

System and Method for Interaction Object Management in a Blockchain Environment

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OVERVIEW

Covers a system and method for managing interaction objects in a blockchain environment. Introduces a block management computer with programmable instructions that establish blockchain connections, receive supplemental blocks, apply preconfigured rules, and create compilation objects comprising interaction objects and supplemental objects. This second continuation features the broadest independent claim scope in the patent family with the fewest required elements, while adding claims covering user, company, and device object interactions.

KEY INNOVATIONS

- Block management system with the broadest claim scope in the patent family
- Direct supplemental block retrieval and compilation object creation
- Compilation objects comprising preconfigured interaction objects and supplemental objects
- Extended claim coverage for user, company, and device object interactions

ABOUT THIS PATENT

How does this patent relate to the others in the family?

This is the second continuation patent in a family of three patents. All three share a November 2016 priority date and cover systems and methods for blockchain transaction reconciliation. The family includes 28 total claims across US 10,192,073; US 10,943,029; and US 11,720,711.

Who owns this patent?

This patent is owned by Rock Innovation LLC. Ownership is recorded in the USPTO assignment database and is publicly verifiable at assignmentcenter.uspto.gov.

Is this patent still active?

Yes. This patent is active and maintained with current maintenance fees. Patent status is publicly verifiable through the USPTO Patent Center at patentcenter.uspto.gov.

How many forward citations does this patent family have?

Over 80 subsequent patent applications cite the Rock Innovation patent family. Citing companies include Microsoft, Visa, Mastercard, Samsung, Toyota, IBM, Bank of America, and others. Citations are public records maintained by the USPTO.

Claim 1 INDEPENDENT SYSTEM

A system for block management, the system comprising:

a network-connected block management computer comprising a memory and a processor and further comprising programmable instructions stored in the memory and operating on the processor, the programmable instructions, when executed by the processor cause the processor to:

- establish a connection to one or more blockchains;
- receive a plurality of supplemental blocks from the one or more blockchains, wherein at least a portion of the plurality of supplemental blocks corresponding to a preconfigured interaction object;
- receive one or more preconfigured rules from the one or more blockchains; and
- create one or more compilation objects based on the one or more preconfigured rules, each compilation object comprising the preconfigured interaction object and the at least portion supplemental objects;

wherein the one or more compilation objects are stored on the one or more blockchains.

Claim 5 INDEPENDENT METHOD

A computer-implemented method for block management, the method comprising:

- receiving, at a compiler, a plurality of blocks from the one or more blockchains;
- requesting, at the compiler, a plurality of supplemental blocks from the one or more blockchains, wherein at least a portion of the plurality of supplemental block correspond to an associated interaction object;
- receiving, at the compiler, one or more preconfigured rules from the one or more blockchain;
- creating, at the compiler, one or more compilation objects, each compilation object comprising the preconfigured interaction objects and the at least portion of the plurality of supplemental objects;
- storing, by the compiler, the one or more compilation objects on the one or more blockchains.

Claim 2 DEPENDENT SYSTEM

The system of claim 1, wherein the programmable instructions, when further executed by the processor cause the processor to:

- create a report based on at least a portion of the one or more compilation objects.

Claim 3 DEPENDENT SYSTEM

The system of claim 1, wherein the programmable instructions, when further executed by the processor cause the processor to:

- receive a connection from an external data source;
- receive additional preconfigured rules, from the external data source, to supplement the one or more preconfigured rules.

Claim 4 DEPENDENT SYSTEM

The system of claim 1, wherein the programmable instructions, when further executed by the processor cause the processor to:

- provide access, via an application programming interface, to the one or more compilation objects to at least a portion of the plurality of connected devices.

Claim 6 DEPENDENT METHOD

The method of claim 5, further comprising the step of:

creating, at a report engine, a report based on at least a portion of the one or more compilation objects.

Claim 7 DEPENDENT METHOD

The method of claim 5, further comprising the step of:

receiving, at the compiler, additional preconfigured rules, from an external data source, to supplement the one or more preconfigured rules.

Claim 8 DEPENDENT METHOD

The method of claim 5, further comprising the step of:

providing access, via an application programming interface, to the one or more compilation objects.

Claim 9 DEPENDENT METHOD

The method of claim 5, wherein each of the one or more compilation objects comprises at least one interaction object, and wherein each interaction object corresponds to:

one of a user object, a company object, and a device object that are involved in an interaction associated with the interaction object.

Claim 10 DEPENDENT METHOD

The method of claim 9, further comprising the steps of:

receiving, at the compiler, a plurality of criteria from a first connected device; and

analyzing, at the compiler, each interaction object to determine if the interaction object has an associated required supplemental object, an association based on the plurality of criteria.

Claim 11 DEPENDENT SYSTEM

The system of claim 1, wherein each of the one or more compilation objects comprises at least one interaction object, and wherein each interaction object corresponds to:

one of a user object, a company object, and a device object that are involved in an interaction associated with the interaction object.

Claim 12 DEPENDENT SYSTEM

The system of claim 11, wherein the programmable instructions, when further executed by the processor cause, the processor to:

receive a plurality of criteria from a first connected device; and

analyze each interaction object to determine if the interaction object has an associated required supplemental object, an association based on the plurality of criteria.

OTHER PATENTS IN THIS FAMILY**PARENT PATENT****US 10,192,073**

Granted January 29, 2019 · 8 Claims

FIRST CONTINUATION**US 10,943,029**

Granted March 9, 2021 · 8 Claims

Interested in Licensing?

Rock Innovation LLC holds a foundational patent portfolio covering blockchain transaction reconciliation technology. With a November 2016 priority date, these patents predate the vast majority of cross-chain bridges, Layer 2 rollups, DeFi protocols, and enterprise blockchain platforms operating today.

We offer flexible licensing structures including flat-fee licenses, running royalties, and paid-up licenses tailored to your scale of use. Comprehensive claim charts and infringement analysis documentation are prepared and available.

To discuss licensing terms or request additional information, visit rockinnovationip.com/licensing or contact us directly at hello@rockinnovationip.com.