PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4709629

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| MAKOTO TANAHASHI | 10/20/2017 |
| YOSHIMASA EGASHIRA | 11/27/2017 |
| KEIICHI YAMAGUCHI | 11/27/2017 |

RECEIVING PARTY DATA

| Name: | KABUSHIKI KAISHA TOSHIBA | |
|-------------------|--------------------------|--|
| Street Address: | 1-1, SHIBAURA 1-CHOME | |
| Internal Address: | MINATO-KU | |
| City: | TOKYO | |
| State/Country: | JAPAN | |
| Postal Code: | 105-8001 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15689593 |

CORRESPONDENCE DATA

Fax Number: (703)816-4100

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.

(703)816-4000 Phone:

Email: ptomail@nixonvan.com **Correspondent Name:** NIXON & VANDERHYE, P.C. Address Line 1: 901 NORTH GLEBE ROAD

Address Line 2: 11TH FLOOR

Address Line 4: ARLINGTON, VIRGINIA 22203

| ATTORNEY DOCKET NUMBER: | MJS-427-411 | |
|--|-------------------|--|
| NAME OF SUBMITTER: | MICHAEL J. SHEA | |
| SIGNATURE: | /Michael J. Shea/ | |
| DATE SIGNED: 11/29/2017 | | |
| This document serves as an Oath/Declaration (37 CFR 1.63). | | |

Total Attachments: 2

PATENT REEL: 044253 FRAME: 0101 source=427-411_Assignment-Declaration#page1.tif source=427-411_Assignment-Declaration#page2.tif

PATENT REEL: 044253 FRAME: 0102 Doc code: Oath

Document Description: Oath or declaration filed

貴社整理番号: G99305543-US-A

Attorney Docket Number - First Named Inventor Makoto TANAHASHI

| THIST INSTITUTE TO THE PROPERTY OF THE PROPERT | | | | |
|--|--|--|--|--|
| 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) | | | | |
| SIGNAL PROCESSING DEVICE | | | | |
| | | | | |
| (Title of the Invention) | | | | |
| As a below named inventor, I hereby declare that: | | | | |
| This declaration is directed to: | | | | |
| ☐ The attached application, | | | | |
| OR ATT / CORD TO SE | | | | |
| United States Application Number or PCT International application number 15/689,593 filed on August 29, 2017 | | | | |
| 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 invention in the application. | | | | |
| 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, Kabushiki Kaisha Toshiba (hereinafter ASSIGNEE), a corporation of the State of Japan, having an office and place of business at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001 Japan, is desirous of acquiring an interest therein; | | | | |
| NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and 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, litle 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-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of 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 filling and granting of foreign applications and the perfecting of title thereto in ASSIGNEE. | | | | |
| AGREED and executed as noted below: | | | | |
| LEGAL NAME OF SOLE OR FIRST INVENTOR: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) Makoto TANAHASHI | | | | |
| Inventor's Signature: Makoto Janahashi Date: (0/20/2017 | | | | |
| Witnessed by: | | | | |
| Name: | | | | |
| | | | | |
| Signature of witness: Date: | | | | |

[X] Additional inventors are being named on the 1 supplemental sheet(s) PTO/AIA/10 attached hereto

(Page 1 of 2)

Note: PTO Rules state A person may not execute an oath or declaration for an application unless that person has reviewed and understands the contents of the application, including the claims, and is aware of the duty to disclose to the Office all information known to the person to be material to patentability as defined in [37 CFR] § 1.56.

宣言書·讀波証

貴社整理番号: G99305543-US-A

| SUPPLEMENTAL SHEET FOR DECLARATION | ADDITIONAL INVENTOR(S) Supplemental Sheet (for PTO/AIAI/08/09) (Page 2 of 2) |
|---|---|
| Legal Name of Additional Joint Inventor, if any: | |
| (E.g., Given Name (first and middle (if any)) and Family Name or Su | ırname) |
| Yoshimasa EGASHIRA | 4 |
| Inventor's Signature: Lyoshimasa Egashira | Date: Nov. 27, 2017 |
| Witnessed by: | |
| Name: | |
| Signature of witness: | Date: |
| | |
| Legal Name of Additional Joint Inventor, if any: | |
| (E.g., Given Name (first and middle (if any)) and Family Name or Su | ırname) |
| Keiichi YAMAGUCHI | , |
| Inventor's Signature | Date: |
| Keichi Yermerzenchi | Nov. 27, 2017 |
| Wilnessed by: | |
| Name: | |
| Signature of witness: | Date: |
| | |
| Legal Name of Additional Joint Inventor, if any: | |
| (E.g., Given Name (first and middle (if any)) and Family Name or Su | ırname) |
| | |
| Inventor's Signature: | Date: |
| Wilnessed by: | |
| Name: | |
| Signature of witness: | Dale: |

PATENT REEL: 044253 FRAME: 0104

RECORDED: 11/29/2017