

CLAIMS

What is claimed is:

1. A blockchain-based data processing method, wherein a blockchain comprises a node device of a service acceptance platform and node devices of service data processing entities, and the method comprises:

receiving, by the node device of the service acceptance platform, service processing application data of a target user;

generating, based on the service processing application data, a first shared service processing result and a first private service processing result with respect to a target service data processing entity, and performing data modeling processing on the first private service processing result to obtain a modeled first private service processing result by converting the first private processing result to a uniform data format, wherein the first shared service processing result comprises at least a data digest of the first private service processing result;

sending a first transaction to the blockchain, the first transaction comprising the first shared service processing result, for the first transaction to be recorded in a distributed database of the blockchain after consensus verification by the blockchain; and

sending the modeled first private service processing result to a node device of the target service data processing entity through an off-chain channel that is external to the blockchain, for-
wherein the node device of the target service data processing entity receives the modeled first private service processing result through the off-chain channel to generate a second service processing result according to preset service processing steps, wherein the service processing steps comprise verifying the modeled first private service processing result based at least on the first shared service processing result, and generating the second service processing result based at least on the modeled first private service processing result obtained through the off-chain channel and the first shared service processing result obtained from the distributed database after the verification succeeds.

2. The method according to claim 1, further comprising:

obtaining, from the distributed database of the blockchain, a second transaction sent by the node device of the target service data processing entity, wherein the second transaction comprises the second service processing result of the target user; and

sending the second service processing result to the target user.

~~3. The method according to claim 1 or 2, wherein the first private service processing result is a data modeled first private service processing result.~~

~~43.~~ The method according to claim 1, wherein the node device of the service acceptance platform is a node device of an insurance application acceptance platform, the node devices of the service data processing entities are node devices of insurance application review agencies, and the service processing application data of the target user is insurance application data of the target user;

the first private service processing result is insurance policy application data with respect to a target insurance application review agency, and the first shared service processing result is a hash digest of the insurance policy application data; and

the second service processing result is an insurance application result of the target user obtained by a node device of the target insurance application review agency through processing.

~~54.~~ The method according to claim 1, wherein the node device of the service acceptance platform is a node device of a claim settlement acceptance platform, the node devices of the service data processing entities are node devices of claim settlement review agencies, and the service processing application data of the target user is claim settlement application data of the target user;

the first private service processing result comprises claim settlement application data with respect to a target claim settlement review agency, and the first shared service processing result comprises a hash digest of the claim settlement application data; and

the second service processing result comprises a compensation result for the target user obtained by a node device of the target claim settlement review agency through processing.

~~65.~~ The method according to claim 3 or 4 ~~or 5~~, wherein the blockchain is a consortium blockchain, and the node device of the service acceptance platform and the node devices of the service data processing entities are consortium member node devices.

~~76.~~ A blockchain-based data processing method, wherein a blockchain comprises a node device of a service acceptance platform and node devices of service data processing entities, and the method comprises:

receiving, by a node device of a target service data processing entity, a modeled first private service processing result sent by the node device of the service acceptance platform through an off-chain channel that is external to the blockchain, wherein the modeled first private service processing result is generated by the node device of the service acceptance platform based on received service processing application data of a target user, performing data modeling processing on a first private service processing result with respect to a target service data processing entity and converting the first private processing result to a uniform data format;

obtaining, from a distributed database of the blockchain, a first transaction sent by the node device of the service acceptance platform, wherein the first transaction comprises a first shared service processing result, the first shared service processing result is generated by the node device of the service acceptance platform based on the received service processing application data of the target user, and the first shared service processing result comprises at least a data digest of the first private service processing result;

generating a second service processing result according to preset service processing steps, wherein the service processing steps comprise verifying the modeled first private service processing result based at least on the first shared service processing result, and generating the second service processing result based at least on the modeled first private service processing result obtained through the off-chain channel and the first shared service processing result obtained from the distributed database after the verification succeeds; and

sending a second transaction to the blockchain, the second transaction comprising the second service processing result, for the second transaction to be recorded in the distributed database of the blockchain after consensus verification by the blockchain.

~~8. The method according to claim 7, wherein the first private service processing result is a data modeled first private service processing result.~~

~~97.~~ The method according to claim ~~7 or 86~~, wherein the node device of the service acceptance platform is a node device of an insurance application acceptance platform, the node

devices of the service data processing entities are node devices of insurance application review agencies, and the service processing application data of the target user is insurance application data of the target user;

the first private service processing result is insurance policy application data with respect to a target insurance application review agency, and the first shared service processing result is a hash digest of the insurance policy application data; and

the second service processing result is an insurance application result of the target user obtained by a node device of the target insurance application review agency through processing.

~~108~~. The method according to claim ~~7 or 8~~6, wherein the node device of the service acceptance platform is a node device of a claim settlement acceptance platform, the node devices of the service data processing entities are node devices of claim settlement review agencies, and the service processing application data of the target user is claim settlement application data of the target user;

the first private service processing result comprises claim settlement application data with respect to a target claim settlement review agency, and the first shared service processing result comprises a hash digest of the claim settlement application data; and

the second service processing result comprises a compensation result for the target user obtained by a node device of the target claim settlement review agency through processing.

~~119~~. A blockchain-based data processing apparatus, wherein a blockchain comprises a node device of a service acceptance platform and node devices of service data processing entities, and the apparatus comprises:

a receiving unit, configured to receive service processing application data of a target user;

a data processing unit, configured to generate, based on the service processing application data, a first shared service processing result and a first private service processing result with respect to a target service data processing entity, and performing data modeling processing on the first private service processing result to obtain a modeled first private service processing result by converting the first private processing result to a uniform data format, wherein the first shared service processing result comprises at least a data digest of the first private service processing result; and

a sending unit, configured to send a first transaction to the blockchain, wherein the first transaction comprises the first shared service processing result, for the first transaction to be recorded in a distributed database of the blockchain after consensus verification by the blockchain, and

the sending unit is further configured to send the modeled first private service processing result to a node device of the target service data processing entity through an off-chain channel that is external to the blockchain, for wherein the node device of the target service data processing entity receives the modeled first private service processing result through the off-chain channel to generate a second service processing result according to preset service processing steps, wherein the service processing steps comprise verifying the modeled first private service processing result based at least on the modeled first shared service processing result, and generating the second service processing result based at least on the modeled first private service processing result obtained through the off-chain channel and the first shared service processing result obtained from the distributed database after the verification succeeds.

~~1210.~~ The apparatus according to claim ~~119~~, further comprising:

an obtaining unit, configured to obtain a second transaction sent by the node device of the target service data processing entity from the distributed database of the blockchain, wherein the second transaction comprises the second service processing result of the target user, and

the sending unit is further configured to send the second service processing result to the target user.

~~13. The apparatus according to claim 11 or 12, wherein the first private service processing result is a data modeled first private service processing result.~~

~~1411.~~ The apparatus according to claim ~~119~~, wherein the node device of the service acceptance platform is a node device of an insurance application acceptance platform, the node devices of the service data processing entities are node devices of insurance application review agencies, and the service processing application data of the target user is insurance application data of the target user;

the first private service processing result is insurance policy application data with respect to a target insurance application review agency, and the first shared service processing result is a hash digest of the insurance policy application data; and

the second service processing result is an insurance application result of the target user obtained by a node device of the target insurance application review agency through processing.

1512. The apparatus according to claim **149**, wherein the node device of the service acceptance platform is a node device of a claim settlement acceptance platform, the node devices of the service data processing entities are node devices of claim settlement review agencies, and the service processing application data of the target user is claim settlement application data of the target user;

the first private service processing result comprises claim settlement application data with respect to a target claim settlement review agency, and the first shared service processing result comprises a hash digest of the claim settlement application data; and

the second service processing result comprises a compensation result for the target user obtained by a node device of the target claim settlement review agency through processing.

1613. The apparatus according to claim **1411** or **1512**, wherein the blockchain is a consortium blockchain, and the node device of the service acceptance platform and the node devices of the service data processing entities are consortium member node devices.

1714. A blockchain-based data processing apparatus, wherein a blockchain comprises a node device of a service acceptance platform and node devices of service data processing entities, and the apparatus comprises:

a receiving unit, configured to receive a **modeled** first private service processing result sent by the node device of the service acceptance platform through an off-chain channel that is external to the blockchain, wherein the **modeled** first private service processing result is generated by the node device of the service acceptance platform based on received service processing application data of a target user, performing data modeling processing on a first private service processing result with respect to a target service data processing entity and converting the first private processing result to a uniform data format;

an obtaining unit, configured to obtain, from a distributed database of the blockchain, a first transaction sent by the node device of the service acceptance platform, wherein the first transaction comprises a first shared service processing result, the first shared service processing result is generated by the node device of the service acceptance platform based on the received service processing application data of the target user, and the first shared service processing result comprises at least a data digest of the first private service processing result;

a data processing unit, configured to generate a second service processing result according to preset service processing steps, wherein the service processing steps comprise verifying the modeled first private service processing result based at least on the first shared service processing result, and generating the second service processing result based at least on the modeled first private service processing result obtained through the off-chain channel and the first shared service processing result obtained from the distributed database after the verification succeeds; and

a sending unit, configured to send a second transaction to the blockchain, wherein the second transaction comprises the second service processing result, for the second transaction to be recorded in the distributed database of the blockchain after consensus verification by the blockchain.

~~18. The apparatus according to claim 17, wherein the first private service processing result is a data modeled first private service processing result.~~

~~19~~¹⁵. The apparatus according to claim ~~17 or 18~~¹⁴, wherein the node device of the service acceptance platform is a node device of an insurance application acceptance platform, the node devices of the service data processing entities are node devices of insurance application review agencies, and the service processing application data of the target user is insurance application data of the target user;

the first private service processing result is insurance policy application data with respect to a target insurance application review agency, and the first shared service processing result is a hash digest of the insurance policy application data; and

the second service processing result is an insurance application result of the target user obtained by a node device of the target insurance application review agency through processing.

2016. The apparatus according to claim ~~17~~ or ~~18~~14, wherein the node device of the service acceptance platform is a node device of a claim settlement acceptance platform, the node devices of the service data processing entities are node devices of claim settlement review agencies, and the service processing application data of the target user is claim settlement application data of the target user;

the first private service processing result comprises claim settlement application data with respect to a target claim settlement review agency, and the first shared service processing result comprises a hash digest of the claim settlement application data; and

the second service processing result comprises a compensation result for the target user obtained by a node device of the target claim settlement review agency through processing.

2117. A computer device, comprising a memory and a processor, wherein the memory stores a computer program executable by the processor, and the processor performs the method according to any one of claims 1 to ~~6~~5 when executing the computer program.

2218. A computer device, comprising a memory and a processor, wherein the memory stores a computer program executable by the processor, and the processor performs the method according to any one of claims ~~7~~6 to ~~10~~8 when executing the computer program.