CLAIMS

1. A method of providing bio-information data based on a plurality of blockchains, the method comprising:

storing, by a user blockchain node, user block data received from a plurality of user terminals of a plurality of users and including user information, a shared key, and a hash key for each user of the plurality of users;

storing, by an electronic contract blockchain node, contract block data received from a second user terminal of a second user and including contract information for a first user requesting the second user to generate bio-information data, the first user and the second user being included in the plurality of users;

storing, by a data transfer blockchain node, transfer block data received from the second user terminal of the second user and including storage information for at least one storage server that stores the bio-information data;

authenticating the first user based on the user blockchain node; and

delivering, when the first user is authenticated, the transfer block data from the data transfer blockchain node to a first user terminal of the first user.

2. The method of claim 1, wherein the contract block data comprises contract information of the first user, a hash key of the first user, a hash key of the second user, and a signature of the second user.

3. The method of claim 2, wherein the storing the contract block data comprises:

storing, by the electronic contract blockchain node, first contract information, wherein the first contract information is encrypted by the first user with a shared key of the second user from the user blockchain node; and

storing, by the electronic contract blockchain node, second contract information including the signature and a re-encrypted first contract information, wherein the re-encrypted first contract information is encrypted by the second user with a shared key of the first user.

4. The method of claim 1, wherein the transfer block data includes a hash key of the first user and a hash key of the second user received from the user blockchain node and also includes the storage information encrypted with a shared key of the first user.

5. The method of claim 1, wherein the storage information includes at least one of an identifier of the storage server, a location where the bio-information data is stored in a storage medium, a verification key, a file size, or file partitioning information.

6. The method of claim 1,

wherein the storage server includes a plurality of storage servers, and

wherein the bio-information data is stored in a data storage blockchain in which the plurality of storage servers operate as nodes, in a block data form including information regarding a file in which a hash key of the first user, a hash key of the second user, and the bio-information data are stored.

7. The method of claim 1, further comprising enabling a metadata blockchain node to store metadata of the bio-information data.

8. The method of claim 1, further comprising:

storing, by the electronic contract blockchain node, new contract block data including new contract information between the first user and a third user; and

storing, the data transfer blockchain node, new transfer block data including new storage information encrypted with a hash key of the third user and a public key of the third user.

9. The method of claim 1, further comprising:

storing, by the electronic contract blockchain node, new contract block data including new contract information between the first user and the second user,

wherein the new contract information includes at least one of deletion of the contract block data, deletion of the transfer block data, and deletion of the bio-information data.

10. The method of claim 1, further comprising:

storing, by the at least one storage server, at least one of block data from a block data group including the user block data, the contract block data, or the transfer block data; and

transferring, by the at least one storage server, the stored block data to an entity to check whether the stored block data is forged.

11. A method of storing bio-information data based on a plurality of blockchains, the method comprising:

storing, by a user blockchain node, user block data received from a plurality of user terminals of a plurality of users and including user information, a shared key, and a hash key for each user of the plurality of users;

storing, by a storage server, bio-information data that is requested by a first user and generated by and received from a second user terminal of a second user, the first user and the second user being included in the plurality of users; and

storing, by a data transfer blockchain node, transfer block data received from the second user terminal of the second user and including storage information of the storage server that stores the bio-information data,

wherein the first user is authenticated based on the user blockchain node, and

wherein, when the first user is authenticated, the transfer block data is delivered from the data transfer blockchain node to the first user.

12. The method of claim 11, wherein the transfer block data includes a hash key of the first user and a hash key of the second user received from the user blockchain node and also includes the storage information encrypted with a shared key of the first user.

13. The method of claim 11, wherein the storage information includes at least one of an identifier of the storage server, a location where the bio-information data is stored in a storage medium, a verification key, a file size, or file partitioning information.

14. The method of claim 11, wherein the storage server includes a plurality of servers, and the plurality of servers constitute a blockchain that stores the bio-information data.

15. A system for transferring bio-information data based on a plurality of blockchains, the system comprising:

a user blockchain node configured to store user block data received from a plurality of user terminals of a plurality of users and including user information, a shared key, and a hash key for each user of the plurality of users;

an electronic contract blockchain node configured to store contract block data received from a second user terminal of a second user and including contract information for a first user requesting the second user to generate bio-information data, the first user and the second user being included in the plurality of users;

a storage server configured to store the bio-information data generated by and received from the second user; and

a data transfer blockchain node configured to store transfer block data received from the second user terminal of the second user and including storage information for the storage server,

wherein the first user is authenticated based on the user blockchain node,

wherein, when the first user is authenticated, the transfer block data is delivered from the data transfer blockchain node to the first user, and

wherein the user block data, the contract block data, and the transfer block data are generated by at least one of the first user or the second user.

16. The system of claim 15, wherein the contract block data comprises contract information of the first user, a hash key of the first user, a hash key of the second user, and a signature of the second user.

17. The system of claim 15, wherein the transfer block data includes a hash key of the first user and a hash key of the second user received from the user blockchain node and also includes the storage information encrypted with a shared key of the first user.

18. The system of claim 15, wherein the storage information includes at least one of an identifier of the storage server, a location where the bio-information data is stored in a storage medium, a verification key, a file size, or file partitioning information.

19. The system of claim 15, wherein the storage server includes a plurality of servers, and the plurality of servers constitute a blockchain that stores the bio-information data.