505421721 04/10/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5468512

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GUILHERME MENEZES	09/28/2015
FABIANO BOTELHO	12/02/2015
ABDULLAH REZA	09/28/2015

RECEIVING PARTY DATA

Name:	EMC CORPORATION	
Street Address:	176 SOUTH STREET	
City:	HOPKINTON	
State/Country:	MASSACHUSETTS	
Postal Code:	01748	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16380815

CORRESPONDENCE DATA

Fax Number: (801)328-1707

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: 801-533-9800 Email: vso@wnlaw.com

WORKMAN NYDEGGER Correspondent Name: Address Line 1: 60 EAST SOUTH TEMPLE

Address Line 2: **SUITE 1000**

Address Line 4: SALT LAKE CITY, UTAH 84111

ATTORNEY DOCKET NUMBER:	20721.6.1
NAME OF SUBMITTER:	PETER F. MALEN JR.
SIGNATURE:	/Peter F. Malen Jr./
DATE SIGNED:	04/10/2019

Total Attachments: 6

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> **PATENT** REEL: 048851 FRAME: 0647 505421721

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PATENT REEL: 048851 FRAME: 0648

PATENT Assignment EMC Docket No.: EMC-15-0022 Atty Docket No.: 16192.160

ASSIGNMENT

WHEREAS, I/we, Guilherme Menezes, Fabiano Botelho, and Abdullah Reza have invented an invention comprising and/or embodying certain improvements or discoveries or both as described in an application for Letters Patent of the United States entitled SYSTEM AND METHOD FOR EFFICIENTLY MEASURING PHYSICAL SPACE FOR AN AD-HOC SUBSET OF FILES IN PROTECTION STORAGE FILESYSTEM WITH STREAM SEGMENTATION AND DATA DEDUPLICATION, the specification of which:

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£ *.3	States Patent Office;	
	was filed on	as U.S. Application No;
	was patented under U.S. Patent	Noonon
	,	nafter "ASSIGNEE"), a corporation organized and of Massachusetts and having a usual place of

is being executed on even date herewith and is about to be filed in the United

existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts 01748 desires to acquire an interest therein in accordance with agreements duly entered into with me/us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, I/we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by me/us had this assignment and sale not been made; I/we hereby convey to ASSIGNEE all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. I/We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, I/we hereby further agree for myself/ourselves and my/our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and

PATENT Assignment EMC Docket No.: EMC-18-0022 Atty Docket No.: 16192.160

charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, I/we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, I/we have hereunto set my/our hands and affixed my/our seals as set forth below:

PATENT Assignment EMC Docket No.: EMC-15-0022 Atty Docket No.: 16192.160

Date: 99/28/201	5 Jelling LE Mange
Print full name of first invent-	or: Guilherme Menezes
Residence:	Santa Clara, CA 95054
Citizenship:	Brazil
Mailing Address:	1535 Vista Club Cir. #104
	Santa Clara, CA 95054
om sam can	
STATE OF	Canta 12. m
COUNTY OF	
who proved to me on the basisubscribed to the within instring in his/her/their authorized cape the person(s), or the entity up	Itember, 20 ¹⁵ , before me appeared Guilherme Menezes is of satisfactory evidence to be the person(s) whose name(s) is/as sument and acknowledged to me that he/she/bey executed the same pacity(ies), and that by his/ber/thefir signature(s) on the instrument on behalf of which the person(s) acted, executed the instrument. FPERJURY under the laws of the State of California that the indicorrect.
WITNESS my hand and offic	cial seal.
	Deenu J Vantas
	Notary Public
	Print Name: Classe L. Sastas
	My Commission expires $8/21/201$
	OF ANNA L. SANTOS Commission # 1986108 Notery Public - Californis Santa Clara County My Comm. Expires Aug 21, 2016

PATENT Assignment EMC Docket No.: EMC-15-0022 Atty Docket No.: 16192.160

Date:	09/28/201	5 MR31
		Inventor's Signature
Print full name	of third inventor:	Abdullah Reza
Residence:		Santa Clara, CA 95051
Citizenship:		Bangladesh
Mailing Addre	SS:	3333 Cabrillo Ave. #123
		Santa Clara, CA 95051
ST	ATE OF	
	NTY OF	rasa Clara
subscribed to the subscribed to the his/hear the person(s), or a continuous subscribed to the person subscribed to the person subscribed to the subscribed t	he within instrument an authorized capacity(ies or the entity upon behal	ifactory evidence to be the person(s) whose name(s) is and acknowledged to me that he/sharther executed the same is), and that by his/heraker signature(s) on the instrument if of which the person(s) acted, executed the instrument. IRY under the laws of the State of California that the est.
WITNESS my	hand and official scal.	
		Notary Public Print Name: Delana L. Santes My Commission expires 8 / 21 / 2016 OEANNA L. SANTOS Commission # 1986108 Notary Public - California Santa Clars County

PATENT Assignment EMC Docket No.: EMC-15-0022 Atty Docket No.: 16192,160

ASSIGNMENT

WHEREAS, I/we, Guilherme Menezes, Fabiano Botelho, and Abdullah Reza have invented an invention comprising and/or embodying certain improvements or discoveries or both as described in an application for Letters Patent of the United States entitled SYSTEM AND METHOD FOR EFFICIENTLY MEASURING PHYSICAL SPACE FOR AN AD-HOC SUBSET OF FILES IN PROTECTION STORAGE FILESYSTEM WITH STREAM SEGMENTATION AND DATA DEDUPLICATION, the specification of which:

	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[X]	was filed on September 30, 2015 as U.S. Application No. 14/871,109;
[]	was patented under U.S. Patent Noon

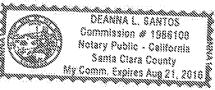
WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts 01748 desires to acquire an interest therein in accordance with agreements duly entered into with me/us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, I/we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by me/us had this assignment and sale not been made; I/we hereby convey to ASSIGNEE all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. I/We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, I/we hereby further agree for myself/ourselves and my/our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and

PATENT Assignment EMC Docket No.: EMC-15-0022 Atty Docket No.: 16192,160

Date: 12/02/15	
	Inventor's Signature
Print full name of second inventor:	Fabiano Botelho
Residence;	San Ramon, CA 94583
Citizenship:	Brazil
Mailing Address:	3344 Chartwell St.
	San Ramon, CA 94583
STATE OF CA	Llaca
subscribed to the within instrument and acknown his/per/their authorized capacity(ies), and the	20/5, before me appeared Fabiass Cupenno Bole/ko evidence to be the person(s) whose name(s) is/are owledged to me that he/she/they executed the same hat by his/her/their signature(s) on the instrument ich the person(s) acted, executed the instrument.
foregoing paragraph is true and correct.	ce the laws of the State of Cautornia that the
WITNESS my hand and official seal.	
	Alama J. Santas
	Notary Public Print Name: Lana L. Santas
	Print Name: Delana L. Santos
	My Commission expires 2 / 24/ 28/6
	Antiminiminiminiminiminiminiminiminiminim



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