

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT3993407

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SONY CORPORATION	07/27/2016
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<b>State/Country:</b>	JAPAN
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
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<b>NAME OF SUBMITTER:</b>	PRAMOD CHINTALAPOODI
<b>SIGNATURE:</b>	/Pramod Chintalapoodi/
<b>DATE SIGNED:</b>	08/04/2016
<b>Total Attachments: 6</b>	
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**ASSIGNMENT**

In consideration for value received, **Sony Corporation**, a corporation of Japan, having a place of business at 1-7-1 Konan, Minato-ku, Tokyo 108-0075, JAPAN, the owner of record as evidenced by assignments recorded in the U. S. Patent and Trademark Office hereby sells, assigns, transfers and conveys unto

**Sony Semiconductor Solutions Corporation**, a corporation of Japan, having a place of business at 4-14-1 Asahi-cho, Atsugi-shi, Kanagawa JAPAN

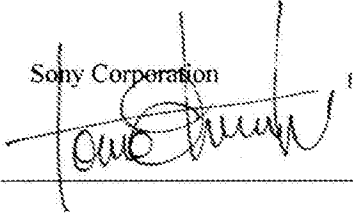
its successors, assigns and legal representatives (hereinafter called the "Assignee"), the entire right, title and interest, for all countries, in and to all inventions which are listed on the attached **Schedule A** and any and all improvements, divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted, thereon, and all reissues and extensions thereof, and all applications for Letters Patent or other grants of protection of proprietary rights including, but not limited to, inventor's certificate, utility model, utility certificate, patent of importation, registration of patent and industrial design registration which may be filed, and which may be granted; upon said inventions in any countries or regions foreign to the United States, and all reissues, renewals and extensions thereof; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States, and all officials of countries or regions foreign to the United States having authority so to do, to issue all such Letters Patent or other grants of protection upon said inventions to the Assignee or to such nominees as it may designate.

AND authorizes and empowers the said Assignee or nominees to invoke and claim for any application for such Letters Patent or other grants of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by a convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from us.

AND hereby covenants that it has the full right to convey the entire right, title and interest herein assigned and that it has not executed and will not execute any agreement in conflict herewith.

AND hereby covenants and agrees that it will communicate to said Assignee or nominees all facts known to us pertaining to said inventions, and testify in all legal proceedings, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and declarations and in general perform all lawful acts necessary or proper to aid said Assignee or nominees in obtaining, maintaining and enforcing all lawful patent or other grants of protection of said inventions in any and all countries and regions.

DATED: July 27, 2016

By: 

Tomonori Okuwaki  
Deputy Senior General Manager  
Intellectual Property Division

**SCHEDULE A**

<b>Docket No.</b>	<b>Appln. No.</b>	<b>Filing Date</b>	<b>Title</b>
SP358143US00	15/025179	8/14/2015	Image Sensor, Electronic Device, and Method for Generating Tessellation Tile
SP354035US00	15/037739	11/17/2014	Signal Processing Apparatus, Signal Processing Method, and Program
SP353989US00	15/035300	11/17/2014	Solid-State Image Capturing Element, Manufacturing Method therefor, and Electronic Device
SP353831US00	14/914175	8/20/2014	Connector Apparatus and Communication System
SP353677US00	14/908319	8/21/2014	Radiation Detector, Method of Manufacturing Radiation Detector, Imaging Unit, and Imaging and Display System
SP353337US00	14/911590	9/10/2014	Imaging Device, Manufacturing Apparatus, Manufacturing Method, and Electronic Apparatus
SP353332US00	15/022087	9/16/2014	Semiconductor Device, Production Method, and Electronic Apparatus
SP353133US00	15/023832	9/16/2014	Solid-State Imaging Element, Method for Manufacturing the Same, and Electronic Device
SP352801US00	14/906798	7/4/2014	Radiation Image Pickup Unit and Radiation Image Pickup Display System
SP352795US00	15/030319	8/8/2014	Image Processing Apparatus, Image Processing Method, and Program
SP352764US00	14/891541	6/19/2014	Solid-State Imaging Element, Method of Manufacturing the Same, and Imaging Device
SP352630US00	15/036104	10/16/2014	Imaging Element and Imaging Device
SP352617US00	15/022188	8/28/2014	Light Control Device, Imaging Element, and Imaging Device, and Light Transmittance Control Method for Light Control Device
SP352336US00	14/895164	5/28/2014	Comparator Circuit, A/D Conversion circuit, and Display Apparatus
SP352291US00	14/204847	3/11/2014	Solid State Imaging Device and Manufacturing Method, and Electronic Apparatus
SP352040US00	14/773260	2/28/2014	Solid-State Image Sensor, Manufacturing Method, and Electronic Device
SP351502US00	14/773269	2/28/2014	Solid State Image Sensor, Manufacturing Method thereof, and Electronic Device
SP350760US00	14/646940	11/18/2013	Image Sensor, Data Transmission Method thereof, Information Processing Apparatus, Information Processing Method, Electronic Device, and Program
SP350556US00	14/156024	1/15/2014	Controller, Information Processing System, Method of Controlling Controller, and Program
SP350312US00	14/220769	3/20/2014	Image Pickup Unit and Image Pickup Display System
SP350243US00	14/764831	2/3/2014	Light Receiving and Emitting Device
SP350204US00	14/762744	1/20/2014	Imaging Apparatus and Electronic Device
SP350034US00	14/653828	12/10/2013	Memory Device and Memory Unit
SP349902US00	14/647793	11/6/2013	Storage Device and Storage Unit
SP349813US00	14/220791	3/20/2014	Stacked Structure and Method of Manufacturing the Stacked Structure

Docket No.	Appln. No.	Filing Date	Title
SP349573US00	14/888664	4/11/2014	Transmission Circuit, Transmission Method, and Transmission System
SP349148US00	14/431970	9/27/2013	Imaging Unit and Imaging Method
SP349056US01	14/994126	1/12/2016	Imaging Device, Imaging Apparatus, Production Apparatus and Method, and Semiconductor Device
SP348552US00	13/972019	8/21/2013	Image Sensor, Imaging Apparatus, and Apparatus and Method for Manufacturing Image Sensor
SP348304US00	13/944497	7/17/2013	Solid State Imaging Apparatus, Signal Reading Method, and Electronic Apparatus
SP347742US00	14/428262	9/18/2013	Solid-State Image Pickup Unit and Electronic Apparatus
SP347723US00	13/955703	7/31/2013	Camera Module and Electronic Device
SP347205US00	13/953214	7/29/2013	Imaging Device, Image Signal Processing Method, and Program
SP346977US00	14/395391	4/25/2013	Imaging Apparatus, Imaging Method, Electronic Device, and Program
SP346534US00	13/909406	6/4/2013	Imaging Device for Capturing Optical Images
SP346340US00	14/420002	8/7/2013	Solid-State Image Pickup Device and Electronic Apparatus
SP346255US00	13/919450	6/17/2013	Solid-State Imaging Device and Electronic Device
SP346107US00	14/417392	7/25/2013	Semiconductor Device, Method of Manufacturing Semiconductor Device, Solid-State Image Pickup Unit, And Electronic Apparatus
SP346021US00	13/953960	7/30/2013	Memory Control Device, Memory Device, Information Processing System and Memory Control Method
SP345947US00	13/909881	6/4/2013	Solid-State Imaging element, Calibration Method Of Solid-State Imaging element, Shutter Device, and Electronic Apparatus
SP345192US00	14/399418	5/8/2013	Solid-State Imaging Unit and Electronic Apparatus
SP345026US00	13/918242	6/14/2013	Solid-State Imaging Device, Method for Controlling the Same, and Electronic Apparatus
SP344873US00	14/391475	4/16/2013	Imaging Apparatus and Electronic System
SP344864US00	13/854689	4/1/2013	Solid-State Image Sensor With MOS Capacitor storage Section To Which A Negative Bias Is Applied After A Reset Sampling Period and Electronic Device Incorporating Same
SP344242US00	14/179964	2/13/2014	Image Sensor and Electronic Device
SP344239US00	13/765963	2/13/2013	Imaging Apparatus and Image Transmitting Method
SP344034US00	13/900310	5/22/2013	Polymeric Actuator, Actuator Device, Method Of Manufacturing Polymeric Actuator, and Method Of Manufacturing Actuator Device
SP343652US00	14/380412	2/5/2013	Solid-State Imaging Unit and Electronic Apparatus With A Signal Charge Accumulated In A Photoelectric Conversion Section Is Divided To Be Read In Predetermined Times Of Intermediate Transfer Operations and A Complete Transfer Operation
SP342803US00	13/848996	3/22/2013	Storage Device and Storage Unit
SP342723US00	13/870156	4/25/2013	Image Pickup Unit and Image Pickup Display System

Docket No.	Appln. No.	Filing Date	Title
SP342572US00	13/749449	1/24/2013	Solid-State Imaging Device, Electronic Device and Driving Method thereof With Selective Second Reading
SP342192US00	13/734166	1/4/2013	Image Pickup Unit and Method Of Manufacturing the Same
SP341902US00	14/356022	12/7/2012	Image-Capturing Device
SP341322US00	13/688835	11/29/2012	Solid-State Imaging Apparatus, Method Of Manufacturing Solid-State Imaging Apparatus and Electronic Device
SP340411US00	14/362313	12/3/2012	An Imaging Apparatus, an Electronic Device, and Imaging Method to Uniformize Distribution of Incident Light, and a Photostimulated Luminescence Detection Scanner
SP340191US00	13/754635	1/30/2013	Presumably Defective Portion Decision Apparatus, Presumably Defective Portion Decision Method, Fabrication Method for Semiconductor Device and Program
SP340132US00	14/353395	12/4/2012	Sensor and Sensing Method for Reducing Power Consumption
SP339711US00	14/363971	12/7/2012	Solid-State Imaging Device, Method Of Manufacturing Solid-State Imaging Device, and Electronic Apparatus
SP339611US00	14/362797	12/4/2012	Solid-State Imaging Device, Driving Method for Solid-State Imaging Device, and Electronic Appliance
SP339593US00	14/368736	1/15/2013	Solid-State Image Pickup Unit, Method Of Manufacturing Solid-State Image Pickup Unit, and Electronic Apparatus
SP338772US00	14/382580	2/27/2013	Solid-State Imaging Device and Electronic Apparatus
SP335442US00	13/650276	10/12/2012	Image Pickup Unit With A Photoelectric Transducer and Image Pickup Display System
SP334110US00	14/233226	7/20/2012	Imaging Device With Reduced Color Mixing and Method Of Manufacturing the Same
SP333040US00	13/533380	6/26/2012	Solid-State Imaging Device and Imaging Device
SP320000US00	13/460163	4/30/2012	Radiation Image Pickup Device and Radiation Image Pickup Display System Including the Same
SP318890US00	13/482631	5/29/2012	Solid-State Imaging Device and Method Of Driving Comprising A First and Second Accumulation Sections for Transferring Charges Exceeding the Saturation Amount
SP318730US01	14/472153	8/28/2014	Image Processing Including Image Correction
SP316840US00	13/372615	2/14/2012	Virtual Memory System, Virtual Memory Controlling Method, and Program
SP312199US00	13/323373	12/12/2011	Simulator, Processing System, Damage Evaluation Method and Damage Evaluation Program
SP311402US00	13/137772	9/12/2011	Image Processing Device, Image Processing System, Image Processing Method and Program
SP308930US01	14/300989	6/10/2014	Solid-State Imaging Element, Driving Method, and Electronic Apparatus
SP308699US01	14/703213	5/4/2015	Solid-State Image Pickup Device In Which Charges Overflowing A Memory During A Charge Transfer Period Are Directed To A Floating Diffusion and Method Of Driving Same
SP307939US00	13/408293	2/29/2012	Semiconductor Manufacturing Apparatus
SP264303US01	14/465432	8/21/2014	Solid-State Imaging Device, Driving Method thereof and Electronic Apparatus

Docket No.	Appln. No.	Filing Date	Title
SP263828US00	13/137567	8/26/2011	Imaging Device and Imaging Apparatus
SP263611US00	13/067204	5/17/2011	Coding Device, Imaging Device, Coding Transmission System, and Coding Method
SP247925US01	14/045069	10/3/2013	Solid-State Imaging Device, Manufacturing Method and Designing Method thereof, and Electronic Device
SP246876US00	13/637766	4/1/2011	Image Pickup Apparatus Having Units Each With A Pair Of Light Receiving Elements, Solid-State Image Pickup Element, and Image Pickup Method Including the Same
SP246528US02	14/995020	1/13/2016	Solid-State Imaging Device and Electronic Apparatus
SP352829US00	14/905041	7/3/2014	Radiation Image Pickup Unit and Radiation Image Pickup Display System
SP352218US00	15/101,062	9/29/2014	Imaging Unit, Lens Barrel, and Portable Terminal
SP346946US01	14/801644	7/16/2015	Information Processing Apparatus and Method, and Photoelectric Conversion Apparatus
SP346585US01	15/005015	1/25/2016	Connecting Multiple Electronic Devices
SP346364US01	14/738462	6/12/2015	Signal Processing Device and Method
SP346174US01	15/063214	3/7/2016	Solid-State Image Pickup Device and Manufacturing Method thereof, and Electronic Apparatus
SP345914US01	14/953731	11/30/2015	Storage Device and Storage Unit
SP345715US00	14/401370	5/15/2013	Imaging Element, Driving Method, and Electronic Apparatus
SP344516US01	15/054095	2/25/2016	Image Transmission System and Image Transmission Method
SP343652US01	15/069603	3/14/2016	Solid-State Imaging Unit and Electronic Apparatus With A Signal Charge Accumulated In A Photoelectric Conversion Section That Is Divided To Be Read In Predetermined Times Of Intermediate Transfer Operations and A Complete Transfer Operation
SP340712US01	14/821495	8/7/2015	Solid-State Imaging Device With Autofocus and Electronic Apparatus
SP339884US01	14/831642	8/20/2015	Image Pickup Unit and Electronic Apparatus
SP339711US01	15/146099	5/4/2016	Solid-State Imaging Device, Method Of Manufacturing Solid-State Imaging Device, and Electronic Apparatus
SP339201US01	14/994119	1/12/2016	Solid-State Imaging Element and Electronic Device
SP336390US01	15/052585	2/24/2016	Imaging Element, Imaging Device, Electronic Device, and Imaging Method
SP332080US00	14/387511	3/21/2013	Solid State Imaging Element, Driving Method Of Solid State Imaging Element, and Electronic Apparatus
SP326970US01	15/018840	2/8/2016	Solid-State Imaging Device and Electronic Apparatus
SP323150US01	15/054058	2/25/2016	Solid-State Imaging Device, Method for Driving the Same, Method for Manufacturing the Same, and Electronic Device
SP320330US01	15/015327	2/4/2016	Waveguide Device, Communication Module and Electronic Device
SP316970US01	14/293591	6/2/2014	Imaging Element, Method for Manufacturing Imaging Element, Pixel Design Method, and Electronic Apparatus
SP313170US02	14/688133	4/16/2015	Solid-State Imaging Device

Docket No.	Appln. No.	Filing Date	Title
SP312680US01	14/808101	7/24/2015	Solid-State Imaging Apparatus, Method Of Manufacturing Solid-State Imaging Apparatus, and Electronic Apparatus
SP263827US01	14/954988	11/30/2015	Semiconductor Apparatus and Method Of Manufacturing Semiconductor Apparatus
SP248369US01	14/825448	8/13/2015	Image Pickup Device Without A Light Shielding Device and Defect Detecting Method thereof
SP246239US01	14/497116	9/25/2014	Method and Apparatus for Eliminating Crosstalk Amount Included In An Output Signal
SP245425US02	15/063200	3/7/2016	Two-Dimensional Solid-State Image Capture Device With Polarization Member and Color Filter for Sub-Pixel Regions and Polarization-Light Data Processing Method therefor
SP241070US02	14/845742	9/4/2015	Solid-State Imaging Device, Method Of Driving the Solid-State Imaging Device, and Electronic Device
SP222414US01	14/253576	4/15/2014	Solid-State Imaging Device and Control System
SP215336US06	14/052323	10/11/2013	Back-Illuminated Type Solid-State Imaging Device