CLAIMS

1. A computer-implemented method performed by a computing system for managing blockchain-based event messages, the method comprising:

storing shipping data and shipping insurance order data associated with a purchase order on a blockchain based on initiating a consensus algorithm through a blockchain node associated with the computing system;

determining, by executing a smart contract based on first one or more predetermined rules and the shipping data, whether a shipping insurance order associated with the shipping insurance order data is valid;

in response to determining that the shipping insurance order is valid, generating, by executing the smart contract, an event message dedicated to an insurance provider notifying that a shipping insurance of the purchase order is effective, wherein the smart contract invokes an event management function to periodically generate the event message until an acknowledgement receipt feedback is received;

storing the event message to a hardware cache managed by the computing system;

sending the event message to a blockchain node associated with the insurance provider; and

processing the event message in response to receiving a feedback message from the blockchain node associated with the insurance provider.

2. The computer-implemented method of claim 1, wherein the feedback message indicates that the event message is received by the blockchain node associated with the insurance provider, and the processing the event message comprises:

storing the event message on the blockchain based on performing the consensus algorithm; and

deleting the event message from the hardware cache.

3. The computer-implemented method of any previous claim, wherein, when the feedback message indicates that the event message is incorrectly received or not received within a predetermined period of time, the processing the event message comprises resending the event message to the blockchain node associated with the insurance provider.

4. The computer-implemented method of any previous claim, wherein the sending the event message is performed periodically until the feedback message is received.

5. The computer-implemented method of any previous claim, wherein the event message is a first event message, the smart contract is a first smart contract, the feedback message is a first feedback message, and the method further comprises:

receiving, from the blockchain node associated with the insurance provider, a second event message directed to one or more service providers, wherein the second event message notifies a distribution of a shipping insurance premium associated with the shipping insurance order to one or more service providers;

sending a second feedback message to the blockchain node associated with the insurance provider indicating that the second event message is correctly received;

determining, by executing a second smart contract based on second one or more predetermined rules, that the distribution of the shipping insurance premium is legal;

storing the second event message on the blockchain based on the consensus algorithm; and

sending the second event message to the one or more service providers.

6. The computer-implemented method of claim 5, further comprising:

receiving shipping insurance premium distribution data from the blockchain node associated with the insurance provider in response to communicating the first event message to the insurance provider; and

storing the shipping insurance premium distribution data on the blockchain based on the consensus algorithm.

7. The computer-implemented method of claim 5, wherein the one or more service providers include one or more of the computing system, a shipping insurance service platform, or ~~an~~the insurance provider.

8. The computer-implemented method of claim 5, wherein the second one or more predetermined rules include a shipping insurance premium distribution plan agreed upon by the computing system, ~~the~~a shipping insurance service platform, and the ~~shipping~~ insurance provider.

9. The computer-implemented method of any previous claim, wherein the first one or more predetermined rules include one or more of a coverage limit of a declared value of the purchase order, items covered by the shipping insurance, or an insurance limit of the purchase order, and wherein the shipping insurance order is valid when the purchase order satisfies the first one or more predetermined rules.

10. The computer-implemented method of ~~any previous~~ claim 1, wherein the shipping insurance order data indicates one or more of items insured, an insurance premium, a declared value of the purchase order, or an insurance included for the purchase order.

11. The computer-implemented method of any previous claim, wherein the consensus algorithm is one of proof of work (PoW), proof of stake (PoS), or practical Byzantine fault tolerance (PBFT).

12. A system for managing blockchain-based event messages, comprising:

one or more processors; and

one or more computer-readable memories coupled to the one or more processors and having instructions stored thereon that are executable by the one or more processors to perform the method of any of claims 1 to 11.

13. An apparatus for managing blockchain-based event messages, the apparatus comprising a plurality of modules for performing the method of any of claims 1 to 11.