

What is claimed is:

1. A method for operating transaction-enabling system comprising a controller, the method comprising the steps of:
 - accessing, using the controller, a distributed ledger comprising an instruction set, wherein the instruction set comprises a field programmable gate array (FPGA) instruction set and is configured to command a downstream production tool;
 - tokenizing, using the controller, the instruction set to generate a tokenized instruction set;
 - interpreting, using the controller, an instruction set access request; and in response to the instruction set access request:
 - providing, using the controller, a provable access to the FPGA instruction set,, wherein the provable access to the FPGA instruction set is provided by the tokenized instruction set; and
 - providing, using the controller, commands to the downstream production tool;
2. The method of claim 1, wherein the downstream production tool is a tool for a coating process, and the instruction set is configured to command the tool for the coating process.
3. The method of claim 1, wherein the downstream production tool is a tool for a 3D printing process and the instruction set is configured to command the tool for the 3D printing process .
4. The method of claim 2 or claim 3, further comprising recording a transaction on the distributed ledger in response to the provided commands to the production tool.
5. The method of claim 1, wherein the downstream production tool is a tool for a semiconductor fabrication process and the instruction set is configured to command the tool for the semiconductor fabrication process. .
6. The method of claim 1, further comprising the steps of interpreting, using the controller, an execution operation of the FPGA instruction set, and recording, using the controller, a transaction on the distributed ledger in response to the execution operation.

7. The method of claim 1, wherein the downstream production tool is a tool for a food preparation process and the instruction set is configured to command the tool for the food preparation process.
8. The method of claim 1, wherein the downstream production tool is a tool for a polymer production process and the instruction set is configured to command the tool for the polymer production process.
9. The method of claim 1, wherein the downstream production tool is a tool for a chemical synthesis process and the instruction set is configured to command the tool for the chemical synthesis process.
10. The method of claim 1, wherein the downstream production tool is a tool for a biological production process and the instruction set is configured to command the tool for the biological production process. .
11. The method of claim 1, wherein the downstream production tool is a tool for a crystal fabrication process and the instruction set is configured to command the tool for the crystal fabrication process. .
12. The method of claim 1, further comprising the steps of:
interpreting, using the controller, an execution operation of the instruction set, and
recording, using the controller, a transaction on the distributed ledger in response to the execution operation.
13. The method according to any one of claims 1 to 12, wherein the distributed ledger is stored separately from the controller.
14. The method according to claim 13, wherein the distributed ledger is stored in a separate data store of instructions.
15. The method of any one of claims 1 to 14, further comprising the steps of:
providing, using the controller, a user with a token demonstrating access, and

recording, using the controller, a transaction on the distributed indicating the access.

16. The method of any one of claims 1 to 15, wherein the distributed ledger is a blockchain.