

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT6137198

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
Siamak Ziraknejad	09/26/2018
Ren-Jay Huang	10/10/2018
Elaine Li	05/06/2015
Hector Vazquez	08/09/2016
Peng Xiao	12/16/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MICROSTRATEGY INCORPORATED
<b>Street Address:</b>	1850 TOWERS CRESCENT PLAZA
<b>City:</b>	VIENNA
<b>State/Country:</b>	VIRGINIA
<b>Postal Code:</b>	22182
<b>PROPERTY NUMBERS Total: 3</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14603651
<b>Application Number:</b>	61931347
<b>Application Number:</b>	14603682
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(877)769-7945
<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>	
<b>Phone:</b>	+1 (202) 626-6367
<b>Email:</b>	apsi@fr.com
<b>Correspondent Name:</b>	NICHOLAS JEPSEN
<b>Address Line 1:</b>	FISH & RICHARDSON P.C.
<b>Address Line 2:</b>	P.O.BOX 1022
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55440-1022
<b>ATTORNEY DOCKET NUMBER:</b>	30693-0152001
<b>NAME OF SUBMITTER:</b>	ARLENE F. YATES
<b>SIGNATURE:</b>	/Arlene F. Yates/
<b>DATE SIGNED:</b>	06/04/2020

PATENT

**Total Attachments: 32**

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ASSIGNMENT


For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, SIAMAK ZIRAKNEJAD, REN-JAY HUANG, ELAINE LI, HECTOR VAZQUEZ, and PENG XIAO, each individually assign to MICROSTRATEGY INCORPORATED, a corporation formed under the laws of Delaware and having a principal place of business at 1850 Towers Crescent Plaza, Vienna, VA 22182, and its successors, transferees, and assignees (collectively the “Assignee”), all of our individual and joint right, title, and interest throughout the world in the subject matter (the “Subject Matter”) of a patent application that names us as inventors, is titled “USER ENROLLMENT AND AUTHENTICATION”, and was filed in the U.S. Patent and Trademark Office on January 23, 2015, as application 14/603,651 (the “Application”), and a provisional patent application that is titled “USER ENROLLMENT AND AUTHENTICATION”, and was filed in the United States Patent and Trademark Office on January 24, 2014, as application 61/931,347.

This Assignment assigns (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors’ certificates for, any of the Subject Matter (collectively the “Applications and Granted Rights”) in every country or region, (b) the right to claim priority based on and the benefit of the filing date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee’s name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

We authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in our names or in the Assignee’s name.

We represent and warrant that we have the right and power to make this Assignment and that we have not made and will not make any other assignment that conflicts with this Assignment.

We will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

  
.....  
Siamak Ziraknejad

Date: 9/26/2018

.....  
Ren-Jay Huang

Date: .....

.....  
Xiaoxu Li

Date: .....

.....  
Hector Vazquez

Date: .....

.....  
Peng Xiao


Date: .....

41051763.doc

We will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

\_\_\_\_\_  
Siamak Ziraknejad

Date: \_\_\_\_\_

  
\_\_\_\_\_  
Ren-Jay Huang

Date: 10/10/2018

\_\_\_\_\_  
Xiaoxu Li

Date: \_\_\_\_\_

\_\_\_\_\_  
Hector Vazquez

Date: \_\_\_\_\_

\_\_\_\_\_  
Peng Xiao

Date: \_\_\_\_\_

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I, the undersigned, in the assignment of the subject matter of the Assignment to the party of the second part hereof, will execute and provide all costs and disbursements, including attorneys' fees, applications, and documents, and will perform all other lawful acts necessary or desirable to secure title to the Assignee the rights, titles, and interests assigned by this Assignment.

Samuel J. Johnson Date: \_\_\_\_\_

Richard H. Hines Date: \_\_\_\_\_

[Signature] Date: 05/26/2015

Hector Vasquez Date: \_\_\_\_\_

Peng Xiao Date: \_\_\_\_\_

[Signature]

AGREEMENT

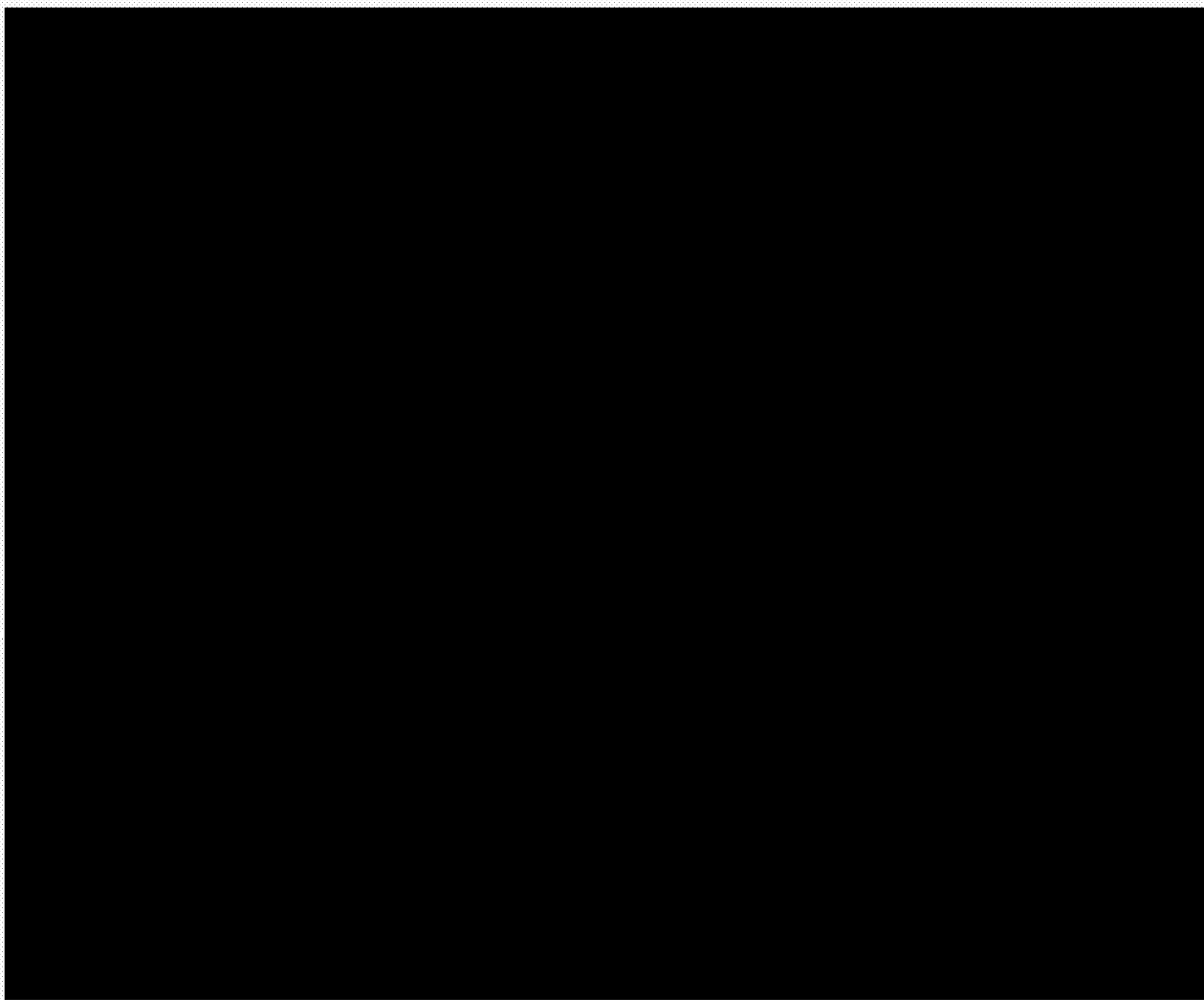
THIS AGREEMENT ("Agreement") is made and entered into by and between MicroStrategy Incorporated ("MicroStrategy") and Hector Vazquez ("Employee").

WHEREAS, Employee and MicroStrategy have agreed that Employee's employment with MicroStrategy and/or with any of its subsidiaries, affiliates or related companies (together, the "Company") terminated on July 29, 2016 (the "Termination Date");

WHEREAS, Employee and the Company desire to enter into the following Agreement to resolve all issues between them including, but not limited to, those relating to Employee's employment with the Company, and the termination thereof; and;

WHEREAS, Employee wishes to receive, and the Company has offered to provide, valuable consideration in exchange for execution by Employee of this Agreement;

NOW THEREFORE, in consideration of the payments and benefits listed below, and provided by the Company, Employee agrees to all of the following:



Employee Initials HV

Employer Initials PA

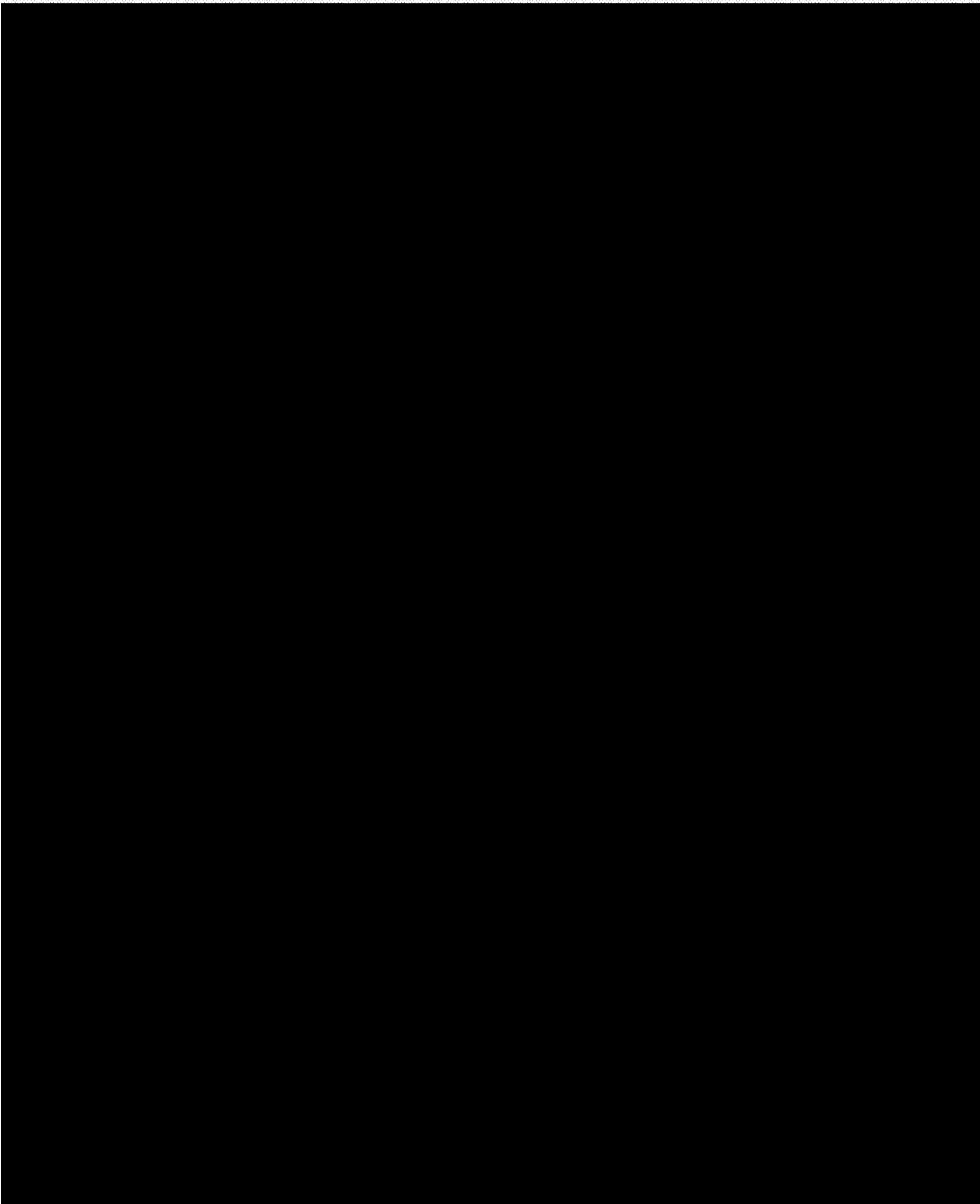
Employee Initials HV

Employer Initials PA

Page 2 of 13

**PATENT**  
**REEL: 052836 FRAME: 0269**





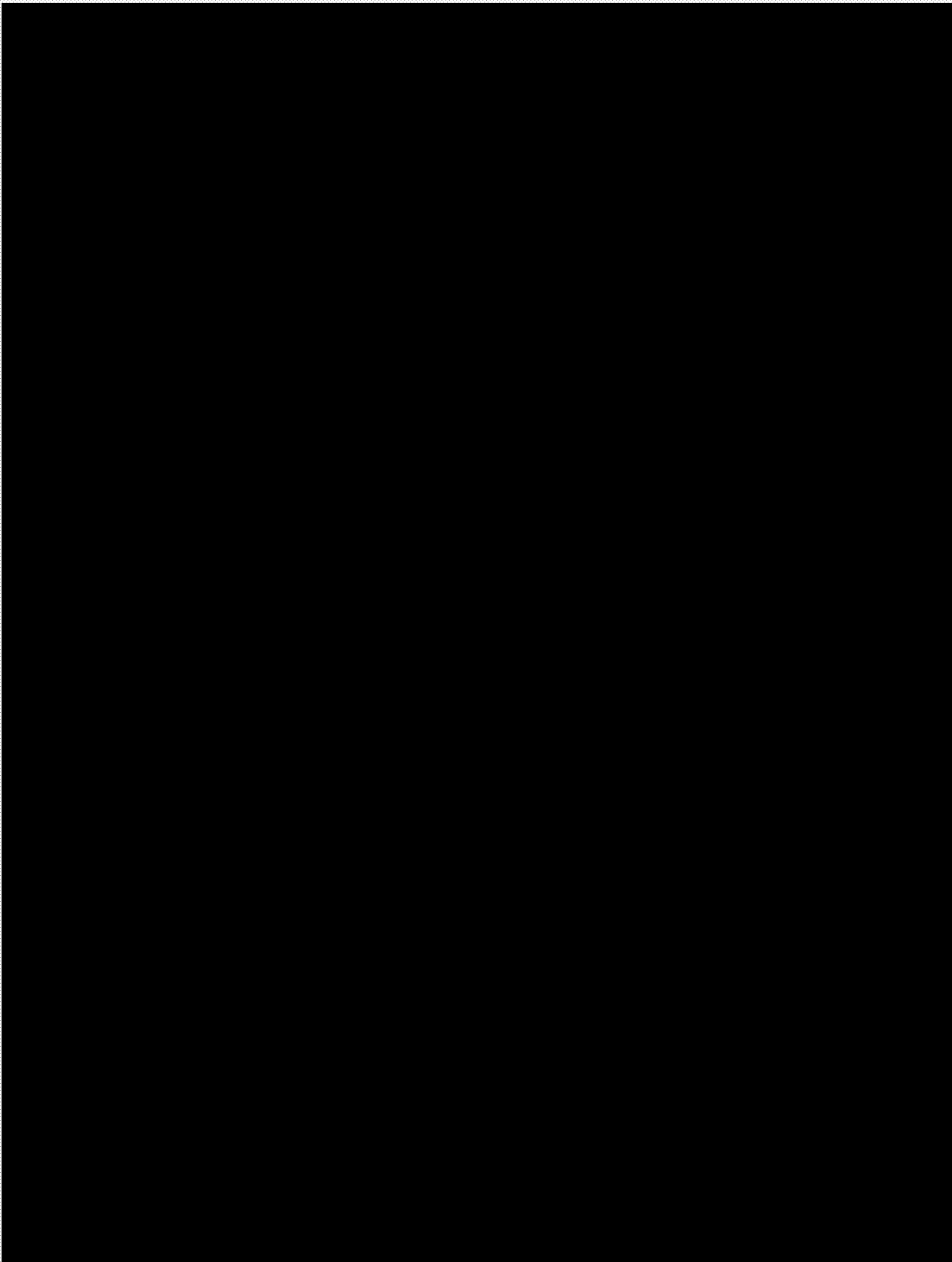
Employee Initials HV

Employer Initials pa

Page 3 of 13

**PATENT**

**REEL: 052836 FRAME: 0270**

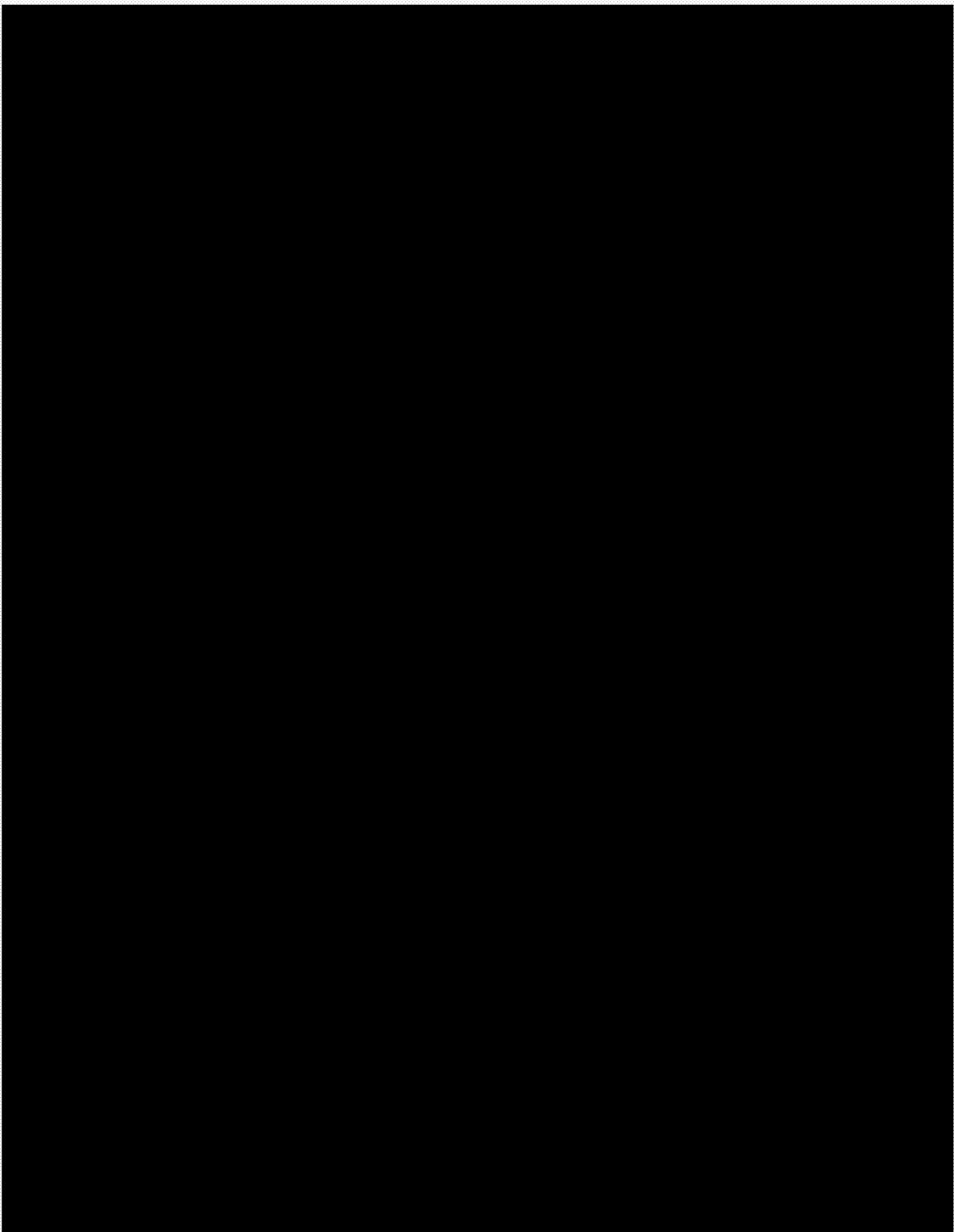


Employee Initials flv

Employer Initials pa

Page 4 of 13

**PATENT**  
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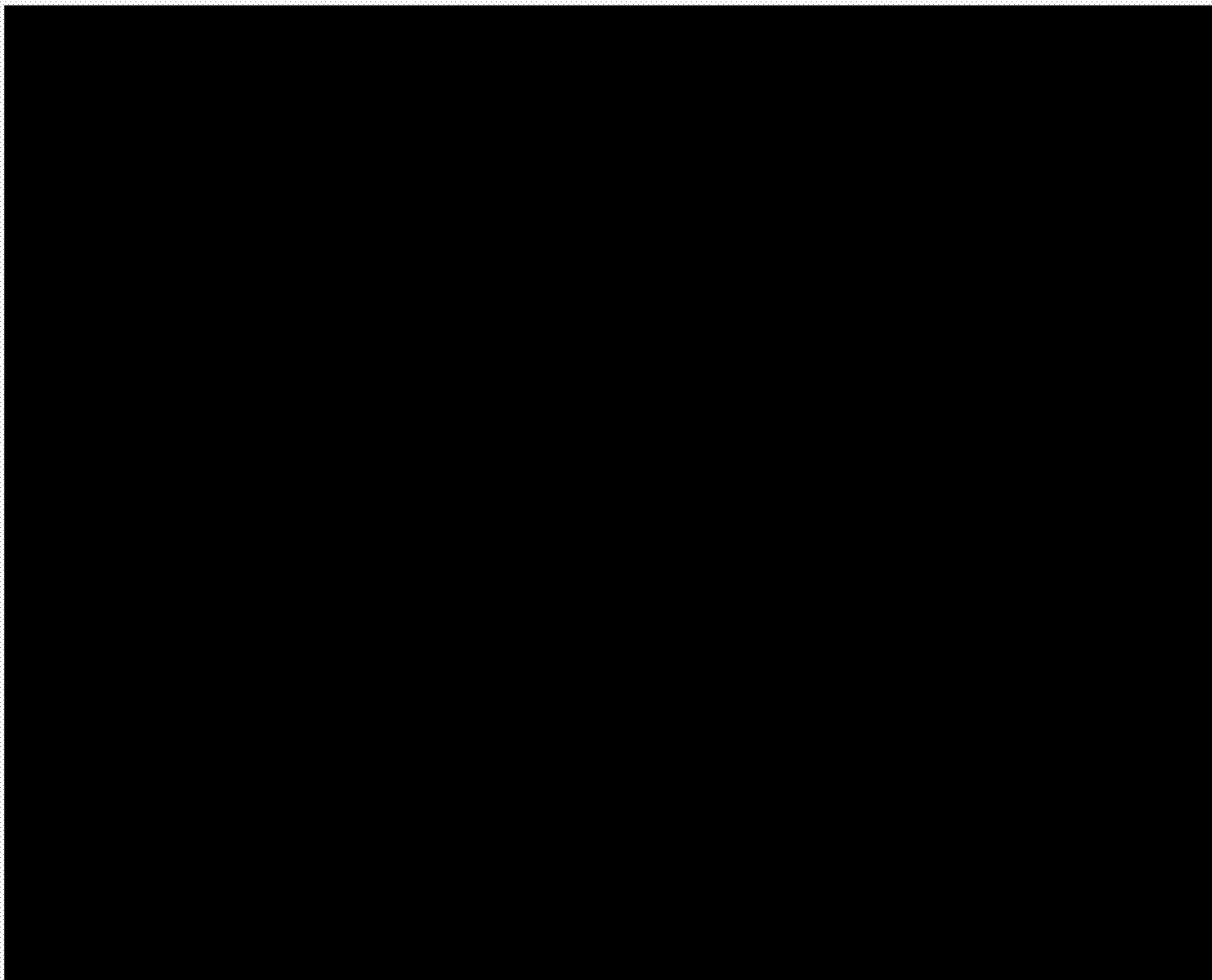


Employee Initials HV

Employer Initials PA

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**PATENT**  
**REEL: 052836 FRAME: 0272**



(c) Assignment of Intellectual Property.

- (i) Employee acknowledges and agrees that all intellectual property, including without limitation, all designs, techniques, devices, discoveries, processes, software, writings, inventions, improvements or documentation and all related know how, produced, made, conceived or authored by Employee, solely or jointly with others, in the course of Employee's employment with the Company together with any intellectual property rights therein, are works made for hire and the property of the Company if such works (i) relate in any manner, at the time the work is conceived or reduced to practice, to the actual or anticipated business, research, or development of the Company; (ii) are suggested by or result from any task assigned to Employee or work performed by Employee for or on behalf of the Company; or (iii) are created or developed with the use of Company equipment, supplies, facilities, information or materials. Employee shall disclose any such intellectual property promptly to the Company and hereby assigns any and all rights in such works to the Company or its assignees.
- (ii) To the extent that any such intellectual property may not, by operation of law, be works made for hire, Employee will assign and does hereby assign to the

Employee Initials HV

Employer Initials PA

Page 6 of 13

Company the ownership of, and all right, title and interest in, such items, and the Company shall have the right to obtain and hold in its own name, all intellectual property rights, including without limitation, patent, trade secret, copyright and similar protections which may be available in such works throughout the world.

- (iii) Employee agrees that all intellectual property made by him, solely or jointly with others, that are based on or contain proprietary information of the Company shall belong to the Company, and Employee hereby assigns any and all rights in such future intellectual property to the Company. For the purposes of this subsection, a work of authorship is based on the proprietary information of the Company if the work derives from or incorporates any such information in principle, structure, expression or design.
- (iv) Employee agrees to assign to the Company all rights in any other work of authorship made by Employee if the Company is required to grant those rights to the United States Government or any of its agencies.
- (v) Employee agrees to assist the Company, or its designee or assignee, at the Company's expense, in every proper way to secure the Company's rights in such intellectual property and any copyrights, patents, mask work rights or other intellectual property rights relating thereto in any and all countries, including the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, assignments and all other instruments which the Company shall deem necessary in order to apply for and obtain such rights and in order to assign and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title and interest in and to such works of authorship, and any copyright, patents, mask work rights or other intellectual property rights relating thereto. Employee further agrees that his obligation to execute or cause to be executed, when it is in his power to do so, any such instrument or papers shall continue after the date hereof.
- (vi) In the event the Company is unable due to Employee's subsequent disability or incapacity or for any other reason whatsoever to secure Employee's signature to any lawful and necessary document required to apply for, register or execute any patent, copyright or other applications with respect to any such intellectual property, Employee hereby irrevocably appoints the Company and its duly authorized officers and agents as his agents and attorneys-in-fact to execute and file any such application and to do all other lawfully permitted acts to further the prosecution and issuance of patents, copyrights or other rights thereon with the same legal force and effect as if executed by him.
- (vii) In order to permit the Company to claim rights to which it may be entitled, Employee agrees to disclose to the Company in writing and in confidence (i) all intellectual property as described in paragraph (a) above that Employee made, either solely or jointly with others, during the term of his employment with the Company, and (ii) all patent and copyright applications filed by him

Employee Initials HV

Employer Initials PM

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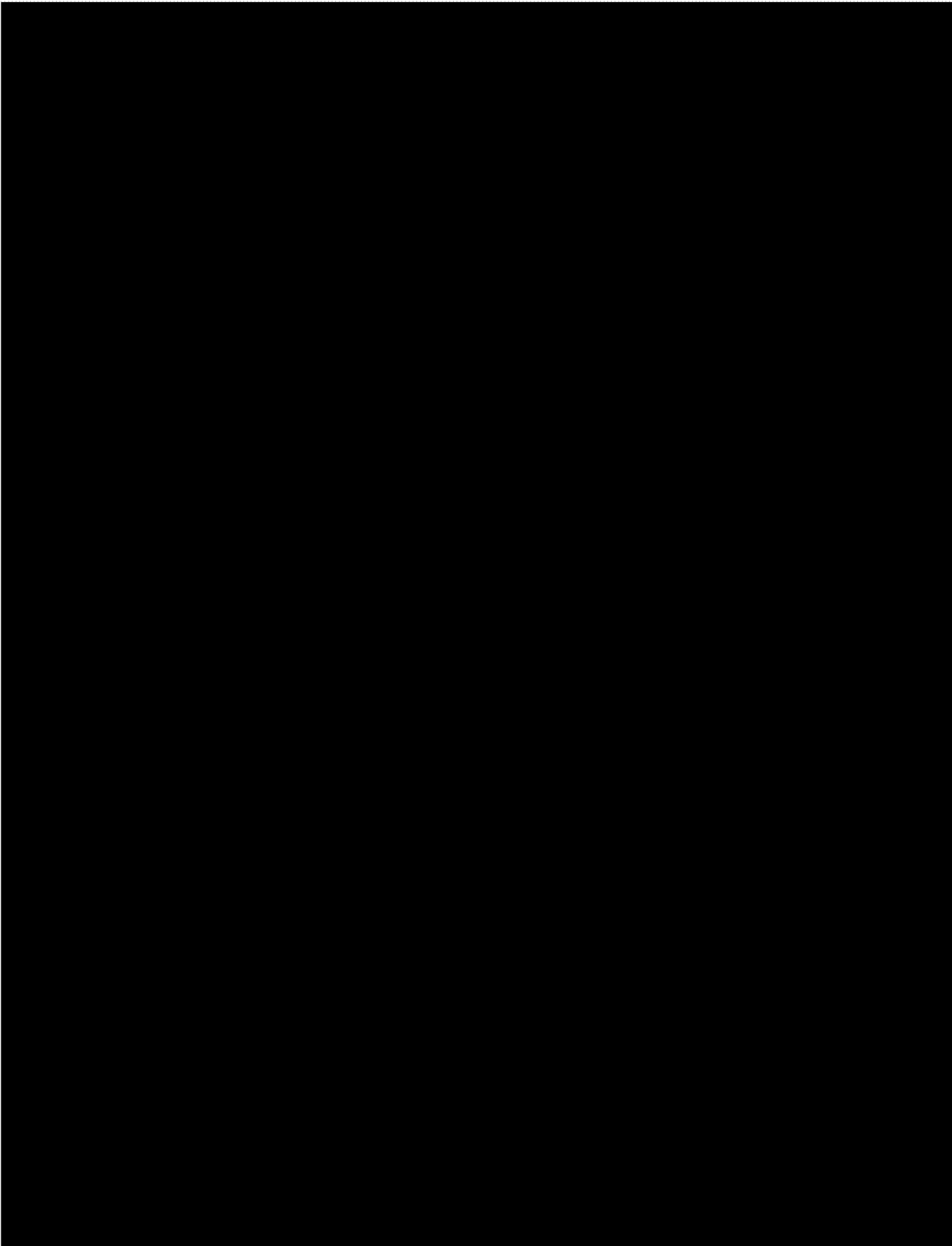
during, or within one (1) year after the termination of, his employment, unless such disclosure is prevented by law or a separate agreement. Employee also agrees to submit to a reasonable and confidential review process under which the Company may determine such issues as may arise under this paragraph.

- (viii) If in the course of Employee's employment with the Company, Employee incorporated into a Company product, process or code any invention, original work of authorship, development, improvement, or trade secrets that was made by Employee before his employment with the Company (collectively referred to as "Prior Inventions"), the Company is hereby granted and shall have a non-exclusive, royalty-free, irrevocable, perpetual, worldwide license to make, have made, modify, use and sell such Prior Invention as part of or in connection with such product, process or code.

Employee Initials HV

Employer Initials PM

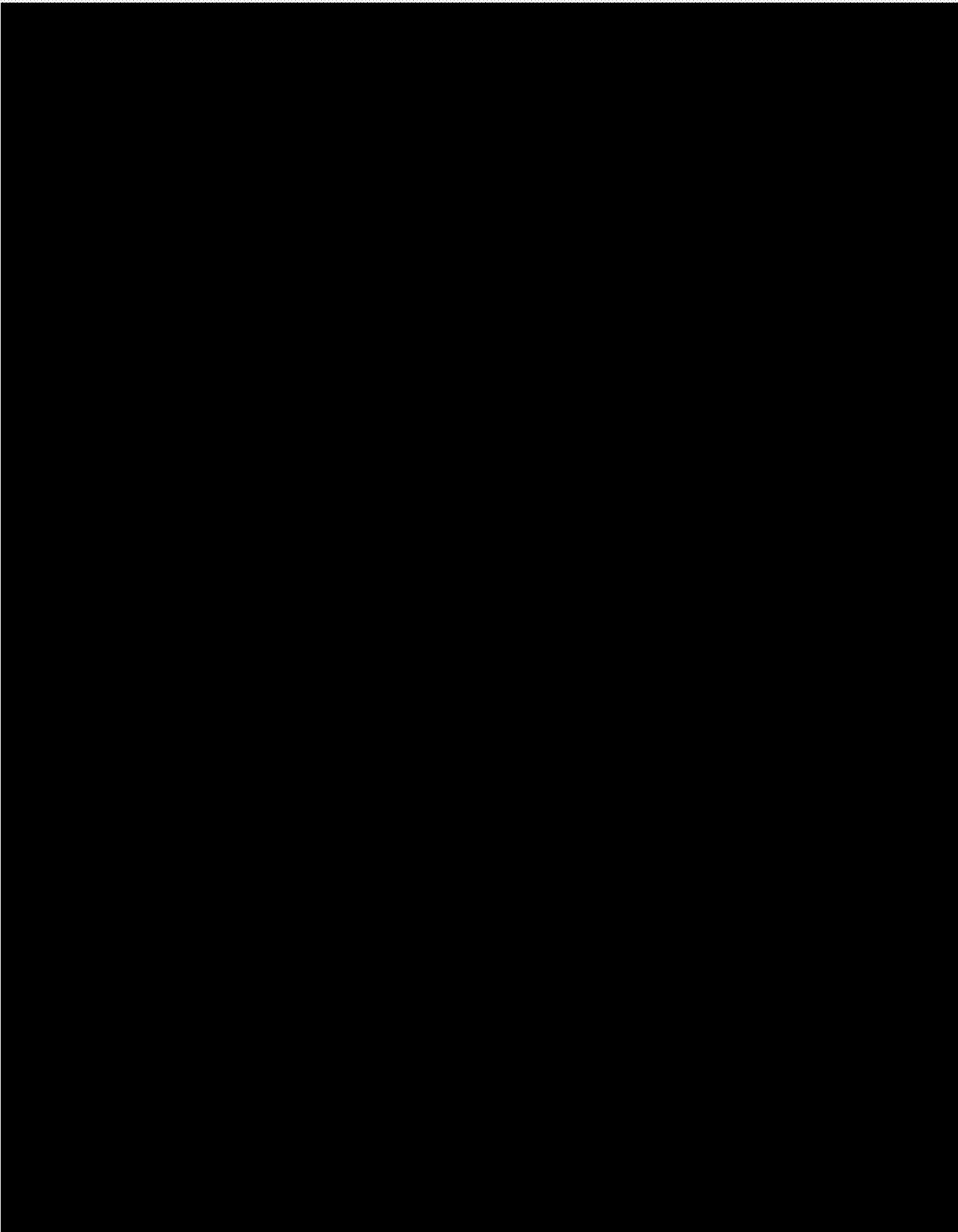
Page 8 of 13



Employee Initials IV

Employer Initials PM

Page 9 of 13



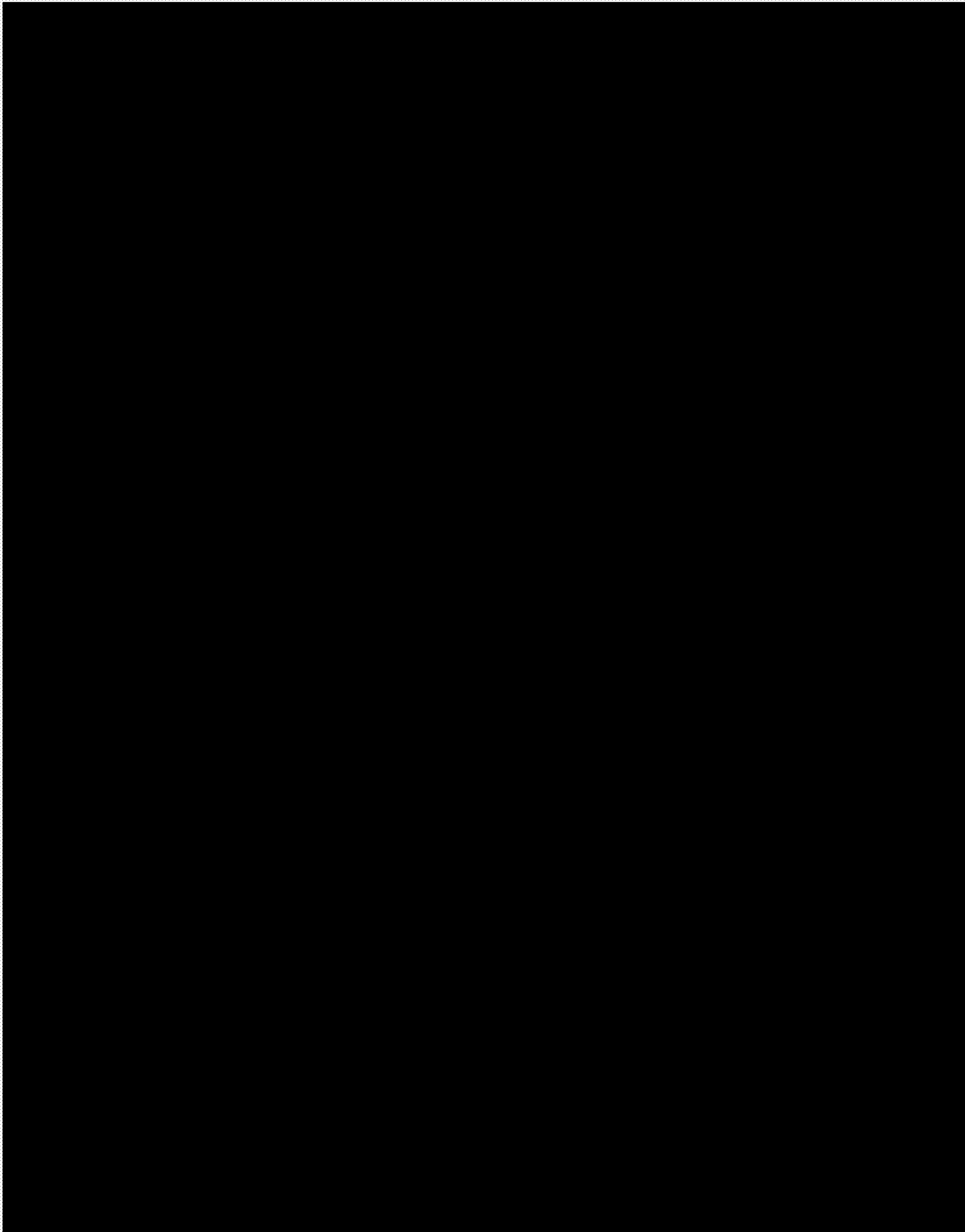
Employee Initials HV

Employer Initials pdv

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**PATENT**  
**REEL: 052836 FRAME: 0277**





Employee Initials HV

Employer Initials pa

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Employee Initials HV

Employer Initials PO

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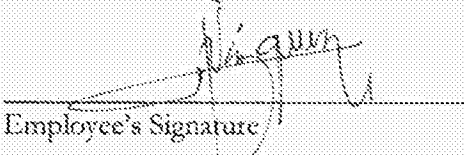
**PATENT**  
**REEL: 052836 FRAME: 0279**

SIGNATURE PAGES (2 of 2)

PLEASE READ THIS AGREEMENT CAREFULLY. IT CONTAINS A RELEASE OF ALL KNOWN AND UNKNOWN, SUSPECTED AND UNSUSPECTED CLAIMS.


Acknowledged and Agreed:

HECTOR VAZQUEZ

  
Employee's Signature

8/9/2016  
Date

FOR MICROSTRATEGY INCORPORATED

  
Phong Le

8/16/2016  
Date

Employee Initials HV

Employer Initials PL

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## AGREEMENT

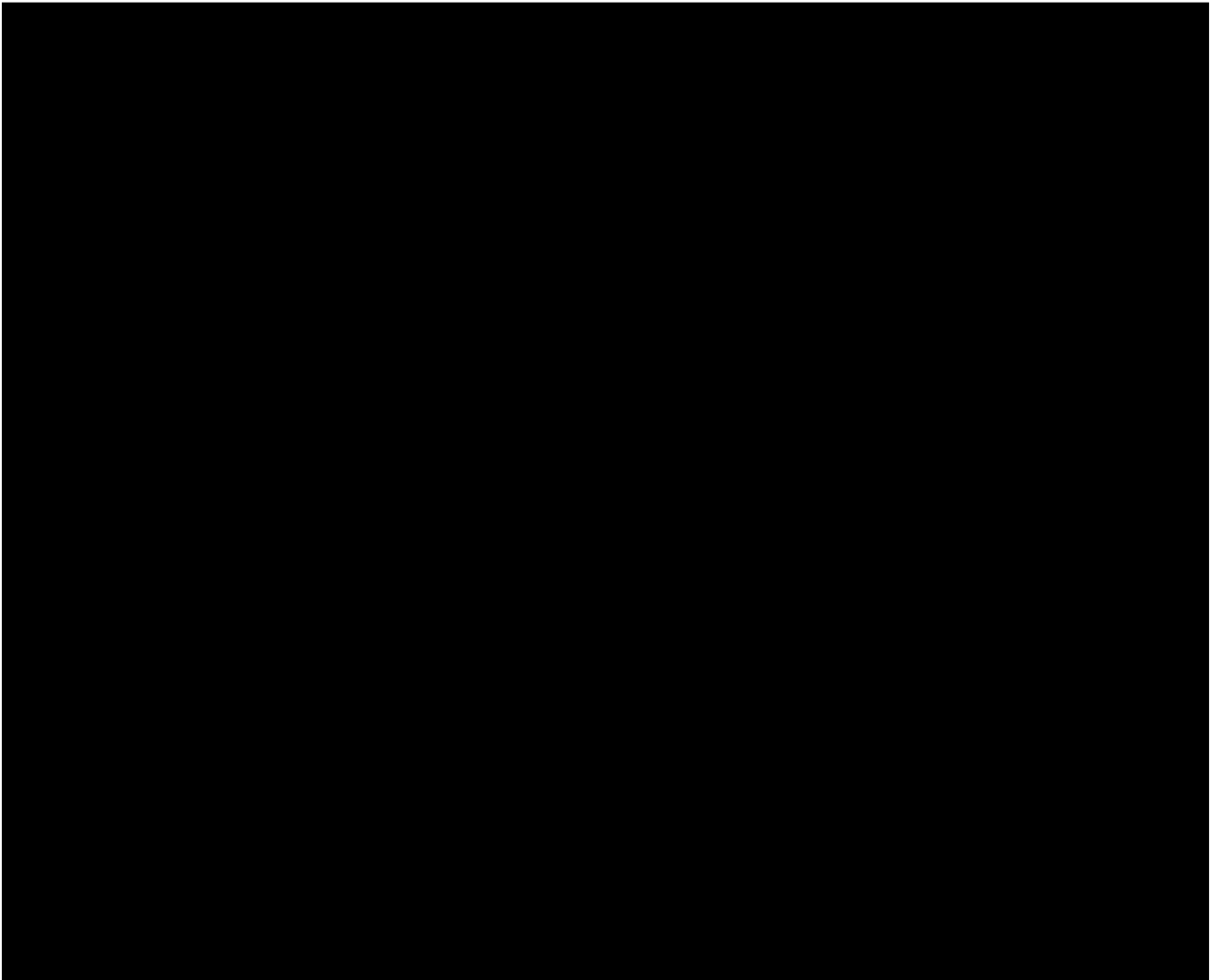
THIS AGREEMENT ("Agreement") is made and entered into by and between MicroStrategy Incorporated ("MicroStrategy") and Peng Xiao ("Employee").

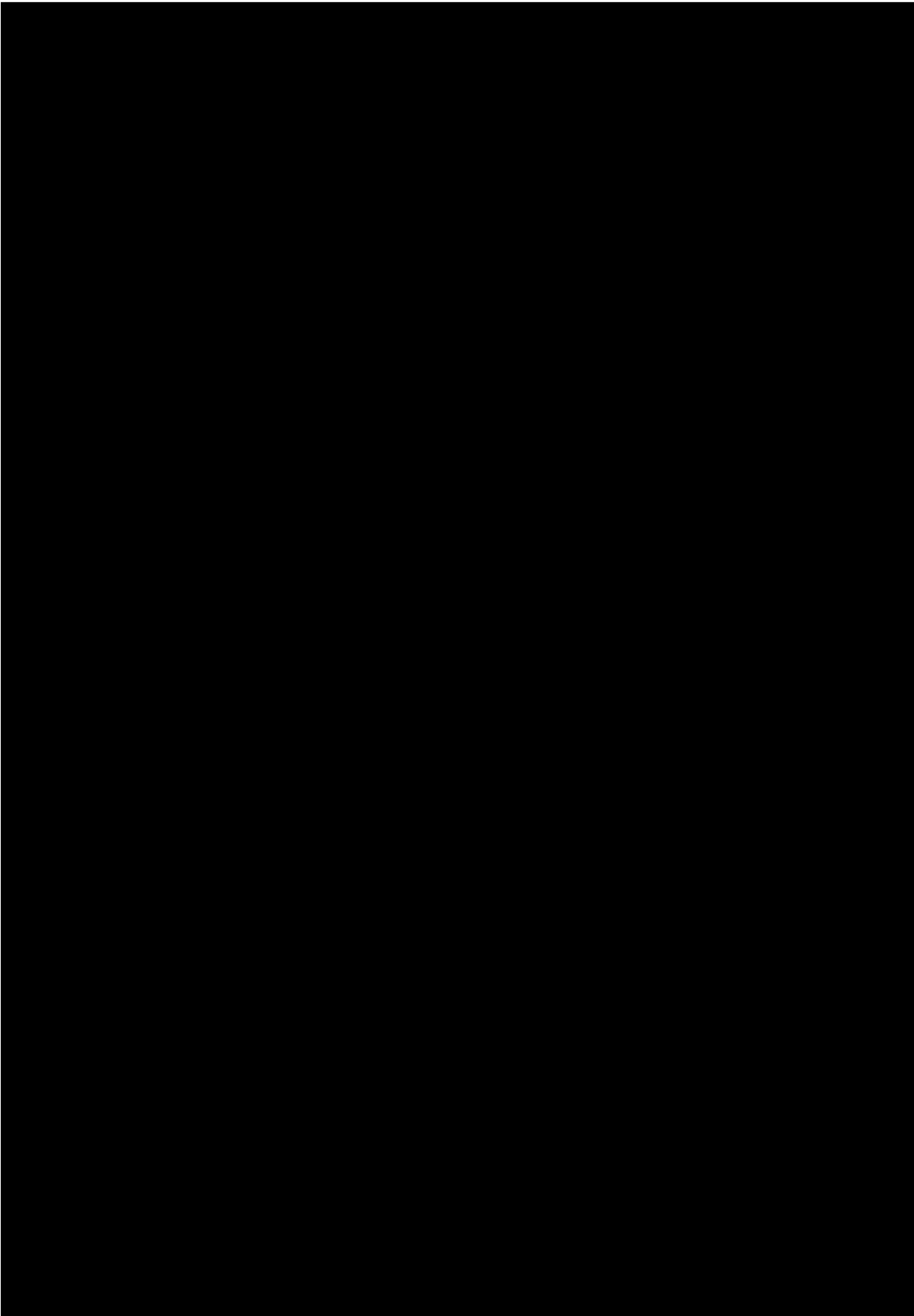
WHEREAS, Employee and MicroStrategy have agreed that Employee's employment with MicroStrategy and/or with any of its subsidiaries, affiliates or related companies (together, the "Company") terminated on December 15, 2014 (the "Termination Date");

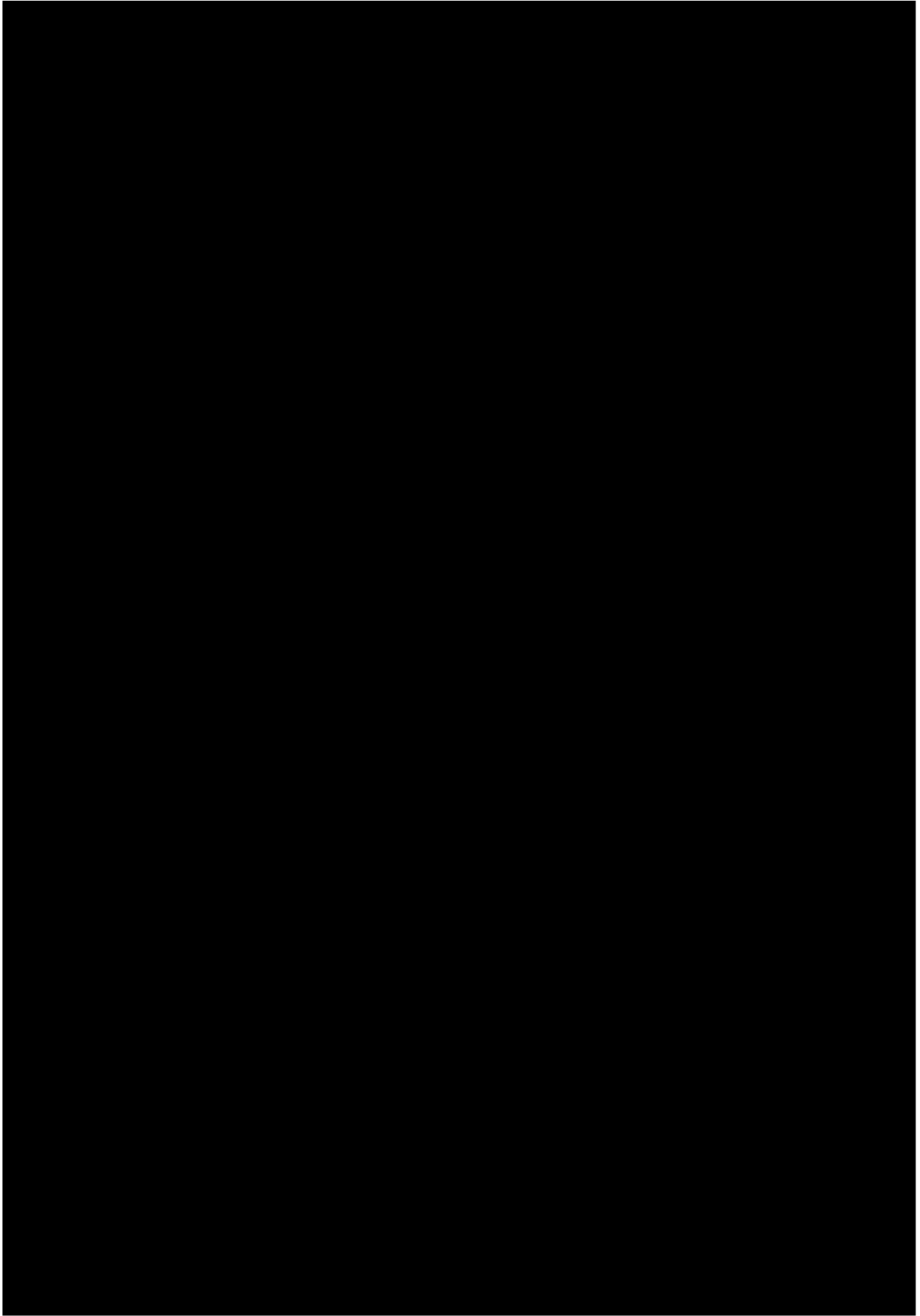
WHEREAS, Employee and the Company desire to enter into this Agreement to resolve issues between them including, but not limited to, those relating to Employee's employment with the Company and the termination of such employment; and

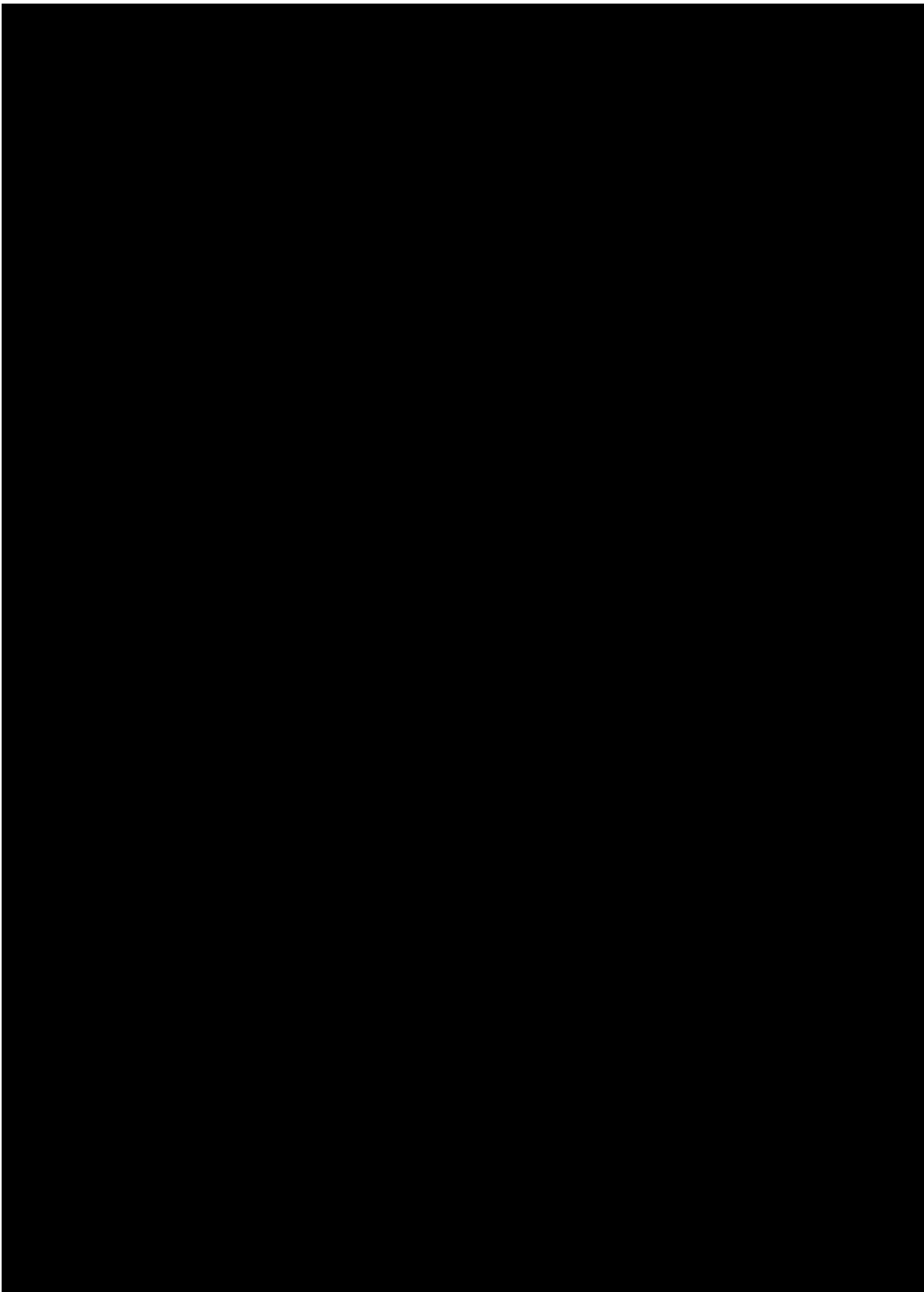
WHEREAS, Employee wishes to receive, and the Company has offered to provide, valuable consideration in exchange for execution by Employee of this Agreement;

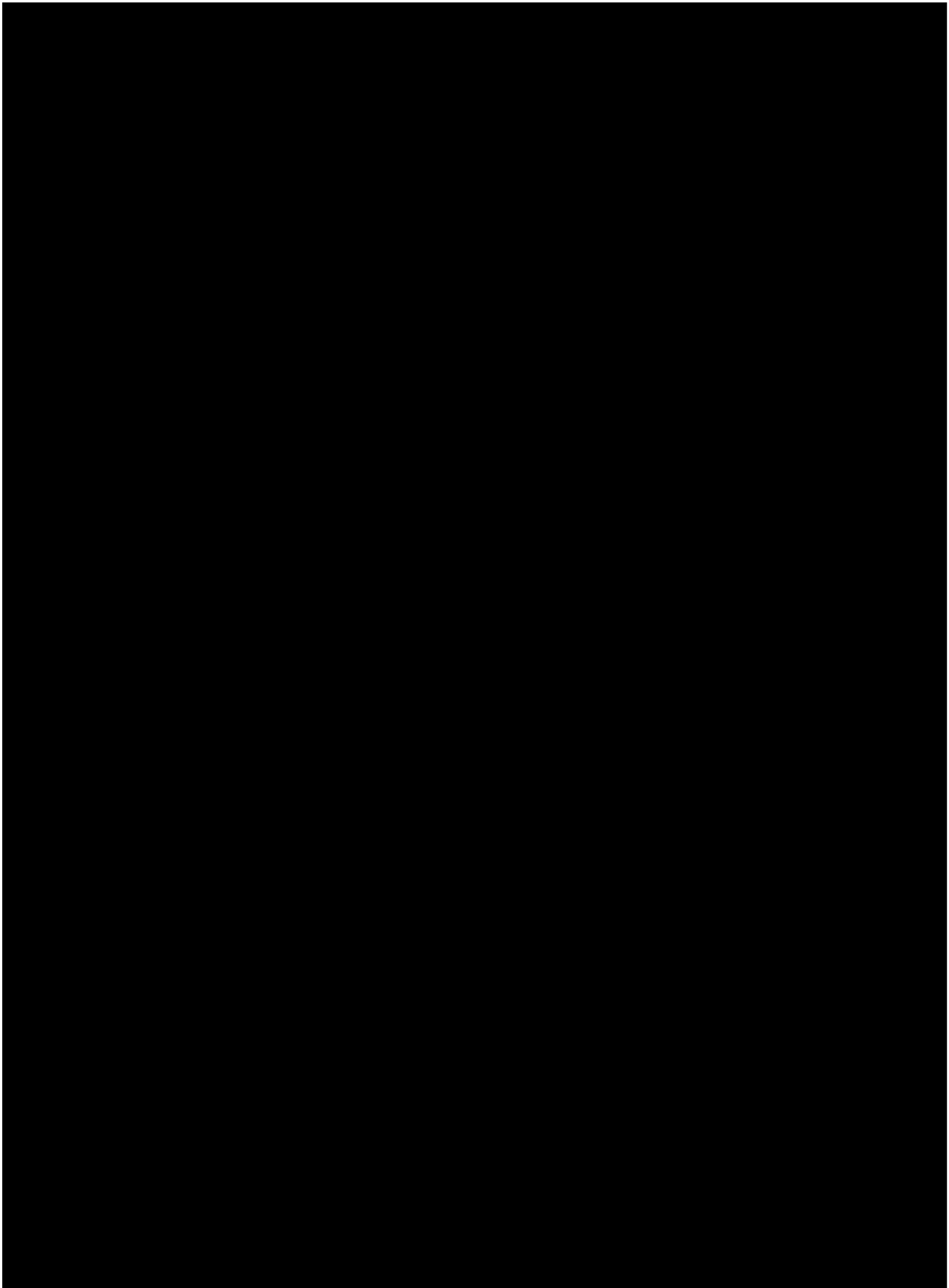
NOW THEREFORE, in consideration of the payments and benefits listed below, and provided by the Company, Employee agrees to all of the following:















6. Assignment of Intellectual Property.

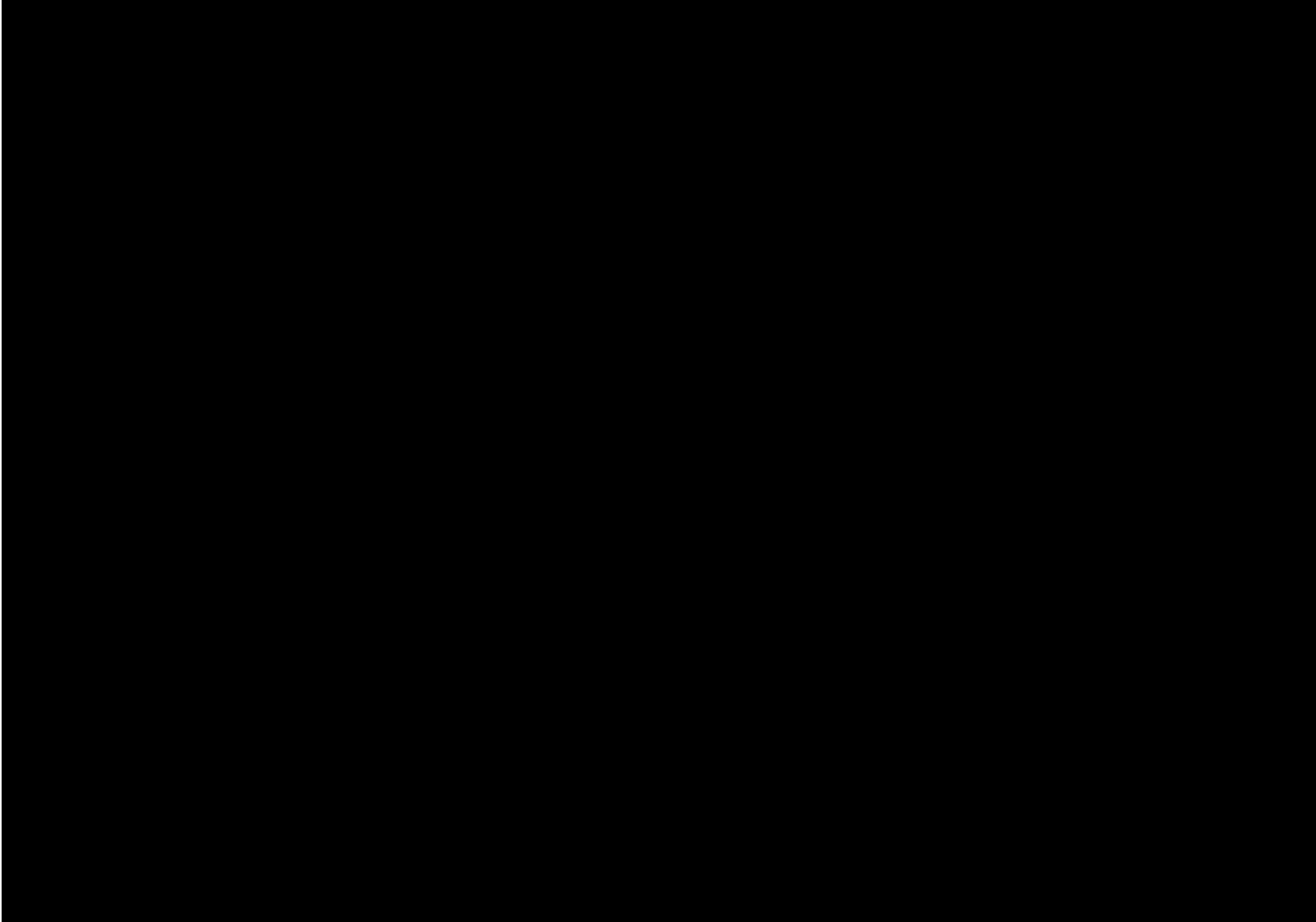
- (a) Employee acknowledges and agrees that all intellectual property, including without limitation, all designs, techniques, devices, discoveries, processes, software, writings, inventions, improvements or documentation and all related know how, produced, made, conceived or authored by Employee, solely or jointly with others, in the course of Employee's employment with the Company together with any intellectual property rights therein, are works made for hire and the property of the Company if

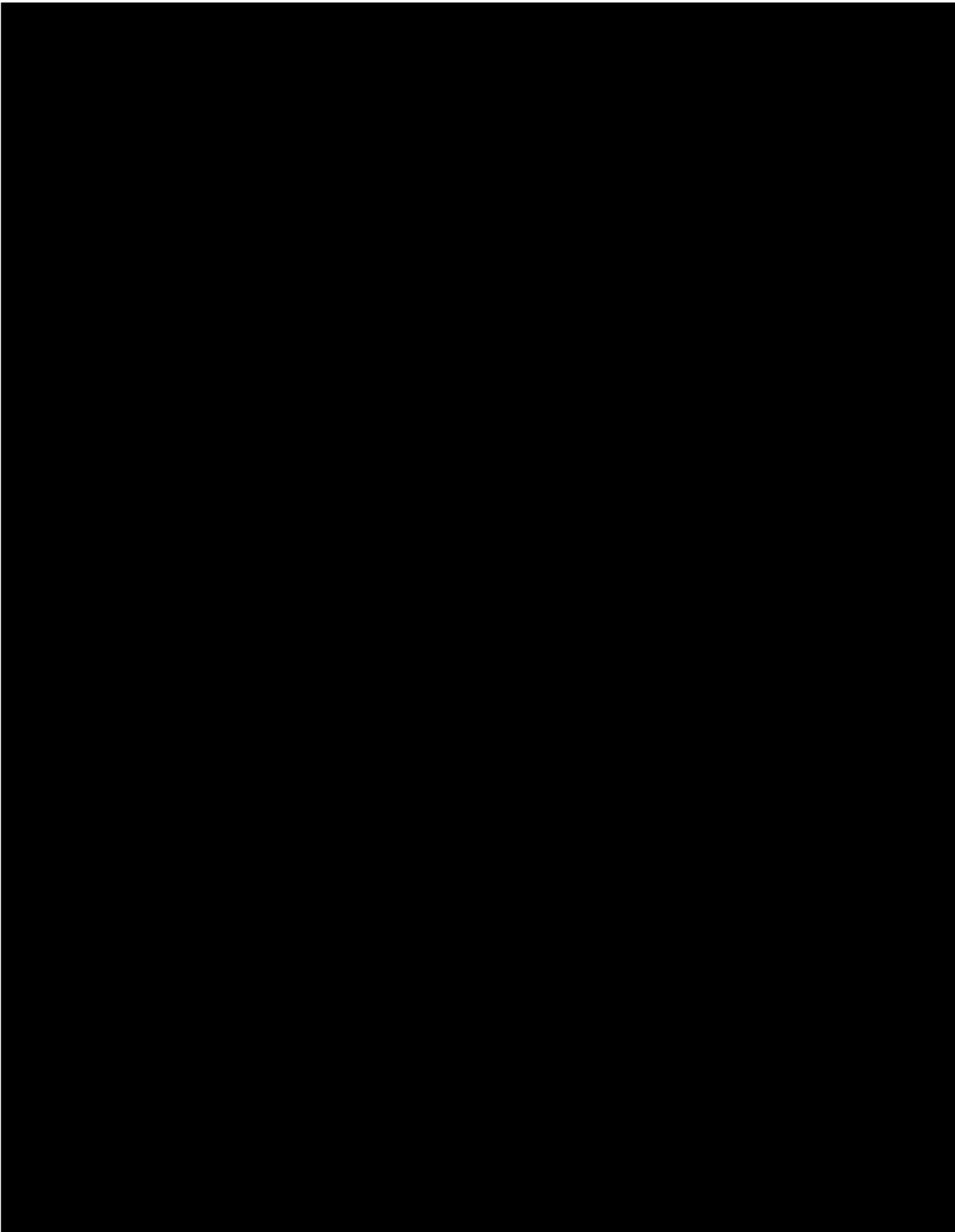
such works (i) relate in any manner, at the time the work is conceived or reduced to practice, to the actual or anticipated business, research, or development of the Company; (ii) are suggested by or result from any task assigned to Employee or work performed by Employee for or on behalf of the Company; or (iii) are created or developed with the use of Company equipment, supplies, facilities, information or materials. Employee shall disclose any such intellectual property promptly to the Company and hereby assigns any and all rights in such works to the Company or its assignees.

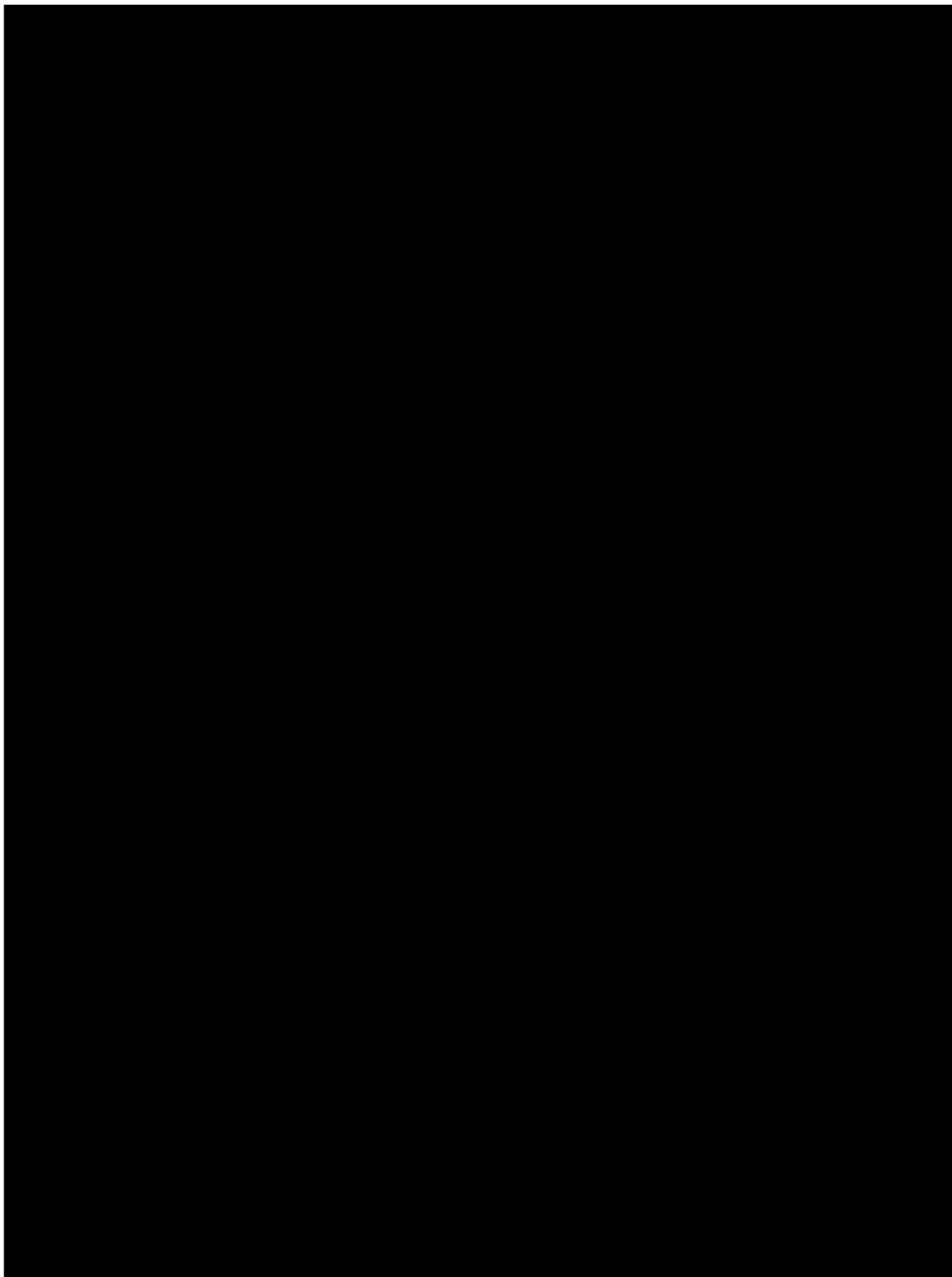
- (b) To the extent that any such intellectual property may not, by operation of law, be works made for hire, Employee will assign and does hereby assign to the Company the ownership of, and all right, title and interest in, such items, and the Company shall have the right to obtain and hold in its own name, all intellectual property rights, including without limitation, patent, trade secret, copyright and similar protections which may be available in such works throughout the world.
- (c) Employee agrees that all intellectual property made by him, solely or jointly with others, that are based on or contain proprietary information of the Company shall belong to the Company, and Employee hereby assigns any and all rights in such future intellectual property to the Company. For the purposes of this subsection, a work of authorship is based on the proprietary information of the Company if the work derives from or incorporates any such information in principle, structure, expression or design.
- (d) Employee agrees to assign to the Company all rights in any other work of authorship made by Employee if the Company is required to grant those rights to the United States Government or any of its agencies.
- (e) Employee agrees to assist the Company, or its designee or assignee, at the Company's expense, in every proper way to secure the Company's rights in such intellectual property and any copyrights, patents, mask work rights or other intellectual property rights relating thereto in any and all countries, including the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, assignments and all other instruments which the Company shall deem necessary in order to apply for and obtain such rights and in order to assign and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title and interest in and to such works of authorship, and any copyright, patents, mask work rights or other intellectual property rights relating thereto. Employee further agrees that his obligation to execute or cause to be executed, when it is in his power to do so, any such instrument or papers shall continue after the date hereof.
- (f) In the event the Company is unable due to Employee's subsequent disability or incapacity or for any other reason whatsoever to secure Employee's signature to any lawful and necessary document required to apply for, register or execute any patent, copyright or other applications with respect to any such intellectual property, Employee hereby irrevocably appoints the Company and its duly authorized officers and agents as his agents and attorneys-in-fact to execute and file any such application

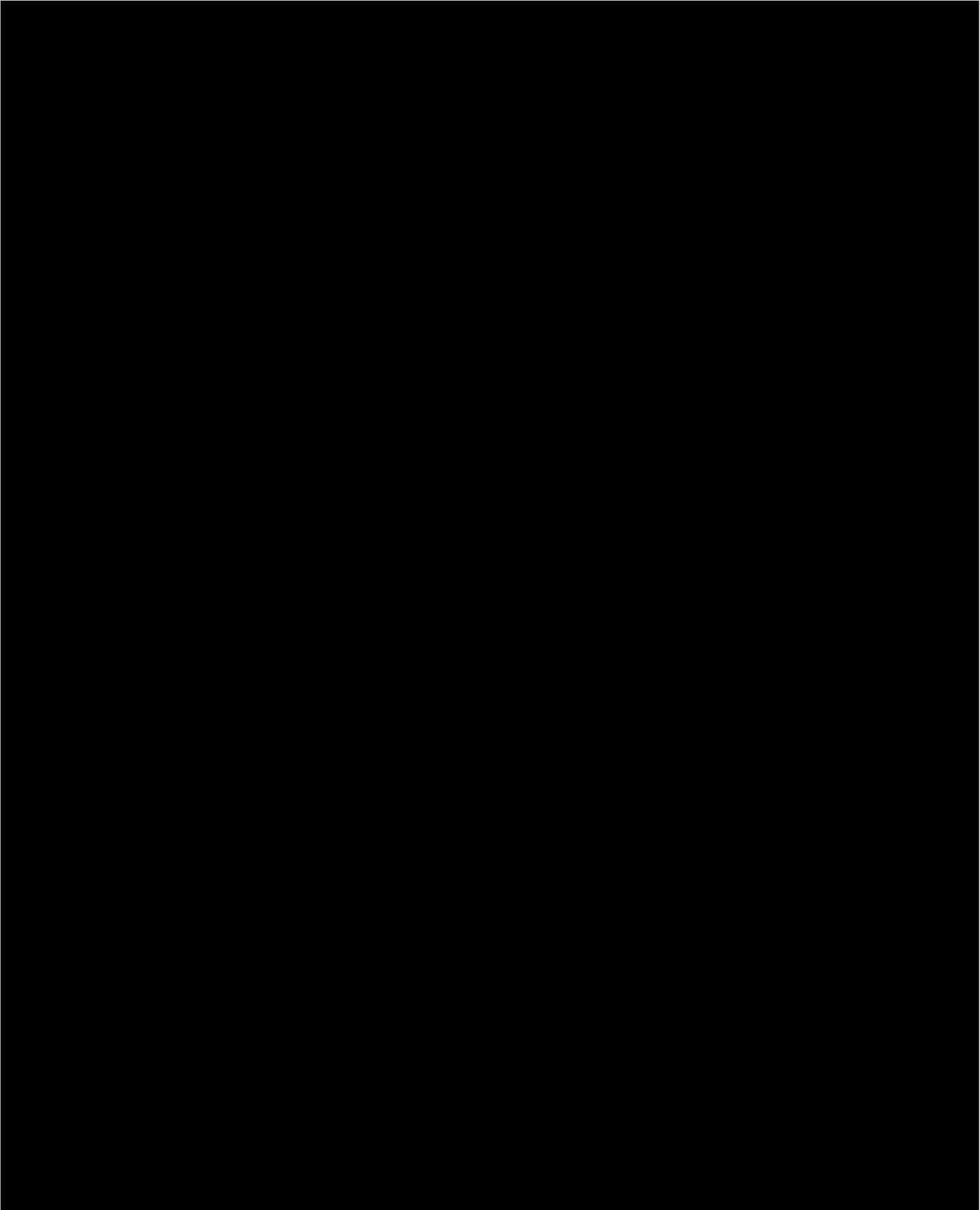
and to do all other lawfully permitted acts to further the prosecution and issuance of patents, copyrights or other rights thereon with the same legal force and effect as if executed by him.

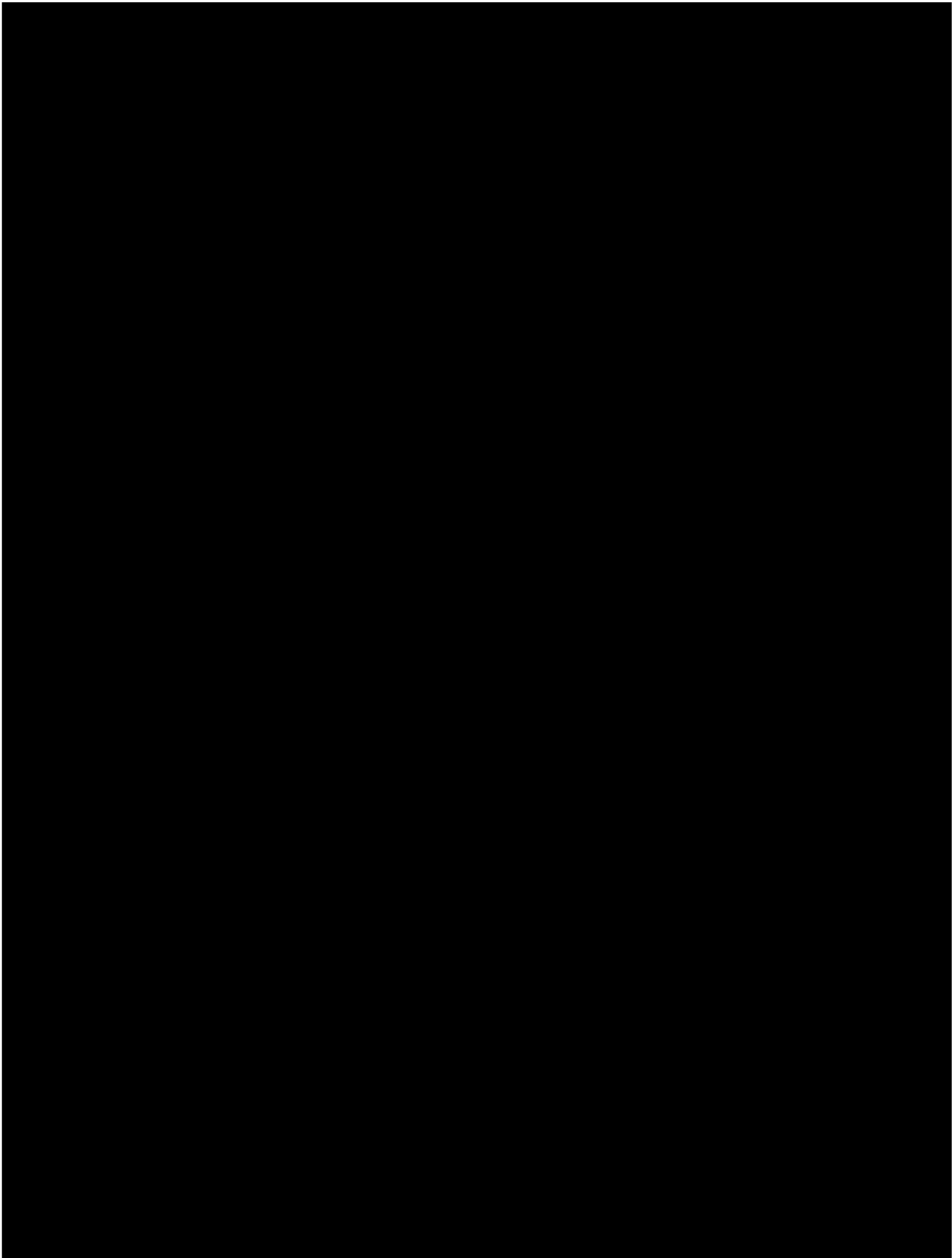
- (g) In order to permit the Company to claim rights to which it may be entitled, Employee agrees to disclose to the Company in writing and in confidence (i) all intellectual property as described in paragraph (a) above that Employee made, either solely or jointly with others, during the term of his employment with the Company, and (ii) all patent and copyright applications filed by him during, or within one (1) year after the termination of, his employment, unless such disclosure is prevented by law or a separate agreement. Employee also agrees to submit to a reasonable and confidential review process under which the Company may determine such issues as may arise under this paragraph.
- (h) If in the course of Employee's employment with the Company, Employee incorporated into a Company product, process or code any invention, original work of authorship, development, improvement, or trade secrets that was made by Employee before his employment with the Company (collectively referred to as "Prior Inventions"), the Company is hereby granted and shall have a non-exclusive, royalty-free, irrevocable, perpetual, worldwide license to make, have made, modify, use and sell such Prior Invention as part of or in connection with such product, process or code.



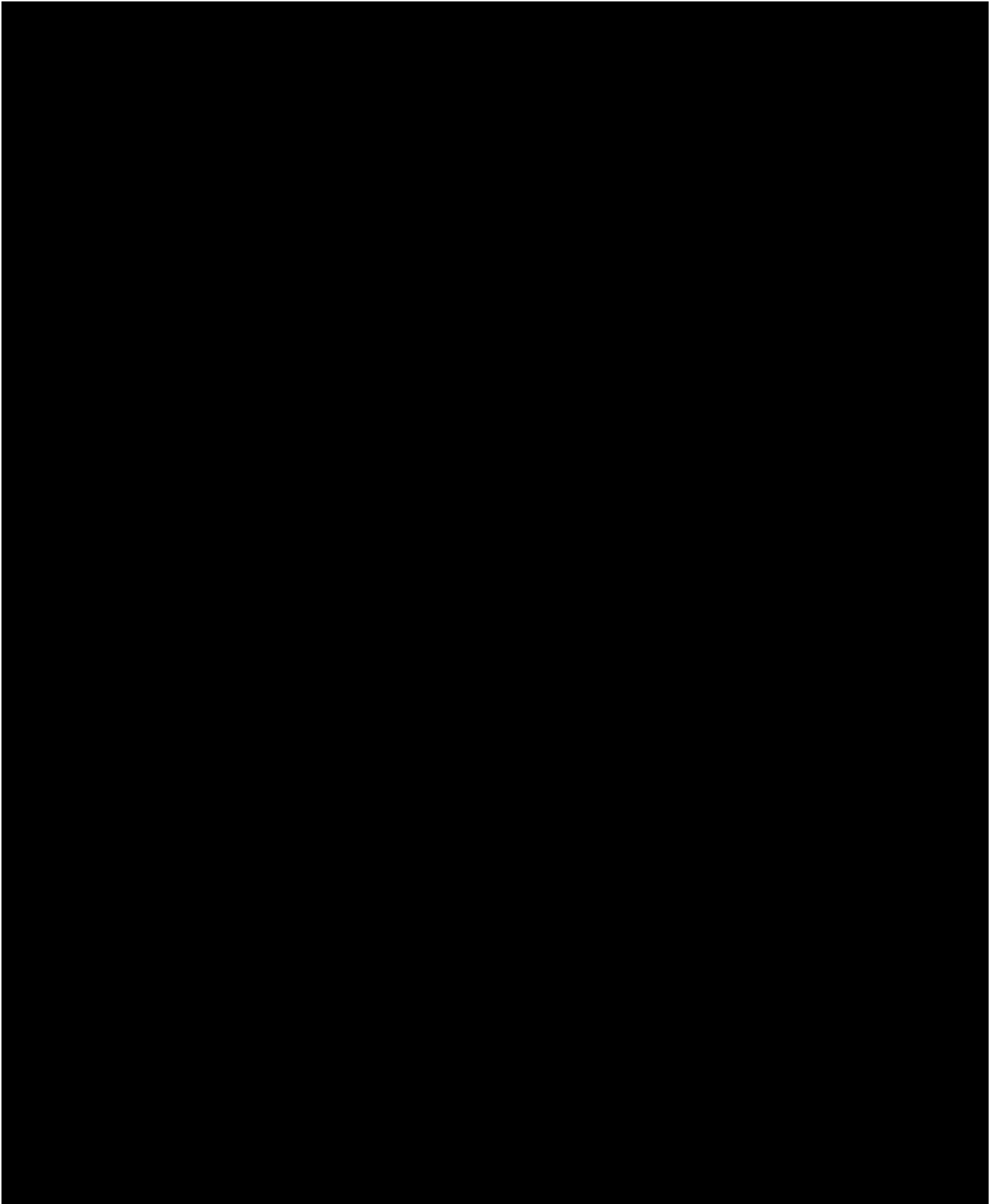













SIGNATURE PAGES (2 of 2)

PLEASE READ THIS AGREEMENT CAREFULLY. IT CONTAINS A RELEASE OF ALL KNOWN AND UNKNOWN, SUSPECTED AND UNSUSPECTED CLAIMS.

Acknowledged and Agreed:

PENG XIAO



\_\_\_\_\_  
Employee's Signature

Dec 16, 2014

\_\_\_\_\_  
Date

FOR MICROSTRATEGY INCORPORATED

\_\_\_\_\_  
Douglas K. Thede

\_\_\_\_\_  
Date