

## System and Method for Interaction Object Management in a Blockchain Environment

| GRANTED       | APPLICATION NO. | CLAIMS | TECHNICAL FIELD            |
|---------------|-----------------|--------|----------------------------|
| March 9, 2021 | 16/231,498      | 8      | Blockchain Data Management |

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### OVERVIEW

Covers a system and method for managing interaction objects in a blockchain environment. Introduces a block reconciliation computer with programmable instructions executed by a processor that establish blockchain connections, receive criteria from connected devices, retrieve blocks corresponding to preconfigured interaction objects, analyze them for associated supplemental objects, and create compilation objects based on preconfigured rules. This first continuation streamlines the claim structure of the parent patent while maintaining core reconciliation functionality.

### KEY INNOVATIONS

- Processor-executed programmable instructions for blockchain block reconciliation
- Automated connection establishment to one or more blockchains
- Criteria-based retrieval and analysis of preconfigured interaction objects
- Rule-based creation of compilation objects stored on blockchains

### ABOUT THIS PATENT

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

This is the first 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](https://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](https://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 reconciliation, comprising:**

a network-connected block reconciliation 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:

- receive a plurality of connections from a plurality of connected devices;

- establish a connection to one or more blockchains;

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

receive a plurality of blocks from the one or more blockchains based on the received criteria, each block corresponding to a preconfigured interaction object;

analyze the preconfigured interaction objects to determine if there is an associated required supplemental object, an association based on the plurality of criteria;

request a plurality of supplemental blocks from the one or more blockchains, each supplemental block corresponding to a required supplemental object;

receive one or more preconfigured rules from the one or more blockchain associated to the preconfigured interaction objects;

create one or more compilation objects comprising interaction objects and supplemental objects associated to the plurality of criteria based on the one or more preconfigured rules;

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

**Claim 5** **INDEPENDENT** **METHOD****A computer-implemented method for block reconciliation, comprising the steps of:**

receiving, from a first connected device of a plurality of connected devices, a plurality of criteria;

receiving, at a compiler, a plurality of blocks from the one or more blockchains based on the received criteria, each block corresponding to a preconfigured interaction object;

analyzing, at the compiler, the preconfigured interaction objects to determine if there is an associated required supplemental object;

requesting, at the compiler, a plurality of supplemental blocks from the one or more blockchains, each supplemental block corresponding to an associated required supplemental object, an association based on the plurality of criteria;

receiving, at the compiler, one or more preconfigured rules from the one or more blockchain associated to the preconfigured interaction objects;

creating, at the compiler, one or more compilation objects comprising interaction objects and supplemental objects based on the plurality of criteria and based on the one or more preconfigured rules;

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.

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

Granted January 29, 2019 · 8 Claims

**SECOND CONTINUATION****US 11,720,711**

Granted August 8, 2023 · 12 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](https://rockinnovationip.com/licensing) or contact us directly at [hello@rockinnovationip.com](mailto:hello@rockinnovationip.com).