

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4555656

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	MARVELL WORLD TRADE LTD.	06/08/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	MARVELL INTERNATIONAL LTD.	
<b>Street Address:</b>	CANON'S COURT, 22 VICTORIA STREET	
<b>City:</b>	HAMILTON	
<b>State/Country:</b>	BERMUDA	
<b>Postal Code:</b>	HM12	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	13766830
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>	(408)222-2755	
<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>		
<b>Phone:</b>	408-222-2500	
<b>Email:</b>	agorthy@marvell.com	
<b>Correspondent Name:</b>	KELVIN VIVIAN	
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<b>ATTORNEY DOCKET NUMBER:</b>	MP4605	
<b>NAME OF SUBMITTER:</b>	KELVIN VIVIAN	
<b>SIGNATURE:</b>	/Kelvin Vivian/	
<b>DATE SIGNED:</b>	08/17/2017	
<b>Total Attachments: 18</b>		
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ASSIGNMENT AND CANCELLATION OF EXCLUSIVE LICENSE  
MWTL to MIL

WHEREAS, Marvell World Trade Ltd., a corporation of Barbados, having a place of business at L'Horizon, Gunsite Road, Brittons Hill, St. Michael, Barbados BB14027 (hereafter the "ASSIGNOR"), is the owner by respective Assignment of patents and patent applications identified in Exhibit A (hereafter the "ASSIGNED PATENTS"), attached hereto and incorporated herein by reference, and has granted an exclusive license for some or all of the ASSIGNED PATENTS to Marvell International Ltd., a corporation of Bermuda, having a place of business at Canon's Court, 22 Victoria Street, Hamilton, HM12, Bermuda (hereafter the "ASSIGNEE"); and

WHEREAS, ASSIGNOR and ASSIGNEE desire to cancel the exclusive licenses to the ASSIGNED PATENTS (if applicable), and ASSIGNEE desires to acquire the entire right, title, and interest of ASSIGNOR in, to and under said ASSIGNED PATENTS and all inventions and improvements described and claimed therein or entitled to the benefit thereof.

THEREFORE, for good and valuable consideration paid by ASSIGNEE, the receipt of which is hereby acknowledged, ASSIGNOR and ASSIGNEE hereby cancel the exclusive licenses to the ASSIGNED PATENTS (if applicable), and the ASSIGNOR does hereby sell, assign and transfer to the ASSIGNEE, ASSIGNOR's entire right, title and interest in and to the ASSIGNED PATENTS including all inventions and improvements disclosed therein and the right to sue for past, present and future infringement thereof, in the U.S. and every foreign country, and all patent rights, including extensions or derivations thereof, both foreign and domestic, that exist and may issue on the ASSIGNED PATENTS, and in any continuation, continuation-in-part, divisional, re-examination, priority application, reissue or extension of the ASSIGNED PATENTS, and further assigns to the ASSIGNEE the priority right provided by the International Convention. This assignment includes assignment to ASSIGNEE of the right to make application in its own behalf for protection of the ASSIGNED PATENTS and any patents issued on the ASSIGNED PATENTS, in the U.S. and countries foreign to the U.S., and to claim under the Patent Cooperation Treaty, the International Convention and/or other international arrangement for any such application the date of any earlier U.S. application (or any other application on the invention) to gain priority with respect to other applications. The ASSIGNED PATENTS and all patents that issue on the ASSIGNED PATENTS shall be held and enjoyed by the ASSIGNEE, its successors and assigns as fully and entirely as the same would have been held and enjoyed by the ASSIGNOR had this assignment not been made, including all rights therein provided by international conventions and treaties, and the right to sue for past, present and future infringement thereof.

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By its undersigned representative, the ASSIGNOR agrees

- a. to execute all papers necessary in connection with the ASSIGNED PATENTS and any continuing, divisional, reissue, reexamination or corresponding application thereof and also to execute separate Assignment in connection with such application as the ASSIGNEE may deem necessary or expedient;
- b. to execute all papers necessary in connection with any interference which may be declared concerning the ASSIGNED PATENTS or any continuation, division, reissue or reexamination thereof and to cooperate with the ASSIGNEE in every way possible in obtaining evidence and going forward with such interference; and
- c. to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the ASSIGNEE on any of the ASSIGNED PATENTS and on any continuation, division, reissue or reexamination of any of the ASSIGNED PATENTS.

IN WITNESS WHEREOF, executed by the ASSIGNOR's undersigned representative on the date following the undersigned's name.

MARVELL WORLD TRADE LTD.

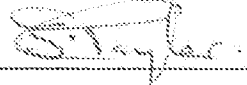
By: 

Name: STEVEN PARKER

Title: DIRECTOR

Date: JUNE 8, 2017

Accepted on behalf of:  
Marvell International Ltd.

By: 

Name: Sherman Taylor

Title: General Manager

Date: June 9, 2017

# PATENT

## Exhibit A

COUNTRY	MP NUMBER	APPLICATION NUMBER	FILING DATE	PATENT NUMBER	ISSUE DATE	STATUS	NOTE	MP NUMBER
US	MP1081C1	12642440	12/18/2009	US7889940 B2	2/15/2011	Issued	Film Grain Generation And Addition	MP1081
CN	MP1081CN	2006100644502	12/20/2006	ZL200610064450.2	11/3/2010	Issued	Film Grain Generation and Addition	MP1081
EP	MP1081EP	6026494.2	12/20/2006	1801751	6/25/2014	Issued	Film Grain Generation and Addition	MP1081
DE	MP1081EPDE	6026494.2	12/20/2006	602006042010.2	6/25/2014	Issued	Film Grain Generation and Addition	MP1081
FR	MP1081EPFR	6026494.2	12/20/2006	1801751	6/25/2014	Issued	Film Grain Generation and Addition	MP1081
GB	MP1081EPGB	6026494.2	12/20/2006	1801751	6/25/2014	Issued	Film Grain Generation and Addition	MP1081
HK	MP1081HK	8104663	12/20/2006	1114987	8/12/2011	Issued	Film Grain Generation and Addition	MP1081
IN	MP1081IN	2009MUM2006	12/20/2006			Filed	Film Grain Generation and Addition	MP1081
JP	MP1081JP	2006-343186	12/20/2006	5236182	4/5/2013	Issued	FILM GRAIN GENERATION AND ADDITION	MP1081
JP	MP1081JPD1	2012-159585	12/20/2006	5301716	6/28/2013	Issued	Film Grain Generation and Addition	MP1081

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US	MP1083	11400505	4/1/2006	US7821578 B2	10/26/2010	Issued	Reconfigurable Self-Calibrating Adaptive Noise Reducer	MP1083
CN	MP1083CN	200780012641.7	4/5/2007	ZL200780012641.7	4/15/2015	Issued	Reconfigurable Self-Calibrating Video Noise Reducer	MP1083
EP	MP1083EP	7755026.7	4/5/2007	2011328	1/18/2017	Issued	Reconfigurable Self-Calibrating Video Noise Reducer	MP1083
DE	MP1083EPDE	7755026.7	4/5/2007	602007049579.2	1/18/2017	Issued	Reconfigurable Self-Calibrating Video Noise Reducer	MP1083
FR	MP1083EPFR	7755026.7	4/5/2007	2011322	1/18/2017	Issued	Reconfigurable Self-Calibrating Video Noise Reducer	MP1083
GB	MP1083EPGB	7755026.7	4/5/2007	2011328	1/18/2017	Issued	Reconfigurable Self-Calibrating Video Noise Reducer	MP1083
IN	MP1083IN	2321MUMNP2008	4/5/2007			Filed	RECONFIGURABLE SELF-CALIBRATING VIDEO NOISE REDUCER	MP1083
JP	MP1083JP	2009-504322	4/5/2007	5186712	2/1/2013	Issued	APPARATUS, METHOD AND VIDEO NOISE REDUCER	MP1083
KR	MP1083KR	KR20087027425	4/5/2007	KR101339997 B1	12/4/2013	Issued	RECONFIGURABLE SELF-CALIBRATING VIDEO NOISE REDUCER	MP1083
WO	MP1083WO	PCTUS07008614	4/5/2007	N/A	N/A	Expired	RECONFIGURABLE SELF-CALIBRATING VIDEO NOISE REDUCER	MP1083
US	MP1085	11736542	4/17/2007	US8264610 B2	9/11/2012	Issued	Shared Memory Multi Video Channel Display Apparatus And Methods	MP1085
US	MP1085.C1	13570985	8/9/2012	US8804040 B2	8/12/2014	Issued	Shared Memory Multi Video Channel Display Apparatus And Methods	MP1085

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CN	MP1085CN	200780014086.1	4/18/2007	ZL200780014086.1	8/8/2012	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1085
CN	MP1085CND1	2012102093410	4/18/2007	ZL2012102093410	6/1/2016	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1085
RP	MP1085EP	7775782.1	4/18/2007	2016765	7/22/2015	Issued	DUAL VIDEO CHANNEL APPARATUS AND METHOD	MP1085
DE	MP1085EPDE	7775782.1	4/18/2007	602007042262	7/22/2015	Issued	DUAL VIDEO CHANNEL APPARATUS AND METHOD	MP1085
FR	MP1085EPFR	7775782.1	4/18/2007	2016765	7/22/2015	Issued	DUAL VIDEO CHANNEL APPARATUS AND METHOD	MP1085
GB	MP1085EPGB	7775782.1	4/18/2007	2016765	7/22/2015	Issued	DUAL VIDEO CHANNEL APPARATUS AND METHOD	MP1085
IN	MP1085IN	2246MU/MNP2008	4/18/2007			Filed	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1085
JP	MP1085JP	2009-506585	4/18/2007	5220726	3/15/2013	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1085
JP	MP1085JPD1	2013-044729	4/18/2007	5582429	7/25/2014	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1085
KR	MP1085KR	20087026713	4/18/2007	10-1366200	2/17/2014	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1085
KR	MP1085KRD1	20137012071	4/18/2007	10-1366203	2/17/2014	Issued	Shared memory Multi Video Channel Display Apparatus and Methods	MP1085
US	MP1085PR	60793276	4/18/2006	N/A	N/A	Expired	Area-Efficient Method To Save DSR Access Bandwidth Requirement On A Digital Video Processor Chip	MP1085

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WO	MP1085WO	PCT/US07009583	4/18/2007	N/A	N/A	Expired	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1085
US	MP1087	11736561	4/17/2007	US8284322 B2	10/9/2012	Issued	Shared Memory Multi Video Channel Display Apparatus And Methods	MP1087
US	MP1087.C1	13619196	9/14/2012	US8754991 B2	6/17/2014	Issued	Shared Memory Multi Video Channel Display Apparatus And Methods	MP1087
CN	MP1087CN	2007800141807	4/18/2007	ZL200780014180 7	1/18/2012	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087
CN	MP1087CND1	201110394193	4/18/2007	ZL201110394193 X	12/24/2014	Issued	Shared Memory Multi Video Channel Display Apparatus And Methods	MP1087
EP	MP1087EP	7775783.9	4/18/2007	2016758	3/29/2017	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1087
DE	MP1087EPDE	7775783.9	4/18/2007	602007050400.7	3/29/2017	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1087
FR	MP1087EPFR	7775783.9	4/18/2007	2016758	3/29/2017	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1087
GB	MP1087EPGB	7775783.9	4/18/2007	2016758	3/29/2017	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1087
EP	MP1087EPD1	11000786.1	4/18/2007	2337334	4/16/2014	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087
IN	MP1087IN	242&MUMNP2608	4/18/2007	281371	3/16/2017	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087
IN	MP1087IND1	3666MUMNP2013	4/18/2007			Filed	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087



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JP	MP1087JP	2009-506586	4/18/2007	5095725	9/28/2012	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087
KR	MP1087KR	7026875	4/18/2007	KR101335270 B1	11/22/2013	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1087
KR	MP1087KRD1	7021398	4/18/2007	10-1334295	11/22/2013	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1087
US	MP1087PR	66793277	4/18/2006	N/A	N/A	Expired	Adaptive Video Converters	MP1087
DE	MP1087UADE	11000786.1	4/18/2007	602087036185 0	4/16/2014	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087
FR	MP1087UAFR	11000786.1	4/18/2007	2337334	4/16/2014	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087
GB	MP1087UAGB	11000786.1	4/18/2007	2337334	4/16/2014	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087
WO	MP1087WO	PCTUS07009584	4/18/2007	N/A	N/A	Expired	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1087
US	MP1088PR	60793275	4/18/2006	N/A	N/A	Expired	Dual 3-D Architecture	MP1088
US	MP1088	11736564	4/17/2007	US8218091 B2	7/10/2012	Issued	Shared Memory Multi Video Channel Display Apparatus And Methods	MP1088
US	MP1088 D1	13524353	6/15/2012	US8736757 B2	5/27/2014	Issued	Shared Memory Multi Video Channel Display Apparatus And Methods	MP1088
CN	MP1088CN	200780014058X	4/18/2007	ZL200780014058.X	2/8/2012	Issued	Shared memory Multi Video Channel Display Apparatus and Methods	MP1088

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CN	MP1088CND1	201110437942.2	4/18/2007	ZL201110437942.2	2/4/2015	Issued	Shared memory Multi Video Channel Display Apparatus and Methods	MP1088
EP	MP1088EP	7755739.5	4/18/2007	N/A	N/A	Abandoned	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1088
EP	MP1088EPD1	11002324.9	4/18/2007			Filed	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1088
IN	MP1088IN	2244MUMNP2008	4/18/2007			Filed	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1088
IN	MP1088IND1	3708MUMNP2015	4/18/2007			Filed	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1088
JP	MP1088JP	2009-506584	4/18/2007	5217037	3/15/2013	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1088
KR	MP1088KR	70265712008	4/18/2007	10-1366199	2/17/2014	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1088
KR	MP1088KRD1	10-2013-7012070	4/18/2007	10-1366202	2/17/2014	Issued	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1088
WO	MP1088WO	PCT/US07009580	4/18/2007	N/A	N/A	Expired	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1088
US	MP1089	11803535	5/14/2007	US8340185 B2	12/25/2012	Issued	Systems And Methods For A Motion Compensated Picture Rate Converter	MP1089
EP	MP1089EP	7809823.3	6/22/2007			Filed	Systems and Methods for a Motion Compensated Picture Rate Converter	MP1089

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JP	MP1089JP	2009-518177	6/22/2007			Abandoned	Systems and Methods for a Motion Compensated Picture Rate Converter	MP1089
JP	MP1089JPD1	2012-231573	6/22/2007	5740690	5/15/2015	Issued	Systems and Methods for a Motion Compensated Picture Rate Converter	MP1089
KR	MP1089KR	7032176/2008	6/22/2007	10137577	3/3/2014	Issued	Systems and Methods for a Motion Compensated Picture Rate Converter	MP1089
US	MP1089PR	60817061	6/27/2006	N/A	N/A	Expired	Motion Compensated Picture Rate Converter	MP1089
TW	MP1089TW	96123121	6/25/2007	TW432017 B	3/21/2014	Abandoned	Systems And Methods For A Motion Compensated Picture Rate Converter	MP1089
WO	MP1089WO	PCTUS07014609	6/22/2007	N/A	N/A	Expired	SYSTEMS AND METHODS FOR A MOTION COMPENSATED PICTURE RATE CONVERTER	MP1089
US	MP1357	11932686	10/31/2007	US8233087 B2	7/31/2012	Issued	Systems And Methods For Deinterlacing High-Definition And Standard-Definition Video	MP1357
CN	MP1357CN	2007800416759	11/6/2007	ZL200780041675.9	2/18/2015	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
EP	MP1357EP	7839978.9	11/6/2007	2095630	10/10/2012	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
DE	MP1357EPDE	7839978.9	11/6/2007	602007026053.1	10/10/2012	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
FR	MP1357EPFR	7839978.9	11/6/2007	2095630	10/11/2012	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357

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GB	MP1357EPGB	7839978.9	11/6/2007	2095630	10/10/2012	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
JP	MP1357JP	2009-536284	11/6/2007	5205621	3/1/2013	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
US	MP1357PR	60864881	11/8/2006	N/A	N/A	Expired	ADVANCED DEINTERLACER FOR HIGH-DEFINITION AND STANDARD-DEFINITION VIDEO	MP1357
TW	MP1357TW	96142262	11/8/2007	1466543	12/21/2014	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
WO	MP1357WO	PCTUS07023450	11/6/2007	N/A	N/A	Expired	ADVANCED DEINTERLACER FOR HIGH-DEFINITION AND STANDARD-DEFINITION VIDEO	MP1357
US	MP1587	11969705	1/4/2008	US8269886 B2	9/18/2012	Issued	Methods And Systems For Improving Low-Resolution Video	MP1587
US	MP1587.C1	13599459	8/30/2012	US8819760 B2	8/26/2014	Issued	Methods And Systems For Improving Low-Resolution Video	MP1587
US	MP1587PR	60878967	1/5/2007	N/A	N/A	Expired	Methods And Systems For Improving Low-Resolution Video	MP1587
TW	MP1587TW	97100393	1/4/2008	1466547	12/21/2014	Issued	Methods And Systems For Improving Low-Resolution Video	MP1587
WO	MP1587WO	PCTUS08000100	1/4/2008	N/A	N/A	Expired	Methods And Systems For Improving Low-Resolution Video	MP1587
US	MP1705	12033490	2/19/2008	US8885099 B2	11/11/2014	Issued	Methods And Systems For Improving Low Resolution And Low Frame Rate Video	MP1705

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CN	MP1705CN	2008800123343	2/19/2008	ZL200880012334.3	9/25/2013	Issued	Methods and Systems for Improving Low Resolution and Low Frame Rate Video	MP1705
US	MP1705PR	60902027	2/16/2007	N/A	N/A	Expired	METHODS AND SYSTEMS FOR IMPROVING LOW FRAME RATE VIDEO	MP1705
US	MP2251	12254289	10/20/2008	US8804048 B2	8/12/2014	Issued	Motion-Adaptive Alternate Gamma Drive For LCD	MP2251
US	MP2251PR	60982580	10/25/2007	N/A	N/A	Expired	Motion-Adaptive Alternate Gamma Drive For LCD	MP2251
TW	MP2251TW	97140735	10/23/2008	I450255	8/21/2014	Issued	Motion-Adaptive Alternate Gamma Drive for a Liquid Crystal Display	MP2251
WO	MP2251WO	PCTUS08080459	10/20/2008	N/A	N/A	Expired	MOTION-ADAPTIVE ALTERNATING GAMMA DRIVE FOR A LIQUID CRYSTAL DISPLAY	MP2251
CN	MP2251WOCN	200880117197X	10/20/2008	ZL200880117197.X	6/18/2014	Issued	Motion-Adaptive Alternate Gamma Drive for a Liquid Crystal Display	MP2251
US	MP2622	12476930	6/2/2009	US8264615 B2	9/11/2012	Issued	Split Edge Enhancement Architecture	MP2622
US	MP2622.C1	13608694	9/10/2012	US8879902 B2	11/4/2014	Issued	Split Edge Enhancement Architecture	MP2622
US	MP2622PR	61073949	6/19/2008	N/A	N/A	Expired	Split Edge Enhancement Architecture	MP2622
WO	MP2622WO	PCTUS0945993	6/2/2009			Published	SPLIT EDGE ENHANCEMENT ARCHITECTURE	MP2622
CN	MP2622WOCN	200980122358.9	6/2/2009	ZL200980122358.9	2/13/2013	Issued	Split Edge Enhancement Architecture	MP2622

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JP	MP2622WOJP	2011-511906	6/2/2009	5095860	9/28/2012	Issued	Split Edge Enhancement Architecture	MP2622
KR	MP2622WOKR	10-7028533	6/2/2009	10-1587196	1/14/2016	Issued	SPLIT EDGE ENHANCEMENT ARCHITECTURE	MP2622
US	MP2629	12555960	9/9/2009	US8571347 B2	10/29/2013	Issued	Reducing Digital Image Noise	MP2629
US	MP2629 C1	14064753	10/28/2013	US9092855 B2	7/28/2015	Issued	Method And Apparatus For Reducing Noise Introduced Into A Digital Image By A Video Compression Encoder	MP2629
US	MP2629FR	61095466	9/9/2009	N/A	N/A	Expired	Compression Artifact Reduction In Digital Video	MP2629
WO	MP2629WO	PCTIB0906932	9/9/2009	N/A	N/A	Expired	REDUCING DIGITAL IMAGE NOISE	MP2629
CN	MP2629WOCN	980135127.1	9/9/2009	ZL200960135127.1	10/29/2014	Issued	Reducing Digital Image Noise	MP2629
EP	MP2629WOEP	9752466.4	9/9/2009	2327219	11/9/2016	Issued	Reducing Digital Image Noise	MP2629
JP	MP2629WOJP	2011-525643	9/9/2009	5233014	4/5/2013	Issued	Reducing Digital Image Noise	MP2629
US	MP2633	12497841	7/6/2009	US8311116 B2	11/13/2012	Issued	Method And Apparatus For Periodic Structure Handling For Motion Compensation	MP2633
US	MP2633.C1	13650375	10/12/2012	US9210445 B2	12/8/2015	Issued	Method And Apparatus For Periodic Structure Handling For Motion Compensation	MP2633

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JP	MP2633JP	2009-162010	7/8/2009	5534299	5/9/2014	Issued	Method and Apparatus for Periodic Structure Handling for Motion Compensation	MP2633
US	MP2633PR	61079269	7/9/2008	N/A	N/A	Expired	Periodic Structure Handling For Motion Compensated Frame Converter	MP2633
US	MP2842	12542519	8/17/2009	9232226	1/5/2016	Issued	Systems And Methods For Perceptually Lossless Video Compression	MP2842
US	MP2842PR	61090106	8/19/2008	N/A	N/A	Expired	Perceptually Lossless Hybrid Video Codec Using Wavelet Transform	MP2842
WO	MP2842WO	PCTUS0954072	8/17/2009			National Phase (PCT)	SYSTEMS AND METHODS FOR PERCEPTUALLY LOSSLESS VIDEO COMPRESSION	MP2842
US	MP2938	12615594	11/10/2009	US9007395 B2	4/14/2015	Issued	Bit Resolution Enhancement	MP2938
US	MP2938PR	61118735	12/1/2008	N/A	N/A	Expired	BIT RESOLUTION ENHANCEMENT USING ADAPTIVE FILTER WITH IMPROVED CONTOUR SEGMENTATION	MP2938
WO	MP2938WO	PCTUS0963827	11/10/2009	N/A	N/A	Expired	BIT RESOLUTION ENHANCEMENT	MP2938
CN	MP2938WOCN	980145239.5	11/10/2009			Abandoned	Bit Resolution Enhancement	MP2938
EP	MP2938WOEP	9793364.2	11/10/2009			Abandoned	Bit Resolution Enhancement	MP2938
JP	MP2938WOJP	2011-538620	11/10/2009	5540253	11/7/2014	Issued	Bit Resolution Enhancement	MP2938
US	MP2965	12748698	3/29/2010	US8619187 B2	12/31/2013	Issued	Cadence Detection In Progressive Video	MP2965

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US	MP2965PR	61165612	4/1/2009	N/A	N/A	Expired	CADENCE DETECTION IN PROGRESSIVE VIDEO	MP2965
WO	MP2965WO	PCTUS1029003	3/29/2010	N/A	N/A	Expired	CADENCE DETECTION IN PROGRESSIVE VIDEO	MP2965
CN	MP2965WOCN	201080014184.7	3/29/2010	ZL 2010200141847	12/16/2015	Issued	Cadence Detection in Progressive Video	MP2965
EP	MP2965WOEP	10725536.6	3/29/2010	2415259	9/16/2015	Issued	Cadence Detection in Progressive Video	MP2965
JP	MP2965WOJP	2012-503345	3/29/2010	5709319	3/13/2015	Issued	Cadence Detection in Progressive Video	MP2965
DE	MP2965WUDE	10725536.6	3/29/2010	602016027566.3	9/16/2015	Issued	Cadence Detection in Progressive Video	MP2965
FR	MP2965WUFR	10725536.6	3/29/2010	2415259	9/16/2015	Issued	Cadence Detection in Progressive Video	MP2965
GB	MP2965WUGB	10725536.6	3/29/2010	2415259	9/16/2015	Issued	Cadence Detection in Progressive Video	MP2965
US	MP3223	12764214	4/21/2010	US8570438 B2	10/29/2013	Issued	Automatic Adjustments For Video Post- Processor Based On Estimated Quality Of Internet Video Content	MP3223
US	MP3223 C1	14062372	10/24/2013	US8922714 B2	12/30/2014	Issued	System And Methods For Adjusting Settings Of A Video Post- Processor	MP3223
US	MP3223PR	61171234	4/21/2009	N/A	N/A	Expired	AUTOMATIC ADJUSTMENTS FOR VIDEO POST- PROCESSOR BASED ON ESTIMATED QUALITY OF INTERNET VIDEO CONTENT	MP3223



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WO	MP3223WO	PCTUS1031911	4/21/2009			National Phase (PCT)	Automatic Adjustments for Video Post-Processor Based On Estimated Quality Of Internet Video Content	MP3223
CN	MP3223WOCN	2010800176460	4/21/2010	800176460	9/10/2014	Issued	Automatic Adjustments for Video Post-Processor Based On Estimated Quality Of Internet Video Content	MP3223
EP	MP3223WOEP	10717360.1	10/21/2011			Filed	Automatic Adjustments for Video Post-Processor Based On Estimated Quality Of Internet Video Content	MP3223
US	MP3260	12815824	6/15/2010	US8537177 B2	9/17/2013	Issued	System And Methods For Gamut Bounded Saturation Adaptive Color Enhancement	MP3260
US	MP3260.C1	14016918	9/3/2013	US8860747 B2	10/14/2014	Issued	System And Methods For Gamut Bounded Saturation Adaptive Color Enhancement	MP3260
US	MP3260PR	61187049	6/15/2009	N/A	N/A	Expired	VIDEO THROUGH ADAPTIVE COLOR ENHANCEMENT	MP3260
WO	MP3260WO	PCTUS10038608	6/15/2010	N/A	N/A	Expired	System and Methods for Gamut Bounded Saturation Adaptive Color Enhancement	MP3260
US	MP3264	12783123	5/19/2010	US8711083 B2	4/29/2014	Issued	Liquid Crystal Display Backlight Control	MP3264
US	MP3264.D1	14228544	3/28/2014	US8860657 B2	10/14/2014	Issued	Liquid Crystal Display Backlight Control	MP3264
US	MP3264PR	61180022	5/20/2009	N/A	N/A	Expired	METHOD TO CONTROL LED BACKLIGHT FOR LOCAL DIMMING	MP3264

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CN	MP3264WCNA	2015100846467	5/19/2010			Allowed (Grant fees paid)	LIQUID CRYSTAL DISPLAY BACKLIGHT CONTROL	MP3264
WO	MP3264WO	PCTUS1035425	5/19/2010	N/A	N/A	Expired	Liquid Crystal Display Backlight Control	MP3264
CN	MP3264WOCN	2010800220622	5/19/2010	ZL2010800220622	9/9/2015	Issued	LIQUID CRYSTAL DISPLAY BACKLIGHT CONTROL	MP3264
EP	MP3264WOEP	10725316.3	5/19/2010			Filed	LIQUID CRYSTAL DISPLAY BACKLIGHT CONTROL	MP3264
JP	MP3264WOJP	2012-511995	5/19/2010	5495279	3/14/2014	Issued	LIQUID CRYSTAL DISPLAY BACKLIGHT CONTROL	MP3264
KR	MP3264WOKR	10-2011-7026228	5/19/2010			Filed	LIQUID CRYSTAL DISPLAY BACKLIGHT CONTROL	MP3264
US	MP3702	13023769	2/9/2011	US9077990 B2	7/7/2015	Issued	Block Noise Detection in Digital Video	MP3702
US	MP3702PR	61368491	7/28/2010	N/A	N/A	Expired	BLOCK NOISE DETECTION IN DIGITAL VIDEO	MP3702
TW	MP3702TW	100104627	2/11/2011	1511545	12/1/2015	Issued	Block Noise Detection in Digital Video	MP3702
WO	MP3702WO	PCTIB11000413	2/9/2011	N/A	N/A	Expired	BLOCK COMPRESSION ARTIFACT DETECTION IN DIGITAL VIDEO SIGNALS	MP3702
CN	MP3702WOCN	2011800368249	2/9/2011			Filed	BLOCK COMPRESSION ARTIFACT DETECTION IN DIGITAL VIDEO SIGNALS	MP3702
EP	MP3702WOEP	11713514.5	2/9/2011			Filed	BLOCK COMPRESSION ARTIFACT DETECTION IN DIGITAL VIDEO SIGNALS	MP3702

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US	MP4605	13766830	2/14/2013	US9152807 B2	10/6/2015	Issued	Method And Apparatus For Providing Audio Or Video Capture Functionality According To A Security Policy	MP4605
US	MP4605PR	61608336	3/8/2012	N/A	N/A	Expired	METHOD AND APPARATUS FOR IMPLEMENTING A PROTECTED AV CAPTURE	MP4605
US	MP4605PR2	61702490	9/18/2012	N/A	N/A	Expired	METHOD AND APPARATUS FOR IMPLEMENTING A PROTECTED AV CAPTURE	MP4605
WO	MP4605WO	PCTUS1326078	2/14/2013	N/A	N/A	Expired	METHOD AND APPARATUS FOR PROVIDING AUDIO OR VIDEO CAPTURE FUNCTIONALITY ACCORDING TO A SECURITY POLICY	MP4605
US	MP2744	12511238	7/29/2009	US8477146B2	7/2/2013	Issued	Processing Rasterized Data	MP2744
US	MP2744PR	61084406	7/29/2008	N/A	N/A	Expired	Two-Dimensional Tiling Structure For Video Frame	MP2744
WO	MP2744WO	PCTUS0932089	7/29/2009	N/A	N/A	Expired	PROCESSING RASTERIZED DATA	MP2744
JP	MP3524WOJP	2012-549111	1/14/2011	5751679	5/29/2015	Issued	Use of Film Grain to Mask Compression Artifacts	MP3524
CN	MP3524WOCN	201180005043.3	1/14/2011	ZL2011800050433	2/3/2016	Issued	Use of Film Grain to Mask Compression Artifacts	MP3524
US	MP3524	13006805	1/14/2011	N/A	N/A	Abandoned	USE OF FILM GRAIN TO MASK COMPRESSION ARTIFACTS	MP3524
US	MP3524PR	61293340	1/15/2010	N/A	N/A	Expired	USE OF FILM GRAIN TO MASK COMPRESSION ARTIFACTS	MP3524

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WO	MP3524WO	PCTUS1121299	1/14/2011	N/A	N/A	Expired	USE OF FILM GRAIN TO MASK COMPRESSION ARTIFACTS	MP3524
US	MP5070	14101918	12/10/2013	US8830395B2	9/9/2014	Issued	Systems And Methods For Adaptive Scaling Of Digital Images	MP5070
US	MP5070PR	61739428	12/19/2012	N/A	N/A	Expired	ADAPTIVE SCALER	MP5070
WO	MP5070WO	PCTUS1374103	12/10/2013	N/A	N/A	Expired	SYSTEMS AND METHODS FOR ADAPTIVE SCALING OF DIGITAL IMAGES	MP5070
US	MP5103	US14/220528	3/20/2014	US9241093 B2	1/19/2016	Issued	GUIDED FILTER- BASED DETAIL ENHANCEMENT	MP5103
CN	MP5103WOCN	2014800172668	3/20/2014			Filed	GUIDED FILTER- BASED DETAIL ENHANCEMENT	MP5103
EP	MP5103WOEP	14769741.1	3/18/2014			Filed	GUIDED FILTER- BASED DETAIL ENHANCEMENT	MP5103
JP	MP5103WOJP	2016-50439	3/22/2013			Filed	GUIDED FILTER- BASED DETAIL ENHANCEMENT	MP5103
KR	MP5103WOKR	10-2015-7030412	3/20/2014			Filed	Guided Filter- Based Detail Enhancement	MP5103
US	MP5103PR	61804522	3/22/2013	N/A	N/A	Expired	Guided Filter Based Detail Enhancement	MP5103
WO	MP5103WO	PCTUS1431311	3/20/2014	N/A	N/A	Expired	GUIDED FILTER- BASED DETAIL ENHANCEMENT	MP5103