PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MAKOTO OKANO	08/18/2014
MASAHIKO MORI	08/07/2014
MASASHIGE ISHIZAKA	08/15/2014
TAKANORI SHIMIZU	08/21/2014
NOBUAKI HATORI	08/22/2014

RECEIVING PARTY DATA

Name:	NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY
Street Address:	3-1, KASUMIGASEKI 1-CHOME
Internal Address:	CHIYODA-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	100-8921
Name:	NEC CORPORATION
Street Address:	7-1, SHIBA 5-CHOME
Internal Address:	MINATO-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	108-8001
Name:	FUJITSU LIMITED
Street Address:	1-1, KAMIKODANAKA 4 -CHOME
Internal Address:	NAKAHARA-KU, KAWASAKI-SHI
City:	KANAGAWA
State/Country:	JAPAN
Postal Code:	211-8588

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14382742

CORRESPONDENCE DATA

PATENT

503014611 REEL: 033930 FRAME: 0579

Fax Number: (520)882-7643

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.

Phone: 520-882-7623

Email:cgee@hayes-soloway.comCorrespondent Name:NORMAN P. SOLOWAYAddress Line 1:4640 E. SKYLINE DRIVE

Address Line 4: TUCSON, ARIZONA 85718

ATTORNEY DOCKET NUMBER: SHIG CP04FE13SA

NAME OF SUBMITTER: NORMAN P. SOLOWAY

SIGNATURE: /norman p. soloway/

DATE SIGNED: 10/10/2014

Total Attachments: 5

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PATENT REEL: 033930 FRAME: 0580

I, Makoto OKANO of c/o National Institute of Advanced Industrial Science and Technology.			
Tsukuba Central 2, 1-1, Umezono 1-chome, Tsukuba-shi, Ibaraki 305-8568 JAPAN, having invented			
certain inventions and improvements in <u>LIGHT SOURCE CIRCUIT AND LIGHT SOURCE</u> <u>DEVICE EQUIPPED WITH SAME</u> and having executed an application for Letters Patent of the			
United States of America describing the same and based thereon on the 18th day of			
August , 2014 (U.S. Patent Application Serial No. 14/382,742 , filed			
September 3, 2014), for good and valuable consideration, the receipt of which is hereby			
acknowledged from National Institute of Advanced Industrial Science and Technology, a Japanese			
corporation having its principal place of business at 3-1, Kasumigaseki 1-chome, Chiyoda-ku, Tokyo			
100-8921 JAPAN, NEC Corporation, a Japanese corporation having its principal place of business at			
7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001 JAPAN and FUJITSU LIMITED, a Japanese			
corporation having its principal place of business at 1-1, Kamikodanaka 4-chome, Nakahara-ku,			
Kawasaki-shi, Kanagawa 211-8588 JAPAN (hereinafter called the Assignees), do hereby sell, assign			
and transfer unto the Assignee, its successors, and assigns my entire right, title, and interest, in and to			
said invention in the United States of America, including all rights, title and interest in the above-			
mentioned application and any divisional, continuing or reissue application or applications and any			
patent which may be issued on the said invention in the United States of America;			
A 10 d			
And for the same consideration I do agree that I will upon request execute any instrument			
which the Assignees may desire to carry this Assignment into effect and perfect the title transferred			
hereby or prosecute the above-mentioned application;			
And I do hereby authorize and request the Commissioner of Patents and Trademarks of the			
United States of America to issue Letters Patent on the said application to the Assignees;			
Officed blates of finested to local motion of the office o			
And I do hereby jointly and severally covenant for myself and for my legal representatives that			
I have granted no right or license to make, use, or sell said invention to anyone except the Assignees,			
that prior to the execution of this deed my right, title, and interest in and to said inventions or any of			
them or any part thereof has not been otherwise encumbered by me, and that I have not executed and			
will not execute any instrument in conflict herewith.			
IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year hereinafter			
noted.			
Inventor's signature Makoto Okano Date Aug. 18, 2014			
Inventor's signature Date Date			
Full name (typed or printed) Makoto OKANO			
Witness: Ruko Jako oka Witness: Sonika Rubo			
Witness: Ruko Takeaka Witness: <u>Senika Rubo</u> Date: <u>Aug. 25. 2014</u> Date: <u>Aug. 26. 2014</u>			

I, Masahiko MORI of c/o National Institute of Advanced Industrial Science and Technology. Tsukuba Central 2, 1-1, Umezono 1-chome, Tsukuba-shi, Ibaraki 305-8568 JAPAN, having invented certain inventions and improvements in LIGHT SOURCE CIRCUIT AND LIGHT SOURCE DEVICE EQUIPPED WITH SAME and having executed an application for Letters Patent of the United States of America describing the same and based thereon on the 7th day of August , 20 14 (U.S. Patent Application Serial No. 14/382,742 , filed September 3, 2014), for good and valuable consideration, the receipt of which is hereby acknowledged from National Institute of Advanced Industrial Science and Technology, a Japanese corporation having its principal place of business at 3-1, Kasumigaseki 1-chome, Chiyoda-ku, Tokyo 100-8921 JAPAN, NEC Corporation, a Japanese corporation having its principal place of business at 7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001 JAPAN and FUJITSU LIMITED, a Japanese corporation having its principal place of business at 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588 JAPAN (hereinafter called the Assignees), do hereby sell, assign and transfer unto the Assignee, its successors, and assigns my entire right, title, and interest, in and to said invention in the United States of America, including all rights, title and interest in the abovementioned application and any divisional, continuing or reissue application or applications and any patent which may be issued on the said invention in the United States of America;			
And for the same consideration I do agree that I will upon request execute any instrument which the Assignees may desire to carry this Assignment into effect and perfect the title transferred hereby or prosecute the above-mentioned application;			
And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent on the said application to the Assignees;			
And I do hereby jointly and severally covenant for myself and for my legal representatives that I have granted no right or license to make, use, or sell said invention to anyone except the Assignees, that prior to the execution of this deed my right, title, and interest in and to said inventions or any of them or any part thereof has not been otherwise encumbered by me, and that I have not executed and will not execute any instrument in conflict herewith.			
IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year hereinafter noted.			
Inventor's signature			
Witness: Reiko Jakeoka Witness: Serika kubo Date: Aug. 25, 2014 Date: Aug. 26.2014			

I, Masashige ISHIZAKA of c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo
108-8001 JAPAN, having invented certain inventions and improvements in LIGHT SOURCE CIRCUIT AND LIGHT SOURCE DEVICE EQUIPPED WITH SAME and having executed an
application for Letters Patent of the United States of America describing the same and based thereon
on the 15th day of August , 2014 (U.S. Patent Application Serial No.
14/382,742 , filed September 3, 2014), for good and valuable consideration, the receipt
of which is hereby acknowledged from National Institute of Advanced Industrial Science and
Technology, a Japanese corporation having its principal place of business at 3-1, Kasumigaseki 1-
chome, Chiyoda-ku, Tokyo 100-8921 JAPAN, NEC Corporation, a Japanese corporation having its
principal place of business at 7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001 JAPAN and FUJITSU
<u>LIMITED</u> , a <u>Japanese</u> corporation having its principal place of business at <u>1-1</u> , <u>Kamikodanaka 4-</u>
chome, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588 JAPAN (hereinafter called the Assignees),
do hereby sell, assign and transfer unto the Assignee, its successors, and assigns my entire right, title,
and interest, in and to said invention in the United States of America, including all rights, title and
interest in the above-mentioned application and any divisional, continuing or reissue application or applications and any patent which may be issued on the said invention in the United States of America;
*

And for the same consideration I do agree that I will upon request execute any instrument which the Assignees may desire to carry this Assignment into effect and perfect the title transferred hereby or prosecute the above-mentioned application;

And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent on the said application to the Assignees;

And I do hereby jointly and severally covenant for myself and for my legal representatives that I have granted no right or license to make, use, or sell said invention to anyone except the Assignees, that prior to the execution of this deed my right, title, and interest in and to said inventions or any of them or any part thereof has not been otherwise encumbered by me, and that I have not executed and will not execute any instrument in conflict herewith.

IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year hereinafter noted.

	signature <u>Masashige Js</u> (typed or printed) Masashige ISHI	hizaka ZAKA	Date	gust 15, 2014
Witness:	March Kinn August 15, 2014	~ .	m/L st 15, 2014	Lawalista

PATENT REEL: 033930 FRAME: 0583

I, Takanori SHIMIZU of c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku. Tokyo 108-8001 JAPAN, having invented certain inventions and improvements in LIGHT SOURCE CIRCUIT AND LIGHT SOURCE DEVICE EQUIPPED WITH SAME and having executed an application for Letters Patent of the United States of America describing the same and based thereon on the 21st day of August, 2014 (U.S. Patent Application Serial No. 14/382,742, filed September 3, 2014), for good and valuable consideration, the receipt of which is hereby acknowledged from National Institute of Advanced Industrial Science and Technology, a Japanese corporation having its principal place of business at 3-1, Kasumigaseki 1-chome, Chiyoda-ku, Tokyo 100-8921 JAPAN, NEC Corporation, a Japanese corporation having its principal place of business at 7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001 JAPAN and FUJITSU LIMITED, a Japanese corporation having its principal place of business at 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588 JAPAN (hereinafter called the Assignees), do hereby sell, assign and transfer unto the Assignee, its successors, and assigns my entire right, title, and interest, in and to said invention in the United States of America, including all rights, title and interest in the abovementioned application and any divisional, continuing or reissue application or applications and any patent which may be issued on the said invention in the United States of America;
And for the same consideration I do agree that I will upon request execute any instrument which the Assignees may desire to carry this Assignment into effect and perfect the title transferred hereby or prosecute the above-mentioned application;
And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent on the said application to the Assignees;
And I do hereby jointly and severally covenant for myself and for my legal representatives that I have granted no right or license to make, use, or sell said invention to anyone except the Assignees, that prior to the execution of this deed my right, title, and interest in and to said inventions or any of them or any part thereof has not been otherwise encumbered by me, and that I have not executed and will not execute any instrument in conflict herewith.
IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year hereinafter noted.
Inventor's signature <u>Jakanori Shimizu</u> Date August 21, 2014 Full name (typed or printed) Takanori SHIMIZU
Witness: Mitness: At Xawabata Date: August 21, 2014 Date: August 21, 2014

And for the same consideration I do agree that I will upon request execute any instrument which the Assignees may desire to carry this Assignment into effect and perfect the title transferred hereby or prosecute the above-mentioned application;

And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent on the said application to the Assignees;

And I do hereby jointly and severally covenant for myself and for my legal representatives that I have granted no right or license to make, use, or sell said invention to anyone except the Assignees, that prior to the execution of this deed my right, title, and interest in and to said inventions or any of them or any part thereof has not been otherwise encumbered by me, and that I have not executed and will not execute any instrument in conflict herewith.

IN WITNESS WHEREOF, I/we hereunto set my hand and seal on the day and year hereinafter noted.

Inventor's signature Adual Hila	U'	Date <u>22</u>	Aug., 2014
Full name (typed or printed) Nobuaki HAT	ORI		V
Witness: Tassufa Usubri Date: 22 Aug. 2014	Witness: _ Date:	Japahin 22. Aug	nakamura 2014
<i>y</i> ,			/ /

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RECORDED: 10/10/2014