

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6554224

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	MARVELL INTERNATIONAL LTD.	09/08/2017
RECEIVING PARTY DATA		
Name:	SYNAPTICS INCORPORATED	
Street Address:	1251 MCKAY DRIVE	
City:	SAN JOSE	
State/Country:	CALIFORNIA	
Postal Code:	95131	
Name:	SYNAPTICS LLC	
Street Address:	POSTSTRASSE 6	
City:	ZUG	
State/Country:	SWITZERLAND	
Postal Code:	CH-6301	
PROPERTY NUMBERS Total: 2		
Property Type	Number	
Application Number:	61084419	
Patent Number:	9055296	
CORRESPONDENCE DATA		
Fax Number:	(214)200-0853	
<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>		
Email:	ming.armstrong@haynesboone.com, IPDocketing@haynesboone.com	
Correspondent Name:	HAYNES AND BOONE, LLP	
Address Line 1:	2323 VICTORY AVENUE	
Address Line 2:	SUITE 700	
Address Line 4:	DALLAS, TEXAS 75219	
ATTORNEY DOCKET NUMBER:	70548.1 (170618US03)	
NAME OF SUBMITTER:	DENNIS R. GALLAGHER	
SIGNATURE:	/Dennis R. Gallagher/	
DATE SIGNED:	02/16/2021	

Total Attachments: 26

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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4601877

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
Name		Execution Date
MARVELL INTERNATIONAL LTD.		06/11/2017
RECEIVING PARTY DATA		
Name:	SYNAPTICS INCORPORATED	
Street Address:	1251 MCKAY DRIVE	
City:	SAN JOSE	
State/Country:	CALIFORNIA	
Postal Code:	95131	
Name:	SYNAPTICS LLC	
Street Address:	POSTSTRASSE 6	
City:	ZUG	
State/Country:	SWITZERLAND	
Postal Code:	CH-6301	
PROPERTY NUMBERS Total: 115		
Property Type	Number	
Patent Number:	7623721	
Patent Number:	7933461	
Patent Number:	7734114	
Patent Number:	8014600	
Patent Number:	8340410	
Patent Number:	7746411	
Patent Number:	7903178	
Patent Number:	7907148	
Patent Number:	8077184	
Patent Number:	8295596	
Patent Number:	8731290	
Patent Number:	9147238	
Patent Number:	7733421	
Patent Number:	7941001	
Patent Number:	8145013	

PATENT

Property Type	Number
Patent Number:	8682101
Patent Number:	7664337
Patent Number:	7889940
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Patent Number:	9008455
Patent Number:	8284322
Patent Number:	8754991
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Patent Number:	8736757
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Patent Number:	8055102
Patent Number:	8306365
Patent Number:	8233087
Patent Number:	8009907
Patent Number:	8265391
Patent Number:	8269886
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Patent Number:	8885099
Patent Number:	8804048
Patent Number:	8948267
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Patent Number:	8279936
Patent Number:	8351508
Patent Number:	8432970
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Patent Number:	8184200
Patent Number:	8477848
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Patent Number:	8374240
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Patent Number:	8879002
Patent Number:	8508662
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Patent Number:	9092855

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Patent Number:	8498342
Patent Number:	8902994
Patent Number:	8761261
Patent Number:	9232226
Patent Number:	8509552
Patent Number:	8787696
Patent Number:	9007395
Patent Number:	8619187
Patent Number:	8363729
Patent Number:	9036711
Patent Number:	7982641
Patent Number:	8711019
Patent Number:	8548816
Patent Number:	8799002
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Patent Number:	8595003
Patent Number:	8570438
Patent Number:	8922714
Patent Number:	8537177
Patent Number:	8860747
Patent Number:	8711083
Patent Number:	8860657
Patent Number:	9369772
Patent Number:	9275295
Application Number:	15013928
Patent Number:	9077990
Patent Number:	8902359
Patent Number:	8581987
Patent Number:	8619199
Patent Number:	8913184
Patent Number:	8692933

Property Type	Number
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Patent Number:	9197891
Patent Number:	9042681
Patent Number:	9247243
Patent Number:	9152807
Application Number:	15040213
Application Number:	14966897
Application Number:	15135931
Patent Number:	9438820
Patent Number:	8477146
Patent Number:	8811496
Patent Number:	8494059
Patent Number:	8645400
Patent Number:	9165059
Patent Number:	8427497
Patent Number:	8797343
Patent Number:	8363969
Patent Number:	8639049
Patent Number:	8830395
Patent Number:	9135723
Application Number:	14250710
Patent Number:	9241093
Patent Number:	9100647

CORRESPONDENCE DATA

Fax Number: (669)272-0771

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: 669-272-0770

Email: uspto@paradiceli.com

Correspondent Name: PARADICE AND LI LLP (SYNAPTICS)

Address Line 1: 1999 S. BASCOM AVE.

Address Line 2: SUITE 300

Address Line 4: CAMPBELL, CALIFORNIA 95008

ATTORNEY DOCKET NUMBER:	SYNM.G000
NAME OF SUBMITTER:	RACHEL MENA
SIGNATURE:	/Rachel Mena/
DATE SIGNED:	09/19/2017

Total Attachments: 21

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PATENT ASSIGNMENT AGREEMENT

WHEREAS, Marvell International Ltd., a corporation organized under the laws of Bermuda, with offices at Canon's Court, 22 Victoria Street, Hamilton HM 23, Bermuda ("Assignor") owns certain patents, patent applications and/or patent registrations, as listed in Exhibit A attached hereto and incorporated herein by this reference ("Patents"); and

WHEREAS, Synaptics Incorporated, a corporation organized under the laws of the State of Delaware and Synaptics LLC, a Delaware limited liability company (collectively, the "Assignee"), desires to acquire all interest of Assignor in, to and under the Patents;

WHEREAS, Assignor has executed that certain Asset Purchase Agreement dated June 11, 2017, assigning, among other things, all interest in and to the Patents from Assignor to Assignee (the "Purchase Agreement");

NOW, THEREFORE, for good and valuable consideration paid by Assignee to Assignor, the receipt and sufficiency of which hereby is acknowledged, Assignor does hereby sell, transfer, assign and deliver unto Assignee its entire interest in and to the Patents, including all divisions, continuations, reexaminations, reissues, and foreign counterparts of the applications and patent registrations for the Patents (and the right to claim priority and the right to apply for any of the foregoing); all rights to causes of action and remedies related thereto (including, without limitation, the right to sue for past, present or future infringement, misappropriation or violation of rights related to the foregoing); and any and all other rights and interests arising out of, in connection with or in relation to the Patents.

FURTHER, nothing contained herein shall be deemed to alter or amend the terms and provisions of the Purchase Agreement and in the event of any conflict between the terms and provisions of this Assignment and the Purchase Agreement, the terms and provisions of the Purchase Agreement shall be deemed to govern and be controlling in all circumstances. This Assignment is executed pursuant to the Purchase Agreement and is entitled to the benefits and subject to the provisions thereof and shall bind and inure to the benefit of the parties thereto and their respective successors and assigns.

FURTHER, Assignor hereby covenants and agrees to execute and deliver, at the request of Assignee, such further instruments of transfer and assignment and to take any other action as such Assignee may reasonably request to more effectively consummate the assignments contemplated by this Assignment. Specifically, Assignor agrees to, at Assignee's expense, execute, acknowledge and deliver such further documents, instruments, conveyances and assurances and take such further actions as may be reasonably required to register in the name of Assignee the assignment of the Patents in any appropriate governmental agency or registrar.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, Assignor and Assignee have caused this Assignment, effective as of the Closing (as defined in the Purchase Agreement), to be duly executed by an authorized officer on this 8th day of September 2017

ASSIGNOR:

MARVELL INTERNATIONAL LTD.,
a corporation organized under the laws of
Bermuda

By: 
Name: Ken Groetjen
Title: Assistant General Manager

REVIEWED


Marvell Legal Department

ASSIGNEE:

SYNAPTICS INCORPORATED

By: _____
Name: _____
Title: _____

SYNAPTICS LLC

By: _____
Name: _____
Title: _____

[Signature Page to Patent Assignment Agreement]

IN WITNESS WHEREOF, Assignor and Assignee have caused this Assignment, effective as of the Closing (as defined in the Purchase Agreement), to be duly executed by an authorized officer on this 8th day of September 2017.

ASSIGNOR:

MARVELL INTERNATIONAL LTD.,
a corporation organized under the laws of
Bermuda

By: _____
Name:
Title:

ASSIGNEE:

SYNAPTICS INCORPORATED

DocuSigned by:
By: John McFarland
Name: John McFarland
Title: Senior Vice President, General Counsel
& Secretary

SYNAPTICS LLC

DocuSigned by:
By: John McFarland
Name: John McFarland
Title: Secretary

Exhibit A

Patents, Patent Applications and Patent Registrations

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
US	MP1072	11296035	12/7/2005	US7623721 B1	11/24/2009	Issued	High-Speed Dithering Architecture	MP1072
US	MP1072.C1	12579207	10/14/2009	US7933461 B1	4/26/2011	Issued	High-Speed Dithering Architecture	MP1072
US	MP1073	11295882	12/7/2005	US7734114 B1	6/8/2010	Issued	Intelligent Saturation Of Video Data	MP1073
US	MP1073.C1	12751295	3/31/2010	US8014600 B1	9/6/2011	Issued	Intelligent Saturation Of Video Data	MP1073
US	MP1073C1C1	13207662	8/11/2011	US8340410 B1	12/25/2012	Issued	Intelligent Saturation Of Video Data	MP1073
US	MP1074	11296185	12/7/2005	US7746411 B1	6/29/2010	Issued	Color Management Unit	MP1074
US	MP1074.C1	12787142	5/25/2010	US7903178 B1	3/8/2011	Issued	Color Management Unit	MP1074
US	MP1075	11296163	12/7/2005	US7907148 B1	3/15/2011	Issued	Intelligent Color Remapping Of Video Data	MP1075
US	MP1075.C1	13045364	3/10/2011	US8077184 B1	12/13/2011	Issued	Intelligent Color Remapping Of Video Data	MP1075
US	MP1076	11295750	12/7/2005	US8295596 B1	10/23/2012	Issued	Adaptive Histogram-Based Video Contrast Enhancement	MP1076
US	MP1076.D1	13614910	9/13/2012	US8731290 B1	5/20/2014	Issued	Adaptive Histogram-Based Video Contrast Enhancement	MP1076
US	MP1076D1C1	14262254	4/25/2014	9147238	9/29/2015	Issued	Adaptive Histogram-Based Video Contrast Enhancement	MP1076
US	MP1078	11294709	12/5/2005	US7733421 B1	6/8/2010	Issued	Vector Interpolator	MP1078
US	MP1080	11294708	12/5/2005	US7941001 B1	5/10/2011	Issued	Multi-Purpose Scaler	MP1080
US	MP1080.D1	13101769	5/5/2011	US8145013 B1	3/27/2012	Issued	Multi-Purpose Scaler	MP1080
US	MP1080D1C1	13410683	3/2/2012	US8682101 B1	3/25/2014	Issued	Multi-Purpose Scaler	MP1080
US	MP1081	11313577	12/20/2005	US7664337 B2	2/16/2010	Issued	Film Grain Generation And Addition	MP1081
US	MP1081.C1	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
EO	MP1081EP	6026494	12/20/2006	1801751	6/25/2014	Issued	Film Grain Generation and Addition	MP1081
DE	MP1081EPDE	6026494	12/20/2006	602006042010.2	6/25/2014	Issued	Film Grain Generation and Addition	MP1081
FR	MP1081EPFR	6026494	12/20/2006	1801751	6/25/2014	Issued	Film Grain Generation and Addition	MP1081
GB	MP1081EPGB	6026494	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	2090MUM2006	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
US	MP1083	11400505	4/7/2006	US7821578 B2	10/26/2010	Issued	Reconfigurable Self-Calibrating Adaptive Noise Reducer	MP1083

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AmericasActive:9411793.6

PATENT
REEL: 055854 FRAME: 0835

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
CN	MP1083CN	2007800126417	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	2011328	1/18/2017	Issued	RECONFIGURABLE SELF-CALIBRATING VIDEO NOISE REDUCER	MP1083
GB	MP1083EPFG B	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	1020087027425	4/5/2007	101339997	12/4/2013	Issued	RECONFIGURABLE SELF-CALIBRATING VIDEO NOISE REDUCER	MP1083
WO	MP1083WO	PCTUS07008614	4/5/2007			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
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
EP	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	2246MUMNP2008	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

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AmericasActive:9411793.6

PATENT
REEL: 055854 FRAME: 0836

JP	MP1085JPD1	2013-044729	4/18/2007	5582429	7/25/2014	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1085
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Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
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			Expired	Area-Efficient Method To Save DDR Access Bandwidth Requirement On A Digital Video Processor Chip	MP1085
WO	MP1085WO	PCTUS07009583	4/18/2007			Expired	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1085
US	MP1086	11521927	9/14/2006	US8175405 B1	5/8/2012	Issued	Adaptive MPEG Noise Reducer	MP1086
US	MP1086.D1	13460152	4/30/2012	US9008455 B1	4/14/2015	Issued	Adaptive MPEG Noise Reducer	MP1086
US	MP1086D1C1	14572377	12/16/2014			Abandoned	ADAPTIVE MPEG NOISE REDUCER	MP1086
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
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EP	MP1087EPD1	11000786.1	4/18/2007	2337334	4/16/2014	Issued	Shared Memory Multi Video Channel	MP1087

							Display Apparatus and Methods	
IN	MP1087IN	2428MUMNP2008	4/18/2007	281371	3/16/2017	Issued	Shared Memory Multi Video Channel Display Apparatus and Methods	MP1087

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
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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	101335270	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	60793277	4/18/2006			Expired	Adaptive Video Converters	MP1087
DE	MP1087UADE	11000786.1	4/18/2007	602007036185.0	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			Expired	SHARED MEMORY MULTI VIDEO CHANNEL DISPLAY APPARATUS AND METHODS	MP1087
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
CN	MP1088CND1	2011104379422	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			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	MP1088

							APPARATUS AND METHODS	
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

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
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
US	MP1088PR	60793275	4/18/2006			Expired	Dual 3-D Architecture	MP1088
WO	MP1088WO	PCTUS07009580	4/18/2007			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
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			Expired	Motion Compensated Picture Rate Converter	MP1089
TW	MP1089TW	96123121	6/25/2007	TWI432017 B	3/21/2014	Abandoned	Systems And Methods For A Motion Compensated Picture Rate Converter	MP1089
WO	MP1089WO	PCTUS07014609	6/22/2007			Expired	SYSTEMS AND METHODS FOR A MOTION COMPENSATED PICTURE RATE CONVERTER	MP1089
US	MP1356	11928674	10/30/2007	US8055102 B1	11/8/2011	Issued	Local Edge Count Heuristic For Vector Interpolator	MP1356

US	MP1356.C1	13290408	11/7/2011	US8306365 B1	11/6/2012	Issued	Local Edge Count Heuristic For Vector Interpolator	MP1356
US	MP1356PR	60864875	11/8/2006			Expired	Local Edge Count Based Heuristic For Vector Interpolator	MP1356
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
Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
EP	MP1357EP	7839978.9	11/6/2007	2095630	10/10/2012	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
DE	MP1357EPDE	07839978.9	11/6/2007	602007026053.1	10/10/2012	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
FR	MP1357EPFR	7839979	11/6/2007	2095630	10/11/2012	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
GB	MP1357EPGB	7839979	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			Expired	ADVANCED DEINTERLACER FOR HIGH-DEFINITION AND STANDARD-DEFINITION VIDEO	MP1357
TW	MP1357TW	96142262	11/8/2007	I466543	12/21/2014	Issued	Advanced Deinterlacer for High-Definition and Standard-Definition Video	MP1357
WO	MP1357WO	PCTUS07023450	11/6/2007			Expired	ADVANCED DEINTERLACER FOR HIGH-DEFINITION AND STANDARD-DEFINITION VIDEO	MP1357
US	MP1358	11928562	10/30/2007	US8009907 B1	8/30/2011	Issued	Localized, Adaptive Video Contrast Enhancement Using Controlled Histogram Equalization	MP1358
US	MP1358.C1	13194054	7/29/2011	US8265391 B1	9/11/2012	Issued	Localized, Adaptive Video Contrast Enhancement Using Controlled Histogram Equalization	MP1358
US	MP1358PR	60864884	11/8/2006			Expired	Localized, Adaptive Video Contrast Enhancement Using Controlled Histogram Equalization	MP1358

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			Expired	Methods And Systems For Improving Low-Resolution Video	MP1587
TW	MP1587TW	97100393	1/4/2008	I 466547	12/21/2014	Issued	Methods And Systems For Improving Low-Resolution Video	MP1587
WO	MP1587WO	PCTUS08000100	1/4/2008			Expired	Methods And Systems For Improving Low-Resolution Video	MP1587
US	MP1598	11969626	1/4/2008	US9100647 B1	8/4/2015	Issued	Film Grain Generator	MP1598
US	MP1598PR	60883586	1/5/2007			Expired	FILM GRAIN GENERATOR	MP1598
US	MP1598PR2	60883591	1/5/2007			Expired	ADVANCED FILM GRAIN GENERATOR	MP1598
US	MP1598PR3	60883593	1/5/2007			Expired	ADVANCED FILM GRAIN GENERATOR	MP1598

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
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
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			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			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			Expired	MOTION-ADAPTIVE ALTERNATING GAMMA DRIVE FOR A LIQUID CRYSTAL DISPLAY	MP2251
CN	MP2251WOC N	200880117197X	10/20/2008	ZL200880117197.X	6/18/2014	Issued	Motion-Adaptive Alternate Gamma Drive for a Liquid Crystal Display	MP2251
US	MP2312	12276060	11/21/2008	US8948267 B1	2/3/2015	Issued	System And Method Of Video Coding Using Adaptive Macroblock Processing	MP2312
US	MP2312PR	60989691	11/21/2007			Expired	RESOURCE ADAPTIVE MACROBLOCK PROCESSING ORDER FOR H.264/AVC VIDEO ENCODE AND DECODE	MP2312
US	MP2341	12325569	12/1/2008	US8228997 B1	7/24/2012	Issued	Systems And Methods For An Efficient Scan Pattern Search In A Video Encoder Motion Estimation Engine	MP2341

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US	MP2341PR	61007133	12/11/2007			Expired	Method And Apparatus For A Snake Scan Pattern Search In A Video Encoder Motion Estimation Engine	MP2341
US	MP2342	12331879	12/10/2008	US8279936 B1	10/2/2012	Issued	Method And Apparatus For Fractional Pixel Expansion And Motion Vector Selection In A Video Codec	MP2342
US	MP2342PR	61007108	12/11/2007			Expired	Method And Apparatus For Fractional Pixel Expansion And Motion Vector Selection In A Video Codec	MP2342
US	MP2343	12331866	12/10/2008	US8351508 B1	1/8/2013	Issued	Multithreaded Descriptor Based Motion Estimation/Compensation Video Encoding/Decoding	MP2343

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
US	MP2343PR	61007068	12/11/2007			Expired	Multithreaded Descriptor Based Motion Estimation/Compensation Video Encoding/Decoding	MP2343
US	MP2354	12332483	12/11/2008	US8432970 B1	4/30/2013	Issued	Block Type Selection	MP2354
US	MP2354PR	61013848	12/14/2007			Expired	Method And Apparatus For Block Type Selection In A Video Encoder	MP2354
US	MP2436	12400207	3/9/2009	US8233730 B1	7/31/2012	Issued	Filter Bank Based Phase Correlation Architecture For Motion Estimation	MP2436
US	MP2436PR	61046922	4/22/2008			Expired	FILTER BANK BASED PHASE CORRELATION ARCHITECTURE FOR MOTION ESTIMATION	MP2436
US	MP2437	12400220	3/9/2009	US8184200 B1	5/22/2012	Issued	Picture Rate Conversion System For High Definition Video	MP2437
US	MP2437PR	61051782	5/9/2008			Expired	Picture Rate Conversion System For High Definition Video	MP2437
US	MP2456	12400227	3/9/2009	US8477848 B1	7/2/2013	Issued	Picture Rate Conversion System Architecture	MP2456
US	MP2456.C1	13899232	5/21/2013	US9031131 B1	5/12/2015	Issued	Picture Rate Conversion System Architecture	MP2456
US	MP2456PR	61059524	6/6/2008			Expired	Picture Rate Conversion System Architecture	MP2456
US	MP2474	12499932	7/9/2009	US8374240 B1	2/12/2013	Issued	Image Frame Management	MP2474
US	MP2474.C1	13764095	2/11/2013	US8885712 B1	11/11/2014	Issued	Image Frame Management	MP2474
US	MP2474PR	61079637	7/10/2008			Expired	Cadence Handling And Buffer Management	MP2474

US	MP2622	12476930	6/2/2009	US8264615 B2	9/11/2012	Issued	Split Edge Enhancement Architecture	MP2622
US	MP2622.C1	13608694	9/10/2012	US8879002 B2	11/4/2014	Issued	Split Edge Enhancement Architecture	MP2622
US	MP2622PR	61073949	6/19/2008			Expired	Split Edge Enhancement Architecture	MP2622
WO	MP2622WO	PCT/US09/45993	6/2/2009			Published	SPLIT EDGE ENHANCEMENT ARCHITECTURE	MP2622
CN	MP2622WOC N	200980122358.9	6/2/2009	ZL200980122358.9	2/13/2013	Issued	Split Edge Enhancement Architecture	MP2622
JP	MP2622WOJP	2011-511906	6/2/2009	5095860	9/28/2012	Issued	Split Edge Enhancement Architecture	MP2622
KR	MP2622WOK R	10-7028533	6/2/2009	10-1587196	1/14/2016	Issued	SPLIT EDGE ENHANCEMENT ARCHITECTURE	MP2622
US	MP2623	12481482	6/9/2009	US8508662 B1	8/13/2013	Issued	Post De-Interlacer Motion Adaptive Filter For Smoother Moving Edges	MP2623
US	MP2623PR	61073954	6/19/2008			Expired	Post De-Interlacer Motion Adaptive LPF For Smoother Moving Edges	MP2623

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US	MP2623PR2	61091290	8/22/2008			Expired	Post De-Interlacer Motion Adaptive LPF For Smoother Moving Edges	MP2623
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	MP2629PR	61095466	9/9/2008			Expired	Compression Artifact Reduction In Digital Video	MP2629
WO	MP2629WO	PCT/IB09/06932	9/9/2009			Expired	REDUCING DIGITAL IMAGE NOISE	MP2629
CN	MP2629WOC N	980135127.1	9/9/2009	ZL200980135127.1	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	MP2630	12417542	4/2/2009	US8212932 B1	7/3/2012	Issued	Video Noise Estimator	MP2630
US	MP2630.C1	13537193	6/29/2012	US8654258 B1	2/18/2014	Issued	Method And Apparatus For Estimating Noise In A Video Signal	MP2630
US	MP2630PR	61080460	7/14/2008			Expired	Video Noise Estimator	MP2630
US	MP2632	12490639	6/24/2009	US8295607 B1	10/23/2012	Issued	Adaptive Edge Map Threshold	MP2632
US	MP2632PR	61079266	7/9/2008			Expired	Adaptive Edge Map Threshold	MP2632
US	MP2633	12497841	7/6/2009	US8311116 B2	11/13/2012	Issued	Method And Apparatus For Periodic Structure Handling For Motion Compensation	MP2633

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US	MP2633.C1	13650375	10/12/2012	US9210445 B2	12/8/2015	Issued	Method And Apparatus For Periodic Structure Handling For Motion Compensation	MP2633
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			Expired	Periodic Structure Handling For Motion Compensated Frame Converter	MP2633
US	MP2752	12510834	7/28/2009	US8587609 B1	11/19/2013	Issued	Accuracy-Adaptive And Scalable Vector Graphics Rendering	MP2752
US	MP2752PR	61085488	8/1/2008			Expired	High-Quality Accuracy-Adaptive Font Rendering	MP2752
US	MP2760PR	61085729	8/1/2008			Expired	Novel Scalable Vector Graphics Rendering Scheme	MP2752
US	MP2767	12533554	7/31/2009	US8878870 B1	11/4/2014	Issued	Graphic Processing Techniques And Configurations	MP2767
US	MP2767PR	61085761	8/1/2008			Expired	Programmable Rectangular Block Based Overlay Scheme Supporting Arbitrary Shape Objects	MP2767

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
US	MP2766PR	61085756	8/1/2008			Expired	Bandwidth Efficient Data Loading Control Mechanism for Visual Post Processing	MP2767
US	MP2775PR	61085988	8/4/2008			Expired	Z-order Filtering with Embedded Messages	MP2767
US	MP2774	12/511606	7/29/2009			Abandoned	Encoding and Decoding Video Data	MP2774
US	MP2774.C1	14095021	12/3/2013			Abandoned	Encoding And Decoding Video Data	MP2774
US	MP2774.D1	12/511629	7/29/2009	8498342	7/30/2013	Issued	Deblocking Filtering	MP2774
US	MP2774D1C1	13951203	7/25/2013	8902994 B1	12/2/2014	Issued	Deblocking Filtering	MP2774
US	MP2774PR	61085995	8/4/2008			Expired	CONTEXT-BASED ARITHMETIC CODE DECODER (CABAC) FOR H.264 VIDEO DECODING	MP2774
US	MP2746PR	61084422	7/29/2008			Expired	Flexible Search Pattern and Convergence Condition for Fast Motion Estimation	MP2774
US	MP2742PR	61084340	7/29/2008			Expired	Uniform Dequantization	MP2774
US	MP2743PR	61084342	7/29/2008			Expired	Deblocking Filter Operator	MP2774
US	MP2798	12510716	7/28/2009	US8761261 B1	6/24/2014	Issued	Encoding Using Motion Vectors	MP2798
US	MP2798PR	61084522	7/29/2008			Expired	Novel Fast Subpixel Motion Vector Search Algorithm For H.264/AVC	MP2798
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			Expired	Perceptually Lossless Hybrid Video Codec Using Wavelet Transform	MP2842
WO	MP2842WO	PCT/US09/54072	8/17/2009			National Phase (PCT)	SYSTEMS AND METHODS FOR PERCEPTUALLY LOSSLESS VIDEO COMPRESSION	MP2842
US	MP2895	12574078	10/6/2009	US8509552 B1	8/13/2013	Issued	Digital Image Processing Error Concealment Method	MP2436
US	MP2895.C1	13951533	7/26/2013	US8787696 B1	7/22/2014	Issued	Method And Apparatus For Replacing A Block Of Pixels In A Digital Image Frame To Conceal An Error Associated With The Block Of Pixels	MP2895
US	MP2895PR	61165607	4/1/2009			Expired	IN-PAINTING BASED OCCLUSION HANDLING FOR MOTION COMPENSATED INTERPOLATED FRAMES	MP2895
US	MP2938	12615594	11/10/2009	US9007395 B2	4/14/2015	Issued	Bit Resolution Enhancement	MP2938
US	MP2938PR	61118735	12/1/2008			Expired	BIT RESOLUTION ENHANCEMENT USING ADAPTIVE FILTER WITH IMPROVED CONTOUR SEGMENTATION	MP2938
Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
WO	MP2938WO	PCT/US09/63827	11/10/2009			Expired	BIT RESOLUTION ENHANCEMENT	MP2938
CN	MP2938WOC N	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	5640253	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
US	MP2965PR	61165612	4/1/2009			Expired	CADENCE DETECTION IN PROGRESSIVE VIDEO	MP2965
WO	MP2965WO	PCT/US10/29003	3/29/2010			Expired	CADENCE DETECTION IN PROGRESSIVE VIDEO	MP2965
CN	MP2965WOC N	201080014184.7	3/29/2010	ZL 2010800141847	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	2012-503545	3/29/2010	5709319	3/13/2015	Issued	Cadence Detection in Progressive Video	MP2965
DE	MP2965WUDE	10725536.6	3/20/2010	602010027566.3	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	MP2965WUG B	10725536.6	3/29/2010	2415259	9/16/2015	Issued	Cadence Detection in Progressive Video	MP2965
US	MP2976	12612836	11/5/2009	US8363729 B1	1/29/2013	Issued	Visual Data Compression Algorithm With Parallel Processing Capability	MP2976
US	MP2976.D1	13752265	1/28/2013	US9036711 B1	5/19/2015	Issued	Visual Data Compression Algorithm With	MP2976

							Parallel Processing Capability	
US	MP2976PR	61112027	6/11/2008			Expired	VISUAL DATA COMPRESSION ALGORITHM WITH PARALLEL PROCESSING CAPABILITY	MP2976
US	MP2977PR	61112031	6/11/2008			Expired	BIDIRECTIONAL CODING AND DATA PACKING FOR PARALLEL VIDEO DECODING	MP2976
US	MP2978	12613830	11/6/2009	US7982641 B1	7/19/2011	Issued	Context-Based Adaptive Binary Arithmetic Coding Engine	MP2978
US	MP2978.C1	13185354	7/18/2011	US8711019 B1	4/29/2014	Issued	Context-Based Adaptive Binary Arithmetic Coding Engine	MP2978
US	MP2978PR	61112043	11/6/2008			Expired	NOVEL CABAC ENCODER ENGINE	MP2978
US	MP3037	12626161	11/25/2009	8548816	10/1/2013	Issued	Efficient Scalefactor Estimation In Advanced Audio Coding And MP3 Encoder	MP3037
US	MP3037.C1	14029240	9/17/2013	US8799002 B1	8/5/2014	Issued	Efficient Scalefactor Estimation In Advanced Audio Coding And MP3 Encoder	MP3037

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
US	MP3037.I1	12780634	5/14/2010	US8346547 B1	1/1/2013	Issued	ENCODER QUANTIZATION ARCHITECTURE FOR ADVANCED AUDIO CODING	MP3037
US	MP3037I1C1	13721625	12/20/2012	US8595003 B1	11/26/2013	Issued	Encoder Quantization Architecture For Advanced Audio Coding	MP3037
US	MP3037PR	61118811	12/1/2008			Expired	EFFICIENT SCALEFACTOR ESTIMATION ALGORITHM IN AAC LC ENCODER	MP3037
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			Expired	AUTOMATIC ADJUSTMENTS FOR VIDEO POST-PROCESSOR BASED ON ESTIMATED QUALITY OF INTERNET VIDEO CONTENT	MP3223

WO	MP3223WO	PCTUS1031911	4/21/2010			National Phase (PCT)	Automatic Adjustments for Video Post-Processor Based On Estimated Quality Of Internet Video Content	MP3223
CN	MP3223WOC N	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	12815884	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			Expired	VIDEO THROUGH ADAPTIVE COLOR ENHANCEMENT	MP3260
WO	MP3260WO	PCTUS10038608	6/15/2010			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

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
US	MP3264PR	61180022	5/20/2009			Expired	METHOD TO CONTROL LED BACKLIGHT FOR LOCAL DIMMING	MP3264
CN	MP3264WCN A	2015100846467	5/19/2010			Allowed	LIQUID CRYSTAL DISPLAY BACKLIGHT CONTROL	MP3264
WO	MP3264WO	PCTUS1035425	5/19/2010			Expired	Liquid Crystal Display Backlight Control	MP3264
CN	MP3264WOC N	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	MP3264WOK R	10-2011-7026228	5/19/2010			Filed	LIQUID CRYSTAL DISPLAY BACKLIGHT CONTROL	
US	MP3541	13090674	4/20/2011	US9369772 B1	6/14/2016	Issued	Dual PID Controller Based Bit Allocation And Rate Control For Video Coding	MP3541
US	MP3541PR	61326526	4/21/2010			Expired	DUAL PID CONTROLLER BASED BIT ALLOCATION AND	MP3541

							RATE CONTROL FOR VIDEO CODING	
US	MP3675	13035322	2/25/2011	US9275295 B1	3/1/2016	Issued	NOISE ESTIMATION BASED ON A CHARACTERISTIC OF DIGITAL VIDEO	MP3675
US	MP3675.C1	15013928	2/2/2016			Pending	NOISE ESTIMATION IN DIGITAL VIDEO	MP3675
US	MP3675PR	61368488	7/28/2010			Expired	NOISE ESTIMATION IN DIGITAL VIDEO	MP3675
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			Expired	BLOCK NOISE DETECTION IN DIGITAL VIDEO	MP3702
TW	MP3702TW	100104627	2/11/2011	I511545	12/1/2015	Issued	Block Noise Detection In Digital Video	MP3702
WO	MP3702WO	PCTIB11000413	2/9/2011			Expired	BLOCK COMPRESSION ARTIFACT DETECTION IN DIGITAL VIDEO SIGNALS	MP3702
CN	MP3702WOC N	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
US	MP3809	13413992	3/7/2012	US8902359 B1	12/2/2014	Issued	Processor Implemented Systems And Methods For Handling Of Occlusion For Frame Rate Upconversion	MP3809
US	MP3809PR	61450523	3/8/2011			Expired	ON HANDLING OF OCCLUSION FOR FRAME RATE UPCONVERSION USING VIDEO INPAINTING	MP3809

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
US	MP3971	13408180	2/29/2012	US8581987 B1	11/12/2013	Issued	Systems And Methods For Evaluating Video Quality	MP3971
US	MP3971PR	61454900	3/21/2011			Expired	VIDEO SEQUENCE QUALITY STABILITY JUDGMENT ALGORITHM-WEIGHTED FLUCTUATION ALGORITHM	MP3971
US	MP4058	13425914	3/21/2012	US8619199 B1	12/31/2013	Issued	Method And Apparatus For Performing Automatic Gain Control To Track Signal Variations In A Wireless Communication Signal	MP4058
US	MP4058PR	61467326	3/24/2011			Expired	Method Of Automatic Gain Control For Tracking Fast Signal Variations In Television Receivers	MP4058
US	MP4058PR2	61546362	10/12/2011			Expired	Method Of Automatic Gain Control For Tracking Fast Signal Variations In Television Receivers	MP4058

US	MP4196	13554042	7/20/2012	US8913184 B1	12/16/2014	Issued	Systems And Methods For Determining Video Field Sharpness	MP4196
US	MP4196PR	61510163	7/21/2011			Expired	Original Video Field Finder And Its Applications	MP4196
US	MP4288	13653259	10/16/2012	US8692933 B1	4/8/2014	Issued	Method And Apparatus For Buffering Anchor Frames In Motion Compensation Systems	MP4288
US	MP4288.C1	14223479	3/24/2014	US8922712 B1	12/30/2014	Issued	Method And Apparatus For Buffering Anchor Frames In Motion Compensation Systems	MP4288
US	MP4288PR	61549372	10/20/2011			Expired	Strategies To Reduce Size Of On Chip Memories	MP4288
US	MP4289	13658662	10/23/2012	US8692935 B1	4/8/2014	Issued	Video Interpolation Mode Based On Merit	MP4289
US	MP4289PR	61554867	11/2/2011			In Prep	Automatic Detection of Performance of FRC State Machine	MP4289
US	MP4417	13721764	12/20/2012	US9197891 B1	11/24/2015	Issued	Systems And Methods For Periodic Structure Handling For Motion Compensation	MP4417
US	MP4417PR	61582472	1/2/2012			Expired	Handling Periodic Structures	MP4417
US	MP4423	13722700	12/20/2012	US9042681 B1	5/26/2015	Issued	Interpolated Video Error Concealment	MP4423
US	MP4423PR	61582473	1/2/2012			Expired	Local Error Concealment	MP4423
US	MP4438	13722614	12/20/2012	9247243	1/26/2016	Issued	INTERPOLATED VIDEO ERROR CONCEALMENT	MP4438
US	MP4438PR	61582475	1/2/2012			Expired	Global Error Concealment	MP4438

Country	MP Number	Application Number	Filing Date	Patent Number	Issue Date	Status	Title	MP Family
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			Expired	METHOD AND APPARATUS FOR IMPLEMENTING A PROTECTED AV CAPTURE	MP4605
US	MP4605PR2	61702490	9/18/2012			Expired	METHOD AND APPARATUS FOR IMPLEMENTING A PROTECTED AV CAPTURE	MP4605
WO	MP4605WO	PCT/US13/26078	2/14/2013			Expired	METHOD AND APPARATUS FOR PROVIDING AUDIO OR VIDEO CAPTURE FUNCTIONALITY ACCORDING TO A SECURITY POLICY	MP4605

US	MP6069	15040213	2/10/2016			Filed	SYSTEM AND METHOD FOR ADAPTIVE CONTRAST ENHANCEMENT	MP6069
US	MP6069PR	62115048	2/11/2015			Filed	ENHANCED ADAPTIVE CONTRAST ENHANCEMENT (ACE)	MP6069
US	MP6081	14966897	12/11/2015			Filed	METHOD AND DEVICE FOR REDUCING VIDEO LATENCY	MP6081
US	MP6081PR	62114781	2/11/2015			Filed	VIDEO LATENCY REDUCTION	MP6081
US	MP6345	15135931	4/22/2016			Filed	Motion Adaptive De-Interlacing Advanced Film Mode Detection	MP6345
US	MP6345PR	62152590	4/24/2015			Filed	Motion Adaptive De-Interlacing (MADI)	MP6345
US	MP6346PR	62152600	4/24/2015			Expired	Advanced Film Mode Detection (AFD) and Cadence Processing	MP6345
US	MP5621	14613638	2/4/2015	US9438820 B1	9/6/2016	Issued	Systems and Methods for Processing Composite Video Signals	MP5621
US	MP5621PR	61935600	2/4/2014			Expired	Method Used For CVBS Signal Sampling Rate Converter	MP5621
US	MP2744	12511238	7/29/2009	US8477146B2	7/2/2013	Issued	Processing Rasterized Data	MP2744
US	MP2744PR	61084406	7/29/2008	Expired		Expired	Two-Dimensional Tiling Structure For Video Frame	MP2744
WO	MP2744WO	PCT/US09/52089	7/29/2009			Expired	PROCESSING RASTERIZED DATA	MP2744
US	MP2747	12511290	7/29/2009	US8811496B1	8/19/2014	Issued	Decoding Image Data	MP2747
US	MP2747.D1	12511425	7/29/2009	US 8494059 B1	7/23/2013	Issued	BUFFER CONTROLLER	MP2747
US	MP2747PR	61084518	7/29/2008			Expired	Speculative Dual-Command Variable Length Decoding Engine With Backtracking	MP2747

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US	MP2739PR	61084332	7/29/2008			Expired	Fast Access of DRAM by CPU VIA Hardware Assisted Write Buffering & Read Prefetching Channels	MP2747
US	MP2755	12512902	7/30/2009	US8645400B1	2/4/2014	Issued	Flexible Bit Field Search Method	MP2755
US	MP2755.C1	14171115	2/3/2014	US9165059 B1	10/20/2015	Issued	FLEXIBLE BIT FIELD SEARCH METHOD	MP2755
US	MP2755PR	61085498	8/1/2008			Expired	Flexible Bit Field Search Method	MP2755
US	MP2761	12512963	7/30/2009	US8427497B1	4/23/2013	Issued	Methods And Apparatuses For Processing Cached Image Data	MP2761
US	MP2761PR	61085708	8/1/2008			Expired	Color Pattern Caching Mechanism For Efficient 2D Graphics	MP2761
US	MP2761.C1	13866344	4/19/2013	US8797343B1	8/5/2014	Issued	METHODS AND APPARATUSES FOR PROCESSING CACHED IMAGE DATA	MP2761

US	MP2776	12534632	8/3/2009	US8363969B1	1/29/2013	Issued	Systems And Methods For Image Coding And Processing	MP2776
US	MP2776PR	61085977	8/4/2008			Expired	LAYERED IMAGE CODING SCHEME FOR BITRATE CONSTRAINED APPLICATIONS	MP2776
US	MP2776.C1	13734273	1/4/2013	US8639049B1	1/28/2014	Issued	SYSTEMS AND METHODS FOR IMAGE CODING AND PROCESSING	MP2776
US	MP2753PR	61085491	8/1/2008			Expired	Unified Memory Traffic Reduction Mechanism for SoC	MP2776
US	MP2754PR	61085494	8/1/2008			Expired	Novel Visual Data Compression Algorithm	MP2776
JP	MP3524WOJP	2012-549111	1/14/2011	5751679	5/29/2015	Issued	Use of Film Grain to Mask Compression Artifacts	MP3524
CN	MP3524WOC N	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			Abandoned	USE OF FILM GRAIN TO MASK COMPRESSION ARTIFACTS	MP3524
US	MP3524PR	61295340	1/15/2010	Expired		Expired	USE OF FILM GRAIN TO MASK COMPRESSION ARTIFACTS	MP3524
WO	MP3524WO	PCTUS1121299	1/14/2011	Expired		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	Expired		Expired	ADAPTIVE SCALER	MP5070
WO	MP5070WO	PCT/US13/74103	12/10/2013			Expired	SYSTEMS AND METHODS FOR ADAPTIVE SCALING OF DIGITAL IMAGES	MP5070
US	MP5071	14134285	12/19/2013	US9135723B1	9/15/2015	Issued	Efficient Visually Lossless Compression	MP5071
US	MP5071PR	61739400	12/19/2012			Expired	EFFICIENT VISUALLY LOSSLESS COMPRESSION	MP5071

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US	MP5102	14250710	4/11/2014			Pending	Systems And Methods For Time-Scale Modification Of Audio Signals	MP5102
US	MP5102PR	61824112	5/16/2013			Expired	Dynamic Search Method For Pitch Detection In Time-Scale Modification Of Speech	MP5102
US	MP5103	14220528	3/20/2014	US9241093	1/19/2016	Issued	GUIDED FILTER-BASED DETAIL ENHANCEMENT	MP5103
CN	MP5103WOC N	2014800172608	3/20/2014			Pending	GUIDED FILTER-BASED DETAIL ENHANCEMENT	MP5103

EP	MP5103WOEP	14769741.1	3/18/2014			Pending	GUIDED FILTER-BASED DETAIL ENHANCEMENT	MP5104
JP	MP5103WOJP	2016-50439	3/22/2013			Pending	GUIDED FILTER-BASED DETAIL ENHANCEMENT	MP5105
KR	MP5103WOK R	10-2015-7030412	3/20/2014			Pending	Guided Filter-Based Detail Enhancement	MP5103
US	MP5103PR	61804522	3/22/2013	Expired		Expired	Guided Filter Based Detail Enhancement	MP5103
WO	MP5103WO	PCT/US14/31311	3/20/2014			Expired	GUIDED FILTER-BASED DETAIL ENHANCEMENT	MP5103