503139082 01/16/2015 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3185693

| SUBMISSION TYPE: | | NE | NEW ASSIGNMENT | | | | |
|--|--------------------------------|--|--|-------------------------------------|----------|----------|-------------|
| NATURE OF CONVEYANCE: | | | ASSIGNMENT | | | | |
| CONVEYING PARTY | ΔΤΑ | • | | | | | |
| | | Nam | ne | | | Exec | cution Date |
| YOICHI TANIMURA | | | | | | 01/07/ | /2015 |
| YASUTAKA SHIMAMO | ТО | | | | | 01/07/ | /2015 |
| HIROSHI GOMI | | | | | | 12/26/ | /2014 |
| DAIJIRO YAMAGUCHI | | | | | | 12/26/ | /2014 |
| RECEIVING PARTY D | ΑΤΑ | | | | | | |
| Name: | SHARP | P KABUSH | IIKI KAISHA | | | | |
| Street Address: | 22-22, 1 | NAGAIKE | -CHO, ABENO-KU | J | | | |
| City: | OSAKA | A-SHI, OS | AKA | | | | |
| State/Country: | JAPAN | | | | | | |
| Postal Code: | 545-852 | 22 | | | | | |
| PROPERTY NUMBERS | | | Number | | | | |
| | | | Number | | 7 | | |
| | | 29511565 | | |] | | |
| Property Type Application Number: | | 29511565 | | |] | | |
| Property Type Application Number: CORRESPONDENCE | DATA | | ; | |] | | |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will</i> | DATA be sent to | (703)816- • <i>the e-ma</i> | 4100 hil address first; i i | | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: Correspondence will I using a fax number, if | DATA be sent to provided | (703)816- • the e-ma l; if that is | 4100 hil address first; in s unsuccessful, it | | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will I using a fax number, if</i> Phone: | DATA be sent to provided | (703)816- • <i>the e-ma</i> <i>I; if that is</i> 703-816-4 | 4100 hil address first; h s unsuccessful, it 4027 | | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will I using a fax number, if</i> Phone: Email: | DATA be sent to provided | (703)816- • <i>the e-ma</i> <i>I; if that is</i> 703-816-4 ptomail@ | 4100 ail address first; i a s unsuccessful, it 1027 nixonvan.com | | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will I using a fax number, if</i> Phone: Email: Correspondent Name: | DATA be sent to provided | (703)816- • <i>the e-ma</i> <i>1; if that is</i> 703-816-4 ptomail@ H. WARR | 4100 ail address first; in s unsuccessful, it 1027 nixonvan.com EN BURNAM, JR. | will be se | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will I using a fax number, if</i> Phone: Email: | DATA be sent to provided | (703)816- 5 <i>the e-ma</i> <i>t; if that is</i> 703-816-4 ptomail@ H. WARR 901 N. GL | 4100 ail address first; i a s unsuccessful, it 1027 nixonvan.com | i will be se i | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will I using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: | DATA be sent to provided | (703)816- 5 <i>the e-ma</i> 703-816-4 ptomail@ H. WARR 901 N. GL ARLINGT | 4100 ail address first; i a s unsuccessful, it 1027 nixonvan.com EN BURNAM, JR. .EBE ROAD, 11TH | i will be se i | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will I using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: | DATA be sent to provided | (703)816- 5 <i>the e-ma</i> <i>1; if that is</i> 703-816-4 ptomail@ H. WARR 901 N. GL ARLINGT HW | 4100 ail address first; in s unsuccessful, it 1027 nixonvan.com EN BURNAM, JR. .EBE ROAD, 11TH ON, VIRGINIA 222 | Will be se I FLOOR 203 | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will I using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: | DATA be sent to provided | (703)816- <i>the e-ma</i> <i>f; if that is</i> 703-816-4 ptomail@ H. WARR 901 N. GL ARLINGT HW H. W | 4100 ail address first; in s unsuccessful, it 1027 nixonvan.com EN BURNAM, JR. EBE ROAD, 11TH ON, VIRGINIA 222 78-790-2478 | H FLOOR 203 M, JR. | | | be sent |
| Property Type Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will I using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER: | DATA be sent to provided | (703)816- 5 the e-ma 7 03-816-4 ptomail@ H. WARR 901 N. GL ARLINGT HW H. W | 4100 ail address first; in s unsuccessful, it 1027 nixonvan.com EN BURNAM, JR. EBE ROAD, 11TH ON, VIRGINIA 222 B-790-2478 WARREN BURNAI | H FLOOR 203 M, JR. | | | be sent |
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| Property Type Application Number: CORRESPONDENCE Fax Number: Correspondence will I using a fax number, if Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER: SIGNATURE: | DATA be sent to provided | (703)816- o the e-ma f; if that is 703-816-4 ptomail@ H. WARR 901 N. GL ARLINGT HW H. M H. M | 4100 ail address first; in s unsuccessful, it 1027 nixonvan.com EN BURNAM, JR. EBE ROAD, 11TH ON, VIRGINIA 222 B-790-2478 WARREN BURNAI Warren Burnam, J 16/2015 | Will be se | nt via L | IS Mail. | |

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| | Attorney Docket Number | HWB-790-2478 | | |
|---|------------------------|------------------|--|--|
| | First Named Inventor | TANIMURA, Yoichi | | |
| INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) USING AN APPLICATION DATA SHEET (37 CFR 1.76) Declaration Submitted With Initial Filing OR | | | | |
| Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1. | 16(f)) required) | | | |
| TELEVISION SET | | | | |
| (Title of the Invention) | | | | |
| As a below named inventor, I hereby declare that: | | | | |
| This declaration is directed to: ☐ the attached application, or ⊠ United States Application Number 29/511,565 filed December 11, 2014, or ☐ PCT International application number filed on | | | | |
| The above-identified application was made or authorized to be made by me. | | | | |
| I believe I am the original inventor or an original joint inventor of a claimed inver | | | | |
| 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. | | | | |
| WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention in the Application identified above. | | | | |
| WHEREAS, Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), a corporation of the State of Japan, having an office and place of business at 22-22, Nagaike-cho, Abeno-ku, , Osaka-shi, Osaka, Japan 545-8522, is desirous of acquiring an interest therein; | | | | |
| NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application, and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all representatives of priority 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 to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention; | | | | |
| ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention; | | | | |
| ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and | | | | |
| ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE. | | | | |
| AGREED and executed as noted below: | | | | |
| Legal Name of Additional Joint Inventor, if any: | | | | |
| (E.g., Given Name (first and middle (if any)) and Family Name or Surname) Hiroshi GOMI | | | | |
| Inventor's Signature: Hiroshi Gomi | Date: December | r 26, 2014 | | |
| Witnessed by: Name: Kazuhito IWAI | | | | |
| Signature of witness: Kanuhato Iwai Date: December 26, 2014 | | | | |

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

2442707

PATENT REEL: 034733 FRAME: 0892

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Doc code: Oath Document Description: Oath or declaration filed

| | Attorney Docket Number | HWB-790-2478 | | | |
|--|------------------------------------|------------------------------|--|--|--|
| | First Named Inventor | TANIMURA, Yoichi | | | |
| INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) | | | | | |
| USING AN APPLICATION DATA SHEET (37 CFR 1.76) | | | | | |
| Declaration Submitted With Initial Filing OR | | | | | |
| Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1. | 16(f)) required) | | | | |
| TELEVISION SET | | | | | |
| (Title of the Invention) | | | | | |
| As a below named inventor, I hereby declare that: | | | | | |
| This declaration is directed to: | | | | | |
| the attached application, or | | | | | |
| United States Application Number 29/511,565 filed December 11, 2 | 014, or | | | | |
| PCT International application number filed on | | | | | |
| The above identified explication use made as outhering the barreds burneds | | | | | |
| The above-identified application was made or authorized to be made by me. | - 41 | | | | |
| I believe I am the original inventor or an original joint inventor of a claimed inver | | 1001 | | | |
| I hereby acknowledge that any willful false statement made in this declaration is by fine or imprisonment of not more than five (5) years, or both. | punishable under 18 U.S.C. | 1001 | | | |
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| NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good | d and valuable consideration. | the receipt and sufficiency | | | |
| of which are hereby acknowledged, the said ASSIGNOR by these presents here | eby sells, assigns, and transfe | ers unto the said | | | |
| ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S e America and all foreign countries, in and to the invention as described in the afo | ntire right, title and interest in | the United States of | | | |
| subsequent applications based thereon including any and all continuations, division | sions, reissues, and substitute | said application and to all | | | |
| all resulting patents, together with the right of priority under the International Co | nvention for the Protection of | Industrial Property, Inter- | | | |
| American Convention Relating to Patents, Designs and Industrial Models, and a States of America adheres, and the ASSIGNOR hereby authorizes and request | any other international agreem | nents to which the United | | | |
| said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors | assions, and legal represent | atives. It is understood and | | | |
| agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented | only ASSIGNEE and will cont | inue to represent only | | | |
| ASSIGNEE with respect to this invention; | | | | | |
| ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal | | | | | |
| representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention; | | | | | |
| ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential | | | | | |
| to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and | | | | | |
| ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE. | | | | | |
| AGREED and executed as noted below: | | | | | |
| Legal Name of Additional Joint Inventor, if any: | | | | | |
| (E.g., Given Name (first and middle (if any)) and Family Name or Surname) Daijiro YAMAGUCHI | | | | | |
| Inventor's | Date: | | | | |
| signature: Daijiro Zamaguchi | Dava | 2/ 2014 | | | |
| Witnessed by: Vecember 26, 2014 | | | | | |
| Name: Kazuhito IWAI | | | | | |
| | | | | | |
| Signature of witness: Kappihito Iwai Date: December 26, 2014 | | | | | |
| U U | | | | | |

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

2442707

PATENT REEL: 034733 FRAME: 0893

| | Attorney Docket Number | HWB-790-2478 | | |
|--|------------------------------|------------------|--|--|
| | First Named Inventor | TANIMURA, Yoichi | | |
| INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) USING AN APPLICATION DATA SHEET (37 CFR 1.76) | | | | |
| Declaration Submitted With Initial Filing OR | | | | |
| Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1. | 16(f)) required) | | | |
| TELEVISION SET | | | | |
| (Title of the Invention) | | | | |
| As a below named inventor, I hereby declare that: | | | | |
| This declaration is directed to: | | | | |
| the attached application, or United States Application Number 29/511,565 filed December 11, 2014, or PCT International application number filed on | | | | |
| | | | | |
| The above-identified application was made or authorized to be made by me. | | | | |
| I believe I am the original inventor or an original joint inventor of a claimed inve | •• | | | |
| I hereby acknowledge that any willful false statement made in this declaration i by fine or imprisonment of not more than five (5) years, or both. | s punishable under 18 U.S.C. | 1001 | | |
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| NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority 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 said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention; | | | | |
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| AGREED and executed as noted below: | | | | |
| LEGAL NAME OF INVENTOR/JOINT INVENTOR: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) | | | | |
| YASUTAKA | | HIMAMOTO | | |
| Inventor's Signature: Yas North A Mimameto | Date: JANN | ary 7, 2015 | | |
| Witnessed by: | | | | |
| Name: Kazuhito Iwai | | | | |
| Signature of witness: Kozuhito Iwai | Date: Janua | ary 7, 2015 | | |

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

2442707

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PATENT REEL: 034733 FRAME: 0894

| | Attorney Docket Number | HWB-790-2478 | | |
|--|------------------------------|------------------|--|--|
| | First Named Inventor | TANIMURA, Yoichi | | |
| INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) USING AN APPLICATION DATA SHEET (37 CFR 1.76) | | | | |
| Declaration Submitted With Initial Filing | (| | | |
| OR Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16(f)) required) | | | | |
| TELEVISION SET | | | | |
| (Title of the Invention) | | | | |
| As a below named inventor, I hereby declare that: | | | | |
| This declaration is directed to: ☐ the attached application, or ⊠ United States Application Number 29/511,565 filed December 11, 2014, or ☐ PCT International application number filed on | | | | |
| The above-identified application was made or authorized to be made by me. | | | | |
| I believe I am the original inventor or an original joint inventor of a claimed inver | | | | |
| I hereby acknowledge that any willful false statement made in this declaration is by fine or imprisonment of not more than five (5) years, or both. | s punishable under 18 U.S.C. | 1001 | | |
| WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention in the Application identified above. | | | | |
| WHEREAS, Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), a corporation of the State of Japan, having an office and place of business at 22-22, Nagaike-cho, Abeno-ku, , Osaka-shi, Osaka, Japan 545-8522, is desirous of acquiring an interest therein; | | | | |
| NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE's attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention; | | | | |
| ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention; | | | | |
| ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and | | | | |
| ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE. | | | | |
| AGREED and executed as noted below: | | | | |
| LEGAL NAME OF INVENTOR/JOINT INVENTOR: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) | | | | |
| Yoichi TANIMURA | | | | |
| Inventor's Signature: Horohi Tanimura Date: 7. January 2015 | | | | |
| Witnessed by: | | | | |
| Name: Kazuhito IWAI | | | | |
| Name: Kazuhito IWAI Signature of witness: Kozuhito Iwai Date: January 7, 2015 | | | | |

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

2442707

PATENT REEL: 034733 FRAME: 0895

RECORDED: 01/16/2015