504080788 11/03/2016

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4127456

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
HIROYUKI KUMENO	10/05/2016
YUICHI MURAI	09/23/2016
YASUSHI TAKEDA	10/28/2016

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State/Country:	JAPAN
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Street Address:	KITA 8-JYO NISHI 5-CHOME, KITA-KU, SAPPORO-SHI
City:	HOKKAIDO
State/Country:	JAPAN
Postal Code:	060-0808
Name:	FLOWBIZ RESEARCH INC.
Street Address:	1-32-13, NISHIOIZUMI, NERIMA-KU
City:	TOKYO
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Postal Code:	178-0065

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

Property Type	Number	
Application Number:	15308753	

### **CORRESPONDENCE DATA**

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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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PATENT

504080788 REEL: 040215 FRAME: 0231

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ATTORNEY DOCKET NUMBER:	2209858.00148US1	
NAME OF SUBMITTER:	YVONNE C. INGRAM	
SIGNATURE:	/YVONNE C. INGRAM/	
<b>DATE SIGNED:</b> 11/03/2016		
Total Attachments: 6		
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Docket No.: Only After Sept. 16, 2012

#### ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

Whereas, I/we, the undersigned inventor(s) hereinafter called assignor(s), have invented certain improvements described in the application identified below; (the "invention") and

Whereas, NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001, Japan; NATIONAL UNIVERSITY CORPORATION HOKKAIDO UNIVERSITY, Kita 8-jyo Nishi 5-chome, Kita-ku, Sapporo-shi, Hokkaido 060-0808, Japan; and Flowbiz Research INC., 1-32-13, Nishioizumi, Norima-ku, Tokyo 178-0065, Japan, (assignees), desires to acquire the entire and exclusive right, title, and interest in the application and invention, and to any patents that may be obtained therefor in the United States, in any U.S. territorial possessions, and in any and all foreign countries;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

I/we, the above named assignor(s), hereby sell, assign and transfer to the above named assignees, their successors and assigns, the entire and exclusive right, title and interest in the application and the invention disclosed therein for the United States, U.S. territorial possessions, and in any and all foreign countries, including all divisions, and continuations, and continuations-in-part thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues and reexaminations, renewals, and substitutions thereof, and including the right to claim priority under 35 U.S.C. §119, and all rights for past infringement, under the International Convention, and under any other relevant International Treaties and Arrangements, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignees, their successors and assigns; I/we will execute without further consideration all papers deemed necessary by the assignees, and generally perform all necessary acts to aid the assignees, their successors and assigns, to obtain and enforce proper protection for the invention in connection with the United States and foreign applications, including but not limited to all divisional, continuation, reissue and other applications for Letters Patent on the invention and execute all assignments thereof to the above named assignees their successors and assigns, when called upon to do so by the assignees; and I/we will communicate to the above named assignees or their representatives all facts known to the undersigned respecting the invention, whenever requested, testify in any legal proceedings in which any of the applications or patents may become involved, and do generally everything necessary to assist the above named assignees or their successors or assigns to obtain patent protection for the invention in the United States and foreign countries.

(Legalization not required for recording	ig but	is prima facie evidence of execution under 35 U.S.C. §261)
As the below named inventor, I hereb	y decla	are that:
This assignment with declaration is directed to:		The attached application, or
unected to.	Œ	United States Application or PCT International Application Number <u>PCT/JP2015/063535</u> filed on <u>April 30, 2015</u> (Confirmation No).
The application is entitled:		

# OBJECT DETECTION DEVICE, OBJECT DETECTION METHOD, AND OBJECT DETECTION SYSTEM

The above identified application was made or was authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application for which this assignment with declaration is being submitted, including the claims.

I am aware of the duty to disclose to the U.S Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this assignment with declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

### Authorization To Permit Access To Application by Participating Office

□ If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified application is filed to have access to the application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the application-as-filed with respect to: 1) the above-identified patent application-as-filed, 2) any foreign application to which the above-identified application claims priority under 35 USC 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application, and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Office.

NAME OF SOLE OR FIRST INVENTOR:					
Given Name					
(first and middle [if any]) Hiroyuki Family N	lame or Surname KUMENO				
Inventor's signature Hiroyuki Kumeno	Date October 5, 2016				
Residence: Tokyo, Japan					
Mailing Address: c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001, Japan					
NAME OF SECOND INVENTOR:					
Given Name (first and middle [if any]) Yuichi Family N	lame or Surname MURAI				
Inventor's signature	Date				
Residence: Hokkaido, Japan					
c/o NATIONAL UNIVERSITY CORPORATION HOKKAIDO Mailing Address: Kita 8-jyo Nishi 5-chome, Kita-ku, Sapporo-shi, Hokkaido 060-0	UNIVERSITY, 0808, Japan				
NAME OF THIRD INVENTOR:	<u> </u>				
Given Name	lame or Surname TAKEDA				
Inventor's signature	Date				
Residence: Tokyo, Japan					
Mailing Address: c/o Flowbiz Research INC., 1-32-13, Nishioizumi, Nerima-ku, T	okyo 178-0065. Japan				
00000000000000000000000000000000000000					
NAME OF FOURTH INVENTOR:					
Given Name (first and middle [if any]) Family Na	me or Surname				
(110, 111, 111, 111, 111, 111, 111, 111,					
Inventor's signature	Date				
Residence:					
Mailing Address:					
NAME OF FIFTH INVENTOR:					
Given Name (first and middle [if any])  Family Name or Surname					
(mat und module ju dirj.);					
Inventor's signature	Date				
Residence:					
Mailing					
Address:					

Docket No.: Only After Sept. 16, 2012

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Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

I/we, the above named assignor(s), hereby sell, assign and transfer to the above named assignees, their successors and assigns, the entire and exclusive right, title and interest in the application and the invention disclosed therein for the United States, U.S. territorial possessions, and in any and all foreign countries, including all divisions, and continuations, and continuations-in-part thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues and reexaminations, renewals, and substitutions thereof, and including the right to claim priority under 35 U.S.C. §119, and all rights for past infringement, under the International Convention, and under any other relevant International Treaties and Arrangements, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignees, their successors and assigns; I/we will execute without further consideration all papers deemed necessary by the assignees, and generally perform all necessary acts to aid the assignees, their successors and assigns, to obtain and enforce proper protection for the invention in connection with the United States and foreign applications, including but not limited to all divisional, continuation, reissue and other applications for Letters Patent on the invention and execute all assignments thereof to the above named assignees their successors and assigns, when called upon to do so by the assignees; and I/we will communicate to the above named assignees or their representatives all facts known to the undersigned respecting the invention, whenever requested, testify in any legal proceedings in which any of the applications or patents may become involved, and do generally everything necessary to assist the above named assignees or their successors or assigns to obtain patent protection for the invention in the United States and foreign countries.

(Legalization not required for recording but is prima facie evidence of execution under 35 U.S.C. §261)

As the below named inventor, I hereb	y decla	are that:
This assignment with declaration is directed to:		The attached application, or
	X	United States Application or PCT International Application Number <u>PCT/JP2015/063535</u> filed on <u>April 30, 2015</u> (Confirmation No).
The application is entitled:		

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PATENT

REEL: 040215 FRAME: 0235

NAME OF SOLE OR FIRST INVENTOR:				
Given Name				
(first and middle [if any]) Hiroyuki	Family Name or Surname	KUMENO		
Inventor's signature	D	eate		
Residence: Tokyo, Japan				
Mailing Address: c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-k	u, Tokyo 108-8001, Japan			
NAME OF SECOND INVENTOR:				
Given Name (first and middle [if any]) Yuichi	Family Name or Surname	MURAI		
Inventor's signature Yul Music	> <u></u>	bate September 23, 2016		
Residence: Hokkaido, Japan	1 ,			
c/o NATIONAL UNIVERSITY CORPORATION HOKKAIDO UNIVERSITY, Mailing Address: Kita 8-jyo Nishi 5-chome, Kita-ku, Sapporo-shi, Hokkaido 060-0808, Japan				
NAME OF THIRD INVENTOR:	wainnennennennennen			
Given Name (first and middle [if any]) Yasushi	Family Name or Sumame	TAKEDA		
Inventor's signature	α	ate		
Residence: Tokyo, Japan				
Mailing Address: c/o Flowbiz Research INC., 1-32-13, Nishioizumi, N	lerima-ku, Tokyo 178-0065, J	apan		
NAME OF FOURTH INVENTOR:				
Given Name (first and middle [if any])	Family Name or Surname			
(moveme manuse (a enyj)		AAAMEERIKKEERIKEERIKEERIKEERIA/		
Inventor's signature	Da	te		
Residence:				
Mailing Address:				
NAME OF FIFTH INVENTOR:				
Given Name (first and middle [if any])	Family Name or Surname			
,	Da	te		
Inventor's signature				
Residence:		·, /		
Mailing Address:	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	***************************************		

Docket No.: Only After Sept. 16, 2012

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(Legalization not required for recording but is prima facie evidence of execution under 35 U.S.C. §261)

As the below named inventor, I hereby declare that:

This assignment with declaration is

United States Application or PCT International Application Number PCT/JP2015/063535

filed on April 30, 2015 (Confirmation No.\_\_\_\_\_\_).

The application is entitled:

# OBJECT DETECTION DEVICE, OBJECT DETECTION METHOD, AND OBJECT DETECTION SYSTEM

The above identified application was made or was authorized to be made by me.

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	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
NAME OF SOLE OR FIRST INVENTOR:	
Given Name	
(first and middle [if any]) Hiroyuki	Family Name or Surname KUMENO
Inventor's signature	Date
Residence: Tokyo, Japan	
Residence. Toryo, Japan	
Mailing Address: c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-	ku, Tokyo 108-8001, Japan
NAME OF SECOND INVENTOR:	
Given Name	
(first and middle [if any]) Yuichi	Family Name or Surname MURAI
Inventor's signature	Date
_ `.,	
Residence: Hokkaldo, Japan	
o/o NATIONAL UNIVERSITY CORPORATION I Mailing Address: Kita 8-jyo Nishi 5-chome, Kita-ku, Sapporo-shi, Ho	
NAME OF THIRD INVENTOR:	2412144 200 000 4 241244
Given Name (first and middle [if any]) Yasushi	Family Name or Surname TAKEDA
Inventor's signature	Date 28,10.2016
Residence: Tokyo, Japan	
Mailing Address: c/o Flowbiz Research INC., 1-32-13, Nishioizumi, N	Javima In. Takua 178 0065 Japan
	verima-ku, 10kyo 170-0003, Japan
NAME OF FOURTH INVENTOR:	
Given Name (first and middle [if any])	Family Name or Surname
(1851 and imedia (m any))	
Inventor's signature	Date
Residence:	
Mailing	
Address:	
NAME OF FIFTH INVENTOR:	
Given Name	Fourth Ware as Evenage
(first and middle [if any])	Family Name or Sumame
Inventor's signature	Date
arvenor a negracia	,
Residence:	
Mailing	
27 AGARAGA	ž.

PATENT PATENE: 0238

**RECORDED: 11/03/2016**