

CLAIMS

1. A networked computer system, comprising:

a distributed blockchain computer system including multiple computing nodes, each computing node storing a copy, or a portion thereof, of a blockchain of the distributed blockchain computer system; and

a server computer system communicatively coupled to one or more client computers and the distributed blockchain computer system, the server computer system comprising one or more processors configured to perform operations comprising:

recording on the blockchain, by transmitting one or more electronic messages to the distributed blockchain computer system, ownership information of respective groups of one or more units of an asset for each of a plurality of owners of the asset;

configuring, for each of one or more of the owners, a digital wallet corresponding to the asset, each digital wallet being associated with a private cryptographic key and at least one blockchain address generated based upon the private cryptographic key;

responsive to a command received from a client computer, using a blockchain address stored in one of said digital wallets to access ownership information of the asset recorded in the blockchain;

performing application processing using the accessed ownership information, wherein the application processing includes an operation for owners or proxies of the owners of said groups of one or more units of the asset to vote according to a number of units of the asset;

for each of the plurality of owners, distributing at least one voting token to the digital wallet of the owner or a digital wallet of a proxy for the owner from the distributed blockchain computer system; and

starting a voting event;

wherein the distributed blockchain computer system is configured to receive, during the voting event, respective ones of the voting tokens from the digital wallets of one or more of the owners or the digital wallets of one or more proxies of the owners transmitted to one or more of a plurality of blockchain addresses; and

wherein the one or more processors are further configured to perform operations comprising:

determining, based upon numbers of the voting tokens recorded in the blockchain for each of the plurality of blockchain addresses, a distribution of votes for each of a plurality of voting choices; and

displaying a result of the voting event based upon the determined distribution of votes, and

wherein the one or more processors are further configured to perform operations comprising:

distributing at least one voting rights token to the digital wallet of a first owner of the plurality of owners or a proxy of the first owner from the distributed blockchain computer system,

wherein said distributing at least one voting token includes:

determining whether the digital wallet includes a voting rights token;

distributing the at least one voting token to the digital wallet if said

determining determined that the digital wallet includes the voting rights token, and not distributing the at least one voting token to the digital wallet if said determining determined that the digital wallet does not include the voting rights tokens;

recording in the blockchain a proxy assignment from one of the owners to a first proxy;

determining, by accessing the blockchain, whether said one of the owners has assigned a proxy to the first proxy; and

distributing the at least one voting token to the digital wallet of the first proxy if said determining determined that the proxy has been assigned to the first proxy, and not distributing the at least one voting token to the digital wallet of said one of the owners if said determining determined that the proxy has not been assigned to the first proxy.

2. The networked computer system according to claim 1, wherein the one or more processors are further configured to perform operations comprising:

recording in the blockchain a second proxy assignment comprising assigning the proxy assignment to the first proxy to a second proxy,

wherein the distributing said at least one voting rights token includes:

determining, from the blockchain, whether said one of the owners has assigned a proxy to the second proxy;

distributing the at least one voting token to the digital wallet of the second proxy if said determining determined that the proxy has been assigned to the second proxy, and not distributing the at least one voting token to the digital wallet of said one of the owners if said determining determined that the proxy has not been assigned to the second proxy.

3. The networked computer system according to claim 2, wherein the one or more processors are further configured to perform operations comprising:

obtaining information from the blockchain in relation to the proxy assignment;

generating an audit report indicating at least the first proxy and the second proxy; and

displaying the generated audit report on one of the client computers.

4. The networked computer system according to any one of claims 1 to 3, wherein the distributing at least one voting token to the digital wallet of each of the plurality of owners or their proxies comprises:

determining a number of units of the asset owned by one of said owners;

determining a number of votes based on the number of units of the asset; and

distribute the determined number of votes to the digital wallet of the one of said owners.

5. The networked computer system according to any one of claims 1 to 4, wherein recording the ownership information on the blockchain includes causing a recording of ownership information of a plurality said owners in a single transaction on the blockchain.

6. The networked computer system according to any one of claims 1 to 5, wherein the one or more processors are further configured to perform operations comprising:

notifying said owners of the starting of the voting event; and
receiving electronic messages from said one or more client computers, wherein one or more of the received electronic messages initiate said transmitting of the voting tokens.

7. The networked computer system according to any one of claims 1 to 6, wherein the one or more processors are further configured to perform operations comprising:

in response to a received electronic message, transferring one or more voting tokens from a first one of the plurality of blockchain addresses to the digital wallet of one of the owners; and

subsequently, in response to another received electronic message, again transmitting the transferred one or more voting tokens from the digital wallet of said one of the owners to a second one of the plurality of blockchain addresses.

8. The networked computer system according to claim 7, wherein the one or more processors are further configured to perform operations comprising:

obtaining information from the blockchain in relation to the again transmitted one or more voting tokens;

generating an audit report indicating at least the transmitting to the first one of the blockchain addresses and the again transmitting to the second one of the blockchain addresses; and

displaying the generated audit report on one of the client computers.

9. A method performed by a server computer system communicatively coupled to one or more client computers and to a distributed blockchain computer system that includes multiple computing nodes, each computing node storing a copy, or a portion thereof, of a blockchain of the distributed blockchain computer system, the method comprising:

recording on the blockchain, by transmitting one or more electronic messages to the distributed blockchain computer system, ownership information of respective groups of one or more units of an asset for each of a plurality of owners of the asset;

configuring, for each of one or more of the owners, a digital wallet corresponding to the asset, each digital wallet being associated with a private cryptographic key and at least one blockchain address generated based upon the private cryptographic key;

responsive to a command received from a client computer, using a blockchain address stored in one of said wallets to access ownership information of the asset recorded in the blockchain;

performing application processing using the accessed ownership information, wherein the application processing includes an operation for owners or proxies of the owners of said groups of one or more units of the asset to vote according to a number of units of the asset;

recording in the blockchain, updated said accessed ownership information or other information associated with the accessed ownership information in accordance with the performed application processing;

distributing at least one voting token to the digital wallet of each of the plurality of owners or a corresponding proxy from the distributed blockchain computer system;

starting a voting event, wherein during the voting event respective ones of the voting tokens in the digital wallets of one or more of the owners or in the digital wallets of proxies of one or more of the owners are transmitted to the distributed blockchain computer system to one or more of a plurality of blockchain addresses;

ending the voting event;

after the ending of the voting event, determining, based upon numbers of the voting tokens recorded in the blockchain for each of the plurality of blockchain addresses, a distribution of votes for each of a plurality of voting choices; and

displaying a result of the voting event based upon the determined distribution of votes, wherein the method further comprises:

distributing at least one voting rights token to the digital wallet of a first owner of the plurality of owners or a proxy of the first owner from the distributed blockchain computer system,

wherein said distributing at least one voting token includes:

determining whether the digital wallet includes a voting rights token;

distributing the at least one voting token to the digital wallet if said determining determined that the digital wallet includes the voting rights token, and not distributing the at least one voting token to the digital wallet if said determining determined that the digital wallet does not include the voting rights tokens;

recording in the blockchain a proxy assignment from one of the owners to a first proxy,

determining, by accessing the blockchain, whether said one of the owners has assigned a proxy to the first proxy; and

distributing the at least one voting token to the digital wallet of the first proxy if said determining determined that the proxy has been assigned to the first proxy, and not distributing the at least one voting token to the digital wallet of said one of the owners if said determining determined that the proxy has not been assigned to the first proxy.

10. The method according to claim 9, wherein the distributing at least one voting token to the digital wallet of each of the plurality of owners or their proxies comprises:

determining a number of units of the asset owned by one of said owners;

determining a number of votes based on the number of units of the asset; and

distribute the determined number of votes to the digital wallet of the one of said owners.

11. A non-transitory computer readable storage medium storing program instructions which, when executed by a processor of a server computer system communicatively coupled to one or more client computers and to a distributed blockchain computer system that includes multiple computing nodes, each computing node storing a copy, or a portion thereof, of a blockchain of the distributed blockchain computer system, causes the server computer system to perform operations comprising:

recording on the blockchain, by transmitting one or more electronic messages to the distributed blockchain computer system, ownership information of respective groups of one or more units of an asset for each of a plurality of owners of the asset;

configuring, for each of one or more of the owners, a digital wallet corresponding to the asset, each digital wallet being associated with a private cryptographic key and at least one blockchain address generated based upon the private cryptographic key;

responsive to a command received from a client computer, using a blockchain address stored in one of said digital wallets to access ownership information of the asset recorded in the blockchain;

performing application processing using the accessed ownership information; and

recording in the blockchain, updated said accessed ownership information or other information associated with the accessed ownership information in accordance with the performed application processing,

wherein the application processing includes an operation for owners or proxies of the owners of said groups of one or more units of the asset to vote according to a number of units of the asset, and wherein the operations further comprise:

distributing at least one voting token to the digital wallet of each of the plurality of owners or a digital wallet of a corresponding proxy from the distributed blockchain computer system;

starting a voting event, wherein during the voting event, respective ones of the voting tokens in the digital wallets of one or more of the owners or in the digital wallets of proxies of one or more of the owners are transmitted to the distributed blockchain computer system to one or more of a plurality of blockchain addresses;

ending the voting event;

after the ending of the voting event, determining, based upon numbers of the voting tokens recorded in the blockchain for each of the plurality of blockchain addresses, a distribution of votes for each of a plurality of voting choices; and

displaying a result of the voting event based upon the determined distribution of votes, wherein the operations further comprise:

distributing at least one voting rights token to the digital wallet of a first owner of the plurality of owners or a proxy of the first owner from the distributed blockchain computer system,

wherein said distributing at least one voting token includes:

determining whether the digital wallet includes a voting rights token;
distributing the at least one voting token to the digital wallet if said
determining determined that the digital wallet includes the voting rights token, and not
distributing the at least one voting token to the digital wallet if said determining
determined that the digital wallet does not include the voting rights tokens;

recording in the blockchain a proxy assignment from one of the owners to a
first proxy,

wherein the distributing said at least one voting rights token includes:

determining, by accessing the blockchain, whether said one of the owners has
assigned a proxy to the first proxy; and

distributing the at least one voting token to the digital wallet of the first proxy
if said determining determined that the proxy has been assigned to the first proxy, and not
distributing the at least one voting token to the digital wallet of said one of the owners if said
determining determined that the proxy has not been assigned to the first proxy.

12. The non-transitory computer readable storage medium according to claim 11,
wherein recording the ownership information on the blockchain includes causing a recording
of ownership information of a plurality said owners in a single transaction on the blockchain.

13. The non-transitory computer readable storage medium according to claim 11 or
claim 12, wherein the application processing includes one or more of an operation generating
two or more additional units of the asset for each unit of the asset for each of said owners, an
operation for an issuer of the asset to buy back one or more units of the asset from at least one
of the owners, an operation to enable the owners or proxies of the owners of said groups of
one or more units of the asset to vote according to a number of units of the asset.

14. A computer program comprising code configured to cause a computer system
to implement the method of either claim 9 or claim 10 when said code is executed by the
computer system.