

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5596130

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	SECURITY INTEREST	
CONVEYING PARTY DATA		
Name		Execution Date
EXAGRID SYSTEMS, INC.		06/28/2019
RECEIVING PARTY DATA		
Name:	ORIX GROWTH CAPITAL, LLC	
Street Address:	280 PARK AVENUE, 40 WEST	
City:	NEW YORK	
State/Country:	NEW YORK	
Postal Code:	10017	
PROPERTY NUMBERS Total: 20		
Property Type	Number	
Patent Number:	7925623	
Patent Number:	7246140	
Patent Number:	7593966	
Patent Number:	7246275	
Patent Number:	8412848	
Patent Number:	8812738	
Patent Number:	9223794	
Patent Number:	8589363	
Patent Number:	9430546	
Patent Number:	9223812	
Patent Number:	9703797	
Application Number:	15620246	
Application Number:	10303656	
Application Number:	13273080	
Application Number:	10114831	
Application Number:	14633366	
Application Number:	10073855	
Application Number:	14829885	
Application Number:	10067946	
Application Number:	15893163	

PATENT

CORRESPONDENCE DATA**Fax Number:** (860)275-8299

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.

Phone: 860-275-8285**Email:** jscheib@rc.com**Correspondent Name:** JACQUELINE P. SCHEIB**Address Line 1:** 280 TRUMBULL STREET**Address Line 2:** ROBINSON & COLE LLP**Address Line 4:** HARTFORD, CONNECTICUT 06103

NAME OF SUBMITTER:	JACQUELINE P. SCHEIB
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SIGNATURE:	/Jacqueline P. Scheib/
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DATE SIGNED:	06/28/2019
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Total Attachments: 8

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT (this “Agreement”), effective as of June 28, 2019, is made by and between **EXAGRID SYSTEMS, INC.**, a Delaware corporation (“Grantor”), and **ORIX GROWTH CAPITAL, LLC**, a Delaware limited liability company (“Lender”). Capitalized terms used in this Agreement which are not defined herein shall have the meanings set forth in the Loan Agreement (as defined below).

WHEREAS, Lender and Grantor are parties to that certain Loan and Security Agreement dated as of the date hereof (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Loan Agreement”); and

WHEREAS, pursuant to the Loan Agreement, Grantor has granted to Lender a security interest in all of its Collateral, including, without limitation, all Intellectual Property (including, without limitation, the Intellectual Property described herein).

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound, Grantor hereby represents, warrants, covenants and agrees as follows:

1. Grant of Security Interest. To secure all of Grantor’s Obligations to Lender, Grantor grants and pledges to Lender a security interest in all of Grantor’s right, title and interest in, to and under its Intellectual Property, including, without limitation: (a) the trademarks and servicemarks listed on **Schedule A** hereto, together with the goodwill connected with the use thereof and symbolized thereby, whether registered or not, and all applications to register and registrations of the same and like protections, but excluding the United States intent-to-use trademark applications to the extent that, and solely during the period in which, the grant of a security interest therein would impair, under applicable federal law, the registrability of such applications or the validity or enforceability of registrations issuing from such applications, (b) the patents and patent applications listed on **Schedule B** hereto and all like protections including, without limitation, all improvements, provisionals, divisionals, continuations, renewals, reissues, extensions and continuations-in-part of the same, (c) all copyrights, maskworks, software, computer programs and other works of authorship, whether registered or unregistered (including all works based on or derived from or incorporating) and including, without limitation, those registered copyrights listed on **Schedule C** hereto, and all extensions and renewals thereof, (d) all rights to recover for past or future infringement of any of the foregoing, (e) all domain name registrations, together with all goodwill of the business connected with or symbolized by the domain names, including, without limitation, those domain name registrations listed on **Schedule D** hereto, (f) all right, title and interest in and to any and all present and future license agreements with respect to any of the foregoing, (g) all present and future accounts, accounts receivable and other rights to payment arising from, in connection with or relating to any of the foregoing, (h) all proceeds and products of the foregoing, including, without limitation, all payments under insurance or any indemnity or warranty payable with respect to any of the foregoing; and (i) all rights of any kind whatsoever of Grantor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world.

2. Representations and Warranties. Grantor represents and warrants that: (a) listed on **Schedule A** hereto are all trademark and service mark registrations and pending trademark and service mark applications owned by Grantor, (b) listed on **Schedule B** are all issued patents and patent applications owned by Grantor, (c) listed on **Schedule C** are all copyright applications, and copyright

registrations owned by Grantor, and (d) listed on **Schedule D** are all domain name registrations owned by Grantor.

3. **Recordation.** Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any domain name registry or other government officials to record and register this Agreement upon request by Lender.

4. **Loan Documents.** This Agreement has been entered into pursuant to and in conjunction with the Loan Agreement, which is hereby incorporated by reference. The provisions of the Loan Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Lender with respect to the Collateral are as provided by the Loan Agreement and related documents, and nothing in this Agreement shall be deemed to limit such rights and remedies.

5. **Execution in Counterparts.** This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page to this Agreement by facsimile or in electronic (i.e., "pdf" or "tif" format) shall be effective as delivery of a manually executed counterpart of this Agreement.

6. **Successors and Assigns.** This Agreement will be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns.

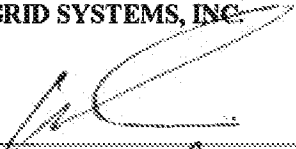
7. **Governing Law.** This Agreement and all acts, transactions disputes and controversies arising hereunder or relating hereto, and all rights and obligations of Lender and Grantor shall be governed by, and construed in accordance with the internal laws of the State of New York without regard to conflict of laws principles, provided that Lender shall retain all rights arising under federal law.

[signatures on next page]

IN WITNESS WHEREOF, intending to be legally bound, Grantor has caused this Agreement to be duly executed as of the date first above written.

GRANTOR:

EXAGRID SYSTEMS, INC.

By: 
Name: William Adams
Title: CEO

LENDER:

ORIX GROWTH CAPITAL, LLC

By: _____
Name: _____
Title: _____

[Signature Page to Intellectual Property Security Agreement]

IN WITNESS WHEREOF, intending to be legally bound, Grantor has caused this Agreement to be duly executed as of the date first above written.

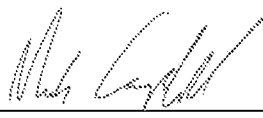
GRANTOR:

EXAGRID SYSTEMS, INC.

By: _____
Name:
Title:

LENDER:

ORIX GROWTH CAPITAL, LLC

By:  _____
Name: Mark Campbell
Title: Authorized Representative

SCHEDULE A

Registrant	Trademark	Status	Reg. No.	Reg. Date
ExaGrid Systems, Inc.	EXAGRID & Design	Registered	4672278	January 13, 2015
ExaGrid Systems, Inc.	EXAGRID	Registered	3785323	May 4, 2010
ExaGrid Systems, Inc.	EXAGRID	Registered	2989981	August 30, 2005

SCHEDULE B

US Patent	Description
7,925,623 4/12/11	METHOD AND APPARATUS FOR INTEGRATING PRIMARY DATA STORAGE WITH LOCAL AND REMOTE DATA PROTECTION (Therrien, Pownell, Kenna, VanderSpek, Hansen, Ramu, Sawyer) - Independent front-end landing space and back-end protection grid - Multi-site cross protection
7,246,140 7/17/07	METHOD AND APPARATUS FOR STORAGE SYSTEM TO PROVIDE DISTRIBUTED DATA STORAGE AND PROTECTION (Therrien, Pownell, Kenna, VanderSpek, Sawyer, Dougherty, Voegtlin, Greizerstein) - Reverse delta version chains - Byte-level deltas to reduce disk storage and inter-site WAN bandwidth
7,593,966 9/22/09	METHOD AND APPARATUS FOR SERVER SHARE MIGRATION AND SERVER RECOVERY USING HIERARCHICAL STORAGE MANAGEMENT (Therrien, Pownell, Kenna, VanderSpek, Hansen, Gilhooly, Evilia) - Faster DR from remote landing space - All backup tape files accessible to backup apps, even though landing space only maintains most recent backups.
7,246,275 7/17/07	METHOD AND APPARATUS FOR MANAGING DATA INTEGRITY OF BACKUP AND DISASTER RECOVERY DATA (Therrien, Pownell, Kenna, VanderSpek, Ramu, Berenson) Data and metadata check summing, with automated local and remote reconstruction of damaged data and metadata files.
8,412,848 4/2/13	METHOD AND APPARATUS FOR CONTENT-AWARE AND ADAPTIVE DEDUPLICATION (Therrien, Thompson) File Zone Affinity (FZA) – backup stream splitting and stamp creation, stamp-based similarity detection for downstream delta compression
8,812,738 8/19/14 CON of US'848	METHOD AND APPARATUS FOR CONTENT-AWARE AND ADAPTIVE DEDUPLICATION (Therrien, Thompson) This patent was awarded based on new claims related to zone stamp matching and zone stamp database management. It is related to patent 8,412,848 (continuation of US '848 patent)
9,223,794 12/29/15 CON of US'738	METHOD AND APPARATUS FOR CONTENT-AWARE AND ADAPTIVE DEDUPLICATION (Therrien, Thompson) This patent was awarded based on new claims related to zone stamp matching and zone stamp database management. It is related to patent 8,412,848 (continuation of US '738 patent)
8,589,363 11/19/13	SYSTEM AND METHOD FOR MANAGING DELTA VERSION CHAINS (Poirier, Sylva) Delta merge algorithm to dramatically accelerate the restoration of older historical versions of backup data by replacing time-consuming disk I/O operations with a computational accelerator.
9,430,546 8/30/16 CON of US'363	SYSTEM AND METHOD FOR MANAGING DELTA VERSION CHAINS (Poirier, Sylva) Delta merge algorithm to dramatically accelerate the restoration of older historical versions of backup data by replacing time-consuming disk I/O operations with a computational accelerator. (continuation of US '363 patent)
9,223,812 12/29/15	ADAPTIVE SCHEDULED PERIODIC CACHING (Therrien, VanderSpek, Chao, Poirier) - Increases data deduplication performance through the implementation of a backup-focused Solid-State Disk (SSD) / Magnetic Disk caching algorithm - Adaptive algorithm that conforms to differing customer backup workloads, schedules, and data periodicity
9,703,797 7/11/17	MULTI_LEVEL_DEDUPLICATION (Therrien, Chao, Hansen, Martinelli, Makosky, Hecker, Smith, VanderSpek) - Increases data deduplication ratio by performing a second deduplication pass on the data that did not match at the 8MB level at the 256KB level. - Improves overall performance by first attempting to match as many zones at the larger zone size.

Pending 15/620,246 06/12/17 CON of US'797	MULTI_LEVEL_DEDUPLICATION (Therrien, Chao, Hansen, Martinelli, Makosky, Hecker, Smith, VanderSpek) - Increases data deduplication ratio by performing a second deduplication pass on the data that did not match at the 8MB level at the 256KB level. - Improves overall performance by first attempting to match as many zones at the larger zone size. - Continuation of US '797 patent
10,303,656 5/29/2019	PARALLELIZING AND DEDUPLICATING BACKUP DATA (Therrien, Stickles, Gillispie, Andrews) This patent application describes the performance and fault tolerance benefits to ExaGrid's global deduplication algorithm in concert with applications like Oracle RMAN channels that can redirect backup content so as to load balance large database backups across a grid of appliances, and survive one or more appliance failures during the backup process.
Pending 13/273080 20130066868 10/13/11	SYSTEM AND METHOD FOR VERSION CHAIN CLUSTERING (Hecker, Ramu) Transaction clustering to improve purge and restore performance using reverse delta chains
10,114,831 10/30/18	DELTA VERSION CLUSTERING AND RE-ANCHORING (VanderSpek, Poirier, Makosky, Ramu, Hecker, Hansen, Therrien) - Anchoring/Re-anchoring with version clusters and Solid State Disk (SSD) caching to enable an increase in storage capacity per appliance - Offsite DR using simple cloud storage services
Allowed 20160253351 2/27/2019	SCALABLE GRID DEDUPLICATION (Hansen, Martinelli, Makosky, Hecker, Smith, VanderSpek, Therrien) - Global deduplication invention that allow data from all appliances to be deduplicated together - Enables Oracle RMAN and other large database backups to be split among multiple appliances using channels, while ensuring the data will be deduplicated.
10,073,855 9/11/18	DYNAMIC AND OPTIMIZED MANAGEMENT OF GRID RESOURCES (Chao, Watkins, Hansen, Smith, Arruda, VanderSpek) Adaptive deduplication balances the amount of backup ingestion with the amount of deduplication and replication within a grid server in order to optimize backup ingest performance while also offering the lowest recovery point objective for data replicated to a disaster recovery grid server.
Pending 20170060696 8/19/15	ADAPTIVE BANDWIDTH MANAGER (Wellnitz, Turner, Kirk, Packard) This patent application describes how ExaGrid load balances available WAN bandwidth across two or more grid servers in order to optimally utilize available bandwidth during site-to-site replication. The invention monitors each grid server's replication progress and adjusts all grid servers to either increase or decrease their respective contribution to replication traffic
10,067,946 9/4/18	NEXT-LEVEL MULTI-LEVEL DEDUPLICATION (VanderSpek, Martinelli, Therrien) - Deduplication of level-1 zones at a second level using improved zone identifiers - Continuation-in-part based on US'797 patent
Pending 15/893163 2/9/2018	IMPROVED DELTA COMPRESSION (VanderSpek, Tague) - Conditionally accelerate delta compression by leveraging x86 CRC computation - Improve the compression rate and the quality of matches in delta compression
Pending <i>Application number not issued.</i>	SYNTHETIC FULL BACKUPS AND DEDUPLICATION BACKUP STORAGE WITH LANDING ZONE (Shu-Tsui Tu, Thomas Gillispie, Adrian VanderSpek) This patent describes ExaGrid's product benefits of having a landing zone for the effective processing of synthetic full backups like NBU Accelerator, ...

SCHEDULE C

None.

SCHEDULE D

exagrid.ca	exagrid.de	exagrid.se
datadedupe.com	exagrid.dk	exagrid.sg
datadeduplication.com	exagrid.es	exagrid.sl
datadeduplication.net	exagrid.eu	exagrid.tw
exagrid.com	exagrid.fi	datadedup.com
exagrid.com	exagrid.fr	datadedup.net
exagrid.com.au	exagrid.gt	datadedupe.net
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exagrid.cz	exagrid.pt	