505591526 07/26/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5638326

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
BOB THURSTON	07/19/2019
MICHAEL BAILEY	07/19/2019
DAVID WYMAN	07/19/2019
STEPHEN SINGER	07/24/2019
MARC SLATER	07/22/2019
IOSIF GRIGORYEV	07/23/2019
CESAR ARRIAGA	07/17/2019
LUIS DIAZ	07/23/2019
NATHAN BARNFIELD	07/23/2019

RECEIVING PARTY DATA

Name:	FMR LLC
Street Address:	245 SUMMER STREET
City:	BOSTON
State/Country:	MASSACHUSETTS
Postal Code:	02210

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16502406

CORRESPONDENCE DATA

Fax Number: (617)526-9899

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: 6175269635

Email:sdwhite@proskauer.comCorrespondent Name:PROSKAUER ROSE LLPAddress Line 1:ONE INTERNATIONAL PLACE

Address Line 4: BOSTON, MASSACHUSETTS 02110

ATTORNEY DOCKET NUMBER: FID-361

NAME OF SUBMITTER: XIN HU RASMUSSEN

PATENT REEL: 049870 FRAME: 0461

505591526

SIGNATURE:	/Xin Hu Rasmussen, #63,264/	
DATE SIGNED:	07/26/2019	
	This document serves as an Oath/Declaration (37 CFR 1.63).	
Total Attachments: 18		
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INVENTOR(S): Thurston et al. CONFIRMATION NO.: 9449

APPLICATION NO.: 16/502,406 FILING DATE: July 3, 2019

TITLE: Systems and Methods for a Data Center Monitoring System

DECLARATION PURSUANT TO 37 C.F.R. § 1.63 AND ASSIGNMENT

I. DECLARATION

As the below named inventor, I hereby make the following declarations with respect to the above-identified patent application:

The above-identified application was made or authorized to be made by me;

I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-identified application;

I hereby state that I have reviewed and understand the contents of the above-identified application, including the claims;

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in 37 C.F.R. § 1.56, including for continuation-in-part applications, material information known by me which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application; and

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT

WHEREAS, I, Bob Thurston, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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 have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with my entire right, title and interest in and to said application and such letters patent as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said application or such letters patent, and any right, title and interest I may have in provisional applications to which said application claims priority; said invention(s), applications 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 had this assignment and sale not been made. I hereby convey all of my rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

industrial property by filing any such applications for letters patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment. I hereby acknowledge that this assignment, being of my entire right, title and interest in and to said invention(s), 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 letters patent to ASSIGNEE in its own name as assignee of my entire right, title and interest therein.

I hereby further agree for myself and my 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(s) to said ASSIGNEE, its successors, assigns, and legal representatives, but at its or their expense and charges, including the execution of non-provisional, substitution, continuation, divisional, reissue, reexamination, or corresponding foreign or international patent applications.

I hereby further agree to provide statements or testimony in any interference or other proceeding in which said invention(s) or any application or patent directed thereto may be involved.

I hereby authorize and request the Director of the United States Patent and Trademark Office to issue such letters patent as shall be granted upon said application, or applications based thereon, to said ASSIGNEE, its successors, assigns, or legal representatives.

IN TESTIMO	NY WHEREOF, I h	have hereunto set my har	nd-and affixed my se	al on the date set	
forth below.			aki miningananani		
		Turrantana	///	[]	
		Inventor:	Bob Thurston		
NOTARIZATION					
State/Commonwealth					
County of Middle	kX)s	SS			
On this <u>/</u> 9 day personally appeared <u>Bowas/were <u>INA Day roo</u> or attached document in</u>	<u>rs-liense</u>	, 2019 before me, to me through satisfacto , to be the person , Notary Notary My-Comn	whose name is signed	ry public, fication, which for the preceding AINE, MUNUMY 1/2024 Notaky	, Viz
WITNESS					i.
Witness Signature:					
Witness Name:					
Witness Date:					
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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT

WHEREAS, I, Michael Bailey, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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 have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with my entire right, title and interest in and to said application and such letters patent as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said application or such letters patent, and any right, title and interest I may have in provisional applications to which said application claims priority; said invention(s), applications 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 had this assignment and sale not been made. I hereby convey all of my rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

industrial property by filing any such applications for letters patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment. I hereby acknowledge that this assignment, being of my entire right, title and interest in and to said invention(s), 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 letters patent to ASSIGNEE in its own name as assignee of my entire right, title and interest therein.

I hereby further agree for myself and my 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(s) to said ASSIGNEE, its successors, assigns, and legal representatives, but at its or their expense and charges, including the execution of non-provisional, substitution, continuation, divisional, reissue, reexamination, or corresponding foreign or international patent applications.

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III. SIGNATURE BLOCK

IN TESTIMONY WHEREOF, I have hereunto set my hand-and affixed my seal on the date set forth below. Inventor: <u>NOTARIZATION</u> State/Commonwealth of Varth Combine)
County of Wake On this 12dday of ____ ____. 2019 before me, the undersigned notary public, personally appeared Michael Bailey, proved to me through satisfactory evidence of identification, which Devec Literie, to be the person whose name is signed on the preceding was/were //C or attached document in my presence JONATHAN A BEACHY Notary Public Wake Co., North Carolina Notary Public My Commission Expires Sept. 30, 2023 My Commission Expires: WITNESS Witness Signature: Witness Name: Witness Date:

INVENTOR(S): Thurston et al. CONFIRMATION NO.: 9449

APPLICATION NO.: 16/502,406 FILING DATE: July 3, 2019

TITLE: Systems and Methods for a Data Center Monitoring System

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I hereby state that I have reviewed and understand the contents of the above-identified application, including the claims;

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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT

WHEREAS, I, David Wyman, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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 have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with my entire right, title and interest in and to said application and such letters patent as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said application or such letters patent, and any right, title and interest I may have in provisional applications to which said application claims priority; said invention(s), applications 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 had this assignment and sale not been made. I hereby convey all of my rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

industrial property by filing any such applications for letters patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment. I hereby acknowledge that this assignment, being of my entire right, title and interest in and to said invention(s), 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 letters patent to ASSIGNEE in its own name as assignee of my entire right, title and interest therein.

I hereby further agree for myself and my 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(s) to said ASSIGNEE, its successors, assigns, and legal representatives, but at its or their expense and charges, including the execution of non-provisional, substitution, continuation, divisional, reissue, reexamination, or corresponding foreign or international patent applications.

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III. SIGNATURE BLOCK	
IN TESTIMONY WHEREOF, I have hereunto set my hand-and affixed my seal on the date set forth below. Inventor: David Wyman	
NOTARIZATION	
State/Commonwealth of New Hempshire County of 3 trafford) ss	
On this 17 day of July , 2019 before me, the undersigned notary public, personally appeared David Wyman, proved to me through satisfactory evidence of identification, which was/were 51 are arrest 10 , to be the person whose name is signed on the preceding or attached document in my presence.	
my willie	
Notary Public My Commission Expires: 913119	
WITNESS	
Witness Signature: RORY V WILKIE	34
Witness Name: Notary Public, New Hampshire My Commission Expires Sep 3, 20	
Witness Date:	3
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INVENTOR(S): Thurston et al. CONFIRMATION NO.: 9449

APPLICATION NO.: 16/502,406 FILING DATE: July 3, 2019

TITLE: Systems and Methods for a Data Center Monitoring System

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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT

WHEREAS, I, Stephen Singer, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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 have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with my entire right, title and interest in and to said application and such letters patent as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said application or such letters patent, and any right, title and interest I may have in provisional applications to which said application claims priority; said invention(s), applications 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 had this assignment and sale not been made. I hereby convey all of my rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

industrial property by filing any such applications for letters patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment. I hereby acknowledge that this assignment, being of my entire right, title and interest in and to said invention(s), 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 letters patent to ASSIGNEE in its own name as assignee of my entire right, title and interest therein.

I hereby further agree for myself and my 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(s) to said ASSIGNEE, its successors, assigns, and legal representatives, but at its or their expense and charges, including the execution of non-provisional, substitution, continuation, divisional, reissue, reexamination, or corresponding foreign or international patent applications.

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	Inventor:	Stephen Singer
<u>NOTARIZATION</u>		
State/Commonwealth of NH County of Hilbrown)	ss	
On this 24 day of	ed to me through satisfactory	evidence of identification, which se name is signed on the preceding
	Land	. memb
	Notary Public	
	My Commissi	HOTARY PUBLIC, NEW HAMPSHIRE
WITNESS		COMMISSION EXPIRES 11/18 202
Witness Signature:		Mommun
Witness Name:		
Witness Date:		_ NOTARY I
		NOTARY PUBLIC
		NEW HAMMIN

INVENTOR(S): Thurston et al. CONFIRMATION NO.: 9449

APPLICATION NO.: 16/502,406 FILING DATE: July 3, 2019

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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT

WHEREAS, I, Marc Slater, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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 have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with my entire right, title and interest in and to said application and such letters patent as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said application or such letters patent, and any right, title and interest I may have in provisional applications to which said application claims priority; said invention(s), applications 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 had this assignment and sale not been made. I hereby convey all of my rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

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IN TESTIMONY WHEREOF, I have forth below.	hereunto set my hand-and affixed my seal on the date set
	Inventor: Marc Lluta Marc Slater
NOTARIZATION	
State/Commonwealth of NH) County of Hills borough) ss On this 22 day of July personally appeared Marc Slater, proved to mas/were NHL 1979152) or attached document in my presence.	, 2019 before me, the undersigned notary public, through satisfactory evidence of identification, which, to be the person whose name is signed on the preceding Notary Public My Commission Expires: Sep 7 2021
WITNESS	
Witness Signature:	
Witness Name:	JOHANNY C. TAVAREZ-GRULLON, Notary Public
Witness Date:	State of New Hampshire My Commission Expires September 7, 2021

INVENTOR(S): Thurston et al. CONFIRMATION NO.: 9449

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II. ASSIGNMENT

WHEREAS, I, Iosif Grigoryev, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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III. SIGNATURE BLOCK	
IN TESTIMONY WHEREOF, I have hereunto set my hand-and affix forth below.	ed my seal on the date set
Inventor:	Josef S.
NOTARIZATION Iosif	Grigorfev
State/Commonwealth of Perus 2 (AND) ss	
On this 23day of July, 2019 before me, the undersign	oned notary public
personally appeared <u>Iosif Grigoryev</u> , proved to me through satisfactory eviden	
was/were, to be the person whose name	
or attached document in my presence.	Instru
Notary Public My Commission Exp พายมณ ฮ	ires: <u>August 3⁶⁰, 2021</u>
WITNESS (M. 100) (D. 111)	
Witness Signature:	COMMONWEALTH OF PENNSYLVANIA
Witness Name: Mark Heyman	NOTARIAL SEAL WILLIAM E. TROUTMAN, NOTARY Public
Witness Date: 2/23/19	Lower Pottsgrove Twp., Montgomery County My Commission Expires August 3, 2021

INVENTOR(S): Thurston et al. CONFIRMATION NO.: 9449

APPLICATION NO.: 16/502,406 FILING DATE: July 3, 2019

TITLE: Systems and Methods for a Data Center Monitoring System

DECLARATION PURSUANT TO 37 C.F.R. § 1.63 AND ASSIGNMENT

I. DECLARATION

As the below named inventor, I hereby make the following declarations with respect to the above-identified patent application:

The above-identified application was made or authorized to be made by me;

I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-identified application;

I hereby state that I have reviewed and understand the contents of the above-identified application, including the claims;

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in 37 C.F.R. § 1.56, including for continuation-in-part applications, material information known by me which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application; and

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT

WHEREAS, I, Cesar Arriaga, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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 have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with my entire right, title and interest in and to said application and such letters patent as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said application or such letters patent, and any right, title and interest I may have in provisional applications to which said application claims priority; said invention(s), applications 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 had this assignment and sale not been made. I hereby convey all of my rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

industrial property by filing any such applications for letters patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment. I hereby acknowledge that this assignment, being of my entire right, title and interest in and to said invention(s), 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 letters patent to ASSIGNEE in its own name as assignee of my entire right, title and interest therein.

I hereby further agree for myself and my 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(s) to said ASSIGNEE, its successors, assigns, and legal representatives, but at its or their expense and charges, including the execution of non-provisional, substitution, continuation, divisional, reissue, reexamination, or corresponding foreign or international patent applications.

I hereby further agree to provide statements or testimony in any interference or other proceeding in which said invention(s) or any application or patent directed thereto may be involved.

I hereby authorize and request the Director of the United States Patent and Trademark Office to issue such letters patent as shall be granted upon said application, or applications based thereon, to said ASSIGNEE, its successors, assigns, or legal representatives.

IN TESTIMONY WHEREOF, I have forth below.	we hereunto set my hand-and affixed my seal on the date set
	Inventor: Low Writings
<u>NOTARIZATION</u>	
State/Commonwealth of Juxar) County of Januart) ss	
On this 17 day of 4 ulu personally appeared Cesar Arriaga, proved to was/were 1000 Lo 100 TERRIG. RAY MY COMMISSION EXPIRE September 2, 2019	, 2019 before me, the undersigned notary public, o me through satisfactory evidence of identification, which to be the person whose name is signed on the preceding Notary Public My Commission Expires: 9-02-19
Witness Signature:	
Witness Name:	
Witness Date:	

INVENTOR(S): Thurston et al. CONFIRMATION NO.: 9449

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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT

WHEREAS, I, Luis Diaz, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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 have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with my entire right, title and interest in and to said application and such letters patent as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said application or such letters patent, and any right, title and interest I may have in provisional applications to which said application claims priority; said invention(s), applications 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 had this assignment and sale not been made. I hereby convey all of my rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

industrial property by filing any such applications for letters patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment. I hereby acknowledge that this assignment, being of my entire right, title and interest in and to said invention(s), 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 letters patent to ASSIGNEE in its own name as assignee of my entire right, title and interest therein.

I hereby further agree for myself and my 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(s) to said ASSIGNEE, its successors, assigns, and legal representatives, but at its or their expense and charges, including the execution of non-provisional, substitution, continuation, divisional, reissue, reexamination, or corresponding foreign or international patent applications.

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IN TESTIMONY WHERE of forth below.	OF, I have her	eunto set my hand-and	l affixed my seal on the date set
		Inventor:	Luis Diaz
NOTARIZATION			
State/Commonwealth of County of)) ss		
On this 23 day of July personally appeared Luis Diaz, prowwas/were Texas DL or attached document in my presence	ed to me throu	gh satisfactory evidents to be the person whose whose whose with the person whose whose whose whose whose whose whose whose who will be a second with the person whose w	
WITNESS			
Witness Signature:	· · ··= · · · · · · · · · · · · · · · ·		
Witness Name:	·		ELLEN AUDREY WASCHKA Notary Public, State of Texas
Witness Date:			Comm. Expires 12-10-2022

INVENTOR(S): Thurston et al. CONFIRMATION NO.: 9449

APPLICATION NO.: 16/502,406 FILING DATE: July 3, 2019

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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. ASSIGNMENT

WHEREAS, I, Nathan Barnfield, have invented, solely or jointly, one or more inventions described in the above-identified patent application for letters patent; and

WHEREAS, FMR LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware, and having a usual place of business at 245 Summer Street, Boston, MA 02210, desires to acquire an interest therein, in accordance with agreements duly entered into with me.

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 have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with my entire right, title and interest in and to said application and such letters patent as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said application or such letters patent, and any right, title and interest I may have in provisional applications to which said application claims priority; said invention(s), applications 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 had this assignment and sale not been made. I hereby convey all of my rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of

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forth below.	AL NU
	Inventor:
<u>NOTARIZATION</u>	Nathan Barnfield
State/Commonwealth of)	
County of) ss	
personally appeared Nathan Barnfield, proved which was/were Dicessed Dicessed Proceeding or attacked document in my presence of MARIO MORA RET. Notary Public STATE OF TEXAS NOTARY ID # 1311 [19] (See 1) [19] (See	Notary Public My Commission Expires: 5 1 2 121
WITNESS	to [fffig]
Witness Signature:	
Witness Name:	
Witness Date:	

PATENT REEL: 049870 FRAME: 0480

RECORDED: 07/26/2019