

CLAIMS

1. A method for processing a commodity damage claim, the method comprising:
 - collecting appearance data of a target commodity, wherein the appearance data of the target commodity is registered with a distributed database of a blockchain in advance;
 - determining whether a damage event occurred on the target commodity based on the appearance data of the target commodity and the appearance data of the target commodity that is registered with the distributed database in advance; and
 - if yes:
 - invoking a smart contract corresponding to the target commodity; and
 - executing commodity damage claim logic stated in the smart contract, to complete the commodity damage claim for the target commodity.
2. The method according to claim 1, wherein collecting the appearance data of the target commodity comprises:
 - associating the appearance data of the target commodity with an identity of the target commodity that has been registered with the blockchain; and
 - storing the appearance data of the target commodity in the distributed database of the blockchain.
3. The method according to claim 2, wherein before determining whether the damage event occurred on the target commodity, the method further comprises:
 - querying the appearance data that is associated with the identity of the target commodity that has been registered with the blockchain in the distributed database of the blockchain, to obtain the appearance data of the target commodity that is registered with the distributed database in advance.
4. The method according to claim 1, wherein determining whether the damage event occurred on the target commodity comprises:

evaluating a damage degree of the target commodity based on the appearance data of the target commodity and the appearance data of the target commodity that is registered with the distributed database in advance, to obtain a damage degree score used to indicate the damage degree;

determining whether the damage degree score reaches a predetermined threshold; and
if yes, determining that the damage event occurred on the target commodity.

5. The method according to claim 1, wherein determining whether the damage event occurred on the target commodity based on the appearance data of the target commodity and the appearance data of the target commodity that is registered with the distributed database in advance comprises:

determining whether a key position of the target commodity is damaged based on the appearance data of the target commodity and the appearance data of the target commodity that is registered with the distributed database in advance; and

if yes, determining that the damage event occurs on the target commodity.

6. The method according to claim 1, wherein invoking the smart contract corresponding to the target commodity comprises:

broadcasting the damage event corresponding to the target commodity to the blockchain, so that member node devices in the blockchain perform consensus processing on the damage event; and

if a consensus is reached on the damage event, invoking the smart contract corresponding to the target commodity.

7. The method according to claim 1, wherein an outer surface of the target commodity is coated with an optical medium that is used to cure the appearance data of the target commodity.

8. The method according to claim 7, wherein collecting the appearance data of the target commodity comprises:

collecting, by using an installed optical sensor, the appearance data of the target commodity that is cured by the optical medium.

9. The method according to claim 7, wherein the optical medium is a nanometer-level optical film.

10. The method according to claim 1, wherein the blockchain is a consortium blockchain.

11. The method according to claim 1, wherein the target commodity comprises a short-range wireless communication device configured to communicate with member node devices of the blockchain.

12. An apparatus for processing a commodity damage claim, the apparatus comprising a plurality of modules configured to perform the method of any one of claims 1 to 11.