

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
PANASONIC INTELLECTUAL PROPERTY CORPORATION OF AMERICA	09/28/2017
RECEIVING PARTY DATA	
Name:	FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
Street Address:	HANSASTRASSE 27C
City:	MUNICH
State/Country:	GERMANY
Postal Code:	80686
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16370748
CORRESPONDENCE DATA	
Fax Number:	(206)359-9000
<i>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.</i>	
Phone:	2063598000
Email:	patentprocurement@perkinscoie.com
Correspondent Name:	PERKINS COIE LLP- PAO GENERAL
Address Line 1:	P.O. BOX 1247
Address Line 2:	PATENT PROCUREMENT
Address Line 4:	SEATTLE, WASHINGTON 98111-1247
ATTORNEY DOCKET NUMBER:	110971-9233.US02
NAME OF SUBMITTER:	SOOJIN LEE
SIGNATURE:	/Soojin Lee/
DATE SIGNED:	09/23/2019
Total Attachments: 6	
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SCHEDULE B-2

TRANSFER DOCUMENTS

Panasonic Intellectual Property Corporation of America having a place of business at 20000 Mariner Ave, Suite 200, Torrance, California, 90503, United States of America ("Assignor"), hereby irrevocably assigns to Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Hansastrasse 27c, 80686 München, Germany, for its Fraunhofer-Institut für Integrierte Schaltungen, Am Wolfsmannel 33, 91058 Erlangen, Germany ("Assignee"), as of the date set forth below, the entire right, title and interest for all relevant jurisdictions, including all rights of priority, in inventions disclosed in the patents and patent applications identified on SCHEDULE A-2, together with future applications for patents under the relevant jurisdiction with respect to the patentable inventions from which any of the foregoing arise, including without limitation, divisions, continuations, continuations-in-part, substitutions, reexaminations, reissues, extensions or foreign counterparts therefrom (collectively, "Patents"), and all causes of action, rights, and remedies arising under any such Patent prior to, on or after the Effective Date of the Patent Assignment Agreement entered into by Assignee with Assignor and with Panasonic Corporation (formerly known as Matsushita Electric Industrial, Co., Ltd.) and Panasonic Intellectual Property Management Co., Ltd and all claims for damages by reason of past, present or future infringement or other unauthorized use of such Patents with the right to sue for and collect such damages. The Effective Date means the date defined in the Patent Assignment Agreement referred herein.

Assignor also hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all patents or certificates of invention which may be granted upon any of the Patents in the name of Assignee, as the assignee to the entire interest therein.

IN WITNESS WHEREOF, Assignor has caused its duly authorized representatives to execute this Assignment.

ASSIGNOR

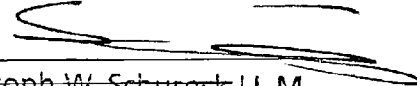
Panasonic Intellectual Property Corporation of America

By: [Signature]
Name: Yoshiaki Tokuda
Title: Director, Member of the Board of Panasonic Intellectual Property Corporation of America
Date: September 28, 2017

ASSIGNEE

Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., for its Fraunhofer-Institut für Integrierte Schaltungen

By: [Signature]
Name: Dr. Michael Gross
Title: Head of Licensing Dpt.
Date: Munich, SEP 27 2017

Witnessed By: 
Name: Christoph W. Schureck LL.M.
Title: Patents and Licensing
Date: _____

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Munich, SEP 27 2017

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**Schedule A-2
ASSIGNED PATENTS (IPCA)**

File No	Pana-ref	Country	Application Number	Publication Number	Patent Number	Status
1	P0566086BR01	BR	PI0917953-4			Published
	P0566086CN01	CN	200980128382.3	102099855	ZL200980128382.3	Granted
	P0566086DE01	DE	09804758.2	2320416	2320416	Granted
	P0566086DK01	DK	09804758.2	2320416	2320416	Granted
	P0566086ES01	ES	09804758.2	2320416	2320416	Granted
	P0566086FI01	FI	09804758.2	2320416	2320416	Granted
	P0566086FR01	FR	09804758.2	2320416	2320416	Granted
	P0566086GB01	GB	09804758.2	2320416	2320416	Granted
	P0566086ID01	ID	W00201100506	051.1779		Application
	P0566086IN01	IN	58/MUMNP/2011			Application
	P0566086IT01	IT	09804758.2	2320416	2320416	Granted
	P0566086JP01	JP	2010-523772	2010-815271	05419876	Granted
	P0566086KR01	KR	10-2011-7002822	2011-0049789	10-1576318	Granted
	P0566086MX01	MX	2011/001253		300375	Granted
	P0566086RU01	RU	2011104350	2011104350	2510536	Granted
	P0566086TR01	TR	09804758.2	2320416	2320416	Granted
	P0566086US01	US	13/057454	2011-0137643	8731909	Granted
	P0566086VN01	VN	1-2011-00039		13564	Granted
2	P0560570CN01	CN	200580015836.8	1954363	ZL200580015836.8	Granted
	P0560570CN02	CN	201110224924.6	102280109	ZL201110224924.6	Granted
	P0560570DE01	DE	602005006551.2	1742202	1742202	Granted
	P0560570DE02	DE	08004731.9		1939862	Granted
	P0560570EP02	EP	08004731.9	1939862	1939862	Granted
	P0560570EP03	EP	16186271.9			Application
	P0560570FR01	FR	05744114.9	1742202	1742202	Granted
	P0560570FR02	FR	08004731.9		1939862	Granted
	P0560570GB01	GB	05744114.9	1742202	1742202	Granted
	P0560570GB02	GB	08004731.9		1939862	Granted
	P0560570JP01	JP	2006-513605	2005-912001	05013863	Granted
	P0560570JP02	JP	2011-184357	2011-248378	05230782	Granted
	P0560570US01	US	11/596254	2008-0262835	8453602	Granted
	P0560570US02	US	13/889983	2013-0246075	8688440	Granted
	6	P0608308EP01	EP	12843823.1	2772913	

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	P0608308JP02	JP	2013-540628	2013-861530	6062370	Granted
	P0608308JP03	JP	2016-242683			Application
	P0608308US01	US	15/079524		9472200	Granted
	P0608308US02	US	14/350403	2014-0257825	9336787	Granted
	P0608308US03	US	15/263534			Application
14	P0617594BR01	BR	112015029574-6			Published
	P0617594CN01	CN	201480031440.1	105408957		Application
	P0617594EP01	EP	14811296.4			Application
	P0617594IN01	IN	3364/MUMNP/2015			Application
	P0617594JP01	JP	2013-122985			Abandoned
	P0617594JP02	JP	2015-522543			Application
	P0617594KR01	KR	10-2015-7033759	2016-0018497		Published
	P0617594MX01	MX	2015/016109			Application
	P0617594RU01	RU	2015151169	2015151169		Published
	P0617594TH01	TH	1501007209			Application
	P0617594US01	US	14/894062		9489959	Granted
	P0617594US02	US	15/286030		9747908	Granted
	P0617594US03	US	15/659023			Application
	P0617594VN01	VN	1-2015-04545			Application
	P0617594WO01	PCT	PCT/JP2014/003103			Expired
	15	P0614397BE01	BE	13862073.7		2933799
P0614397BR01		BR	112015013233-2			Published
P0614397CN01		CN	201380063794.X	104838443		Application
P0614397CN02		CN	201710759624.5			Application
P0614397DE01		DE	13862073.7		2933799	Granted
P0614397EP01		EP	13862073.7	2933799	2933799	Granted
P0614397EP02		EP	17173916.2			Application
P0614397ES01		ES	13862073.7		2933799	Granted
P0614397FI01		FI	13862073.7		2933799	Granted
P0614397FR01		FR	13862073.7		2933799	Granted
P0614397GB01		GB	13862073.7		2933799	Granted
P0614397IN01		IN	1303/MUMNP/2015			Application
P0614397IT01		IT	13862073.7		2933799	Granted
P0614397JP02		JP	2014-551851			Application
P0614397KR01		KR	10-2015-7016672	2015-0095702		Published
P0614397MX01		MX	2015/006161		341885	Granted
P0614397NL01		NL	13862073.7		2933799	Granted
P0614397PL01		PL	13862073.7		2933799	Granted
P0614397PT01		PT	13862073.7		2933799	Granted
P0614397RU01		RU	2015121716			Application
P0614397SE01		SE	13862073.7		2933799	Granted
P0614397TH01		TH	1501003179			Application
P0614397TR01		TR	13862073.7		2933799	Granted

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	P0614397US01	US	14/650093		9767815	Granted
	P0614397US02	US	15/673957			Application
	P0614397VN01	VN	1-2015-01777			Application
	P0614397WO01	PCT	PCT/JP2013/006948			Expired
18	P0457085JP01	JP	2014-137861			Abandoned
	P0622623BR01	BR	BR112016016373-7	BR112016016373-7		Published
	P0622623CN01	CN	201580002275.1	105659321A		Published
	P0622623EP01	EP	15756035.8	3113181		Published
	P0622623IN01	IN	201647021185	201647021185 A		Published
	P0622623JP01	JP	2014-039431			Abandoned
	P0622623JP02	JP	2016-505017			Application
	P0622623KR01	KR	10-2016-7008919			Application
	P0622623MX01	MX	MX/a/2016/008718			Application
	P0622623RU01	RU	2016138285			Application
	P0622623SG01	SG	11201605222X	11201605222X		Published
	P0622623US01	US	15/181606			Application
	P0622623WO01	PCT	PCT/JP2015/000537	WO2015/129165		Expired
P0623174US01	US	61/974689			Withdrawn	
19	P0457141JP01	JP	2014-153832			Abandoned
	P0623117BR01	BR	BR112016019838-7	BR112016019838-7		Published
	P0623117CN01	CN	201580003573.2	105874534A		Published
	P0623117EP01	EP	15774034.1	3128513		Published
	P0623117IN01	IN	201647025785	201647025785A		Published
	P0623117JP01	JP	2016-511368			Application
	P0623117KR01	KR	10-2016-7012900			Application
	P0623117MX01	MX	MX/e/2016/010595			Application
	P0623117RU01	RU	2016138694			Application
	P0623117TH01	TH	1601002785			Application
	P0623117US01	US	61/972722			Withdrawn
	P0623117US02	US	15/221425			Application
	P0623117VN01	VN	1-2016-03547			Application
	P0623117WO01	PCT	PCT/JP2015/001601	WO2015/151451		Expired
20	P0623757AU01	AU	2015291897			Application
	P0623757BR01	BR	BR112017000629-4			Application
	P0623757CA01	CA	2,958,429			Application
	P0623757CN01	CN	201580015301.4	106133831		Published
	P0623757EP01	EP	15824312.1	3174050		Published
	P0623757ID01	ID	P-00201701178			Application
	P0623757IN01	IN	201647040394	201647040394 A		Published
	P0623757JP01	JP	2014-219214			Abandoned
	P0623757JP02	JP	2016-535772			Application
	P0623757KR01	KR	10-2016-7024863			Application
P0623757MX01	MX	MX/e/2016/015786			Application	

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P0623757RU01	RU	2017102311			Application
P0623757SG01	SG	11201701197T			Application
P0623757TH01	TH	1701000222			Application
P0623757US01	US	62/028805			Withdrawn
P0623757US02	US	15/353780			Application
P0623757VN01	VN	1-2017-00137			Application
P0623757WO01	PCT	PCT/JP2015/003358	WQ2016/013164		Expired
P0623757ZA01	ZA	2017/01428			Application