

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DEFI EDUCATION FUND

Petitioner

v.

TRUE RETURN SYSTEMS, LLC

Patent Owner

Case IPR2023-01388

U.S. Patent No. 10,025,797

**REQUEST BY PATENT OWNER FOR DIRECTOR REVIEW OF THE
DECISION GRANTING INSTITUTION**

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Patent Trial and Appeal Board
U.S. Patent & Trademark Office
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I. INTRODUCTION

True Return Systems LLC (“Patent Owner” or “True Return”) submits this Request for Director Review (“Request”) of the January 5, 2024 Decision Granting Institution of an Inter Partes Review of U.S. Patent 10,025,797 (“Decision”). In granting the Petition, the Board made erroneous findings of material fact, and conclusions of law relative to the teachings of the ‘797 Patent and the prior art. This request is supported by the Declaration of Jack Fonss (EX3001), the inventor of the ‘797 Patent.

In granting institution, the Board adopted the Petitioner’s interpretation of the terms “supplemental information” and “supplemental transaction data,” and erroneously imported those terms into the ‘797 Patent. The ‘797 Patent’s parallel storage of difference layers (“PSDL”) require that PSDL values and differences are determinative and that they impact or are imputed into blockchain ledger records in contrast to being “supplemental.” No Petitioner art teaches imputing or impacting as specified and taught by the ‘797 Patent (EX1001).

Further, the Board erroneously aligned the ‘797 Patent’s PSDL with Zinder’s (EX1004) term “outside of the blockchain” and Toll's (EX1005) term “not submitted to the blockchain.” This resulted in a misinterpretation of the limited and conventional teachings of Zinder (EX1004) and Toll (EX1005) which teach collocated distributed storage or no storage of their respective “supplemental” items.

In contrast, the '797 Patent limitations require separateness in storage, separateness in operations, and separateness in the frequency of retrieval, writing, and usage between the PSDL and a linked transaction record ledger.

Lastly, the Board erroneously concluded that the '797 Patent does not teach a prohibition of either duplication of PSDL storage at every node or collocation of all values stored in the PSDL at every node. (Decision, Paper 7, p. 22). This conclusion is contradicted by the specification of the '797 Patent. (*See* EX1001, p.17, p.19, Claim 2, p. 20, Claim 6, p.20, Claim 4, p. 19, Claim 1, and p. 20, Claim 19).

These erroneous findings of material fact, and conclusions of law relative to the teachings of the '797 Patent and the prior art respectfully require reversal of the institution grant.¹

II. ARGUMENT

The conclusion of the Board that the '797 Patent PSDL requires or is based on “supplemental information” or “supplementary transaction data” is erroneous.

The Petitioner’s art presents general storage and archival systems or archival duplicating operations that may be used with a blockchain (*see, e.g.*, Zinder, EX1004 and Toll, EX1005; *see also* EX3001, ¶¶ 7,8 or general storage techniques with blockchain-like properties (e.g. Storj, EX1023 and MedRec, EX1009). The

¹ Separately, the Patent Owner's sole member claims that they have been the subject of personal threats, where attorneys of the Petitioner and attorneys at a potential real-party-in-interest have affirmatively used this IPR filing in social media to endorse and call for violence against the Patent Owner's sole member. (EX3001, ¶ 55).

Petitioner contends that the ‘797 Patent stores supplemental information with a ledger or blockchain. (Petition, p. 38).

Core to the prior art’s technical failings are the Petitioner misstatements (adopted in the Decision) that the ‘797 Patent is directed at “supplementary information” or “supplementary transaction data.” The ‘797 Patent does not claim to invent supplemental information such as Toll’s “wallet” or “account” information (*see* EX3001, ¶¶ 9-10), or Zinder’s post-transactional detail which both precludes and omits the ‘797 Patent limitations of impacting and imputing. *Id.*

The ‘797 Patent invents determinative information (not supplemental), which requires impacting, altering, or imputing values on blockchain records. (*See*, e.g., EX1001, specification pp. 17-19, and claims 1, 7, 12, 13, 15, 19, 20, pp.19-20). This occurs through its PSDL and separately retrieved and stored values which are independent of the blockchain transaction records and independent of the frequency, source, occurrence, and storage of already submitted blockchain transactions. (EX3001 ¶ 10).

None of the Petitioner’s art teaches or suggests the ‘797 Patent’s required impacting or imputing of values in blockchain transaction records as required by a PSDL. (EX3001 ¶¶ 12-14).

A. The Board’s Interpretation of Zinder’s Term “Outside of the Blockchain” and Toll’s Term “Not Submitted to the Blockchain” Are in Opposition to ’797 Patent Claims

The Board misinterpreted the term “outside of the blockchain” in Zinder (“outside of the blockchain” occurring at EX1004 ¶¶ 9, 13; *see also* ¶ 12) and “information not submitted to the blockchain” in Toll (EX1005, ¶ 52; *See also* EX3001 ¶¶12-14).

Toll’s sole reference to its “information not submitted” is limited to a single sentence in a single paragraph, describing “wallet information, account information, business process rules, and other information . . .” (EX1005, ¶ 52). This information is already incorporated and stored in a conventional blockchain through blockchain keys, addresses, and smart contract deployments. (EX3001, ¶ 13).

Zinder’s “outside of the blockchain” is faithful to its title “Systems and Methods of Secure Provenance for Distributed Transaction Databases” where it teaches a limited storage access, partitioning, and “firewalling” of elements collocated and fully distributed in conflict with ’797 Patent. (EX3001, ¶ 14).

Zinder does not teach a PSDL, but rather simply populates additional data across the all the individual nodes of a blockchain data environment, limiting node validator review of “outside of the blockchain” items (EX1004, ¶ 9; *see also* EX3001, ¶ 14). Neither Zinder (EX1004) nor Toll (EX1005) teach or suggest the

‘797 Patent limitations, and all of these ‘797 Patent limitations are in conflict with Zinder and Toll’s supplemental data, points including:

(i) physical or operational separation of storage (*see, e.g.*, EX1001, p. 17 “the base DCL is stored and transacted independent of the PSDL storage” and EX1001 claim 6, p. 20: “[W]herein the layers of at least one electronic parallel storage of difference layer [PSDL] are modular changeable and independent of the distributed electronic ledger containing electronic transaction records”);

(ii) time sequence independence between a PSDL and linked transaction records (*see, e.g.*, EX1001, p. 15: “ Each PSDL will store at least one system written and system accessible time-sequenced differential or descriptor, where differentials are created by the system from exogenous and electronically published data streams”);

(iii) unique time alignment between a PSDL’s internet-sourced feeds with blockchain transaction records (*see, e.g.*, EX1001, p. 16: “The value of differences is generated by the system from one or more internet data streams, the values of differences are generated, stored, and linked with a frequency which matches or exceeds the frequency used for appending transaction records to the database”); and

(iv) actual imputation from a PSDL to a transaction ledger (*see, e.g.*, EX1001, claims 1, 7, 12, 13, 15, 19, 20, pp. 19-20), and other operations and aspects in conformity with a ‘797 Patent PSDL. (EX3001, ¶ 14).

B. Zinders’s “Outside of the Blockchain” Means Only Limited Access of Collocated Data

The Petitioner presented an interpretative reading of Zinder where “outside of the blockchain” would imply an arrangement of centralized (or decentralized) separateness (from a transactional ledger) consistent with ‘797 Patent’s PSDL. (EX3001, ¶ 15). Zinder actually uses “outside of the blockchain” to mean a data arrangement that is collocated and duplicated at every blockchain node with every instance of every copy of the related blockchain ledger, which is inconsistent with claims of the ‘797 Patent. (*Id.*) Zinder’s collocation, duplication, and required waiting for a transaction to already occur before storage, and confidentiality are contrary to the claim limitations of the ‘797 Patent and its PSDL. (*Id.*)

The Board made a critical error in concluding that Zinder’s “outside of the blockchain” is not duplicative, which is contradicted by Zinder itself. (Decision, Paper 7, p. 23; *see also* EX3001, ¶¶ 16-23).

C. Zinder Teaches Restricted Access to Fully Distributed Data and Not a ‘797 Patent PSDL

Unlike the ‘797 Patent’s PSDL, Zinder teaches restricted access to fully distributed data. By Zinder’s own terms, its “outside of the blockchain” storage (604 and 606 contained within 600 “resource repository”) is replicated at every node, duplicated, and collocated with every copy of the blockchain, consistent with Nakamoto principles detailed in the POPR. (*See, e.g.*, POPR, Paper 6, pp. 4-5, 15-

16, and EX3001 ¶¶ 16-23). Zinder makes no statements or suggestions that 604, 606, 600, or the term “resource repository” which appears to capture and include every instance of “additional,” “other,” “provenance,” or “outside of the blockchain” items are stored or operated anywhere but at each node as is clearly stated throughout its specification and claims. (EX3001, ¶ 18). An examination of Zinder’s teachings based on Zinder’s terminology rather than the figures—compels an identical conclusion. (EX3001, ¶¶ 18-22).

Zinder teaches and requires that each node, of perhaps 100,000 nodes (*see* POPR, Paper 6, p. 25), contains the resource repository. (EX3001, ¶ 23). As detailed in the POPR and fatal to Zinder, Zinder, whether examined through its figures, terms, or a combination thereof all result in the same collocated conclusion which is consistent with the POPR (Paper 6; *see also* EX3001, ¶ 23).

Zinder further cements the duplication and collocation:

The availability of the records on the blockchain is also increased because of the distributed nature of the distributed blockchain computing system. Thus, the failure of one node (or the destruction of records in one location) will not result in loss of the digital provenance information.

(*See, e.g.*, EX1004, ¶ 13 and EX3001, ¶ 24). This provenance data, which is “outside of the blockchain,” is collated with transaction records through the combinations of Zinder 604, 606, and 600, meaning that this statement should be understood to state

what is written in Zinder— provenance (supplemental) information is fully distributed to every node. (EX3001, ¶ 24).

D. Zinder Does Not Teach a PSDL or the Separateness Required of a PSDL

The Board misstated the required separateness and configuration of a PSDL, as the PSDL is detailed in the ‘797 Patent specification and as used in the ‘797 Patent claims. (EX3001, ¶ 25)

Understanding the nodes are the potentially innumerable duplicated blockchain validators where each stores a duplicate copy of the blockchain transaction record, the ‘797 Patent specification states:

For clarity, the base DCL is stored and transacted independent of the PSDL storage. Also for clarity, PSDL storage may impart absolute values (where absolute values are subject to differences over time sequences), descriptive characteristics, or a mix of absolute values, relative values, and descriptors.

(EX1001, p. 17).

The ‘797 specification precludes “PSDL storage at every node” because it specifically requires that a DCL (the blockchain transaction ledger or distributed computer ledger) is stored and transacted independently of the PSDL. (EX3001, ¶ 27).

Blockchains as described in Zinder are fully distributed among nodes: “Each node that is part of the distributed computer system may also keep a copy or a portion

of the blockchain 618 in storage (e.g., on disk or in RAM) that is local to the corresponding node.” (EX1004, ¶ 48). Using Zinder’s teaching that a blockchain and its transaction ledgers are fully node-distributed as detailed in Zinder (*Id.*); that is each node contains and operates from a copy of the blockchain transaction ledger (along with Zinder’s supplemental items—*see, e.g.*, Zinder, EX1004, claim 1, p. 35, and EX3001, ¶ 28), Zinder conflicts with ‘797 Patent claim limitations including EX1001, p. 19, Claim 2, EX1001, p.20, claim 6, EX1001, p. 20, claim 14, and both independent claims 1 and 19 limiting a PSDL to be either centralized or decentralized (and not distributed) (*See including* EX1001, p. 19, claim 1, and EX1001 p. 20, claim 19)—all of which require a separateness in conflict to Zinder. (EX3001, ¶ 17-23, 30).

The ‘797 Patent claim limitations state that a PSDL must be independent and written [to] and stored separately from a DCL or blockchain transaction ledger, and that a PSDL must be centralized or decentralized. It is not possible for a PSDL, as specified and used in the ‘797 Patent to be consistent with Zinder’s supplemental “outside of the blockchain.” (EX3001, ¶ 29).

Toll’s data of “information not submitted” is redundant data already on the blockchain without any teaching or suggestion of use. Further, Toll’s “information not submitted” (EX1005, ¶ 52) does not suggest or teach any value imputing or impacting blockchain transaction records or any other action for its supplemental

data. (EX3001, ¶ 31). Toll’s sole reference to “information not submitted” is limited to a single paragraph with no application or use of “information not submitted” (*id.*) and the entirety of Toll teaches a use of the blockchain itself for messaging through multiple triggering blockchain transactions for storage on one or more other blockchains. (EX3001, ¶ 31). While Toll does not state, teach or write anything regarding its supplemental items of “wallet,” “account,” or “business process rules” (EX1005, ¶ 52), when used in their common meaning, Toll merely restates duplication of data already on the blockchain, where conventional blockchain addresses are representative of wallets and accounts and blockchain deployed smart contracts contain business process rules. (EX3001, ¶ 31.)

E. No Other Petitioner Art Teaches or Suggests a PSDL

Further, none of MedRec (EX1009), IPFS (EX1021), SIA (EX1022), Storj (EX1023), or Swarm (EX1024), suggest, teach, or add a PSDL’s centralized or decentralized linked storage to a distributed blockchain, and each affirmatively discourages or precludes any degree of centralization (or non-distribution). (*See, e.g.,* POPR, Paper 6, pp.10-11 (internal citations omitted) and EX3001, ¶ 32). Similarly, both Chainlink (EX1020) and Zhang (EX1006) do not suggest or teach any linked data storage (POPR, p. 12, 14, internal citations omitted, and EX3001, ¶ 32). Toll (EX1005) teaches storage of duplicative administrative items such as wallet and account information at “a clearing house computer system” (EX1005, ¶ 52), but

Toll makes no teaching or suggestions of any “electronically published data streams” (see, e.g. EX1001, claims 1, 7, 19, pp. 19-20), independent frequency and process of writing and storing to a PSDL as required by a PSDL (see, e.g., EX1001, p. 17) , or the use of any items to alter, impact or impute any blockchain transaction records values (EX1001, claims 1, 7, 12, 13, 15, 19, 20, pp.19-20; EX3001, ¶ 32).

III. CONCLUSION

The Patent Owner therefore respectfully requests that the decision to institute an inter partes review be reversed.

Dated: January 30, 2024

Respectfully submitted,

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CERTIFICATION OF SERVICE

The undersigned hereby certifies that the foregoing PATENT OWNER'S REQUEST FOR DIRECTOR REVIEW OF THE DECISION GRANTING INSTITUTION was served on January 30, 2024 by filing documents through the Patent Trial and Appeal Case Tracking System (P-TACTS) and courtesy copies were also served via electronic mail on the following:

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