

WHAT IS CLAIMED IS:

1. A method for generation of blocks for a partitioned blockchain, comprising:

5 storing, in a memory of a processing server, at least one block comprising a partitioned blockchain, wherein the at least one block includes a most recently added block, the most recently added block including at least a header and one or more transaction entries;

receiving, by a receiving device of the processing server, at least one transaction data entry for each of a plurality of subnets;

10 generating, by a hashing module of the processing server, a hash value via application of one or more hashing algorithms to at least the header included in the most recently added block;

generating, by a generation module of the processing server, a new block header, wherein the new block header includes at least the generated hash value, a
15 timestamp, and a sequence of pairs including a pair for each of the plurality of subnets, each pair including at least a subnet identifier associated with the respective subnet and a merkle root of each of the at least one transaction data entries received for the respective subnet;

generating, by the generation module of the processing server, a new block,
20 wherein the new block includes at least the generated new block header and the at least one transaction data entry for each of the plurality of subnets; and

electronically transmitting, by a transmitting device of the processing server, at least the generated new block to a plurality of nodes associated with the partitioned blockchain.

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2. The method of claim 1, further comprising:

generating, by the hashing module of the processing server, the merkle root for each of the plurality of subnets via application of one or more hashing algorithms to each of the at least one transaction data entries received for the respective subnet.

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3. The method of claim 1, wherein receiving the at least one transaction data entry for each of the plurality of subnets further includes receiving the merkle root for each of the plurality of subnets.

4. The method of claim 1, further comprising:
generating, by the generation module of the processing server, an updated
partitioned blockchain by adding the generated new block to the partitioned
blockchain, wherein
- 5 transmitting the generated new block includes transmitted the generated
updated partitioned blockchain including the generated new block.
5. The method of claim 1, wherein each of the at least one transaction
data entries for each of the plurality of subnets includes at least the subnet identifier
10 associated with the respective subnet.
6. The method of claim 1, further comprising:
storing, in a subnet database of the processing server, a plurality of subnet
profiles, wherein each subnet profile includes a structured data set related to a subnet
15 including at least a subnet identifier and one or more semantics.
7. The method of claim 6, wherein each of the at least one transaction
data entries received for a subnet are formatted based on the one or more semantics
included in a subnet profile that includes the associated subnet identifier.
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8. The method of claim 6, wherein the merkle root associated with a
subnet is generated using one or more hashing algorithms based on the one or more
semantics included in a subnet profile that includes the associated subnet identifier.
9. The method of claim 1, wherein the generated new block header
25 further includes a version number, a difficulty target, and a nonce.
10. The method of claim 9, wherein the nonce is received from one of the
plurality of nodes associated with the partitioned blockchain.
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11. A system for generation of blocks for a partitioned blockchain,
comprising:
a memory of a processing server configured to store at least one block
comprising a partitioned blockchain, wherein the at least one block includes a most

recently added block, the most recently added block including at least a header and one or more transaction entries;

a receiving device of the processing server configured to receive at least one transaction data entry for each of a plurality of subnets;

5 a hashing module of the processing server configured to generate a hash value via application of one or more hashing algorithms to at least the header included in the most recently added block;

a generation module of the processing server configured to

10 generate a new block header, wherein the new block header includes at least the generated hash value, a timestamp, and a sequence of pairs including a pair for each of the plurality of subnets, each pair including at least a subnet identifier associated with the respective subnet and a merkle root of each of the at least one transaction data entries received for the respective subnet, and

15 generate a new block, wherein the new block includes at least the generated new block header and the at least one transaction data entry for each of the plurality of subnets; and

a transmitting device of the processing server configured to electronically transmit at least the generated new block to a plurality of nodes associated with the partitioned blockchain.

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12. The system of claim 11, wherein the hashing module of the processing server is further configured to generate the merkle root for each of the plurality of subnets via application of one or more hashing algorithms to each of the at least one transaction data entries received for the respective subnet.

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13. The system of claim 11, wherein receiving the at least one transaction data entry for each of the plurality of subnets further includes receiving the merkle root for each of the plurality of subnets.

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14. The system of claim 11, wherein the generation module of the processing server is further configured to generate an updated partitioned blockchain by adding the generated new block to the partitioned blockchain, and

transmitting the generated new block includes transmitted the generated updated partitioned blockchain including the generated new block.

15 15. The system of claim 11, wherein each of the at least one transaction data entries for each of the plurality of subnets includes at least the subnet identifier associated with the respective subnet.

10 16. The system of claim 11, further comprising:
a subnet database of the processing server configured to store a plurality of subnet profiles, wherein each subnet profile includes a structured data set related to a subnet including at least a subnet identifier and one or more semantics.

15 17. The system of claim 16, wherein each of the at least one transaction data entries received for a subnet are formatted based on the one or more semantics included in a subnet profile that includes the associated subnet identifier.

20 18. The system of claim 16, wherein the merkle root associated with a subnet is generated using one or more hashing algorithms based on the one or more semantics included in a subnet profile that includes the associated subnet identifier.

19. The system of claim 11, wherein the generated new block header further includes a version number, a difficulty target, and a nonce.

25 20. The system of claim 19, wherein the nonce is received from one of the plurality of nodes associated with the partitioned blockchain.