### 505338914 02/21/2019

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5385695

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
SHINNOSUKE HAYAMIZU	12/13/2018
KAZUYUKI MARUKAWA	12/14/2018
ITARU SHIMIZU	12/18/2018
NORIKO TANAKA	12/17/2018
ASAKO KANEKO	12/19/2018

#### **RECEIVING PARTY DATA**

Name:	SONY CORPORATION
Street Address:	1-7-1 KONAN
Internal Address:	MINATO-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	1080075

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16327011

### **CORRESPONDENCE DATA**

**Fax Number:** (312)803-4960

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.

**Email:** docketing@chiplawgroup.com

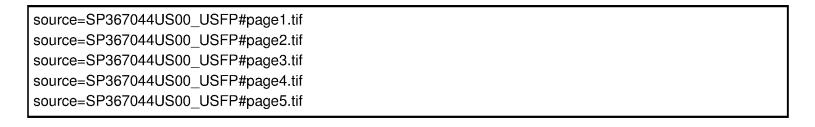
Correspondent Name: CHIP LAW GROUP
Address Line 1: 155 N WACKER DR

Address Line 2: SUITE 4250

Address Line 4: CHICAGO, ILLINOIS 60606

Total Attachments, 5	
DATE SIGNED:	02/21/2019
SIGNATURE:	/Pramod Chintalapoodi/
NAME OF SUBMITTER:	PRAMOD CHINTALAPOODI
ATTORNEY DOCKET NUMBER:	SP367044US00

Total Attachments: 5



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

IMAGING DEVICE, SIGNAL PROCESSING DEVICE, AND VEHICLE CONTROL SYSTEM		
As the below named inventor, I hereby declare that:		
This declaration The attached application, or		
United States application or PCT international application number PCT/JP2017/031588 filed on 2017/09/01	-	
The above-identified application was made or authorized to be made by me.		
believe that I am the original inventor or an original joint inventor of a claimed invention in the application.  WHEREAS, SONY CORPORATION , with offices	91	
1-7-1 KONAN, MINATO-KU, TOKYO, 108-0075, JAPAN (hereinafter referred to as ASSIGNEE), is destrous		
equiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or simil egal protection which may be granted therefor in the United States and in any and all foreign countries;	ar	
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;		
And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designer, 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		
nvenior: SHINNOSUKE HAYAMIZU Date: Vec. 13th, 2018	<b></b>	
ignature: <u>速水新で介</u>		

Attorney Docket No.: Sony Ref. No.: SP367044US00

# 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	IMAGING DEVICE, SIGNAL PROCESSING DEVICE, AND VEHICLE CONTROL SYSTEM	
As the below	named inventor, I hereby declare that:	
This declarati	The ottached anotherion ov	
Who alkayin 131	United States application or PCT international application number PCT/JP2017/031588  filed on 2017/09/01	
	lentified application was made or authorized to be made by me.	
	I am the original inventor or an original joint inventor of a claimed invention in the application.  SONY CORPORATION , with offices at	
1-7-1 KC	ONAN, 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 ion 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 accruse 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;		
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 to no perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of tates and countries foreign thereto;	
application fo	er 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 bereafter 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	KAZUYUKI MARUKAWA Dale: 2018	
Signature:	Konguli Manhawa	

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

	litle of nvention	SYSTEM	
,,	As the below named inventor, I hereby declare that:		
	This declarati s directed to:	The attached application, or	
		United States application or PCT international application number PCT/JP2017/031588  filed on 2017/09/01	
.]	The above-id	ntified application was made or authorized to be made by me.	
	believe that	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	
		nterest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar in which may be granted therefor in the United States and in any and all foreign countries;	
6 1 2 3 4 5 8	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;		
1	lesignee, as emuneration	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 tes and countries foreign thereto;	
í	application for	agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for 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 bereafter require and prepare at its own expense;	
í	application, s	agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said id invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will a same in any interference or litigation related thereto;	
	And I hereby his assignme	ovenant that no assignment, sale, agreement or encumbrance has been or will be made or emered into which would conflict with it and sale.	
Ţ	hereby acknoor more than	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of five (5) years, or both.	
1	EGAL NAN	E OF INVENTOR	
1	nventor:	ITARU SHIMIZU Date: Dec 1844, 2018	
5	Signature:	Itaru Shimizu	

# 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	IMAGING DEVICE, SIGNAL PROCESSING DEVICE, AND VEHICLE CONTROL SYSTEM	
As the below	named inventor, Thereby declare that:	
This declarated is directed to:	Phonochicostic and accomplication and accomplication of the	
	United States application or PCT international application number PCT/JP2017/031588 filed on 2017/09/01	
The above-id	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	
1-7-1 KC	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;		
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:	NORIKO TANAKA Date: 2-018 12-17	
Signature: Noriko Tanaka		

Attorney Docket No.: Sony Ref. No.: SP367044US00

## 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	IMAGING DEVICE, SIGNAL PROCESSING DEVICE, AND VEHICLE CONTROL SYSTEM	
As the below	named inventor, Thereby declare that:	
This declarates is directed to	The attentian amplication or	
The skeet of	United States application or PCT international application number PCT/JP2017/031588  filed on 2017/09/01  contitled application was made or authorized to be made by me.	
	I am the original inventor or an original joint inventor of a claimed invention in the application.  SONY CORPORATION , with offices at	
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 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;		
designee, as remuneration	ragree 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 in 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 aforesnid 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 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.		
	ME OF INVENTOR	
Inventor: Signature:	ASAKO KANEKO Dase: 2018, 12, 19 Asako Kaneko	

PATENT REEL: 048394 FRAME: 0841

**RECORDED: 02/21/2019**