503317064 05/21/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3363682

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| KOHEI ASADA | 03/05/2015 |
| YOICHIRO SAKO | 04/22/2015 |
| KAZUYUKI SAKODA | 03/19/2015 |
| AKIRA TANGE | 05/05/2015 |
| YUKI KOGA | 03/23/2015 |

RECEIVING PARTY DATA

| Name: | SONY CORPORATION |
|-----------------|------------------------|
| Street Address: | 1-7-1 KONAN, MINATO-KU |
| City: | TOKYO |
| State/Country: | JAPAN |
| Postal Code: | 108-0075 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14438437 |

CORRESPONDENCE DATA

Fax Number: (617)646-8646

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: 617-646-8000

Email: patents_SonyAdmins@WolfGreenfield.com

Correspondent Name: RANDY J. PRITZKER

Address Line 1: WOLF GREENFIELD & SACKS, P.C.

Address Line 2: 600 ATLANTIC AVE

Address Line 4: BOSTON, MASSACHUSETTS 02210

| ATTORNEY DOCKET NUMBER: \$1459.71974US00 NAME OF SUBMITTER: AMANDA MOURA SIGNATURE: /Amanda Moura/ DATE SIGNED: 05/21/2015 | DATE CIGITED! | 00/21/2010 |
|---|-------------------------|-----------------|
| NAME OF SUBMITTER: AMANDA MOURA | DATE SIGNED: | 05/21/2015 |
| | SIGNATURE: | /Amanda Moura/ |
| ATTORNEY DOCKET NUMBER: S1459.71974US00 | NAME OF SUBMITTER: | AMANDA MOURA |
| | ATTORNEY DOCKET NUMBER: | S1459.71974US00 |

Total Attachments: 5

PATENT REEL: 035689 FRAME: 0201

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| Title of Invention | SIGNAL PROCESSING DEVICE AND SIGNAL PROCESSING METHOD |
|---|---|
| As the below | named inventor. I hereby declare that: |
| This declaration is directed to: | The sette short applications are |
| | United States application or PCT international application number PCT/JP2013/074744 filed on 2013/09/12 |
| The above-id | entified application was made or authorized to be made by me. |
| WHEREAS. | |
| acquiring all | NAN, MINATO-KU, TOKYO, 108-0075, JAPAN (hereinafter referred to as ASSIGNEE), is desirous of interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar on which may be granted therefor in the United States and in any and all foreign countries; |
| NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged. I by these presents do hereby assign, sell and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filling of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto; | |
| designee, as remuneration | r agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further it, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of ates and countries foreign thereto: |
| application f | r agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for or foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters may be granted for my aforesaid invention, as said ASSIGNEE thereof shall hereafter require and prepare at its own expense; |
| application, | r agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will be same in any interference or litigation related thereto; |
| And I hereby coverant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale. | |
| | nowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of a five (5) years, or both. |
| LEGAL NA | ME OF INVENTOR |
| Inventor: | KOHELASADA Date: March 5, 2015 |
| Signature: | Kohei Grada |

| Title of Invention | SIGNAL PROCESSING DEVICE AND SIGNAL PROCESSING METHOD |
|--|--|
| As the below | named inventor. I hereby declare that: |
| This declarati | The attention of anti-maties of |
| | United States application or PCT international application number PCT/JP2013/074744 filed on 2013/09/12 |
| The above-id | entified application was made or authorized to be made by me. |
| WHEREAS, | |
| *************************************** | NAN, MINATO-KU, TOKYO, 108-0075, JAPAN (hereinafter referred to as ASSIGNEE), is desirous of |
| | interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar on which may be granted therefor in the United States and in any and all foreign countries; |
| NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I by these presents do bereby assign, sell and transfer unto said ASSIGNFE, its successors, assigns, and legal representatives, the entire right, title and interest in said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other hencfits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue said United States Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto; | |
| designee, as remuneration | agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of ates and countries foreign thereto; |
| application for | r agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for it foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters may be granted for my aforesaid invention, as said ASSIGNEE thereof shall hereafter require and prepare at its own expense: |
| application, s | r agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said aid invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will be same in any interference or litigation related thereto; |
| And I hereby this assignment | covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with nt and sale. |
| | rowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of a five (5) years, or both. |
| LEGAL NAME OF INVENTOR | |
| Inventor: | YOICHIRO SAKO Date: April 22, 2015 |
| Signature: | Michigan Laker |

| Title of Invention | SIGNAL PROCESSING DEVICE AND SIGNAL PROCESSING METHOD | |
|--|--|--|
| As the below | named inventor, I hereby declare that: | |
| | This declaration is directed to: The attached application, or | |
| | United States application or PCT international application number filed on 2013/09/12 PCT/JP2013/074744 | |
| | entified application was made or authorized to be made by me. | |
| I believe that WHEREAS, | I am the original inventor or an original joint inventor of a claimed invention in the application. SONY CORPORATION , with offices at | |
| *************************************** | NAN, MINATO-KU, TOKYO, 108-0075, JAPAN (hereinafter referred to as ASSIGNEE), is desirous of | |
| | interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar on which may be granted therefor in the United States and in any and all foreign countries; | |
| NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I by these presents do hereby assign, sell and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue said United States Letters Patent to said ASSIGNEE, as the assignce of the whole right, title and interest thereto; | | |
| designee, as remuneration | agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of ates and countries foreign thereto; | |
| application for | r agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for ir foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters may be granted for my aforesaid invention, as said ASSIGNEE thereof shall hereafter require and prepare at its own expense; | |
| And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto; | | |
| And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale. | | |
| 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. | | |
| LEGAL NAM | ME OF INVENTOR | |
| Inventor: | KAZUYUKI SAKODA Date: March 19, 2015 | |
| Signature: | They will be to him to be to the | |

Attorney Docket No.: Sony Ref. No.: SP348273US00

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

| Title of Invention SIGNAL PROCESSING DEVICE AND SIGNAL PROCESSING METHOD | |
|---|--|
| As the below named inventor, I hereby declare that: | |
| This declaration | |
| United States application or PCT international application number PCT/JP2013/074744 filed on 2013/09/12 | |
| The above-identified application was made or authorized to be made by me. | |
| 1 believe that I am the original inventor or an original joint inventor of a claimed invention in the application. WHEREAS, SONY CORPORATION , with offices at | |
| 1-7-1 KONAN, MINATO-KU, TOKYO, 108-0075, JAPAN (hereinafter referred to as ASSIGNEE), is desirous of | |
| acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries; | |
| NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged. I by these presents do hereby assign, sell and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filling of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto; | |
| And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto; | |
| And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as said ASSIGNEE thereof shall hereafter require and prepare at its own expense; | |
| And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto; | |
| And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale. | |
| 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. | |
| LEGAL NAME OF INVENTOR | |
| Inventor: AKIRA TANGE Date: March 5, 20/5 | |
| Signature: April Jange | |

| Title of Invention | SIGNAL PROCESSING DEVICE AND SIGNAL PROCESSING METHOD |
|--|--|
| As the below | named inventor, I hereby declare that: |
| This declarati | The attracted against ag |
| | United States application or PCT international application number PCT/JP2013/074744 filed on 2013/09/12 . |
| The above-id | entified application was made or authorized to be made by me. |
| WHEREAS. | I am the original inventor or an original joint inventor of a claimed invention in the application. SONY CORPORATION , with offices at |
| acquiring all | DNAN, MINATO-KU, TOKYO, 108-0075, JAPAN (hereinafter referred to as ASSIGNEE), is desirous of interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar on which may be granted therefor in the United States and in any and all foreign countries; |
| NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged. I by these presents do hereby assign, sell and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto: | |
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| application fe | r agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for or foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters may be granted for my aforesaid invention, as said ASSIGNEE thereof shall hereafter require and prepare at its own expense; |
| application, s | r agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said aid invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will be same in any interference or litigation related thereto; |
| And I hereby this assignment | covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with ent and sale. |
| | nowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of a five (5) years, or both. |
| LEGAL NAME OF INVENTOR | |
| Inventor: | YUKI KOGA Date: Houch 33 cte/t |
| Signature: | mark to the |

RECORDED: 05/21/2015