

I/We Claim:

1. A method for carbon trading, comprising:

acquiring identification data and carbon behavior data of a transport device, the carbon behavior data indicating at least one of carbon consumption behavior and carbon emission reduction behavior of the transport device, and the identification data including at least an identity corresponding to the transport device;

in response to determining that the identity is in a predetermined identity set, acquiring an attribute corresponding to the transport device based on the identity;

determining, based on the carbon behavior data and a first smart contract matching with the attribute, a carbon emission reduction equivalent corresponding to the carbon behavior data, the first smart contract being provided for converting the carbon behavior data to the carbon emission reduction equivalent;

transmitting the carbon emission reduction equivalent to a blockchain platform to store in a first account associated with a first object, the first object being associated with a plurality of transport devices; and

publishing a carbon trading associated with the carbon emission reduction equivalent in the first account as a blockchain transaction.

2. The method of claim 1, wherein transmitting the carbon emission reduction equivalent to the blockchain platform comprises:

packaging the carbon emission reduction equivalent to transmit to the blockchain platform in response to at least one of i) reaching a preset time interval and ii) a data amount of the acquired identification data and the carbon behavior data exceeding a predetermined value.

3. The method of claim 2, further comprising:

in response to at least one of i) reaching the preset time interval and ii) the data amount of the acquired identification data and the carbon behavior data exceeding the predetermined value, packaging the identification data and the carbon behavior data to transmit to distributed storage devices; and

packaging a hash value of the identification data and the carbon behavior data to transmit to the blockchain platform.

4. The method of claim 1, further comprising:
setting, based on a characteristic of data to be transmitted to the blockchain platform, a database type for storing the data,
wherein the database type includes at least one of:
a database type for basic information for storing data that will not be updated once being stored;
a database type for tracking information for storing data that will be updated from time to time; and
a database type for ownership information for storing data related to ownership of the transport device and a change process thereof.

5. The method of claim 1, wherein determining the carbon emission reduction equivalent comprises:
selecting, based on the attribute, a first smart contract matching with the attribute from a plurality of first smart contracts stored in the blockchain platform to determine the carbon emission reduction equivalent corresponding to the carbon behavior data, wherein the attribute indicates at least a frame number of the transport device.

6. The method of claim 3, wherein the identification data and the carbon behavior data are from at least one of the distributed storage devices, an on-board module of the transport device and an application installed on a mobile terminal associated with the transport device;
and
wherein the transport device includes at least one of an battery electric vehicle, a hybrid electric vehicle and a shared bicycle.

7. The method of claim 6, wherein the carbon behavior data at least includes a traveled distance, fuel consumption and electricity consumption corresponding to at least one of the carbon consumption behavior and the carbon emission reduction behavior.

8. The method of claim 6, wherein the transport device is a shared bicycle and the carbon behavior data at least includes a traveled distance corresponding to at least one of the carbon consumption behavior and the carbon emission reduction behavior.

9. The method of any of claims 7-8, wherein determining the carbon emission reduction equivalent comprises:

determining the carbon emission reduction equivalent based on a baseline carbon emission and a carbon emission of the transport device, wherein the baseline carbon emission indicates a carbon emission of a fuel-burning transport device with a similar attribute to the attribute the transport device over the traveled distance, and the carbon emission of the transport device indicates a carbon emission of the transport device over the traveled distance.

10. The method of claim 9, wherein the fuel-burning transport device with a similar attribute has approximately the same model, displacement, engine or motor power, passenger capacity and vehicle curb weight with the transport device.

11. The method of claim 1, further comprising:

in response to a request for issuing carbon tokens from the first object, acquiring a locking-pending amount of a carbon emission reduction voucher or the carbon emission reduction equivalent in the first account;

determining an issuance amount of carbon tokens based on a predetermined ratio and the locking-pending amount;

generating, via a second smart contract for issuing the carbon tokens, the issuance amount of carbon tokens in the first account; and

transferring the locking-pending amount of the carbon emission reduction voucher or the carbon emission reduction equivalent from the first account to a second account.

12. The method of claim 1, further comprising:

in response to a request for burning carbon tokens from the first object, acquiring a burning-pending amount of carbon tokens in the first account;

determining, based on a predetermined ratio and the burning-pending amount of carbon tokens, an unlocked amount of a carbon emission reduction voucher or the carbon emission reduction equivalent;

burning, via a third smart contract for burning carbon tokens, the burning-pending amount of carbon tokens in the first account; and

transferring the unlocked amount of the carbon emission reduction voucher or the carbon emission reduction equivalent from a second account into the first account.

13. The method of any of claims 11 and 12, wherein at least one of the second smart contract and the third smart contract is signed via a private key of a second object.

14. The method of any of claims 11 and 12, further comprising:
in response to the request for issuing carbon tokens or the request for burning carbon tokens, determining the predetermined ratio based on a total amount of the carbon tokens and a total amount of the carbon emission reduction voucher or the carbon emission reduction equivalent in the second account.

15. The method of any of claims 11 and 12, further comprising:
in response to a request for distributing carbon tokens to a user associated with the transport device, determining an exchange amount of the carbon tokens based on the carbon behavior data of the transport device; and
transferring the exchange amount of the carbon tokens from the first account to an account of the user, the first account being associated with a plurality of accounts of users.

16. A device for carbon trading, comprising:
a memory configured to store one or more programs; and
a processor coupled to the memory and configured to execute the one or more programs to cause the device to perform the method according to any of claims 1-15.

17. A non-transitory computer-readable medium having machine-executable instructions stored thereon, the machine-executable instructions, when executed, causing a machine to perform the method according to any of claims 1-15.

18. A computer program product tangibly stored on a non-transitory computer-readable medium and comprising machine-executable instructions, the machine-executable instructions, when executed, causing a machine to perform the method according to any of claims 1-15.