505116270 09/27/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5163031

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOHN C. HENDERSON	08/01/2018
LUCY R. CHAI	08/01/2018
JEFFREY ZARRELLA	08/14/2018
ABIGAIL S. GERTNER	08/06/2018
KEITH J. MILLER	09/23/2018

RECEIVING PARTY DATA

Name:	THE MITRE CORPORATION
Street Address:	7515 COLSHIRE DRIVE
City:	MCLEAN
State/Country:	VIRGINIA
Postal Code:	22102

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16042958

CORRESPONDENCE DATA

Fax Number: (703)760-7777

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: 7037607344

Email: klibby@mofo.com

Correspondent Name: WILLIS H. CHANG

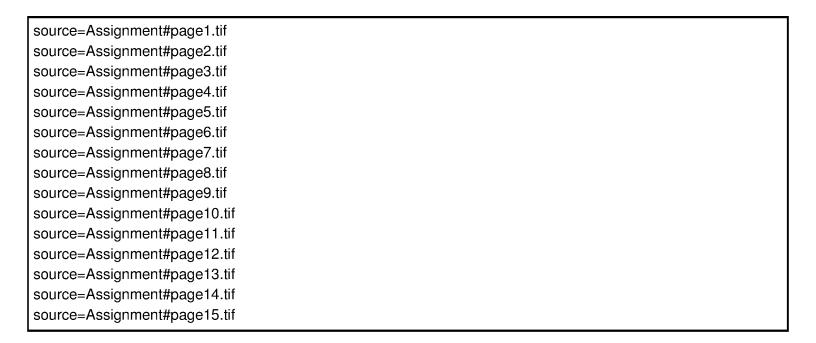
Address Line 1:MORRISON & FOERSTER LLPAddress Line 2:1650 TYSONS BLVD., SUITE 400

Address Line 4: MCLEAN, VIRGINIA 22102

ATTORNEY DOCKET NUMBER:	69959-20057.00
NAME OF SUBMITTER:	WILLIS H. CHANG
SIGNATURE:	/Willis H. Chang/
DATE SIGNED:	09/27/2018
	•

Total Attachments: 15

PATENT REEL: 046999 FRAME: 0536



PATENT REEL: 046999 FRAME: 0537

ASSIGNMENT

This assignment is by:

- John C. HENDERSON c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- Lucy R. CHAI
 c/o The MITRE Corporation
 7515 Colshire Drive
 McLean, Virginia 22102
 United States of America
- 3 Jeffrey ZARRELLA c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 4 Abigail S. GERTNER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 5 Keith J. MILLER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America

([each] referred to in this Assignment as "Assignor"), whose residence or mailing address information is listed above.

This Assignment is to:

Assignee: The MITRE Corporation
Address: 7515 Colshire Drive
McLean Virginia 22102

McLean, Virginia 22102 United States of America

A juristic entity duly organized under and pursuant to the laws of: Delaware

(referred to in this Assignment as "Assignee"), which desires to acquire the entire right, title and interest in, to and under the patent application identified below and the inventions covered thereby.

Assignor invented certain new and useful inventions in:

NAME AND FACE MATCHING

which are set forth in:

Serial No.: 16/042,958 Filing Date: July 23, 2018 (which identifying information may be added after execution)

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the

Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement,

- 1. Assignor hereby sells, assigns, transfers and sets over, to Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all extensions of said letters patent or patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor, had this sale and assignment not been made.
- Assignor represents, warrants and covenants (a) that, at the time of execution and delivery of this agreement, Assignor is the sole and lawful owner of Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement, or (b) that Assignor solely and lawfully owned Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same were unencumbered and that Assignor previously sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, or to a predecessor in interest of Assignee, Assignor's entire right, title and interest in and to said inventions and said applications for letters patent.
- 3. Assignor shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. For purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
- 4. Assignor hereby authorizes and requests the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.
- Assignor hereby grants attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office or any foreign patent issuing authority for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.
- 6. This assignment may be executed in one or more counterparts, with the same effect as if each signature were on the same document. Each counterpart so executed shall be deemed to be an original, and all such counterparts shall be construed together and shall constitute one agreement.

ASSIG	NOR(s):		
Date:	Aug 1,2018	Signature:	
	0		John C. HENDERSON
Date:		Signature:	
		-	Lucy R. CHAI
			2

Date:	 Signature:	
		Jeffrey ZARRELLA
Date:	 Signature:	
		Abigail S. GERTNER
Date:	Signature:	
		Keith J. MILLER

ASSIGNMENT

This assignment is by:

 John C. HENDERSON c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America

- Lucy R. CHAI
 c/o The MITRE Corporation
 7515 Colshire Drive
 McLean, Virginia 22102
 United States of America
- 3 Jeffrey ZARRELLA c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 4 Abigail S. GERTNER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 5 Keith J. MILLER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America

([each] referred to in this Assignment as "Assignor"), whose residence or mailing address information is listed above.

This Assignment is to:

Assignee: The MITRE Corporation
Address: 7515 Colshire Drive

McLean, Virginia 22102 United States of America

A juristic entity duly organized under and pursuant to the laws of: Delaware

(referred to in this Assignment as "Assignee"), which desires to acquire the entire right, title and interest in, to and under the patent application identified below and the inventions covered thereby.

Assignor invented certain new and useful inventions in:

NAME AND FACE MATCHING

which are set forth in:

Serial No.: 16/042,958 Filing Date: July 23, 2018 (which identifying information may be added after execution)

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the

Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement,

- 1. Assignor hereby sells, assigns, transfers and sets over, to Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all extensions of said letters patent or patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor, had this sale and assignment not been made.
- 2. Assignor represents, warrants and covenants (a) that, at the time of execution and delivery of this agreement, Assignor is the sole and lawful owner of Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignor has good and full right and lawfull authority to sell and convey the same in the manner set forth in this agreement, or (b) that Assignor solely and lawfully owned Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same were unencumbered and that Assignor previously sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, or to a predecessor in interest of Assignee, Assignor's entire right, title and interest in and to said inventions and said applications for letters patent.
- 3. Assignor shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. For purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
- 4. Assignor hereby authorizes and requests the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.
- 5. Assignor hereby grants attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office or any foreign patent issuing authority for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.
- 6. This assignment may be executed in one or more counterparts, with the same effect as if each signature were on the same document. Each counterpart so executed shall be deemed to be an original, and all such counterparts shall be construed together and shall constitute one agreement.

<u>ASSIG1</u>	NOR(s):			
Date:		Signature:		
			John C. HENDERSON	
Date:	08/01/2018	Signature:	luyler	
			Lucy R. CHAI	

Date:	Signature:		
		Jeffrey ZARRELLA	
Date:	 Signature:		
		Abigail S. GERTNER	
Date:	 Signature:		
		Keith J. MILLER	

ASSIGNMENT

This assignment is by:

- John C. HENDERSON c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- Lucy R. CHAI
 c/o The MITRE Corporation
 7515 Colshire Drive
 McLean, Virginia 22102
 United States of America
- 3 Jeffrey ZARRELLA c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 4 Abigail S. GERTNER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 5 Keith J. MILLER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America

([each] referred to in this Assignment as "Assignor"), whose residence or mailing address information is listed above.

This Assignment is to:

Assignee: Address:

The MITRE Corporation 7515 Colshire Drive

McLean, Virginia 22102 United States of America

A juristic entity duly organized under and pursuant to the laws of: Delaware

(referred to in this Assignment as "Assignee"), which desires to acquire the entire right, title and interest in, to and under the patent application identified below and the inventions covered thereby.

Assignor invented certain new and useful inventions in:

NAME AND FACE MATCHING

which are set forth in:

Serial No.: 16/042,958

Filing Date: July 23, 2018

(which identifying information may be added after execution)

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the

Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement.

- 1. Assignor hereby sells, assigns, transfers and sets over, to Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all extensions of said letters patent or patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor, had this sale and assignment not been made.
- 2. Assignor represents, warrants and covenants (a) that, at the time of execution and delivery of this agreement, Assignor is the sole and lawful owner of Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement, or (b) that Assignor solely and lawfully owned Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same were unencumbered and that Assignor previously sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, or to a predecessor in interest of Assignee, Assignor's entire right, title and interest in and to said inventions and said applications for letters patent.
- 3. Assignor shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. For purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
- 4. Assignor hereby authorizes and requests the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.
- 5. Assignor hereby grants attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office or any foreign patent issuing authority for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.
- 6. This assignment may be executed in one or more counterparts, with the same effect as if each signature were on the same document. Each counterpart so executed shall be deemed to be an original, and all such counterparts shall be construed together and shall constitute one agreement.

<u>ASSIGN</u>	NOR(s):		
Date:		Signature:	
			John C. HENDERSON
Date:		Signature:	
			Lucy R. CHAI

		Choir Retologo Tran 1102
Date:	8/14/18 Signature:	March
Date:	Signature:	Jeffrey ZARRELLA
Date:	Signature:	Abigail S. GERTNER
Date	Signaturo	Keith J. MILLER

ASSIGNMENT

This assignment is by:

- John C. HENDERSON c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 2 Lucy R. CHAI c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- Jeffrey ZARRELLA c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 4 Abigail S. GERTNER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 5 Keith J. MILLER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America

([each] referred to in this Assignment as "Assignor"), whose residence or mailing address information is listed above.

This Assignment is to:

Assignee: Address:

The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America

A juristic entity duly organized under and pursuant to the laws of: Delaware

(referred to in this Assignment as "Assignee"), which desires to acquire the entire right, title and interest in, to and under the patent application identified below and the inventions covered thereby.

Assignor invented certain new and useful inventions in:

NAME AND FACE MATCHING

which are set forth in:

Serial No.: 16/042,958

Filing Date: July 23, 2018

(which identifying information may be added after execution)

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the

Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement,

- 1. Assignor hereby sells, assigns, transfers and sets over, to Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all extensions of said letters patent or patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor, had this sale and assignment not been made.
- 2. Assignor represents, warrants and covenants (a) that, at the time of execution and delivery of this agreement, Assignor is the sole and lawful owner of Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement, or (b) that Assignor solely and lawfully owned Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same were unencumbered and that Assignor previously sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, or to a predecessor in interest of Assignee, Assignor's entire right, title and interest in and to said inventions and said applications for letters patent.
- 3. Assignor shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. For purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
- 4. Assignor hereby authorizes and requests the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.
- 5. Assignor hereby grants attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office or any foreign patent issuing authority for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.
- 6. This assignment may be executed in one or more counterparts, with the same effect as if each signature were on the same document. Each counterpart so executed shall be deemed to be an original, and all such counterparts shall be construed together and shall constitute one agreement.

ASSIGNO	DR(s):		
Date:	Signature:		
	Andrew Control of the	John C. HENDERSON	
Date:	Signature:		
,		Lucy R. CHAI	
		2	

Date:	Signature:	
Date:	8/4/2018 Signature:	Jeffrey ZARRELLA Abigail S. GERTNER
Date:	Signature:	Keith L MILLER

ASSIGNMENT

This assignment is by:

- John C. HENDERSON c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- Lucy R. CHAI
 c/o The MITRE Corporation
 7515 Colshire Drive
 McLean, Virginia 22102
 United States of America
- 3 Jeffrey ZARRELLA c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- 4 Abigail S. GERTNER c/o The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102 United States of America
- Keith J. MILLER
 c/o The MITRE Corporation
 7515 Colshire Drive
 McLean, Virginia 22102
 United States of America

([each] referred to in this Assignment as "Assignor"), whose residence or mailing address information is listed above.

This Assignment is to:

Assignee:

The MITRE Corporation 7515 Colshire Drive

Address:

McLean, Virginia 22102 United States of America

A juristic entity duly organized under and pursuant to the laws of: Delaware

(referred to in this Assignment as "Assignee"), which desires to acquire the entire right, title and interest in, to and under the patent application identified below and the inventions covered thereby.

Assignor invented certain new and useful inventions in:

NAME AND FACE MATCHING

which are set forth in:

Serial No.: 16/042,958

Filing Date: July 23, 2018

(which identifying information may be added after execution)

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the

Assignee, or if the Assigner has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement,

- 1. Assignor hereby sells, assigns, transfers and sets over, to Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all extensions of said letters patent or patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor, had this sale and assignment not been made.
- Assignor represents, warrants and covenants (a) that, at the time of execution and delivery of this agreement, Assignor is the sole and lawful owner of Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement, or (b) that Assignor solely and lawfully owned Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same were unencumbered and that Assignor previously sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, or to a predecessor in interest of Assignee, Assignor's entire right, title and interest in and to said inventions and said applications for letters patent.
- 3. Assignor shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. For purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
- 4. Assignor hereby authorizes and requests the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.
- 5. Assignor hereby grants attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office or any foreign patent issuing authority for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.
- 6. This assignment may be executed in one or more counterparts, with the same effect as if each signature were on the same document. Each counterpart so executed shall be deemed to be an original, and all such counterparts shall be construed together and shall constitute one agreement.

ASSIC	BNOR(s):		
Date:	S	Signature:	
			John C. HENDERSON
Date:	S	Signature:	
			Lucy R. CHAI
• • • • •			2

Date:	Signature:	
		Jeffrey ZARRELLA
Date:	Signature:	
		Abigail S. GERTNER
Date:	9/23/20/8 Signature:	Jeto Il
		/ Keith L MILLER

3

va-521499

PATENT REEL: 046999 FRAME: 0552

RECORDED: 09/27/2018