

CLAIMS

What is claimed is:

1. A network node comprising:
 - at least one processor;
 - at least one memory communicatively coupled to the at least one processor;
 - at least one network interface communicatively coupled to the at least one processor;
 - wherein the network node is configured to be within a plurality of network nodes communicatively coupled in a peer-to-peer network of network nodes implementing a distributed ledger;
 - wherein the network node is communicatively coupled to at least one remotely located computing device through the at least one network interface;
 - wherein the at least one processor is configured to:
 - deploy a child smart contract, which is a subsequent version of a parent smart contract, on the distributed ledger; and
 - set an upgraded address field in the parent smart contract to point to an address of the child smart contract;
 - wherein the parent smart contract remains deployed after the child smart contract is deployed.
2. The network node of claim 1, wherein the at least one processor is further configured to initiate an event indicating that the upgraded address field has been set.
3. The network node of claim 1, wherein the at least one processor is further configured to:
 - set a parent address field in the child smart contract to point to an address of the parent smart contract; and
 - initiate an event indicating that the upgraded address field has been set.
4. The network node of claim 1, wherein the at least one processor is further configured to set a token supply parameter in the child smart contract to equal a token supply parameter in the parent smart contract.

5. The network node of claim 1, wherein the at least one processor is further configured to migrate all old tokens in the parent smart contract from a token holder address to an address of the child smart contract.
6. The network node of claim 5, wherein the at least one processor is further configured to issue at least one new token in the child smart contract to the token holder address.
7. The network node of claim 6, wherein the at least one processor is further configured to:
 - determine if there are old tokens in at least one other token holder address that need to be migrated;
 - issue new tokens in the child smart contract to an intermediate address;
 - select a new token holder address from the at least one other token holder address;
 - migrate old tokens in the parent smart contract from the new token holder address to the address of the child smart contract; and
 - transfer at least one new token in the child smart contract from the intermediate address to the new token holder address.
8. The network node of claim 7, wherein the at least one processor is further configured to migrate all old tokens and transfer at least one new token based on determining that old tokens in the parent smart contract are restricted from trading following deployment of the child smart contract.
9. The network node of claim 7, wherein the at least one processor is further configured to determine that old tokens in the parent smart contract are restricted from trading based on whether the upgraded address field in the parent smart contract is set or unset.
10. The network node of claim 9, wherein the old tokens and new tokens are cryptographic tokens that each represents an external, tradeable asset.

11. The network node of claim 1, wherein the parent smart contract and the child smart contract are implemented using respective originating smart contracts.
12. A computerized method for upgrading a parent smart contract, wherein the computerized method is performed by a network node configured to be included within a plurality of network nodes in a peer-to-peer network of network nodes implementing a distributed ledger, wherein the network node is configured to be communicatively coupled to other network nodes in the peer-to-peer network, the computerized method comprising:
 - deploying a child smart contract, which is a subsequent version of the parent smart contract, on the distributed ledger; and
 - setting an upgraded address field in the parent smart contract to point to an address of the child smart contract;wherein the parent smart contract remains deployed after the child smart contract is deployed.
13. The computerized method of claim 12, further comprising initiating an event indicating that the upgraded address field has been set.
14. The computerized method of claim 12, further comprising:
 - setting a parent address field in the child smart contract to point to an address of the parent smart contract; and
 - initiating an event indicating that the upgraded address field has been set.
15. The computerized method of claim 12, further comprising setting a token supply parameter in the child smart contract to equal a token supply parameter in the parent smart contract.
16. The computerized method of claim 12, further comprising migrating all old tokens in the parent smart contract from a token holder address to an address of the child smart contract.

17. The computerized method of claim 16, further comprising issuing at least one new token in the child smart contract to the token holder address.
18. The computerized method of claim 17, further comprising:
 - determining if there are old tokens in at least one other token holder address that need to be migrated;
 - issuing new tokens in the child smart contract to an intermediate address;
 - selecting a new token holder address from the at least one other token holder address;
 - migrating old tokens in the parent smart contract from the new token holder address to the address of the child smart contract; and
 - transfer at least one new token in the child smart contract from the intermediate address to the new token holder address.
19. The computerized method of claim 18, further comprising migrating all old tokens and transfer at least one new token based on determining that old tokens in the parent smart contract are restricted from trading following deployment of the child smart contract.
20. The computerized method of claim 18, further comprising determining that old tokens in the parent smart contract are restricted from trading based on whether the upgraded address field in the parent smart contract is set or unset.
21. The computerized method of claim 20, wherein the old tokens and new tokens are cryptographic tokens that each represents an external, tradeable asset.
22. The computerized method of claim 12, wherein the parent smart contract and the child smart contract are implemented using respective originating smart contracts.
23. A network node comprising:
 - at least one processor;
 - at least one memory communicatively coupled to the at least one processor;
 - at least one network interface communicatively coupled to the at least one processor;

wherein the network node is configured to be within a plurality of network nodes
communicatively coupled in a peer-to-peer network of network nodes
implementing a distributed ledger;
wherein the network node is configured to be communicatively coupled to at least one
remotely located computing device through the at least one network interface;
wherein the at least one processor is configured to:
deploy a child smart contract, which is a subsequent version of a parent smart
contract, on the distributed ledger;
set an upgraded address field in the parent smart contract to point to an address of
the child smart contract;
issue new tokens in the child smart contract to an intermediate address;
migrate all old tokens in the parent smart contract from a token holder address to
an address of the child smart contract; and
transfer at least one new token in the child smart contract from the intermediate
address to the token holder address;
wherein the parent smart contract remains deployed after the child smart contract
is deployed; and
wherein the old tokens and new tokens are cryptographic tokens that each
represents an external, tradeable asset.

24. The network node of claim 23, wherein the at least one processor is further configured to set a token supply parameter in the child smart contract to equal a token supply parameter in the parent smart contract.

25. The network node of claim 23, wherein the at least one processor is further configured to migrate all old tokens and transfer at least one new token based on determining that old tokens in the parent smart contract are restricted from trading following deployment of the child smart contract.

26. The network node of claim 23, wherein the at least one processor is further configured to determine that old tokens in the parent smart contract are restricted from trading based on whether the upgraded address field in the parent smart contract is set or unset.