

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4569229

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
OVERLAND STORAGE, INC.	08/02/2017
SPHERE 3D CORP.	08/02/2017
SPHERE 3D INC.	08/02/2017
V3 SYSTEMS HOLDINGS, INC.	08/02/2017

RECEIVING PARTY DATA

Name:	OPUS BANK
Street Address:	19900 MACARTHUR BLVD, 12TH FLOOR
City:	IRVINE
State/Country:	CALIFORNIA
Postal Code:	92612

PROPERTY NUMBERS Total: 30

Property Type	Number
Application Number:	14505302
Patent Number:	5819309
Application Number:	13619394
Application Number:	14551543
Patent Number:	5931968
Patent Number:	9614931
Patent Number:	5898534
Patent Number:	6167550
Patent Number:	9542215
Application Number:	14636606
Patent Number:	5712863
Application Number:	13615236
Patent Number:	9665700
Patent Number:	9483285
Application Number:	13072622
Patent Number:	5815514
Application Number:	14605839

PATENT

Property Type	Number
Application Number:	13538636
Application Number:	11357742
Application Number:	15437971
Application Number:	14229368
Application Number:	14229497
Application Number:	14229381
Application Number:	15066179
Application Number:	15066478
Application Number:	15065251
Application Number:	13563603
Application Number:	13592243
Application Number:	11388402
Application Number:	14720553

CORRESPONDENCE DATA

Fax Number: (213)996-3305

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: 2136836305

Email: williamwolff@paulhastings.com

Correspondent Name: WILLIAM WOLFF

Address Line 1: 515 SOUTH FLOWER STREET

Address Line 2: 25TH FLOOR

Address Line 4: LOS ANGELES, CALIFORNIA 90071

NAME OF SUBMITTER: WILLIAM WOLFF

SIGNATURE: /William Wolff/

DATE SIGNED: 08/28/2017

Total Attachments: 7

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**IP SECURITY AGREEMENT SUPPLEMENT NUMBER TWO TO INTELLECTUAL
PROPERTY SECURITY AGREEMENT**

This **IP SECURITY AGREEMENT SUPPLEMENT NUMBER TWO TO INTELLECTUAL PROPERTY SECURITY AGREEMENT**, dated as of August 2, 2017 (this "Supplement"), is delivered pursuant to that certain Intellectual Property Security Agreement, dated April 6, 2016 (as amended, restated, supplemented, or otherwise modified from time to time, the "Intellectual Property Security Agreement"), among Grantors listed on the signature pages thereof (collectively, jointly and severally, "Grantors" and each individually "Grantor"), and **OPUS BANK**, a California commercial bank ("Lender") as Lender. Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Intellectual Property Security Agreement, which by this reference is incorporated herein.

WHEREAS, with respect to Patents, (i) the Intellectual Property Security Agreement was recorded with the United States Patent and Trademark Office on April 18, 2016, at Reel 038306, Frame 0035, and (ii) that certain IP Security Agreement Supplement Number One to Intellectual Property Security Agreement, dated June 20, 2017 among Grantors and Lender ("IP Supplement Number One"), recorded with the United States Patent and Trademark Office on June 20, 2017, at Reel 042921, Frame 0674;

WHEREAS, with respect to Trademarks, (i) the Intellectual Property Security Agreement was recorded with the United States Patent and Trademark Office on April 18, 2016, at Reel 5772, Frame 0973, and (ii) IP Supplement Number One, recorded with the United States Patent and Trademark Office on July 20, 2017 at Reel 6088, Frame 0200;

WHEREAS, the Grantors and the Lender wish to supplement the Intellectual Property Security Agreement by supplementing Schedule A to the Intellectual Property Security Agreement to add the Patents appearing on Schedule A hereto, and have agreed to do so;

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree to supplement the Intellectual Property Security Agreement as follows:

1. Each Grantor and Lender hereby agree that Schedule A to the Intellectual Property Security Agreement is hereby supplemented by adding the Patents appearing on Schedule A attached hereto (the "Additional Patents"), and such Additional Patents shall be and become part of the Collateral referred to in the Intellectual Property Security Agreement and Schedule A attached thereto and shall secure all Obligations.

2. Each Grantor hereby: (a) reaffirms all prior grants of security interests in favor of Lender in all of such Grantor's right, title, and interest in, to, and under the Patents identified on Schedule A to the Intellectual Property Security Agreement prior to the effectiveness of this Supplement, (b) grants, assigns, and pledges to Lender, continuing security interests in all of such Grantor's right, title, and interest in, to, and under the Additional Patents identified on Schedule A attached hereto, (c) represents and warrants that the representations and warranties in the Intellectual Property Security Agreement, as amended by this Supplement, are true and correct in all material respects on and as of the date hereof, as though made on such date; and (d) agrees that the Intellectual Property Security Agreement, as supplemented hereby, is and shall remain in full force and effect.

3. **THE VALIDITY OF THIS SUPPLEMENT, THE CONSTRUCTION, INTERPRETATION, AND ENFORCEMENT HEREOF, AND THE RIGHTS OF THE PARTIES HERETO WITH RESPECT TO ALL MATTERS ARISING HEREUNDER OR RELATED**

HERETO SHALL BE DETERMINED UNDER, GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA.

4. This Supplement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Supplement. Delivery of an executed counterpart of this Supplement by telefacsimile or other electronic method of transmission shall be equally as effective as delivery of an original executed counterpart of this Supplement. Any party delivering an executed counterpart of this Supplement by telefacsimile or other electronic method of transmission also shall deliver an original executed counterpart of this Supplement but the failure to deliver an original executed counterpart shall not affect the validity, enforceability, and binding effect of this Supplement.


5. This Supplement is a Loan Document.

[signature pages follow]


IN WITNESS WHEREOF, the undersigned Grantors hereto have executed this Supplement by and through their duly authorized officers, as of the day and year first above written.

GRANTORS:


OVERLAND STORAGE, INC., a California corporation

By: 
Name: Kurt Kalbfleish
Title: SVP and CFO


SPHERE 3D CORP., a corporation organized under the laws of Ontario Canada

By: 
Name: Kurt Kalbfleish
Title: SVP and CFO

SPHERE 3D INC., a corporation organized under the laws of Canada

By: 
Name: Kurt Kalbfleish
Title: SVP, CFO, and Secretary


V3 SYSTEMS HOLDINGS, INC., a Delaware corporation

By: 
Name: Kurt Kalbfleish
Title: Secretary and CFO

ACCEPTED AND ACKNOWLEDGED TO:

LENDER:

OPUS BANK, a California commercial bank

By: 
Name: _____
Title: *CEO*

[SIGNATURE PAGE TO IP SECURITY AGREEMENT SUPPLEMENT NUMBER TWO TO INTELLECTUAL PROPERTY SECURITY AGREEMENT]

SCHEDULE A

PATENTS:

Country	Title	Owner	Patent No./Publication No.
U.S.	APPARATUS AND METHOD FOR PERFORMING SNAPSHOTS OF BLOCK-LEVEL STORAGE DEVICES	OVERLAND STORAGE INC ;	2016098413
U.S.	Automated tape cartridge library with accelerated calibration	Overland Storage, Inc.	5819309
U.S.	DATA PROTECTION SYSTEMS WITH MULTIPLE SITE REPLICATION	OVERLAND STORAGE INC	2006200506
U.S.	DATA PROTECTION SYSTEMS WITH MULTIPLE SITE REPLICATION	OVERLAND STORAGE INC	2013019074
U.S.	DATA PROTECTION WITH MULTIPLE SITE REPLICATION	OVERLAND STORAGE INC ;	2015081995
U.S.	DIGITAL DATA RECORDING CHANNEL	Overland Storage, Inc.	5931968
U.S.	IDENTIFYING A RESOURCE SET REQUIRE FOR A REQUESTED APPLICATION AND LAUNCHING THE RESOURCE SET IN A CONTAINER FOR EXECUTION IN A HOST OPERATING SYSTEM	SPHERE 3D INC ;	9614931
U.S.	Method and system for controlling the position of a magnetic read head	Overland Storage, Inc.	5898534
U.S.	METHOD OF WRITING DATA TO STORAGE MEDIUM BY INSERTING BITS AT A VARIABLE RATE IN RESPONSE TO BIT STREAM CONTENT MONITORING	Overland Storage, Inc.	6167550
U.S.	METHODS AND SYSTEMS FOR PROVIDING SOFTWARE APPLICATIONS	SPHERE 3D INC ;	2017163553
U.S.	MIGRATING VIRTUAL MACHINES FROM A SOURCE	V3 Systems Holdings, Inc.	9542215

Country	Title	Owner	Patent No./Publication No.
	PHYSICAL SUPPORT ENVIRONMENT TO A TARGET PHYSICAL SUPPORT ENVIRONMENT USING MASTER IMAGE AND USER DELTA COLLECTIONS		
U.S.	PARALLEL ASYNCHRONOUS DATA REPLICATION	OVERLAND STORAGE INC ;	2016259836
U.S.	Randomizing encoder for digital data storage	Overland Storage, Inc.	5712863
U.S.	SYSTEMS AND METHODS FOR CONTEXTUALLY ALLOCATING EMULATION RESOURCES	SPHERE 3D INC	2016266916
U.S.	SYSTEMS AND METHODS FOR LOAD BALANCING DRIVES AND SERVERS	OVERLAND STORAGE INC	2013060948
U.S.	SYSTEMS AND METHODS FOR MANAGING EMULATION RESOURCES	SPHERE 3D INC ;	2014297249
U.S.	SYSTEMS AND METHODS FOR PROVIDING AN EMULATION OF A COMPUTER PRODUCT	SPHERE 3D INC	2016266915
U.S.	SYSTEMS AND METHODS FOR SELECTING BETWEEN EMULATED AND NON-EMULATED RESOURCES FOR PROVIDING AN EMULATION SESSION	SPHERE 3D INC	2016266914
U.S.	SYSTEMS AND METHODS OF MANAGING ACCESS TO REMOTE RESOURCES	SPHERE 3D INC ;	9665700
U.S.	SYSTEMS AND METHODS OF OPTIMIZING RESOURCES FOR EMULATION	SPHERE 3D INC ;	9483285
U.S.	SYSTEMS AND METHOD FOR STORING PARITY GROUPS	Overland Storage, Inc.	2011314219
U.S.	VARIABLE RATE BIT INSERTER FOR DIGITAL DATA STORAGE	Overland Storage, Inc.	5815514

Country	Title	Owner	Patent No./Publication No.
U.S.	VIRTUAL MACHINE MIGRATION INTO THE CLOUD	V3 SYSTEMS HOLDINGS INC ; V3 SYSTEMS INC	2014040888
U.S.	VIRTUAL MACHINE STATE TRACKING USING OBJECT BASED STORAGE	V3 SYSTEMS HOLDINGS INC ; V3 SYSTEMS INC	2014059538
U.S.	Directory information for managing data in network file system	OVERLAND STORAGE, INC.	20060173956
U.S.	MICROVISOR RUN TIME ENVIRONMENT OFFLOAD PROCESSOR	SPHERE 3D CORPORATION	20150339128
U.S.	SYSTEMS AND METHODS FOR ACCESSING REMOTE RESOURCES FOR EMULATION	SPHERE 3D INC.	20140297251
U.S.	SYSTEMS AND METHODS FOR LOAD BALANCING DRIVES AND SERVERS BY PUSHING A COPY OF A FREQUENTLY ACCESSED FILE TO ANOTHER DISK DRIVE	OVERLAND STORAGE, INC.	20150142869
U.S.	Systems and Methods for Providing an Emulator	SPHERE 3D INC.	20140297250
U.S.	SYSTEMS AND METHODS FOR STORING PARITY GROUPS	OVERLAND STORAGE, INC.	20120303685