used by a user. The value exchange medium circulation system 1 may constitute, for example, a network having nodes such as the server 10 and the user device 20, and the network may have a side as a server-client model and a side as a block chain network. In the present embodiment, the value exchange medium circulation system 1 may be referred to as a "first network" from the standpoint of, for example, a first value exchange medium as a circulate network. In the present embodiment, the value exchange medium circulation system 1 may be referred to as a "second network" from the standpoint of, for example, a second value exchange medium as a circulate network.

【0025】

The value exchange medium circulation system 1 quantifies the "value" provided to others as a source of the desire for human social activities (the force included in the function constituting a part of the community) as a relative

assessment from the viewpoint of economic value, and generates a "value scale function in which temporal and spatial variations are suppressed" and a "value exchange medium" having a "value storage function" which are not influenced by the era or the state in a controllable manner by the exchange value per unit, and distributes them between the nodes. In value exchange medium circulation system 1, two types of value exchange medium, a first value exchange medium and a second value exchange medium, may be distributed between the servers 10 and the user device 20.

【0026】

The user can manage each of the first value exchange medium and the second value exchange medium associated with the user ID via, for example, a wallet management application X, which is an application software installed in the user device 20 and will be described later.

【0027】

In the present embodiment, the name or unit of the first value exchange medium may be referred to as "ACT" and the name or unit of the second value exchange medium may be referred to as "EST". In the present embodiment, replacing first value exchange medium with second value exchange medium is sometimes referred to as "first exchange", and replacing second value exchange medium with first value exchange medium is sometimes referred to as "second exchange". In the present embodiment, the first exchange request transmitted by the user device 20 to the server 10 may be referred to as a "first exchange request", and the second exchange request transmitted by the user device 20 to the server 10 may be referred to as a "second exchange request".

【0028】

In the present embodiment, unless otherwise specified, "exchange rate", "desired exchange rate", "first desired exchange rate", "second desired exchange rate", "market exchange rate", "first market exchange rate", "second market exchange rate", "target exchange rate", "first target exchange rate", and "second target exchange rate" are expressed as the ratio of the first value exchange medium exchange quantity to the second value exchange medium exchange quantity, "first value exchange medium exchange quantity/second value exchange medium exchange quantity" (i.e., the ratio of the second value exchange medium unit exchange value to the first value exchange medium unit exchange value, "second value exchange medium unit exchange value/first value exchange medium unit exchange value"). However, this does not mean that expressing the "exchange rate", "desired exchange rate", "first desired exchange rate", "second desired exchange rate", "exchange rate", "first exchange rate", "second exchange rate", "target exchange rate", "first target exchange rate", and "second target exchange rate" as the ratio of the second value exchange medium exchange quantity to the first value exchange medium exchange quantity, "exchange quantity of second value exchange medium/exchange quantity of first value exchange medium" (i.e., the ratio of the first value exchange medium unit exchange value to the second value exchange medium unit exchange value, "unit exchange value of first value exchange medium/unit exchange value of second value exchange medium") is excluded from the present embodiment.

【0029】

(1-2)first value exchange medium

In value exchange medium circulation system 1, first value exchange medium may be circulated. The first value exchange medium may be newly issued (hereinafter sometimes referred to as "issuance based on evaluation") based

on, for example, evaluations of value transferred between a plurality of user device(s) 20 free-of-charge by a predetermined issuance algorithm based on evaluation (to be described later) of the servers 10. The first value exchange medium may be write-off from paid consumption by the server 10 based on, for example, the first value exchange medium consumed by the user device 20 and the server 10 by acquiring a value in a second economic activity described later, which is performed between the server 10 and the server 10. The first value exchange medium may be newly issued (hereinafter sometimes referred to as "issuance based on debt") based on, for example, a second exchange between the user device 20 and the servers 10. In other words, the issuance based on debt can be said to be an act in which the server 10 deposits a second value exchange medium from the user device 20, and the server 10 newly issues a first value exchange medium as a substantial deposit certificate. In other words, the issuance based on debt can be said to have a "debt" in which the size of the economic value is represented by the number of first value exchange medium to the issuing destination (user device 20) (obligation to provide second value exchange medium to the user by exchange as described later) as the issuing source (server 10); and a "claim" in which the size of the economic value is represented by the number of first value exchange medium to the issuing source (right to acquire second value exchange medium from the server by exchange as described later) as the issuing destination. The first value exchange medium may be write-off by offsetting based on issuance on debt offsetting purchases by the server 10, e.g., by a first exchange made between the user device 20 and the server 10. The first value exchange medium may be write-off (write-off due to expiration), for example, when a predetermined time has elapsed since it was acquired. For example, the first value exchange medium may be recorded in the first ledger stored in the servers 10 by associating the issuance quantity with the user ID. In the present embodiment, the mode in which the first ledger is configured is not particularly limited. The first ledger may be, for example, a centralized ledger managed by the servers 10, any user device 20, or the like. The first ledger may be, for example, a distributed ledger configured by a block chain etc stored in each of the servers 10 and the user device 20. In the present embodiment, the "update of the first ledger" may include any process for update that can be defined according to the aspect of the configuration of the first ledger, and may include a process of directly updating the first ledger, as well as a process of transmitting a request for update to an information processing device having an first ledger update right.

【0030】

(1-2-1) value and Economic Activities

(1-2-1-1)value

The "value" in the present embodiment may include any information expressed in a form that can be transmitted and received between a plurality of information processing apparatuses in relation to any action (social activity) performed by a human in the course of a social lifestyle. In other words, "value" may include, for example, benefits exchanged between users (individuals, corporations, etc.) in human social activities. The "value" may also include, for example, information about goods (goods), services (services), or contractual actions (including actions that cause (psychological) claims on one side and (psychological) debt on the other side) that are exchanged between users (individuals, corporations, etc.), and information that has not necessarily been evaluated or quantified in conventional societies. The value may include, for example, contents such as written language data, moving image data, image data, audio data, design drawing data, work data, useful information data, etc.

【0031】

In this embodiment, the value may include "paid exchangeable value" and "free-of-charge exchangeable value" and "paid exchangeable value" may include "paid consumption value". In the present embodiment, "paid for" means that a first value exchange medium or second value exchange medium is required as a consideration in the economic activity performed by the user device 20. In the present embodiment, "free-of-charge" means that no first value exchange medium or second value exchange medium is required in consideration of the economic activity performed by the user device 20. In the value exchange medium circulation system 1 according to the present embodiment, the user device 20 can execute "first economic activity", "second economic activity", "third economic activity", and "fourth economic activity" which will be described later. Hereinafter, "paid exchangeable value" (including "paid consumption value") and "free-of-charge exchangeable value" will be described together with "first economic activity", "second economic activity", "third economic activity" and "fourth economic activity".

【0032】

In the present embodiment, the "type I" may be a type to which the "free-of-charge exchangeable value" that is not compensation for exchange to first value exchange medium in the first economic activity, can be managed by the servers 10, or is managed, belongs. In the present embodiment, the "type II" may be a type to which the "paid consumption value" managed by the server 10 or managed by the server 10, which has the first value exchange medium as a compensation for consumption in the second economic activity, belongs. In the present embodiment, the "type III" may be a type to which the "paid exchangeable value" that can be managed by the server 10 or is managed by the server 10 for the compensation for exchange of first value exchange medium in the third economic activity belongs. In the present embodiment, the "type IV" may be a type to which "any paid exchangeable value" that cannot be managed or is not managed by the servers 10, which has a first value exchange medium or second value exchange medium as a compensation for exchange in the fourth economic activity, belongs.

【0033】

(1-2-1-2)paid exchangeable value

In the present embodiment, the "paid exchangeable value" (including "paid consumption value") may include, for example, a value that is provided and obtained in consideration of first value exchange medium in second economic activity and third economic activity, which is a value set to accept provision of a predetermined quantity (which may include 0 (zero)) of first value exchange medium as consideration for provision of value.

【0034】

<Second Economic Activities>

In the present embodiment, an act of obtaining (using) a first value exchange medium in a compensation for consumption manner a economic value (paid consumption value) that can be extracted from value that may occur in networks via the servers 10 between the user device 20 that perform differing economic activities is referred to as "second economic activity". More specifically, the "second economic activity" refers to an act of acquiring the "value" that may occur in the network (first network) by the first economic activity while consuming a predetermined quantity of first value exchange medium as a consideration. When the user device 20 executes the second economic activity, it can be considered that the value is exchanged between the user device 20 that executes the second economic activity and the user device 20 that acquires the free-of-charge exchangeable value described later in the first economic

activity. The type II to which the paid consumption value accompanied by the compensation for consumption acquired by the user using the user device 20 in the second economic activity belongs may be further subdivided into, for example, types IIA, IIB, IIC, IIAA, IIAAA,..

【0035】

(push type)

The second economic activity may include, for example, an act of obtaining a paid consumption value as a push-type second economic activity. Here, the "push-type second economic activity" can be said to be a second economic activity as an "action for arbitrarily (intentionally) exerting an influence" by a user who attempts to acquire paid consumption value (attempts to extract economic value from the first network) that consumes first value exchange medium as a consideration and can cause economic value to a target user (group) of a second economic activity that acquires free-of-charge exchangeable value in the first economic activity. The target paid consumption value of the push-type second economic activity may include, for example, "small classification: reproduction frequency specification/frequency accounting type moving picture commercial/medium classification: terminal display interrupt insertion type advertisement/large classification: targeting advertisement", "small classification: display time/region/user attributes (characteristics) specification insertion type advertisement/medium classification: terminal display interrupt insertion type advertisement/large classification: targeting advertisement", "small classification: main part display/pre-reproduction insertion type advertisement/medium classification: free-of-charge exchangeable value synthetic advertisement/large classification: targeting advertisement", etc and value (economic value). More specifically, the push-type second economic activity includes, for example, transmission of information for increasing the willingness to purchase, transmission of information for impressive manipulation, transmission of information for influencing behavior, etc can be said to be an action such as displaying (forcibly displaying) information transmitted by the user device 20 (which will be described later, the content of the execution request relating to the acquisition action of the paid consumption value belonging to the type II, which is registered in the second economic activity execution request table stored in the storage unit 11), on the user device 20 operated by the target user who acquires the free-of-charge exchangeable value etc in the first economic activity, via the server 10. This may enable a consumer user who intends to acquire paid consumption value belonging to the type II related to the push type second economic activity to acquire economic value obtained from actions for a user who acquires free-of-charge exchangeable value belonging to the type I in the first economic activity. In other words, as described above in connection with acquiring free-of-charge exchangeable value, a user who receives an "arbitrarily influencing action" from another consumer user may be understood to have accepted (accepted) an "arbitrarily influencing action" from another consumer user, thereby repaying (settlement debt or debt a consumer user who acquires a paid consumption value) the (ideal) debt that occurs to the user who provided the free-of-charge exchangeable value by acquiring the free-of-charge exchangeable value. In this way, the (ideal) debt generated by the user who provided the free-of-charge exchangeable value may be offset by the debt generated by the second economic activity by the consumer user acquiring the paid consumption value, and the first value exchange medium consumed may have a basis for issuance based on evaluation to the (ideal) creditor free-of-charge exchangeable value provider user. That is, in the value exchange medium circulation system 1, as will be described later, a settlement, which is a settlement act between a debt and a debt that occurs between a plurality of users who perform first economic activity and second

economic activity, can be autonomously processed by using a issuance algorithm based on evaluation.

【0036】

(pull type)

The second economic activity may include, for example, the act of obtaining a paid consumption value as a pull-type second economic activity. Here, the "pull-type second economic activity" can be said to be a second economic activity as an action of "an action of arbitrarily (intentionally) extracting information" by a user who intends to acquire paid consumption value (attempt to extract economic value from the first network) that consumes first value exchange medium as a consideration for a target user (group) of a second economic activity for which free-of-charge exchangeable value is acquired etc in a first economic activity and that can cause economic value. The paid consumption value which is the object of the second economic activity of the pull type may include, for example, "small classification: interest change prediction/middle classification: interest trend correlation analysis/large classification: interest statistics", "small classification: political party support change prediction/middle classification: awareness trend correlation analysis/large classification: awareness statistics", "small classification: consumption change prediction/medium classification: consumption trend correlation analysis/large classification: consumption statistics", "small classification: exchange fluctuation prediction/medium classification: currency and economic correlation analysis/large classification: economic statistics" (for example, value stored in the storage unit 11 of the server 10 and obtained by verifying the correlation data stored in the storage unit 11 of the server 10 by including, outside the value exchange medium circulation system 1, the exchange function of the second value exchange medium and the foreign legal currency of each country in the exchange transaction configuration by the user terminal 20, etc.). More specifically, the pull-type second economic activity includes, for example, the acquisition of basic data (big data) for transmitting information for increasing the willingness to purchase, transmitting information for impressive manipulation, or transmitting information for influencing behavior, and can be said to be an act of attempting to extract economic value from the basic data to be acquired (basic data as big data stored in the storage unit 11 of the server 10, including the operation information of the user device 20 for acquiring free-of-charge exchangeable value in the first economic activity, etc. This may enable a consumer user who intends to acquire paid consumption value belonging to the type II related to the pull type second economic activity to acquire economic value as actions for a user who acquires free-of-charge exchangeable value belonging to the type I in the first economic activity. In other words, as described above in connection with obtaining the free-of-charge exchangeable value, it can also be understood that the user who receives the "action to extract information arbitrarily" from the other consumption user has accepted (accepted) the "action to extract information arbitrarily" from the other consumption user, thereby paying (settlement the debt or debt the consumption user who acquires the paid consumption value) the (ideal) debt that occurs to the user who provided the free-of-charge exchangeable value by obtaining the free-of-charge exchangeable value, and (accept) the "action to extract information arbitrarily" from the other consumption user. In this way, the (ideal) debt generated by the user who provided the free-of-charge exchangeable value may be offset by the debt generated by the second economic activity by the consumer user acquiring the paid consumption value, and the first value exchange medium consumed may have a basis for issuance based on evaluation to the (ideal) creditor free-of-charge exchangeable value provider user. That is, in the value exchange medium circulation system 1, as will be described later, a settlement, which is a settlement act between a

debt and a debt that occurs between a plurality of users who perform first economic activity and second economic activity, can be autonomously processed by using a issuance algorithm based on evaluation.

【0037】

(Others second economic activity Blocking Type)

The second economic activity may include, for example, a second economic activity of the other party second economic activity blocking type. Here, the "second economic activity of the other party second economic activity block type" is second economic activity as an action for blocking second economic activity (advertisement, collection of big data, etc) to be executed by the other party in relation to the first economic activity when the first economic activity of acquiring the free-of-charge exchangeable value belonging to the type I is performed by the other party itself. Here, the category of the type II to which the target paid consumption value of the second economic activity of the other party second economic activity block type belongs may be different from the category of the type II to which the target paid consumption value of the other second economic activity (push type, pull type, etc.) belongs. Specifically, for example, the server 10 may accept an execution request (other party second economic activity block request) for excluding a specified user ID (the server 10 itself is basically assumed) from execution targets included in an execution request of a second economic activity of a type (push type, pull type, etc) other than the other party second economic activity block type. At this time, when the server 10 executes the execution request on the basis of the execution request of the second economic activity such as the push type or the pull type received from the user device 20, for example, the server 10 may exclude the user ID included in the other-person second economic activity block request from the object of the execution request on the basis of the other-person second economic activity block request. When the server 10 records the operation information etc acquired from the user device 20 in a first evaluation table, a search history table, and the like described later, the server 10 may exclude the user ID included in the other-person second economic activity block request from the recording target based on the other-person second economic activity block request (for example, the server 10 may record the information relating to the first economic activity with the "user ID of the free-of-charge exchangeable value acquirer" in the first evaluation table described later as a blank space). As a result, the user who performs the other-party second economic activity block-type second economic activity can directly retrieve the economic value (paid consumption value) included in the act of acquiring the free-of-charge exchangeable value belonging to the type I by consuming first value exchange medium (i.e., without receiving an action of arbitrarily (intentionally) exerting influence from another user by the second economic activity of the push type of another user or receiving an action of arbitrarily (intentionally) extracting information from another user by the second economic activity of the pull type of another user). In other words, as described above, a user who does not receive an "arbitrarily influencing action" (push type) or an "arbitrarily extracting action" (pull type) from another consumer user as a result of obtaining the free-of-charge exchangeable value can be understood to be paying the debt (ideal) generated to the user who provided the free-of-charge exchangeable value by obtaining the free-of-charge exchangeable value by not receiving the action from the other consumer user (settlement the debt or replace the debt with the consumer user who obtains the paid consumption value) and paying the same by the second economic activity of the second economic activity block type of the other consumer, instead of receiving the action from the other consumer user (accept). In this way, the (ideal) debt generated by the user who provided the free-of-charge exchangeable value may be offset by the consumption of first value exchange medium

associated with the second economic activity of the other party second economic activity blocking type, and the first value exchange medium consumed may have a basis for issuance based on evaluation to the (ideal) creditor free-of-charge exchangeable value providing user. That is, in the value exchange medium circulation system 1, as will be described later, a settlement, which is a settlement act between a debt and a debt that occurs between a plurality of users who perform first economic activity and second economic activity, can be autonomously processed by using a issuance algorithm based on evaluation.

【0038】

Thereafter, the paid consumption value belonging to the type II registered (set) in the server 10 can be arbitrarily acquired (used) with a compensation for consumption by requesting the server 10 of the user device 20 to execute the type II. Further, the compensation for consumption relating to the paid consumption value belonging to each category of the type II may be set as the base prices associated with each paid consumption value belonging to the type II and each constituent group, which are recorded in the the basic price of the second economic activity table stored in the storage unit 11 of the servers 10. The setting action may be a dedicated action of a system administrator, which may include artificial intelligence under the supervision of the system administrator. When the server 10 receives the execution request of the second economic activity from the user device 20, the server 10 may specify the base price related to the execution request from the the basic price of the second economic activity table by the user device 20, and may update the first ledger in accordance with the execution of the second economic activity by the user device 20 as the paid consumption value obtaining action.

【0039】

<3rd Economic Activities>

In the present embodiment, the act of providing or acquiring paid exchangeable value to the compensation for exchange through the servers 10 via the first value exchange medium between the user device 20 is referred to as "third economic activity". The paid exchangeable value provided and obtained by the user device 20 with compensation for exchange in the third economic activity may be registered in a value table, which will be described later. The type III to which the paid exchangeable value to be subjected to the third economic activity belongs can be arbitrarily subdivided. The type III may be subdivided by, for example, a data format of a paid exchangeable value to be subjected to third economic activity, which may include, for example, data formats created by certain software such as CAD data, in addition to common data formats such as written language data, moving image data, audio data, and image data. The paid exchangeable value belonging to the type III may include any information related to the commodities and services traded between the users, but the type III may be subdivided according to the type of such commodities and services.

【0040】

An example of subdivision of Type III is shown below. The type III may be further subdivided into, for example, type IIIA, IIIB, IIIC, IIICA, IIICAB..

(Written language Data System)

In the case of a written language data system, for example, "sub-classification: self-enlightenment book/medium classification: long book/large classification: book" or "sub-classification: IT paper/medium classification: short,article/large classification: paper" may be included

(Movie Data System)

In the case of a moving image data system, for example, "small classification: Suspense drama/medium classification: continuous drama/large classification: drama" or "small classification: SF cinema/medium classification: long cinema/large classification: cinema" may be included.

(Audio Data System)

The voice data system may include, for example, "Orchestral Music/Medium Class: Classical Music/Major Class: Music" or "Small Class: Pop Music/Medium Class: Major Music/Major Class: Music".

(Image Data System)

In the case of an image data system, for example, "small classification character illustration/middle classification: digital illustration/large classification: illustration" or "small classification: gravure photograph/middle classification: idle photograph/large classification: photograph" may be included.

(Work Data System)

In the case of the work data system, for example, "small classification: house construction CAD data/medium classification: construction CAD data/large classification: CAD data", and "small classification: group schedule management application/medium classification: business application/large classification: application" may be included.

(Product Systems with Distribution)

In the case of an article system accompanied by logistics, for example, "small classification: focal length/medium classification: monofocal lens/large classification: camera lens" and "small classification: stand speaker/medium classification: AV equipment (audiovisual)/large classification: auction" may be included.

(Contract System with Provision of Services)

Contract systems involving the provision of services may include, for example, "small classification: character/medium classification: design/large classification: illustrator", "small classification: web database/medium classification: Java programming/large classification: programming", etc.

【0041】

The user device 20 selects a target category from among the types III (the category of the types III may be set in advance by a system administrator, etc), and the number of first value exchange medium as a compensation for exchange linked to the respective paid exchangeable value to be value registered in the value table by a value registering operation described later may be registered in the value table.

【0042】

<Fourth Economic Activities>

In the present embodiment, the act of exchanging paid exchangeable value (arbitrary paid exchangeable value) belonging to the type IV (which cannot be managed by the server 10 or is not managed by the server 10) using the first value exchange medium or the second value exchange medium as a compensation for exchange is referred to as "fourth economic activity". In other words, the fourth economic activity may be a direct transfer (a direct transfer resulting from any direct transaction outside value exchange medium circulation system 1 (in other words, the real economy)).

【0043】

(1-2-1-3) free-of-charge exchangeable value

In the present embodiment, "free-of-charge exchangeable value" is, for example, a value set so as not to accept the provision of a predetermined quantity of first value exchange medium as a consideration for the provision of value, and may include value as an object to be evaluated by a issuance algorithm based on evaluation described later. Here, the setting of whether or not to accept the provision of a predetermined quantity of first value exchange medium may be performed by the value provider using the user device 20, for example.

【0044】

<first economic activity>

The act of providing or obtaining free-of-charge exchangeable value between the user device 20 via the servers 10 is referred to as "first economic activity". The free-of-charge exchangeable value provided and obtained by the user device 20 in the first economic activity without compensation for consumption such as compensation for exchange as third economic activity and second economic activity is registered in a value table, which will be described later. The type I to which the free-of-charge exchangeable value to be subjected to the first economic activity belongs can be arbitrarily subdivided. The type I may be subdivided by, for example, a data format of a free-of-charge exchangeable value to be subjected to first economic activity, which may include, for example, data formats created by certain software such as CAD data, in addition to common data formats such as written language data, moving image data, audio data, and image data.

【0045】

An example of subdivision of type I is shown below. The type I may be further subdivided into, for example, type IA, IAB, IABC,..

(Written language Data System)

The written language data system may include, for example, "small classification: IT articles/medium classification: technology articles/large classification: articles", and "small classification: finance columns/medium classification: economic columns/large classification: columns".

(Movie Data System)

In the case of a moving image data system, for example, "small classification: test driving review/middle classification: automobile review/large classification: review" and "small classification: business interview/middle classification: economic activity interview/large classification: interview" may be included.

(Audio Data System)

The voice data system may include, for example, "Piano Sonata Music/Medium Class: Classical Music/Major Classification: Music" or "Lock Music/Medium Classification: Indies Music/Major Classification: Music", etc.

(Image Data System)

In the case of an image data system, for example, "small classification character illustration/middle classification: digital illustration/large classification: illustration" or "small classification: mountain photograph/middle classification: landscape photograph/large classification: photograph" may be included.

(Work Data System)

In the case of the work data system, for example, "small classification: stationery 3D printer data/medium

classification: simple-material 3D printer data/medium classification: 3D printer data", and "small classification: schedule-management application/medium classification: business application/large classification: application" may be included.

【0046】

Whenever the free-of-charge exchangeable value is acquired by the user device 20, the server 10 may associate the server 10 with each category of the type I to which the free-of-charge exchangeable value belongs in the value table, and evaluation score the free-of-charge exchangeable value from the operation information of the user device 20 based on the basic score recorded in the first economic activity basic score table. In the evaluation score by the server 10 performed here, it is preferable that basic score associated with the constituent group to which the user who acquires the free-of-charge exchangeable value belongs be used in the first economic activity basic score table.

【0047】

For example, the free-of-charge exchangeable value may include "opinions by the value acquiring user" such as "comments" (comments on news articles, etc.) or "reviews" (product reviews, etc.) by the user acquiring the free-of-charge exchangeable value or paid exchangeable value for the free-of-charge exchangeable value provided by the free-of-charge exchangeable value providing user in the first economic activity or the paid exchangeable value provided by the paid exchangeable value providing user in the third economic activity. In this instance, the "opinion by the value acquiring user" may be registered in the value table after specifying the category of the type I as the free-of-charge exchangeable value to which the opinion itself is provided, and may be treated as the free-of-charge exchangeable value thereafter.

【0048】

(1-2-2) Issuance

< Issuance based on evaluation >

In the present embodiment, the server 10 relatively evaluates the free-of-charge exchangeable value and the free-of-charge exchangeable value providing user transferred (provided and obtained) between the user device 20 by a predetermined issuance algorithm based on evaluation (to be described later). Then, based on the first economic activity and the second economic activity, the server 10 uses a predetermined issuance algorithm based on evaluation to issuance based on evaluation a predetermined number of pieces of first value exchange medium in association with the user ID of the free-of-charge exchangeable value providing users. The number of pieces of first value exchange medium to be issuance based on evaluation by the server 10 may be calculated so as to reflect the purchasing power of the constituent group to which the user who acquired the free-of-charge exchangeable value belongs, as described later. Here, the "constituent group" may be an aggregate of regional attributes (living sites or business sites) recorded in an account-information table, which will be described later. A "constituent group" may be, for example, a collection of users (generally) sharing at least one of the following: "legal currency", "applicable laws", "governance mechanisms", "purchasing power", and "languages of use". "Constituent group" may be defined by, for example, municipalities, prefectures, states, regions, nations, economic bloc, continents, etc. In the present embodiment, the description is made on the assumption of "state", but the present invention is not limited to this. The definition of regional attributes and constituent group may be determined by the systems administrator. In this way, the first value exchange medium places its value on universal energies that span times (times, etc.) and places (countries, etc.) based

on the desire for human social and economic activities and the desire to contribute to communities, etc., referred to as the "free-of-charge exchangeable value" described above. In addition to the regional attributes recorded in the account information table, the server 10 may specify the constituent group to which the user ID belong based on the location information based on the GPS data or, etc acquired from the user device 20, the language used by the user device 20, the display language of the wallet management application X described later, or etc.

【0049】

<Issuance based on debt>

In the present embodiment, the server 10 performs issuance based on debt by associating a predetermined number of pieces of first value exchange medium with the user ID of the user device 20 in accordance with the second exchange request received from the user device 20 by a predetermined issuance algorithm based on debt, which will be described later. For example, in this embodiment, a user may obtain a predetermined quantity of first value exchange medium by providing a free-of-charge exchangeable value to another user in the first economic activity, or by providing a paid exchangeable value to another user in the third economic activity. However, the user may wish to second economic activity, third economic activity or fourth economic activity with more first value exchange medium than the first value exchange medium quantity so obtained. At this time, the user can acquire the first value exchange medium of the insufficient quantity by exchanging a predetermined quantity of second value exchange medium with a predetermined quantity of first value exchange medium by the second exchange request (issuance based on debt by the servers 10). In this way, the issuance based on debt can be said to have the effect of reducing the problem of the shortage of first value exchange medium in the first networks.

【0050】

(1-2-3) write-off

(1-2-3-1)second economic activity

In the present embodiment, first value exchange medium is a compensation for consumption of second economic activity. When the user performs second economic activity in the first network via the user device 20, the server 10 performs write-off (write-off from paid consumption) of the first value exchange medium of the predetermined quantity from the first network by write-off the predetermined quantity in the first value exchange medium linked to the user ID of the user in the first ledger. The amount of first value exchange medium consumed by the second economic activity and write-off from the first network serves as a basis for the amount of first value exchange medium to be issuance based on based on the first economic activity according to a predetermined issuance algorithm based on evaluation described later. That is, the quantity of first value exchange medium (or first economic activity as a user device inherent in the second economic activity) consumed by the economic value 20 in the first value exchange medium by the action of acquiring economic value (paid consumption value) that can be extracted from the "value" generated in the network based on the evaluation value and write-off from the network can be said to have a function as a basis for calculating economic value included in the evaluation (evaluation score by evaluation point) given to the free-of-charge exchangeable value in the first economic activity.

【0051】

Note that the first value exchange medium consumed in the second economic activity may be temporarily linked to an ID for temporary storage (ID for temporary storage of write-off from paid consumption) managed by, for

example, a system administrator or the like in the first ledger, without write-off (write-off from paid consumption) from the first ledger, and may be allocated to the first value exchange medium to be issuance based on evaluation on the evaluation value calculated in relation to the assessment of the free-of-charge exchangeable value belonging to the type I in the first economic activity.

【0052】

<Second Economic Activities and Basic Prices>

The base prices of the paid consumption value belonging to the respective categories included in the type II of the second economic activity may be the same among the different constituent group. On the other hand, it is preferable that the basic prices relating to the acquiring actions of the paid consumption value belonging to each category included in the type II relating to the second economic activity are individually determined and updated for each constituent group. That is, it is desirable to optimize the basic prices for the paid consumption value acquiring actions belonging to the respective categories so as to match the value size (purchasing power) generated in the networks by the first economic activity of the users belonging to the respective constituent group subject to the second economic activity, for example, while making the modes of segmentation of the paid consumption value belonging to the respective categories included in the type II common among a plurality of constituent group.

【0053】

<Guidelines for Determining Basic Prices and Renewal Processes>

Basic prices for paid consumption value acquisition activities belonging to each category included in Type II of the second economic activity may be output by AI (machine-learning algorithms) or by human power (continuously) output if AI is not included in the configuration, so that the sum of the consumed quantities (integration of basic prices, etc.) for acquisition activities of paid consumption value belonging to the same category during a predetermined period varies the basic prices so as to maximize at all times, for each paid consumption value belonging to each category of each constituent group. More specifically, for example, the server 10 may output a coefficient for integrating the basic price recorded in the the basic price of the second economic activity table stored in the storage unit 11 and the activity content recorded in the second economic activity table as input data into the basic price related to the act of acquiring the paid consumption value belonging to the type II by using the scoring method by the machine-learning algorithms so that the number of the first value exchanging media consumed for each category of the type II of each subject group is maximized. Then, the outputted coefficients may be integrated into the base price as the original integrated reference value to fluctuate the base price related to the paid consumption value acquiring act belonging to the type II.

【0054】

Here, the server 10 may have, for example, a machine learning device as described below. That is, the machine learning device can learn to determine a basic price related to an acquiring action of a user device belonging to at least one type (e.g., type II) for consuming and extracting economic value generated in the network in a circulate network of a value exchange medium (e.g., first value exchange medium) issued based on a evaluation score to a economic value (e.g., free-of-charge exchangeable value belonging to type I) for which a consideration provided using the paid consumption value 20 is not accepted. The machine learning device may include an observation unit for observing a consumption trend composed of the consumption quantity of the value exchange medium according

to the at least one type and the basic price according to the type in a predetermined period, and a learning unit for learning a change in the consumption quantity of the value exchange medium according to the at least one type observed by the observation unit in association with the basic price according to the type.

【0055】

The amount of value exchange medium issued based on the evaluation score may be determined based on the amount of value exchange medium consumed by the act of retrieving economic value generated in the networks.

【0056】

The consumption trend according to the at least one type of consumption observed by the observation unit may include at least one of a timing, a target user property, a target user property, and a target constituent group.

【0057】

The base price of the type observed by the observation unit may include at least one of a price per hour, a price per number of times, and a price per area.

【0058】

The learning unit may learn to determine the basic price of the type by updating a function for determining the basic price of the type based on the consumption trend of the at least one type.

【0059】

The learning unit may include a reward calculation unit for calculating a reward for a result of determining a basic price related to the type based on consumption trends related to the at least one type, and a function update unit for updating the function based on a reward calculated by the reward calculation unit.

【0060】

The function updating unit may learn the basic price of the type in which the reward is most obtained by repeating the updating of the function.

【0061】

The observation unit may observe a consumption trend composed of a value exchange medium consumption quantity in the predetermined period and a base price of the network type, independently of each type (and each constituent group) related to each act of extracting economic value generated in the network.

【0062】

The target data observed by the previous period observing unit may include operation data of a user device for acquiring a economic value for which the setting is made not to accept the consideration, which is the cause of the addition of the evaluation score, and basic score relating to the evaluation score.

【0063】

The object data to be learned in association with the previous term learning unit may include operation information of a user device for acquiring a economic value for which the setting is made not to accept the consideration, which is the cause of the point addition of the evaluation score, and basic score relating to the evaluation score.

【0064】

Further, another machine learning device included in the server 10 may learn a basic price of a consumption price related to at least one type (for example, an acquisition act of paid consumption value belonging to the type II) of an act of consuming and extracting economic value generated in the network by consuming the value exchange medium

in a circulate network of a value exchange medium (for example, a first value exchange medium) issued based on an assessment of a economic value (for example, an acquisition act of free-of-charge exchangeable value belonging to the type I) for which a consideration provided by the server 10 is not accepted using the user device 20. The machine learning apparatus may include an observing unit for observing the total consumption price of the type in a predetermined period and the basic price as a state variable, and a learning unit for learning the basic price such that the total of the consumption prices in the predetermined period becomes larger in accordance with a data set created based on the state variable.

【0065】

The learning unit may further include a reward calculation unit that calculates a reward based on the sum of the consumption prices, and a function update unit that updates a function for determining the base price based on the reward.

【0066】

<Control of Unit Exchange Value>

In the present embodiment, the server 10 may uniformly vary (mainly reduce the exchange value per unit of the first value exchange medium and increase the price) all the basic prices relating to the acquiring action of the paid consumption value belonging to each category of the type II in each constituent group based on the input by the system administrator (the content of the commitments to the user). At this time, the server 10 may transmit (notify) the content of the updating process (the content of the commitments) to the user device 20 in advance or at the time of executing the process. Thereby, the first economic activity of the value can be controlled by the double anchoring effect of the exchange value per unit sense between the balance of the value sense between the paid consumption value and the first value exchange medium when acquiring the paid consumption value in the second economic activity of the user (the sense of value recognition and the sense of price first value exchange medium) and the balance of the value sense of the first value exchange medium (the sense of exchange value per unit recognition and the sense of price value) issuance based on evaluation when providing the free-of-charge exchangeable value in the exchange value per unit of the user. In addition, the double anchoring effect of the value sensation can also be applied to the balance of the paid exchangeable value sensation in the direct free-of-charge transaction by the user, that is, the balance of the value sensation of the value sales price (on the other hand, the purchase price) in the third economic activity of the user operating the user device 20 (the exchange value per unit perception and the value sensation of the price), and further, the balance of the value sensation of the direct transaction according to any paid exchangeable value in the fourth economic activity (the exchange value per unit perception and the value sensation of the price). The server 10 may execute the server 10 as a measure for arbitrarily varying the value (exchange value per unit) included per unit of each first value exchange medium, the total volume of circulation of the first value exchange medium in the first network, the total volume of circulation of the second value exchange medium in the second network (to be described later), and the price (the price of paid exchangeable value arbitrarily priced by the user) (a measure for controlling the size (exchange value per unit) of the value (e.g., economic value, exchange value, purchasing power, etc.) included per unit of value exchange medium). The systems administrator should determine the content of commitments (the rate at which the exchange value per unit changes, i.e., the amount of price fluctuations) as a macroeconomic policy in value exchange medium circulation system 1.

【0067】

<Basic price table>

The basic prices relating to the acquiring actions of the paid consumption value belonging to each category of each type II of each constituent group in the second economic activity may be defined, for example, in a "the basic price of the second economic activity table" to be described later. The "base price" recorded in the the basic price of the second economic activity table is "base price when second economic activity is performed for (a user belonging to) the constituent group" and is not "base price when a user belonging to the constituent group performs second economic activity for another constituent group". The the basic price of the second economic activity table may include categories of type II, constituent group, base prices, and cumulative magnitude criteria. In the determination and updating process of the basic price, the basic price may be determined by referring to the the basic price of the second economic activity table and the "second economic activity table" as the activity record of the second economic activity. The second economic activity table may include the date and time, the user ID, the constituent group to which the user ID belongs, the category of the type II, the consumed quantity, and the activity target constituent group.

【0068】

The "value" in the first economic activity that can be taken out from the network in the above-described second economic activity is, for example, when there is a free-of-charge exchangeable value B such as written language data or moving image data provided from the user device 20A as a first economic activity, and on the other hand, there is a "value" generated in the first network by a search action, a browsing action, or an acquiring action by the user device 20C attempting to acquire the free-of-charge exchangeable value B as a first economic activity. Here, in order to make it easy for the other user device 20D to find the economic value as the second economic activity in response to various actions as the first economic activity by the user device 20C, the system administrator can prescribe the mode of the acquiring action of the paid consumption value belonging to the type II in advance, determine the base price of the acquired paid consumption value for each constituent group as the object of second economic activity, and provide an environment in which the user device 20D can acquire the paid consumption value (economic value as the object (object) of second economic activity). It should be noted that the economic value to be obtained (generated) by performing the second economic activity is paid consumption value, and it can be said that the action of the second economic activity itself or the object of the second economic activity itself (the value itself generated in the first network by the first economic activity) is not paid consumption value. For example, the category of the type II may include the category of the use of the paid consumption value acquisition environment as the provision of the environment for performing the "push type" second economic activity described above, such as the category for providing the environment for the user device 20D to perform the advertisement to the user device 20C, and the category for the use of the paid consumption value acquisition environment as the provision of the environment for the second economic activity of the "pull type" described above, such as the category for providing the environment for the user device 20D to use the big data recorded by the servers 10 as various actions by the user device 20C in the first economic activity. Further, for example, the paid consumption value acquiring environment may include a category of the type II as a provision of the environment in which the user device 20D can perform the mixed second economic activity of the "push type" and the "pull type" described above. In this manner, the user device 20D trying to acquire the paid consumption value can acquire the paid consumption value by consuming first value exchange

medium. That is, it can be understood that the economic value is found in the action of the user device 20C in the first economic activity and the free-of-charge exchangeable value B provided by the user device 20A in the first economic activity by the amount of the first value exchange medium consumed in the action of acquiring the paid consumption value belonging to the type II. In this way, the "value" generated in the first network by the first economic activity generates a economic value that can be quantified through the second economic activity, and a predetermined quantity of first value exchange medium corresponding to the evaluation value described later as the generated economic value can be issuance based on evaluation to the user device 20A. It should be noted that the act of acquiring paid consumption value belonging to the type II may include, for example, advertising in a manner of interrupting various acts in the first economic activity of the user device 20C (e.g., advertising in a manner of inserting it into a viewing line as in a conventional TV commercial, inserting it into a subscription line using advertising columns such as newspapers and magazines, inserting it into a web search list field line, or inserting it into a viewing line as in a signboard) or advertising in a manner of directly including it in the free-of-charge exchangeable value B when acquiring the free-of-charge exchangeable value B in the first economic activity of the user device 20C, and further, may be finely divided into categories for each category of the type II to which the paid consumption value belongs, and the convenience of the user device 20D may be improved. The system administrator may provide any paid consumption value to the user device 20D as long as the system administrator is in a paid consumption value acquisition environment belonging to the type II in which the economic value found by the second economic activity to the "value" caused by the first economic activity increases, and preferably adds, modifies, or deletes (categories of) the acquisition environment of the paid consumption value belonging to the type II so that the number of first value exchange medium consumed by the user device 20D increases and the number of first value exchange medium to be issuance based on evaluation in the first economic activity increases.

【0069】

(1-2-3-2) and others

It should be noted that the server 10 may set a write-off deadline to a first value exchange medium newly associated with the user ID, for example, at the time of updating the first ledger, and the server 10 may cancel (write-off due to expiration) from the first ledger when a preset deadline arrives. The write-off deadline may be different for each history of acquiring the first value exchange medium. Then, the server 10 may reduce the issuance based on debt balance recorded in the issuance based on debt table by the amount of first value exchange medium that has been write-off to the server 10, as will be described later. In this regard, the first value exchange medium may be configured to have or not have a "value storage function" of the currency's basic functions, or to have any degree. The first value exchange medium is also write-off by offsetting purchases of issuance based on debt by the servers 10, which will be described later, i.e., by the user device 20 to make first exchange requests.

【0070】

(1-2-4) Transfer (fourth economic activity)

In the present embodiment, the user can transfer (assignment) first value exchange medium to another user (user ID) using the user device 20. The user can also transfer (settlement, assignment , and reimbursement) the first value exchange medium between the users using the user device 20 as a consideration for the paid exchangeable value to be arbitrarily acquired (fourth economic activity).

【0071】

(1-2-5) value circulation

As described above, first value exchange medium that is issuance based on evaluation based on first economic activity and second economic activity and issuance based on debt based on second exchange can be used for second economic activity and third economic activity payments in the first networks, and can be used for fourth economic activity remittances between users. The first value exchange medium to be issued is consumed in the second economic activity to be subjected to write-off (write-off from paid consumption) etc, and can also be subjected to write-off (write-off due to expiration) by the expiration of the time limit when the write-off time limit is set. For example, a user who acquires a first value exchange medium by issuing an evaluation based on the evaluation of the free-of-charge exchange value belonging to the type I, or by selling the paid exchange value belonging to the type III can exchange a first value exchange medium in an amount exceeding the amount of consumption of the first value exchange medium due to the acquisition of the paid consumption value belonging to the type II by himself or herself, or the acquisition of the paid exchange value belonging to the type III, by a first exchange with the server 10 (first value exchange medium offset purchase by the server 10) to be described later, the OOF in the amount exceeding the amount can be exchanged with a second value exchange medium in an amount including an equivalent economic value. As a result, the first value exchange medium functions as a paid exchangeable value (including paid consumption value) and a free-of-charge exchangeable value replacement medium, and the flow rate can be higher than that of a conventional value exchange medium such as legal currency. That is, the first value exchange medium can be said to be a value measure controllable value exchange medium in which issuance, transfer, and write-off cycles can be performed continuously and quickly.

【0072】

(1-3) second value exchange medium

(1-3-1) Outline of second value exchange medium

In value exchange medium circulation system 1, second value exchange medium may be circulated. The second value exchange medium may be issued in a predetermined quantity in advance, for example, by ICO performed by a system administrator. The second value exchange medium may also be issued, for example, by the credit issuance described below. Note that in the present embodiment, the manner in which the second ledger is configured is not particularly limited. The second ledger may be, for example, a centralized ledger managed by the servers 10, any user device 20, etc. The second ledger may be, for example, a distributed ledger configured by a block chain etc stored in each of the servers 10 and the user device 20. In the present embodiment, the "update of the second ledger" may include any process for update that can be defined according to the mode of configuration of the second ledger, and may include a process of directly updating the second ledger, and a process of transmitting an update request to an information processing device having an second ledger update right.

【0073】

As described above, the first value exchange medium may not have the value storage function, but the first value exchange medium can be basically constantly exchanged in the second value exchange medium by the exchange place function by the servers 10 described below. For this reason, as will be described later, a second value exchange medium having a value storage function in advance may have a function of complementing a value storage function

which the first value exchange medium does not have.

【0074】

The server 10 may have a exchange place function for exchanging first value exchange medium and second value exchange medium with the user device 20. More specifically, for example, a user desiring a second value exchange medium can transmit a exchange request (first exchange request) requesting the second value exchange medium to exchange first value exchange medium at a desired exchange rate (first desired exchange rate) to the server 10 via the user device 20. For example, a user who wants a first value exchange medium can transmit a exchange request (second exchange request) requesting the first value exchange medium to exchange second value exchange medium at a desired exchange rate (second desired exchange rate) to the server 10 via the user device 20.

【0075】

The server 10 may perform the commitment processing (first commitment processing) on the second exchange request received from the user device 20, under predetermined conditions, with the first market exchange request by the market rate (market exchange rate) of the first desired exchange rate and the second desired exchange rate. That is, the server 10 may issuance based on debt a first value exchange medium to the user and acquire second value exchange medium from the user.

【0076】

In addition, the server 10 may perform a second commitment process on the first exchange request received from the user device 20 under a predetermined condition using the second market exchange request of the market exchange rate described above. In other words, the server 10 may transfer the second value exchange medium to the user, acquire the first value exchange medium from the user, and write-off the above-mentioned issuance based on debt to write-off the server 10.

【0077】

The market exchange rate according to the first market exchange request and the market exchange rate according to the second market exchange request may be the same or different. When the two are distinguished from each other, the market exchange rate related to the first market exchange request may be referred to as "first market exchange rate" and the market exchange rate related to the second market exchange request may be referred to as "second market exchange rate".

【0078】

(1-3-2) Increase/Decrease in second value exchange medium

The market exchange rate (first market exchange rate and second market exchange rate) may be determined based on the desired exchange rate (first desired exchange rate and second desired exchange rate) relating to the exchange request received from the user device 20 by the server 10 serving as the exchange place. As will be described later, the quantity of second value exchange medium fluctuates (increases or decreases) under predetermined conditions. In other words, the market exchange rate can be said to be an index value (expected increase rate) representing a quantity (ratio) expected to increase (newly issued to itself) the second value exchange medium in the future for each user's second value exchange medium. For example, in the present embodiment, when a predetermined increase condition is satisfied (or when a decrease condition is satisfied), the smart contract units 131 and 231 described later newly issue (or write-off) a second value exchange medium to the respective users based on the holding quantity of

the second value exchange medium, the circulation contribution rate described later, or the transfer evaluation value, based on the reaching premium rate which is the premium rate (the ratio of market exchange rate to target exchange rate) at the time when the predetermined increase condition or the decrease condition is satisfied. Subsequently, when the smart contract units 131 and 231 execute the new issue (or write-off) process of the second value exchange medium for each user, the exchange place managing unit 15 may modify the desired exchange rate of each user so that the market exchange rate converges to the "target exchange rate" or "near the target exchange rate" or so that the increase (or decrease) rate of the newly issued (or write-off) increased (or decreased) second value exchange medium is offset for each user. As described above, the market exchange rate, reflecting the fundamentals of the user, etc reaches a threshold, or converges to the vicinity of the "target replacement rate" after a predetermined period has elapsed. Therefore, since the second value exchange medium is increased (or decreased) by the market exchange rate based on the desired exchange rate of the respective users, the market exchange rate can be referred to as an expected increase rate.

【0079】

For example, each of the server 10 and each user device 20 may acquire market exchange rate derived from the server 10 and intermittently monitor whether a predetermined increasing condition or a predetermined decreasing condition is satisfied. When the server 10 and the user device 20 determine that the predetermined increasing condition is satisfied, the server 10 and the user device 20 may generate second ledger updating information for increasing the second value exchange medium quantity in accordance with at least one of the holding quantity of the second value exchange medium held by the server 10, the circulation contribution rate of the second value exchange medium, and the transfer evaluation value of the second value exchange medium. Similarly, when the server 10 and the user device 20 determine that the predetermined reduction condition is satisfied, the server 10 and the user device 20 may generate second ledger updating information for reducing the number of pieces of second value exchange medium information in accordance with at least one of the amount of second value exchange medium held by the server 10 and the circulation contribution rate of the second value exchange medium.

【0080】

As described above, in the present embodiment, the exchange value per unit of the second value exchange medium converges to a value near the value obtained by multiplying the exchange value per unit of the first value exchange medium by the target exchange rate value on the basis of the arrival premium rate. In particular, when the target exchange rate is "1.00", the second value exchange medium is increased or decreased so that the exchange value per unit converges near the exchange value per unit of the first value exchange medium on the basis of the arrival premium rate. Then, the user who holds or intends to hold the second value exchange medium performs exchange request in a desired exchange rate that is conscious of a premium rate (expected rate of increase). Therefore, the user's awareness of the premium rate (expected increase rate) immediately after the second value exchange medium increase or decrease process is executed converges to the vicinity of "1". That is, the desired exchange rate based on the user's consciousness converges in the vicinity of the target exchange rate so as to reflect the ratio of the second value exchange medium increased or decreased by the reaching premium rate. In this manner, if the amount of first value exchange medium or second value exchange medium each user desires does not change as the second value exchange medium increases or decreases, it can be expected that each user will modify the desired exchange rate to offset the

increase or decrease amount of second value exchange medium. This allows the market exchange rate to be kept at or close to the value of the target exchange rate, so that the exchange value per unit of the second value exchange medium can be kept at or close to the value of the exchange value per unit of the first value exchange medium multiplied by the target exchange rate. In other words, the quantity of second value exchange medium is increased or decreased such as the exchange value per unit is prevented from deviating from the exchange value per unit of the first value exchange medium based on the target exchange rate. That is, in more general terms, the quantity of second value exchange medium increases or decreases (second value exchange medium is issued or write-off) based on the replacement ratio with the first value exchange medium.

【0081】

When the second value exchange medium is increased or decreased, the server 10 may accept the desired exchange rate relating to the exchange request recorded in the exchange request table, and the server 10 may forcibly modify the increase amount or decrease amount of the second value exchange medium so as to write-off (or decrease) the increase amount or decrease amount, as will be described later. Further, the server 10 may restrict a predetermined correction (correction in a direction opposite to the direction in which the increase amount or the decrease amount of the second value exchange medium is offset) of the desired exchange rate received from the user device 20 in a predetermined period of time (a variation restraining period described later) from a point in time when the second value exchange medium is increased or decreased. Further, the server 10 may fix the commitment process with the exchange request received from the user device 20 to the target exchange rate (first target exchange rate or second target exchange rate) for a predetermined period (fixed transaction period to be described later). In other words, in the fixed transaction period, the server 10 may generate a fixed transaction request (first fixed transaction request or second fixed transaction request) by the target exchange rate, and then cause the server 10 to prioritize the fixed transaction request over the market exchange request, and then make the server 10 agree with the exchange request received from the user device 20. This allows the exchange value per unit of the second value exchange medium to be controlled to values based on the exchange value per unit and target exchange rate of the first value exchange medium. In particular, when the target exchange rate is "1.00", the effect of keeping the exchange value per unit of the second value exchange medium equal to or close to the exchange value per unit of the first value exchange medium increases.

【0082】

The user can transfer (assignment) second value exchange medium to other users (user ID) using the user device 20. The user can also transfer (settlement, assignment, and reimbursement) the second value exchange medium between the users using the user device 20 as a consideration for the paid exchangeable value to be arbitrarily acquired (fourth economic activity).

【0083】

(1-4) Functions of first value exchange medium and second value exchange medium

Figure 2

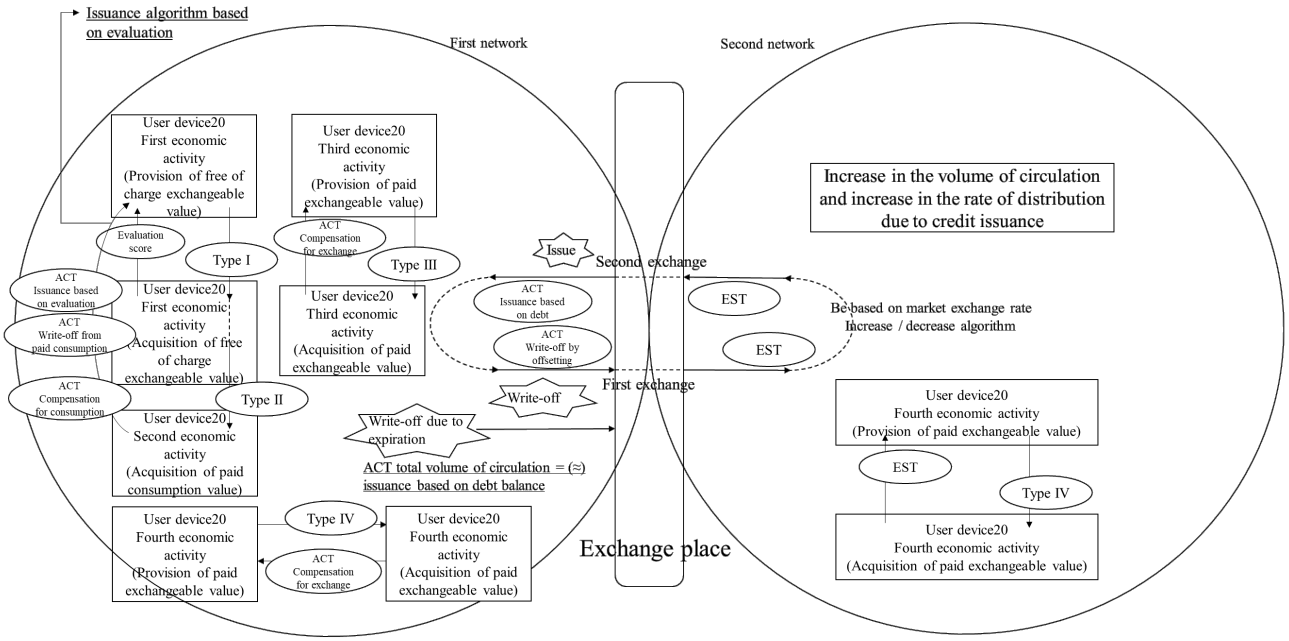


FIG. 2 is a conceptual diagram for explaining examples of mutual relationships among the above-described economic activities, value, and value exchange medium. The above-mentioned relationships among economic activities, value, and value exchange medium are expressed as follows, for example. It should be noted that the following explanations are merely examples, and do not limit the order, causality, quantity etc, of the generation and implementation of the respective economic activities, value, and value exchange medium.

【0084】

Firstly, if the basic price of the second economic activity (the compensation for consumption standard for acquiring the paid consumption value belonging to the type II) is uniformly increased (based on the content of the commitments), the consumed amount of the first value exchange medium relating to the second economic activity increases, and the issuance based on evaluation amount of the first value exchange medium increases. As a result, the issuance based on evaluation quantity of first value exchange medium per evaluation score is increased. In other words, the exchange value per unit of the first value exchange medium relating to the compensation for consumption associated with the act of acquiring the paid consumption value belonging to the type II and the issuance based on evaluation based on the assessment of the free-of-charge exchangeable value belonging to the type I is reduced.

【0085】

Then, increasing pressures are applied to the prices of the first value exchange medium in the first economic activity to increase the consumption quantity of the economic value relating to the issuance based on evaluation so as to match the sensation of the user with respect to the size of the economic value (purchasing power) according to

the issuance based on evaluation quantity of the first value exchange medium in the first economic activity, and the sensation of the user with respect to the size of the economic value (purchasing power) according to the consumption quantity of the first value exchange medium in the second economic activity, thereby increasing the consumption quantity of the economic value relating to the issuance based on evaluation. In other words, the exchange value per unit of the first value exchange medium related to the paid exchangeable value belonging to the type III is reduced. Also, in order to match the sense of the size of the user's economic value (purchasing power) with respect to the price of the paid exchangeable value in the third economic activity, an increasing pressure is applied to the price of any paid exchangeable value in the fourth economic activity, and the amount of remittance of the first value exchange medium relating to the fourth economic activity is increased. In other words, the exchange value per unit of the first value exchange medium relating to any paid exchangeable value belonging to type IV is reduced. Thus, increasing the required number of first value exchange medium increases the number of first value exchange medium in the second exchange, increasing the issuance based on debt balance of the first value exchange medium, increasing the total volume of circulation of the first value exchange medium, and decreasing the exchange value per unit of the first value exchange medium to approach the commitments. In other words, the devaluation of the exchange value per unit of the first value exchange medium penetrates among the users.

【0086】

From the above, as the demand for first value exchange medium increases, the second value exchange medium becomes relatively insufficient, and the exchange value per unit of the second value exchange medium in the exchange place function increases relatively as the exchange value per unit of the first value exchange medium decreases (the exchange value per unit decreases), and the expected increase rate rises. By executing the increasing process by the smart contract units 131 and 231, which will be described later, the total volume of circulation of the second value exchange medium is increased, and the exchange value per unit of the second value exchange medium is decreased so as to converge to a value obtained by multiplying the exchange value per unit of the decreased first value exchange medium by the target exchange rate. The commitments can then be achieved by increasing the total volume of circulation of first value exchange medium and second value exchange medium as the issuance based on debt quantity of first value exchange medium by the second exchange request increases to meet the demand as the second value exchange medium increases. In other words, the exchange value per unit of first value exchange medium and second value exchange medium is rounded down to match the uniform increase of the basic price of the second economic activity (compensation for consumption criteria for obtaining paid consumption value belonging to type II).

【0087】

In the present embodiment, the first value exchange medium is issuance based on evaluation (evaluation distribution including first economic activity by evaluation value calculation by issuance algorithm based on evaluation) based on the relative evaluation of the value (free-of-charge exchangeable value) transferred between the user device 20 in the economic value without charge via the servers 10, and the magnitude of the economic value included in the relative evaluation (consumption amount related to the obtaining action of the paid consumption value belonging to the type II). In this manner, since the relative estimation and the controllable economic value are essential to the first value exchange medium, the first value exchange medium has the value scale function of being

stably and autonomously exerted. In other words, the exchange value per unit of the first value exchange medium can be controlled by controlling the prices associated with the act of obtaining the paid consumption value belonging to type II. That is, in more general terms, the first value exchange medium determines the issuance based on evaluation quantity based on the consumed quantity associated with the free-of-charge exchangeable value relative assessment and paid consumption value acquisition actions.

【0088】

Then, the first value exchange medium is purchased issuance based on debt and offset based on a process of exchanging with the second value exchange medium by generating a supply without excess and deficiency with respect to the demand and a demand without excess and deficiency with respect to the supply by the exchange place function of the servers 10. Here, second value exchange medium is a value exchange medium having a value storage function in which the quantity is increased or decreased under a predetermined condition so as to keep the exchange value per unit converged to a value obtained by multiplying the exchange value per unit of the first value exchange medium by the target exchange rate.

【0089】

Therefore, the first value exchange medium is connected to the second value exchange medium by the exchange place function of the server 10, and can be said to be "value exchange medium in which the value scale function to be issued (issuance based on evaluation) is autonomously exerted based on the relative evaluation (evaluation distribution including economic value by evaluation value calculation) of the value to be transferred between users without charge". In addition, the second value exchange medium can be said to be "a value exchange medium having a value storage function of issuing or write-off (autonomously increasing or decreasing the circulation quantity) based on a relative evaluation of value transferred between users (distribution quantity adjustment as a total quantity by keeping the evaluation distribution and supply-demand balance converged to an equilibrium state based on the holding quantity, the circulation contribution rate, the transfer evaluation value calculation, etc).

【0090】

The second value exchange medium may have, for example, a credit issuance function as described later. In this instance, the credit issuance source user (which may include the system administrator) may issue a new second value exchange medium at the price of assets such as claims and stocks acquired from the credit issuance destination user (in other words, a basis for collecting economic value for credit issuance which can be represented by a second value exchange medium quantity) based on the degree of trust of the credit issuance destination user. This can be expected to increase the number of second value exchange medium and first value exchange medium flows and increase the flow rate.

【0091】

Thus, the first value exchange medium and second value exchange medium connected to each other by the exchange place function of the servers 10 may function as a value exchange medium as an integral evaluation standard currency. Then, the first value exchange medium in which the value is based on the evaluation value (in other words, the economic value related to the first value exchange medium consumed in the acquiring action of the paid consumption value belonging to the type II) as the economic value inherent in the free-of-charge exchangeable value provides the second value exchange medium with the function (anchoring function) as the exchange value

per unit standard, while the value storage function can be acquired by the first exchange to the second value exchange medium (the target first value exchange medium in the first exchange is write-off by the offsetting purchases of the servers 10). That is, in the present embodiment, the first value exchange medium and the second value exchange medium can be provided to the user in such a manner that the "value scale function" (in other words, the unified reference function of the size of the economic value inherent in each value exchange medium and the unified reference function of the scale of the scale) as the basis of the function as the value exchange medium can be strongly stabilized and controlled beyond the space and the time, as a whole, by the issuance algorithm based on debt using the exchange place function by the server 10, the algorithms for increasing and decreasing the second value exchange medium by the smart contract units 131 and 231, and the consecutive cooperative processing of the respective processing by the server 10 for the issuance algorithm based on evaluation.

【0092】

(1-5) Comparisons with legal currency and virtual currency

Figure 3

Functions, etc.	Legal currency	Cryptocurrency・crypto assets (Bit coins, etc.)	First value exchange medium	Second value exchange medium
Basis for currency credibility	・National economic power ・National rights to issue exclusive currency ・National ability to repay government issued bonds ・People's labor force (Production and Consumption Capabilities)	・Discretion of the issuer (No concept of credibility)	・Economic value included in people's desire for social activities by issuance algorithm based on evaluation ・First network's economic power (tax collection) ・Exclusive right to issue the first network ・User's productivity and consumption	- (Dependent on first value exchange medium and linkage) ・Economic power of the second network (tax collection capacity) ・Exclusive right to issue the second network ・User's productivity and consumption
Exchange value per unit fluctuations	・Foreign exchange fluctuations ・Inflation due to macroeconomic policy	・Dependent on the trading party	・Control by the system administrator (Macroeconomic Controllability by Updating Uniform Setting of the basic price of the second economic activity)	- (Dependent on first value exchange medium)
Scope of applicability	・Issuing state ・Foreign currency holdings	・User's discretion ・No restrictions	・First network to build ・Scope of the first network provided by the system administrator ・Scope of first value exchange medium circulation	・All of the user device 20 that's installed wallet administration application X ・No restrictions (worldwide)
Inflation concerns	Yes	No concept	None	- (Dependent on first value exchange medium)
Exchange with other assets	○	○	○	○
International trade	△	◎	◎	◎
Setting the write off deadline	×	×	○	Autonomously publish (increase) and write-off (decrease) by algorithms.
Circulation control	△	×	◎	- (Dependent on first value exchange medium)
Measure of value	○ (with unstable elements)	×	◎	- (Dependent on first value exchange medium)
Value retention	○ (With inflation)	○ (Fluctuation)	- (Dependent on second value exchange medium)	◎
Circulation speed	△	×	◎	◎

FIG. 3 is a diagram for explaining examples of functions of the first value exchange medium and the second value exchange medium in the present embodiment. The function of the value exchange medium (currency) will be described by comparing with the legal currency and the virtual currency with FIG. 3. The following descriptions are merely examples, and do not limit the functions of the respective currency.

【0093】

As shown in Fig. 3, legal currency's resistance to inflation is fragile. Not only is it affected by policies such as

macroeconomic policies of issuing entities, but credibility depends heavily on the economic power of issuing entities (such as national power and JGB redemption capacity) and legal mandatory circulating power. The legal currency is issued for each issuing entity, and the exchange rate arises mainly from the necessity of international settlement in the circulate in the economic bloc governed by the issuing entity, and today, in which "value" is circulate worldwide. Despite the fact that the scope of circulation is limited to the economic bloc governed by the issuing entity, the legal currency is greatly affected by other legal currency issued by outside the issuing entity, and is greatly affected by other legal currency. In addition, except for a decrease in deposits due to a decrease in debt, the legal currency is circulation among users on the assumption that it will not write-off, and depends on an increase in the debt of newly issued instruments. Therefore, the rate of circulation during normal times when there are no inflation concerns is slow, and it is easy for them to stay at one place (more people have, fewer people do not have). It should be noted that the circulation control of legal currency is limited to the form of indirect external influences exerted by money creation systems such as commercial banks on the state in which liability is chained between economic entities such as individuals and corporations (the state in which debt and receivables are circulated in a chained manner between users). In most cases, circulation control is pursued through policy-based interest rates (call rates) and public market manipulations (buy and sell operations) by central bank. In this legal currency, "value scale function" and "value storage" functions, which are the functions of the value exchange medium, appear to generally function in normal times, although there are some fluctuations in the economic bloc governed by the issuing entity. However, even in this case, there is a problem that the impact of exchange rates cannot be avoided, the possibility of financial instability in the event of erroneous policy cannot be eliminated, and further, the development of international relations with which interests cross each other cannot be neglected.

【0094】

As shown in FIG. 3, the virtual currency(also referred to as "crypto assets") of the so-called Bitcoin etc, is a value exchange medium in which the location of the issuing entity and the responsibilities are unstable, the electronic data is merely, and the value of the data itself or the value of the object to be based is not established, so that the data exists as a so-called "content-free" value exchange medium. From this it can be seen that the virtual currency is very uncertain about the basis of credibility, and even though it is distributed worldwide (among users) as a value exchange medium, the exchange value per unit is unstable, and no one can predict when the value (exchange value per unit) will crash or soar. Further, the circulation rate as a value exchange medium of the virtual currency does not reach the legal currency, and it is said that it is only a speculative object for the user. Thus, no circulation control is made, i.e. called "empty" virtual currency, which does not have a "value scale function" which is a critical function as a value exchange medium, on the other hand, even if the exchange value per unit varies, only the basic elements of the "value storage function" have.

【0095】

It should be noted that the conventional value exchange medium of electronic money, points, etc has a value source in the legal currency, and since it is not circulate value exchange medium to construct a economic bloc by itself, these are regarded as a dependent medium of the legal currency, and will not be described here. As described above, the value exchange medium has a legal currency and a virtual currency, and as shown in FIG. 3, the difference between the first value exchange medium and the second value exchange medium and the other value exchange medium will

be described below.

【0096】

The currency is a value exchange medium that functions with circulateeconomic bloc, but the circulate economic bloc of the first value exchange medium is the first network. The first value exchange medium is the only settlement in the first network and is issuance based on evaluation and issuance based on debt using predetermined algorithms in the first network and circulate. The user logs in using an account on the first network to perform an economic activity (exchanging "value" with another user) by using the account on the first network. In the first network, it is also possible to add a tax collection function to the user's economic activity. In other words, the basis for first value exchange medium's credibility can be said to be the economic power of the first networks. The first value exchange medium exerts a stable "value scale function" with predetermined algorithms in order that the first network provides a value exchange medium function to users throughout the world (all where there is a user device 20 connected to the communication network N) and over time. The first value exchange medium is characterized in that it is easier to control circulation than the statutory currency because it does not raise inflation concerns because it exhibits the "value scale function" that is stronger than the statutory currency (i.e., it can be write-off by consumption in the second economic activity by the user terminal 20, it can be write-off by offset purchase of debt issued by the server 10, and it can be write-off by the due date, and it is a value exchange medium that is constantly write-off and is continuously valued and issued by the algorithm from time to time, by valuation issuance, and debt issuance). In addition, it can control the unit exchange value by controlling prices of the first network (control of commitments and consumption quantity related to the second economic activity).

【0097】

Next, the second value exchange medium will be described. The second value exchange medium is a virtual currency(crypto assets) with the characteristic that it can be exchanged for first value exchange medium at any time (the "content" can be said to be first value exchange medium) in which the quantity increases or decreases autonomously based on the expected rate of increase relative to the exchange value per unit of the first value exchange medium. Thus, when the second value exchange medium is decoupled from the first value exchange medium, the expected growth rate cannot be calculated, which can be just the so-called "content-free" virtual currency. As described above, since it is assumed that the second value exchange medium functions integrally with the first value exchange medium, the second value exchange medium in which it is connected to the first value exchange medium will be described.

【0098】

As shown in FIG. 3, the second value exchange medium is a so-called first value exchange medium based value exchange medium. Therefore, the economic bloc (second network) of the second value exchange medium overlaps with the economic bloc (first network) of the first value exchange medium and becomes all the places where the user device 20 connected to the communication network N exists. The basis for second value exchange medium credibility depends (interlocks) on the first value exchange medium. In addition, if the second value exchange medium has a credit issuance function, the soundness of assets such as claims acquired by the credit issuance source from the credit issuance destination may be affected by the grounds for the credibility of the second value exchange medium. The second value exchange medium is designed to "value scale function" the first value exchange medium by increasing

or decreasing its quantity by the cooperation of the smart contracts 131 and 231 and the exchange place manager 15 and by a series of other algorithms. Also, if the "value scale" (exchange value per unit) of the first value exchange medium fluctuates, the second value exchange medium fluctuates to follow the fluctuation of the "value scale" of the first value exchange medium, and increases or decreases based on the expected rate of increase, so that the quantity fluctuates to counteract the fluctuation of the second value exchange medium's asset-related value (exchange value) due to exchange value per unit fluctuations such as price fluctuations, for example. The second value exchange medium has a basic "value storage function" due to its virtual currency. In addition, measures for varying the quantity of issuance by evaluating the degree of contributions of the user to the currency circulation can be included in the configuration. From these facts, the second value exchange medium can function as a fast global currency of an inflation-tolerant circulation control capable monetary circulation speed in which the "value scale function" and the "value storage function" are exhibited larger or stronger than those of the legal currency and the virtual currency.

【0099】

(2) Configuration

(2-1) System Configuration

Figure 4

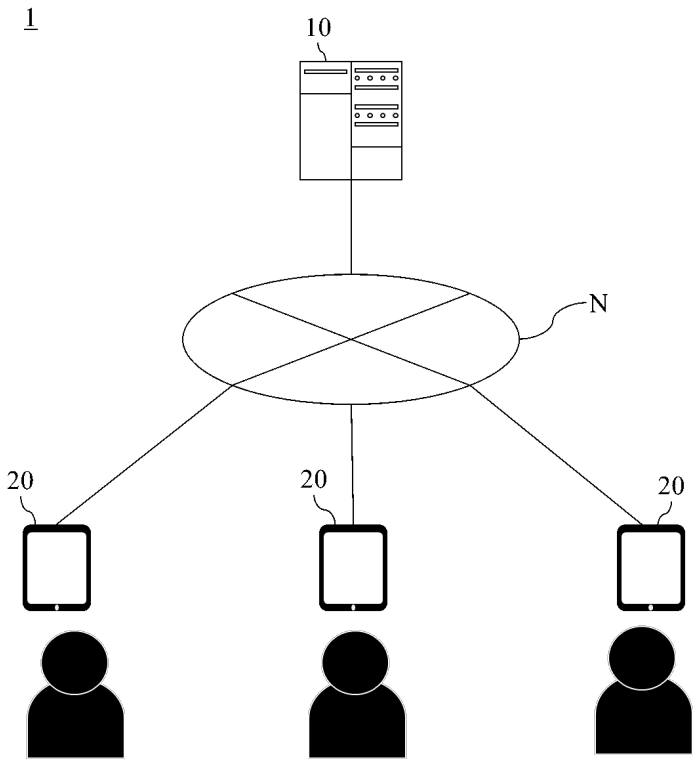


FIG. 4 is a diagram illustrating an exemplary configuration of the value exchange medium circulation system 1. The value exchange medium circulation system 1 includes servers 10 and a plurality of user device's 20, which are communicably connected via communication networks N such as the Internet. The server 10 is an example of an information processing device used by a system administrator, and the server 10 provides a service for managing, for example, first value exchange medium and second value exchange medium (hereinafter, sometimes referred to as "value exchange medium service") to a user. The user device 20 is an exemplary information processing device used by a user, and serves as an interface for using value exchange medium services provided by the servers 10. Hereinafter, a network composed of the servers 10 and the plurality of user device's 20 may be referred to as a value exchange medium circulation network.

【0100】

(2-2) Hardware Configuration

Figure 5

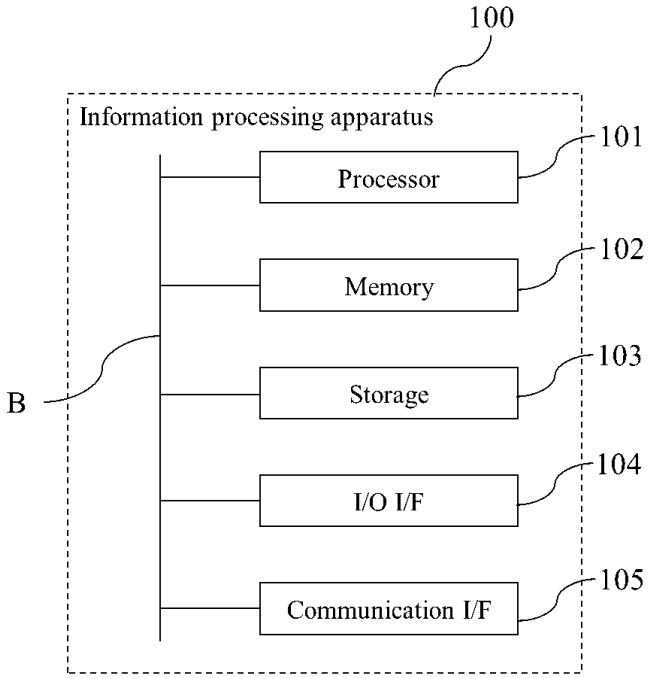


FIG. 5 is a diagram showing an exemplary hardware configuration of the server 10 and the user device 20. Below, When the servers 10 and the user device 20 do not need to be distinguished from each other, they are collectively referred to as an information processing device 100. The information processing device 100 may include, for example, a smart phone, a cellular phone (feature phone), a computer (e.g., desktop, laptop, tablet, etc.), a server device, a media computer platform (e.g., cables, satellite set-top boxes, digital video recorders, etc.), a handheld computer device (e.g., PDAs (Personal Digital Assistant), email clients, etc.), a wearable terminal (e.g., eyeglass-type device, watch-type device, etc.), another type of computer, a communication platform, and combinations of these devices.

【0101】

The information processing apparatus 100 includes a processor 101, a memory 102, a storage 103, an input/output interface (input/output I/F) 104, and a communication interface (communication I/F) 105. As an example and not by way of limitation, the hardware components of the information processing apparatus 100 are connected to each other via a bus B.

【0102】

The information processing device 100 implements the functions and/or methods described in the present embodiment in cooperation with the processor 101, the memories 102, the storages 103, the input/output I/F104, and the communication I/F105.

【0103】

The processor 101 executes functions and/or methods implemented by code or instructions included in a program stored in the storage 103. The processor 101 includes, but is not limited to, a central processing unit (CPU), an MPU (Micro Processing Unit), a GPU (Graphics Processing Unit), a microprocessor (microprocessor), a processor core (processor core), a multiprocessor (multiprocessor), a ASIC(Application-Specific Integrated Circuit, a FPGA(Field Programmable Gate Array), etc and each processing disclosed in each embodiment may be realized by a logical circuit (hardware) or a dedicated circuit formed in an integrated circuit (IC (Integrated Circuit) chip, LSI (Large Scale Integration)), etc. These circuits may be realized by one or a plurality of integrated circuits, and a plurality of processes shown in each embodiment may be realized by one integrated circuit. The LSI may also be referred to as a VLSI, a super LSI, an ultra LSI, etc depending on the difference in the degree of integration.

【0104】

The memory 102 temporarily stores a program loaded from the storage 103 by the processor 101, and provides a work area for the processor 101. The memory 102 also temporarily stores various data generated while the processor 101 executes the program. Memory 102 includes, by way of example and not limitation, RAM (Random Access Memory), ROM (Read Only Memory), etc.

【0105】

The storage 103 stores programs. The storages 103 include, but are not limited to, HDDs (Hard Disk Drive), SSDs (Solid State Drive), flash memories, etc.

【0106】

The communication I/F105 transmits and receives various data via the communication network N. The communication may be performed by wire or wireless, and any communication protocol may be used as long as the communication can be performed with each other. The communication I/F105 has a function of executing communication with other information processing apparatuses via the communication networks N. The communication I/F105 transmits various data to other information processing apparatuses in accordance with an instruction from the processor 101. The communication I/F105 receives various data transmitted from other information processing apparatuses and transmits the data to the processor 101.

【0107】

The input/output I/F104 includes an input device for inputting various operations to the information processing apparatus 100, and an output device for outputting a processing result processed by the information processing apparatus 100. The input/output I/F104 may be integrated with the input device and the output device, or may be separated from the input device and the output device.

【0108】

The input device is realized by any one or a combination of all types of devices capable of obtaining an input from a user and transmitting information relating to the input to the processor 101. The input device may include, by way of example and not limitation, hardware keys such as a touch panel, a touch display, and a keyboard, a pointing device such as a mouse, a camera (operation input via an image), and a microphone (operation input by voice). The input device may also include various sensors capable of obtaining various physical quantities based on the user's operation or state or the like, such as GPS sensors, acceleration sensors, inclination sensors, vibration

sensors, temperature sensors, barometric pressure sensors, humidity sensors, illumination sensors, pressure sensors, blood pressure sensors, heart rate sensors, body temperature sensors, and perspiration sensors.

【0109】

The output device is realized by any one or a combination of all types of devices capable of outputting the processing result processed by the processor 101. When the processing result is output as a video and/or a moving image, the output device is realized by any one or a combination of all types of devices capable of displaying the display data according to the display data written in the frame buffer. By way of example, and not limitation, output devices include touch panels, touch displays, monitors (such as, but not limited to, liquid crystal displays (LCD) and OELD(Organic Electroluminescence Display), head mounted displays (HMDs: Head Mounted Display), projection mappings, holograms, devices capable of displaying images, textual information, etc in air (which may be vacuum), speakers (audio output), printers, etc. These outputting devices may be capable of displaying displayed data in a 3D.

【0110】

The programs of the present embodiment may be provided in the form of being stored in a storage medium readable by a computer. The storage medium is capable of storing programs in a "tangible medium that is not temporary". The programs include, by way of example and not limitation, software programs and computer programs.

【0111】

A storage medium may include, where appropriate, one or more semiconductor-based or other integrated circuits (ICs) (e.g., by way of non-limiting example, field-programmable gate arrays (FPGA), application-specific integrated circuits (ASIC), etc.), hard disk drives (HDDs), hybrid hard drives (HHDs), optical disks, optical disk drives (ODDs), magneto-optical disks, magneto-optical drives, floppy diskettes, floppy disk drives (FDDs), magnetic tapes, solid-state drives (SSDs), RAM drives, secure digital cards or drives, any other suitable storage medium, or any suitable combination of two or more of these. The storage medium may be volatile, non-volatile, or a combination of volatile and non-volatile, as appropriate.

【0112】

The program of the present embodiment may be provided to the information processing device 100 via any transmission medium capable of transmitting the program, such as communication networks and broadcasting waves. The present embodiment can also be realized in the form of a data signal embedded in a carrier wave in which a program is embodied by electronic transmission.

【0113】

The program of the present embodiment is implemented using, for example, without limitation, a scripting language such as ActionScript, JavaScript (registered trademark), an object-oriented programming language such as Objective-C, Java (registered trademark), a markup language such as HTML5, etc.

【0114】

At least a part of the processing in the information processing apparatus 100 may be realized by cloud computing configured by one or more computers.

【0115】

At least part of the processing in the information processing apparatus 100 may be performed by another information processing apparatus. In this case, at least a part of the processing of each functional unit realized by the processor 101 may be performed by another information processing apparatus.

【0116】

(2-3) Functional configuration of the server 10

Figure 6

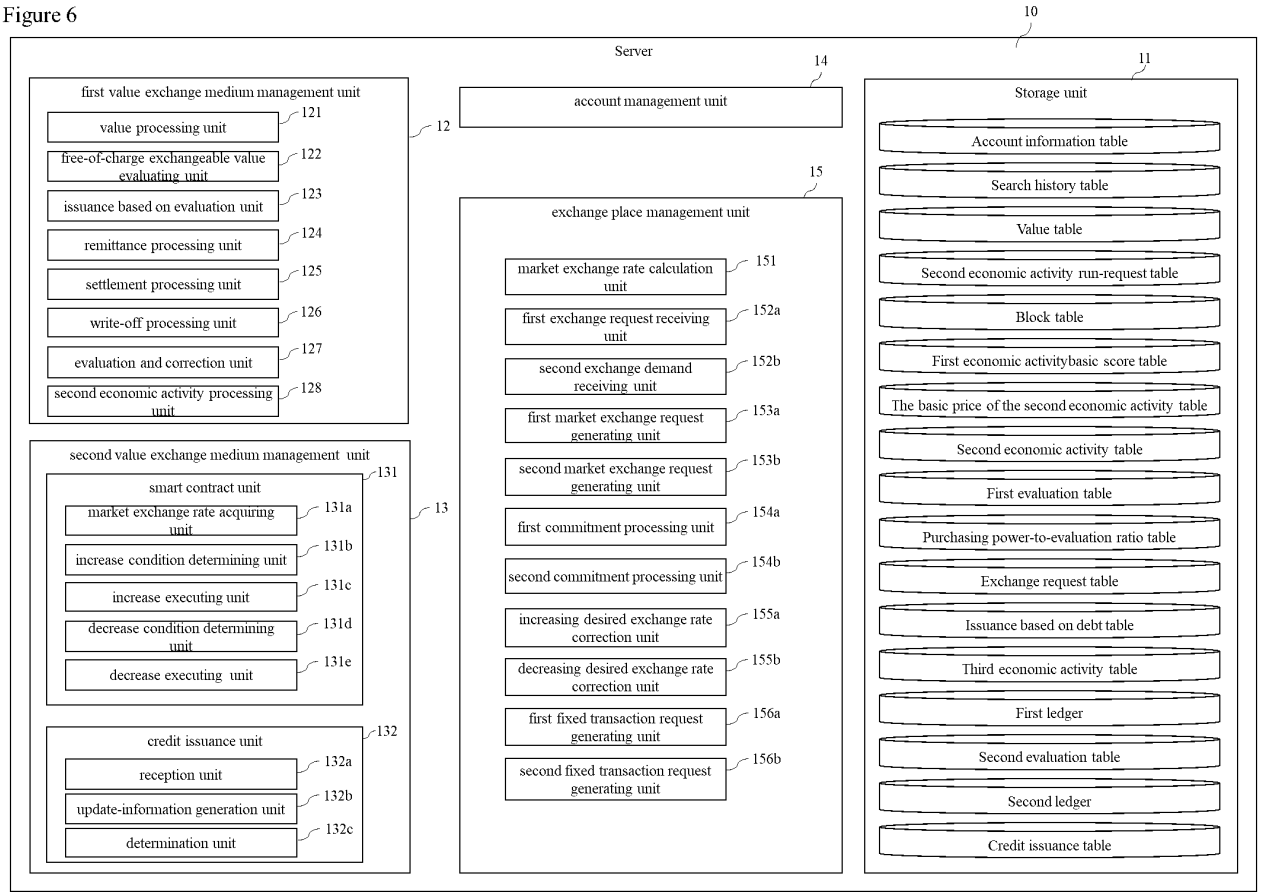


FIG. 6 is a block diagram showing an example of the functional configuration of the server 10. The server 10 includes, for example, a storage unit 11, a first value exchange medium management unit 12, a second value exchange medium management unit 13, an account management unit 14, and a exchange place management unit 15. These are realized by the cooperation of the processor 101, the memories 102, the storages 103, the input/output I/F104, and the communication I/F105 included in the above-described information processing device 100.

【0117】

(2-3-1) storage unit 11

The storage unit 11 stores, for example, an account information table, a search history table, a value table, a second economic activity execution-request table, a block table, a first economic activity basic score table, a the basic price of the second economic activity table, a second economic activity table, a first evaluation table, a purchasing power-to-evaluation ratio table, a exchange request table, a issuance based on debt table, a third economic activity table, a first ledger, a second evaluation table, a second ledger, and a credit issuance table.

【0118】

<Account Information Table>

[Drawing 7A]

User ID	Distinction between individuals and business operators	Gender/date of birth (in case of individual)/ Industry and startup period (in the case of entrepreneurs)	User information	Regional attributes
U001	Individual	Male, March 1, 1974	・・・	Minato-ku/Tokyo/JPN
U002	Business operator	Founded in manufacturing in 1950	・・・	Minato-ku/Tokyo/JPN
U003	Individual	Women, October 1, 1990	・・・	Los Angeles/California/USA
・・・	・・・	・・・	・・・	・・・

FIG. 7A is a diagram illustrating an exemplary account-information table. The account information table is a table for managing users. The account information table schedule, for example, "identification information for identifying a user (user ID)", "individual and business operator", "sex/birth date (individual)", "industry/startup date (business operator)", "user information", and "region attribute". Here, "individual and business operator" records the individual and business operator as the type of the user's account. Also, in "Sex, birth date (in the case of an individual)/industry type/startup date (in the case of an entrepreneur)", the sex and birth date of the user in the case of a user as an individual and the industry type and startup date of the entrepreneur in the case of a user as an entrepreneur are recorded. In the "user information", arbitrary attribute information of the user is recorded. In the "region attribute", the base region of the user is recorded. The "regional attributes" may include constituent group.

【0119】

<Search History Table>

[Drawing 7B]

Search date and time	Main district (Including regional attributes)	User ID	Distinction between the first economic activity and third economic activity	Subject District of Search (including Local Attributes)	Type	Search word
2019/02/10 16:53	JPN	U234	First economic activity	JPN	IA	Motorcycle
2019/02/11 16:53	USA	U410	Third economic activity	JPN	IIIC	Dog
2019/02/12 16:53	JPN	U678	First economic activity	USA	IC	Flower
. . .	. . .	. . .	. . .	. . .	. . .	. . .

FIG. 7B illustrates an exemplary search history table. The retrieval history table is, for example, a table for managing a history of retrieval of free-of-charge exchangeable value (value belonging to type I) and paid exchangeable value (value belonging to type III) performed by the user using the user device 20. The retrieval history table may include, for example, "retrieval date and time," "constituent group (including region attribute)," "user ID," "first economic activity and third economic activity," "constituent group to be retrieved (including region attribute)," "type," and "retrieval word." For example, the server 10 can acquire a history of the search from the user device 20 and record the history in the search history table. More specifically, for example, the server 10 may record the search content received from the user device 20 in the search history table when the server 10 transmits a result of a search request, a list request, etc relating to the free-of-charge exchangeable value belonging to the type I or the paid exchangeable value belonging to the type III received from the user device 20 to the user device 20.

【0120】

<Value Table>

[Drawing 7C]

Value ID	Value type	Type	Price	Value content	Value provider identity	Value providers Constituent group
V001	Free-of-charge exchangeable value	Type IA	-	・・・	U009	USA
V002	Paid exchangeable value	Type IIIB	500ACT	・・・	U123	JPN
V003	Free-of-charge exchangeable value	Type IC	-	・・・	U045	USA
・・・	・・・	・・・	・・・	・・・	・・・	・・・

FIG. 7C is a diagram illustrating an exemplary value table. The value table is a table for managing value belonging to the types I and III. The value may be paid exchangeable value or free-of-charge exchangeable value . The value table may be divided into a free-of-charge exchangeable value table and a paid exchangeable value table to separately manage the value belonging to the type I and the value belonging to the type III. The value table may include, for example, an ID (value ID) for identifying the value, a value type, a type to which the value belongs, a price of the value, a content of the value, a user ID (value provider ID) related to the user who is the value provider, and constituent group to which the value provider belongs.

【0121】

<Second Economic Activity Execution Request Table>

[Drawing 7D]

Execution request approval date and time	Main district of the execution requesting users	Execution requesting user User ID	Type of the push content	Push content data	District subject to push	User to be pushed	Timing of the push	Operating condition of the user device 20 to be pushed
2019/1/25	JPN	U358	Type IIA (large)-F (medium)-K (small)	P001JPEG	USA	Individual/male/20s/40s/Los Angeles/Types IA, B, D Interesting Trends/Volume of evaluation value Acquisition 100 or more per month within six months/Volume of Type IIIA B/R Purchased 500ACT or more per month within three months/Holding of EST10000 or more	USA Hour Monday-Friday 18:00 to 26:00/USA Hour Saturday/Day 8:00 to 24:00	Type IA Search/Acquisition/Type IB Search/Type ID Acquisition
2019/1/26	USA	U798	Type IIB-C-B	P002MP4	JPN	Service industry/Less than 3 years of startup/Tokyo Metropolitan Government/Type IA, C and D interest trend/Category II consumption volume of 500 or more per month within 3 months/Category III sales value of 300ACT or more per month within 2 months	JPN Hour, Monday, Wednesday, Friday 10:00 to 20:00	Search/acquisition of type IB/type IE/type IGAB search/acquisition
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

FIG. 7D shows an exemplary second economic activity run-request table. The second economic activity execution request table is a table for managing the execution request of the second economic activity received by the servers 10 from the user device 20. In the second economic activity execution-request table, for example, data which is transmitted from the user device 20 to the server 10 and which is the content of an advertisement (push-information) relating to the second economic activity is registered. The second economic activity execution request table may include, for example, "the execution request approval date and time", "the constituent group to which the execution request user belongs", "the user ID of the execution request user", "the type to which the push content belongs", "the push content data", "the push target constituent group", "the push target user", "the push timing", and "the condition of the operation status of the user device 20 to be pushed".

【0122】

<Block Table>

[Drawing 7E]

User ID	Commencement	Term	Block object
U005	2019/5/1	2019/5/31	Advertising/Type I Acquisition Record/Type I Search Record/Type III Acquisition Record/Type III Search Record
U007	2019/5/5	2019/8/4	Advertising
. . .	. . .	. . .	. . .

FIG. 7E is a diagram illustrating an exemplary block table. The block table is a table for managing various kinds of information of the second economic activity of the other party second economic activity block type. The block table may include, for example, "user ID", "start time", "end time", and "block target". Starting and ending times mean, for example, the start and end times, respectively, of a period in which a block is executed. The block target indicates, for example, the category of the type II related to the second economic activity of the push type, the pull type, etc by another person as the block target. When the server 10 receives the "block request" (the execution request of the second economic activity of the other party second economic activity block type) from the user device 20, the server 10 updates the second ledger, and records the "block content" (the content of the execution request of the second economic activity of the other party second economic activity block type) in the block table stored in the storage unit 11 of the server 10. The block table may be integrated into the above-described second economic activity execution-request table.

【0123】

<First Economic Activity Basic Point Table>

[Drawing 7F]

	Main district A	Main district B	Main district C	・・・
Type IA (IT Articles/Medium Classification: Technology Articles/Major Classification: Articles)	1 point/output 300 written language (No count less than 300 written language)	5 points/Output 1000 written language (1000 written language no-count)	1 point/output unit 1000 written language (1000 written language no-count)	・・・
Type IB (Test Driving Review/Medium Classification: Automobile Review/Major Classification: Review)	2 points per 3 minutes of viewing (No count for less than 3 minutes)	2 points per 3 minutes of viewing (No count for less than 3 minutes)	10 points per 8 minutes of viewing (No count for less than 8 minutes)	・・・
Type IC (Character Illustration/Medium Classification: Digital Illustration/Major Classification: Illustration)	5 points per download	3 points per download	2 points per download	・・・
・ ・ ・	・ ・ ・	・ ・ ・	・ ・ ・	・ ・ ・

FIG. 7F is a diagram illustrating an exemplary first economic activity basic score table. The first economic activity basic score table is a table for managing a basic score serving as a basis for calculating the evaluation score relating to the first economic activity. The first economic activity basic score table may include, for example, basic score for evaluating the free-of-charge exchangeable value , which is defined by the operation data of the user device 20 for acquiring the free-of-charge exchangeable value belonging to the type I in the first economic activity. In the first economic activity basic score table, for example, a basic score may be defined for each category and for each constituent group of the type I to which the free-of-charge exchangeable value to be the first economic activity target belongs. The configuration of the category of the type I, the values of the basic score, etc included in the first economic activity basic score table may be set by the system administrator, or may be determined based on the basic score correction request received from at least one user device 20. The basic score may not have a difference for each constituent group, or may have a difference for each constituent group so as to reflect the characteristics of each constituent group, for example. The basic score may be collectively set (changed) across the constituent group for each particular category included in the type I.

【0124】

The substantial weight of an assessment for a free-of-charge exchangeable value belonging to type I may differ from category to category, from constituent group to constituent group, or from time to time. Therefore, the server 10 may accept a request for correcting the basic score from the user device 20, for example, and may correct the basic score included in the first economic activity basic score table in response to the request. The basic score correction request may include, for example, a user ID, a category of type I, information indicating a desired basic score, etc. The server 10 may accept the basic score correction request from at least one user device 20, and may correct the basic score included in the first economic activity basic score table based on the basic score correction request at a predetermined timing (e.g., every predetermined period, at a timing specified by the system administrator, or at any time). The method of calculating the correction value of the basic score is not particularly limited, and for example, the method may be a weighted average (including a simple average value), a median value, etc and of the basic score

after the desired correction related to the respective basic score correction requests. In addition, the server 10 may refer to the search history table stored in the storage unit 11, analyze the number of searches, the frequency, etc for each category of the type I, and then correct the basic score included in the first economic activity basic score table based on the analyzed result. The user device 20 may display a screen for inputting various types of information relating to basic score correcting requests by the user. The screen may be configured in any manner.

【0125】

<Second Economic Activity Basic Price Table>

[Drawing 7G]

	Main district A	Main district B	Main district C
Type IIA	300 ACT/min	200 ACT/min	250 ACT/min
Type IIB	800 ACT/times	500 ACT/times	1000 ACT/min
Type IIC	5ACT/ pixels × minute	4ACT/ pixels × minute	2ACT/ pixels × minute
Type IID	8ACT/ pixels × times	9ACT/ pixels × times	12ACT/pixel times
Type IIE	100 ACT/min x coefficient (display order of the auction method)	120 ACT/min x coefficient (display order of the auction method)	80 ACT/min x coefficient (display order of the auction method)
Type IIF (Advertising Block)	3000 ACT/month	2000 ACT/month	2500 ACT/month
Type IIG (Type I Acquisition Recording Block)	500 ACT/month	300 ACT/month	400 ACT/month
Type IIH (Type I Search Record Block)	200ACT/month	150 ACT/month	170 ACT/month
Type III (Type III Acquisition Recording Block)	300 ACT/month	200ACT/month	250 ACT/month
Type IIJ (Type III Search Record Block)	100 ACT/month	60 ACT/month	80 ACT/month
. . .	. . .	. . .	. . .

FIG. 7G is a diagram illustrating an exemplary the basic price of the second economic activity table. The basic price of the second economic activity table is a table for managing the basic prices that serve as the basis for calculating the consumed quantity of the first value exchange medium relating to the second economic activity. In the second economic activity basic price table, the operation state of the user terminal 20 subject to the second economic activity receiving the execution request content relating to the acquisition action of the paid consumption value belonging to the type II in the second economic activity (for example, in the case of "push type", the server 10 may transmit the execution request content relating to the acquisition of the paid consumption value belonging to the type II registered in the second economic activity execution request table to the display device of the user terminal 20 based on the operation state of the user terminal 20 trying to acquire the free-of-charge exchange value belonging to the type I subject to the execution request, or in the case of "pull type", the server 10 may transmit the execution request content relating to the acquisition of the paid consumption value belonging to the type II for which the

execution request is approved to the operation state of the big data based on the operation state of the user terminal 20 trying to acquire the paid consumption value belonging to the type II subject to the execution request without registering to the second economic activity execution request table). The base price for each act of acquiring the paid consumer value belonging to the category II related to the second economic activity may be included. The the basic price of the second economic activity table may include, for example, basic prices for each category of the type II to which the paid consumption value to be acquired in the second economic activity belongs and for each constituent group. The "category of type II" and the "base price" included in the basic price of the second economic activity table may be set by a system administrator, or may be determined (updated) by artificial intelligence using a machine-learning device, for example. The "base price" does not need to have a difference for each constituent group, or may have a difference for each constituent group, but when the value exchange medium circulation system 1 according to the present embodiment is implemented over a plurality of constituent group having different purchasing power sizes, the difference may be provided for each constituent group. The system administrator may define a category of each paid consumption value to classify the paid consumption value handled in the second economic activity in advance, and set a base price for each category of the type II of each constituent group according to the mode of the acquiring action of the paid consumption value classified in advance, for example, the type IIA of the constituent group A is "300 ACT/min", the type IIB is "800 ACT/times", or the type IIC is "5ACT/ pixels×minutes".

【0126】

The substantial weight of each paid consumption value, expressed in terms of base prices, for an act of acquiring a paid consumption value belonging to type II may differ from category to category, from constituent group to constituent group, or from time to time. Therefore, the server 10 may accept a request to correct the base price (base price correction request) from, for example, an information processing apparatus operated by a system administrator connected to the server 10, an input/output I/F104 (apparatus) of the server 10, or a machine-learning apparatus connected to the server 10, and may correct the base price included in the the basic price of the second economic activity table in response to the base price correction request. The base price correction request may include, for example, information indicating the category of the type II, information indicating the constituent group, and information indicating the base price after the correction. The server 10 may accept the base price correction request from at least the one device, and may correct the base price included in the the basic price of the second economic activity table based on the base price correction request at a predetermined timing (e.g., every predetermined period, at a timing specified by the system administrator, or at any time). The method of calculating the correction value of the basic price is not particularly limited, but may be, for example, an arbitrary basic price related to each basic price correction request etc.

【0127】

<Second Economic Activity Table>

[Drawing 7H]

Date and time	User ID of the user in a second economic avtivity	Constituent group to which the user belongs in a second economic activity	Second economic activity quantity	Type	Constituent group to which the user belongs in a targeted second economic activity
2019/1/1 00:00	U001	JPN	100	Type IIA	USA
2019/1/5 5:00	U001	JPN	30	Type IID	JPN
2019/1/10 21:00	U002	USA	40	Type IIA	USA
2019/1/23 13:00	U003	JPN	10	Type IIB	JPN
2019/1/23 19:00	U001	JPN	100	Type IIE	USA
2019/1/29 23:00	U004	JPN	50	Type IID	JPN
2019/1/31 12:00	U005	USA	30	Type IIC	USA
2019/2/1 00:00	U001	USA	0	Type IIF	USA

FIG. 7H is a diagram illustrating an exemplary second economic activity table. The second economic activity table is a table for managing various types of second economic activity information. The second economic activity table may include, for example, "date/time," "user ID of the user who performs second economic activity," "constituent group to which the user who performs second economic activity," "second economic activity quantity," "type," and "constituent group to which the user who is the target of second economic activity belongs." In the "date time", the time at which the second economic activity was performed is recorded. The date and time may be the world standard time. In the "second economic activity quantity", the consumed quantity of first value exchange medium in the second economic activity performed by the "user who performs second economic activity" is recorded. In the "type", the category of the type II to which the paid consumption value to be acquired in the second economic activity performed by the user belongs is recorded.

【0128】

<First Evaluation Table>

[Drawing 7I]

Date and time	Free-of-charge exchangeable value ID	Type	Free-of-charge exchangeable value providers User ID	Constituent group to which the value providers belongs in free-of- charge exchangeable	Free-of-charge exchangeable value acquirer User ID	Constituent group to which the value acquirer belongs in free of charge exchangeable value	Evaluation score	Purchasing power-to-evaluation ratio	Evaluation value	Issuance based on evaluation
2019/1/1 11:00	A001	IA	U001	USA	U003	JPN	10	2.3684	23.684	Completed
2019/1/5 5:00	A002	IB	U002	JPN	U004	USA	8	7.5000	60	Completed
2019/1/10 21:00	A001	ID	U001	USA	U005	JPN	2	2.3684	4.7368	Completed
2019/1/23 13:00	A001	IA	U001	USA	U003	JPN	10	2.3684	23.684	Completed
2019/1/23 19:00	A002	IE	U002	JPN	U007	JPN	6	2.3684	14.2104	Completed
2019/1/29 23:00	A001	IC	U001	USA	U008	USA	9	7.5000	67.5	Completed
2019/1/30 12:00	A002	IB	U002	JPN	U009	JPN	10	2.3684	23.684	Completed
2019/1/31 12:00	A001	ID	U001	USA	U008	USA	10	7.5000	75	Completed
2019/1/31 12:00	A001	IA	U001	USA	U010	USA	9	7.5000	67.5	Completed
2019/2/1 4:15	A003	IF	U003	JPN	U001	USA	15	Blank space	Blank space	Not yet

FIG. 7I is a diagram illustrating an exemplary first assessment table. The first evaluating table is a table for managing various kinds of data relating to the first economic activity for each first economic activity. The first assessment table may include, for example, "date/time," "free-of-charge exchangeable value ID," "type," "user ID of the free-of-charge exchangeable value provider," "constituent group to which the free-of-charge exchangeable value provider belongs," "user ID of the free-of-charge exchangeable value acquirer," "constituent group to which the free-of-charge exchangeable value acquirer belongs," "evaluation score," "first economic activity," and "issuance based on evaluation" for each evaluation value. In the "date time", the time at which the first economic activity was performed is recorded. The ID of the free-of-charge exchangeable value evaluated by the first economic activity is recorded in the "free-of-charge exchangeable value ID". The category of the type I to which the free-of-charge exchangeable value to be evaluated belongs is recorded in the "type". The "evaluation score" quantitatively calculates and records the evaluation score, which is calculated based on the first economic activity basic score table and the operation information relating to the acquisition of the free-of-charge exchangeable value of the user device 20 used by the free-of-charge exchangeable value acquirer, and which serves as the calculation basis of the evaluation value and the purchasing power-to-evaluation ratio. Here, the operation information is information arbitrarily (qualitatively or quantitatively) indicating the operation of the user device 20 when the user device 20 uses (acquires) the free-of-charge exchangeable value. The operating information may include any information that is obtainable by the various input devices described above (touch panels, touch displays, such as hardware and keyboards, pointing devices such as a mouse, cameras, microphones, GPS sensors, acceleration sensors, slope sensors, motion sensors, temperature sensors, pressure sensors, humidity sensors, light sensors, pressure sensors, blood pressure sensors, heart rate sensors, body temperature sensors, and perspiration sensors, etc.) provided by the

information processing device. More specifically, the operation information may be, for example, a reproduction time etc for a free-of-charge exchangeable value which is moving image data, a display data amount (including the number of display characters) for a free-of-charge exchangeable value which is written language data such as articles, etc and the operation information may be the number of display pixels etc for a free-of-charge exchangeable value which is image data. The operation data is data used as a basis for calculating a evaluation score from basic score determined for each category and for each constituent group of the type I. That is, the operation information is information that can serve as a basis for calculating the evaluation score from the basic score relating to the free-of-charge exchangeable value belonging to the type I acquired by the user device 20. A system administrator etc may arbitrarily set what kind of data the operation information is to be acquired by which input device. In particular, the system administrator etc may set the operation information so that the above-described evaluation score can be rationally calculated in accordance with the mode of free-of-charge exchangeable value for each category of the system type I. The evaluation value calculated by the free-of-charge exchangeable value evaluating unit 122, which will be described later, is recorded in "evaluation value". Information indicating whether the issuance based on evaluation of the first value exchange medium based on the evaluation value by the issuance based on evaluation unit 123, which will be described later, has been executed or has not been completed is recorded in "issuance based on evaluation". In this way, the server 10 can acquire the history information of the user's action, such as acquiring the free-of-charge exchangeable value belonging to the type I, as the big data integrated with the other tables and the ledger stored in the storage unit 11, and by treating the history information (big data) as the "value" generated in the first network, the server 10 can provide the user device 20 with the economic value as the paid consumption value as the result obtained from the action of extracting the "value" generated in the first network by the first economic activity through the second economic activity.

【0129】

The evaluation score recorded in the first evaluation table may be corrected by, for example, the evaluation correction unit 127 of the server 10 at a predetermined time, for example, at a predetermined time point prior to the free-of-charge exchangeable value evaluation unit 122 of the server 10 starting the purchasing power-to-evaluation ratio calculation process. The evaluation/correction algorithm may be a process of correcting the evaluation score based on any parameter related to the first economic activity and/or setting information set by a user, a system administrator, etc.

【0130】

As for the free-of-charge exchangeable value acquired by the respective users, for example, attributes such as which category of the type I is included, who is the provider of the free-of-charge exchangeable value, etc can be considered. The evaluation/correction algorithm may be, for example, a process of correcting the evaluation score on the basis of the ratio of the attribute of a particular free-of-charge exchangeable value relating to the evaluation score to be corrected, i.e., the free-of-charge exchangeable value acquired by the free-of-charge exchangeable value acquirer in the first economic activity, to all the free-of-charge exchangeable value attributes acquired by the user within a predetermined period.

【0131】

For example, when the category of the type I in which the free-of-charge exchangeable value is included, is the

above-described attributes, the evaluation/correction unit 127 etc of the server 10 may calculate the ratio of the free-of-charge exchangeable value included in the category among all the free-of-charge exchangeable value acquired by the user within a predetermined period, and may correct the evaluation score to be corrected based on the ratio. At this time, the larger the ratio, the smaller the evaluation score may be corrected. The smaller the ratio, the larger the evaluation score may be corrected.

【0132】

Further, for example, when the free-of-charge exchangeable value provider has the attributes described above, the evaluation/correction unit 127 etc of the server 10 may calculate the ratio of the free-of-charge exchangeable value provided by the provider of the free-of-charge exchangeable value to be corrected among all the free-of-charge exchangeable value acquired by the user within a predetermined period, and may correct the evaluation score to be corrected based on the ratio. At this time, the larger the ratio, the smaller the evaluation score may be corrected. The smaller the ratio, the larger the evaluation score may be corrected.

【0133】

The evaluation score correction process may be performed, for example, by multiplying the evaluation score by a predetermined correction factor. Here, the correction magnification may be calculated as follows, for example.

"Corrected magnification" =1+y+y'.

【0134】

Here, y=a+(1−browsing ratio of respective categories)×b, where a is the addition value when free-of-charge exchangeable value of all the same categories is acquired, and b is the addition value when free-of-charge exchangeable value of a category that has not been acquired even once is acquired. In addition, y′ =a′ +(1−browsing ratio of the respective users)×b′ , where a′ represents the addition value when the free-of-charge exchangeable value provided by the same free-of-charge exchangeable value provider has been acquired, and b′ represents the addition value when the free-of-charge exchangeable value provided by the free-of-charge exchangeable value provider that has not been acquired once has been acquired has been acquired.

【0135】

In addition, the evaluation/correction algorithm may be, for example, a process of correcting the evaluation score based on the ratio of the part of the total free-of-charge exchangeable value of one unit, the part being used by the free-of-charge exchangeable value acquirer, which is outputted by the user device 20. As described above, the evaluation score correction process may be performed, for example, by multiplying the evaluation score by a predetermined correction factor. Here, the correcting factor may be, for example, the ratio of the part of the entire free-of-charge exchangeable value of one unit, which is used by the free-of-charge exchangeable value acquirer, which is outputted by the user device 20.

【0136】

<Evaluated Purchasing Power Ratio Table>

[Drawing 7J]

Purchasing power-to-evaluation ratio calculation term	Main district A	Main district B	Main district C	・・・
2019/1/1~2019/1/31	4.5768	2.2482	7.5028	・・・
2019/2/1~2019/2/28	5.9625	2.4084	7.1298	・・・
2019/3/1~2019/3/31	4.2845	3.2975	8.8464	・・・
・ ・ ・	・ ・ ・	・ ・ ・	・ ・ ・	・ ・ ・

FIG. 7J is a diagram illustrating an exemplary purchasing power-to-evaluation ratio table. The purchasing power-to-evaluation ratio table is a table for managing purchasing power-to-evaluation ratio described later in the respective purchasing power-to-evaluation ratio calculation periods. Here, the purchasing power-to-evaluation ratio calculation period may be a predetermined period for calculating the purchasing power-to-evaluation ratio, which is arbitrarily set by the system administrator etc. In the purchasing power-to-evaluation ratio table, for example, purchasing power-to-evaluation ratio may be recorded for each constituent group as shown in FIG. 7J.

【0137】

<Replacement Request Table>

[Drawing 7K]

In the exchange request Date and time	User ID	Main district	Exchange request type	Quantity	Desired exchange rate	In the commitment process Date and time
2019/1/1 11:00	U045	JPN	First exchange requirements	1000ACT	0.95	2019/1/1 12:00
2019/1/5 5:00	U005	USA	Second exchange requirements	2000EST	1.2	2019/1/10 10:00
2019/1/10 21:00	U023	USA	First exchange requirements	700ACT	0.9	-
・・・	・・・		・・・	・・・	・・・	・・・

FIG. 7K is a diagram illustrating an exemplary exchange request table. The exchange request table is a table for managing the exchange request received from the user device 20 and the first exchange or second exchange of the exchange request. The exchange request table may include, for example, "date and time of exchange request", "user ID", "constituent group", "exchange request type", "quantity", "desired exchange rate", and "date and time of commitment process". In the "exchange request date/time", the time at which the server 10 acquires the exchange

request from the user device 20 is recorded. The user ID of the user device 20 that has transmitted the exchange request is recorded as the "user ID". The constituent group to which the user of the user device 20 that transmitted the exchange request belongs is recorded in "constituent group". In the "exchange request type", the type of the exchange request, that is, whether the exchange request is the first exchange request or the second exchange request is recorded. In the "quantity", the quantity of the exchange medium (first value exchange medium in the case of the first exchange request and second value exchange medium in the case of the second exchange request) desired to be exchanged is recorded. In the desired exchange rate, the ratio of the exchange value per unit between the first value exchange medium and the second value exchange medium desired by the user is recorded. In the "date and time of the commitment process", the time when the server 10 executes the commitment process for the exchange request is recorded.

【0138】

<Debt Issuance Table>

[Drawing 7L]

Issuance based on debt quantity (A)	Offset purchase quantity (B)	Cancellation due to expiration quantity (B')	Issuance based on debt balance (A-(B+B'))	Total volume of the circulation in the first value exchange medium (C)	Total volume percentage of circulation of the issuance based on debt balance ((A-(B+B'))/C)	Update date and time
10000	8000	500	1500	1500	1	2019/07/01

FIG. 7L is a diagram illustrating an exemplary issuance based on debt table. Here, the issuance based on debt table is a table for managing various quantities relating to the issuance based on debt of the first value exchange medium. The issuance based on debt table may include, for example, "issuance based on debt quantity," "offset purchased quantity," "write-off due to expiration quantity," "balance of issuance based on debt," "total volume of circulation of first value exchange medium," and "ratio of balance of issuance based on debt to total volume of circulation" (ratio of balance of issuance based on debt to total volume of circulation of first value exchange medium), etc. Assuming that the issuance based on debt quantity is A, the offsetting purchased quantity is B, and the write-off due to expiration quantity is B′ , the balance of the issuance based on debt can be expressed as A-(B+B′). Further, the issuance based on debt quantity A may be calculated as the accumulation of the newly issued issuance based on debt quantity, the offset purchase quantity B may be calculated as the accumulation of the newly offset purchase quantity, and the write-off due to expiration quantity B′ may be calculated as the accumulation of the newly write-off due to expiration quantity.

【0139】

<3rd Economic Activity Table>

[Drawing 7M]

Date and time	Provider constituent group	Provider user ID	Constituent group of acquirers	Acquirer user ID	Type	First value exchange medium quantity
2019/01/01	USA	U101	USA	U102	IIIA animation Large-class movie	20
2019/01/10	JPN	U201	JPN	U202	IIIB photography Large-class still image	5
2019/01/20	USA	U102	JPN	U201	IIIC locks Major Category Voice	10
2019/01/31	JPN	U202	USA	U103	IIID scientific papers Major Category written language	15
2019/02/01	USA	U103	JPN	U203	IIIE games Major category application	30

FIG. 7M is a diagram illustrating an exemplary third economic activity table. The third economic activity table is a table for managing various kinds of data relating to an actually performed third economic activity. The third economic activity table may include, for example, "date/time," "provider constituent group," "provider user ID," "acquirer constituent group," "acquirer user ID," "type," "first value exchange medium quantity," etc. In the "date time", the time at which the third economic activity was performed is recorded. The date and time may be the world standard time. In the "provider constituent group", the constituent group to which the user who became the provider in the third economic activity belongs is recorded. In the "provider user ID", the ID of the user who has become the provider in the third economic activity is recorded. In the "acquirer constituent group", the constituent group to which the user who became the acquirer in the third economic activity belongs is recorded. The user ID of the user who has become the acquirer in the third economic activity is recorded in the "acquirer user ID". The category of the type III to which the paid exchangeable value relating to the third economic activity performed by the user belongs is recorded in the "type III". The "first value exchange medium quantity" records the quantity of first value exchange medium as a compensation for exchange of the paid exchangeable value traded in the third economic activity.

【0140】

<First ledger>

[Drawing 7N]

Medium ID	Acquisition user ID	Date of acquisition	Cause of acquisition	Remittance Source User ID	Scheduled date of write-off
A001	U001	2018/07/01	Issuance based on evaluation	-	2019/07/01
A002	U023	2018/07/01	Issuance based on debt	-	2019/07/01
A003	U011	2018/07/03	Third economic activity	U099	2019/07/01
A004	U203	2018/07/05	Remittance	U045	2019/07/05
・ ・ ・	・ ・ ・	・ ・ ・	・ ・ ・	・ ・ ・	・ ・ ・

FIG. 7N is a diagram illustrating an exemplary first ledger. The first ledger is a ledger for managing various types of first value exchange medium information. The first ledger includes information on issuance, transfer, write-off, etc. of the first value exchange medium. As shown in the drawing 7N, for example, the first ledger may include "medium ID", "acquisition user ID", "acquisition date", "acquisition cause", "remittance source user ID", and "scheduled write-off date". The medium ID are used to identify each first value exchange medium. The acquired user ID is the user ID of the user who acquired the first value exchange medium. The obtaining date is a date on which the user obtained the first value exchange medium. The obtaining cause is a cause of the user obtaining the first value exchange medium, and may include, for example, a issuance based on evaluation, issuance based on debt, third economic activity, and (mere) remittance. The "remittance source user ID" is the user ID of the user who remitted the acquired first value exchange medium when the acquiring cause is a third economic activity, a (mere) remittance,etc. The scheduled write-off date is the date of the write-off deadline of the first value exchange medium set by the server 10. In the first ledger described above, medium ID are attached to each first value exchange medium to distinguish them. However, as an first ledger, the number of pieces of first value exchange medium linked to the user ID may be recorded without distinguishing the first value exchange medium from each other. Further, in the mode in which the "medium ID" is used, the first value exchange medium of the write-off (write-off from paid consumption, write-off by offsetting or write-off due to expiration) may be second economic activity from the first ledger by consuming by the user in the write-off, offsetting purchasing by the second commitment process of the servers 10 based on the first exchange request of the user device 20, or arrival of the "scheduled write-off date" etc, or the "medium ID" itself may be cumulatively managed by leaving the "user ID" blank without write-off. When the "medium ID" is

cumulatively managed, the "medium ID" in which the "user ID" is blank may be cumulatively accumulated, or the "medium ID" in which the "user ID" which is cumulatively accumulated after a predetermined period has elapsed may be allocated to the issuance based on evaluation portion or the issuance based on debt portion.

【0141】

In the present embodiment, the first ledger record is rewritten according to the issuance, transfer (assignment), or write-off of the first value exchange medium, but for each first value exchange medium, a history from issuance to transfer and write-off may be left as a record.

【0142】

<Second Evaluation Table>

[Drawing 7O]

Date and time	Quantity of second value exchange medium	Remittance user ID	Deposit user ID	Remittance category	Ratio of remittance category	Offset determination	Transfer evaluation value
2019/1/22 12:00	120,000	U001	U002	C	1.00	1	0 (120,000)
2019/1/23 2:00	1,000	U003	U000	A	10.00	0	10,000
2019/1/24 15:00	800	U003	U000	B	5.00	0	4,000
2019/1/25 23:00	2,000	U003	U000	A	10.00	0	20,000
2019/1/31 20:00	186,000	U002	U001	C	1.00	1	66,000
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

FIG. 7O is a diagram illustrating an exemplary second assessment table. The second evaluating table is a table for evaluating the respective users from the second value exchange medium transfer states between the servers 10 and the user device 20. That is, when the second evaluation table is included in the configuration, in the case of "increase based only on the increase pattern (iii) transfer evaluation value" or "increase based only on the held quantity and the transfer evaluation value" of the second value exchange medium described later, the new issue quantity of the second value exchange medium at the time of increase can be determined based on the transfer evaluation value and the reaching premium rate by evaluating the remittance content using the second evaluation table instead of simply determining the new issue quantity based only on the amount of remittance. When the calculation of the transfer evaluation value using the second evaluation table and the increment patterns (iii) are included in the configuration, the second value exchange medium quantity newly issued to the user is "the ratio of the user's transfer evaluation value to the total sum of transfer evaluation value recorded in the second evaluation table×(reaching premium rate−1)×second value exchange medium total volume of circulation", in other words, the transfer evaluation value in

the second evaluation table can be said to have substantially the same function as the evaluation score in the first evaluation table. As a result, the flow rate of the first value exchange medium and the second value exchange medium can be improved. The second assessment table may include, for example, "date/time," "second value exchange medium quantity," "remittance user ID," "deposit user ID," "remittance category," "remittance category magnification," "offset determination," and "transfer evaluation value." The date and time when the second value exchange medium has been moved and recorded in the "date and time". The time may be a world standard time. In the "second value exchange medium quantity", the quantity of the second value exchange medium in which the move was conducted and recorded. The "remittance user ID" records the identification number of the user who has been unconnected with the medium ID. The identification number of the user newly linked to the medium ID is recorded in the "deposit user ID". In the illustrated 7O, "U000" is described as a server ID. "Remittance Classification" records the classification according to the remittance status. For example, the remittance classification is set in advance for the second exchange request by the user device 20 in the case of A, the remittance of second value exchange medium to the server 10 which is generated when the first market exchange request is agreed by the server 10, the remittance of second value exchange medium to the server 10 which is generated in the case of B at the time of settlement of a charge or a commission in the first network, and the remittance of second value exchange medium between the user device 20 such as transfer or settlement in the case of C. In the "remittance classification magnification", the magnification set according to the remittance classification is recorded. This may be determined and updated as a dedicated action by the servers 10, or may be determined and updated by means including at least one user device 20. In the "offset determination", it is determined whether or not the executed remittance is added to the calculation of the transfer evaluation value, and, for example, 0 is recorded when it is determined that the remittance is added to the calculation of the transfer evaluation value (no offset determination), and 1 is recorded when it is determined that the remittance is not added to the calculation of the transfer evaluation value (there is an offset determination). Further, when the remittance which has previously been determined to have no offset determination is determined to have offset determination by a transaction which has occurred later, the offset determination of the remittance may be rewritten and recorded, or only a line for causing the transfer evaluation value to be negative may be created. For example, when the remittance user U002 transfers money to the remittance user U001 in the normal transfer C, or when the remittance user U001 transfers money to the remittance user U002 in the normal transfer C (which can be regarded as an act of returning the remitted second exchangemedium to the remitter), the same number of second value exchange medium transfers may not be added to the transfer evaluation value. In the second estimation table of the diagram 7O, since the transaction of the row 1 exists first when the shift of the row 5 is executed, the transfer evaluation value is calculated using only the row 1 and the 66,000EST obtained by subtracting the 120,000EST of the same quantity from the 186,000 of the row 5. At the same time, the transfer evaluation value of row 1 is rewritten to 0. (Or a row may be created to only minus 120,000 the transfer evaluation value of the U001) "transfer evaluation value" records the values calculated by (second value exchange medium quantity)×(remittance division factor).

【0143】

<2nd ledger>

[Drawing 7P]

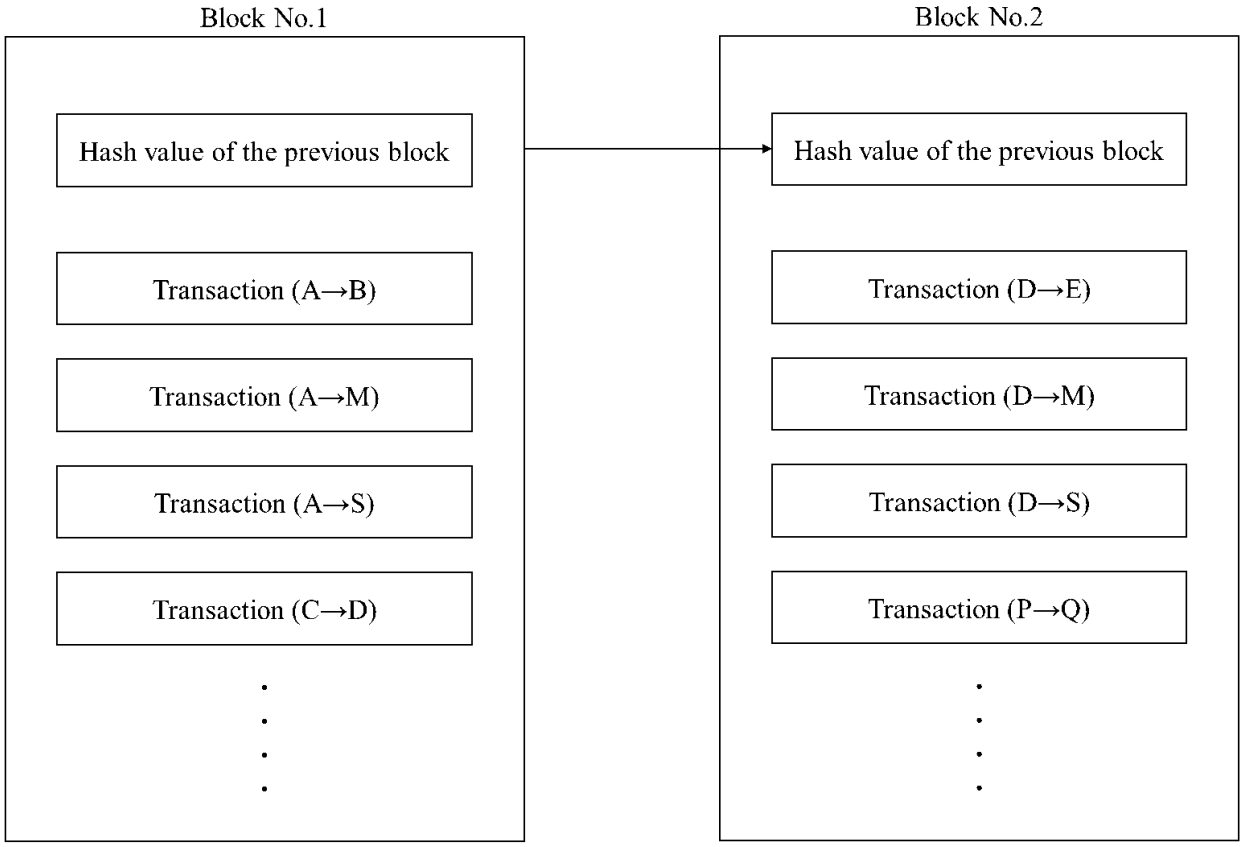


FIG. 7P is a diagram illustrating an exemplary second ledger. The second ledger is composed of, for example, a block chain, and includes second value exchange medium transaction data. The block contains information about any transaction between users. Specifically, each block contains digest data and a list of transactions that are information about the transaction. The digest data includes a new hash value calculated from the previous block. That is, as shown in the diagram 7P, the blocks include hash values calculated from the information included in the preceding block, so that the hash values are stored as transaction databases (block chains) in a state where the blocks are connected like a chain. Transactions are data that records second value exchange medium transactions between users. The transaction includes input information indicating information on the transfer source and output information indicating information on the transfer destination. The input information includes the output information of the transaction when the user of the transfer source receives the transfer of the second value exchange medium to be the transaction target (identification information specifying the transaction (hash-value, array number, etc. of the transaction)), and information for proving that the user owns the second value exchange medium (script etc that satisfy the condition for using the output).

【0144】

[Drawing 7Q]

Medium ID	User ID	Cause of acquisition	Date of acquisition
B001	U002	New issuance due to increase or decrease	2018/07/02
B002	U002	Price of selling act by first exchange	2018/07/02
B003	U012	Remittances from other users	2018/07/04
B004	U003	Credit issuance by other users	2018/07/06
B005	U004	Credit issuance by servers	2018/07/06
・ ・ ・	・ ・ ・	・ ・ ・	・ ・ ・

FIG. 7Q is a diagram illustrating another exemplary second ledger. The second ledger contains information about the issuance, transfer, and write-off of the second value exchange medium. As shown in the drawing 7Q, the second ledger includes, for example, "medium ID", "user ID", "acquisition cause", and "acquisition date". The medium ID are used to identify each second value exchange medium. The user ID is information for identifying the holder of the second value exchange medium. The acquisition cause is information indicating the cause of acquisition of the second value exchange medium, and may include, for example, new issuance by increasing the second value exchange medium by the server 10 or the user device 20, which will be described later, acquisition as a consideration for first value exchange medium by the first exchange by the exchange place function of the server 10, remittance from another user device 20, and the like. The source may include, for example, issuance based on debt by the servers 10. Further, the obtaining cause may include, for example, a credit issuance by the server 10 or the user device 20. The obtaining date is a date on which the user obtained the second value exchange medium. In the second ledger described above, medium ID are attached to each second value exchange medium to distinguish them. However, as an second ledger, the number of pieces of second value exchange medium linked to the user ID may be recorded without distinguishing the second value exchange medium from each other. Further, in the mode in which the "medium ID" is used, the second value exchange medium to be write-off by the reduction executing unit 131e or 231e of the smart contract unit 131 or 231 may be write-off from the second ledger, or the "medium ID" itself may be cumulatively

managed by leaving the "user ID" blank without write-off. When the "medium ID" is cumulatively managed, the "medium ID" in which the "user ID" is blank may be cumulatively accumulated, or the "medium ID" in which the "user ID" which is cumulatively accumulated after a predetermined period has elapsed may be allocated to the issuance or the like by the increment executing unit 131c or 231c.

【0145】

In the present embodiment, the second ledger record is rewritten according to the issuance, transfer, or write-off of the second value exchange medium, but for each second value exchange medium, a history from issuance to transfer and write-off may be left as a record.

【0146】

<Credit Issue Table>

[Drawing 7R]

Credit issuance destination IDs	Credit issuance source IDs	Credit issuance quantity	Credit write-off quantity	Credit issuance balance	Credit issuance limit quantity
U005	U431	5,000,000	2,500,000	2,500,000	10,000,000
U023	U045	4,000,000	1,000,000	3,000,000	8,000,000
U156	U096	1,500,000	500,000	1,000,000	6,000,000
. . .	. . .	. . .	. . .	. . .	. . .

FIG. 7R is a diagram illustrating an exemplary credit issuance table. The credit issuance table contains information about the credit issuance of the second value exchange medium. As shown in the diagram 7R, the credit issuance table includes, for example, "credit issuance destination ID", "credit issuance source ID", "credit issuance quantity", "credit write-off quantity", "credit issuance balance", "credit issuance limit quantity", etc. The "credit issuance destination ID" is a user ID as a credit issuance destination. The "credit issuance source ID" is a system administrator ID or a user ID as a credit issuance source. The "credit issuance quantity" is a second value exchange medium (cumulative) quantity credit issuance to the user of the credit issuance destination. The "credit write-off quantity" is a second value exchange medium (cumulative) quantity credit write-off to the user of the credit issuance destination. The "credit issuance balance" is the balance of the credit issuance quantity currently issued to the user of the credit issuance destination (i.e., "(cumulative) credit issuance quantity-(cumulative) credit write-off quantity"). The credit issuance limit quantity is a predetermined credit issuance limit quantity relating to the user of the credit issuance destination.

【0147】

(2-3-2) first value exchange medium manager 12

The first value exchange medium managing unit 12 includes, for example, a value processing unit 121, a free-of-charge exchangeable value evaluating unit 122, a issuance based on evaluation unit 123, a money transfer processing unit 124, a settlement processing unit 125, a write-off processing unit 126, an evaluation correcting unit 127, and a second economic activity processing unit 128. The value processing unit 121 executes processing relating to the value received from the user device 20. The free-of-charge exchangeable value evaluation unit 122 is an exemplary issuance algorithm based on evaluation, and executes an evaluation process for a value in which users are transferred without charge and a free-of-charge exchangeable value provider. The issuance based on evaluation unit 123 may issuance based on evaluation the first value exchange medium to the free-of-charge exchangeable value provider based on the evaluation value calculated by the free-of-charge exchangeable value evaluating unit 122. The remittance processing unit 124 executes remittance processing between first value exchange medium users. The settlement processing unit 125 executes processing relating to settlement relating to third economic activity between first value exchange medium users. The write-off processing unit 126 manages the write-off deadlines of the respective first value exchange medium, and executes processing for write-off the first value exchange medium in which the write-off deadline has arrived. The evaluating/correcting unit 127 performs a process of correcting the first economic activity basic score table. The second economic activity processing unit 128 executes processing relating to the second economic activity.

【0148】

(2-3-3) second value exchange medium manager 13

The second value exchange medium managing unit 13 includes, for example, a smart contract unit 131 and a credit issuance unit 132.

【0149】

The smart contract unit 131 is configured as a so-called smart contract that automatically executes a predetermined process when a predetermined increasing condition or a predetermined decreasing condition is satisfied, and specifically executes a second value exchange medium increasing/decreasing process (increasing process or decreasing process) based on market exchange rate monitoring. The smart contract unit 131 includes, for example, a market exchange rate acquiring unit 131a, an increase condition determining unit 131b, an increase executing unit 131c, a decrease condition determining unit 131d, and a decrease executing unit 131e. The market exchange rate acquiring unit 131a acquires market exchange rate from, for example, the exchange place managing unit 15 (e.g., the market exchange rate calculating unit 151) included in the server 10. The increase condition determination unit 131b determines, for example, whether or not a predetermined increase condition is satisfied. The increase executing unit 131c executes, for example, a process of increasing the second value exchange medium by a predetermined number in accordance with the determination result of the increase condition determining unit 131b. The reduction condition determination unit 131d determines, for example, whether or not a predetermined reduction condition is satisfied. The reduction executing unit 131e executes, for example, a process of reducing the second value exchange medium by a predetermined number in accordance with the determination result of the decrease condition determining unit 131d.

【0150】

The credit issuance unit 132 executes, for example, a process related to the credit issuance of the second value exchange medium. The credit issuance unit 132 includes, for example, a reception unit 132a, an update-information generation unit 132b, and a determination unit 132c. Acceptance unit 132 For example, a accepts credit issuance requests from the user device 20. The update-information generation unit 132b generates second ledger update-information for credit issuance, for example. More specifically, the update-information generating unit 132b generates update-information for newly credit issuance a second value exchange medium of a quantity based on the value size of assets provided from the user ID, which is the credit issuance request source, represented by the second value exchange medium quantity linked to the user ID related to the credit issuance request, to the user ID. For example, the determination unit 132c determines whether or not the balance of the second value exchange medium to be credit issuance for the user ID related to the credit issuance requests exceeds a predetermined credit issuance limit quantity.

【0151】

(2-3-4) Account management unit 14

The account managing unit 14 executes basic processing for the user to use the value exchange medium services, such as user registering and login processing. The processing of the account management unit 14 may include authentication processing such as biometric authentication or two-stage authentication.

【0152】

(2-3-5) exchange place Manager 15

The exchange place managing unit 15 executes a process as exchange place such as first value exchange medium and second value exchange medium provided by the servers 10. The exchange place managing unit 15 includes, for example, a market exchange rate calculating unit 151, a first exchange request receiving unit 152a, a second exchange demand receiving unit 152b, a first market exchange request generating unit 153a, a second market exchange request generating unit 153b, a first agreement processing unit 154a, a second agreement processing unit 154b, an increasing desired exchange rate correcting unit 155a, a decreasing desired exchange rate correcting unit 155b, a first fixed transaction request generating unit 156a, and a second fixed transaction request generating unit 156b.

【0153】

For example, the market exchange rate calculating unit 151 may calculate market exchange rate (including the first market exchange rate and the second first value exchange medium) which is the market rate of the desired exchange rate, based on desired exchange rate (including the first desired exchange rate and the second desired exchange rate) which is the replacement rate between the market exchange rate and the second value exchange medium desired by the user.

【0154】

For example, the first exchange request receiving unit 152a may receive the first exchange request received from the user device 20 and record it in the exchange request table stored in the storage unit 11. Here, the first exchange request may be, for example, a request for exchanging a predetermined quantity of first value exchange medium with the second value exchange medium at a first desired exchange rate desired by the user.

【0155】

For example, the second exchange request receiving unit 152b may receive the second exchange request received from the user device 20 and record it in the exchange request table stored in the storage unit 11. Here, the second exchange request may be, for example, a demand for exchanging a predetermined quantity of second value exchange medium with the first value exchange medium at a second desired exchange rate desired by the user.

【0156】

The first market exchange request generation unit 153a may generate a predetermined first market exchange request, for example. Here, the predetermined first market exchange request may be, for example, a request for replacing a predetermined number of first value exchange medium with second value exchange medium in market exchange rate (first market exchange rate), which is a market rate of desired exchange rate (first desired exchange rate and second desired exchange rate).

【0157】

The second market exchange request generation unit 153b may generate a predetermined second market exchange request, for example. Here, the predetermined second market exchange request may be, for example, a request for replacing a predetermined number of second value exchange medium with first value exchange medium in market exchange rate (second market exchange rate), which is a market rate of desired exchange rate (first desired exchange rate and second desired exchange rate).

【0158】

The first commitment processing unit 154a may execute commitment processing of, for example, a first market exchange request, a first fixed transaction request, etc, and a second exchange request satisfying a predetermined first commitment condition. The predetermined first commitment condition may include, for example, that the second desired exchange rate is the same as or lower than the first market exchange rate and that the second desired exchange rate is the same as or lower than the first target exchange rate. Also, the predetermined first commitment condition may include that the second exchange request is a row.

【0159】

The second commitment processing unit 154b may execute commitment processing of, for example, a second market exchange request, a second fixed transaction request, etc, and a first exchange request satisfying a predetermined second commitment condition. The predetermined second commitment condition may include, for example, that the first desired exchange rate is the same or higher than the second market exchange rate, and that the first desired exchange rate is the same or higher than the second target exchange rate, etc. The predetermined second commitment condition may include that the first exchange request is a row.

【0160】

For example, when the number of pieces of second value exchange medium associated with the respective user ID increases in response to the predetermined increase condition being satisfied, the increase-time desired exchange rate correction unit 155a may correct the first desired exchange rate relating to the first exchange request so as to offset the increase rate of the number of pieces of second value exchange medium associated with the user ID relating to the first exchange request. In addition, for example, when the number of second value exchange medium linked to the user ID increases in response to the predetermined increase condition being satisfied, the increase-time desired

exchange rate correction unit 155a may correct the second desired exchange rate relating to the second exchange request so as to offset the increase rate of the number of second value exchange medium linked to the user ID relating to the second exchange request.

【0161】

For example, when the number of pieces of second value exchange medium associated with the respective user ID decreases in response to the predetermined decrease condition being satisfied, the decrease-time desired exchange rate correction unit 155b may correct the first desired exchange rate relating to the first exchange request so as to offset the decrease rate of the number of pieces of second value exchange medium associated with the user ID relating to the first exchange request. In addition, for example, when the number of second value exchange medium linked to the respective user ID decreases in response to the predetermined reduction condition being satisfied, the reduction time desired exchange rate correction unit 155b may correct the second desired exchange rate related to the second exchange request so as to offset the reduction ratio of the number of second value exchange medium linked to the user ID related to the second exchange request.

【0162】

The first fixed transaction request generation unit 156a may generate a predetermined first fixed transaction request, for example. Here, the predetermined first fixed transaction request may be, for example, a demand for replacing the first value exchange medium with the second value exchange medium at a predetermined target exchange rate (first target exchange rate).

【0163】

The second fixed transaction request generation unit 156b may generate a predetermined second fixed transaction request, for example. Here, the predetermined second fixed transaction request may be, for example, a demand for replacing the second value exchange medium with the first value exchange medium at a predetermined target exchange rate (second target exchange rate).

【0164】

(2-4) Functional configuration of the user device 20

Figure 8

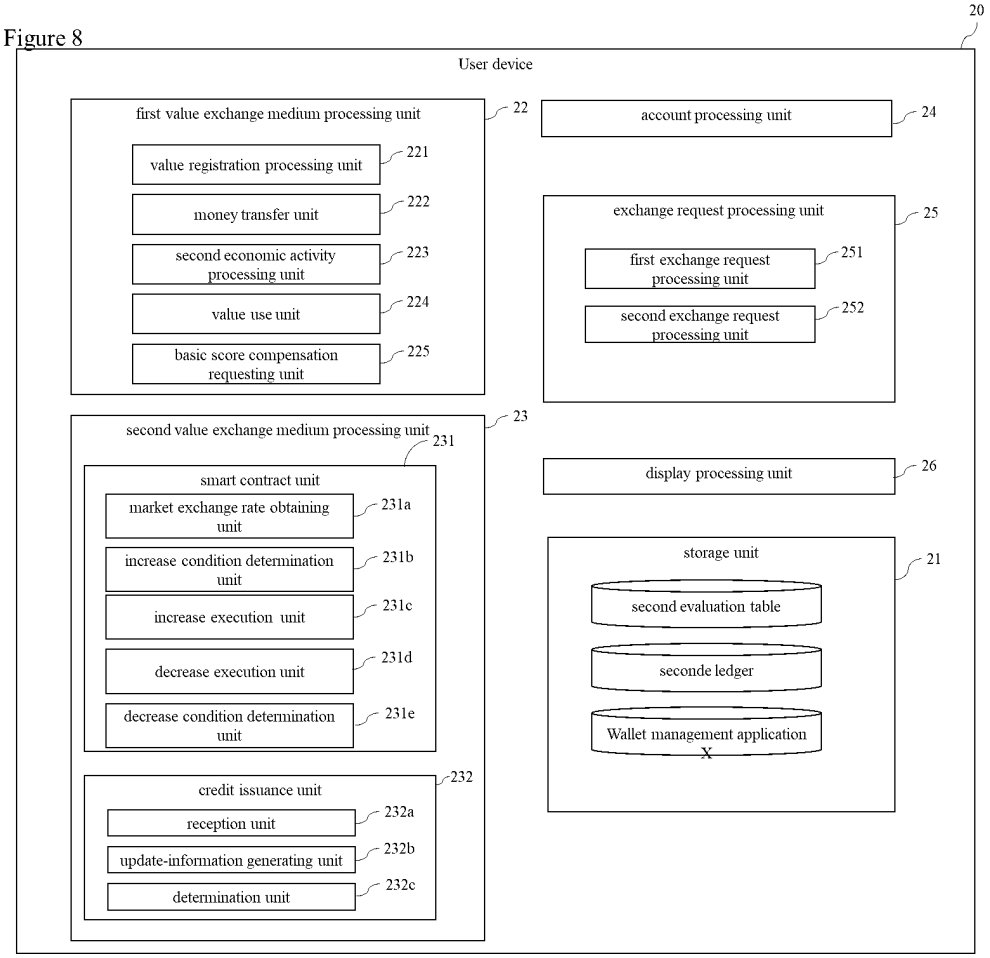


FIG. 8 is a block diagram showing an exemplary functional configuration of the user device 20. The user device 20 includes, for example, a storage unit 21, a first value exchange medium processing unit 22, a second value exchange medium processing unit 23, an account processing unit 24, a exchange request processing unit 25, and a display processing unit 26. These are realized by the cooperation of the processor 101, the memories 102, the storages 103, the input/output I/F104, and the communication I/F105 included in the above-described information processing device 100.

【0165】

(2-4-1) Storage 21

The storage unit 21 stores, for example, a second evaluating table, a second ledger, and a wallet managing application X. The second ledger may be configured as a distributed ledger, e.g., a block-chain, and may include second value exchange medium transactions. The second evaluating table may be configured as a distributed ledger such as a block chain, etc to the second ledger, or may be attached to the second ledger.

【0166】

The wallet management application X is a generic name of the wallet management application X1 and the wallet management application X2. The wallet managing application X1 is an application for managing first value exchange medium held by a user recorded in the first ledger. The user may be able to accept issuance (issuance based on

evaluation and issuance based on debt from the server 10) and transfer (including transfer as a consideration for any transaction) of first value exchange medium from other users (user ID and server ID) and transfer (including transfer as a consideration for any transaction) of first value exchange medium to other users (user ID and server ID) (including unilateral remittance and transfer as a consideration for any transaction) by the wallet managing application X1 using the user device 20. The wallet managing application X2 functions as an application for managing second value exchange medium held by the user recorded in the second ledger. Using the user device 20, the user may accept the credit issuance and transfer of second value exchange medium from other users (user ID and server ID), accept the issuance of second value exchange medium by the increment execution units 131c and 231c, accept the write-off of second value exchange medium by the decrement execution units 131e and 231e, and transfer second value exchange medium to other users (user ID and server ID).

【0167】

(2-4-2) first value exchange medium processing unit 22

The first value exchange medium processing unit 22 includes, for example, a value registering processing unit 221, a money transfer unit 222, a second economic activity processing unit 223, a value use unit 224, and a basic score compensation requesting unit 225. The value registration processing unit 221 executes registration processing relating to the paid exchangeable value belonging to the type III or the free-of-charge exchangeable value belonging to the type I. The remittance unit 222 executes a process related to the remittance of the first value exchange medium. The second economic activity processing unit 223 executes processing relating to the second economic activity. The value use unit 224 executes a process related to the use of the paid exchangeable value or the free-of-charge exchangeable value. The basic score correction request unit 225 executes a process related to a request for correcting the basic score related to the assessment of the free-of-charge exchangeable value belonging to the type I.

【0168】

(2-4-3) second value exchange medium processing unit 23

The second value exchange medium processing unit 23 includes, for example, a smart contract unit 231 and a credit issuance unit 232.

【0169】

The smart contract unit 231 is configured as a so-called smart contract that automatically executes a predetermined process when a predetermined increasing condition or a predetermined decreasing condition is satisfied, and specifically executes a second value exchange medium increasing/decreasing process (increasing process or decreasing process) based on market exchange rate monitoring. The smart contract unit 231 includes, for example, a market exchange rate obtaining unit 231a, an increase condition determination unit 231b, an increase execution unit 231c, a decrease condition determination unit 231d, and a decrease execution unit 231e. The market exchange rate acquiring unit 231a acquires market exchange rate from, for example, the exchange place managing unit 15 (e.g., the market exchange rate calculating unit 151) included in the server 10. The increase condition determination unit 231b determines, for example, whether or not a predetermined increase condition is satisfied. The increase executing unit 231c executes, for example, a process of increasing the second value exchange medium by a predetermined number in accordance with the determination result of the increase condition determining unit 231b. The reduction condition determination unit 231d determines, for example, whether or not a predetermined reduction condition is satisfied.

The reduction executing unit 231e executes, for example, a process of reducing the second value exchange medium by a predetermined number in accordance with the determination result of the reduction condition determining unit 231d.

【0170】

The credit issuance unit 232 executes, for example, a process related to the credit issuance of the second value exchange medium. The credit issuance unit 232 includes, for example, a reception unit 232a, an update-information generation unit 232b, and a determination unit 232c. Acceptance section 232 For example, a accepts credit issuance requests from the user device 20. The update-information generation unit 232b generates second ledger update-information for credit issuance, for example. More specifically, the update-information generating unit 232b generates update-information for newly credit issuance a second value exchange medium of a quantity based on the value size of assets provided from the user ID, which is the credit issuance request source, represented by the second value exchange medium quantity linked to the user ID related to the credit issuance request, to the user ID. For example, the determination unit 232c determines whether or not the balance of the second value exchange medium to be credit issuance for the user ID related to the credit issuance requests exceeds a predetermined credit issuance limit quantity.

【0171】

(2-4-4) Account processing unit 24

The account processing unit 24 executes basic processing for the user to use the value exchange medium services, such as user registering and login processing. The processing of the account processing unit 24 may include authentication processing such as biometric authentication or two-stage authentication.

【0172】

(2-4-5) exchange request processing unit 25

The exchange request processing unit 25 transmits the exchange request of the content corresponding to the user's operations to the server 10. The exchange request processing unit 25 includes, for example, a first exchange request processing unit 251 and a second exchange request processing unit 252. The first exchange request processing unit 251 transmits a first exchange request to the server 10 in response to a user's manipulation. The second exchange request processing unit 252 transmits the second exchange request to the server 10 in response to the user's manipulation.

【0173】

(2-4-6) Display processing unit 26

The display processing unit 26 executes processing for displaying various screens on a display device (input/output I/F104) of the user device 20 based on predetermined display data.

【0174】

(3) First value exchange medium

(3-1) Registration of value

The registration processing of the free-of-charge exchangeable value which is the basis of the issuance based on evaluation of the first value exchange medium in the present embodiment and the registration processing of the paid exchangeable value which is the basis of the settlement of the first value exchange medium relating to the third economic activity will be described. In this process, for example, the user registers the free-of-charge exchangeable value that is the basis of issuance of the first value exchange medium or the paid exchangeable value that is the basis of settlement of the first value exchange medium related to the third economic activity in the server 10. When registering the value, the user may select whether the value to be provided is paid exchangeable value or free exchangeable value, that is, whether the first value exchange medium is transferred from another user who uses (acquires) the value.

【0175】

(3-1-1) paid exchangeable value registrations

Figure 9

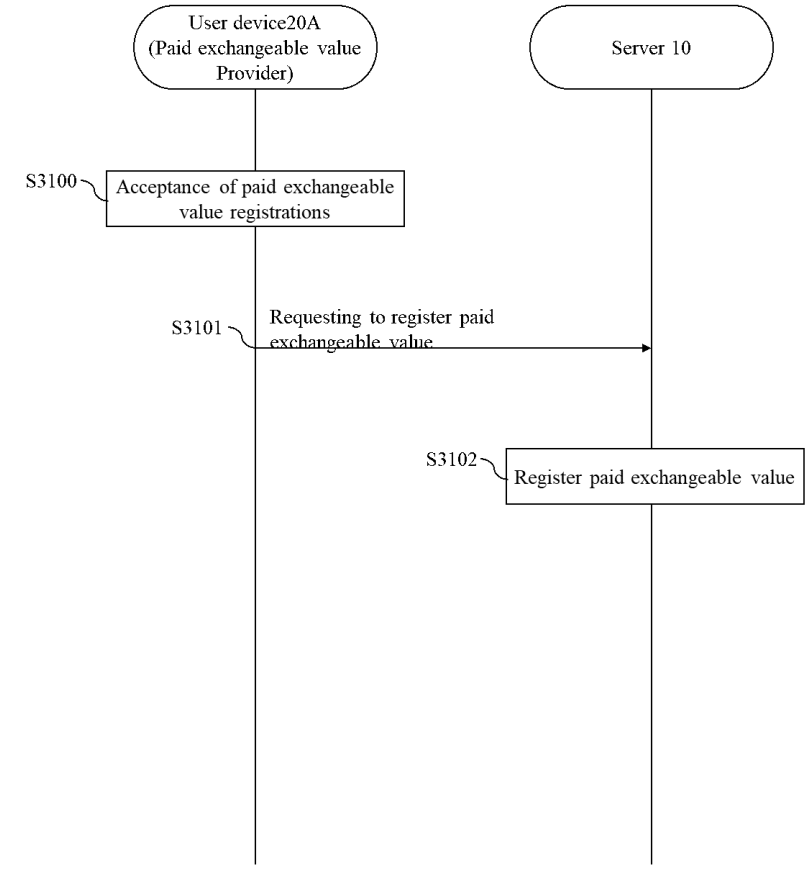


FIG. 9 is a diagram illustrating exemplary operation sequences of the paid exchangeable value registering process.

【0176】

(S3100)

First, the value registration processor 221 of the user device 20A accepts input of paid exchangeable value

registration data in response to, for example, manipulation of an input device (input/output I/F) by the user A. Here, the paid exchangeable value registration information is information relating to the registration of the paid exchangeable value, and includes information indicating the paid exchangeable value and the price.

【0177】

Figure 10

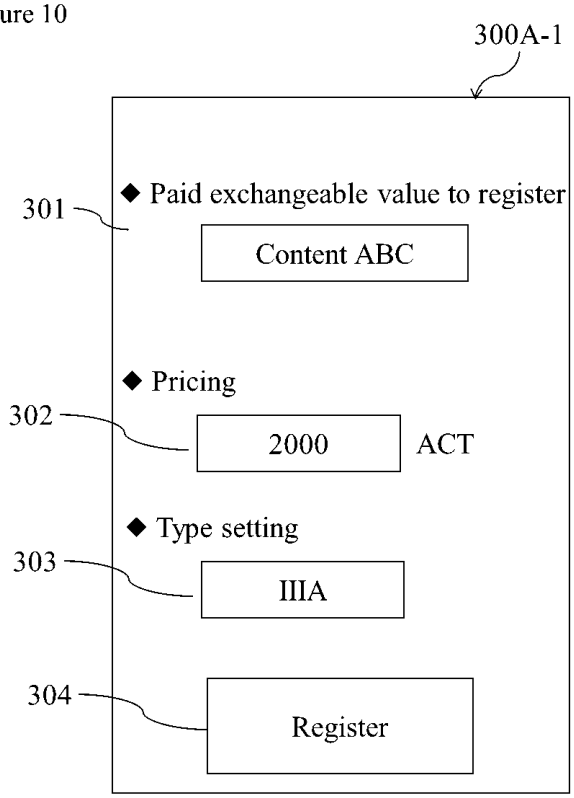


FIG. 10 is a diagram illustrating an exemplary paid exchangeable value input screen 300 A-1 displayed on the user device 20A. As shown in FIG. 10, the paid exchangeable value registration information input screen 300 A-1 includes, for example, an input unit 301 of a paid exchangeable value to be registered, a pricing unit 302, a type selection unit 303, and a selection unit 304 for transmitting a paid exchangeable value registration request.

【0178】

In the input unit 301, the user can input a paid exchangeable value to be registered. The inputting unit 301 displays, for example, information for specifying the paid exchangeable value, such as the storage location and the filename of the paid exchangeable value stored in the storage area of the user device 20A. The data format of the paid exchangeable value and the mode of inputting the data are not limited to those described above. For example, the input unit 301 may be a form capable of directly inputting text, etc such as an exhibition form in an electronic commerce site or an input form in an SNS. Alternatively, the paid exchangeable value may be user operation and environmental information acquired by the user device 20A including a wearable terminal etc. This may allow analogous operations such as, for example, skilled workers, dancers, etc. to be treated as "economic value (paid exchangeable value)". Further, for example, the paid exchangeable value may be 3D data of an object acquired by the user device 20A including the 3D scanning terminal. This may allow, for example, artists to treat the creation of a work as a creation as a "economic value (paid exchangeable value)". Further, for example, the paid exchangeable

value may be data such as moving images (live broadcast of TV, etc.) or data such as sounds (live broadcast of radio, etc.) provided by so-called live distribution. In this instance, information acquired by the user device 20A to which an input device (input/output I/F104) such as video or audio is connected is transmitted to the server 10 in real time, and the server 10 outputs the information to a viewing device (input/output I/F104) connected to another user device 20, whereby the information can be distributed among users in real time.

【0179】

In the price setting unit 302, the user can set the quantity (price) of the first value exchange medium to be used (acquired) of the value. Here, when the quantity is "0", the paid exchangeable value may be registered as "free paid exchangeable value". When the paid exchangeable value is registered, as will be described later, when a user who is another value user uses the paid exchangeable value (performs third economic activity), the user receives transfer of the amount set in the pricing unit 302 from the first value exchange medium held by the user who is the value user. The type selection unit 303 may allow the user to select a paid exchangeable value category from categories included in the type III (including categories obtained by subdividing the type III such as the type IIIA, IIIB, IIIC...).

【0180】

(S3101)

Next, when the user inputs the paid exchangeable value registration information and selects the selection unit 304, the value registration processor 221 of the user device 20A transmits a paid exchangeable value registration request to the server 10. The paid exchangeable value registration request includes the paid exchangeable value registration request described above.

【0181】

(S3102)

Next, when the value processing unit 121 of the server 10 receives the paid exchangeable value registration request from the user device 20A, the server 10 registers the paid exchangeable value registration information included in the paid exchangeable value registration request in the value table stored in the storage unit 11. As a result, the paid exchangeable value can be used by a user who is another value user through the user device 20 by browsing, viewing, etc in the first network provided by the server 10, for example.

【0182】

(3-1-2) free-of-charge exchangeable value registrations

Figure 11

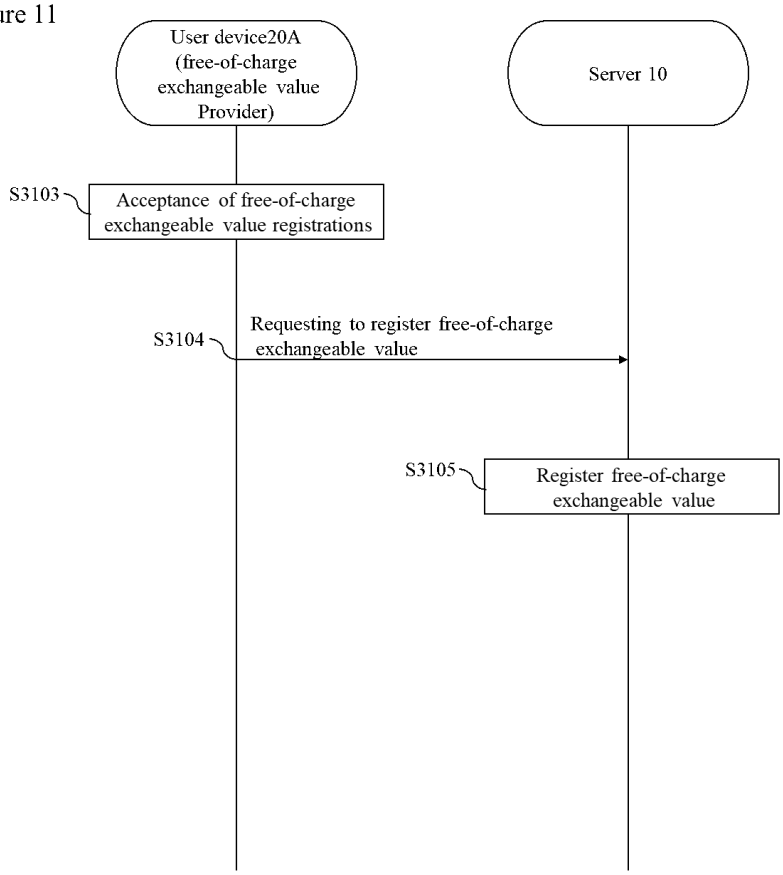


FIG. 11 is a diagram illustrating exemplary operation sequences of the free-of-charge exchangeable value registering process.

【0183】

(S3103)

First, the value registration processor 221 of the user device 20A accepts input of free-of-charge exchangeable value registration data in response to, for example, manipulation of an input device (input/output I/F) by the user A. Here, the free-of-charge exchangeable value registration information is information related to the registration of the free exchangeable value, and includes free-of-charge exchangeable value described later.

【0184】

Figure 12

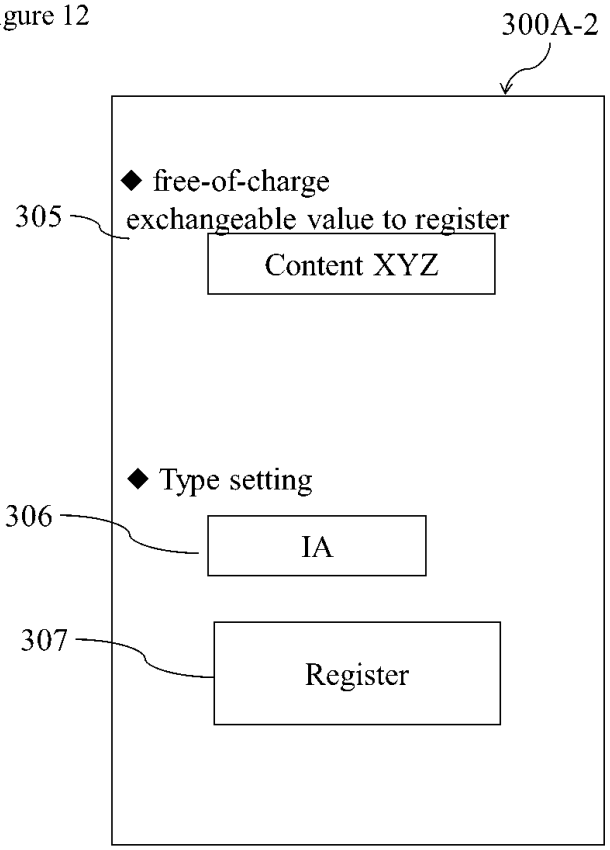


FIG. 12 is a diagram illustrating an exemplary free-of-charge exchangeable value input screen 300 A-2 displayed on the user device 20A. As shown in FIG. 12, the free-of-charge exchangeable value registration information input screen 300 A-2 includes, for example, an input unit 305 of a free-of-charge exchangeable value to be registered, a type selection unit 306, and a selection unit 307 for transmitting a free-of-charge exchangeable value registration request.

【0185】

In the input unit 305, the user can input data relating to the free-of-charge exchangeable value to be registered. The inputting unit 305 displays, for example, information for specifying the free exchangeable value, such as the storage location and the filename of the free-of-charge exchangeable value stored in the storage area of the user device 20A. The format of the free-of-charge exchangeable value and the mode of inputting the same are not limited to those described above. For example, the input unit 305 may be a form capable of directly inputting text, etc such as an exhibition form in an electronic commerce site or an input form in an SNS. Alternatively, the free-of-charge exchangeable value may be user operation and environmental information acquired by the user device 20A including a wearable terminal etc. This may allow analogous operations such as, for example, skilled workers, dancers, etc. to be treated as "value (free exchangeable value)". Further, for example, the free-of-charge exchangeable value may be 3D data of an object acquired by the user device 20A including the 3D scanning terminal. This may allow, for example, artists to treat the creation of a work as a creation as a "value (free exchangeable value)". Further, for example, the free-of-charge exchangeable value may be data such as moving

images (live broadcast of TV, etc.) or data such as sounds (live broadcast of radio, etc.) provided by so-called live distribution. In this instance, information acquired by the user device 20A to which an input device (input/output I/F104) such as video or audio is connected is transmitted to the server 10 in real time, and the server 10 outputs the information to a viewing device (input/output I/F104) connected to another user device 20, whereby the information can be distributed among users in real time. The type selection unit 306 may allow the user to select a free-of-charge exchangeable value category from categories included in the type I (including categories obtained by subdividing the type I such as type IA, IB, IC,...).

【0186】

(S3104)

Next, when the user inputs the free-of-charge exchangeable value registration information and selects the selection unit 307, the value registration processor 221 of the user device 20A transmits a free-of-charge exchangeable value registration request to the server 10. The free-of-charge exchangeable value registration request includes the free-of-charge exchangeable value registration request described above.

【0187】

(S3105)

Next, when the value processing unit 121 of the server 10 receives the free-of-charge exchangeable value registration request from the user device 20A, the server 10 registers the value registration information included in the free-of-charge exchangeable value registration request in the value table stored in the storage unit 11. As a result, the free-of-charge exchangeable value can be used (acquired) by a user who is another value user by browsing, viewing, etc in the first network provided by the server 10, for example.

【0188】

(3-2) Issuance

(3-2-1) Issuance based on evaluation

【0189】

The issuance based on evaluation process of the first value exchange medium will be described. The issuance based on evaluation process of the first value exchange medium is a process of issuance based on evaluation the first value exchange medium by the server 10 based on the consumed quantities of the evaluation score and the first value exchange medium, which are respectively recorded in the first assessment table and the second economic activity table stored in the storage unit 11. The issuance based on evaluation process may include providing and first economic activity a free exchangeable value, calculating a purchasing power-to-evaluation ratio, and issuance based on evaluation processes, as described below.

【0190】

(3-2-1-1) Provision and Acquisition of free-of-charge exchangeable value (first economic activity)

Figure 13

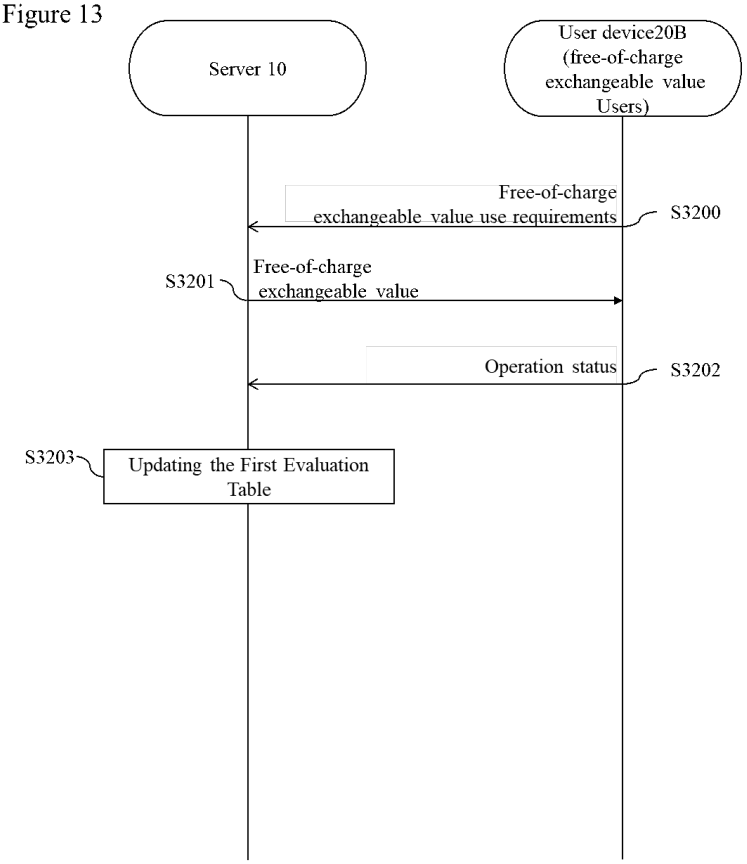


FIG. 13 is a diagram illustrating exemplary operation sequences of the free-of-charge exchangeable value providing and acquiring process. In the following description, it is assumed that the user B as the free-of-charge exchangeable value user uses the user device 20B to use (acquire) the free-of-charge exchangeable value provided by the user A as the free-of-charge exchangeable value provider.

【0191】

(S3200)

First, it is assumed that, for example, a screen of the first network provided by the server 10 is displayed on the display device (input/output I/F104) of the user device 20B, and then the user B selects the use of the free-of-charge exchangeable value provided by the user A, which is registered in the value table stored in the storage unit 11 via the input device (input/output I/F104) of the user device 20B. As a result, the value use unit 224 of the user device 20B may transmit a free-of-charge exchangeable value use request indicating that the use of the free-of-charge exchangeable value is requested to the server 10. The free-of-charge exchangeable value use request may include the user ID of the user B.

【0192】

(S3201)

Next, when the value processing unit 121 of the server 10 receives the free-of-charge exchangeable value use request from the user device 20B, the user A may transmit the free-of-charge exchangeable value provided by the

user A and registered in the value table to the user device 20B. As a result, the user B can use (acquire) the free-of-charge exchangeable value via the user device 20B. That is, first economic activity is performed between the user A and the user B.

【0193】

(S3202)

Next, the value use unit 224 of the user device 20B may transmit the operation information of the user device 20B relating to the use of the free-of-charge exchangeable value belonging to the type I to the server 10. Here, the operation information is information that arbitrarily indicates (qualitatively or quantitatively) the operation of the user device 20B at the time of using the free-of-charge exchangeable value belonging to the type I by the user device20B according to the first economic activity. The operation data is data used as a basis for calculating a evaluation score from basic score determined for each category and for each constituent group of the type I. The operation information may be, for example, a reproduction time etc for a free-of-charge exchangeable value which is moving image data, a display data amount (including the number of display characters) for a free-of-charge exchangeable value which is written language data such as articles, etc, and the operation information may be the number of display pixels etc for a free-of-charge exchangeable value which is image data. That is, the operation information is information that can serve as a basis for calculating the evaluation score from the basic score relating to the free-of-charge exchangeable value belonging to the type I acquired by the user device 20, for example, calculating the number of times of integration of the basic score etc.

(S3203) Next, when the value processing unit 121 of the server 10 receives the operation information from the user device 20B, the server 10 may update the first evaluation table based on the operation information. More specifically, the value processing unit 121 of the server 10 may record the date and time, the free-of-charge exchangeable value ID related to the acquired free exchangeable value, the category of the type I to which the acquired free-of-charge exchangeable value belongs, the free-of-charge exchangeable value provider ID, and the constituent group to which the free-of-charge exchangeable value provider belongs in the first assessment table. Further, the value processing unit 121 of the server 10 may record the free-of-charge exchangeable value acquirer ID and the constituent group to which the free-of-charge exchangeable value acquirer belongs, which are related to the free-of-charge exchangeable value use request. Further, the value processing unit 121 of the server 10 may refer to the first economic activity basic score table to specify the basic score corresponding to the category of the type I in which the constituent group to which the free-of-charge exchangeable value acquirer operating the user device20B belongs and the value of the free-of-charge exchangeable value is registered, calculate the evaluation score by integrating the basic score with the operation information, and then record the evaluation score in the assessment table. This completes the free-of-charge exchangeable value provision and obtaining process.

【0194】

(3-2-1-2) Calculation of purchasing power-to-evaluation ratio

Figure 14

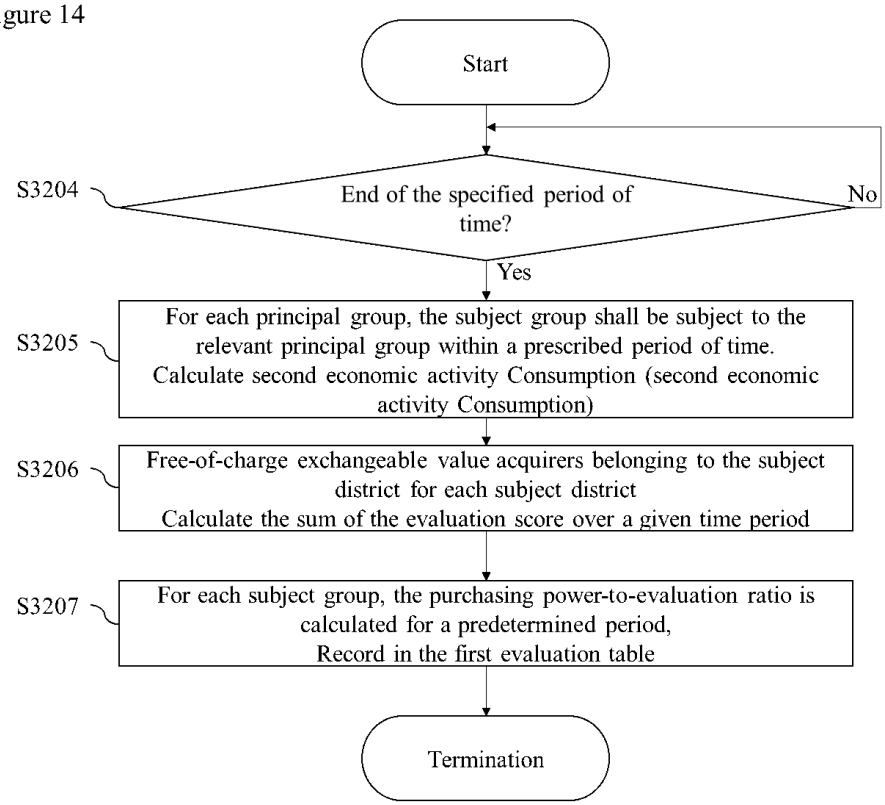


FIG. 14 is a diagram illustrating an exemplary operation flow of the purchasing power-to-evaluation ratio calculation process.

【0195】

(S3204)

First, for example, the free-of-charge exchangeable value evaluating unit 122 of the server 10 determines whether or not the predetermined period for calculating the purchasing power-to-evaluation ratio, i.e., the purchasing power-to-evaluation ratio calculation period, has ended. Here, the purchasing power-to-evaluation ratio calculation period may be a fixed period determined in advance by the system administrator, and the length of the fixed period is not particularly limited, but may be defined by a week, a month, etc.

【0196】

(S3205)

Next, when it is determined that the purchasing power-to-evaluation ratio calculation period has ended, the free-of-charge exchangeable value evaluating unit 122 of the server 10 may use the recorded data of the consumption quantity in the second economic activity table in (3-4-1) described later to add up the consumption quantity (second economic activity quantity) of the first value exchange medium in the second economic activity targeted for the constituent group in the purchasing power-to-evaluation ratio calculation period for each constituent group, and calculate the second economic activity quantity targeted for the constituent group of each constituent group. In other words, it can be said that the sum of the first value exchange medium consumed in relation to the acquiring

action of the paid consumption value by a certain user is calculated in purchasing power-to-evaluation ratio calculation period for each constituent group to which the user who acquires the free-of-charge exchangeable value etc belongs, which is the second economic activity execution target by the certain user. In other words, it can be said that the sum of the purchasing power-to-evaluation ratio calculation periods of the first value exchange medium spent on the constituent group is calculated by the second economic activity for the constituent group for each constituent group.

【0197】

Here, the second economic activity quantities of the respective constituent group in the purchasing power-to-evaluation ratio calculation periods are shown by exemplifying the second economic activity table shown in FIG. 7H. The purchasing power-to-evaluation ratio calculation period shall be from 0:00 on January 1, 2019 to 24:00 on January 31, 2019. At this time, the second economic activity quantity of constituent group USAs in the purchasing power-to-evaluation ratio calculation period is 100 (row 1)+40 (row 3)+100 (row 5)+30 (row 7)=270. The second economic activity quantity of constituent group JPNs in the purchasing power-to-evaluation ratio calculation period is 30 (row 2)+10 (row 4)+50 (row 6)=90.

【0198】

(S3206)

Next, the free-of-charge exchangeable value evaluation unit 122 of the server 10 may refer to the first evaluation table to calculate the total evaluation score of the free-of-charge exchangeable value acquirer belonging to the constituent group during the purchasing power-to-evaluation ratio calculation period for each constituent group. In other words, it can be said that for each constituent group to which the user who is to acquire the free-of-charge exchangeable value belongs, the sum of the predetermined periods of evaluation score recorded in the first assessment table in relation to the free-of-charge exchangeable value acquiring action is calculated. In other words, it can be said that the sum of the purchasing power-to-evaluation ratio calculation periods of the evaluation score to be given to the free-of-charge exchangeable value is calculated for each constituent group by the user belonging to the constituent group acquiring the free exchangeable value.

【0199】

In the first evaluation table shown in the 7I, the total evaluation score of the constituent group USAs to which the user who acquired the free-of-charge exchangeable value in the purchasing power-to-evaluation ratio calculation period belongs is 8 (row 2)+9 (row 6)+10 (row 8)+9 (row 9)=36. In addition, the total evaluation score of the constituent group JPNs to which the user who acquired the free-of-charge exchangeable value in the purchasing power-to-evaluation ratio calculation period belongs is 10 (row 1)+2 (row 3)+10 (row 4)+6 (row 5)+10 (row 7)=38.

【0200】

(S3207)

Next, the free-of-charge exchangeable value evaluating unit 122 of the server 10 may calculate the purchasing power-to-evaluation ratio for each constituent group in the purchasing power-to-evaluation ratio calculation period, and may record the calculated purchasing power-to-evaluation ratio in a purchasing power-to-evaluation ratio table etc. Here, the purchasing power-to-evaluation ratio may be defined as "the sum total of the second economic activity quantities (consumed quantities of first value exchange medium) relating to the second economic activity

performed for the user belonging to the constituent group in the predetermined period/the sum total of the evaluation score relating to the free-of-charge exchangeable value acquired by the user belonging to the constituent group in the predetermined period". In the first network in which a plurality of pieces of constituent group having different purchasing power can exist, the size of the economic value included in the above-mentioned "assessment" (the size of the "value" generated in the first network by the first economic activity by the user) may be different for each constituent group. In the first economic activity basic score table, even in the same category included in the type I, it is possible to provide differences in the size of the basic score of each constituent group (by a measure of varying the integration degree of basic score for each category of the type I for each constituent group by reflecting the characteristics and conditions of the constituent group). Therefore, the server 10 calculates the purchasing power-to-evaluation ratio as the side of acquiring the free-of-charge exchangeable value belonging to the type I, and multiplies the evaluation score for each evaluation (the acquisition action in the free-of-charge exchangeable value where the evaluation occurs) by the server 10, so that the server 10 can appropriately calculate the size of the evaluation score included in the "evaluation" for the user belonging to each free exchangeable value, even if the difference is provided in the integration degree (the degree of addition of the purchasing power-to-evaluation ratio) of the free-of-charge exchangeable value for each constituent group of the same category of the type I while reflecting the different purchasing power for each constituent group as the side of acquiring the free-of-charge exchangeable value belonging to the type I in the evaluation score, and at the same time, the server 10 can appropriately calculate the size of the evaluation score included in the "evaluation" for the user belonging to each free exchangeable value, even for the providing user.

【0201】

In the second economic activity table shown in FIG. 7H and the first assessment table shown in FIG. 7I, the purchasing power-to-evaluation ratio of the constituent group USA in the purchasing power-to-evaluation ratio calculation period is 270/36=7.5000, and the purchasing power-to-evaluation ratio of the constituent group JPN in the purchasing power-to-evaluation ratio calculation period is 90/38=2.3684. This completes the purchasing power-to-evaluation ratio calculation process.

【0202】

(3-2-1-3) Processing issuance based on evaluation

Figure 15

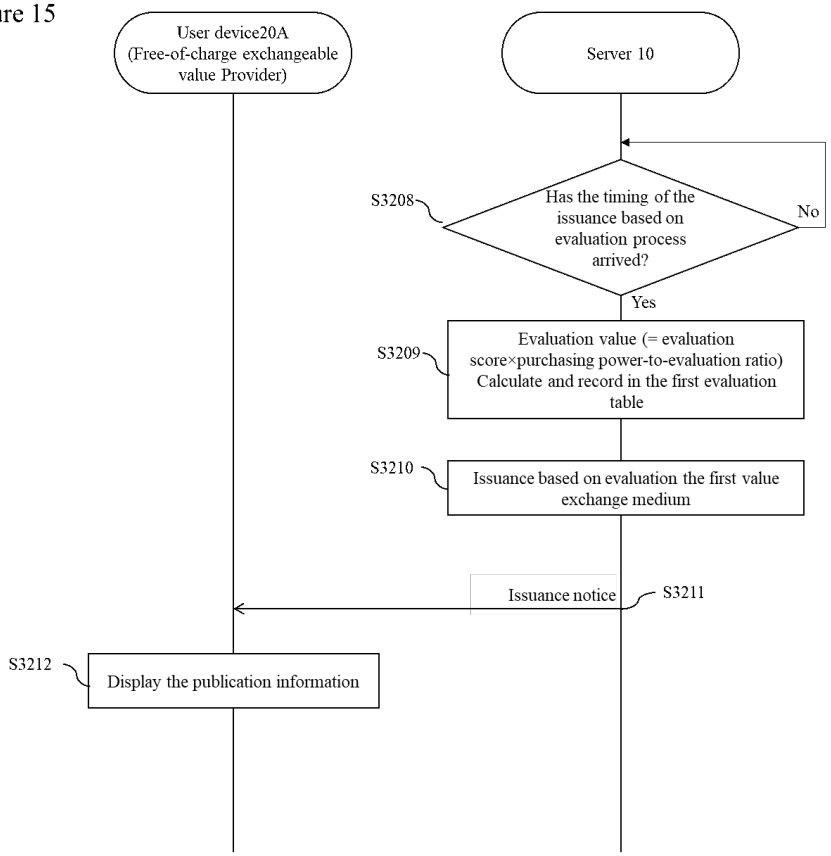


FIG. 15 is a diagram illustrating exemplary operation sequences of the issuance based on evaluation process. The issuance based on evaluation process can be applied to the first economic activity (provision and retrieval of free exchangeable value) represented by any one record (row) included in the first assessment table described with reference to the drawing 7I, for example.

【0203】

(S3208)

First, for example, the issuance based on evaluation unit 123 of the server 10 determines whether or not a time for executing the issuance based on evaluation processing related to the target first economic activity, i.e., a time for executing the issuance based on evaluation processing, has arrived. Here, the time at which the issuance based on evaluation process is executed may be any time determined in advance by the system administrator, and the time may be defined by a cycle of 24:00 every day, 24:00 every Sunday, or 24:00 every last day of every month, although the timing is not particularly limited. In this instance, the time at which the issuance based on evaluation process is executed may differ for each constituent group, or may be the same time. The issuance based on evaluation processing execution timing may be the end timing of the predetermined period in the above-described purchasing power-to-evaluation ratio calculation processing, and the processing may be performed following the end of the purchasing power-to-evaluation ratio calculation processing. Alternatively, the time may be a time when the target first economic activity is executed.

【0204】

(S3209)

Next, the issuance based on evaluation unit 123 of the server 10 may calculate the evaluation value relating to the target first economic activity, and may record the calculated evaluation value in the first evaluation table. Here, the evaluation value may be calculated as, for example, "evaluation score x purchasing power-to-evaluation ratio of the purchasing power-to-evaluation ratio calculation period including the time point at which the target first economic activity is executed". Alternatively, the evaluation value may be calculated as, for example, "evaluation score × purchasing power-to-evaluation ratio of the purchasing power-to-evaluation ratio calculation period prior to the purchasing power-to-evaluation ratio calculation period including the time point at which the target first economic activity is executed". At this time, for example, the issuance based on evaluation unit 123 of the server 10 may refer to the purchasing power-to-evaluation ratio table in advance or at the time of the S3209, and may record the desired purchasing power-to-evaluation ratio in the first evaluation table.

【0205】

Here, as described above, when the evaluation value is calculated as "the purchasing power-to-evaluation ratio of the purchasing power-to-evaluation ratio calculation period including the time point at which the evaluation score×target first economic activity is executed", the evaluation value can be calculated simultaneously for all the first economic activity included in the purchasing power-to-evaluation ratio calculation period. Therefore, the issuance based on evaluation quantity included in the purchasing power-to-evaluation ratio calculation period and the second economic activity quantity (consumed quantity of first value exchange medium by the second economic activity) can be made to coincide with each other (including complete coincidence, substantial coincidence, etc). In other words, it can be said that the measure balances the magnitude of the economic value expressed as the quantity of first value exchange medium consumed in the second economic activity of the acquiring action of the paid consumption value in the predetermined period and the magnitude of the economic value expressed as the evaluation value given in the providing action of the free-of-charge exchangeable value in the first economic activity of the predetermined period.

【0206】

Further, when the evaluation value is calculated as "evaluation score × the purchasing power-to-evaluation ratio of the purchasing power-to-evaluation ratio calculation period prior to the purchasing power-to-evaluation ratio calculation period including the time point at which the target first economic activity is executed" as described above, a difference may occur between the issuance based on evaluation quantity and the second economic activity quantity included in a given purchasing power-to-evaluation ratio calculation period (the consumed quantity of first value exchange medium by the second economic activity). For example, the issuance based on evaluation unit 123 of the server 10 may execute a correcting process for reducing the difference in the calculation process of the evaluation value. The correction process may be, for example, a process of multiplying the pre-correction evaluation value by coefficients calculated on the basis of differences between the issuance based on evaluation quantity and the second economic activity quantity. The coefficients may be updated at a predetermined time, which may be periodic, for example, based on differences between the issuance based on evaluation quantity and the second economic activity quantity. In the present embodiment, there are index values as the issuance based on

debt balance ratio recorded in the issuance based on debt table stored in the storage unit 11 of the servers 10. The issuance based on evaluation unit 123 of the server 10 may use the index value when performing the above-described correcting process for reducing the difference. For example, when the index value is "1.0" (as the ratio of the issuance based on debt balance to the total volume of circulation of the first value exchange medium), the issuance based on evaluation unit 123 of the server 10 can recognize that the issuance based on evaluation quantity (the first predetermined quantity) and the write-off from paid consumption quantity (the second predetermined quantity) are in a relation of "1:1". Here, when the index value indicates, for example, a value such as "1.1" (indicating "first predetermined quantity<second predetermined quantity"), "0.9" (indicating "first predetermined quantity>second predetermined quantity"), etc, the issuance based on evaluation unit 123 of the server 10 can make the index value close to "1.0" by performing a correcting process for reducing the differences described above. The system administrator may cause the issuance based on evaluation unit 123 of the server 10 to perform a correcting process for reducing the above-described differences.

【0207】

(S3210)

Next, the issuance based on evaluation unit 123 of the server 10 may refer to the first assessment table stored in the storage unit 11 to issuance based on evaluation the first value exchange medium of the target first economic activity in association with the user ID, i.e., the free-of-charge exchangeable value provider ID. Specifically, for example, the issuance based on evaluation unit 123 of the server 10 adds the first value exchange medium of the quantity indicated by the evaluation value relating to the target first economic activity to the first ledger stored in the storage unit 11 in association with the user ID. Here, the issuance based on evaluation unit 123 of the server 10 may record in the first evaluation table that the issuance based on evaluation processing has been completed for the first economic activity for which the issuance based on evaluation processing has been completed.

【0208】

(S3211)

Next, the issuance based on evaluation unit 123 of the server 10 may transmit an issuance notification indicating the issuance based on evaluation of the first value exchange medium to the user device 20A. The issuance notification may include information for specifying the free-of-charge exchangeable value subject to the issuance based on evaluation and information related to the issuance (issuance information) such as the quantity of first value exchange medium that has been issuance based on evaluation. It should be noted that the issuance based on evaluation unit 123 of the server 10 may notify the total number of the issuance based on evaluation quantities of the first value exchange medium relating to all the issuance based on evaluation processes executed for the user in the predetermined period at any time point after the predetermined period ends, without executing the issue notification process for each issuance based on evaluation as in the S3211.

【0209】

(S3212)

Next, when the display processor 26 of the user device 20A receives the issuance notification from the server 10, the display processor 26 may display the issuance information on the display device.

【0210】

Figure 16

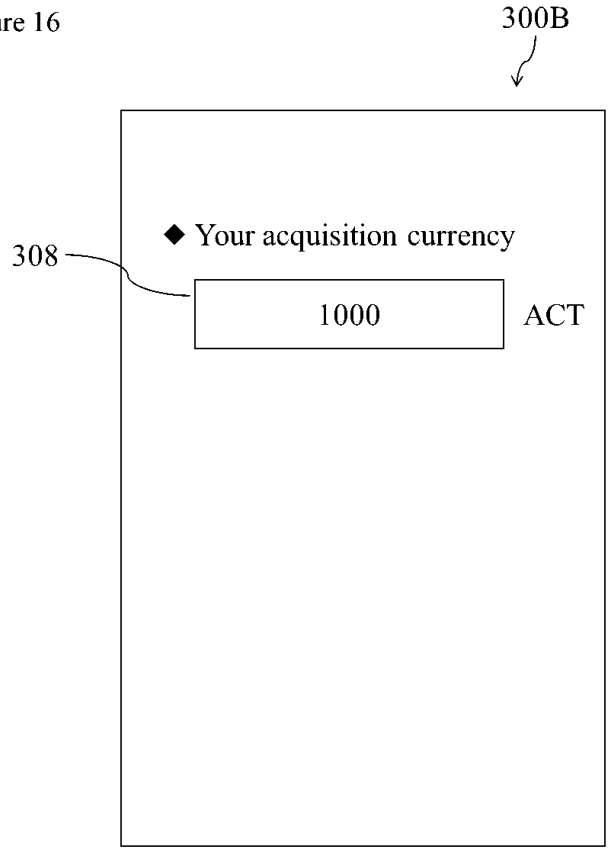


FIG. 16 is a diagram showing an example of an issue information display screen 300B for displaying issue information. As shown in FIG. 16, the issuance-information issuance based on evaluation screen 300B includes, for example, a display unit 308 for displaying the number of pieces of first value exchange medium that have been issued. This completes the issuance based on evaluation process of the first value exchange medium.

【0211】

(3-2-2) Issuance based on debt

The server 10 functions as a exchange place for managing exchanges between the first value exchange medium and the second value exchange medium by the exchange place managing unit 15. In this exchange place function, the server 10 may be able to newly issue a first value exchange medium in response to the second exchange request received from the user device 20. Such publication shall be referred to as a issuance based on debt for the publication (issuance based on evaluation) of a first value exchange medium on the basis of a value provided free-of-charge or an assessment to its free-of-charge exchangeable value providers. The detail of the issuance based on debt will be described later.

【0212】

(3-3) Transfer

The first value exchange medium transfers between users, for example, by remittance between users or by settlement (third economic activity or fourth economic activity) associated with the use of paid exchangeable value. Hereinafter, the remittance related to the fourth economic activity and the settlement related to the third economic

activity will be respectively described.

(3-3-1) Remittances

Figure 17

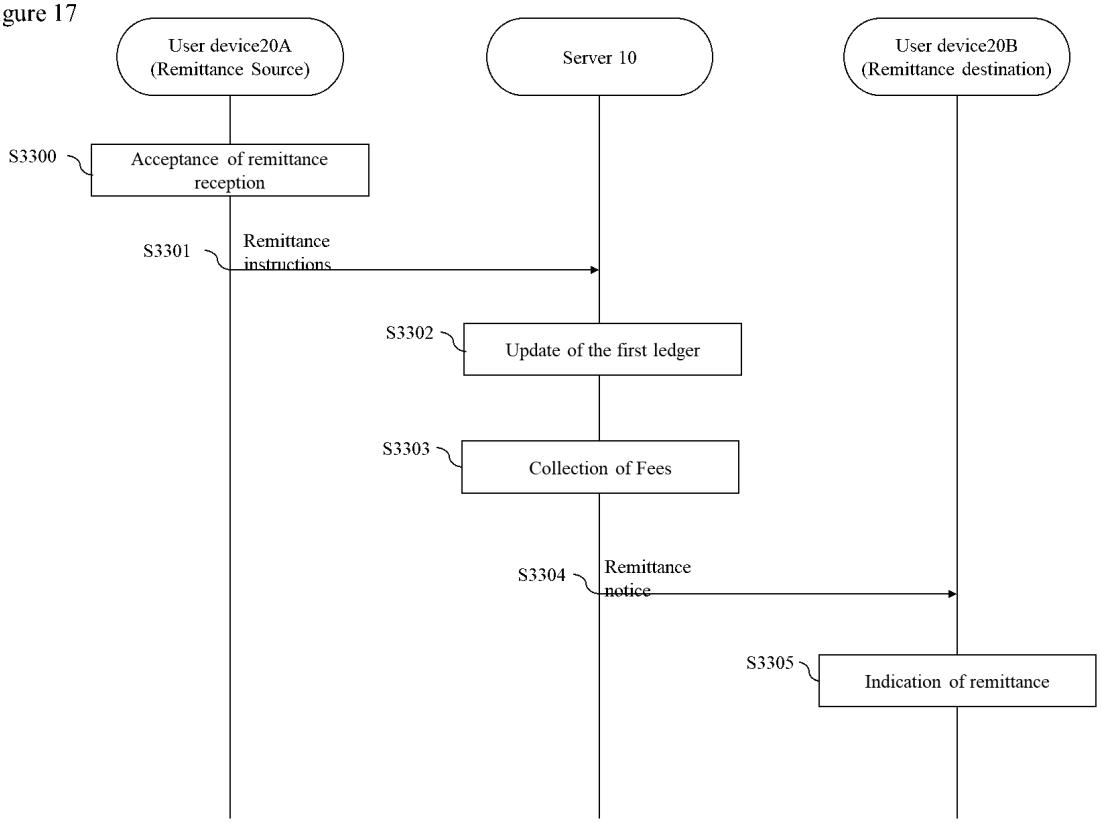


FIG. 17 is a diagram illustrating exemplary operation sequences of the first value exchange medium money transfer process. In the following description, it is assumed that the user A, which is the remittance source, uses the user device 20A, and the user B, which is the remittance destination, uses the user device 20B.

【0213】

(S3300)

First, the remittance unit 222 of the user device 20A accepts an input of a first value exchange medium remittance instruction in response to an operation of the input device by the user A. The content of the remittance instruction includes, for example, the quantity of the first value exchange medium to be remitted and the remittance destination.

【0214】

Figure 18

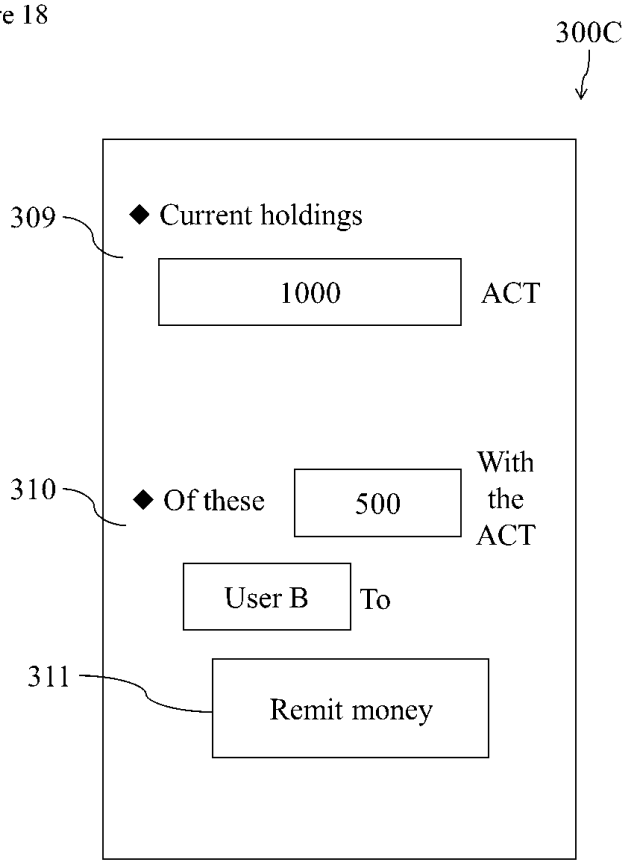


FIG. 18 is a diagram showing an exemplary remittance instruction input screen 300C for inputting a remittance instruction of a first value exchange medium displayed on the user device 20. As shown in FIG. 18, the remittance instruction input screen 300C includes, for example, a display unit 309 for displaying the currently held amount of first value exchange medium, an input unit 310 for inputting the number of first value exchange medium to be remitted and the remittance destination, and a selection unit 311 for transmitting the remittance instruction. In this embodiment, "1000ACT" is displayed as the present first value exchange medium holding quantity on the display unit 309. In addition, the user A can input the number of first value exchange medium to be remitted and the remittance destination to the input unit 310. In this embodiment, "500" ACT is inputted as the number of first value exchange medium to be transferred, and "User B" is inputted as the transfer destination.

【0215】

(S3301)

Next, when the user A inputs the content of the remittance instruction in the remittance instruction input screen 300C and selects the remittance instruction in the selection unit 311, the remittance unit 222 of the user device 20A transmits the remittance instruction to the server 10.

【0216】

(S3302)

When the remittance processing unit 124 of the server 10 receives the remittance instruction from the user device20A, the remittance processing unit 124 of the server 10 may execute, in the first ledger, processing for

updating the user ID corresponding to the amount of remittance in the first value exchange medium associated with the user ID of the remittance source user from the remittance source user to the remittance destination user. At this time, the remittance processing unit 124 of the server 10 may also execute processing for rewriting the scheduled write-off date of the first value exchange medium according to the user of the remittance destination. At this time, the remittance processor 124 of the server 10 may preferentially update the user ID of the user B from the first value exchange medium held by the user A, which is the remittance source, which is closer to the arrival date of the scheduled write-off date. In this embodiment, in the first ledger stored in the storage unit 11, the remittance processing unit 124 of the server 10 executes processing for updating the user ID of 500ACT out of 1000 ACTs, which are first value exchange medium linked to the user ID of the user A as the remittance source, from the user A to the user B.

【0217】

(S3303)

Next, the remittance processor 124 of the server 10 may collect a predetermined amount of second value exchange medium from the user A of the remittance source as the remittance fee. For example, the remittance processor 124 of the server 10 transmits a predetermined transaction generation instruction to the user device 20A. In response to the transaction generation instruction, the second value exchange medium processor 23 of the user device 20 A may generate a transaction whose content is to transfer a predetermined quantity of second value exchange medium linked to the user ID of the user A to the server 10 (administrator ID related to the system administrator), and may transmit (broadcast) the transaction to the blockchain network. Alternatively, the second value exchange medium processing unit 23 of the user device 20A may also perform the processing of generating and transmitting the transactions at the time of transmitting the remittance instruction (S3301) described above. The amount of the fee-of-charge may be defined by, for example, setting information set by the system administrator in advance, or may be changed according to the circulation contribution rate or transfer evaluation value of the type of the user's accounts (e.g., "business operators" and "individuals") and the status of the user's first value exchange medium and/or second value exchange medium remittance. In this manner, by providing the second value exchange medium collection process for the first value exchange medium transfer process between the users, the second value exchange medium supplied to the value exchange medium circulation networks can be appropriately collected, and the administrator etc of the servers 10 can obtain the transfer by fee-of-charge.

【0218】

(S3304)

Next, the remittance processor 124 of the server 10 may transmit a remittance notification indicating that the remittance has been executed to the user device 20B used by the user of the remittance destination.

【0219】

(S3305)

Next, upon receiving the remittance notification from the server 10, the display processor 26 of the user device 20B used by the user of the remittance destination may display a remittance notification screen indicating the content of the remittance on the display device based on the remittance notification.

【0220】

Figure 19

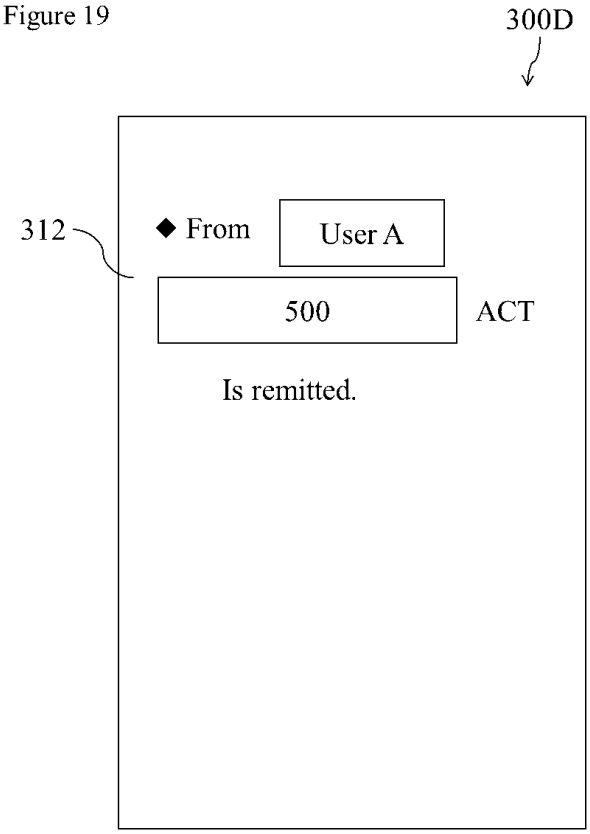


FIG. 19 is a diagram showing an example of the remittance notification screen 300D. As shown in FIG. 19, the remittance notification screen 300D includes, for example, a display unit 312 that displays the remittance source and the number of remitted first value exchange medium. In this embodiment, "User A" is displayed as the remittance source, and "500" ACT is displayed as the number of remitted first value exchange medium on the display unit 312.

【0221】

(3-3-2) settlement(third economic activity)

Figure 20

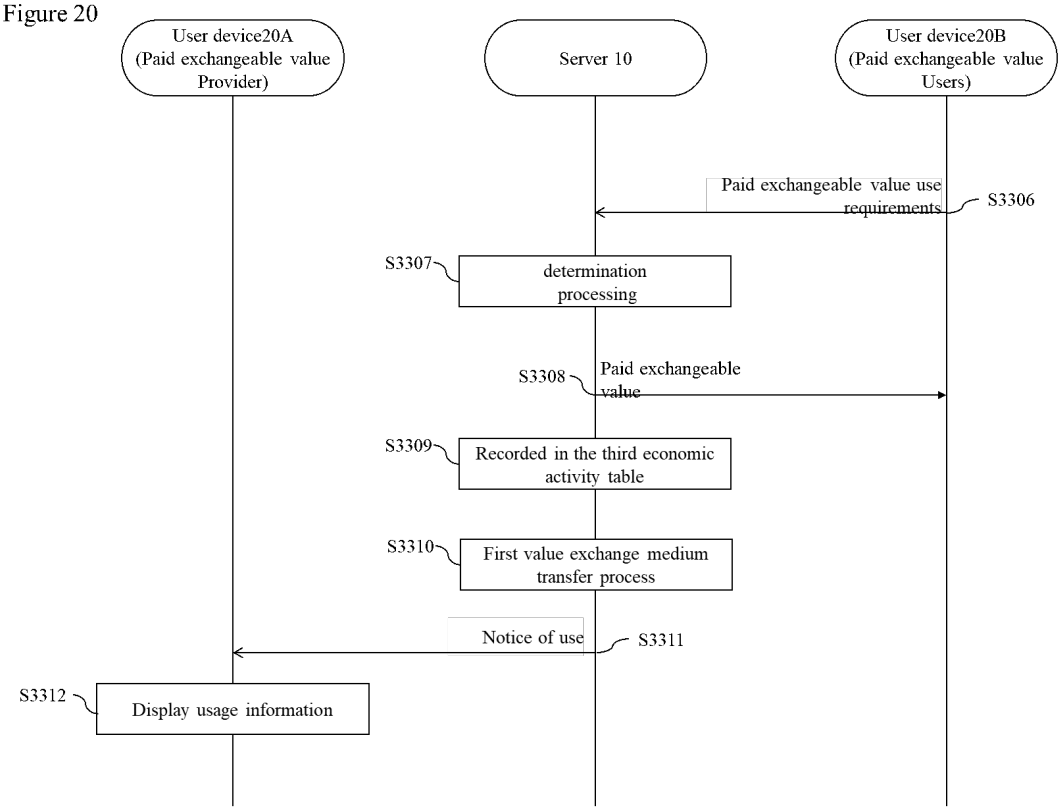


FIG. 20 is a diagram showing an exemplary operation sequence of a settlement (third economic activity) process associated with the use of paid exchangeable value registered in the value table stored in the storage unit 11 of the server 10. In this process, for example, when the user B who is the paid exchangeable value user uses the paid exchangeable value, the first value exchange medium of the quantity corresponding to the price of the paid exchangeable value is transferred from the user B who is the paid exchangeable value user to the user A who is the paid exchangeable value provider. In the following description, it is assumed that the user B as the paid exchangeable value user uses the user device 20B to use (acquire) the paid exchangeable value provided by the user A as the paid exchangeable value provider.

【0222】

(S3306)

First, it is assumed that, for example, a screen of the first network provided by the server 10 is displayed on the display device of the user device 20B, and then the user B selects the use of the paid exchangeable value provided by the user A, which is registered in the value table stored in the storage unit 11 via the input device of the user device 20B. As a result, the value utilization unit 224 of the user device 20B transmits a paid exchangeable value utilization request indicating a paid exchangeable value utilization request to the server 10.

【0223】

(S3307)

Next, when the value processing unit 121 of the server 10 receives the paid exchangeable value use request from the user device 20B, the server 10 refers to the first ledger to determine whether or not the user B has first value exchange medium equal to or larger than the price of the paid exchangeable value.

【0224】

(S3308)

Next, when the value processing unit 121 of the server 10 determines that the user B has first value exchange medium equal to or more than the price of the paid exchangeable value, the server 10 transmits the paid exchangeable value provided by the user A to the user device 20B. As a result, the user B can use the paid exchangeable value via the user device 20B.

【0225】

(S3309)

In addition, the value processing unit 121 of the server 10 records the transaction history (the provider constituent group, the provider user ID, the acquirer constituent group, the acquirer user ID, the category of the type III to which the paid exchangeable value belongs, and the amount of first value exchange medium that has become a consideration) in the third economic activity table stored in the storage unit 11. When the value processing unit 121 of the server 10 determines that the user B does not hold first value exchange medium equal to or larger than the price of the paid exchangeable value, the server 10 transmits a notification of, for example, the fact that the paid exchangeable value cannot be used to the user device 20B, and the processing ends.

【0226】

(S3310)

Next, the settlement processing unit 125 of the server 10 executes processing for transferring a quantity of first value exchange medium corresponding to the price related to the paid exchangeable value from the user B, who is the paid exchangeable value user, to the user A, who is the paid exchangeable value provider. More specifically, the settlement processing unit 125 of the server 10 executes, in the first ledger, processing for updating the number of user ID corresponding to prices in the first value exchange medium associated with the user ID of the user B who is the paid exchangeable value user from the user B who is the paid exchangeable value user to the user A who is the paid exchangeable value provider. At this time, the settlement processor 125 of the server 10 may perform the linking from the user B to the user A preferentially from the server having the closest date of arrival of the write-off deadline.

【0227】

(S3311)

Next, the settlement processor 125 of the server 10 transmits to the user device 20A a use notification for notifying that the paid exchangeable value is used by another user. The usage notification may include information (usage information) on the quantity of the first value exchange medium corresponding to the price of the usage.

【0228】

(S3312)

Next, when the display processor 26 of the user device 20A receives the usage notification from the server 10, the display processor 26 displays the usage information on the display device.

【0229】

Figure 21

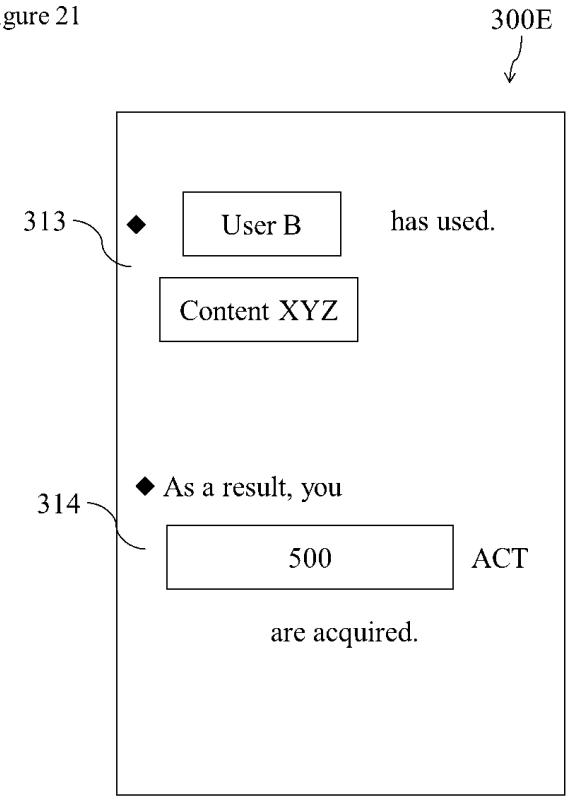


FIG. 21 is a diagram showing an example of a usage information display screen 300E for displaying usage information. As shown in FIG. 21, the usage information display screen 300E includes, for example, a display unit 313 indicating the paid exchangeable value user and the paid exchangeable value who used the usage information. The usage information display screen 300E may include a display unit 314 indicating the number of pieces of first value exchange medium acquired by the paid exchangeable value provider through the use of the paid exchangeable value. This completes the settlement (third economic activity) process associated with the use of the paid exchangeable value.

【0230】

(3-4) write-off

(3-4-1) second economic activity

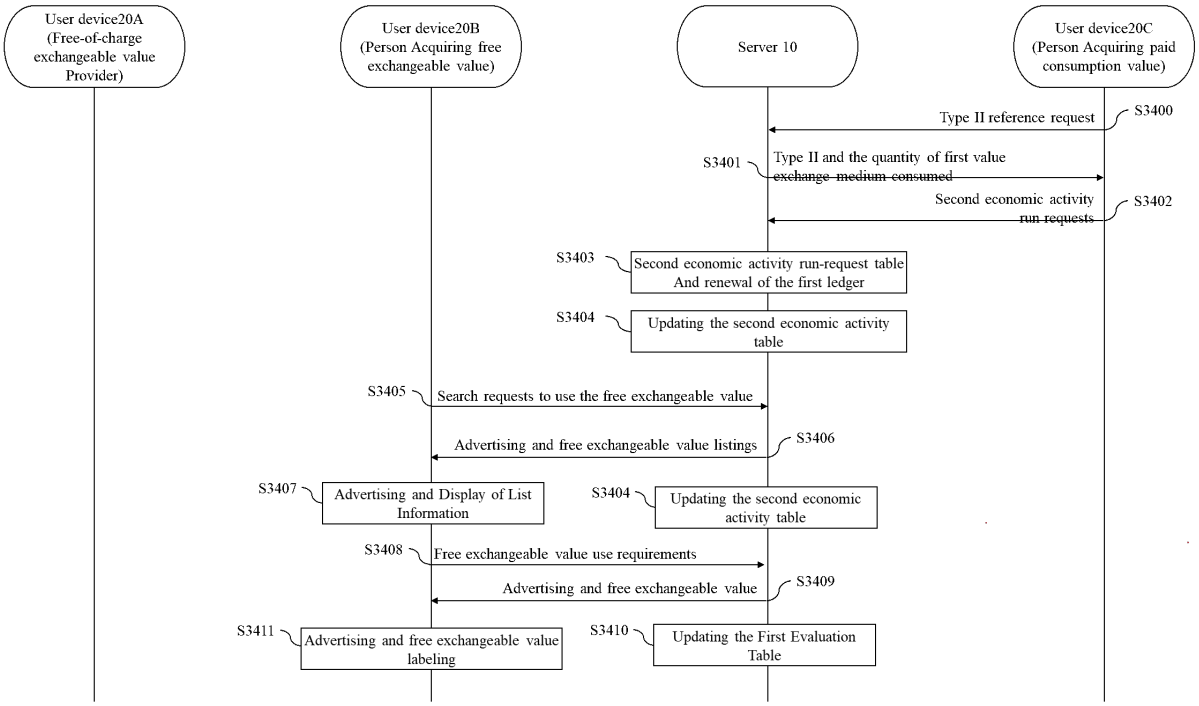
(3-4-1-1) Pull type, push type, etc.

Hereinafter, operation processes of the respective information processing apparatuses when second economic activity is performed in the value exchange medium circulation system 1 will be described. First, the outline of the second economic activity will be described. When the second economic activity processing unit 128 of the server 10 receives, for example, a request to execute a second economic activity from the second economic activity

processing unit 223 of the user device 20, the server 10 specifies, based on the the basic price of the second economic activity table, a consumption amount of first value exchange medium required to execute a particular second economic activity related to the request received from the user device 20, and transmits information indicating the consumption amount to the user device 20. When the second economic activity processing unit 128 of the server 10 receives the approval (execution approval) to execute the second economic activity from the user terminal 20, the second economic activity processing unit 128 of the server 10 may write-off the first value exchange medium of the consumption quantity related to the execution request related to the user ID related to the user terminal 20 to which the execution approval was transmitted (similar to the write-off processing by the arrival of the scheduled write-off date, but may not take measures to reduce the debt issuance balance. In addition, the consumed first value exchange medium may write-off the medium ID from the first ledger (consumption write-off) or may temporarily store the medium ID in isolation without write-offing the medium ID in order to apply it to the later assessment issuance), and executes the second economic activity based on the execution request. In addition, the second economic activity content may be recorded in the second economic activity table.

【0231】

Figure 22



Next, referring to FIG. 22, the second economic activity will be described in detail. FIG. 22 is an exemplary operation process of the value exchange medium circulation system 1, and the value exchange medium circulation system 1 does not necessarily execute the process in the order and the content shown in FIG. 22.

【0232】

Hereinafter, it is assumed that the user device 20A is the user device 20 used by the user A as the free-of-charge exchangeable value provider in the first economic activity, the user device 20B is the user device 20 used by the user B as the free-of-charge exchangeable value acquirer in the first economic activity, and the user device 20C is the user device 20 used by the user C (the user C who intends to perform the advertisement activity) as the paid consumption

value acquirer in the second economic activity (for example, the advertisement activity).

【0233】

In the following description, it is assumed that the user device 20B uses free-of-charge exchangeable value registered by the user device 20A in advance in the value table stored in the storage unit 11 of the server 10, for example, as in the above-described S3103~S3105, via the server 10. When the user device 20B acquires the free-of-charge exchangeable value as a first economic activity through the server 10 and displays it on the display device, the user device 20C is supposed to display an advertisement relating to one paid consumption value belonging to the type II on the display device together with the free-of-charge exchangeable value.

【0234】

(S3400)

The second economic activity processor 223 of the user device 20 C transmits, for example, a request for referring to the base prices of the respective categories and constituent group of the first value exchange medium consumed when performing the push-type second economic activity (in other words, a request for confirming the cost relating to the second economic activity) to the server 10 in response to the user C's manipulation.

【0235】

(S3401)

When the second economic activity processor 128 of the server 10 receives the above-described request from the user device20C, for example, the server 10 transmits, based on the the basic price of the second economic activity table, information indicating the base price for each category and for each constituent group of the first value exchange medium consumed when the push-type second economic activity is performed, to the user device 20C.

【0236】

(S3402)

When the display processor 26 of the user device20C receives, for example, information indicating each category relating to advertising as an act of acquiring paid consumption value belonging to the requested category II and the amount of first value exchange medium consumed for each target constituent group from the server 10, the display processor 26 of the user device 20C displays the information on the display device of the user device 20C. The second economic activity processor 223 of the user device 20C transmits a second economic activity execution request (second economic activity execution request) to the server 10 in response to the user C's manipulation, for example. Here, the second economic activity execution request may include advertisement content data, a target constituent group, a target user attribute, etc relating to an act of acquiring a paid consumption value belonging to the type II selected from the information displayed on the display device, the advertisement content data, the target user attribute, etc. The second economic activity execution request may include a request for registering an execution request (upload of advertisement content data) in the second economic activity execution request table stored in the storage unit 11 of the server 10.

【0237】

(S3403)

For example, when the second economic activity processor 128 of the server 10 receives a second economic activity execution request including a request to register an execution request from the user device 20C, the server

10 updates the second economic activity execution request table based on the second economic activity execution request. Specifically, the second economic activity processor 128 of the server 10 updates the second economic activity execution request table by, for example, registering advertisement content data, target constituent group, target user attributes, etc included in the second economic activity execution request in the second economic activity execution request table. In addition, the second economic activity processor 128 of the server 10 generates first update-information for updating one ledger (write-off the first value exchange medium) based on, for example, second economic activity execution requests. The first update-information may be, for example, the content of write-off of a record of the first value exchange medium of the quantity associated with the user ID in the first ledger. Alternatively, the first update-information may have a content in which the holder information of the first value exchange medium of the quantity associated with the user ID in the first ledger is left blank. Then, the second economic activity processor 128 of the server 10 updates the first ledger based on the first update-information. At this time, the write-off may be performed preferentially from the first value exchange medium held by the user whose arrival date of the scheduled write-off date is close to the arrival date. Further, the server 10 may transmit, for example, a notification to the effect that the server 10 has updated the first ledger to the user device 20C. The user device 20 C may, for example, display the notification received from the server 10. As an example, charging is performed at the execution request registration timing, but the server 10 may perform charging processing (first ledger updating processing) for each execution processing of the execution request of the server 10 based on the execution request registration content of the server 10.

【0238】

(S3404)

For example, the second economic activity processing unit 128 of the server 10 updates the second economic activity table by recording the content of the execution processing (the amount of first value exchange medium consumed, etc.) in the second economic activity table, based on the execution processing of the execution request content relating to the act of acquiring the paid consumption value belonging to the type II in the second economic activity execution request table registered in the user device 20C.

【0239】

(S3405)

The value use unit 224 of the user device 20 B transmits, for example, a search request for using (browsing etc) the free-of-charge exchangeable value belonging to the type I to the server 10.

【0240】

(S3406)

For example, in response to the search request received from the user device 20B, the second economic activity processor 128 of the server 10 transmits the advertisement data (the content of the execution request relating to the acquisition action of the paid consumption value belonging to the registered type II of the user device 20C) as the acquisition action of the paid consumption value belonging to the type II associated with the search action or the like of the user device 20B to the user device 20B. At this time, when the search request is an execution processing target of the execution request content, the second economic activity processing unit 128 of the server 10 may insert the execution request content (advertisement) into the free-of-charge exchangeable value list belonging to the type I.

【0241】

(S3407)

For example, when the display processor 26 of the user device 20 B receives the advertisement and the list information of the free-of-charge exchangeable value belonging to the type I from the server 10 (free-of-charge exchangeable value list display), the display processor 26 inserts the advertisement into the list information and displays the advertisement on the display device. In addition, the display processor 26 of the user device 20B may display the advertisement on the display device in a partial area of the display device in which the list information is displayed, for example, a partial display area of the display device. The display processing unit 26 of the user device 20B may perform processing for displaying the advertisement on the display device prior to processing for displaying the list information on the display device. At this time, the second economic activity processing unit 128 of the server 10 may execute the above-described processing (S3404) following the execution processing of the second economic activity execution request.

【0242】

(S3408)

For example, when the value use unit 224 of the user device 20 B receives a request to use (browse, etc.) the free-of-charge exchangeable value including the selection of the free-of-charge exchangeable value belonging to the type I by the user B, the value use unit 224 transmits a request (free-of-charge exchangeable value use request) to use (browse, etc.) the free-of-charge exchangeable value belonging to the selected type I to the server 10. The S3408 corresponds to the above-described S3200.

【0243】

(S3409)

The value processing unit 121 and/or the second economic activity processing unit 128 of the server 10, for example, in response to the free-of-charge exchangeable value use request received from the user device 20B, transmits the free-of-charge exchangeable value belonging to the type I and the advertisement as the acquiring action of the paid consumption value belonging to the type II associated with the free-of-charge exchangeable value use request to the user device 20B. At this time, for example, the value processing unit 121 and/or the second economic activity processing unit 128 of the server 10 may insert the advertisement into the free-of-charge exchangeable value and transmit the advertisement, or may transmit the free-of-charge exchangeable value and the advertisement, respectively. The S3409 corresponds to the above-described S3201.

【0244】

(S3410)

The free-of-charge exchangeable value evaluation unit 122 of the server 10 updates the first evaluation table by recording evaluation score in the first evaluation table based on, for example, an act of acquiring a free-of-charge exchangeable value belonging to the type I of the user device 20B (free-of-charge exchangeable value use such as browsing) and a first economic activity basic score table. The server 10 may also transmit, for example, a notification to the effect that the server 10 has transmitted the advertisement to the user device 20B to the user device 20C, which is a registering source of the advertisement (second economic activity execution request). The S3410 corresponds to the above-described S3202 and S3203.

【0245】

(S3411)

When the display processor 26 of the user device 20 B receives the free-of-charge exchangeable value and the advertisement from the server 10, for example, the display processor 26 displays the free-of-charge exchangeable value and the advertisement on the display device (input/output I/F104). The display processor 26 of the user device 20B may display the advertisement in a partial area of the display device displaying the free-of-charge exchangeable value, for example, in a partial display area of the display device. The display processing unit 26 of the user device 20B may perform processing for displaying the advertisement on the display device prior to processing for displaying the free-of-charge exchangeable value on the display device.

【0246】

It should be noted that the settlement (first ledger updating process) may be a lump-sum prepayment at the time when the server 10 approves the execution request relating to the second economic activity (as an operation of acquiring the paid consumption value belonging to the type II) by the user device 20C. Alternatively, the settlement (first ledger updating process) may be executed for each second economic activity execution process by the server 10 based on the execution request content relating to the paid consumption value acquisition act belonging to the type II registered in the second economic activity execution request table after the server 10 approves the execution request relating to the second economic activity (as the paid consumption value acquisition act belonging to the type II) by the user device 20C, and in this instance, the server 10 may stop the execution process by the server 10 when the first value exchange medium holding balance of the user C is lost. Alternatively, the server 10 may execute a margin transaction such as closing of a month with respect to the user C.

【0247】

As for the recording of the activity content (execution processing of execution requests) in the second economic activity table, the execution history may be recorded each time the first ledger related to the second economic activity is updated. The second economic activity table may be configured such that the user C can refer to own history of executing the process by using the user device 20C. User C may optionally be able to modify or delete, including suspend, execution requests that have already been approved by servers 10 and registered in the second economic activity execution request table.

【0248】

(3-4-2) write-off due to expiration

The first value exchange medium may be write-off, for example, by the arrival of a write-off deadline. More specifically, the write-off processing unit 126 of the server 10 may specify a write-off time limit for each first value exchange medium included in the first ledger when a predetermined condition is satisfied (e.g., when a predetermined time period has elapsed since the previous write-off processing, or when a request for executing write-off processing is received by a system administrator etc), and may write-off a record of the first value exchange medium from the first ledger when the write-off time limit is a time point prior to the time point of the write-off processing. From this, it can be said that the first value exchange medium can control the value storage function among the basic functions of the currency. The write-off deadline can be arbitrarily set by the system administrator, and the server 10 stores the setting information of the write-off deadline in the storage unit 11. The

write-off deadlines of the first value exchange medium may be set differently depending on the user ID, the types of accounts of the users, the history of acquiring the users, etc. It should be noted that the write-off processing unit 126 of the server 10 may successively record the write-off quantity of the first value exchange medium where the write-off processing has been executed upon the arrival of the write-off deadline in the issuance based on debt table, i.e., may increase the write-off due to expiration quantity. Since the first value exchange medium can have a write-off deadline, the circulation rate can be increased.

【0249】

(3-4-3) Customs pricing adjustments in third economic activity

Figure 23

	Constituent group A (USA)	Constituent group B (JPN)	Constituent group C	Constituent group D	Constituent group E	Constituent group F
Type IIIA	21.00	18.00	15.00	12.00	5.00	33.00
Type IIIB	7.00	6.00	3.00	8.50	1.25	9.25
Type IIIC	11.00	9.00	10.00	16.00	1.80	18.00
Type IIID	16.00	14.00	12.00	11.00	4.50	29.55
Type IIIE	31.00	24.00	23.00	32.00	5.88	46.00

Now, referring to FIG. 23, examples of customs pricing adjustments in the third economic activity will be described. In the table shown in FIG. 23, the average value (average trading price) of the trading prices of the paid exchangeable value traded through the servers 10 among the plurality of user device 20 belonging to the same constituent group for each category of type III and for each constituent group for a predetermined period up to the present time is shown. The table shown in FIG. 23 may be referred to as a "third economic activity purchasing power reference table". The third economic activity purchasing power reference table shown in FIG. 23 is based on the third economic activity table shown in FIG. 7M. Since the average trading price included in the third economic activity purchasing power look-up table shown in FIG. 23 is calculated based only on the trading among the plurality of user device 20 belonging to the same constituent group, excluding the trading among the plurality of user device 20 belonging to a different constituent group, it can be said that the average trading price represents the purchasing power of each constituent group for each category of the type III.

【0250】

Here, for example, in FIG. 23, since the average trading price of the type IIIC (lock/large classification sound) (one of the categories of type III) of the constituent group F is 18.00ACT and the average trading price of the type

IIIC of the constituent group E is 1.80ACT, it can be said that the average trading price of the type IIIC has a 10-fold difference between the constituent group F and the constituent group E. Here, it is desirable to allow the user to perform the first, second, and third economic activity among the various constituent group without paying significant costs within the first networks. However, if there is a large difference in the average trading price between different constituent group, there is a possibility that the selling price of the paid exchangeable value belonging to the type IIIC to be sold to the user belonging to the constituent group in which the average trading price is small by the user belonging to the constituent group in which the average trading price is large is depressed (in turn, there is a possibility that the willingness of the user to sell the paid exchangeable value is reduced). As a measure to alleviate this, the server 10 may perform, for example, customs price adjustment processing described below.

【0251】

Based on the third economic activity purchasing power reference table, for example, when a user belonging to a certain subject group F attempts to refer to a price (e.g., a set price) of a paid exchange value provided by a user belonging to a subject group E that differs from the subject group F to which the server 10 belongs in the third economic activity, the server 10 may display the average value (1.80) in the subject group E associated with the category III to which the paid exchange value belongs (e.g., type IIIC) and the average value (18.00) of the same type IIIC in the subject group F to which the server 10 belongs and the average value (1.80) of the subject group E associated with the paid exchange value are lower than the average value (18.00) of the subject group F to which the server 10 belongs, by way of example, multiplying the 2ACT by the ratio of the average value (10.00) of the AC value (10.00=10.00)×10.00 2ACT (AC=10.00) as an example). The ratio of the average value to be multiplied by the price set for the paid exchange value registered in the 2ACT table may be limited to the range from the original ratio (10.00, i.e., 20ACT as an example) to "1.00" (i.e., 2ACT as an example), and the method of the ratio change may be, for example, arbitrary setting information by the system administrator, arbitrary setting information by the system administrator, or arbitrary setting information by the system administrator and the user combined. At this time, the corrected amount of 20ACT displayed by the sale and purchase of the paid exchange value may be settlement as the exchange consideration.

【0252】

(4) Second value exchange medium

The value exchange medium circulation network in this embodiment may also have aspects of a block chain network in which the servers 10 and the user device 20 are configured as nodes. The nodes may share second ledger for recording or managing second value exchange medium issuance, transfer, write-off, etc. in a distributed manner. More specifically, for example, the server 10 may store a block chain as a second ledger shown in FIG. 7P and FIG. 7Q in the storage unit 11, and the user device 20 may store a block chain as a block chain in the storage unit 21.

【0253】

Each of the servers 10 and the user device 20 may generate and transmit transactions to other nodes under predetermined conditions. Upon receiving transactions from other nodes, the servers 10 and the user device 20 may perform predetermined verifications and transmit the transactions to the other nodes. In this manner, transactions generated at any node on the value exchange medium circulation network may be broadcast to any other node on the value exchange medium circulation network.

【0254】

Transactions broadcast on the block chain network may be captured in blocks generated by mining processing by nodes that are responsible for minor functions. The blocks generated by the minor may be broadcast on the block chain network, and each node may add the received blocks to its stored block chain after performing a predetermined verification. It should be noted that the circulate block chain network second value exchange medium may not be a purely decentralized network, but may be a network in which administrative nodes such as servers 10 reside. For example, the network may be configured in any manner, such as a bit coin type, a ripple type, an Ethernet type, or a mode disclosed in Patent Document 1 as a prior technical document.

【0255】

(4-1) credit issuance (issuance based on credit)

<Overview>

Hereinafter, the credit issuance of the second value exchange medium will be described. In this embodiment, the second value exchange medium may also be issued by the credit issuance, as described above. Here, the credit issuance of the second value exchange medium can be said to be, for example, issuing a new second value exchange medium of a quantity based on the trust of the user who is the object of the credit issuance in association with the user ID of the user. The user's credibility may be calculated, for example, based on a subsequent transaction between the server 10 or the user device 20 as the credit issuance source and the user device 20 as the credit issuer.

- Investments (e.g., underwriting stocks, purchasing stocks, underwriting bonds such as corporate and government bonds, and purchasing bonds)
- Loans (e.g., instrument loans, bill loans, collateral loans, unsecured loans, etc.)
- Payment of money, tax collection (accounting by systems), second exchange, remittance, etc.

【0256】

<Credit Issuer>

The credit issuance source that executes the credit issuance may be the server 10 used by the system administrator, or the server 10 may be any user device 20 used by any user. In particular, when the credit issuance source is the user device 20, the system administrator etc may assign in advance a credit issuance rights capable of executing the credit issuance to the user ID using the user device 20 serving as the credit issuance source. The information on the application of the credit issuance rights to the user ID may be recorded in the storage unit 11 etc of the servers 10 as appropriate. The credit issuance source may be limited to one user device 20 per constituent group. Here, the user device 20 serving as a single credit issuance source in one constituent group may be referred to as a "user device of central bank 20 ". Also, a user who uses the "central bank type user device 20 " may be referred to as an "central bank type user".

【0257】

<Credited user>

The credit issuance target (credit issuers) may be any user device 20 used by any user. For example, the user device 20 of the credit issuers to be the target of the credit issuance executed by the credit issuance source may be arbitrarily set according to the accounts of the credit issuance source, such as the system administrator ID or the user ID. For example, the credit issuers of the user device 20 as one credit issuance source may be limited to only the user device 20 belonging to the constituent group to which the user device 20 as the credit issuance source belongs. The corresponding relation between the credit issuance source and the credit issuers may be recorded in, for example, the storage unit 11 of the server 10. Here, the user device 20 serving as the credit issuers may be referred to as "commercial and industrial bank type user device 20 ". Also, a user who uses the "commercial and industrial bank type user device 20 " may be referred to as an "commercial and industrial bank type user".

【0258】

<Examples of Service Configurations>

In addition, when the "central bank user" mentioned above and "commercial and industrial bank user" are included in the configuration, the corresponding relation according to the embodiment is not limited, and for example, the credit issuance source may have "central bank user" as a single user in each constituent group. As the credit issuer, "commercial and industrial bank users" as a plurality of users may exist for each constituent group in association with each central bank user. There may be a large number of "ordinary users" who operate the user device 20 of individuals, corporations, organizations, administrations, and etc, linked to respective constituent group (nations). Here, for example, the credit issuance may be performed only by the commercial and industrial bank user who is the credit issuer from the central bank user who is the credit issuance source, and the credit issuance to the ordinary user may not be performed. In this instance, since there is no transaction relation relating to the credit issuance between the central bank user and the general user, the credit issuance for supplying the second value exchange medium to the general user is performed through the commercial and industrial bank user. In other words, the credit issuance in this instance can be said to be a new issue of a second value exchange medium as a supply resource from the central bank user to the commercial and industrial bank user, which is performed in order to supply second value exchange medium from the commercial and industrial bank user to the ordinary user. The

second value exchange medium supplied to the second network by the credit issuance is write-off by being repaid from the commercial and industrial bank network user to the central bank network user. In the above-described configuration, the "trust" (the value size of the asset as the recovery basis of the second value exchange medium for credit issuance) that the central bank user receives from the commercial and industrial bank user who is the credit issuer for credit issuance to the commercial and industrial bank user becomes the soundness of the asset of the commercial and industrial bank user. In other words, it is preferable to set an upper limit for credit issuance to commercial and industrial bank user based on the size of the economic value represented by the second value exchange medium quantity of the debt held by the commercial and industrial bank user (on the other hand, the debt generated by the ordinary user). Here, the upper limit can be referred to as a credit issuance limit quantity. The commercial and industrial bank user may receive credit issuance from the central bank user based on his/her financial soundness, and may conduct business such as financing and investments (including sales and purchase of claims) to the ordinary user using the second value exchange medium that he/she has come to hold.

【0259】

<Specific processing of credit issuance>

Figure 24

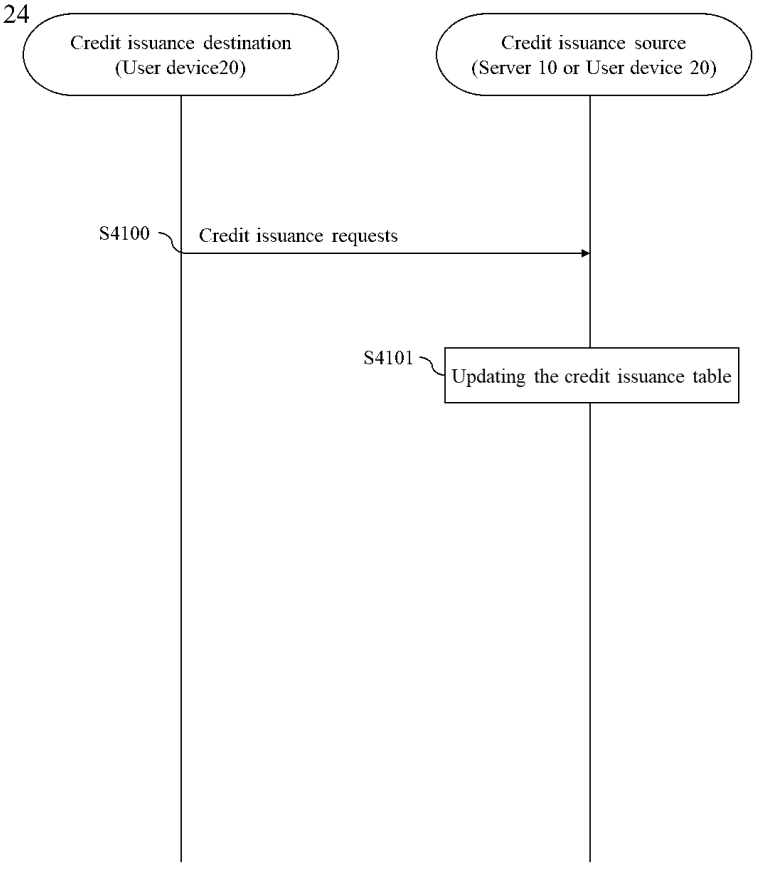


FIG. 24 is a schematic diagram illustrating exemplary operation sequences relating to the credit issuance process. In the following explanation, the credit issuer is the user device 20, and the credit issuance source is the server 10. First, the user device 20 serving as a credit issuer may transmit a credit issuance request to the server 10 in response to, for example, a user's operation (S4100). The credit issuance requests may include, for example, an indication of the number of second value exchange medium the user wishes to credit issuance. The credit issuance requests may

include, for example, information specifying the credit issuer (user ID), information specifying the credit issuance source (system administrator ID, user ID, etc.), etc.

【0260】

The receiving unit 132a of the credit issuance unit 132 of the server 10 may receive the credit issuance request transmitted from the user device 20, and record the information included in the received credit issuance request in the credit issuance table stored in the storage unit 11 of the server 10. The update-information generating unit 132b of the credit issuance unit 132 of the server 10 may update the second ledger based on the credit issuance request received by the receiving unit 132a (S4101). More specifically, the update-information generating unit 132b of the credit issuance unit 132 of the server 10 may add the second value exchange medium of the quantity of the credit issuance request to the second ledger by associating the update-information generating unit 132b with the user ID of the user device 20 as the credit issuer. Then, the credit issuance unit 132 of the server 10 may execute a process of increasing the credit issuance balance of the credit issuer (which can be specified by referring to the information for specifying the credit issuer included in the credit issuance request or the information stored in the storage unit 11 etc in advance) by the amount corresponding to the credit issuance request in the credit issuance table.

【0261】

For example, the credit issuance limit quantity may be set for each user of the credit issuer by the user of the credit issuance source etc. The credit issuance limit quantity may be set based on the trust of the user of the credit issuer. The credit issuance limit quantity for each credit issuer may be recorded in the credit issuance table by the credit issuance unit 132 of the server 10 in response to, for example, a request of the server 10 or the request of the user device 20 which is the credit issuance source. In response to reference requests from the user device 20 as a credit issuance source and the user device 20 as a credit issuer, the server 10 may refer to the credit issuance table and transmit information such as the credit issuance limit. When the determination unit 132c of the credit issuance unit 132 of the server 10 receives the credit issuance request from the user device 20 as the credit issuer, the determination unit 132c of the server 10 may refer to the credit issuance table to determine whether or not the desired credit issuance quantity included in the credit issuance request exceeds the credit issuance limit quantity. When it is determined that the desired credit issuance quantity included in the credit issuance request exceeds the credit issuance limit quantity, the update-information generating unit 132b of the credit issuance unit of the server 10 may notify the user device 20 that transmitted the credit issuance request that the credit issuance is not executed without executing the credit issuance process.

【0262】

<Currency write-off by repayment>

The user device 20 serving as the credit issuer can return the second value exchange medium that has been credit issuance to the server 10 or the user device 20 serving as the credit issuance source. Specifically, the user device 20 serving as a credit issuer may transmit a repayment request to the server 10 in response to a user's manipulation, for example. The repayment requests may include, for example, information indicating the amount of second value exchange medium the user wishes to repay. The repayment request may include, for example, information for specifying a credit issuance source to be repaid, such as a system administrator ID and a user ID.

【0263】

When the update-information generating unit 132b of the credit issuance unit 132 of the server 10 receives the repayment request from the user device 20 as the credit issuer, the update-information generating unit 132b may update the second ledger based on the repayment request. More specifically, the update-information generating unit 132b of the credit issuance unit 132 of the server 10 may write-off the second value exchange medium of the amount of the repayment request from the second ledger. Then, the updated information generating unit 132b of the credit issuance unit 132 of the server 10 may execute a process of decreasing the credit issuance balance related to the credit issuance source (which can be specified by referring to information for specifying the credit issuance source included in the repayment request or information stored in advance in the storage unit 11 etc) by the quantity related to the credit issuance request in the credit issuance table.

【0264】

(5) Exchange

In the present embodiment, the server 10 has a exchange place function of exchanging first value exchange medium and second value exchange medium with the user device 20.

【0265】

(5-1) exchange request by user device 20

Figure 25

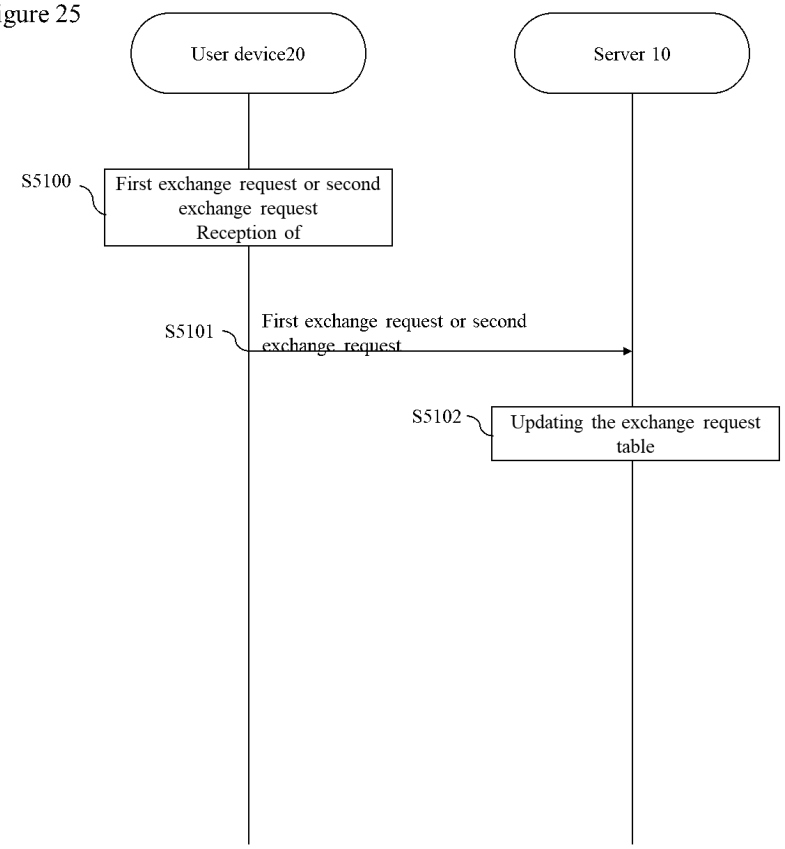


FIG. 25 is a diagram illustrating exemplary operation sequences relating to the process of transmitting and registering exchange request. Hereinafter, exchange request by the user device 20 will be described.

【0266】

(S5100)

First, the first exchange request processing unit 251 or the second exchange request processing unit 252 of the user device 20 accepts an input of a exchange request (first exchange request or second exchange request) in response to, for example, a user's manipulation of an input device.

【0267】

Figure 26

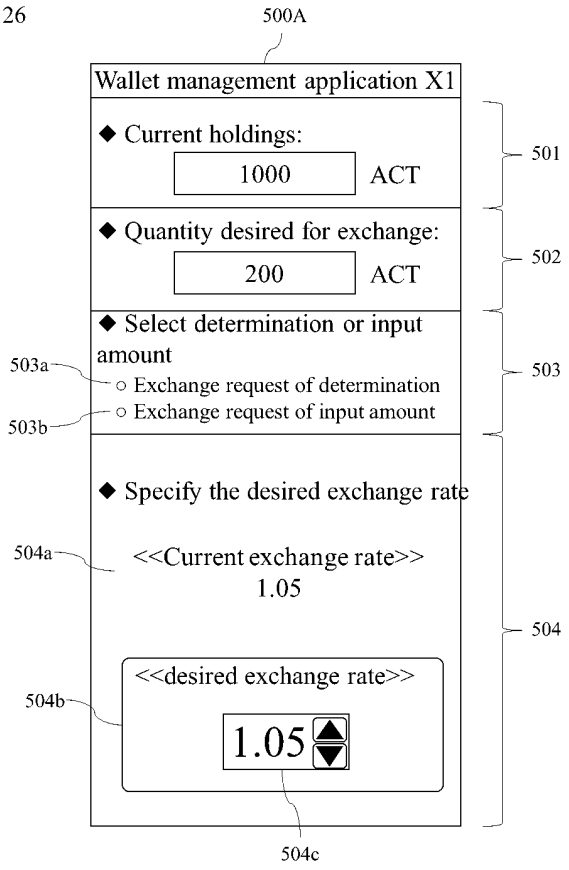


FIG. 26 is a diagram illustrating an exemplary first exchange request input screen 500A displayed in the wallet managing application X1 of the user device 20. The input screen 500A of the first exchange request includes, for example, an area 501 for displaying the present holding amount of the first value exchange medium, an area 502 for inputting the amount of first value exchange medium desired to be replaced, an area 503 for selecting the first exchange request of the line without specifying the desired exchange rate or the first exchange request of the limit value specifying the desired exchange rate, and an area 504 for specifying the desired exchange rate when the first exchange request of the limit value is selected.

【0268】

In the area 501, the quantity of first value exchange medium currently held by the user is displayed. Area 502 displays the number of first value exchange medium that the user has entered and desires to replace. The area 503 includes, for example, a selection unit 503a for selecting the first exchange request of the row and a selection unit 503b for selecting the first exchange request of the limit values.

【0269】

The area 504 includes, for example, a displaying area 504a of the present market rate, and a modifying unit 504b for modifying the desired exchange rate. In the display area 504a of the current market rate, values of market exchange rate (second market exchange rate) (to be described later) are displayed as the current market rate. The user can set the desired exchange rate (first desired exchange rate) for replacing the first value exchange medium with the second value exchange medium after checking the present market rate (market exchange rate) by the

displaying area 504a. The user can correct the desired exchange rate by operating the correction unit 504b for correcting the desired exchange rate.

【0270】

Although the display mode of the correction unit 504b is not particularly limited, for example, in this example, a change unit 504c for changing the desired exchange rate is displayed. The changing unit 504c may be capable of inputting numerical values in a free text, or the desired exchange rate may be increased or decreased (increased in the case of an upward arrow, decreased in the case of a downward arrow, etc.) in accordance with the direction of the arrow with a predetermined width (e.g., 0.05) every time the icon of the arrow displayed on the changing unit 504c is pressed.

【0271】

Figure 27

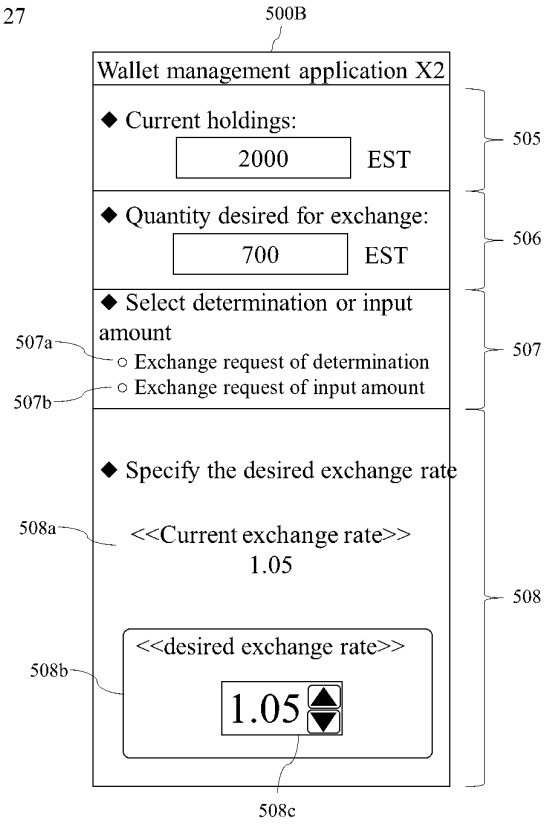


FIG. 27 is a diagram illustrating an exemplary input screen 500B of the second exchange request displayed in the wallet managing application X2 of the user device 20. The input screen 500B of the second exchange request includes, for example, an area 505 for displaying the present holding amount of the second value exchange medium, an area 506 for inputting the amount of the second value exchange medium desired to be replaced, an area 507 for selecting whether the second exchange request of the line without specifying the desired exchange rate or the second exchange request of the limit value specifying the desired exchange rate, and an area 508 for specifying the desired exchange rate when the second exchange request of the limit value is selected.

【0272】

In the area 505, the number of second value exchange medium currently held by the user is displayed. Area 506 displays the number of second value exchange medium that the user has entered and desires to replace. The area

507 includes, for example, a selection unit 507a for selecting the second exchange request of the row and a selection unit 507b for selecting the second exchange request of the limit values.

【0273】

The area 508 includes, for example, a display area 508a of the present market rate, and a correction unit 508b for correcting the desired exchange rate. In the display area 508a of the current market rate, values of market exchange rate (first market exchange rate) (to be described later) are displayed as the current market rate. The user can set the desired exchange rate (second desired exchange rate) for replacing the second value exchange medium with the first value exchange medium after checking the present market rate (market exchange rate) by the displaying area 508a. The user can modify the desired exchange rate by operating the modification unit 508b for modifying the desired exchange rate.

【0274】

Although the display mode of the correction unit 508b is not particularly limited, for example, in this example, a change unit 508c for changing the desired exchange rate is displayed. The changing unit 508c may be capable of inputting numerical values in a free text, or the desired exchange rate may be increased or decreased (increased in the case of an upward arrow, decreased in the case of a downward arrow, etc.) in accordance with the direction of the arrow with a predetermined width (e.g., 0.05) every time the icon of the arrow displayed on the changing unit 508c is pressed.

【0275】

(S5101)

Next, when the first exchange request processing unit 251 or the second exchange request processing unit 252 of the user device 20 receives an input of a exchange request (first exchange request or second exchange request) by the user, the server 10 transmits the received exchange request (first exchange request or second exchange request) to the server 10.

【0276】

(S5102)

Next, when the first exchange request receiving unit 152a of the server 10 receives the first exchange request from the user device 20, the first exchange request receiving unit 152a of the server 10 adds the content of the received first exchange request to the exchange request table stored in the storage unit 11, and updates the exchange request table. When the second exchange request accepting unit 152b of the server 10 receives the second exchange request from the user device 20, the second exchange request accepting unit 152b of the server 10 adds the content of the received second exchange request to the exchange request table stored in the storage unit 11, and updates the exchange request table. This completes the process of transmitting and registering the exchange request.

【0277】

(5-2) exchange place functions of the servers 10

The server 10 has a exchange place function of exchanging first value exchange medium and second value exchange medium with the user device 20. Hereinafter, exchange place function of the servers 10 will be described.

【0278】

(5-2-1) Calculation of market exchange rate

In the present embodiment, the market exchange rate calculation unit 151 of the server 10 calculates a market exchange rate which is a market rate (expected increasing rate) of the desired exchange rate related to the exchange request received from the user device 20. The market exchange rate is a replacement rate at which the issuance based on debt and issuance based on debt of the first value exchange medium to be described later are offset purchased. The method of calculating the market exchange rate may employ any method capable of representing the market rate of the desired exchange rate. For example, the market exchange rate may be calculated based on the at least one first desired exchange rate and the at least one second desired exchange rate. At this time, for example, the market exchange rate may be calculated based only on the desired exchange rate (first desired exchange rate and second desired exchange rate) relating to the exchange request (first exchange request and second exchange request) received by the server 10 within a predetermined validity period. The market exchange rate may be calculated based on all the first desired exchange rate and all the second desired exchange rate.

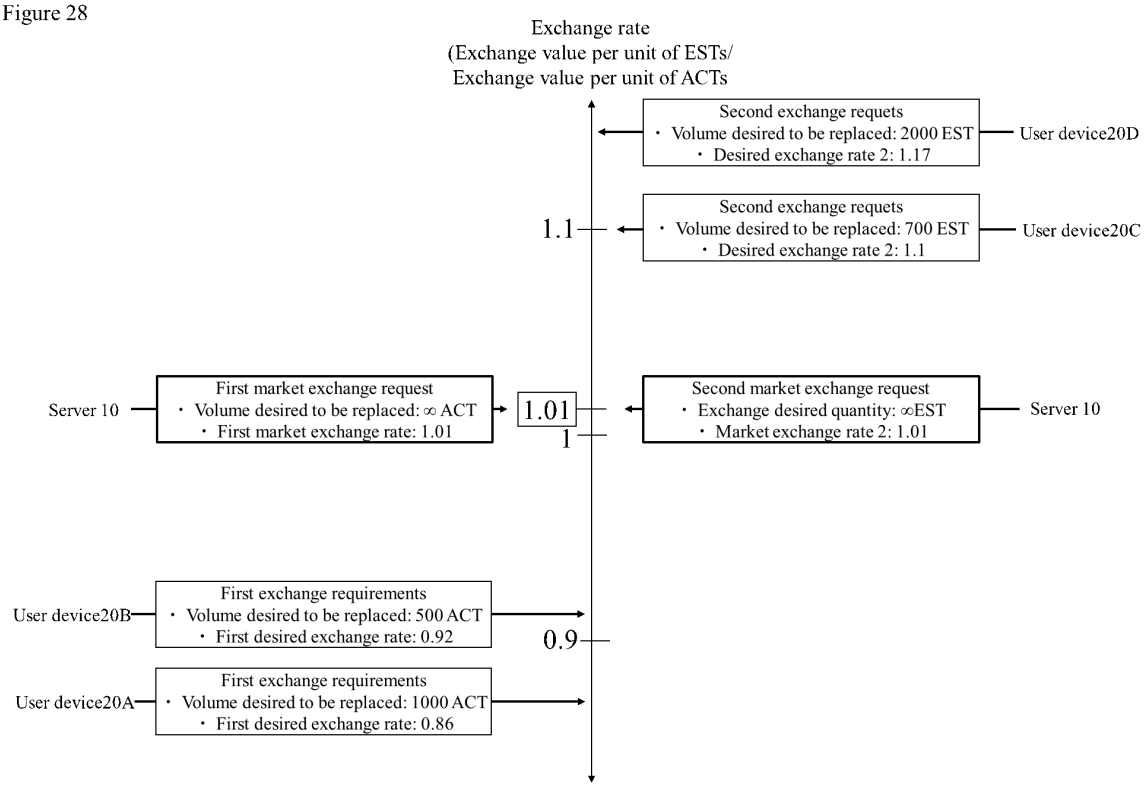
【0279】

<weighted average>

For example, the market exchange rate may be a weighted average of the first desired exchange rate and the second desired exchange rate included in the exchange request table (the average obtained by multiplying the respective values by a factor (which may include 0) as a weighting). For example, the market exchange rate may be a weighted mean of at least one first desired exchange rate and at least one second desired exchange rate. The market exchange rate may also be a weighted mean of all the first desired exchange rate and all the second desired exchange rate. Further, for example, when the highest first desired exchange rate of the first desired exchange rate included in the exchange request table is the highest first desired exchange rate, and the lowest second desired exchange rate of the second desired exchange rate included in the exchange request table is the lowest second desired exchange rate, the market exchange rate may be calculated based on the highest first desired exchange rate and the lowest second desired exchange rate. In particular, for example, the market exchange rate may be the mean of the highest first desired exchange rate and the lowest second desired exchange rate. Further, for example, the market exchange rate may specify a predetermined number of second exchange requests (for example, 1 or 1000) in the order of the desired exchange rate close to the first exchange request, specify a predetermined number of first exchange requests (for example, 1 or 1000) in the order of the desired exchange rate close to the second exchange request, and may be the mean of the desired exchange rate related to the specified exchange request.

【0280】

Figure 28



For example, in the example shown in FIG. 28, the first exchange request processing unit 251 of each user device2 0A and 20B transmits the first exchange request to the server 10, and the second exchange request processing unit 252 of each user device 20C and 20D transmits the second exchange request to the server 10. More specifically, in the first exchange request transmitted by the first exchange request processor 251 of the user device 20A, the number of first value exchange medium desired to be replaced is 1000 ACTs, and the first desired exchange rate is 0.86. In the first exchange request transmitted by the first exchange request processor 251 of the user device 20B, the number of first value exchange medium desired to be replaced is 500 ACTs, and the first desired exchange rate is 0.92. In the second exchange request transmitted by the second exchange request processor 252 of the user device 20C, the number of second value exchange medium desired to be replaced is 700 ESTs, and the second desired exchange rate is 1.1. In the second exchange request transmitted by the second exchange request processor 252 of the user device 20D, the number of second value exchange medium desired to be replaced is 2000 ESTs, and the second desired exchange rate is 1.17.

【0281】

At this time, the maximum first desired exchange rate is 0.92 relating to the first exchange request transmitted by the first exchange request processing unit 251 of the user device 20B, and the minimum second desired exchange rate is 1.1 relating to the second exchange request transmitted by the second exchange request processing unit 252 of the user device 20C. From the above, in the case of the highest first desired exchange rate and the lowest second desired exchange rate is market exchange rate, the market exchange rate is (0.92+1.1)/2=1.01.

【0282】

(5-2-2) Issuance based on debt of first value exchange medium according to the first market exchange request

The first market exchange request generating unit 153a of the server 10, for example, generates a first market exchange request for exchanging the first value exchange medium to be issuance based on debt to the second value exchange medium by the market exchange rate described above (first market exchange rate). Then, the first commitment processing unit 154a of the server 10 identifies the second exchange request satisfying the predetermined first commitment condition among the second exchange request included in the exchange request table, and executes the commitment processing. Specifically, when the second desired exchange rate has a second exchange request equal to or lower than the market exchange rate (first market exchange rate) or market exchange rate (first market exchange rate), the second exchange request is set as a commitment target satisfying the predetermined first commitment condition, and the commitment process with the first market exchange request is executed in the first market exchange rate. In the second exchange request of the row, the first market exchange rate immediately executes the commitment process with the first market exchange request as a commitment target satisfying the predetermined first commitment condition.

【0283】

In the commitment processing, the first commitment processing unit 154a of the server 10 updates, for example, the first ledger and issuance based on debt tables of the server 10. First, the first commitment processing unit 154a of the server 10 generates a record as first update-information for issuing a first value exchange medium of the number obtained by multiplying the number of second value exchange medium related to the second exchange request by the market exchange rate (first market exchange rate) in association with the user ID related to the second exchange request, the first update-information for updating the first ledger. Then, the first commitment processing unit 154a of the server 10 updates the first ledger by adding the record to the first ledger.

【0284】

Further, the first commitment processing unit 154a of the server 10 updates the issuance based on debt table by adding the number of issued first value exchange medium to the issuance based on debt number of the issuance based on debt table as issuance based on debt. As a result, the first value exchange medium is issuance based on debt.

【0285】

(5-2-3) Transfer of second value exchange medium associated with issuance based on debt

Further, the first commitment processing unit 154a of the server 10 executes processing for transferring the second value exchange medium associated with the user ID of the second exchange request subjected to the commitment processing to the server ID of the server 10 in accordance with the issuance based on debt of the first value exchange medium. More specifically, the first commitment processing unit 154a of the server 10 generates a transaction as second update-information for updating the second ledger, and the transaction is generated as second update-information for transferring the second value exchange medium of the quantity related to the second exchange request from the user ID related to the second exchange request to the server ID (administrator ID) related to the server 10. Then, the first commitment processing unit 154a of the server 10 broadcasts the

transaction to the value exchange medium circulation network. The second ledger is updated by capturing the transactions into the block chains of the nodes.

【0286】

The system administrator may perform free-of-charge issuance based on debt (hereinafter, referred to as "free-of-charge issuance based on debt") for the user based on any setting information set in advance. More specifically, for example, the first market exchange request generating unit 153a of the server 10 may generate a predetermined number of first market exchange request (hereinafter, sometimes referred to as "first request for free-of-charge benefit") that does not require the transfer of second value exchange medium as a consideration received by the server ID linked to the system administrator of the server 10 from the user ID linked to the user who operates the user device 20, as a measure based on any setting information by the system administrator.

【0287】

In this case, the first commitment processing unit 154a of the server 10 may perform a commitment processing (hereinafter, referred to as a "first free-of-charge commitment processing") with a second exchange request (hereinafter, referred to as a "second request for free-of-charge acquisition") as a response to the first request for free-of-charge benefit received from the user device 20 under a predetermined condition.

【0288】

At this time, as the server ID associated with the system administrator of the server 10, it is preferable that the second commitment processing unit 154b of the server 10 prepares only the first request for free-of-charge benefit or the first free-of-charge commitment processing amount of the second value exchange medium to be transferred to the user ID associated with the user who operates the user device 20 to perform the first exchange request as the payment source for the assignment and purchasing the first value exchange medium according to the later first exchange request.

【0289】

It should be noted that the server 10 may take measures to limit the use of the first value exchange medium for free-of-charge issuance based on debt to the user ID by the first free-of-charge contract process to the compensation for consumption related to the acquisition of the paid consumption value belonging to the type II (or may include the compensation for exchange related to the acquisition of the paid exchangeable value belonging to the type III), and the server 10 may transmit the information indicating the purpose (limited use) of the free-of-charge issuance based on debt related to the first request for free-of-charge benefit to the user device 20 at the time of executing the free-of-charge issuance based on debt. Then, the display processor 26 of the user device 20 may display, on the display device of the user device 20, the information indicating the purpose of the free-of-charge issuance based on debt relating to the first request for free-of-charge benefit received from the server 10.

【0290】

In addition, the system administrator may set the write-off due to expiration period of the first value exchange medium for free-of-charge issuance based on debt to the user ID by the first free-of-charge contract processing to a relatively short period of time, such as 1 day, 3 days, 1 week, half month, or 1 month, as optional setting information in advance, and the server 10 may transmit information indicating the usage period of the first value exchange medium for free-of-charge issuance based on debt in the first free-of-charge contract processing to the

user device 20 at the time of executing the free-of-charge issuance based on debt. Then, the display processor 26 of the user device 20 may display the information indicating the expiration date of the first value exchange medium received from the server 10 on the display device of the user device 20. As a result, the system administrator can arbitrarily improve the circulation rate of the first value exchange medium including the economic stimulus.

【0291】

(5-2-4) Offsetting purchases of first value exchange medium by the second market exchange request

The second market exchange request generating unit 153b of the server 10 generates the second market exchange request for exchanging the second value exchange medium held by the server 10 itself with the first value exchange medium by the issuance based on debt, for example, in the market exchange rate described above (second market exchange rate). Instead of infinitely generating the second market exchange request, the second market exchange request generating unit 153b of the server 10 may generate the second market exchange request corresponding to the issuance based on debt balance recorded in the issuance based on debt table. Then, the second commitment processing unit 154b of the server 10 identifies the first exchange request satisfying the predetermined second commitment condition from the first exchange request included in the exchange request table, and executes the commitment processing. Specifically, when the first desired exchange rate has a first exchange request equal to or higher than the market exchange rate (second market exchange rate) or market exchange rate (second market exchange rate), the first exchange request is set as a commitment target satisfying the predetermined second commitment condition, and the commitment process with the second market exchange request is executed in the second market exchange rate. In addition, for the first exchange request of the row, a commitment process with the second market exchange request is immediately executed in the second market exchange rate as a commitment target satisfying the predetermined second commitment condition.

【0292】

In the commitment processing, the second commitment processing unit 154b of the server 10 updates, for example, the first ledger and issuance based on debt tables of the server 10. First, the second commitment processing unit 154b of the server 10 generates first update-information for updating the first ledger, the first update-information having a content of resolving the association with the user ID with respect to the first value exchange medium of the quantity relating to the first exchange request associated with the user ID relating to the first exchange request. The first update-information may be, for example, the content of write-off of a record of the first value exchange medium of the quantity associated with the user ID in the first ledger. Alternatively, the first update-information may have a content in which the holder information of the first value exchange medium of the quantity associated with the user ID in the first ledger is left blank. Then, the second commitment processing unit 154b of the server 10 updates the first ledger based on the first update-information. At this time, the write-off may be performed preferentially from the first value exchange medium held by the user whose arrival date of the scheduled write-off date is close to the arrival date.

【0293】

Further, the second commitment processing unit 154b of the server 10 updates the issuance based on debt table by adding the quantity of first value exchange medium whose association with the user ID has been write-off to the

write-off purchase quantity of the issuance based on debt table as the write-off purchase quantity for the issuance based on debt. This offsets the first value exchange medium.

【0294】

(5-2-5) Transfer of second value exchange medium due to offsetting purchases

Further, the second commitment processing unit 154b of the server 10 executes processing for transferring the second value exchange medium held by the server 10 to the user ID of the first exchange request in conjunction with the write-off purchasing of the first value exchange medium. More specifically, the second commitment processing unit 154b of the server 10 generates a transaction as second update-information for updating the second ledger, and for transferring the second value exchange medium of the quantity obtained by dividing the quantity of the first value exchange medium related to the first exchange request by the second market exchange rate from the server ID of the server 10 to the user ID of the first exchange request. Then, the second commitment processing unit 154b of the server 10 broadcasts the transaction to the value exchange medium circulation network. The second ledger is updated by capturing the transactions into the block chains of the nodes.

【0295】

(5-2-6) Sales (Exchange) Fees

Further, the remittance processing unit 124 of the server 10 may collect a predetermined quantity of second value exchange medium from a user who is a sales (first exchange) source of the first value exchange medium that is a target of the second commitment processing, as a first value exchange medium sales (exchange) commission. For example, the remittance processor 124 of the server 10 transmits a predetermined transaction generation instruction to the user device 20. In response to the transaction generation instruction, the second value exchange medium processor 23 of the user device 20 may generate a transaction whose content is to transfer a predetermined quantity of second value exchange medium linked to the user ID of the user to the server 10 (administrator ID related to the system administrator), and may transmit (broadcast) the transaction to the block chain network. Alternatively, the second commitment processing unit 154b of the server 10 may perform the process of generating and transmitting the transaction for transferring the second value exchange medium held by the user ID related to the first exchange request to the server ID related to the server 10, following the process of transferring the second value exchange medium held by the second commitment processing unit 154b itself to the user ID related to the first exchange request (the user of the first value exchange medium selling (first exchange) source). The amount of the selling (exchanging) commission may be defined, for example, by setting information set by the system administrator in advance, or may be changed according to evaluation value such as the type of accounts of the user (e.g., "business" and "individuals"), the first value exchange medium of the user and/or the status of remittance of the second value exchange medium, etc.

【0296】

(5-3) Spreads

The exchange place managing unit 15 of the server 10 may provide a difference (spread) between the market exchange rate (sometimes referred to as the "first market exchange rate") relating to the first market exchange request and the market exchange rate (sometimes referred to as the "second market exchange rate") relating to the second market exchange request. The exchange place managing unit 15 of the server 10 may provide differences

between the target exchange rate (sometimes referred to as the first target exchange rate) relating to the first fixed transaction request and the target exchange rate (sometimes referred to as the second target exchange rate) relating to the second fixed transaction request when executing the processes described in "(6-1-3-3) and (6-2-3-3) fixing of the replacement rate" described later. By providing the spread, the second value exchange medium supplied to the value exchange medium circulation networks can be appropriately collected, and the administrator etc of the servers 10 can obtain the spread benefit.

【0297】

(6) Stabilizing the value scale function of the second value exchange medium

(6-1) Increased quantity of second value exchange medium

(6-1-1) Basic flow of increase

Figure 29

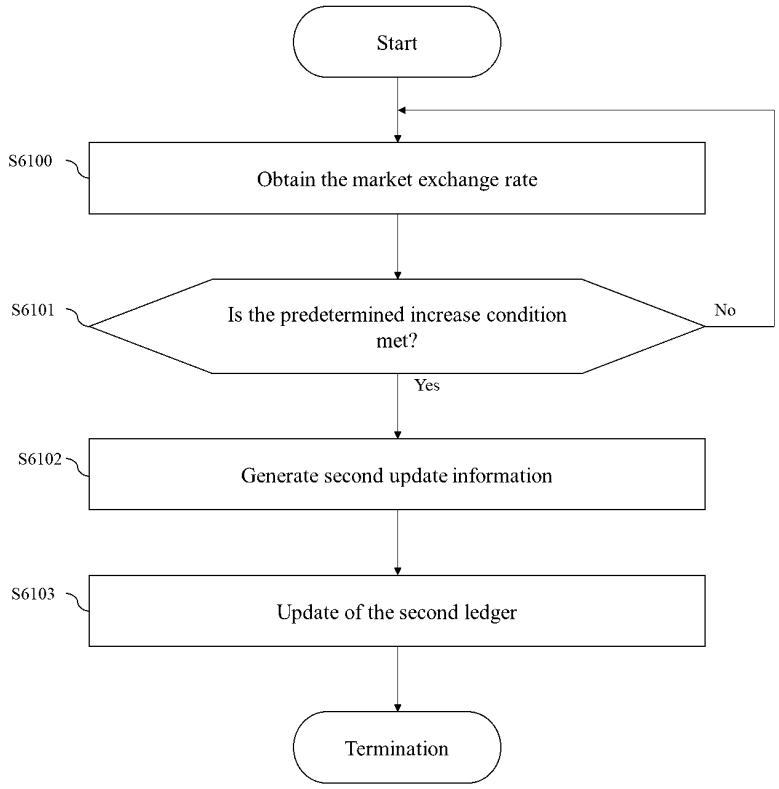


FIG. 29 is a diagram illustrating an exemplary operation flow of a second value exchange medium increasing process executed by the smart contract unit 131 of the server 10 and the smart contract unit 231 of the user device 20. Hereinafter, the increase of the number of second value exchange medium in the present embodiment will be described.

【0298】

(S6100)

The market exchange rate acquiring unit 131a of the server 10 or the market exchange rate acquiring unit 231a of the user device 20 acquires the market exchange rate described in the above "(5-2-1) market exchange rate calculation" from the market exchange rate calculating unit 151 of the server 10.

【0299】

(S6101)

Next, the increase condition determination unit 131b of the server 10 or the increase condition determination unit 231b of the user device 20 determines whether or not a predetermined increase condition is satisfied.

【0300】

Here, the predetermined increase condition described above may be, for example, that the increase rate, which is the ratio of the market exchange rate acquired by the market exchange rate acquiring unit 231a or the market exchange rate acquiring unit 131a to the target exchange rate between the first value exchange medium and the

second value exchange medium, has reached the increase upper limit value, which is the predetermined upper limit value. Here, target exchange rate is the target of the rate of switching between the first value exchange medium and the second value exchange medium that can be set by the system administrator. The target exchange rate may be, for example, a second value exchange medium when the exchange value per unit (value of money) of the first value exchange medium is equal to the exchange value per unit (value of money) of the second value exchange medium, which is represented as "exchange value per unit of the exchange value per unit/first value exchange medium of the target exchange rate" as "1.00".

【0301】

The premium upper limit may be determined, for example, at random or within a predetermined interval (e.g., between 1.05 and 1.10), randomly or by voting by the user device 20, etc. Incidentally, in the case of randomly determining, it may be a discrete fixed value defined by a predetermined step width (for example, a value of 0.001 step such as (1.05+0.001×N)). The premium upper limit value may be black-boxed so that the user or the user and the system administrator cannot recognize it. This allows the smart contracting unit 131 or 231 to perform the process of increasing the second value exchange medium without causing the user to be aware of the process.

【0302】

Further, the predetermined increase condition described above may be, for example, that the premium rate at the point in time when the predetermined period has elapsed from the previous second value exchange medium increase processing (or decrease processing) is larger than "1". As a result, the cycles of the second value exchange medium increasing/decreasing process can be kept within a predetermined period. Therefore, even in the case where the fluctuation of the premium rate continues to fluctuate gradually within the range in which the fluctuation of the premium rate does not reach the premium upper limit value, the premium rate can be made close to "1", and the effect of making the premium rate difficult to deviate from "1" (effect of suppressing the fluctuation of the premium rate to the vicinity of "1") can be further enhanced.

【0303】

(S6102)

Next, when the increase condition determination unit 131b of the server 10 or the increase condition determination unit 231b of the user device 20 determines that the predetermined increase condition is satisfied, the increase execution unit 131c of the server 10 or the increase execution unit 231c of the user device 20 increases the second value exchange medium associated with the user ID of the user device 20 and the server 10 by a predetermined number. Specifically, the increase execution unit 131c of the server 10 or the increase execution unit 231c of the user device 20 generates the second update-information for updating the second ledger, which is the second update-information for increasing the second value exchange medium associated with the server ID of the server 10 or the user ID of the user device 20 by a predetermined amount. In this instance, the second ledger may be constituted by block chain. Therefore, the second update-information may be a transaction to be captured in the block chain, and the second update-information may be a transaction having a content of newly generating a predetermined amount of second value exchange medium having the user ID as a holder. The above-mentioned predetermined quantity, i.e., the second value exchange medium increment quantity, will be described later.

【0304】

(S6103)

Next, the increase execution unit 131c of the server 10 or the increase execution unit 231c of the user device 20 transmits the generated second update-information (transactions) to any nodes (the server 10 or the user device 20, etc.) in the value exchange medium circulation network. The second updated information (transactions) is broadcasted on the value exchange medium circulation network, and after a predetermined process, the updated information (transactions) is fetched into the block chain stored in the respective nodes. As a result, the second ledger is updated.

【0305】

As described above, when a predetermined increasing condition is satisfied, the smart contract unit 131 of the server 10 or the smart contract unit 231 of the user device 20 increases the amount of second value exchange medium held by the system administrator or the user by a predetermined amount.

【0306】

(6-1-2) Increase quantity

(i) Based on the holding quantity only

The increase quantity may be calculated based on a premium rate at the time when a predetermined increase condition is satisfied (hereinafter, referred to as a "reaching premium rate") and a second value exchange medium holding quantity of the user and the system administrator. Here, when the predetermined increase condition described above is that the premium rate, which is the ratio of the market exchange rate to the target exchange rate, reaches the premium upper limit value, the reaching premium rate is equal to the premium upper limit value described above. When the predetermined increase condition mentioned above is such that the premium rate at the point in time when the predetermined period has elapsed from the previous second value exchange medium increase processing (or decrease processing) is larger than "1", the reaching premium rate is the premium rate itself at the point in time when the predetermined period has elapsed (limited to the case where it is larger than "1"). For example, it may be "increase quantity=(reaching premium rate−1)×held EST quantity immediately before the increase processing is executed".

【0307】

(ii) Based on the quantity and circulation contribution rate held

The incremental quantity may be calculated based on the reaching premium rate, the amount of second value exchange medium held by the user and the system administrator, and a circulation contribution rate that is the percentage of the user's contributions to the total monetary circulation speed for moving the user and the system administrator's second value exchange medium, such as remittances. For example, "increase quantity=(reaching premium rate−1)×amount of ESTs held immediately before the increase process is executed×amount of ESTs held×circulation contribution rate" may be used. Here, the circulation contribution rate is calculated, for example, as follows.

Circulation contribution rate = individual currency transfer rate/reference currency transfer rate

Individual currency transfer rate = amount of EST transfer (remittance) in a given time period/amount of EST held in the last time period,

Base currency transfer rate = Total EST transfer (remittance) quantity/Total EST quantity

The predetermined period may be a period from the last execution of the second value exchange medium increasing process (or decreasing process) by the smart contract unit 131 of the server 10 and the smart contract unit 231 of the user device 20 to the present execution. Further, the circulation contribution rate of the system administrator may be fixed as an arbitrary value as "1" which is the average value.

【0308】

(iii) Based on the transfer evaluation value only

The incremental quantity may be calculated on the basis of a transfer evaluation value which is a evaluation value related to the transfer of the second value exchange medium, such as a remittance. Specifically, for example, the increase quantity may be a value obtained by multiplying the following equation (1) by the equation (2).

(1) Total volume of circulation of second value exchange medium recorded in the second ledger multiplied by (premium rate-1)

(2) Percentage (transfer evaluation value) of remittance quantity to total remittance quantity per user of the second value exchange medium quantity of remittance, etc. (payment, settlement, remittance, payment instrument, or second exchange, etc.) that was processed during the period from the last execution of the second value exchange medium increase processing (or decrease processing) to the current increase based on the second ledger.

Here, it can be said that the above equation (1) indicates the total amount of second value exchange medium which increases this time in the second ledger. In addition, the above equation (2) can be said to indicate the contribution (contribution to use as a remittance side) of each user to the total transfer amount (total remittance amount) of the second value exchange medium. Therefore, the above calculation method can be said to issue a second value exchange medium according to the transfer evaluation value of the respective users after the increase quantity as a whole is determined on the basis of the reaching premium rate. Such an increased quantity calculation method enables new issuance of second value exchange medium according to the status of remittance of each user (second value exchange medium usage status) regardless of the quantity of second value exchange medium held, thereby improving the monetary circulation speed of the second value exchange medium.

【0309】

Instead of the transfer evaluation value based on the second ledger described above, the transfer evaluation value may use transfer evaluation value recorded in the second assessment table stored in the storage unit 11 of the server 10 and the storage unit 21 of the user device 20. Further, the "remittance classification", "remittance classification ratio", "offset determination", and "transfer evaluation value" recorded in the second evaluation table may be included in the second ledger, and the second ledger and the second evaluation table may be integrally configured.

【0310】

(iv) Based on the quantity and transfer evaluation value held

The incremental quantity may be calculated by prorating the incremental quantity based on a predetermined proportional division rate between (i) the case based only on the held quantity and (iii) the case based only on the transfer evaluation value. More specifically, the smart contract unit 131 of the server 10 or the smart contract unit 231 of the user device 20, for example, accepts inputs of desired proportional division rate (proportional division of specific gravity based on the holding quantity and specific gravity based on the transfer evaluation value) from the

system administrator or the user, totals the accepted proportional division rate, and thereby calculates specific gravity based only on the increasing holding quantity and specific gravity based only on the transfer evaluation value. Then, the smart contract unit 131 of the server 10 or the smart contract unit 231 of the user device 20 may use the ratio (increase proportional division rate) of the specific gravity calculated here, and may use the increased quantity of the second value exchange medium as a pro rata sum, described above "(i) case based only on the held quantity" and "(iii) case based only on the transfer evaluation value". In this case, the increase quantity may be calculated by multiplying the calculation result according to each case by the increase proportional division rate. For example, when the increase proportional division rate is "30% based only on the held quantity" and "70% based only on the transfer evaluation value", the smart contract unit 131 of the servers 10 or the smart contract unit 231 of the user device 20 may sum the quantity obtained by multiplying the increase quantity calculated based only on the held quantity by 0.3 and the quantity obtained by multiplying the increase quantity calculated based only on the transfer evaluation value by 0.7.

【0311】

In this way, by calculating not only the holding quantity but also the increasing quantity of the second value exchange medium based on the circulation contribution rate and the transfer evaluation value, it is possible to cause the user holding the second value exchange medium to exercise an incentive to use the second value exchange medium (payment, settlement, remittance, payment instrument, second exchange, etc) (in general theory, the use incentive of the legal currency may be negative (* the desire to hold is higher than the desire to use) and the circulation function as the "value exchange medium" of the second value exchange medium becomes easy to exert. Furthermore, the second value exchange medium can function as a currency that exerts a positive (synonymous with negative and small) asset-like effect, which is "easy to increase in quantity" if it is used moderately without stagnation, on the other hand, "positive interest rate" (synonymous with negative and small) can occur when it is used. On the other hand, if the second value exchange medium is stagnant and stored without use, it is difficult to increase the quantity. In other words, it can function as a currency that exerts negative (synonymous with positive and small) asset-like effects, which can be caused by "negative interest rate" (synonymous with positive and small) if not used, so that it can be easily moved from purse to purse, that is, "value" can be easily exchanged, and it can be a "value exchange medium" with a high circulation rate. In the present embodiment, similarly to the first value exchange medium, the second value exchange medium can function as "a value exchange medium with a high circulation rate (in which the variation of the value measure is suppressed) in which the exchange value per unit is controlled, which is newly issued based on the relative assessment and the demand of the value transferred between the users".

【0312】

(6-1-3) Stabilization of value scale function of second value exchange medium

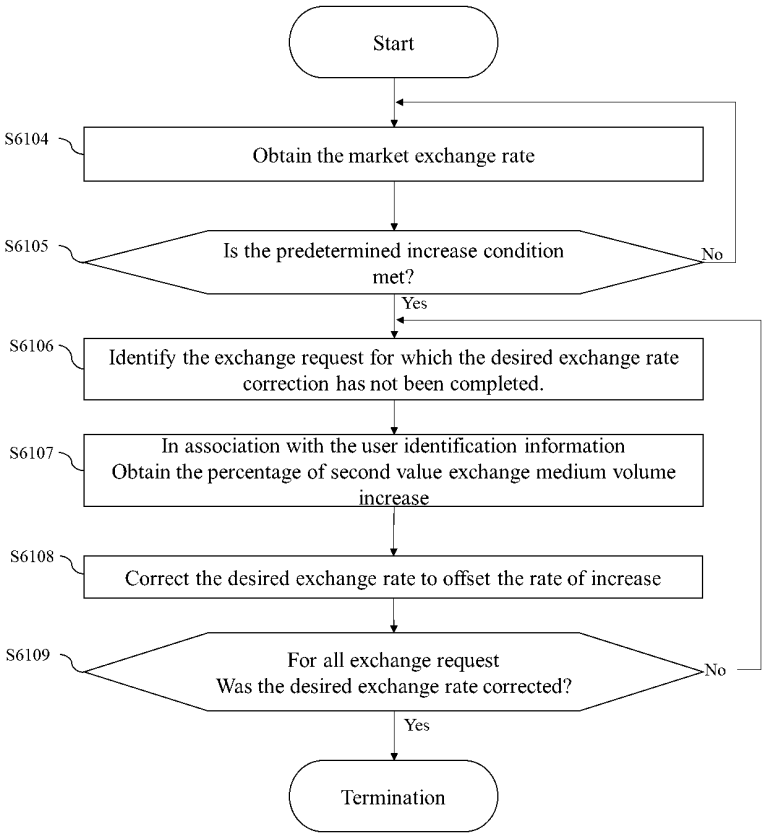
As described above, when a predetermined increasing condition is satisfied, the amount of second value exchange medium held by each user increases based on the amount of second value exchange medium held by each user, the circulation contribution rate, and the transfer evaluation value. Accordingly, the server 10 may execute a predetermined process for further balancing (preventing the server 10 from deviating from the target exchange rate) the value scale function (exchange value per unit) of the second value exchange medium in target exchange rate

with the value scale function (exchange value per unit) of the first value exchange medium, as described below. This allows the strong value scale function (exchange value per unit controllable function) of the first value exchange medium to be further generated for the second value exchange medium, as described above, since the exchange value per unit of the second value exchange medium is further balanced target exchange rate (or around) the exchange value per unit of the first value exchange medium.

【0313】

(6-1-3-1) Amendment of desired exchange rate

Figure 30



The server 10 may modify the desired exchange rate relating to the exchange request that has been received by the server 10 so as to offset the increasing rate of the second value exchange medium quantity of the respective users. In addition, the amount of variation of the first market exchange rate and the second market exchange rate based on the market exchange rate that varies as a result of the present correction process may be target exchange rate (the amount of variation exceeding the target exchange rate is limited) up to the first target exchange rate and the second target exchange rate. FIG. 30 is a diagram showing an exemplary operation flow of the desired exchange rate correction processing at the time of the increasing processing. By this process, the above-mentioned market exchange rate is further approached to the target exchange rate.

【0314】

(S6104)

First, as in the S6100 described above, the increased-time desired exchange rate correction unit 155a of the server 10 acquires market exchange rate from the market exchange rate calculation unit 151 of the server 10.

【0315】

(S6105)

Next, as in the S6101 described above, the increase-time desired exchange rate modifying unit 155a of the server 10 determines whether or not a predetermined increase condition is satisfied. If it is determined that the predetermined increment condition is not satisfied (S6105;No), the process returns to step S6104. On the other hand, if it is determined that the predetermined increasing condition is satisfied (S6105; YES), the process proceeds to step S6106.

【0316】

(S6106)

Next, the increased-time desired exchange rate correction unit 155a of the server 10 specifies one exchange request of the previously received exchange request (including the first exchange request and the second exchange request) recorded in the exchange request table stored in the storage unit 11, in which the correction of the desired exchange rate has not been completed.

【0317】

(S6107)

Next, the increase-time desired exchange rate correction unit 155a of the server 10 refers to the second ledger, and acquires the increase rate of the number of second value exchange medium linked to the user ID related to the exchange request specified by the S6106.

【0318】

(S6108)

Next, the increase-time desired exchange rate correction unit 155a of the server 10 corrects the desired exchange rate of the exchange request specified by the S6106 so as to offset the increase rate of the second value exchange medium acquired by the S6107 in the exchange request table. For example, when the first desired exchange rate according to a first exchange request is 0.86 and the number of second value exchange medium associated with the user ID according to the first exchange request increases by 3%, the first desired exchange rate is modified to 0.8342 because 0.86×(100−3)%=0.8342. Further, for example, when the second desired exchange rate related to a certain second exchange request is 1.17 and the number of second value exchange medium associated with the user ID related to the second exchange request increases by 3%, the second desired exchange rate is modified to 1.1349 because 1.17×(100−3)%=1.1349. For example, when the second desired exchange rate of the second exchange request is 1.04 and the number of second value exchange medium associated with the user ID of the second exchange request increases by 5%, the second desired exchange rate is modified to 0.988 because 1.04×(100−5)%=0.988. At this time, if the first market exchange rate is, for example, 1.00, the second exchange request with the second desired exchange rate modified to 0.988 can be made the first market exchange request in the first market exchange rate, in this case 1.00.

【0319】

(S6109)

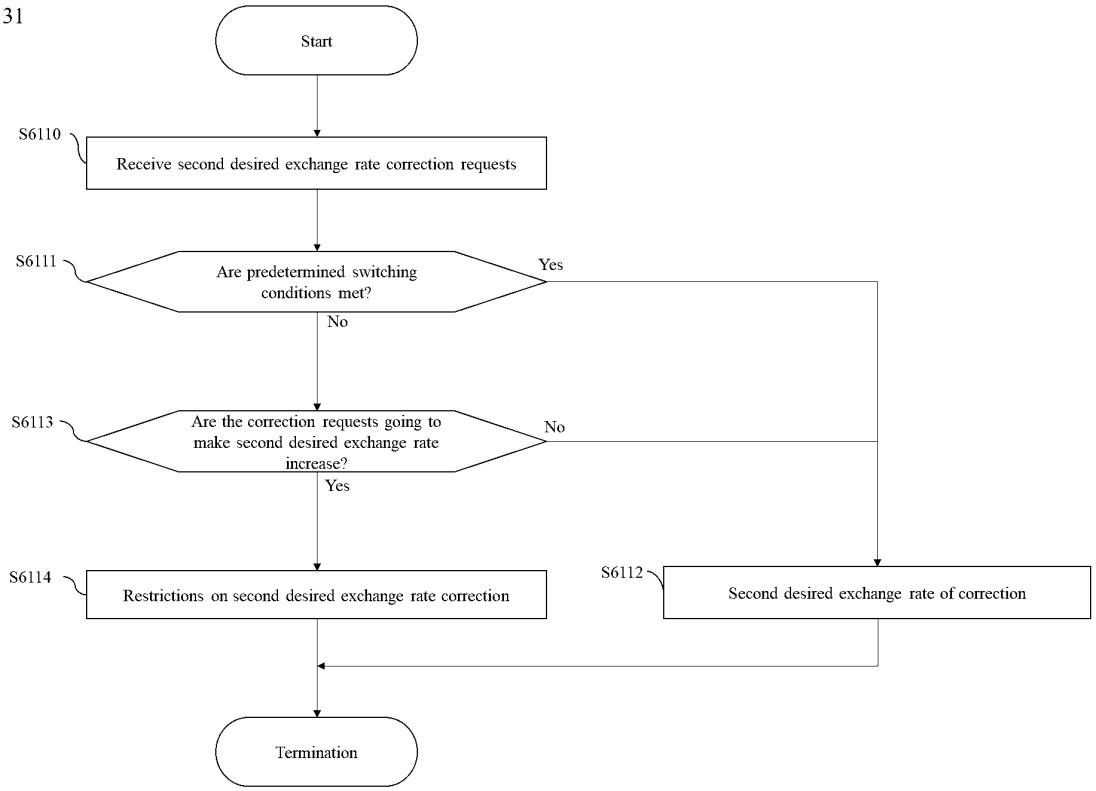
Next, the incremental desired exchange rate modifying unit 155a of the server 10 determines whether or not the server 10 has modified the desired exchange rate for all of the exchange request that have been received in the

exchange request table. If it is determined that the desired exchange rate has not been modified for all of the previously received exchange request (S6109;No), the process returns to the S6106. When it is determined that the desired exchange rate has been corrected for all of the received exchange request (S6109; YES), the process is completed.

【0320】

(6-1-3-2) Restrictions on amendments to increase the second desired exchange rate

Figure 31



The server 10 may restrict the modification of the second desired exchange rate in a predetermined period (variation restraining period) when the number of pieces of second value exchange medium associated with the user ID increases by the described process above "(6-1-1) increase basic flow". FIG. 31 is a diagram illustrating an exemplary operation flow of the modification restricting process for increasing the second desired exchange rate. By this process, during the fluctuation suppressing period, it is possible to suppress that the market exchange rate that has once approached the target exchange rate fluctuates with the intention of the user and rapidly deviates from the target exchange rate in a short period of time. The restricting process may be limited to the uncommitted second exchange requests recorded in the exchange request table at the time when the second value exchange medium increasing process described above is performed.

【0321】

(S6110)

First, the increased-time desired exchange rate correction unit 155a of the server 10 receives a request for correction of the second desired exchange rate from the user device 20. The modification request may include, for example, information indicating a second desired exchange rate after the desired modification, i.e., a second modification desired exchange rate.

【0322】

(S6111)

Next, the incremental desired exchange rate modifying unit 155a of the server 10 determines whether or not a predetermined switching condition is satisfied. The predetermined switching condition is a condition for defining the end of the variation suppression period described above. For example, the predetermined switching condition may be that a period of a predetermined fixed length has elapsed. The length of the fixed length period is not particularly limited, and the fixed length period may be any length, and may be determined by voting of the user device 20 etc. Further, for example, the predetermined switching condition may be that the above-mentioned premium rate, i.e., the ratio of the market exchange rate to the target exchange rate, has reached a predetermined threshold. Here, the value of the predetermined threshold is not particularly limited and may be any value. The value of the predetermined threshold may be equal to or greater than the above-mentioned premium upper limit value.

【0323】

(S6112)

If it is determined in step S6111 that the predetermined switching condition is satisfied (S6111; YES), the incremental desired exchange rate modifying unit 155a of the server 10 modifies the second desired exchange rate in the exchange request table, and the process is completed.

【0324】

(S6113)

When it is determined in step S6111 that the predetermined switching condition is not satisfied (S6111;No), the increase-time desired exchange rate correction unit 155a of the server 10 determines whether or not the correction content relating to the correction request is a direction in which the second desired exchange rate increases (a direction in which the second desired exchange rate corrected by the processing described in the "correction of the (6-1-3-1) desired exchange rate" returns to the second desired exchange rate prior to the correction), which is accompanied by an increase in the number of second value exchange medium linked to the user ID by the processing described in the "basic flow of increase of (6-1-1)"). When it is determined that the second desired exchange rate does not increase (S6111; NO), the process proceeds to step S6112, and the increase-time desired exchange rate correction unit 155a of the server 10 corrects the second desired exchange rate in the exchange request table, and the process is completed.

【0325】

(S6114)

If it is determined in step S6113 that the second desired exchange rate is increasing (S6113; YES), the increasing-time desired exchange rate correction unit 155a of the server 10 executes a predetermined restriction process for restricting the correction of the second desired exchange rate. Here, the predetermined limiting process may be, for example, a process of not performing any correction process of the second desired exchange rate and a process of correcting the second desired exchange rate that is not in accordance with the correction demand received in the S6110 (e.g., a process of correcting the second desired exchange rate recorded in the exchange request table to a value smaller than the value of the correction second desired exchange rate received in the

S6110). Further, the predetermined restricting process may be, for example, a process of notifying the user device 20 that the modification of the second desired exchange rate is restricted. Thus, the processing is completed.

【0326】

(6-1-3-3) Fixed exchange rate

When the number of pieces of second value exchange medium associated with the user ID is increased by the series of processes described above in "(6-1) Increase of the number of pieces of second value exchange medium", the server 10 may execute a process of making the target exchange rate agree on the exchange request received from the user device 20 in a predetermined time interval. The predetermined period is referred to as a fixed transaction period period. The fixed transaction period may overlap with the variability-suppression periods described above.

【0327】

The first fixed transaction request generating unit 156a of the server 10 generates the first fixed transaction request for exchanging (issuance based on debt) the first value exchange medium with the second value exchange medium in the target exchange rate (first target exchange rate), for example, infinitely. Then, the first commitment processing unit 154a of the server 10 identifies the second exchange request satisfying the predetermined first commitment condition among the second exchange request included in the exchange request table, and executes the commitment processing. Specifically, when the second desired exchange rate has a second exchange request that is the same as or lower than the target exchange rate (first target exchange rate) than the target exchange rate (first target exchange rate), the second exchange request is set as a commitment target satisfying a predetermined first commitment condition, and a commitment process with respect to the first fixed transaction request is executed by the target exchange rate (first target exchange rate). In the second exchange request of the row, the target exchange rate (first target exchange rate) immediately executes the commitment process with the first fixed transaction request as a commitment target satisfying the predetermined first commitment condition.

【0328】

In the commitment processing, the first commitment processing unit 154a of the server 10 updates, for example, the first ledger and issuance based on debt tables of the server 10. First, the first commitment processing unit 154a of the server 10 generates a record as first update-information for issuing a first value exchange medium of the number obtained by multiplying the number of second value exchange medium related to the second exchange request by the target exchange rate (first target exchange rate) in association with the user ID related to the second exchange request, the first update-information for updating the first ledger. Then, the first commitment processing unit 154a of the server 10 updates the first ledger by adding the record to the first ledger.

【0329】

Further, the first commitment processing unit 154a of the server 10 updates the issuance based on debt table by adding the number of issued first value exchange medium to the issuance based on debt number of the issuance based on debt table as issuance based on debt. As a result, the first value exchange medium is issuance based on debt.

【0330】

Further, the first commitment processing unit 154a of the server 10 executes processing for transferring the second value exchange medium associated with the user ID of the second exchange request subjected to the commitment processing to the server ID of the server 10 in accordance with the issuance based on debt of the first value exchange medium. More specifically, the first commitment processing unit 154a of the server 10 generates a transaction as second update-information for updating the second ledger, and the transaction is generated as second update-information for transferring the second value exchange medium of the quantity related to the second exchange request from the user ID related to the second exchange request to the server ID (administrator ID) related to the server 10. Then, the first commitment processing unit 154a of the server 10 broadcasts the transaction to the value exchange medium circulation network. The second ledger is updated by capturing the transactions into the block chains of the nodes.

【0331】

For example, the second fixed transaction request generating unit 156b of the server 10 generates the second fixed transaction request for exchanging (offsetting) the second value exchange medium held by the server 10 with the first value exchange medium by the target exchange rate described above (second target exchange rate). Instead of infinitely generating the second fixed transaction request, the second fixed transaction request generating unit 156b of the server 10 may generate the second fixed transaction request corresponding to the issuance based on debt balance recorded in the issuance based on debt table. Then, the second commitment processing unit 154b of the server 10 identifies the first exchange request satisfying the predetermined second commitment condition from the first exchange request included in the exchange request table, and executes the commitment processing. Specifically, when the first desired exchange rate has a first exchange request that is the same as or higher than the target exchange rate (second target exchange rate) than the target exchange rate (second target exchange rate), the first exchange request is set as a commitment target that satisfies a predetermined second commitment condition, and the commitment process with the second fixed transaction request is executed by the target exchange rate (second target exchange rate). Also, for the first exchange request of the row, a commitment process with the second fixed transaction request is immediately executed by the target exchange rate (second target exchange rate) as a commitment target satisfying the predetermined second commitment condition.

【0332】

In the commitment processing, the second commitment processing unit 154b of the server 10 updates, for example, the first ledger and issuance based on debt tables of the server 10. First, the second commitment processing unit 154b of the server 10 generates first update-information for updating the first ledger, the first update-information having a content of resolving the association with the user ID with respect to the first value exchange medium of the quantity relating to the first exchange request associated with the user ID relating to the first exchange request. The first update-information may be, for example, the content of write-off of a record of the first value exchange medium of the quantity associated with the user ID in the first ledger. Alternatively, the first update-information may have a content in which the holder information of the first value exchange medium of the quantity associated with the user ID in the first ledger is left blank. Then, the second commitment processing unit 154b of the server 10 updates the first ledger based on the first update-information. At this time, the write-off may

be performed preferentially from the first value exchange medium held by the user whose arrival date of the scheduled write-off date is close to the arrival date.

【0333】

Further, the second commitment processing unit 154b of the server 10 updates the issuance based on debt table by adding the quantity of first value exchange medium whose association with the user ID has been write-off to the write-off purchase quantity of the issuance based on debt table as the write-off purchase quantity for the issuance based on debt. This offsets the first value exchange medium.

【0334】

Further, the second commitment processing unit 154b of the server 10 executes processing for transferring the second value exchange medium held by the server 10 to the user ID of the first exchange request in conjunction with the write-off purchasing of the first value exchange medium. More specifically, the second commitment processing unit 154b of the server 10 generates a transaction as second update-information for updating the second ledger, and for transferring the second value exchange medium of the quantity obtained by dividing the quantity of the first value exchange medium related to the first exchange request by the second market exchange rate from the server ID of the server 10 to the user ID of the first exchange request. Then, the second commitment processing unit 154b of the server 10 broadcasts the transaction to the value exchange medium circulation network. The second ledger is updated by capturing the transactions into the block chains of the nodes.

【0335】

(6-2) Decrease in second value exchange medium quantity

(6-2-1) Basic flow of decrease

Figure 32

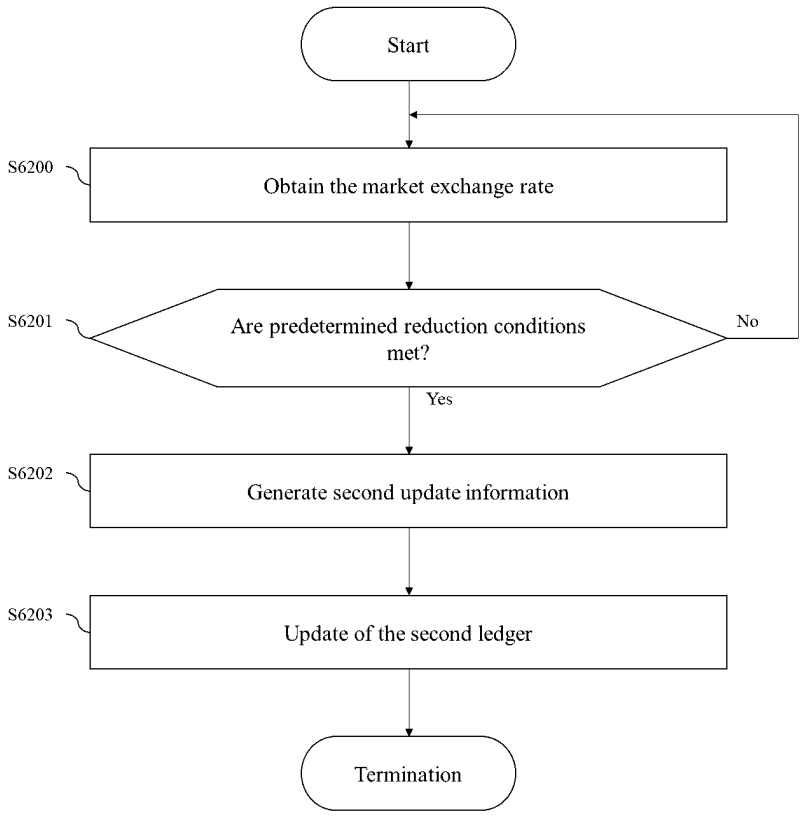


FIG. 32 is a diagram showing an exemplary operation flow of the second value exchange medium reduction process executed by the smart contract unit 131 of the server 10 and the smart contract unit 231 of the user device 20. Hereinafter, the reduction of the number of second value exchange medium in the present embodiment will be described.

【0336】

(S6200)

The market exchange rate acquiring unit 131a of the server 10 or the market exchange rate acquiring unit 231a of the user device 20 acquires the market exchange rate described in the above "(5-2-1) market exchange rate calculation" from the market exchange rate calculating unit 151 of the server 10.

【0337】

(S6201)

Next, the reduction condition determination unit 131d of the server 10 or the reduction condition determination unit 231d of the user device 20 determines whether or not a predetermined reduction condition is satisfied.

【0338】

Here, the predetermined decreasing condition described above may be, for example, that the premium rate, which is the ratio of the market exchange rate acquired by the market exchange rate acquiring unit 231a or the market exchange rate acquiring unit 131a to the target exchange rate between the first value exchange medium and the second value exchange medium, has reached the premium lower limit value, which is the predetermined lower limit value. Here, target exchange rate is the target of the rate of switching between the first value exchange medium and the second value exchange medium that can be set by the system administrator. The target exchange rate may be, for example, a second value exchange medium when the exchange value per unit (value of money) of the first value exchange medium is equal to the exchange value per unit (value of money) of the second value exchange medium, which is represented as "1.00" as "the exchange value per unit of the exchange value per unit/first value exchange medium of the target exchange rate".

【0339】

The premium lower limit may be determined, for example, at random or within a predetermined interval (e.g., between 0.95 and 0.90), randomly or by voting by the user device 20, etc. Incidentally, in the case of randomly determining, it may be a discrete fixed value defined by a predetermined step width (for example, a value of 0.001 step such as (0.95−0.001×N)). The premium lower limit value may be black-boxed so that the user or the user and the system administrator cannot recognize it. This allows the smart contracting unit 131 or 231 to perform the second value exchange medium reduction process without causing the user to be aware of the timing.

【0340】

The predetermined reduction condition described above may be, for example, that the premium rate is smaller than "1" at a point in time when a predetermined period has elapsed since the previous second value exchange medium reduction processing (or increase processing). As a result, the cycles of the second value exchange medium increasing/decreasing process can be kept within a predetermined period. Therefore, even in the case where the fluctuation of the premium rate continues to fluctuate gradually within the range in which the fluctuation of the premium rate does not reach the premium lower limit value, the premium rate can be made close to "1", and the

effect of making the premium rate difficult to deviate from "1" (effect of suppressing the fluctuation of the premium rate to the vicinity of "1") can be further enhanced.

【0341】

(S6202)

Next, when the reduction condition determination unit 131d of the server 10 or the reduction condition determination unit 231d of the user device 20 determines that the predetermined reduction condition is satisfied, the reduction execution unit 131e of the server 10 or the reduction execution unit 231e of the user device 20 decreases the second value exchange medium associated with the user ID of the user device 20 and the server 10 by a predetermined number. Specifically, the decrease execution unit 131e of the server 10 or the decrease execution unit 231e of the user device 20 generates second update-information for updating the second ledger, which is second update-information for decreasing the second value exchange medium associated with the server ID of the server 10 or the user ID of the user device 20 by a predetermined amount. In this instance, the second ledger may be constituted by the block chain. Therefore, the second update-information may be a transaction to be captured in the block chain, and the second update-information may be a transaction having a content of decreasing the second value exchange medium having the user ID as the holder by a predetermined number. The above-mentioned predetermined quantity, i.e., the quantity of reduction in second value exchange medium, will be described later.

【0342】

(S6203)

Next, the reduction execution unit 131e of the server 10 or the reduction execution unit 231e of the user device 20 transmits the generated second updated information (transactions) to any nodes (the server 10 or the user device 20, etc.) in the value exchange medium circulation network. The second updated information (transactions) is broadcasted on the value exchange medium circulation network, and after a predetermined process, the updated information (transactions) is fetched into the block chain stored in the respective nodes. As a result, the second ledger is updated.

【0343】

As described above, when a predetermined reduction condition is satisfied, the smart contract unit 131 of the server 10 or the smart contract unit 231 of the user device 20 reduces the amount of second value exchange medium held by the system administrator or the user by a predetermined amount.

【0344】

(6-2-2) Decrease quantity

(i) Based on the quantity held only

The reduction quantity may be calculated on the basis of the premium rate at the time when the predetermined reduction condition is satisfied (hereinafter referred to as the "reaching premium rate") and the second value exchange medium holding quantity of the user and the system administrator. Here, when the predetermined decreasing condition described above is that the premium rate, which is the ratio of the market exchange rate to the target exchange rate, reaches the premium lower limit value, the reaching premium rate is equal to the premium lower limit value described above. Further, when the above-mentioned predetermined reduction condition is that the premium rate at the point in time when the predetermined period has elapsed from the previous second value

exchange medium reduction processing (or increase processing) is smaller than "1", the reaching premium rate is the premium rate itself at the point in time when the predetermined period has elapsed (limited to the case where it is smaller than "1"). For example, it may be "reduction quantity=(1-reaching premium rate)×the held EST quantity immediately before the reduction process is executed".

【0345】

(ii) Based on the quantity and circulation contribution rate held

The amount of reduction may be calculated based on the reaching premium rate, the amount of second value exchange medium held by the user and system administrator, and a circulation contribution rate that is the percentage of the user's contributions to the total monetary circulation speed for the user's and system administrator's second value exchange medium movements, such as remittances. For example, it may be "reduction quantity=(1−reaching premium rate)×number of held ESTs immediately before the reduction process is executed×(1 divided by circulation contribution rate)". Here, the circulation contribution rate is calculated, for example, as follows. Incidentally, the value obtained by "(1 divided by circulation contribution rate)" relating to the calculation of the exemplified reduced quantity may be provided with an upper limit value, and when the value is larger than "1", the obtained value may be corrected by balancing the value in a circulation contribution rate manner among users larger than "1" (in other words, users having a relatively low circulation contribution rate in which the circulation contribution rate is smaller than "1") so as not to exceed the upper limit value.

Circulation contribution rate = individual currency transfer rate ÷ reference currency transfer rate

Individual currency transfer rate = amount of EST transfer (remittance) in a given time period/amount of EST held in the last time period,

Reference currency transfer rate= Total EST transfer (remittance) quantity/Total EST quantity

The predetermined period may be a period from the last execution of the second value exchange medium reduction process (or the increase process) by the smart contract unit 131 of the server 10 and the smart contract unit 231 of the user device 20 to the present execution. Further, the circulation contribution rate of the system administrator may be fixed as an arbitrary value as "1" which is the average value of the total.

【0346】

In this way, by calculating not only the possessed quantity but also the reduced quantity of the second value exchange medium based on the circulation contribution rate, it is possible to cause the user holding the second value exchange medium to exercise an incentive to use the second value exchange medium (payment, settlement, remittance, payment instrument, second exchange, etc) (in general theory, the legal currency use incentive may be negative (*higher in the preservation desire than in the use desire) and the function as the "value exchange medium" of the second value exchange medium becomes easier to exert. Furthermore, the second value exchange medium can function as a currency that exerts positive (synonymous with a relatively small and negative) asset-like effects that can cause a "low volume" if used appropriately without stagnation, or a "positive interest rate" (synonymous with a relatively small and negative) if used appropriately without stagnation. On the other hand, if the second value exchange medium is stagnant and stored only without use, it can function as a currency that exerts the asset-like effects of a negative (synonymous with a relatively large and negative) that can cause a "negative interest rate" (synonymous with a relatively large and negative) if it is not used, so that it can easily move from the

purse to the purse, that is, it can become a "value exchange medium" in which the "value" is easily exchanged and the circulation rate is fast. In the present embodiment, similarly to the first value exchange medium, the second value exchange medium can function as "a value exchange medium with a high circulation rate in which the variation of the value measure, which is newly issued based on the relative assessment and the demand of the value transferred between the users, is suppressed (the exchange value per unit is controlled)".

【0347】

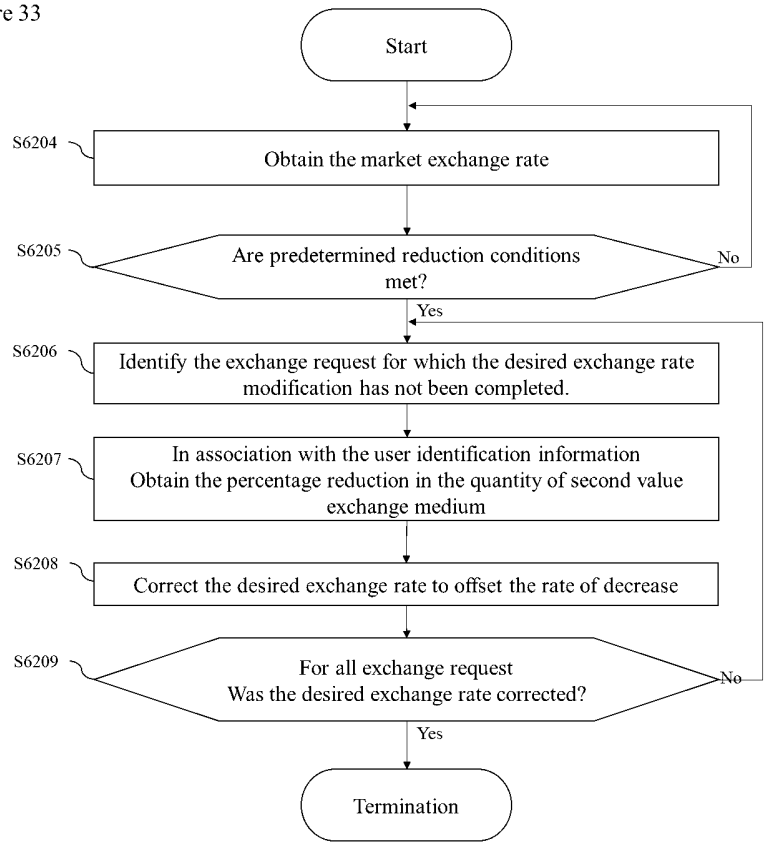
(6-2-3) Stabilization of value scale function of second value exchange medium

As described above, when a predetermined decreasing condition is satisfied, the amount of second value exchange medium held by each user decreases based on the amount of second value exchange medium held by each user and the circulation contribution rate. Accordingly, the server 10 may execute a predetermined process for further balancing (preventing the server 10 from deviating from the target exchange rate) the value scale function (exchange value per unit) of the second value exchange medium in target exchange rate with the value scale function (exchange value per unit) of the first value exchange medium, as described below. This allows the strong value scale function of the first value exchange medium (the function of controlling exchange value per unit) to be further generated for the second value exchange medium, as described above, since the exchange value per unit of the second value exchange medium is further balanced target exchange rate (or around) the exchange value per unit of the first value exchange medium.

【0348】

(6-2-3-1) Amendment of desired exchange rate

Figure 33



The server 10 may modify the desired exchange rate relating to the exchange request that has been received by the server 10 so as to offset the reduction rate of the second value exchange medium quantity of the respective users. In addition, the amount of variation of the first market exchange rate and the second market exchange rate based on the market exchange rate that varies as a result of the present correction process may be target exchange rate (the amount of variation exceeding the target exchange rate is limited) up to the first target exchange rate and the second target exchange rate. FIG. 33 is a diagram illustrating an exemplary operation flow of the desired exchange rate correction processing at the time of the reduction processing. By this process, the market exchange rate mentioned above is further approached to the target exchange rate.

【0349】

(S6204)

First, the decreased-time desired exchange rate correction unit 155b of the server 10 acquires the market exchange rate from the market exchange rate calculating unit 151 of the server 10 in the same manner as in the S6200 described above.

【0350】

(S6205)

Next, decreased-time desired exchange rate correction unit 155b of the server 10 determines whether or not a predetermined reduction condition is satisfied in the same manner as in the S6201 described above. If it is determined that the predetermined decreasing condition is not satisfied (S6205;No), the process returns to step S6204. On the other hand, if it is determined that the predetermined decreasing condition is satisfied (S6205; YES), the process proceeds to step S6206.

【0351】

(S6206)

Next, decreased-time desired exchange rate correction unit 155b of the server 10 specifies one exchange request of the exchange request (including the first exchange request and the second exchange request) which has been received and which has been recorded in the exchange request table stored in the storage unit 11 and for which the modification of the desired exchange rate has not been completed.

【0352】

(S6207)

Next, decreased-time desired exchange rate correction unit of the server 10 refers to the second ledger and acquires the decreasing rate of the number of second value exchange medium linked to the user ID related to the exchange request specified by the S6206.

【0353】

(S6208)

Next, the decreased-time desired exchange rate correction unit 155b of the server 10 corrects the desired exchange rate of the exchange request specified by the S6206 so that the reduction rate of the second value exchange medium acquired by the S6207 is offset in the exchange request table. For example, if the first desired exchange rate according to a first exchange request is 0.86 and the number of second value exchange medium associated with the user ID according to the first exchange request is reduced by 3%, the desired exchange rate is

modified to 0.8858 because 0.86×(100+3)%=0.8858. Further, for example, when the second desired exchange rate related to a certain second exchange request is 1.17 and the number of second value exchange medium linked to the user ID related to the second exchange request is reduced by 3%, the second desired exchange rate is modified to 1.2051 because 1.17×(100+3)%=1.2051. For example, when the first desired exchange rate according to a first exchange request is 0.96 and the number of second value exchange medium associated with the user ID according to the first exchange request is reduced by 5%, the first desired exchange rate is modified to 1.008 because 0.96×(100+5)%=1.008. At this time, if the second market exchange rate is, for example, 1.00, the first exchange request with the first desired exchange rate modified to 1.008 can be made the second market exchange request in the second market exchange rate, in this case 1.00.

【0354】

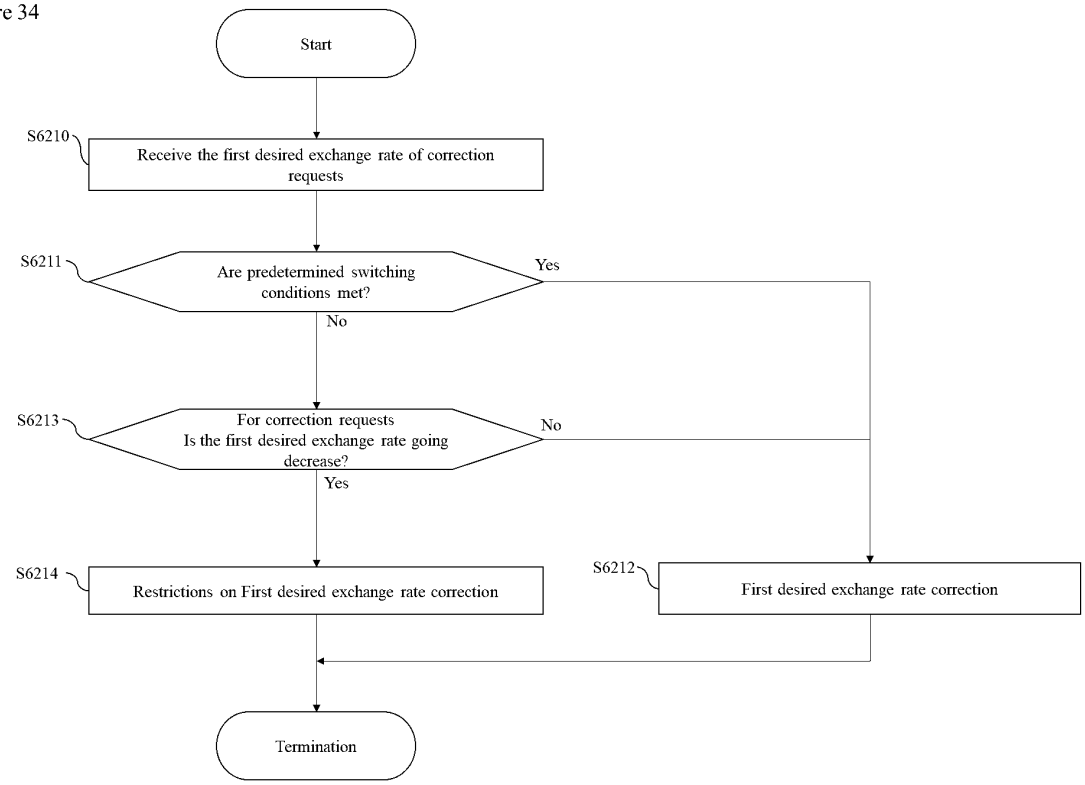
(S6209)

Next, the decreased-time desired exchange rate correction unit 155b of the server 10 determines whether or not the desired exchange rate has been modified for all of the exchange request received in the exchange request table. If it is determined that the desired exchange rate has not been corrected for all of the received exchange request (S6209;No), the process returns to the S6206. When it is determined that the desired exchange rate has been corrected for all of the received exchange request (S6209; YES), the process is completed.

【0355】

(6-2-3-2) Restrictions on corrections to reduce the first desired exchange rate

Figure 34



When the number of pieces of second value exchange medium associated with the user ID is decreased by the process mentioned above "(6-2-1) Basic Flow for Decreasing", the server 10 may restrict the correction for decreasing the first desired exchange rate in a predetermined period (variation suppressing period). FIG. 34 is a

diagram illustrating an exemplary operation flow of the modification restricting process for decreasing the first desired exchange rate. By this process, during the fluctuation suppressing period, it is possible to suppress that the market exchange rate that has once approached the target exchange rate fluctuates with the intention of the user and rapidly deviates from the target exchange rate in a short period of time. Note that the restricting process may be limited to the uncommitted first exchange requests recorded in the exchange request table at the time when the second value exchange medium decreasing process described above is performed.

【0356】

(S6210)

First, the decreased-time desired exchange rate correction unit 155b of the server 10 receives a request for correction of the first desired exchange rate from the user device 20. The modification request may include, for example, information indicating a first desired exchange rate after the desired modification, i.e., a first desired exchange rate of modification.

【0357】

(S6211)

Next, the decreased-time desired exchange rate correction unit 155b of the server 10 determines whether or not the predetermined switching condition is satisfied. The predetermined switching condition is a condition for defining the end of the variation suppression period described above. For example, the predetermined switching condition may be that a period of a predetermined fixed length has elapsed. The length of the fixed length period is not particularly limited, and the fixed length period may be any length, and may be determined by voting of the user device 20 etc. Further, for example, the predetermined switching condition may be that the premium rate, i.e., the ratio of the market exchange rate to the target exchange rate mentioned above, has reached a predetermined threshold. Here, the value of the predetermined threshold is not particularly limited and may be any value. The value of the predetermined threshold may be equal to or less than the lower limit of the premium mentioned above.

【0358】

(S6212)

If it is determined in step S6211 that the predetermined switching condition is satisfied (S6211; YES), the decreased-time desired exchange rate correction unit 155bof the server 10 modifies the first desired exchange rate in the exchange request table, and the process is completed.

【0359】

(S6213)

When it is determined in step S6211 that the predetermined switching condition is not satisfied (S6211;No), the decreasing desired exchange rate modifying unit 155b of the server 10 determines whether or not the modification content relating to the modification request is the direction in which the first desired exchange rate is decreased (the direction in which the first desired exchange rate modified by the processing described in the "modification of the (6-2-3-1) desired exchange rate" is returned to the first desired exchange rate prior to the modification), which is accompanied by the decrease in the number of second value exchange medium linked to the user ID by the processing described in the "basic flow of the (6-2-1) decrease"). If it is determined that the first desired exchange

rate is not decreasing (S6213; NO), the process proceeds to step S6212, and the decreasing desired exchange rate modifying unit 155b of the server 10 modifies the first desired exchange rate in the exchange request table, and the process is completed.

【0360】

(S6214)

If it is determined in step S6213 that the first desired exchange rate is decreasing (S6213; YES), the decreasing desired exchange rate modifying unit 155b of the server 10 executes a predetermined restricting process for restricting the modification of the first desired exchange rate. Here, the predetermined limiting process may be, for example, a process of not performing any correction process of the first desired exchange rate and a process of correcting the first desired exchange rate that is not in accordance with the correction demand received in the S6210 (e.g., a process of correcting the first desired exchange rate recorded in the exchange request table to a value larger than the value of the correction first desired exchange rate received in the S6210). The predetermined restriction process may be, for example, a process of notifying the user device 20 that the modification of the first desired exchange rate is restricted. Thus, the processing is completed.

【0361】

(6-2-3-3) Fixed exchange rate

When the number of pieces of second value exchange medium associated with the user ID is reduced by the series of processes described above in "(6-2) Reduction of the number of pieces of second value exchange medium", the server 10 may execute a process of making the target exchange rate commit the exchange request received from the user device 20 for a predetermined period (fixed transaction period).

【0362】

The first fixed transaction request generating unit 156a of the server 10 generates the first fixed transaction request for exchanging (issuance based on debt) the first value exchange medium with the second value exchange medium in the target exchange rate (first target exchange rate), for example, infinitely. Then, the first commitment processing unit 154a of the server 10 specifies a second exchange request satisfying a predetermined commitment condition among the second exchange request included in the exchange request table, and executes commitment processing. Specifically, when the second desired exchange rate has a second exchange request that is the same as or lower than the target exchange rate (first target exchange rate) than the target exchange rate (first target exchange rate), the second exchange request is set as a commitment target satisfying a predetermined first commitment condition, and a commitment process with respect to the first fixed transaction request is executed by the target exchange rate (first target exchange rate). In the second exchange request of the row, the target exchange rate (first target exchange rate) immediately executes the commitment process with the first fixed transaction request as a commitment target satisfying the predetermined first commitment condition.

【0363】

In the commitment processing, the first commitment processing unit 154a of the server 10 updates, for example, the first ledger and issuance based on debt tables of the server 10. First, the first commitment processing unit 154a of the server 10 generates a record as first update-information for issuing a first value exchange medium of the number obtained by multiplying the number of second value exchange medium related to the second exchange

request by the target exchange rate (first target exchange rate) in association with the user ID related to the second exchange request, the first update-information for updating the first ledger. Then, the first commitment processing unit 154a of the server 10 updates the first ledger by adding the record to the first ledger.

【0364】

Further, the first commitment processing unit 154a of the server 10 updates the issuance based on debt table by adding the number of issued first value exchange medium to the issuance based on debt number of the issuance based on debt table as issuance based on debt. As a result, the first value exchange medium is issuance based on debt.

【0365】

Further, the first commitment processing unit 154a of the server 10 executes processing for transferring the second value exchange medium associated with the user ID of the second exchange request subjected to the commitment processing to the server ID of the server 10 in accordance with the issuance based on debt of the first value exchange medium. More specifically, the first commitment processing unit 154a of the server 10 generates a transaction as second update-information for updating the second ledger, and the transaction is generated as second update-information for transferring the second value exchange medium of the quantity related to the second exchange request from the user ID related to the second exchange request to the server ID (administrator ID) related to the server 10. Then, the first commitment processing unit 154a of the server 10 broadcasts the transaction to the value exchange medium circulation network. The second ledger is updated by capturing the transactions into the block chains of the nodes.

【0366】

For example, the second fixed transaction request generating unit 156b of the server 10 generates the second fixed transaction request for exchanging (offsetting) the second value exchange medium held by the server 10 with the first value exchange medium by the target exchange rate described above (second target exchange rate). Instead of infinitely generating the second fixed transaction request, the second fixed transaction request generating unit 156b of the server 10 may generate the second fixed transaction request corresponding to the issuance based on debt balance recorded in the issuance based on debt table. Then, the second commitment processing unit 154b of the server 10 identifies the first exchange request satisfying the predetermined second commitment condition from the first exchange request included in the exchange request table, and executes the commitment processing. Specifically, when the first desired exchange rate has a first exchange request that is the same as or higher than the target exchange rate (second target exchange rate) than the target exchange rate (second target exchange rate), the first exchange request is set as a commitment target that satisfies a predetermined second commitment condition, and the commitment process with the second fixed transaction request is executed by the target exchange rate (second target exchange rate). Also, for the first exchange request of the row, a commitment process with the second fixed transaction request is immediately executed by the target exchange rate (second target exchange rate) as a commitment target satisfying the predetermined second commitment condition.

【0367】

In the commitment processing, the second commitment processing unit 154b of the server 10 updates, for example, the first ledger and issuance based on debt tables of the server 10. First, the second commitment

processing unit 154b of the server 10 generates first update-information for updating the first ledger, the first update-information having a content of resolving the association with the user ID with respect to the first value exchange medium of the quantity relating to the first exchange request associated with the user ID relating to the first exchange request. The first update-information may be, for example, the content of write-off of a record of the first value exchange medium of the quantity associated with the user ID in the first ledger. Alternatively, the first update-information may have a content in which the holder information of the first value exchange medium of the quantity associated with the user ID in the first ledger is left blank. Then, the second commitment processing unit 154b of the server 10 updates the first ledger based on the first update-information. At this time, the write-off may be performed preferentially from the first value exchange medium held by the user whose arrival date of the scheduled write-off date is close to the arrival date.

【0368】

Further, the second commitment processing unit 154b of the server 10 updates the issuance based on debt table by adding the quantity of first value exchange medium whose association with the user ID has been write-off to the write-off purchase quantity of the issuance based on debt table as the write-off purchase quantity for the issuance based on debt. This offsets the first value exchange medium.

【0369】

Further, the second commitment processing unit 154b of the server 10 executes processing for transferring the second value exchange medium held by the server 10 to the user ID of the first exchange request in conjunction with the write-off purchasing of the first value exchange medium. More specifically, the second commitment processing unit 154b of the server 10 generates a transaction as second update-information for updating the second ledger, and for transferring the second value exchange medium of the quantity obtained by dividing the quantity of the first value exchange medium related to the first exchange request by the second market exchange rate from the server ID of the server 10 to the user ID of the first exchange request. Then, the second commitment processing unit 154b of the server 10 broadcasts the transaction to the value exchange medium circulation network. The second ledger is updated by capturing the transactions into the block chains of the nodes.

【0370】

(7) Simultaneous settlement between heterologous currency

In the present embodiment, in response to a reference request of a paid consumption value belonging to the type II or a reference request of a paid exchangeable value belonging to the type III of the user device 20, the server 10 may display the amount of second value exchange medium as a consideration in addition to or instead of the amount of first value exchange medium when the server 10 displays the amount of first value exchange medium as a consideration for acquisition of the paid consumption value or acquisition of the paid exchangeable value on the display device of the user device 20. Specifically, for example, the server 10 may specify, from the first market exchange rate generated by the first market exchange request generating unit 153a, the number of second value exchange medium required to acquire the number of the first value exchange medium by the second exchange, and transmit a notification (which may include a EST settlement request) indicating that the server 10 can pay the second value exchange medium of the specified number as a consideration to the user device 20. The notification may include, for example, a second value exchange medium quantity, a settlement request, and a second exchange request in the first market exchange rate, as well as an execution request for an acquisition action of a paid consumption value belonging to type II, or a paid exchangeable value utilization request for an acquisition of a paid exchangeable value belonging to type III. Subsequently, when the server 10 receives the EST settlement request from the user device 20, the server 10 transmits and receives the request by the user's selection of execution, the first commitment processing unit 154a completes the commitment processing of the second exchange request in the first market exchange rate included in the EST execution request. Thereafter, the server 10 may settle the first value exchange medium that has been issuance based on debt by a predetermined process for acquiring the paid consumption value belonging to the type II or the paid exchangeable value belonging to the type III.

【0371】

This can reduce the labor required for the user's settlement, and at the same time, the currency (value) circulation rate can be increased. This may also allow to circulate the second value exchange medium to be distributed as a virtual payout in the first network only in the second network.

【0372】

This measure is expected to increase the issuance based on debt balance, and at the same time, the second value exchange medium of servers (as depository assets) may increase. In addition, the amount of first value exchange medium acquired by the free-of-charge exchangeable value provider user or the paid exchangeable value provider user may also be increased. Thus, as the offsetting quantity of the server increases, the second value exchange medium of the server eventually transfers to the free-of-charge exchangeable value providing user or the paid exchangeable value providing user. Thus, the acceleration of the first value exchange medium flow rate and the acceleration of the second value exchange medium flow rate can be exerted.

【0373】

In addition to the effect of "providing a value exchange medium in which the exchange value per unit can be controlled" according to the present embodiment, for example, the following effect can be expected.

- The exchange value per unit of the value exchange medium provided can be stabilized.
- The flow rate of the value exchange medium provided may be increased.

- The economic value contained in the free-of-charge exchangeable value can be quantified.
- The flow rate of the value (replacement value) can be improved.
- Since the total currency volume of circulation increases (value exchange medium is newly issued) when the exchange value per unit of the value exchange medium to be provided is devalued, the value of the entire value exchange medium held as assets does not decrease. Also, the substantial debt size may be reduced. In addition, if the subject matter to be increased (subject matter to be newly issued) is biased toward the purchasing power side, hoarded money taxation such as substantial asset taxation may occur. In addition, if the increase target (new issue target) is biased toward the purchasing power, the monetary circulation speed can be further improved. Also, redistribution of wealth and liability may optionally be performed.

【0374】

Although the preferred embodiments of the present invention have been described above, the present invention is not limited to the embodiments described above, and can be implemented in various other forms without departing from the spirit of the present invention. The processing steps of the various functional units of the present invention are not limited to the aspects of the embodiments mentioned above, and various combinations can exert the effects of the present invention. Further, for example, a technique conventionally known by a person skilled in the technic may be included in a part of the functional unit to modify each processing step exemplified in the embodiment mentioned above to exert the effect of the present invention. In addition, each of the processing steps described above can be arbitrarily changed in order or executed in parallel within a range that does not cause inconsistency in the content of processing. In addition, other steps may be added between the processing steps. In addition, an arbitrary step may be excluded from each processing step. The steps described as one step may be divided into a plurality of steps and executed, or the steps described as a plurality of steps may be grasped as one step.

[Explanation of Codes]

【0375】

1...exchange medium circulation system, 10... server, 11...storage unit 12... first value exchange medium management unit, 121... value processing unit 122... free-of-charge exchangeable value evaluating unit 123... issuance based on evaluation unit 124...remittance processing unit 125... settlement processing unit 126... write-off processing unit, 127...evaluation and correction unit 128... second economic activity processing unit 13... second value exchange medium control unit, 131... smart contract unit, 131a... market exchange rate acquiring unit 131b...increase condition determining unit , 131c... increase executing unit 131d... decrease condition determining unit 131e...decrease executing unit 132... credit issuance unit, 132a... reception unit, 132b... update-information generation unit, 132c...determination unit, 14... account management unit, 15... exchange place manager, 151... market exchange rate calculation unit 152a... first exchange request receiving unit 152b... second exchange demand receiving unit 153a... first market exchange request generating unit , 153b... second market exchange request generating unit , 154a...first agreement processing unit 154b... second agreement processing unit 155a... increasing desired exchange rate correcting unit 155b... decreasing desired exchange rate correction unit, 156a... first fixed transaction request generating unit 156b... second fixed transaction request generating unit

20A, 20B, 20C, 20D... user device, 21... storage unit, 22... first value exchange medium processing unit, 221... value registration processing unit 222... money transfer unit, 223... second economic activity processing unit 224...

value use unit 225... basic score compensation requesting unit, 23... second value exchange medium processing unit, 231... smart contract unit 231a... market exchange rate obtaining unit 231b... increase condition determination unit 231c... increase execution unit, 231d...decrease condition determination unit 231e.... decrease execution unit 232... credit issuance unit 232a... reception unit 232b.... update-information generating unit 232c... determination unit, 24... account processing unit 25... exchange request processing unit 251... first exchange request processing unit 252... second exchange request processing unit 26... display processing unit, 100... information processing device 101... processor 102... memory 103...storage 104..... Input/output interface (I/F) 105..... Communication interface 300A... value registration information input screen, 300B..... Issuance Information screen, 300C...remittance instruction input screen, 300D...remittance notification screen 300E..usasge information display screen、Ｘ、Ｘ１、Ｘ２ Wallet Management Applications X