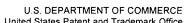


10/24/2012





United States Patent and Trademark Office RE 103650842 To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies) Junichi Yamashita (07/06/2012), Yusuke Sony Corporation Onoyama (07/19/2012), Tetsuo Minami (07/20/2012), Naobumi Toyomura (07/20/2012), Internal Address: Additional name(s) of conveying party(ies) attached? X Yes Street Address: 3. Nature of conveyance/Execution Date(s): 1-7-1 Konan Minato-Ku, Tokyo Execution Date(s): in parentheses after inventor name 108-0075 **JAPAN** Merger x Assignment Change of Name Security Agreement 1 Joint Research Agreement City: Government Interest Assignment State: Executive Order 9424, Confirmatory License Country: Zip: Additional name(s) & address(es) x No Other Yes attached? This document serves as an Oath/Declaration (37 CFR 1.63). 4. Application or patent number(s): A. Patent Application No.(s) B. Patent No.(s) 13/588.495 Additional numbers attached? 5. Name and address to whom correspondence 6. Total number of applications and 1 concerning document should be mailed: patents involved: Name: Christopher M. Tobin 40.00 RADER, FISHMAN & GRAUER PLLC 7. Total fee (37 CFR 1.21(h) & 3.41) Internal Address: Atty. Dkt.: SON-5151 Street Address: 1233 20th Street, N.W. Authorized to be charged to deposit account Suite 501 Enclosed None required (government interest not affecting title) Washington 8. Payment Information City: DC 20036 Zip: (202) 955-3750 Phone Number: 18-0013 (202) 955-3751 Deposit Account Number Fax Number: Christopher M. Tobin Authorized User Name cmt@raderfishman.com Email Address: 135/(8/495 10/24/2012 KNGUYEN1 99009005 189013 9. Signature: October 19, 2012 01 FC:8021 Total number of pages including cover

> Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

Christopher M. Tobin - 40,290

Name of Person Signing

sheet, attachments, and documents:

6

		I FORM COVER SHEET (PTO-1 supplemental sheet)	595)
Additional Conve	ying Party(ies)/Exe	cution Date(s) (1. Continued	d):
Tetsuro Yamamoto (09/06/2012), and Katsu	uhide Uchino (07/20/2012)	
Additional Assign	ees (2. Continued):		
Assignee Name:			
Street Address:			
City:	State:	Country:	Zip:
Assignee Name:			
Internal Address: Street Address:			
City:	State:	Country:	Zip:
'	***************************************		
Internal Address: Street Address:			
City:	State:	Country:	Zip:
Additional Applica	ations and/or Paten	ts (4. Continued):	
Additional Patent Applicati 4A. Continued:	ion Numbers	Additional Patent Numbers 4B. Continued:	
	Additional number	s attached?	No

Docket No.: SON-5151

Attorney Docket No. 80001-5151 SONY Ref. No.: SP332220US00

ASSIGNMENT

WHEREAS, I, as below named inventors, residing at the addresses stated next to our names, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in DISPLAY DEVICE AND ELECTRONIC APPARATUS

for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, SONY CORPORATION, a Japanese corporation, with offices at 1-7-1 Konan, Minato-ku, Tokyo, Japan (hereinafter referred to as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection 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, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the 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 the 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 the 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.

And I hereby authorize and request my attorney(s) of record in the	is application to insert the serial number and filing date of this application in
the spaces that follow: Serial Number: 13/588, 495	, Filing Date: August 17, 2012
This assignment executed on the dates indicated below.	
JUNICHI YAMASHITA	
Name of first or sole inventor	Execution date of U.S. Patent Application
TOKYO, JAPAN	
Residence of First or sole inventor	71
umích varnachita	July 6 2012
Signature of first or sole inventor	Date of the assignment
YUSUKE ONOYAMA	
Name of second inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of second inventor TUSU TE PROYAMA	Date of this assignment
Signature of second inventor	Date of this assignment
TETSUO MINAMI	
Name of third inventor	Execution date of U.S. Patent Application
TOKYO, JAPAN	
Residence of third inventor	•
Tetaro Ininami	July 20, 20/2 Date of this assignment
Signature of third inventor	Date of this assignment

PATENT REEL: 029254 FRAME: 0432

ADDITIONAL INVENTOR(S)

NAOBUMI TOYOMURA	
Name of fourth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of fourth inventor	.,
Signature of fourth inventor	Date of this assignment
Signature of fourth inventor	Date of this assignment
TETSURO YAMAMOTO	
Name of fifth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of fifth inventor	
Signature of fifth inventor	Date of this assignment
KATSUHIDE UCHINO	
Name of sixth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of sixth inventor	
Signature of sixth inventor	Date of this assignment
Signature of sixth inventor	Date of the assignment
Name of seventh inventor	Execution date of U.S. Patent Application
Residence of seventh inventor	•
Signature of seventh inventor	Date of this assignment
Name of eighth inventor	Execution date of U.S. Patent Application
Residence of eighth inventor	
residence of eighth inventor	
Signature of eighth inventor	Date of this assignment
Name of ninth inventor	Execution date of U.S. Patent Application
Residence of ninth inventor	
Signature of ninth inventor	Date of this assignment

Attorney Docket No. 80001-5151 SONY Ref. No.: SP332220US00

ASSIGNMENT

WHEREAS, I, as below named inventors, residing at the addresses stated next to our names, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in DISPLAY DEVICE AND ELECTRONIC APPARATUS

for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, SONY CORPORATION, a Japanese corporation, with offices at 1-7-1 Konan, Minato-ku, Tokyo, Japan (hereinafter referred to as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all forcign 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, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the 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 the 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 the 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.

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JUNICHI YAMASHITA	
Name of first or sole inventor TOKYO, JAPAN	Execution date of U.S. Patent Application
Residence of First or sole inventor	
Signature of first or sole inventor	Date of this assignment
YUSUKE ONOYAMA	
Name of second inventor KANAGAWA, JAPAN	Execution date of U.S. Patent Application
Residence of second inventor	
Signature of second inventor	Date of this assignment
TETSUO MINAMI	
Name of third inventor TOKYO, JAPAN	Execution date of U.S. Patent Application
Residence of third inventor	
Signature of third inventor	Date of this assignment

PATENT REEL: 029254 FRAME: 0434

ADDITIONAL INVENTOR(S)

NAOBUMI TOYOMURA	
Name of fourth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of fourth inventor	
Signature of fourth inventor	Date of this assignment
organization for the state of t	Date of this assignment
TETSURO YAMAMOTO	
Name of fifth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of fifth inventor	Say ()0/2
Jetsuro yamamto Signature of fifth inventor	Sep. 6, 20/2 Date of this assignment
Signature of fifth inventor	Date of this assignment
KATSUHIDE UCHINO	
Name of sixth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of sixth inventor	
C:	Data of this posignment
Signature of sixth inventor	Date of this assignment
Name of seventh inventor	Execution date of U.S. Patent Application
Residence of seventh inventor	
Signature of seventh inventor	Date of this assignment
Signature of Seventh inventor	Date of this assignment
Name of eighth inventor	Execution date of U.S. Patent Application
Decidence Contact in the contact in	
Residence of eighth inventor	
Signature of eighth inventor	Date of this assignment
5.5	
Name of ninth inventor	Execution date of U.S. Patent Application
	Execution date of U.S. Patent Application
Name of ninth inventor Residence of ninth inventor	Execution date of U.S. Patent Application
	Execution date of U.S. Patent Application Date of this assignment

PATENT REEL: 029254 FRAME: 0435

RECORDED: 10/19/2012