

Description is given below regarding an outline of settlement performed in the token community.

[0026]

Firstly, the supply chain company X opens a token community account as a representative of the supply chain. The community settlement requesting device 100-X of company X makes a request to the community settlement execution device 200-A of the financial institution A to open an account (issue a token) (P1). The community settlement execution device 200 opens a token community account, and assigns a token issuance right to the community settlement requesting device 100-X of company X (P2).

[0027]

Next, company X performs payment by token to company Y as consideration for delivery. The community settlement requesting device 100-X of company X notifies the community settlement execution device 200 of financial institution A of a request for payment by token. The community settlement execution device 200-A of the financial institution A records the issuance of a token in the distributed token ledger 500, and issues the token. The community settlement execution device 200-A transmits the issued token to the community settlement requesting device 100-Y of company Y (P3).

[0028]

Note that the token includes a history of payment from company X, the monetary amount, a payment due date, and a receiver. In addition, regarding content that the community settlement requesting device 100-X writes into the distributed token ledger 500, content of the transaction for which the token has been issued are recorded. Note that the token issued by financial institution A may be transmitted from the community settlement requesting device 100-X of company X to company Y.

[0029]

At financial institution A that manages the account for company X, the community settlement execution device 200-A obtains from the distributed token ledger 500 the request for payment by token from company X, and causes the occurrence of a debt (monetary debt) from company X to company Y to be recorded in the electronic credit management system 300 (P4). The electronic credit management system 300 accepts the request from the community settlement execution device 200-A, and records the content of the token in an electronic credit management table 310.

[0030]

By the community settlement execution device 200-A causing content of the token issued in accordance with the

processing in accordance with the token payment request program 110. It is similar in regard to other programs. Furthermore, the arithmetic device 102 operates as a functional unit that provides each function of a plurality of processes that respective programs perform. A computer and a computer system are a device and a system that includes these functional units.

[0045]

The distributed token ledger 500 is a management ledger that is distributed among and shared by participants in the token community. In the present first embodiment, token information is shared by storing the distributed token ledger 500 in each community settlement requesting device 100 of the companies X through Z and each community settlement execution device 200 of the financial institutions A through C. FIG. 13 is a view that illustrates an example of the distributed token ledger 500.

[0046]

The distributed token ledger 500 is updated by a community settlement execution device 200 of the financial institutions A through C or a community settlement requesting device 100 of the companies X and Z. The distributed token ledger 500 includes a transaction ID 501, transaction content 502, a payer 503, a receiver 504, a transaction amount 505, a target transaction 506, a record

community management table 700. The community management table 700 is distributed among and shared by the participants in the token community, and is set by the community settlement execution devices 200 of the financial institutions A through C.

[0054]

The community management table 700 includes a token name 701, an issue amount 702, a participant name 703, a representative flag 704, and a Densai (electronic record credit service in Patent Document 1 described above.) contract presence/absence 705 in one entry.

[0055]

The token name 701 stores an identifier or a name for the token. The issue amount 702 stores the value (monetary amount) of the token that can be issued. The participant name 703 stores the name of participants in the token community that can use the token.

[0056]

The representative flag 704 is set to "Y" for the representative of the token community. Note that, in the present first embodiment, description is given for an example in which the payer of the token (company X) is the representative and the representative decides the participant names 703, but there is no limitation to this.

[0057]

The Densai contract presence/absence 705 is set to

receiver and with the transaction ID 501 = "TX400" when company Y pays company Z, which has not joined the electronic credit management system 300, by token, as illustrated in FIG. 2.

[0088]

The "guaranteed payment" token with the transaction ID 501 = "TX400" has the payer 503 as "company Y" and the receiver 504 as "financial institution B" indicates an example in which the financial institution B ensures payment to company Z.

[0089]

According to the process described above, a payment transaction (TX300 or TX400) is registered in the distributed token ledger 500. The community settlement execution device 200 of a financial institution can refer to the distributed token ledger 500 to detect that a request for payment from company X to company Y (company Z) has newly occurred.

[0090]

FIG. 7 is a flow chart that illustrates an example of a token payment acceptance process. This process is started when the token payment acceptance program 220 of the community settlement execution device 200 of a financial institution detects a new payment request in the distributed token ledger 500.

accepts a token liquidation request from a user.

[0118]

The community settlement requesting device 100 accepts a token liquidation request from the input device 103 or the like (S41). The community settlement requesting device 100 obtains the transaction ID 501 (or token name), the monetary amount and the user name (participant name 703) from the liquidation request.

[0119]

The community settlement requesting device 100 refers to the community management table 700 to determine whether the user of the liquidation request has a usage contract for the electronic credit management system 300 (S42). In a case where the user has a usage contract, the community settlement requesting device 100 advances the process to step S43, and advances the process to step S44 in a case where the user has no usage contract.

[0120]

In step S43, the community settlement requesting device 100 adds, to the distributed token ledger 500, handover of the token with the transaction content 502 set to "liquidation." Meanwhile, in step S44, the community settlement requesting device 100 adds, to the distributed token ledger 500, handover of the token with the transaction content 502 set to "guaranteed liquidation."

distributed token ledger 500.

[0157]

A company X node 1000-X corresponds to the community settlement requesting device 100-X (refer to FIG. 2) of the first embodiment, and a company Y node 1000-Y corresponds to the community settlement requesting device 100-Y of the first embodiment. A financial institution A node 2000-A corresponds to the community settlement execution device 200-A (refer to FIG. 2) of the first embodiment, and a financial institution B node 2000-B corresponds to the community settlement execution device 200-B (refer to FIG. 2) of the first embodiment.

[0158]

Since the configuration of each node is the same, description is given below regarding the company X node 1000X, and description for other nodes is omitted. FIG. 17 is a block view that illustrates an example of the company X node 1000X.

[0159]

The company X node 1000-X holds a copy of the distributed token ledger 500, calculates the latest balance of each token from the distributed token ledger 500, and stores the latest balance of each token in the token balance management table 600. The distributed token ledger 500 is configured by the blockchain illustrated in the