

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT6552013

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
THOMSON LICENSING	01/09/2018
RECEIVING PARTY DATA	
Name:	THOMSON LICENSING DTV
Street Address:	1 RUE JEANNE D'ARC
City:	ISSY-LES-MOULINEAUX
State/Country:	FRANCE
Postal Code:	92130
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17154283
CORRESPONDENCE DATA	
Fax Number:	
<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:	6094365071
Email:	brian.pritchett@interdigital.com
Correspondent Name:	RONALD KOLCZYNSKI, INTERDIGITAL
Address Line 1:	200 BELLEVUE PARKWAY, SUITE 300
Address Line 4:	WILMINGTON, DELAWARE 19809
NAME OF SUBMITTER:	RONALD KOLCZYNSKI
SIGNATURE:	/RONALD KOLCZYNSKI/
DATE SIGNED:	02/15/2021
Total Attachments: 25	
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ASSIGNMENT

WHEREAS, **THOMSON LICENSING**, a corporation organized and existing under the laws of France and having offices at 1 rue Jeanne d'Arc, 92130 Issy-les Moulineaux, France, and **THOMSON LICENSING DTV**, a corporation organized and existing under the laws of France and having offices at 1 rue Jeanne d'Arc, 92130 Issy-les Moulineaux, France, entered into an agreement calling for the assignment of certain inventions, to **THOMSON LICENSING DTV**;

NOW THEREFORE, **THOMSON LICENSING**, in consideration of the mutual covenants of said agreement, does hereby assign to **THOMSON LICENSING DTV**, its successors and assigns, **THOMSON LICENSING**'s entire right, title and interest, for all countries and states, in and to, and including any right to claim priority of:

US Application No. 11/698460 filed January 26, 2007

Title: AUTHENTICATION OF DATA IN A DIGITAL TRANSMISSION SYSTEM

Docket Number: CPT98003-US-CNT[2]

US Application No. 14/565007 filed December 9, 2014

Title: LAST AUDIO/VIDEO SEQUENCE IN LOOP MODE ON A DIGITAL SYSTEM

Docket Number: PF020045-US-CNT

US Application No. 10/523182 filed July 21, 2003

Title: ANTENNA

Docket No. PF020098-US-PCT

US Application No. 10/468881 filed February 28, 2002

Title: FEATURE TO NARROW DSS KEYWORD SEARCH

Docket No. PU010042-US-PCT

US Application No. 12/189574 filed August 11, 2008

Title: METHOD AND SYSTEM FOR CONTROLLING AND AUDITING CONTENT/SERVICES

Docket No. PU050099-US-DIV[1]

US Application No. 12/189588 filed August 11, 2008

Title: METHOD AND SYSTEM FOR CONTROLLING AND AUDITING CONTENT/SERVICES

Docket No. PU050099-US-DIV[2]

US Application No. 09/297415 filed April 29, 1999

Title: SEPARATE POWER SUPPLIES FOR STANDBY OPERATION

Docket No. RCA88471-US-NP

US Application No. 11/014079 filed December 15, 2004

Title: LOW NOISE ENCODING AND DECODING METHOD

Docket No. RCA88692-US-CNT[1]

US Application No. 09/581147 filed June 8, 2000

Title: PEAK TO PEAK SIGNAL DETECTOR FOR AUDIO SYSTEM

Docket No. RCA88835-US-NP

US Application No. 12/349503 filed January 6, 2009
Title: ADVERTISING IN CHANNEL SURF LIST
Docket No. RCA89532-US-DIV

US Application No. 11/525376 filed September 22, 2006
Title: ISOLATE 12C BUS FROM TERRESTRIAL TUNER TO IMPROVE
PERFORMANCE OF HDTV DEMODULATION
Docket No. RCA89647-US-DIV[1]

US Application No. 11/893256 filed August 15, 2007
Title: ISOLATE 12C BUS FROM TERRESTRIAL TUNER TO IMPROVE
PERFORMANCE OF HDTV DEMODULATION
Docket No. RCA89647-US-DIV[2]

US Application No. 10/146152 filed May 14, 2002
Title: VIDEO ENCODING METHOD AND APPARATUS
Docket No. RCA89717-US-DIV[1]

US Application No. 10/145221 filed May 14, 2002
Title: VIDEO ENCODING METHOD AND APPARATUS
Docket No. RCA89717-US-DIV[2]

US Application No. 13/519577 filed December 29, 2009
Title: AN EFFECTIVE AND LOW COMPLEXITY CHANNEL ESTIMATION
SCHEME FOR MOBILE DVB-T/H RECEIVER
Docket No. PA090059-US-PCT

US Application No. 13/575122 filed January 25, 2010
Title: TEXTURE BASED ADAPTIVE INTER-COLOR PREDICTION
APPROACH TO INTRA FRAME CODING FOR RGB 4:4:4 FORMAT
Docket No. PA100001-US-PCT

US Application No. 14/345356 filed September 22, 2011
Title: ADVANCE INTERACTION IN IPTV SYSTEM
Docket No. PA110018-US-PCT

US Application No. 14/128549 filed June 24, 2011
Title: SYSTEM AND METHOD OF VIDEO ON DEMAND SERVICE FOR BOTH
2D AND 3D
Docket No. PA110021-US-PCT

US Application No. 12/592787 filed December 3, 2009
Title: FILM MODE DETECTION BASED ON HISTOGRAM CALCULATION
Docket No. PF080145-US-NP

US Application No. 13/640476 filed April 8, 2011
Title: Observer Color Vision Calibration
Docket No. PF100027-US-PCT

US Application No. 13/651554 filed October 15, 2012
Title: Memory friendly keyframe extractor
Docket No. PF110029-US-NP

US Application No. 14/345272 filed September 18, 2012
Title: 3D devices management in a home network environment
Docket No. PF110063-US-PCT

US Application No. 14/372018 filed October 8, 2012
Title: Photo-consistency metric for multi-view mesh texturing
Docket No. PF110195-US-PCT

US Application No. 14/398571 filed April 24, 2013
Title: DYNAMIC MODIFICATION OF MANIFEST IN ADAPTIVE
STREAMING DEPENDING ON AVAILABLE BANDWIDTH
Docket No. PF120014-US-PCT

US Application No. 14/659782 filed March 17, 2015
Title: METHOD OF FILM GRAIN SIMULATION IMPLEMENTATION FOR
CONSUMER HD DVD PLAYERS
Docket No. PU050224-US-CNT

US Application No. 14/308525 filed June 18, 2014
Title: REDUCED RESOLUTION UPDATE MODE FOR MULTI-VIEW VIDEO
CODING
Docket No. PU060006-US-DIV

US Application No. 13/138269 filed January 30, 2009
Title: RICH INTERACTION BY USING METADATA, FACE RECOGNITION
AND GESTURE RECOGNITION
Docket No. PU080171-US-PCT

US Application No. 13/148819 filed February 9, 2010
Title: SIGNAL GENERATION FOR LED/LCD-BASED HIGH DYNAMIC
RANGE DISPLAYS
Docket No. PU090025-US-PCT

US Application No. 13/501535 filed October 4, 2010
Title: ADAPTIVE CODING METHOD OF MOTION INFORMATION
Docket No. PU090141-US-PCT

US Application No. 13/579049 filed December 10, 2010
Title: SMART CATCH-UP TV (CH-WP2-006)
Docket No. PU100049-US-PCT

US Application No. 14/721771 filed May 26, 2015
Title: AUTOMATIC, PERSONALIZED VIRTUAL CHANNEL FOR TV
Docket No. PU100053-US-CNT

US Application No. 13/580389 filed February 25, 2011
Title: SHIFT PROGRAM GUIDE TO COMPENSATE FOR PROGRAM PAUSE
Docket No. PU100057-US-PCT

US Application No. 13/634663 filed March 3, 2011
Title: IMPLICIT ADAPTIVE MOTION VECTOR PREDICTOR SELECTION
FOR VIDEO COMPRESSION
Docket No. PU100063-US-PCT

corporations organized and existing under the laws of France and that **Patricia A. Verlangieri**, who signed the foregoing Assignment this day, is/are fully authorized to execute the document on behalf of THOMSON LICENSING and THOMSON LICENSING DTV, respectively, for this purpose.

Signed and sealed this 9th day of January 2018.

Wendy J. Cianciola
Notary Public



Rev. 07/2015

EXHIBIT A

Recordable Confirmatory Patent Assignment

THIS PATENT ASSIGNMENT (“Assignment”), effective as of July 30, 2018, is made by and between THOMSON LICENSING DTV SAS, *société par actions simplifiée* organized under the laws of the French Republic (hereinafter “**ASSIGNOR**”); and INTERDIGITAL MADISON PATENT HOLDINGS, SAS, a *société par actions simplifiée* organized under the laws of the French Republic (hereinafter “**ASSIGNEE**”).

WHEREAS:

A **ASSIGNOR** is the sole owner of the patents and/or patent applications listed in the attached Appendix A (hereinafter “the **PATENTS**”); and

B **ASSIGNEE** is desirous of acquiring all of **ASSIGNOR**’s right, title and interest in and to the **PATENTS**.

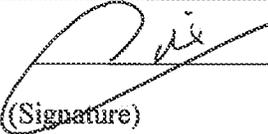
NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, **ASSIGNOR** has sold, assigned and transferred, and does hereby confirm the sale, assignment and transfer to **ASSIGNEE** of all of **ASSIGNOR**’s right, title and interest in and to (i) the **PATENTS**; (ii) all patents and patent applications linked to the **PATENTS** through one or more claims of priority pursuant to 35 U.S.C. §§ 120 or 119(e) (the equivalent laws or regulation of any other patent authority) or that are, or are entitled to be, foreign counterparts, reissues, divisionals, renewals, revivals, reissues, reexaminations, extensions, continuations or continuations-in-part with respect to any other patent or patent applications in such set of the **PATENTS**, and (iii) the right to sue for and recover damages for any past, present or future infringement of the **PATENTS**, the same to be held and enjoyed by **ASSIGNEE** for its own use and enjoyment, and for the use and enjoyment of its successors, assigns and other legal representatives, to the end of the term or terms thereof as fully and entirely as the same would have been held and enjoyed by **ASSIGNOR**, if this assignment and sale had not been made.

IN WITNESS WHEREOF, **ASSIGNOR** has caused this Recordable Patent Assignment to be signed by its duly appointed officer having full authority in the circumstances; and **ASSIGNEE** has caused this Recordable Patent Assignment to be signed by its duly appointed officer having full authority in the circumstances.

(Signatures on the next page.)

SIGNED for and on behalf of

THOMSON LICENSING DTV SAS

By  on 07/22/18
(Signature) (Date)

Adrien Cadieux, Duly authorized
(Print Name and Title)

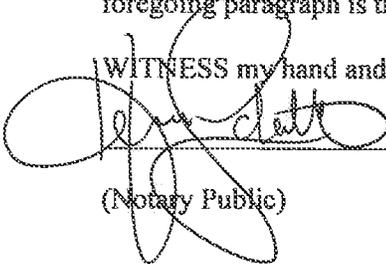
State of New York

County of New York

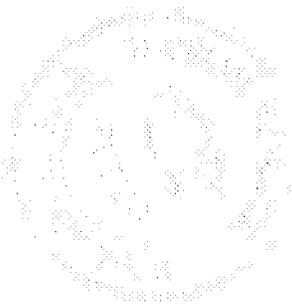
On this 23rd day of New York, 2018 before me,
Adrien Cadieux, personally appeared
_____, who proved to me on the basis of satisfactory
evidence to be the person whose name is subscribed to the instrument and acknowledged to me
that he/she executed the same in his/her authorized capacity and that by his/her signature on the
instrument the person, or the entity upon behalf of which the person acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of New York that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.


(Notary Public)

HANNAH SCHULTZ
Notary Public, State of New York
No. 01506363003
Qualified in New York County
Commission Expires August 21, 2021



SIGNED for and on behalf of

INTERDIGITAL MADISON PATENT HOLDINGS, SAS

By T. Berghuis on _____
(Signature) (Date)

Timothy J. Berghuis, President
(Print Name and Title)

State of Delaware

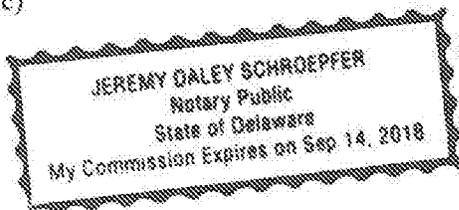
County of New Castle

On this _____ day of _____, 2018 before me,
Jeremy Daley Schroeffer, personally appeared
Timothy J. Berghuis, who proved to me on the basis of satisfactory
evidence to be the person whose name is subscribed to the instrument and acknowledged to me
that he/she executed the same in his/her authorized capacity and that by his/her signature on the
instrument the person, or the entity upon behalf of which the person acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Delaware that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(Notary Public)



[Signature Page to the Madison PALA Recordable Confirmatory Patent Assignment]

<u>Case Reference</u>	<u>Acquired Madison Patent vs. Organic</u>	<u>Country</u>	<u>Filing Date</u>	<u>Serial Number</u>	<u>Issue Date</u>	<u>Patent Number</u>
PU100064-IN-PCT	organic	IN	3/2/2011	7135/DELNP/12		
PU100064-JP-PCT	organic	JP	3/2/2011	2012-557038	10/28/2016	6029984
PU100064-KR-PCT	organic	KR	3/2/2011	10-2012-7026306	12/12/2017	10-1810263
PU100064-NL-EPT	organic	NL	3/2/2011	11710054.5	5/9/2018	2545711
PU100064-US-PCT	organic	US	3/2/2011	13/581875		
PU100064-ZA-PCT	organic	ZA	3/2/2011	2012/06433	10/30/2013	2012/06433
PU100068-CN-PCT	organic	CN	3/4/2011	201180013065.4	10/26/2016	ZL201180013065.4
PU100068-EP-EPT	organic	EP	3/4/2011	11709233.8		
PU100068-JP-PCT	organic	JP	3/4/2011	2012-557041	4/1/2016	5908848
PU100068-KR-PCT	organic	KR	3/4/2011	10-2012-7026424	6/27/2017	10-1753273
PU100068-US-PCT	organic	US	3/4/2011	13/583338	3/1/2016	9277245
PU100072-CN-PCT	organic	CN	4/1/2011	201180017846.0	1/20/2016	ZL201180017846.0
PU100072-EP-EPT	organic	EP	4/1/2011	11717353.4		
PU100072-JP-PCT	organic	JP	4/1/2011	2013-502567	1/6/2017	6069188
PU100072-KR-PCT	organic	KR	4/1/2011	10-2012-7028670	12/21/2017	10-1813299
PU100072-US-PCT	organic	US	4/1/2011	13/635007	6/13/2017	9681113
PU100073-CN-PCT	organic	CN	3/22/2011	201180015635.3	1/20/2016	ZL201180015635.3
PU100073-KR-PCT	organic	KR	3/22/2011	10-2012-7027416		
PU100081-CN-PCT	organic	CN	3/31/2011	201180025548.6	4/17/2018	ZL201180025548.6
PU100081-EP-EPT	organic	EP	3/31/2011	11763182.0		
PU100081-JP-DIV	organic	JP	4/1/2016	2016-074432	9/1/2017	6200544
PU100081-JP-PCT	organic	JP	3/31/2011	2013-502566	1/27/2017	6080756
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PU100081-US-PCT	organic	US	3/31/2011	13/634200		
PU100086-US-PCT	organic	US	10/15/2010	13/876031	12/8/2015	9210272
PU100090-US-PCT	organic	US	11/9/2010	13/883632		
PU100098-BR-PCT	organic	BR	4/29/2011	BR1120120274376		
PU100098-CN-PCT	organic	CN	4/29/2011	201180021911.7	8/3/2016	ZL201180021911.7
PU100098-EP-EPT	organic	EP	4/29/2011	11777687.2		
PU100098-JP-PCT	organic	JP	4/29/2011	2013-507950	5/20/2016	5937572
PU100098-KR-PCT	organic	KR	4/29/2011	10-2012-7031381	3/23/2018	10-1843592
PU100098-US-PCT	organic	US	4/29/2011	13/635056		
PU100102-CN-PCT	organic	CN	5/11/2011	201180023362.7	8/17/2016	ZL201180023362.7
PU100102-EP-EPT	organic	EP	5/11/2011	11725543.0		
PU100102-JP-DIV	organic	JP	8/21/2015	2015-163333	3/3/2017	6100847
PU100102-JP-DIV[2]	organic	JP	2/23/2017	2017-032207	6/15/2018	6351773
PU100102-JP-DIV[3]	organic	JP	6/5/2018	2018-107650		
PU100102-JP-PCT	organic	JP	5/11/2011	2013-510077	10/2/2015	5812448

<u>Case Reference</u>	<u>Acquired Madison Patent vs. Organic</u>	<u>Country</u>	<u>Filing Date</u>	<u>Serial Number</u>	<u>Issue Date</u>	<u>Patent Number</u>
PU100102-KR-PCT	organic	KR	5/11/2011	10-2012-7029338		
PU100102-US-CNT	organic	US	9/20/2017	15/709965		
PU100102-US-PCT	organic	US	5/11/2011	13/696852	10/17/2017	9793921
PU100104-CN-PCT	organic	CN	5/17/2010	201080066863.9	8/17/2016	ZL201080066863.9
PU100104-DE-EPT	organic	DE	5/17/2010	10725302.3	7/22/2015	602010026046.1
PU100104-FR-EPT	organic	FR	5/17/2010	10725302.3	7/22/2015	2572358
PU100104-KR-PCT	organic	KR	5/17/2010	10-2012-7029837	6/29/2017	10-1754201
PU100105-BR-PCT	organic	BR	5/18/2010	BR1120120286420		
PU100105-JP-PCT	organic	JP	5/18/2010	2013-511130	12/25/2015	5860037
PU100105-KR-PCT	organic	KR	5/18/2010	10-2012-7030108	11/28/2016	10-1682267
PU100105-US-PCT	organic	US	5/18/2010	13/639979	11/28/2017	9832417
PU100114-CN-PCT	organic	CN	9/17/2010	201080070212.7	4/5/2017	ZL201080070212.7
PU100114-JP-PCT	organic	JP	9/17/2010	2013-529109	5/15/2015	5745063
PU100114-KR-PCT	organic	KR	9/17/2010	10-2013-7009706	11/24/2016	10-1681176
PU100114-US-PCT	organic	US	9/17/2010	13/824344	9/6/2016	9438876
PU100117-US-DIV	organic	US	10/18/2016	15/296252		
PU100117-US-PCT	organic	US	5/11/2011	13/696847	11/22/2016	9503743
PU100118-EP-EPT	organic	EP	2/15/2012	12707646.1		
PU100118-US-PCT	organic	US	2/15/2012	14/378450		
PU100129-US-PCT	organic	US	6/6/2011	13/700882	4/12/2016	9313465
PU100135-CN-PCT	organic	CN	6/3/2011	201180038012.8	11/9/2016	ZL201180038012.8
PU100135-EP-EPT	organic	EP	6/3/2011	11790440.9		
PU100135-JP-PCT	organic	JP	6/3/2011	2013-513358	3/4/2016	5894149
PU100135-KR-PCT	organic	KR	6/3/2011	10-2012-7034385	12/15/2017	10-1811468
PU100135-US-PCT	organic	US	6/3/2011	13/701347		
PU100139-EP-EPT	organic	EP	6/23/2011	11728751.6		
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PU100139-KR-PCT	organic	KR	6/23/2011	10-2012-7034008	2/8/2018	10-1829345
PU100139-TW-NP	organic	TW	6/28/2011	100122707	4/1/2016	1528781
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PU100142-CN-PCT	organic	CN	8/3/2010	201080034937.0	5/20/2015	ZL201080034937.0
PU100142-EP-EPT	organic	EP	8/3/2010	10744779.9		
PU100142-JP-PCT	organic	JP	8/3/2010	2012-523695	11/6/2015	5833551
PU100142-KR-PCT	organic	KR	8/3/2010	10-2012-7003247	2/7/2017	10-1706407
PU100142-US-CNT	organic	US	3/26/2015	14/669479	3/14/2017	9596518
PU100142-US-PCT	organic	US	8/3/2010	13/387199	4/14/2015	9009758
PU100159-US-PCT	organic	US	8/19/2010	13/816522	8/9/2016	9412335
PU100160-CN-PCT	organic	CN	7/19/2010	201080068129.6		
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