

Independent Claim 1 (System Claim)

A system for automating the generation and monetization of tokenized Real World Assets (RWAs), the system comprising:

an IoT edge hardware layout with sensor devices, edge routers, and edge gateways that measure data associated with any commodity, security, physical asset, financial instrument, or other RWA using wireless protocols;

an IoT cloud platform that receives the data, validates it, and generates a digital RWA certificate;

a blockchain integrated with the cloud platform that creates a value token representing the certificate as an immutable digital asset on a distributed ledger, including registration of users and equipment; and

a blockchain-based trading platform that enables trading of the value token on a commodity, crypto, security, or financial exchange using market orders, limit orders, options, forwards, futures, swaps, or similar instruments, with all transactions recorded on the blockchain to automate ownership transfer and payment.

Dependent Claims for Independent Claim 1

The following is a complete set of dependent claims (Claims 2–21) that further specify and narrow the system of Independent Claim 1. Each dependent claim is fully supported by the disclosures in the attached document (Patent Filing Highlights US20200027096A1.docx), including the detailed descriptions of the IoT edge hardware layout (sensor devices, edge routers, edge gateways, and wireless protocols), IoT cloud platform validation/verification processes, blockchain-integrated value token creation (immutable digital asset recording, user/equipment registration, public-key addresses, cryptographic linking), blockchain-based trading platform functionality (order types, automated matching/execution/settlement, ownership transfer and payment), primary-market issuance from validated RWA data, immutable ledger recording for fraud reduction and permanent verification, and the overall end-to-end tokenized RWA generation and monetization architecture as of the November 7, 2017 priority date.

Full Claim Set in Formal USPTO-Style Format (Reordered to Start with Claim 1)

1. A system for automating the generation and monetization of tokenized Real World Assets (RWAs), the system comprising: an IoT edge hardware layout with sensor devices, edge routers, and edge gateways that measure data associated with any commodity, security, physical asset, financial instrument, or other RWA using wireless protocols; an IoT cloud platform that receives the data, validates it, and generates a digital RWA certificate; a blockchain integrated with the cloud platform that creates a value token representing the certificate as an immutable digital asset on a distributed ledger, including registration of users and equipment; and a blockchain-based trading platform that enables trading of the value token on a commodity, crypto, security, or financial exchange using market orders, limit orders, options, forwards, futures, swaps, or similar instruments, with all transactions recorded on the blockchain to automate ownership transfer and payment.

2. The system of claim 1, wherein the IoT edge hardware layout comprises sensor devices, edge routers, and edge gateways configured to communicate using one or more wireless protocols selected from the group consisting of Bluetooth, Zigbee, WiFi, Z-Wave, Sub-Gigahertz, Cellular, Satellite, LoRaWAN, Sigfox, and combinations thereof.
3. The system of claim 1, wherein the IoT cloud platform performs automated validation of the measured data using processes for accuracy, sampling design, internal controls, and verification consistent with established standards for real-world asset certification.
4. The system of claim 1, wherein the blockchain creates the value token by recording the digital RWA certificate as an immutable digital asset that includes one or more of public-key addresses, cryptographic block linking, timestamps, transaction data, user identifiers, equipment identifiers, validation reports, and verification statements.
5. The system of claim 1, wherein the blockchain integrated with the cloud platform registers all participants and equipment on the distributed ledger to prevent double-spending or fraud in the tokenized RWA.
6. The system of claim 1, wherein the blockchain-based trading platform processes buyer bids and executes trades using market orders, limit orders, options, forwards, futures, swaps, or pre-market contracts.
7. The system of claim 1, wherein the blockchain-based trading platform further supports advanced order types selected from the group consisting of short selling, trailing stop orders, conditional orders, One-Triggers-the-Other (OTO) orders, One-Cancels-the-Other (OCO) orders, One-Triggers-a-One-Cancels-the-Other (OTOCO) orders, and combinations thereof.
8. The system of claim 1, wherein the blockchain-based trading platform applies time-in-force rules to orders, the time-in-force rules selected from the group consisting of day orders, good-'til-canceled orders (up to 180 days), fill-or-kill orders, immediate-or-cancel orders, on-the-open orders, on-the-close orders, and combinations thereof.
9. The system of claim 1, wherein the blockchain-based trading platform automatically matches, executes, and settles trades by recording each transaction as a new cryptographically linked block on the distributed ledger, thereby transferring ownership of the value token to the buyer and delivering payment to the seller.
10. The system of claim 1, wherein all buy/sell transactions, ownership transfers, and payments are permanently recorded on the blockchain to reduce fraud and ensure permanent verification and auditability of the tokenized RWA.
11. The system of claim 1, wherein creation of the value token occurs as a primary market activity based on the validated digital RWA certificate generated from the IoT-sourced data.
12. The system of claim 1, wherein the system maintains multiple redundant copies of the distributed ledger across cloud environments to provide fault tolerance and Byzantine fault tolerance for the tokenized RWA records and trading activity.
13. The system of claim 1, wherein the IoT cloud platform and blockchain operate in real time or near real time to enable continuous measurement, validation, token minting, listing, and trading of the tokenized RWA.

14. The system of claim 1, further comprising automated monetization of the tokenized RWA by transferring funds to the seller upon execution of a winning bid while simultaneously delivering the value token to the buyer.
15. The system of claim 1, wherein the value token represents a digital representation of any commodity, security, physical asset, financial instrument, or other RWA that is verifiable and cannot be double-spent due to the immutable nature of the blockchain.
16. The system of claim 1, wherein the blockchain-based trading platform functions as an integrated commodity, crypto, security, or financial exchange without requiring separate centralized custodians or clearinghouses.
17. The system of claim 1, wherein the system further comprises a secure registration process for users and equipment that cryptographically binds the IoT edge hardware layout, the digital RWA certificate, and the value token on the distributed ledger.
18. The system of claim 1, wherein the IoT cloud platform receives data continuously from the IoT edge hardware layout and generates the digital RWA certificate in an automated closed-loop process prior to blockchain token creation.
19. The system of claim 1, wherein the distributed ledger employs cryptographic hashing of each new block to prior blocks to ensure immutability of all tokenized RWA records and trading transactions.
20. The system of claim 1, wherein the system eliminates intermediaries by performing end-to-end automated tokenization, listing, trading, settlement, and monetization directly on the integrated blockchain and trading platform.
21. The system of claim 1, wherein the blockchain-based trading platform enables high-frequency, derivative, and institutional trading of tokenized RWAs while maintaining permanent auditability and fraud reduction through immutable ledger recording.

These claims form a self-contained, commercially robust claim family that directly maps to the IoT-driven RWA tokenization, blockchain-integrated value token creation, and native blockchain-based trading/exchange functionality described in the November 7, 2017 provisional disclosure. The full set (renumbered to begin with Claim 1) can be incorporated into a non-provisional, continuation, or continuation-in-part application to further strengthen the Parisii patent portfolio for tokenized Real World Assets and blockchain-based RWA trading infrastructure.