# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|---|---|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

### CONVEYING PARTY DATA

| Name | Execution Date |
|---|---|
| PAUL LINDSEY BORRILL | 02/16/2021 |

### RECEIVING PARTY DATA

| | |
|---|---|
| **Name:** | ERIC LITAK |
| **Street Address:** | 3225 ALPINE CREEK RD |
| **City:** | RENO |
| **State/Country:** | NEVADA |
| **Postal Code:** | 89519 |

### PROPERTY NUMBERS Total: 19

| Property Type | Number |
|---|---|
| **Application Number:** | 62773558 |
| **Application Number:** | 16162632 |
| **Application Number:** | 62488025 |
| **Application Number:** | 16694054 |
| **Application Number:** | 15687529 |
| **Application Number:** | 15959161 |
| **Application Number:** | 62573196 |
| **Application Number:** | 16414781 |
| **Patent Number:** | 9774401 |
| **PCT Number:** | US1828709 |
| **Application Number:** | 61846602 |
| **Application Number:** | 61893285 |
| **Application Number:** | 61913302 |
| **Application Number:** | 14564015 |
| **Application Number:** | 14520331 |
| **Application Number:** | 62474772 |
| **Application Number:** | 60762286 |
| **Application Number:** | 12162121 |
| **Application Number:** | 11331444 |

**CORRESPONDENCE DATA**

**Fax Number:** (925)329-4825

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

**Email:** bhasinpatents@gmail.com

**Correspondent Name:** LAW OFFICE OF PUNITA BHASIN

**Address Line 1:** 3501 LONE TREE WAY, SUITE 4

**Address Line 2:** SUITE 4

**Address Line 4:** ANTIOCH, CALIFORNIA 94509

| NAME OF SUBMITTER: | PUNITA BHASIN |
|---|---|
| SIGNATURE: | /punitabhasin/ |
| DATE SIGNED: | 03/03/2021 |

**Total Attachments: 20**

source=Assignment Document#page1.tif
source=Assignment Document#page2.tif
source=Assignment Document#page3.tif
source=Assignment Document#page4.tif
source=Assignment Document#page5.tif
source=Assignment Document#page6.tif
source=Assignment Document#page7.tif
source=Assignment Document#page8.tif
source=Assignment Document#page9.tif
source=Assignment Document#page10.tif
source=Assignment Document#page11.tif
source=Assignment Document#page12.tif
source=Assignment Document#page13.tif
source=Assignment Document#page14.tif
source=Assignment Document#page15.tif
source=Assignment Document#page16.tif
source=Assignment Document#page17.tif
source=Assignment Document#page18.tif
source=Assignment Document#page19.tif
source=Assignment Document#page20.tif

## BILL OF SALE

Seller:       Fred Hjelmeset, solely in his capacity as the Chapter 7 Trustee ("Seller") of the estate of Paul Lindsey Borrill, Case No. 20-50095 MEH ("Estate"), pending in the United States Bankruptcy Court for the Northern District of California, San Jose Division (the "Bankruptcy Court")

Purchaser:    Eric Litak ("Purchaser")

Pursuant to the Bankruptcy Court's "Amended Order Authorizing Sale of Assets to Eric Litak" dated February 10, 2021 [Docket 219] (the "Order"), Seller hereby sells, transfers, conveys and assigns to Purchaser all of the Debtor's right, title and interest, if any, in and to the Estate's IP, which is listed in the Exhibit A attached to the Order, and has agreed to execute and deliver an Assignment of Intellectual Property Rights (Exhibit 1) so that the Purchaser may, in his discretion, record the Assignment of Intellectual Property Rights with the United States Patent and Trademark Office. Capitalized terms used herein without definition shall have the meanings ascribed to them in the sale agreement between Seller and Purchaser, as amended and approved by the Order.

The sale and transfer of the foregoing assets is on an "as is, where is" basis with all faults and defects, without any representations or warranties, and subject to all liens, claims and interests.

Purchaser accepts the assets on an "as is, where is" basis with all faults and defects without any representations or warranties, and subject to all liens, claims and interests.

This Bill of Sale is governed by the laws of the State of California and both Seller and Purchaser hereby consent to the jurisdiction of Bankruptcy Court to resolve any dispute with respect to this Bill of Sale.

IN WITNESS WHEREFORE, the undersigned trustee has executed this Bill of Sale as of February 14, 2021.

Fred Hjelmeset, solely in his capacity as the
Trustee of the Chapter 7 case of Paul Lindsey Borrill

By: _____
Name: Fred Hjelmeset
Title:  Chapter 7 Trustee

Accepted as per the above.

_____        2/16/2021
Eric Litak

## Exhibit 1

## Assignment of Intellectual Property Rights

This Assignment of Intellectual Property Rights Assignment ("IP Assignment"), dated February 16, 2021, is executed, acknowledged, and delivered by Fred Hjelmeset, solely in his capacity as the Chapter 7 Trustee, acting on behalf of the estate of Paul Lindsey Borrill ("Debtor"), Case No. 20-50095 MEH ("Estate"), pending in the United States Bankruptcy Court for the Northern District of California, San Jose Division (the "Bankruptcy Court"), and whose office is located at P.O. Box 4188, Mountain View, CA 94040 ("Assignor") pursuant to the Agreement to Purchase Assets dated October 29, 2020 (the "Asset Purchase Agreement") between Assignor, as seller, and Eric Litak ("Assignee"), as buyer.

WHEREAS, under the terms of the Asset Purchase Agreement, Assignor has conveyed, transferred, and assigned to Assignee, the right, title and interest, if any, to the Estate's intellectual property listed in the Exhibit A attached to the "Amended Order Authorizing Sale of Assets to Eric Litak" [Docket 219] (the "Order"), filed with the Bankruptcy Court on February 10, 2021, and has agreed to execute and deliver this IP Assignment to the Assignee.

"Patents" means patents and/or patent application including any United States, foreign or international patents and patent applications listed in Exhibit A and any utility, divisional, continuation, continuation-in-part, substitute, renewal or reissue or other patent applications which have been or shall be filed with the United States Patent and Trademark Office and all foreign countries claiming priority to the patents or patent applications listed in Exhibit A.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, Assignor has sold, assigned and transferred, and does hereby sell, assign and transfer to Assignee all right, title and interest in and to:

(i)     the Patents, including any and all inventions, invention disclosures and discoveries disclosed or claimed therein and claiming priority from Patents as further identified in Exhibit A, attached hereto, the same right, title, and interest to be held and enjoyed by said Assignee for its own use, and for the use of its successors, assigns, or other legal representatives;

(ii)    invention disclosures as identified in the Exhibit A attached hereto, the same right, title, and interest to be held and enjoyed by said Assignee for its own use, and for the use of its successors, assigns, or other legal representatives; and

(iii)   all past, present and future causes of action and enforcement rights, whether currently pending, filed or otherwise, in connection with the Patents, the patents and patent applications claiming priority from the Patents and any of the inventions or discoveries described or claimed therein, including without limitation, all rights to sue for any past, present or future infringement of the Patents, including the rights to license and to collect and receive any damages, royalties, injunctive relief, and/or any other settlements or remedies for such infringements, the same to be held and

enjoyed by Assignee for its own use and enjoyment, and for the use and enjoyment of its successors, assigns and other legal representatives, to the end of the term or terms thereof as fully and entirely as the same would have been held and enjoyed by Assignor, if this Assignment and sale had not been made.

This IP Assignment shall be binding upon and shall inure to the benefit of the parties and their respective successors and assigns.
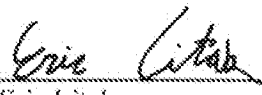
This Assignment shall be governed by, and construed in accordance with, the laws of the United States in respect to patent issues and in all other respects by the laws of the State of California, without giving effect to the conflict of laws ruled thereof.

IN WITNESS WHEREOF, ASSIGNOR, AS SELLER HAS DULY EXECUTED AND DELIVERED THIS IP ASSIGNMENT AS OF THE DATE FIRST ABOVE WRITTEN.

Fred Hjelmeset, solely in his capacity as the
Trustee of the Chapter 7 case of Paul Lindsey Borrill

By: _____
Name: Fred Hjelmeset
Title: Chapter 7 Trustee

Accepted as per the above.

_____     2/16/2021
Eric Litak

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)

Intellectual Assets 5.1 24-November 2020

# Intellectual Property Inventory for Paul Borrill
(Inventions, disclosures of Paul Borrill /Earth Computing Inc.)

## Formal Patent Documentation:

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Patent Application Filed / Pending | 11/30/2018 | A GENERALIZED REVERSIBILITY FRAMEWORK FOR COMMON KNOWLEDGE IN SCALE-OUT DATABASE SYSTEMS | Application 62/773,558 | LODC Docket No. BOR-008P | Paul Borrill | Document in the house. |
| Patent Application Filed / Pending | 10/17/2018 | CLASSICAL IMPLEMENTATION OF QUANTUM ENTANGLEMENT IN DATACENTER NETWORK DESIGN | Application: 16/162,632 Associated Provisional:62/573,196 | [BOR-007P] LODC Docket No. BOR-007 | Paul Borrill | Document in the house. |
| Patent Application Filed / Pending Application Published | Filed: 4/18/2018 Published: 10/18/2018 | PACKET FORWARDING MECHANISM FOR DISTRIBUTED COMPUTER SYSTEMS | Application:15/956,733 Associated Provisional:62/486,948 Publishing # 2018/0302324 | [BOR-006P] LODC Docket No. BOR-006 | Atsushi Kasura | Document in the house. |
| Patent Application Filed / Pending | 4/20/2018 | CLASSICAL IMPLEMENTATION OF ENTANGLEMENT | Provisional: 62/488,025 U.S. Application No.: PCT/US2018/28709 | [BOR-005P] | Paul Borrill | Document in the house. |

Confidential - Earth Computing, Inc.

EXHIBIT A

4 of 20

**PATENT
REEL: 055482 FRAME: 0646**

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)

Intellectual Assets 5.1 24-November 2020

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Issued Patent US 09/774,401 B1 | 9/26/2017 | ENTANGLED LINKS, TRANSACTIONS AND TREES FOR DISTRIBUTED COMPUTING SYSTEMS | US 09/774,401 B1<br>Application 14/331,225<br>Associated Provisionals:<br>61/846,602<br>61/893,285<br>61/913,302 | [BOR-001]<br>[BOR-001P2]<br>[BOR-001C]<br>Atty. Docket No 10205-04427 | Paul Borrill | Document in the house. |
| Provisional incorporated into Issued Patent 09/774,401 | 7/15/2013 | EARTH Computing | Provisional Application 61/846,602 | Prov-0001-2013<br>Atty. Docket No. 84550057-0001 Z | Paul Borrill | Document in the house. |
| Provisional incorporated into Issued Patent 09/774,401 | 10/21/2013 | A Framework for Earth Computing | Provisional Application 61/893,285 | Prov-0002-2013<br>Atty. Docket No. Borrill-Prov-0002-2013 | Paul Borrill | Document in the house. |
| Provisional incorporated into Issued Patent 09/774,401 | 12/08/2013 | Earth Computing. Various Embodiments and Methods. | Provisional Application 61/913,302 | Prov-0003-2013 | Paul Borrill | Document in the house. |
| Abandoned, but incorporated into Issued Patent 09/774,401 | 12/08/2014 | EARTH COMPUTING, EMBODIMENTS & METHODS | Application 14/564,015<br>Associated Provisional 61/913,302 | [BOR-003]<br>[BOR-003P2]<br>Atty. Docket No 12100P003 | Paul Borrill | Document in the house. |

Confidential - Earth Computing, Inc.

EXHIBIT A

**PATENT**
**REEL: 055482 FRAME: 0647**

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)     Intellectual Assets   5.1   24-November 2020

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Patent Abandoned. Needs to be resurrected | 10/21/2014 | A SCALE-INDEPENDENT, DISTRIBUTED, COHERENT DATA MECHANISM | Application 14/520,331 | [BOR-002] [BOR-002P2] Atty. Docket No. 12100P002 | Paul Borrill | Document in the house. |
| Issued Patent US 08/268,620 B2 PDF | 9/4/2012 | SELF-HEALING COMMUNICATION TREES. | US 2013011.65866 A1 US 08/268,620 B2 Application: 12/651,027 Associated Provisional: 61/142,147 | THIS PATENT IS BEING ASSIGNED TO EARTH COMPUTING IN RETURN FOR SHARES. | Paul Borrill | Document in the house. |
| Patent Abandoned. Needs to be resurrected US20090037451A 1 | 1/25/2006 | Attack and Disaster Resilient Cellular Storage Systems and Methods. | US20090037451A1 International Patent WO #2007/120953 A2 Associated Provisional: 60/762,286 | | REPLICUS Software Corporatio n. (Paul Borrill) | Document in the house. |
| Provisional Abandoned. Cancelled follow up with Fish & Richardson. | 1/11/2006 | Persistent Dynamic Repository | 11/331,444 | 20327-0018001 Atty. Docket No. REPLP001 | Paul Borrill | Document in the house. |

**PATENT**
**REEL: 055482 FRAME: 0648**

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)  Intellectual Assets  5.1  24-November 2020

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Disclosure | | ATOMIC LINK OPERATION MECHANISM FOR EARTH-COMPUTING PATENT | | [BOR-004P] | Atsushi Kasuya, | Document in the house- |
| Disclosure | | Entangled Links. Software Device Driver / ISR Implementation | ENTL | | Paul Borrill | Document in the house. |
| Disclosure | | Entangled Transactions EQ/CQ Implementation. | ENTT | | Paul Borrill | Document in the house. |
| Disclosure | | Iceberg Model Security Infrastructure | ICEB | | Paul Borrill | Document in the house. |
| Disclosure | | MetaData Tensor & Mechanism. Reversible Commutative Data Structures. | MDTM | | Paul Borrill | Document in the house. |
| Disclosure | | Security Tensor for Distributed Trust | STEN | | Paul Borrill | Document in the house. |
| Disclosure | | Secure Multi-Party Transactions | SMPT | | Paul Borrill | Document in the house. |
| Disclosure | | Conserved Quantities in Distributed Systems | CQDS | | Paul Borrill | Document in the house. |
| Disclosure | | Distributed IP address Source Triangulation | DAST | | Paul Borrill | Document in the house. |

Confidential - Earth Computing, Inc.

Page 4 of 15

EXHIBIT A

**PATENT**
**REEL: 055482 FRAME: 0649**

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)

Intellectual Assets  5.1  24-November 2020

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Disclosure | | Silent Data Corruption Protection | SDCP | | Paul Borrill | Document in the house. |
| Disclosure | | Many Core Security Hierarchy | MCSH | | Paul Borrill | Document in the house. |
| Disclosure | | Distributed Contagious Adaptive Authentication | DCAA | | Paul Borrill | To be filed as patent. |
| Disclosure | | Language Elements for Distributed Systems | LEDS | | Paul Borrill | Document in the house. |
| Disclosure | | Bayesen N-Modular Redundancy on Complex Networks | BNCS | | Paul Borrill | Document in the house. |
| Disclosure | | Self-Healing Communication Trees (DTA) | SHCT | | Paul Borrill | Document in the house. |
| Disclosure | | Distributed Dynamic Countable Credentials | DDCC | | Paul Borrill | Document in the house. |
| Disclosure | | Hyper-Evolvable Cyber Defense Infrastructure | HEDI | | Paul Borrill | Document in the house. |
| Disclosure | | Persistent Dynamic Repository | PDRE | | Paul Borrill | Document in the house. |
| Disclosure | | Attack and Disaster Resilient Cellular Storage Systems | ADRC | | Paul Borrill | Document in the house. |

Confidential - Earth Computing, Inc.

**PATENT**
**REEL: 055482 FRAME: 0650**

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)      Intellectual Assets   5.1   24-November 2020

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Disclosure | | Cloudplane Declarative Language System | CDLS | | Paul Borrill | Document in the house. |
| Disclosure | | Integration Agent Validation Methodology | IAVM | | Paul Borrill | Document in the house. |
| Disclosure | | Contiguous Adaptive Authentication Security | CAAS | | Paul Borrill | Document in the house. |
| Disclosure | | Dynamic Locality Secure Protocol (dlsp) | DLSP | | Paul Borrill | Document in the house. |
| Disclosure | | Dynamic Countable Credentials Authentication | DCCA | | Paul Borrill | Document in the house. |
| Disclosure | | Structural Temporal Integrity & Security | STIS | | Paul Borrill | Document in the house. |
| Disclosure | | Supervisory Control from Hierarchical Vantage Point | Various | | Paul Borrill | Document in the house. |
| Disclosure | | Group Privacy Assurance through constrained trees | Various | | Paul Borrill | Document in the house. |
| Disclosure | | Transaction Persistence using AIT and Dynamic Ram Self-Refresh. | Various | | Paul Borrill | Document in the house. |
| Disclosure | | Cyber-Defense 1, Hypercontainers. | Various | | Paul Borrill | Document in the house. |

EXHIBIT A

9 of 20

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)                 Intellectual Assets   5.1   24-November 2020

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Disclosure | | Cyber-Offense 2. Coordination of IP countermeasures. | Various | | Paul Borrill | Document in the house. |
| Technical Document | | | FAQ | | Paul Borrill | Document in the house. |
| Technical Document | | | CAO | | Paul Borrill | Document in the house. |
| Technical Document | | | CDL | | Paul Borrill | Document in the house. |
| Technical Document | | | CDR | | Paul Borrill | Document in the house. |
| Technical Document | | | DDT | | Paul Borrill | Document in the house. |
| Technical Document | | | CEL | | Paul Borrill | Document in the house. |
| Technical Document | | | CFP | | Paul Borrill | Document in the house. |
| Technical Document | | | CLI | | Paul Borrill | Document in the house. |
| Technical Document | | | CRM | | Paul Borrill | Document in the house. |

Confidential - Earth Computing, Inc.

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)

Intellectual Assets 5.1 24-November 2020

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Technical Document | | ████████ | CRT | | Paul Borrill | Document in the house. |
| Technical Document | | | CMF | | Paul Borrill | Document in the house. |
| Technical Document | | | CMT | | Paul Borrill | Document in the house. |
| Technical Document | | | CPO | | Paul Borrill | Document in the house. |
| Technical Document | | | CSF | | Paul Borrill | Document in the house. |
| Technical Document | | | CSI | | Paul Borrill | Document in the house. |
| Technical Document | | | CSR | | Paul Borrill | Document in the house. |
| Technical Document | | | CTO | | Paul Borrill | Document in the house. |
| Technical Document | | | CBO | | Paul Borrill | Document in the house. |

Confidential - Earth Computing, Inc.

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)

Intellectual Assets 5.1 24-November 2020

| Asset Type/ Status | Date | Title | Reference # | Docket # | Inventor | Physical Location |
|---|---|---|---|---|---|---|
| Technical Document | | ████ | CBD | | Paul Borrill | Document in the house. |
| Technical Proposal | | ████ | DARPA-Time | | Paul Borrill | Document in the house. |
| Scientific Paper | | ████ | TimeZero | | Paul Borrill | Document in the house. |
| Scientific Paper | | ████ | TimeOne | | Paul Borrill | Document in the house. |
| Engineering Paper | | ████ | TimeTwo | | Paul Borrill | Document in the house. |
| Technical Report | | | | | Paul Borrill | Document in the house. |
| Technical Proposal | | | | | Paul Borrill | Document in the house. |
| Technical Proposal | | | | | Paul Borrill | Document in the house. |
| Technical Proposal | | | | | REPLICUS Research | Document in the house. |

Confidential - Earth Computing, Inc.

EXHIBIT A

**PATENT**
**REEL: 055482 FRAME: 0654**

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)    Intellectual Assets  5.1  24-November 2020

## Engineering Documentation (Notes, code segments & Drawings) available on the following:

| Asset Type | Reference | Title | Description | Inventor(s) | Comments |
|---|---|---|---|---|---|
| Disclosure | December-2013 - March 2014 | Cryptographic Timing Methods for detecting Man-in-The-Middle Attacks. | Written notes. For provisional 4 (not yet filed) | | Document in the house. |
| Disclosure | December-2013 - March 2014 | On-the wire 2 x 2 matrix data structures for emulating entanglement with ENTL. | Written notes, equations, Mathematica notebooks, Numbers documents, Omnigraffle diagrams. | | Document in the house. |
| Disclosure | June 2012 | Methods for Tensor Network Operations for CO/EQ arithmetic verification after perturbations | Written notes, equations, Numbers documents. Omnigraffle diagrams. | | Document in the house. |
| Disclosure | October 2012 | Methods for Tensor Network hiding of privacy information while still being able to aggregate quantities and detect anomalous events. | Written notes. | | Document in the house. |
| Disclosure | Various (2007-2013) | Method of co-opting search engines like Google to perform indexing operations for distributed key-value data stores. | Written notes. | | Document in the house. |
| Disclosure | Various (2007-2013) | Cryptographic method to prevent search engines like Google discovering hidden key-value data store indexing data structures. | Written notes. | | Document in the house. |
| Disclosure | 2012 | Unfolding Data Structures. Distributed recursive stack for Metadata tensor (MDT) | Documents, diagrams, written notes. | | Document in the house. |

Confidential - Earth Computing, Inc.

**PATENT**
**REEL: 055482 FRAME: 0655**

EXHIBIT A

13 of 20

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)     Intellectual Assets   5.1   24-November 2020

| Asset Type | Reference | Title | Description | Inventor(s) | Comments |
|---|---|---|---|---|---|
| Disclosure | 2010 | Priority Queue Engine (PQE) | Documents, diagrams, written notes. | | Document in the house. |
| Disclosure | Various (2007-2013) | Combining redundancy resilience with geographic distribution and serendipitous replicas. | Documents, diagrams, written notes. | | Document in the house. |
| Disclosure | Various (2007-2013) | Method of independently managing identity and individuality in privacy based Metadata Tensor data structures | Documents, diagrams, written notes. | | Document in the house. |
| Disclosure | Various (2006-2013) | Hyper-evolvability. Method of utilizing STIS (temporal intimacy) to rapidly evolve security countermeasures/ | Written notes. | | Document in the house. |
| Disclosure | Various (2006-2013) | Windtunnel: Agent Modeling and Infrastructure. Bisimulation of real and simulated implementations sharing the same equipment. | Written notes. | | Document in the house. |
| Disclosure | Various (2005-2013) | Memory protection from stack overflows. Fill memory with Jump to Trap, with special significance, in between code above/below stack/heap. | Written notes. | | Document in the house. |
| Disclosure | Various (2009-2010) | RAID Replacement. Ingest/ Evaporate system on independent failure domains. | Written notes. | | Document in the house. |

EXHIBIT A

14 of 20

**PATENT**
**REEL: 055482 FRAME: 0656**

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)  Intellectual Assets  5.1  24-November 2020

| Asset Type | Reference | Title | Description | Inventor(s) | Comments |
|---|---|---|---|---|---|
| Disclosure | 2011 | Email (or other forwarding) - re-encrypting to allow copying but no reading until registered. | Written notes. | | Document in the house. |
| Disclosure | 2011 | Method to disable individual attackers in botnet. | Written notes. | | Document in the house. |
| Disclosure | March 2011 | Mobile cryptographic documents. Rotating and incrementing keys relative to root. | Written notes. | | Document in the house. |
| Disclosure | 2012 | Buffered Entangled State with snarfing. | Written notes. | | Document in the house. |
| Disclosure | SEP 2010 | Serendipitous replica management within the same storage device. | Written notes. | | Document in the house. |
| Disclosure | Various (2009-2010) | Technique for utilizing out of order and in-order concurrency opportunities in long-haul networks using SCTP and other protocols. | Written notes. | | Document in the house. |
| Disclosure | Various (2009-2010) | Serial Copy Management System using Dynamic Locality. | Written notes. | | Document in the house. |
| Disclosure | 2009 | Graph Theoretic Publish & Subscribe mechanisms for secure tree operation and negotiation of temporal intimacy. | Written notes. | | Document in the house. |

Confidential - Earth Computing, Inc.

EXHIBIT A

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)

Intellectual Assets 5.1 24-November 2020

| Asset Type | Reference | Title | Description | Inventor(s) | Comments |
|---|---|---|---|---|---|
| Disclosure | 2005 | Unified Replica Management: Patent Graph Replica Management Facility. | Extensive typed notes (printed - locate original doc on backup). | | Document in the house. |
| Disclosure | 2010 | Specialized repositories for legal escrows, immutable emails and priority dates for inventions | Written notes. | | Document in the house. |
| Disclosure | 2010 | Pipelined core processing for network operations | Written notes. | | Document in the house. |
| Disclosure | 2004 | Set based distributed replicas on a graph. | Written notes. | | Document in the house. |
| Disclosure | July 2010 | Business Object Tensor. The idea that you can anonymously thread through the MDT to accumulate totals, averages, etc. without violating privacy. | Written notes. | | Document in the house. |
| Disclosure | July 2011 | How to stop email spam. | Written notes. | | Document in the house. |
| Disclosure | 2005? | Self-organizing virus scanning. | Typed up disclosure. | | Document in the house. |
| Disclosure | 2006 | Automatic Capacity Balancing, Ice-Cube Tray self-leveling system | Written notes. | | Document in the house. |
| Disclosure | 2012 | Distributed Paxos election over multiple stacked trees | Written notes. Sufficient Disclosure prepared in slides. | | Document in the house. |
| Disclosure | 2012 | FPGA implementation of Entangled Links using emulated quantum circuits. | Written notes. | | Document in the house. |

Confidential - Earth Computing, Inc.

EXHIBIT A

16 of 20

Borrill (Replicus Software, REPLICUS Research, EARTH Computing Inc.)

Intellectual Assets 5.1 24-November 2020

| Asset Type | Reference | Title | Description | Inventor(s) | Comments |
|---|---|---|---|---|---|
| Disclosure | 2012 | WORC (Wire-Oriented Resilient Consistency) Protocol | Written notes. | | Document in the house. |
| Disclosure | 2012 | PLAY (Programmable Application Layer Yakking) Protocol | Written notes. Slides. | | Document in the house. |
| Disclosure | 2013 | Switchless routing using independent Ethernet Segments. Each Tree is a VLAN. | Written notes. | | Document in the house. |
| Disclosure | 2013 | Metadata Tensor. A data structure fan method for synchronizing and serializing updates to replicated objects on distributed computers. | Extensive notes, technical documents and designs. | | Document in the house. |
| Disclosure | 2013 | Reversible Time in IT Infrastructures using Reversible Links in Tensor Networks. | Written notes. | | Document in the house. |
| Disclosure | 2012 | Dynamic Lattice where one node is the (default) foci, but It may pass control to other nodes within its tree. | Written notes, technical design documents. | | Document in the house. |
| Disclosure | 2013 | Matrix with [a,-b;b,a] representing -1 as mutual information | Written notes, technical design documents. | | Document in the house. |
| Disclosure | 2013 | Surface/Core abstraction for Earth Computing. The Immutable Barrier for Robust IT Infrastructures. | Extensive notes, design documents and presentations. | | Document in the house. |

Borrili (Replicus Software, REPLICUS Research, EARTH Computing Inc.)

Intellectual Assets   5.1   24-November 2020

| Asset Type | Reference | Title | Description | Inventor(s) | Comments |
|---|---|---|---|---|---|
| Disclosure | 2013 | Cryptographic methods for Metadata Tensor privacy predicates. | Written notes. | | Document in the house. |

**DISCLAIMER: This list (pages 1 through 15) of Item 26 to Schedule AB is provided in the interest of full disclosure. Debtor makes no representation regarding whether anything listed constitutes intellectual property pursuant to Bankruptcy Code 101(35A), or includes any other property right**

Confidential - Earth Computing, Inc.

Page 15 of 15

**EXHIBIT A**

Patents/Patent Applications for Paul Borrill

In the interest of clarity, the Intellectual Property of Paul Borrill's includes the Estate's Interest, if any, in the following:

| Asset Type/Status | Date | Title | Reference # | Inventor | Physical Location |
|---|---|---|---|---|---|
| Patent Application Filed/Pending | 11/25/2019 | A GENERALIZED REVERSIBILITY FRAMEWORK FOR COMMON KNOWLEDGE IN SCALE-OUT DATABASE SYSTEMS | U.S. Application 16/694,054 Associated Provisional 62/773,558 | Paul Borrill | |
| Patent Application Filed/Pending | 4/20/2018 | CLASSICAL IMPLEMENTATION OF ENTANGLEMENT | U.S. Application No. 15/959,161 Associated Provisional 62/488,025 | Paul Borrill | |
| Patent Application Filed/Pending | 8/27/2017 | ENTANGLED LINKS, TRANSACTIONS AND TREES FOR DISTRIBUTED COMPUTING SYSTEMS | U.S. Application 15/687,529 Associated Application 14/331,225 | Paul Borrill | |
| Patent Application Filed/Pending | 5/17/2019 | | U.S. Application 16/414,781 Associated Application 15/687,529 | Paul Borrill | |

EXHIBIT A

19 of 20

**PATENT**
**REEL: 055482 FRAME: 0661**

| Patent Application Filed/Pending | | | Paul Borrill | Document in the house |
|---|---|---|---|---|
| 7/24/2008 | ATTACK AND DISASTER RESILIENT CELLULAR STORAGE SYSTEMS AND METHODS | U.S. Application 12/162,121 | | |
| 1/24/2007 | | International Patent PCT/US2007/061003 | | |
| 1/25/2006 | | Provisional Application 60/762,286 | | |

EXHIBIT A