

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5353730

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
CHANGJIU SHAO	12/24/2018
YANYU XU	12/24/2018
HONGBING GU	12/24/2018
KE YANG	12/24/2018
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:	16162221
CORRESPONDENCE DATA	
Fax Number:	(617)526-9899
<i>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.</i>	
Phone:	(617) 526-9706
Email:	shynes@proskauer.com
Correspondent Name:	PROSKAUER ROSE LLP
Address Line 1:	ONE INTERNATIONAL PLACE
Address Line 4:	BOSTON, MASSACHUSETTS 02110
ATTORNEY DOCKET NUMBER:	FID-325
NAME OF SUBMITTER:	PATRICK J. NIEDERMEIER
SIGNATURE:	/Patrick J. Niedermeier #64,946/
DATE SIGNED:	01/31/2019
This document serves as an Oath/Declaration (37 CFR 1.63).	
Total Attachments: 8	
source=FID-325 Executed Combined Declaration and Assignment#page1.tif	

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S): Changjiu Shao *et al.* CONFIRMATION NO.: 3043
APPLICATION NO.: 16/162,221 FILING DATE: October 16, 2018
TITLE: Systems and Methods for Interactive Braille Display

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, Changjiu Shao, 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 02110, 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.

III. SIGNATURE BLOCK

IN TESTIMONY WHEREOF, I have hereunto set my hand-and affixed my seal on the date set forth below.

Inventor:

Changjiu Shao
Changjiu Shao

NOTARIZATION

State/Commonwealth of)
County of) ss

On this ____ day of _____, 201_, before me, the undersigned notary public, personally appeared Changjiu Shao, proved to me through satisfactory evidence of identification, which was/were _____, to be the person whose name is signed on the preceding or attached document in my presence.

Notary Public

My Commission Expires: _____

WITNESS

Witness Signature:

Witness Name:

Witness Date:

Zhaopeng Liu
ZHAOPENG LIU
2018.12.20

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S): Changjiu Shao *et al.* CONFIRMATION NO.: 3043
APPLICATION NO.: 16/162,221 FILING DATE: October 16, 2018
TITLE: Systems and Methods for Interactive Braille Display

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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, Yanyu Xu, 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 02110, 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:

Yanyu Xu
Yanyu Xu

NOTARIZATION

State/Commonwealth of _____)
County of _____) ss

On this ____ day of _____, 201_, before me, the undersigned notary public, personally appeared Yanyu Xu, proved to me through satisfactory evidence of identification, which was/were _____, to be the person whose name is signed on the preceding or attached document in my presence.

Notary Public

My Commission Expires: _____

WITNESS

Witness Signature:

Zhao peng Liu

Witness Name:

ZHAOPENG LIU

Witness Date:

2018.12.24

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S): Changjiu Shao *et al.* CONFIRMATION NO.: 3043
APPLICATION NO.: 16/162,221 FILING DATE: October 16, 2018
TITLE: Systems and Methods for Interactive Braille Display

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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, Hongbing Gu, 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 02110, 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: Hongbing Gu
Hongbing Gu

NOTARIZATION

State/Commonwealth of _____)
County of _____) ss

On this ____ day of _____, 201_, before me, the undersigned notary public, personally appeared Hongbing Gu, proved to me through satisfactory evidence of identification, which was/were _____, to be the person whose name is signed on the preceding or attached document in my presence.

Notary Public
My Commission Expires: _____

WITNESS

Witness Signature: Zhao peng Lin
Witness Name: ZHAOPENG LIN
Witness Date: 2018.12.20

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S): Changjiu Shao *et al.* CONFIRMATION NO.: 3043
APPLICATION NO.: 16/162,221 FILING DATE: October 16, 2018
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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, Ke Yang, 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 02110, 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

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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

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Inventor:

Ke Yang
Ke Yang

NOTARIZATION

State/Commonwealth of _____)
County of _____) ss

On this ____ day of _____, 201_, before me, the undersigned notary public, personally appeared Ke Yang, proved to me through satisfactory evidence of identification, which was/were _____, to be the person whose name is signed on the preceding or attached document in my presence.

Notary Public

My Commission Expires: _____

WITNESS

Witness Signature:

Zhao peng Liu

Witness Name:

ZHAOPENG LIU

Witness Date:

2018.12.29

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