

**Claims**

1. A computer-implemented method for allocating tokens to multi-order quantities of goods, comprising:
  - generating a first token for association with a first physical quantity of a good (**first quantity**), wherein:
    - the first token is associated with a first digital token; and
    - the first digital token is associated with one or more product properties, at least one said product property being the first quantity;
  - generating two or more second tokens for association with second physical quantities of the good (**second quantities**), the second quantities being portions of the first quantity, wherein:
    - each second token is associated with a second digital token;
    - each second digital token is associated with one or more product properties, at least one said product property in each case being the respective second physical quantity of the good,wherein a sum of all the second quantities associated with the second tokens does not exceed the first quantity.
2. The computer-implemented method of claim 1, wherein the second quantities:
  - are equal quantities;
  - are unequal quantities; or
  - comprise a plurality of different quantities.
3. The computer-implemented method of claims 1 or 2, wherein each of said first token and second tokens is unique.
4. The computer-implemented method of claim 3, wherein each of said first digital token and second digital tokens is unique.
5. The computer-implemented method of any one of claims 1 to 4, wherein at least one said product property associated with each second digital token is the first digital token.
6. A computer-implemented method for transferring a physical asset, comprising:
  - generating a public indicium and a private indicium;

applying the public indicium to a visible location associated with the physical asset;

applying the private indicium to a further location associated with the physical asset, the further location being a tamper-evident location;

generating a digital token associated with the public indicium and private indicium, the digital token being associated with one or more product properties, at least one said product property being current owner information of a transferor; the method further comprising:

receiving a request for transferral of the physical asset, the request comprising the public indicium and owner information of a transferee;

verifying the public indicium; and

updating the current owner information with the owner information of the transferee.

7. The computer-implemented method of claim 6, wherein verifying the public indicium comprises verifying the public indicium using the private indicium.
8. The computer-implemented method of claim 6 or 7, further comprising uploading the digital token to a multi-node network, and wherein:
  - receiving the request for transferral further comprises receiving a hash from the transferor;
  - verifying the public indicium comprises using the hash to verify the public indicium; and
  - updating the current owner information with the ownership identifier comprises updating the current owner information with the hash and the ownership identifier.
9. The computer-implemented method of claim 8, wherein using the hash to verify the public indicium comprises using the hash to verify the transferor is a current owner of the physical asset.
10. The computer-implemented method of claim 8 or 9, wherein the hash comprises a hash of at least the current owner information and the digital token.
11. The computer-implemented method of claim 6 or 7, further comprising uploading the digital token to a multi-node network, and wherein:

receiving the request for transferral comprises receiving the digital token and the current owner information;

verifying the public indicium comprises verifying, using a ledger stored on a node in the multi-node network, the public indicium is associated with the digital token and the current owner information; and

updating the current owner information with the ownership identifier comprises updating the ledger with the owner information of the transferee.

12. The computer-implemented method of any one of claims 8 to 11, being implemented on a block-chain.

13. The computer-implemented method of any one of claims 6 to 12, wherein the public indicium and digital token are allocated according to the method of any one of claims 1 to 5, wherein:

the first token comprises at least the public indicium;

the first quantity comprises the physical asset; and

the digital token comprises the first digital token.

14. The computer-implemented method of claim 13, wherein the first token comprises both the public indicium and private indicium.

15. The computer-implemented method of any one of claims 6 to 12, wherein generating a public indicium and private indicium comprises generating pairs of indicia, each pair comprising a said public indicium and a said private indicium, each pair being associated with a corresponding digital token, wherein the pairs of indicia and digital tokens are allocated according to the method of any one of claims 1 to 5, and wherein:

each second token comprises at least the public indicium of a respective pair of said pairs of indicia;

the second quantity associated with each second token comprises the respective physical asset; and

the digital token associated with said respective pair of indicia comprises the respective first digital token.

16. The computer-implemented method of claim 13, wherein each respective digital token comprises both the public indicium and private indicium.

17. The computer-implemented method of any one of claims 1 to 16, further comprising retiring the digital token upon determining an expiry date of the physical asset associated with the respective digital token has expired.
18. The computer-implemented method of any one of claims 6 to 16, further comprising retiring the digital token upon successful verification of the public indicium.
19. The computer-implemented method of any one of claims 1 to 5, 15 and 16, further comprising retiring all digital tokens that have not been verified (**unverified digital tokens**) for which the second quantity associated with the respective unverified digital token is greater than the first quantity minus the second quantities associated with all digital tokens that have been successfully verified.
20. A computer-implemented method for managing interactions with an asset, comprising:  
generating a physical token associated with a physical asset;  
generating a digital token associated with the physical token, the digital token being associated with product properties including:  
owner information of an owner of the physical asset; and  
a description of the physical asset;  
receiving a request for at least partial control of the physical asset (**requested control**), the request comprising a hash;  
verifying the hash using at least one of the digital token and owner information; and  
upon verification of the hash, transferring requested control to a transferee.
21. The computer-implemented method of claim 20, wherein the product properties comprise a plurality of controllable objects each associated with a usage flag having an active state and an inactive state, the requested control comprises a request for control of one or more of the controllable objects (**requested controllable objects**), the method further comprising:  
upon verification of the hash, allocating control to only those said requested controllable objects for which the usage flag is in the inactive state; or  
preventing verification of the hash if the requested controllable objects comprise at least one object for which the usage flag is active.

22. The computer-implemented method of claim 20 or 21, wherein receiving the request for at least partial control comprises receiving transferee information of the transferee, the method further comprising:
- storing transferee information of transferees permitted to have the requested control; and
  - preventing transferring of the requested control if the transferee does not match transferee information stored for the requested control.
23. The computer-implemented method of any one of claims 20 to 22, further comprising:
- receiving, upon completion of usage of requested control, a request to relinquish the requested control, the request comprising a relinquishment hash;
  - verifying the relinquishment hash using at least one of the digital token and transferee information of the transferee; and
  - upon verification of the relinquishment hash, relinquishing the requested control.
24. A system comprising:
- memory; and
  - at least one processor, the memory storing instructions that, when executed by the at least one processor, cause the at least one processor to perform the computer-implemented method of any one of claims 1 to 23.
25. A non-transitory computer-readable medium having instructions stored thereon that, when executed by a system comprising a processor, cause the system to performed the computer-implemented method of any one of claims 1 to 23.