### 504261068 03/07/2017

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4307748

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
AKIHIRO UEKI	10/03/2016
TOSHIYUKI MAEDA	10/05/2016
AKIRA SHIOKAWA	10/07/2016
KOJI AOTO	10/10/2016
KOJI NAKANISHI	10/03/2016
HIDEKI AOYAMA	10/03/2016
KENGO MIYOSHI	10/05/2016
MITSUAKI OSHIMA	10/28/2016

#### **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:	15352640

#### **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.

**Email:** ppc.docket@ml.jp.panasonic.com

Correspondent Name: PANASONIC IP MANAGEMENT CO., LTD.

Address Line 1: 7F OBP PANASONIC TOWER

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

Address Line 4: OSAKA, JAPAN 540-6207

ATTORNEY DOCKET NUMBER: P0624195US01

NAME OF SUBMITTER: HIROO MAEDA

SIGNATURE: /Hiroo MAEDA/

PATENT 504261068 REEL: 041490 FRAME: 0001

DATE SIGNED:	03/07/2017
Total Attachments: 6	
source=Assignment 15352640(P062419	95US01 PPCUS)#page1.tif
source=Assignment 15352640(P062419	, <b>.</b>
source=Assignment 15352640(P062419	95US01 PPCUS)#page3.tif
source=Assignment 15352640(P062419	95US01 PPCUS)#page4.tif
source=Assignment 15352640(P062419	, 1 3
source=Assignment 15352640(P062419	95US01 PPCUS)#page6.tif

Panasonic Ref*: _	P0624195US 0 (	Application Serial No. 15 / 352640
Japan Firm Name:	PIPM Direct	Japan Firm Ref: P0624195US01
US Firm Name*: _ (* must be filled)		US Firm Ref:

#### ASSIGNMENT

WHEREAS, the undersigned has (have) invented the invention entitled:		
Box 1		
Title of Invention:		
DISPLAY DEVICE AND DISPLAY METHOD		
1. For use when signing Declaration prior to filing U	J.S. patent application (check on	ly one box below)
(a)■ for which an application for U.S. patent has been executed	by the undersigned conc	urrently herewith, or
(b) ☐ for which an application for U.S. patent has been executed (if Declaration & Assignment are signed on the same day, check (a) and make no entry in the blank; if the		, Or grment, enter the date(s) on which you signed the Declaration)
(c) for which an International Application has been filed as:  (for the PCT-US national entry, check only (c) and enter PCT application number in the right)	PCT Application No.	and,
2. For use when signing Declaration	n after filing U.S. patent application	on
(d)□ for which an application for U.S. patent has been filed on:	Application Filing Date	and,

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

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 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, 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

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 b	relow)	
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(1)	Akihiro UEKI	akihiro Ueki	Month, Date, Year  Oct. 3, 2016
(2)	Toshiyuki MAEDA	Foshiyahi Maeda	Month, Date, Year  Oct. 5, 20/6
(3)	Akira SHIOKAWA		Month, Date, Year
(4)	Koji AOTO		Month, Date, Year

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

Panasonic Ref*:	P0624195US01	
-----------------	--------------	--

# **ASSIGNMENT (Cont.)**

15/352640

**Additional Inventors:** 

	ional Inventors: (Continued)		
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(5)	Koji NAKANISHI	Koji Nakanishi	Month, Date, Year Oct. 3, 20/6
(6)	Hideki AOYAMA		Month, Date, Year
(7)	Kengo MIYOSHI	Hengo Miyoshi	Month, Date, Year  Oct. 5, 20/6
(8)	Mitsuaki OSHIMA		Month, Date, Year
(9)			Month, Date, Year
(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

□Check if additional paper(s) is/are attached. Total of 2 pages are submitted.

Panasonic Ref*:	P0624195US 0	Application Serial No	15/352640
Japan Firm Name: _	PIPM Direct	Japan Firm Ref:	P0624195US01
US Firm Name*:		US Firm Ref:	

### **ASSIGNMENT**

WHEREAS, the undersigned has (have) invented the invention entitled:

		Box 1
		Title of Invention:
		DISPLAY DEVICE AND DISPLAY METHOD
one box below)	J.S. patent application (check only or	1. For use when signing Declaration prior to filing
rrently herewith, or	by the undersigned concurre	(a)■ for which an application for U.S. patent has been executed
, Of oment, enter the date(s) on which you signed the Declaration)		(b) for which an application for U.S. patent has been executed (if Declaration & Assignment are signed on the same day, check (a) and make no entry in the blank; if t
nment, enter the date(s) on which you signed the Deciaration) and,	e Declaration was signed before this Assignme. PCT Application No.	(c) of or which an International Application has been filed as:

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

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 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, 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.

(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 great(s) the Assignee(s) and the appoint the proposition of the

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	elow)	
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(1)	Akihiro UEKI		Month, Date, Year
(2)	Toshiyuki MAEDA		Month, Date, Year
(3)	Akira SHIOKAWA	Akim Shi kum	Month, Date, Year Oct. 7, 2016
(4)	Koji AOTO		Month, Date, Year

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

Panasonic Ref*:	P0624195US01	

# **ASSIGNMENT (Cont.)**

15/352640

Additional	Inventors:
------------	------------

	ox2 (Continued)		
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(5)	Koji NAKANISHI		Month, Date, Year
(6)	Hideki AOYAMA	Hideli Aojanei	Month, Date, Year Oct. 3, 2016
(7)	Kengo MIYOSHI		Month, Date, Year
(8)	Mitsuaki OSHIMA		Month, Date, Year
(9)			Month, Date, Year
(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)			Moriti, 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  $\underline{\phantom{a}2}$  pages are submitted.

Panasonic Ref*:	P0624195US 0	Application Serial No	15/352640
Japan Firm Name: _	PIPM Direct	Japan Firm Ref:	P0624195US01
US Firm Name*:	·	US Firm Ref:	

# **ASSIGNMENT**

Box 1		4	
Title of Invention:		•	
DISPLAY DEVICE AND DISPLAY METHOD	•		
		. `	
1. For use when signing Declaration prior to filing	U.S. patent application (check on	ly one box below)	
(a)■ for which an application for U.S. patent has been executed	by the undersigned conci	urrently herewith, or	
(b)□ for which an application for U.S. patent has been executed	on the following dete(s):	. or	
(if Declaration & Assignment are signed on the same day, check (a) and make no entry in the blank; if t			
(a) for which an International Application has been filed as:			
(c) for which an International Application has been filed as:  (for the PCT-US national entry, check only (c) and enter PCT application number in the right)	PCT Application No.	and,	
2. For use when signing Declaration after filling U.S. patent application			
2. 1 of use when signing Declaration	Tarter mirry 0.5. patern applicant		
(d)□ for which an application for U.S. patent has been filed on:	Application Filing Date	and,	
(u)Li for which an application for 0.5, patent has been filed on.	Application I mily Date	and,	

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

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 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, 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 below)		
	(e) First Name, Last Name	(f) Signature	(g) Date signed
, (1) <sup>1</sup>	Akihiro UEKI		Month, Date, Year
(2)	Toshiyuki MAEDA		Month, Date, Year
(3)	Akira SHIOKAWA		Month, Date, Year
(4)	Koji AOTO	Hoji Aoto	Month, Date, Year Oct . 10 , 2016

■Check if additional paper(s) is/are attached. Total of 2 pages are submitted.

PATENT

Panasonic Ref*:	P0624195US01

# **ASSIGNMENT (Cont.)**

15/352640

	ional Inventors: (Continued)		
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(5)	Koji NAKANISHI		Month, Date, Year
(6)	Hideki AOYAMA		Month, Date, Year
(7)	Kengo MIYOSHI		Month. Date, Year
(8)	Mitsuaki OSHIMA	Mituch OShin	Month, Date, Year  Oct. 28, 2016
(9)			Month, Date, Year
(10)			Month, Date, Year
(11)			Month, Date, Year
(12)			Month, Dale, Year
(13)			Month, Date, Year
(14)			Month, Dale, 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, Dale, Year

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

**RECORDED: 03/07/2017**