# 505774983 11/15/2019

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5821801

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
KIYOTAKA EIZUMI	05/27/2019
MAKOTO RYUDO	05/27/2019
DOUKEI NAGAYASU	05/22/2019
HITOSHI NISHIMURA	05/27/2019
JINGBO WANG	05/27/2019
MASATOSHI NISHIO	05/27/2019
HIDEAKI YAMAGUCHI	05/24/2019
YOSHIAKI TAKENAKA	05/24/2019
RYO ISHIKAWA	05/24/2019

## **RECEIVING PARTY DATA**

Name:	PANASONIC INTELLECTUAL PROPERTY MANAGEMENT CO., LTD.	
Street Address: 1-61, SHIROMI 2-CHOME, CHUO-KU, OSAKA-SHI		
City:	OSAKA	
State/Country:	JAPAN	
Postal Code:	540-6207	

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

Property Type	Number	
Application Number:	16466404	

## **CORRESPONDENCE DATA**

Fax Number:

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.

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Correspondent Name: PASONA KNOWLEDGE PARTNER INC.

Address Line 1: 8F OBP PANASONIC TOWER

Address Line 2: 1-61, SHIROMI 2-CHOME, CHUO-KU

Address Line 4: OSAKA, JAPAN 540-6208

ATTORNEY DOCKET NUMBER: P1002799US01

NAME OF SUBMITTER: ASAMI KATO

PATENT 505774983 REEL: 051015 FRAME: 0183

SIGNATURE:	/Asami KATO/	
<b>DATE SIGNED:</b> 11/15/2019		
Total Attachments: 3		
source=Assignment 16466404(P1002799US01 Wende)#page1.tif		
source=Assignment 16466404(P1002799US01 Wende)#page2.tif		
source=Assignment 16466404(P1002799US01 Wende)#page3.tif		

PATENT REEL: 051015 FRAME: 0184

Japa US F	asonic Ref*: P1002799US01 in Firm Name: PIPM Direct Firm Name*:	<del></del>	Application Serial No Japan Firm Ref: US Firm Ref: GNMENT	Assignment Form (Oct. 2014)
WHE	REAS, the undersigned has (have) invented			
Box 1		the invention entitled:		
	of Invention: LIGNMENT METHOD			
<u> </u>	1. For use when signi	ng Declaration prior to filir	ng U.S. patent application (check only	v one box below)
	for which an application for U.S. patent			ently herewith, or
	for which an application for U.S. patent			, or
(if Dec	claration & Assignment are signed on the same day, check (a) a or which an International Application h	nd make no entry in the blank; if	the Declaration was signed before this Assignm	ent, enter the date(s) on which you signed the Declaration)
1	the PCT-US national entry, check only (c) and enter PCT applic		PCT Application No.	PCT/JP2017/042715 and
- 05			tion after filing U.S. patent application	
(d)□ f	or which an application for U.S. patent			and,
	WHEREAS, Panasonic Intellectual Pr	operty Management	Co., Ltd. of 1-61, Shiromi 2-cho	me, Chuo-ku, Osaka-shi, Osaka 540-6207
legally and in United said ir United by this reexar and in papers Protect this ap eviden in and relating application patent unders patent thereby execut The unfurther docum	restates) and in all countries foreign to the United States and all countries foreign to the United States and all countries foreign to the United States and all countries foreign to the United States for all countries foreign to the United States for the undersigned agree(s) to execute all pages and documents and perform any act which tion of Industrial Property or similar agreem plication or any and all Related Applications are and proceeding with such interference, a to said invention, this application and any age thereto and in support thereof, for the benations as the Assignee(s) may deem necess. The undersigned agree(s) to perform all affiliciation and its signed if this Assignment had not been made if the undersigned hereby authorize(s) and reas, to issue any and all Letters Patent(s) restated, and will not execute, any assignment, and by the undersigned hereby does sell, assign and by the undersigned hereby does sell, assign and by the undersigned in connection with the dersigned hereby grant(s) the Assignee(s) identification which may be necessary or deent.  The undersigned hereby agree(s) that the fee undersigned hereby agree(s) that the Undersigned hereby agree(s) that the Che undersigned hereby	no to any Letters Pater or consideration, the recorderation, the recorderates, does sell, assed States of America, Inited States; and (ii) thorals, conversions, divided States (hereinafter of thereto; and (iii) any a herefore, and all rights or the full term or terms pers necessary in connain a may be necessary in contain a may be necessary in ents, all papers necessary in ents, all papers necessary in different and for any and all litigand all Related Applicate effit of Assignee(s), and sarry or expedient. In the conveyed to the ending and the properties of the conveyed to the ending and the appointed U.S. estrable in order to consideration and for a sand the appointed U.S. estrable in order to consideration and sarry or expedient.	at(s) that may be granted therefoeipt and sufficiency of which are eipt and sufficiency of which are sign and transfer unto said Assig its territories, dependencies and ais patent application and any an isions, continuations, continuations, continuations and application and a series are for past and future infring thereof.  The ection with this application and a connection with claims or provisions or uncertion with any interfact with the Assignee(s) in every ations regarding, or for the purposions or Letters Patent(s) therefor also to execute separate assign also to execute separate assign or be necessary to obtain a grant and Assignee(s) as fully and entirely oner of Patents, and officials of a tion or any and all Related Applies and the application or any and all Related Applies and the application of any and all related Applies and the application of any and all related Applies and the application of any and all related Applies and the application of any and all related Applies and the application of a new power of attorneys and agents the apply with the rules of the U.S. Patent attorneys and agents the apply with the rules of the U.S. Patent and accordance with the later and the application accordance with the later and the accordance with the later and transfer and transfer and the application and accordance with the later and transfer and transfer and the accordance with the later and transfer and transfer and the accordance with the later and transfer and transfer and the accordance with the later and transfer and tran	r. hereby acknowledged and intended to be nee(s) the entire and exclusive right, title possessions (hereinafter designated as the d all related patent application(s) disclosing ns-in-part and reissues thereof in the ons"), along with all rights of priority created g all renewals, extensions, reissues and gement thereunder, in the United States any and all Related Applications thereof, all ions of the International Convention for ference which may be declared concerning a way possible in obtaining and producing use of protecting the right, title and interest re, and to testify in any legal proceeding ments in connection with such of a valid United States and any foreign as the same would have been held by the call foreign countries, whose duty is to issue cations thereof to said Assignee(s) and and that the undersigned has (have) not authority for revoking power of attorney(s) by in place thereof.  The power to insert on this assignment any tent Office for recordation of this individually and collectively.
Box2	N WITNESS WHEREOF, executed by the united inventor, please Sign and Date be	low)		ame(s) and signature(s).
	(e) First Name, Last Name		(f) Signature	(g) Date signed
(1)	Kiyotaka EIZUMI	Kiyotaka Makoto	Eizumi River	May 27. 2019
(2)	Makoto RYUDO	Makoto	Ryndo	May, 27 2019
	_			Month, Date, Year

lacktriangle Check if additional paper(s) is/are attached. Total of  $\underline{\phantom{a}2}$  pages are submitted.

Doukei NAGAYASU

Hitoshi NISHIMURA

(3)

(4)

Panasonic Ref*: P1002799US01	Assignment Form (Oct. 2014) Application Serial No. 16/466404
Japan Firm Name: PIPM Direct	Japan Firm Ref:
US Firm Name*:	US Firm Ref:
/* must be filled	

# **ASSIGNMENT**

WHEREAS, the undersigned has (have) invented the invention entitled	:	
Box 1		
Title of Invention: ALIGNMENT METHOD		
1. For use when signing Declaration prior to fili	ing U.S. patent application (check onl	y one box belaw)
(a)□ for which an application for U.S. patent has been executed	by the undersigned concurre	ently herewith, or
(b)□ for which an application for U.S. patent has been executed	on the following date(s):	, or
(if Declaration & Assignment are signed on the same day, check (a) and make no entry in the blank; ij	f the Declaration was signed before this Assignn	nent, enter the date(s) on which you signed the Declaration)
(c)■ for which an International Application has been filed as:	PCT Application No.	PCT/JP2017/042715 and

WHEREAS, Panasonic Intellectual Property Management Co., Ltd. of 1-61, Shiromi 2-chome, Chuo-ku, Osaka-shi, Osaka 540-6207

Application Filing Date

<u>Japan</u>

(d) for which an application for U.S. patent has been filed on:

its/their heirs, successors, legal representatives and assigns (hereinafter designated as "Assignee(s)") is/are desirous of acquiring the entire right, title, and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and intended to be

2. For use when signing Declaration after filing U.S. patent application

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and intended to be legally bound hereby, the undersigned, by these presents, does sell, assign and transfer unto said Assignee(s) the entire and exclusive right, title and interest in and to; (i) said invention in the United States of America, its territories, dependencies and possessions (hereinafter designated as the United States) and in all countries foreign to the United States; and (ii) this patent application and any and all related patent application(s) disclosing said invention, including provisionals, non-provisionals, conversions, divisions, continuations-in-part and reissues thereof in the United States and all countries foreign to the United States (hereinafter designated as "Related Applications"), along with all rights of priority created by this patent application under any treaty relating thereto; and (iii) any and all Letters Patent(s), including all renewals, extensions, reissues and reexamination certificates which may be granted therefore, and all rights to sue for past and future infringement thereunder, in the United States and in all countries foreign to the United States for the full term or terms thereof.

The undersigned agree(s) to execute all papers necessary in connection with this application and any and all Related Applications thereof, all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements, all papers necessary in connection with any interference which may be declared concerning this application or any and all Related Applications thereof and to cooperate with the Assignee(s) in every way possible in obtaining and producing evidence and proceeding with such interference, and for any and all litigations regarding, or for the purpose of protecting the right, title and interest in and to said invention, this application and any and all Related Applications or Letters Patent(s) therefore, and to testify in any legal proceeding relating thereto and in support thereof, for the benefit of Assignee(s), and also to execute separate assignments in connection with such applications as the Assignee(s) may deem necessary or expedient.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States and any foreign patent(s) to the Assignee(s) and to vest all rights hereby conveyed to the Assignee(s) as fully and entirely as the same would have been held by the undersigned if this Assignment had not been made.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents, and officials of all foreign countries, whose duty is to issue patents, to issue any and all Letters Patent(s) resulting from said application or any and all Related Applications thereof to said Assignee(s) and hereby covenants that the undersigned has (have) full right to convey the entire interest herein assigned, and that the undersigned has (have) not executed, and will not execute, any assignment, sale, agreement or encumbrances in conflict herewith.

The undersigned hereby does sell, assign and transfer unto said Assignee(s) the full and exclusive authority for revoking power of attorney(s) executed by the undersigned in connection with this application and for appointing a new power of attorney in place thereof. The undersigned hereby grant(s) the Assignee(s) and the appointed U.S. patent attorneys and agents the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent Office for recordation of this document.

The undersigned hereby agree(s) that the above obligations shall apply to the undersigned both individually and collectively.

The undersigned hereby agree(s) that this Assignment shall be construed in accordance with the law of the appropriate jurisdiction within the United States.

IN WITNESS WHEREOF, executed by the undersigned on the date(s) following the undersigned name(s) and signature(s)

Box2	(Each Inventor, please Sign and Date be	low)	
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(1)	Kiyotaka EIZUMI		Month, Date, Year
(2)	Makoto RYUDO		Month, Date, Year
(3)	Doukei NAGAYASU	Roubier Nagayasan	Month, Date, Year Way 22, 2019
(4)	Hitoshi NISHIMURA		Month, Date, Year

■Check if additional paper(s) is/are attached. Total of \_\_\_2\_ pages are submitted.

and.

Panasonic Ref\*: P1002799US01

# **ASSIGNMENT (Cont.)**

16/466404

Additional Inventors:

	onal Inventors: Continued)		
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(5)	Jingbo WANG	Jingho Wang Masacoshi HISHIO	Month, Date, Year May 27. 2019
(6)	Masatoshi NISHIO	Masacoshi HISHIO	Month, Date, Year May 24, 2019
(7)	Hideaki YAMAGUCHI	Hideaki YAMAGUCHI	Month, Date, Year 14. 2019
(8)	Yoshiaki TAKENAKA	Yoshiaki Takenaka	Month, Date, Year May. 24.2019
(9)	Ryo ISHIKAWA	Ryo ISHIKAWA	Month, Date, Year Hay 24. 2019
(10)			Month, Date, Year
(11)			Month, Date, Year
(12)			Month, Date, Year
(13)			Month, Date, Year
(14)			Month, Date, Year
(15)			Month, Date, Year
(16)			Month, Date, Year
17)			Month, Date, Year
18)			Month, Date, Year
19)			Month, Date, Year
20)			Month, Date, Year
21)			Month, Date, Year
22)			Month, Date, Year

 $_{\square}$ Check if additional paper(s) is/are attached. Total of  $\underline{\phantom{a}}$  pages are submitted.

PATENT REEL: 051015 FRAME: 0187

**RECORDED: 11/15/2019**