

CLAIMS

1. A system for facilitating a record of information of an organism comprising:
 - a distributed ledger storing the information associated with an identifier of the organism; wherein the identifier contains an encrypted data;
 - an input module operable to receive an input of the identifier attached to the organism; and
 - a processor operable to analyse the identifier and display at least a part of the information associated with the organism,

wherein the processor is further operable to generate additional information upon occurrence of an event for the organism, and record the additional information in the distributed ledger;-

wherein the identifier further contains a public key of a digital wallet associated with the identifier of the organism, and the processor is operable to record the additional information in the distributed ledger using the digital wallet;

wherein the processor is operable to verify an ownership of the organism using a private key stored in the digital wallet;

wherein the identifier is operable to be encrypted with the private key and to be decrypted by the public key, wherein the public key is distributed with the digital wallet.
2. The system according to claim 1, wherein a plurality of computing devices are implemented as a plurality of nodes on the distributed ledger, and the input module and the processor are implemented in at least one of the plurality of computing devices.
3. The system according to claim 2, wherein the identifier further contains ~~at least one of encoded data and encrypted data.~~

4. The system according to claim 3, wherein once the input of identifier is received, the processor is operable to decode the identifier containing the encoded data without connecting to a communication network, and display the decoded data.

5. The system according to claim 14, wherein the processor is operable to connect to the communication network to decrypt the encrypted data.

6. The system according to claim 1, wherein the distributed ledger comprises a plurality of blocks, and each block of the plurality of blocks stores information associated with each identifier allocated to each organism.

7. The system according to claim 6, wherein the processor is operable to record the additional information in a set of blocks among the plurality of blocks, and each block of the set of blocks stores the information associated with the identifier of the organism.

8. The system according to claim 1, wherein the plurality of computing devices include at least one electronic device operable to monitor the event for the organism and generate the additional information relating to the event.

9. The system according to claim 8, wherein the event comprises at least one of the following: transaction and environmental factor.

10. The system according to claim 9, wherein the electronic device comprises at least one of the following: a sensor, an actuator, a monitor and a camera.

11. The system according to claim 10, wherein the electronic device is deployed to monitor the environmental factor of an area where the organism is farmed.

12. The system according to claim 1, wherein the identifier is in a form of at least one of the following: a QR code, barcode, data matrix and maxicode.

13. The system according to claim ~~12~~1, wherein the identifier is marked on a body of the organism or is attached on the organism using a tag.

~~14. The system according to claim 12, wherein the identifier further contains a public key of a digital wallet associated with the identifier of the organism, and the processor is operable to record the additional information in the distributed ledger using the digital wallet.~~

~~15. The system according to claim 14, wherein the processor is operable to verify an ownership of the organism using a private key stored in the digital wallet.~~

~~16~~14. The system according to claim ~~14~~1, wherein once the organism is consumed, the processor is operable to close the digital wallet.

~~17~~15. The system according to claim 1, wherein the information comprises at least one of genomic information, environmental information and transaction status information.

~~18~~16. A method for facilitating a record of information of an organism comprising:

storing, on a distributed ledger, the information associated with an identifier of the organism; wherein the identifier contains an encrypted data;

receiving, by an input module, an input of the identifier attached to the organism;

analysing, by a processor, the identifier;

displaying, by the processor, at least a part of the information associated with the organism;

generating, by the processor, additional information upon occurrence of an event for the organism; and

recording, by the processor, the additional information in the distributed ledger;

wherein the identifier further contains a public key of a digital wallet associated with the identifier of the organism, and the processor is operable to record the additional information in the distributed ledger using the digital wallet;

wherein the processor is operable to verify an ownership of the organism using a private key stored in the digital wallet;

wherein the identifier is operable to be encrypted with the private key and to be decrypted by the public key, wherein the public key is distributed with the digital wallet.

~~19~~17. The method according to claim ~~18~~16, wherein a plurality of computing devices are implemented as a plurality of nodes on the distributed ledger, and the input module and the processor are integrated in at least one of the plurality of computing devices.

~~20~~18. The method according to claim ~~19~~17, wherein the identifier contains at least one of encoded data and encrypted data.

~~21~~19. The method according to claim ~~20~~18, wherein once the input of the identifier is received, the processor is operable to decode the identifier containing the encoded data without connecting to a communication network, and display the decoded data.

~~22~~20. The method according to claim ~~21~~19, wherein the processor is operable to connect to the communication network to decrypt the encrypted data.

~~23~~21. The method according to claim ~~18~~16, wherein the distributed ledger comprises a plurality of blocks, and each block of the plurality of blocks stores information associated with each identifier allocated to each organism.

2422. The method according to claim ~~23~~21, wherein the processor is operable to record the additional information in a set of blocks among the plurality of blocks, and

each block of the set of blocks stores the information associated with the identifier of the organism.

~~25~~23. The method according to claim ~~18~~16, wherein the plurality of computing devices include at least one electronic device operable to monitor the event for the organism and generate the additional information relating to the event.

~~26~~24. The method according to claim ~~25~~23, wherein the event comprises at least one of the following: transaction and environmental factor.

~~27~~25. The method according to claim ~~26~~24, wherein the electronic device comprises at least one of the following: a sensor, an actuator, a monitor and a camera.

~~28~~26. The method according to claim ~~27~~25, wherein the electronic device is deployed to monitor the environmental factor of an area where the organism is farmed.

~~29~~27. The method according to claim ~~18~~16, wherein the identifier is in a form of at least one of the following: a QR code, barcode, data matrix and maxicode.

~~30~~28. The method according to claim ~~29~~27, wherein the identifier is marked on a body of the organism or is attached on the organism using a tag.

~~31. The method according to claim 29, wherein the identifier further contains a public key of a digital wallet associated with the identifier of the organism, and the processor is operable to record the additional information in the distributed ledger using the digital wallet.~~

~~32. The method according to claim 31, wherein the processor is operable to verify an ownership of the organism using a private key stored in the digital wallet.~~

~~33~~29. The method according to claim ~~31~~16, wherein once the organism is consumed, the processor is operable to close the digital wallet.

~~34~~30. The method according to claim ~~18~~16, wherein the information comprises at least one of genomic information, environmental information and transaction status information.