PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5412153

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SONIC IP, INC.	02/12/2018

RECEIVING PARTY DATA

Name:	DIVX CF HOLDINGS LLC
Street Address:	1345 AVENUE OF THE AMERICAS
Internal Address:	46TH FLOOR
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10105

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16136170

CORRESPONDENCE DATA

Fax Number: (949)852-0004

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Phone: 9498520000
Email: pair@kppb.com
Correspondent Name: KPPB LLP
Address Line 1: 2190 S. TOWNE CENTRE PLACE
Address Line 2: SUITE 300
Address Line 4: ANAHEIM, CALIFORNIA 92806

ATTORNEY DOCKET NUMBER:	D1-01940.CON4
NAME OF SUBMITTER:	TESS LANGSETH-DEPAOLIS
SIGNATURE:	/Tess Langseth-DePaolis/
DATE SIGNED:	03/08/2019

Total Attachments: 17
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RECORDATION FORM COVER SHEET
PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)	2. Name and address of receiving party(ies)
Sonic IP, Inc.	Name: DivX CF Holdings LLC
	Internal Address: 46th Floor
Additional name(s) of conveying party(ies) attached? ☐ Yes ■ No	Street Address: 1345 Avenue of the Americas

3. Nature of conveyance/Execution Date(s):

Execution Date(s) 02/12/2018

■ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other_____

City: New York

State: NY

Country: US   Zip: 10105

Additional name(s) & address(es) attached? ☐ Yes ■ No

4. Application or patent number(s): ☐ This document serves as an Oath/Declaration (37 CFR 1.63).

A. Patent Application No.(s)

16/136,170

B. Patent No.(s)

Additional numbers attached? ☐ Yes ■ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: KPPB LLP

Internal Address: Suite 300

Street Address: 2190 S. Towne Centre Place

City: Anaheim

State: CA   Zip: 92806

Phone Number: 949.852.0000

Docket Number: D1-01940.CON4

Email Address: pair@kppb.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) $_____

☐ Authorized to be charged to deposit account
☐ Enclosed
☐ None required (government interest not affecting title)

8. Payment Information

Deposit Account Number _____

Authorized User Name _____

9. Signature: /Paul J. Lee/   March 7, 2019

Signature   Date

Paul J. Lee

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 17

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

**PATENT
REEL: 048546 FRAME: 0163**

PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT ("Patent Assignment") is made as of February 12, 2018 by Sonic IP, Inc., a California corporation ("Sonic IP"), DivX, LLC, a Delaware limited liability company ("DivX" and together with Sonic IP the "Assignors" and each an "Assignor"), and DivX CF Holdings LLC, a Delaware limited liability company (the "Assignee"). Capitalized terms used herein but not otherwise defined shall have the meanings ascribed to them in the Purchase Agreement (as defined below).

WHEREAS, Neulion, Inc., a Delaware corporation ("Parent") and Assginee are parties to that certain Purchase Agreement, dated as of December 18, 2017 (the "Purchase Agreement"), pursuant to which Assignee has agreed to purchase, and Parent has agreed to cause each Assignor to sell, convey, assign, transfer and deliver to Assignee, all of such Assignor's right, title and interest in, to and under the Business IP on the terms and conditions set forth in the Purchase Agreement; and

WHEREAS, pursuant to the Purchase Agreement, Parent has agreed to cause each Assignor to execute and deliver this Patent Assignment by which the Patents set forth in Exhibit A hereto (the "Transferred Patents") are assigned and conveyed by such Assignor to Assignee at the Closing.

NOW, THEREFORE, in consideration of the foregoing premises and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, upon the terms and subject to the conditions set forth in the Purchase Agreement, it is hereby agreed that:

1.   Patent Conveyance.

Each Assignor does hereby irrevocable and unconditionally:

a.   sell, transfer, convey, assign and deliver to Assignee all of such Assignor's right, title and interest in, to and under: (i) the Transferred Patents and the inventions disclosed therein, including any patents issuing on any applications included in the Transferred Patents and all reissues, reexaminations, extensions, continuations, continuations in part, continuing prosecution applications, requests for continuing examinations and divisionals of any of the Transferred Patents and all foreign counterparts relating to any of the foregoing, including, without limitation, certificates of invention, utility models and other governmental grants or issuances and any patents and patent applications that claim priority from any of the foregoing; (ii) all causes of action (whether known or unknown or whether currently pending, filed, or otherwise) and other enforcement rights under, or on account of, the Transferred Patents , including, without limitation, all causes of action and other enforcement rights for (A) damages, (B) injunctive relief, and (C) any other remedies of any kind for past, current and future infringement; and (iii) all rights to collect royalties or other payments under or on account of the Transferred Patents due or payable on or after the Effective Date, the same to be held by Assignee for Assignee's own use and enjoyment, and for the use and enjoyment of Assignee's successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed

by such Assignor if this Assignment had not been made, including all rights therein provided by international conventions and treaties.

b. agree to execute applications, assignments, declarations, affidavits, and any other papers as reasonably necessary to perfect Assignee's right, title and interest throughout the world in all Transferred Patents assigned to Assignee hereunder and, at Assignee's sole expense, assist Assignee as reasonably necessary in perfecting such right, title and interest in Assignee.

2. Terms of the Purchase Agreement. This Patent Assignment is being delivered pursuant to the Purchase Agreement, and is subject to the representations, warranties, conditions, limitations, covenants and agreements set forth in the Purchase Agreement. Each Assignor and Assignee acknowledge and agree that the representations, warranties, conditions, limitations, covenants and agreements contained in the Purchase Agreement shall not be superseded hereby, but shall remain in full force and effect to the full extent provided therein. The rights and remedies of Assignee, Assignors or Parent under the Purchase Agreement shall not be deemed to be enlarged, modified, or in any way altered by the terms of this Patent Assignment. In the event of any conflict between the terms of the Purchase Agreement and the terms of this Patent Assignment, the terms of the Purchase Agreement shall prevail.

3. Counterparts. This Patent Assignment may be executed in two or more counterparts, all of which shall be considered one and the same instrument and shall become effective when one or more counterparts have been signed by each of the parties and delivered to the other party.

4. Governing Law. This Patent Assignment and all disputes or controversies arising out of or relating to this Patent Assignment or the transactions contemplated hereby shall be governed by, and construed in accordance with, the internal laws of the State of Delaware, without regard to the laws of any other jurisdiction that might be applied because of the conflicts of laws principles of the State of Delaware.

[Signature Page Follows]

IN WITNESS WHEREOF, each Assignor has caused this Patent Assignment to be executed as of the date first above written.

Assignor:

DivX, LLC

By: _____
Name: Alexander G. Arato
Title: General Counsel

Sonic IP, Inc.

By: _____
Name: _____
Title: _____

The Assignee hereby accepts assignment of the Transferred Patents.

Assignee:

DivX CF Holdings LLC

By: _____
Name: _____
Title: CONSTANTINE M. DAKOLIAS
PRESIDENT

[Signature Page to Patent Assignment]

IN WITNESS WHEREOF, each Assignor has caused this Patent Assignment to be executed as of the date first above written.

Assignor:

DivX, LLC

By: _____
Name: Alexander G. Arato
Title: General Counsel

Sonic IP, Inc.

By: _____
Name: _____
Title: _____

The Assignee hereby accepts assignment of the Transferred Patents.

Assignee:

DivX CF Holdings LLC

By: _____
Name: _____
Title: _____

[Signature Page to Patent Assignment]

IN WITNESS WHEREOF, each Assignor has caused this Patent Assignment to be executed as of the date first above written.

Assignor:

DivX, LLC

By: _____
Name: _____
Title: _____

Sonic IP, Inc.

By: _____
Name: Roy E. Reichbach
Title: President

The Assignee hereby accepts assignment of the Transferred Patents.

Assignee:

DivX CF Holdings LLC

By: _____
Name: _____
Title: _____

[Signature Page to Patent Assignment]

Exhibit A to the Patent Assignment

Internal File No.	Country	Serial No.	Filing Date	Title	Patent No.	Grant Date
00040	US	11230794	Sep 20, 2005	Video Deblocking Filter	7729426	Jun 1, 2010
00040.BR	BR	PI05061636	Sep 20, 2005	Video Deblocking Filter		
00040.CN	CN	2005800011043	Sep 20, 2005	Video Deblocking Filter	ZL 200580001104.3	May 25, 2011
00040.CON	US	12788210	May 26, 2010	Video Deblocking Filter	8139651	Mar 20, 2012
00040.HK	HK	091101221	Sep 20, 2005	Video Deblocking Filter	HK1132389	Dec 9, 2011
00042	US	11258496	Oct 24, 2005	Multimedia Distribution System	8472792	Jun 25, 2013
00042.CON	US	13913187	Jun 7, 2013	Multimedia Distribution System	9420287	Aug 16, 2016
00042.CON2	US	15217894	Jul 22, 2016	Multimedia Distribution System		
00053	US	11016184	Dec 17, 2004	Multimedia Distribution System for Multimedia Files Having Subtitle Information	8731369	May 20, 2014
00053.BR	BR	PI04167384	Dec 8, 2004	Multimedia Distribution System		
00053.CN	CN	2004800414529	Dec 8, 2004	Multimedia Distribution System	ZL200480041452 .9	Nov 27, 2013
00053.CON	US	14281791	May 19, 2014	Multimedia Distribution System for Multimedia Files with Interleaved Media Chunks of Varying Types	9369687	Jun 14, 2016
00053.CON2	US	15144776	May 2, 2016	Multimedia Distribution System for Multimedia Files with Interleaved Media Chunks of Varying Types		
00053.DE	DE	048139182	Dec 8, 2004	Multimedia Distribution System	60 2004 046 980.7	Apr 8, 2015
00053.EP	EP	048139182	Dec 8, 2004	Multimedia Distribution System	1692859	Apr 8, 2015
00053.EP.DIV	EP	151625621	Dec 8, 2004	Decoding System for Decoding Multimedia Files, System for Encoding a Multimedia File, and Multimedia File		
00053.EP.DIV.HK	HK	161038177	Dec 8, 2004	Decoding System for Decoding Multimedia Files, System for Encoding a Multimedia File, and Multimedia File		
00053.FR	FR	048139182	Dec 8, 2004	Multimedia Distribution System	1692859	Apr 8, 2015
00053.GB	GB	048139182	Dec 8, 2004	Multimedia Distribution System	1692859	Apr 8, 2015
00053.JP.D2	JP	2012221387	Dec 8, 2004	Multimedia Distribution System	5589043	Aug 1, 2014
00053.KR	KR	1020067013801	Dec 8, 2004	Multimedia Distribution System	10-1127407	Mar 9, 2012
00053.KR.DIV	KR	1020117022407	Dec 8, 2004	Multimedia Distribution System	10-1380262	Mar 26, 2014
00053.KR.DIV2	KR	1020127033797	Dec 8, 2004	Multimedia Distribution System	10-1380265	Mar 26, 2014
00053.SG	SG	2006038079	Dec 8, 2004	Multimedia Distribution System	123104	Nov 28, 2008
00053.TR	TR	048139182	Dec 8, 2004	Multimedia Distribution System	TR2015/08443	Apr 8, 2015
00055	US	11323062	Dec 30, 2005	Media Transfer Protocol	7664872	Feb 16, 2010

[Exhibit A to Patent Assignment]

102407843.4

00056	US	11685929	Mar 14, 2007	Federated Digital Rights Management Scheme Including Trusted Systems	7515710	Apr 7, 2009
00056.CON	US	12411271	Mar 25, 2009	Federated Digital Rights Management Scheme Including Trusted Systems	8201264	Jun 12, 2012
00056.CON2	US	13489409	Jun 5, 2012	Federated Digital Rights Management Scheme Including Trusted Systems	8656183	Feb 18, 2014
00056.CON3	US	14183360	Feb 18, 2014	Federated Digital Rights Management Scheme Including Trusted Systems	9184920	Nov 10, 2015
00056.CON4	US	14928746	Oct 30, 2015	Federated Digital Rights Management Scheme Including Trusted Systems	9798863	Oct 24, 2017
00056.CON5	US	15791265	Oct 23, 2017	Federated Digital Rights Management Scheme Including Trusted Systems		
00056.JP	JP	2009500592	Mar 14, 2007	Federated Digital Rights Management Scheme Including Trusted Systems	5200204	Feb 22, 2013
00056.SG	SG	2008066839	Mar 14, 2007	Federated Digital Rights Management Scheme Including Trusted Systems	146026	Dec 15, 2010
00072.01	US	13087348	Apr 14, 2011	File Format for Multiple Track Digital Data	RE45052	Jul 29, 2014
00073	US	10895355	Jul 21, 2004	Optimized Secure Media Playback Control	7460668	Dec 2, 2008
00075	US	10615898	Jul 8, 2003	Method and System for Securing Compressed Digital Video	7295673	Nov 13, 2007
00642	US	11970493	Jan 7, 2008	Video Distribution System Including Progressive Playback	7886069	Feb 8, 2011
00642.CN	CN	2008800070149	Jan 7, 2008	Video Distribution System Including Progressive Playback	ZL200880007014 9	Oct 30, 2013
00642.CN.DIV1	CN	2013104306736	Jan 7, 2008	Video Distribution System Including Progressive Playback	ZL 201310430673.6	Apr 12, 2017
00642.CN.DIV2	CN	2013104299944	Jan 7, 2008	Video Distribution System Including Progressive Playback	ZL201310429994 .4	Aug 17, 2016
00642.CON	US	12982413	Dec 30, 2010	Video Distribution System Including Progressive Playback	8977768	Mar 10, 2015
00642.CON2	US	14632670	Feb 26, 2015	Video Distribution System Including Progressive Playback	9794318	Oct 17, 2017
00642.CON3	US	15682379	Aug 21, 2017	Video Distribution System Including Progressive Playback		
00642.EP	EP	087057451	Jan 7, 2008	Video Distribution System Including Progressive Playback		
00642.JP	JP	2009545012	Jan 7, 2008	Video Distribution System Including Progressive Playback	5559544	Jun 13, 2014
00642.JP.DIV	JP	2014117349	Jun 6, 2014	Video Distribution System Including Progressive Playback	5894220	Mar 4, 2016
00642.SG	SG	2009045303	Jan 7, 2008	Video Distribution System Including Progressive Playback	153621	May 31, 2012
01167	US	12272631	Nov 17, 2008	Hierarchical and Reduced Index Structures for Multimedia Files	8233768	Jul 31, 2012
01167.CN	CN	2008801164317	Nov 17, 2008	Hierarchical and Reduced Index Structures for Multimedia Files	ZL 200880116431.7	Jun 4, 2014
01167.CON2	US	15229030	Aug 4, 2016	Hierarchical and Reduced Index Structures for Multimedia Files		
01167.JP	JP	2010534264	Nov 17, 2008	Hierarchical and Reduced Index Structures for Multimedia Files	5513400	Apr 4, 2014
01167.SG	SG	2010030567	Nov 17, 2008	Hierarchical and Reduced Index Structures for Multimedia Files	161354	Dec 14, 2012
01221	US	12260404	Oct 29, 2008	Application Enhancement Tracks	8997161	Mar 31, 2015
01221.CN	CN	2008801275964	Dec 22, 2008	Application Enhancement Tracks	200880127596.4	Sep 30, 2015

[Exhibit A to Patent Assignment - 2]

01221.DE	DE	088701529	Dec 22, 2008	Application Enhancement Tracks	602008043390.0	Apr 6, 2016
01221.EP	EP	088701529	Dec 22, 2008	Application Enhancement Tracks	2238752	Apr 6, 2016
01221.FR	FR	088701529	Dec 22, 2008	Application Enhancement Tracks	2238752	Apr 6, 2016
01221.GB	GB	088701529	Dec 22, 2008	Application Enhancement Tracks	2238752	Apr 6, 2016
01221.HK	HK	111077352	Dec 22, 2008	Systems and Methods for Encoding Application Enhancement Tracks for Inclusion with Media Files	1153597B	May 6, 2016
01221.SG.DIV	SG	2012096723	Dec 22, 2008	Application Enhancement Tracks	186690	May 31, 2016
01239	US	12272782	Nov 17, 2008	Chunk Header Incorporating Binary Flags and Correlated Variable-Length Fields	8301793	Oct 30, 2012
01239.CON	US	13662687	Oct 29, 2012	Chunk Header Incorporating Binary Flags and Correlated Variable-Length Fields	8942548	Jan 27, 2015
01239.CON2	US	14594005	Jan 9, 2015	Chunk Header Incorporating Binary Flags and Correlated Variable-Length Fields		
01239.EP	EP	088493390	Nov 17, 2008	Chunk Header Incorporating Binary Flags and Correlated Variable-Length Fields		
01239.HK	HK	111017578	Nov 17, 2008	Chunk Header Incorporating Binary Flags and Correlated Variable-Length Fields		
01393	US	12480276	Jun 8, 2009	Systems and Methods for Font File Optimization for Multimedia Files	8289338	Oct 16, 2012
01393.SG	SG	2010072106	Jun 8, 2009	Systems and Methods for Font File Optimization for Multimedia Files	165123	May 15, 2013
01457	US	12611042	Nov 2, 2009	System and Method for Playing Content on Certified Devices	8631145	Jan 14, 2014
01622	US	12684002	Jan 7, 2010	Singular, Collective and Automated Creation of a Media Guide for Online Content	8510303	Aug 13, 2013
01622.AU	AU	2010203605	Jan 7, 2010	Singular, Collective and Automated Creation of a Media Guide for Online Content	2010203605	Sep 24, 2015
01622.CA	CA	2749170	Jan 7, 2010	Singular, Collective and Automated Creation of a Media Guide for Online Content	2749170	Jun 21, 2016
01622.CN	CN	2010800073958	Jan 7, 2010	Singular, Collective and Automated Creation of a Media Guide for Online Content	ZL 2010 8 0007395.8	Sep 9, 2015
01622.CN.DIV	CN	201510475205X	Jan 7, 2010	Singular, Collective and Automated Creation of a Media Guide for Online Content		
01622.CON	US	13938100	Jul 9, 2013	Singular, Collective and Automated Creation of a Media Guide for Online Content	9201922	Dec 1, 2015
01622.CON2	US	14924639	Oct 27, 2015	Singular, Collective and Automated Creation of a Media Guide for Online Content	9672286	Jun 6, 2017
01622.CON3	US	15490718	Apr 18, 2017	Singular, Collective, and Automated Creation of a Media Guide for Online Content		
01622.EP	EP	107295131	Jan 7, 2010	Singular, Collective and Automated Creation of a Media Guide for Online Content		
01622.JP	JP	2011545428	Jan 7, 2010	Singular, Collective and Automated Creation of a Media Guide for Online Content	5681641	Jan 16, 2015
01622.KR	KR	1020117018320	Jan 7, 2010	Singular, Collective and Automated Creation of a Media Guide for Online Content	10-1635876	Jun 28, 2016
01622.MX	MX	MXa2011007344	Jan 7,	Singular, Collective and Automated	316584	Dec 17,

[Exhibit A to Patent Assignment - 3]

			2010	Creation of a Media Guide for Online Content		2013
01940	US	12946631	Nov 15, 2010	Elementary Bitstream Cryptographic Material Transport Systems and Methods	8781122	Jul 15, 2014
01940.CA	CA	2782825	Nov 15, 2010	Elementary Bitstream Cryptographic Material Transport Systems and Methods	2782825	Apr 26, 2016
01940.CON	US	14306146	Jun 16, 2014	Elementary Bitstream Cryptographic Material Transport Systems and Methods	9124773	Sep 1, 2015
01940.CON2	US	14839783	Aug 28, 2015	Elementary Bitstream Cryptographic Material Transport Systems and Methods	9706259	Jul 11, 2017
01940.CON3	US	15615626	Jun 6, 2017	Elementary Bitstream Cryptographic Material Transport Systems and Methods		
01940.JP	JP	2012542061	Nov 15, 2010	Elementary Bitstream Cryptographic Material Transport Systems and Methods	5723888	Apr 3, 2015
01940.JP.DIV	JP	201568797	Nov 15, 2010	Elementary Bitstream Cryptographic Material Transport Systems and Methods	6078574	Jan 20, 2017
01970	US	12986957	Jan 7, 2011	Real Time Flash Based User Interface for Media Playback Device	8631407	Jan 14, 2014
01974A	US	13221682	Aug 30, 2011	Systems and Methods for Adaptive Bitrate Streaming of Media Stored in Matroska Container Files Using Hypertext Transfer Protocol	8914534	Dec 16, 2014
01974AB.CA	CA	2823829	Dec 22, 2011	Adaptive Bitrate Streaming of Media Stored in Matroska Container Files Using Hypertext Transfer Protocol		
01974AB.EP	EP	118552371	Dec 22, 2011	Adaptive Bitrate Streaming of Media Stored in Matroska Container Files Using Hypertext Transfer Protocol		
01974AB.JP	JP	2013548427	Dec 22, 2011	Adaptive Bitrate Streaming of Media Stored in Matroska Container Files Using Hypertext Transfer Protocol	6038805	Nov 19, 2016
01974AB.JP.DIV	JP	2016215144	Jul 4, 2013	Systems and Methods for Adaptive Bitrate Streaming of Media Stored in Matroska Container Files Using Hypertext Transfer Protocol		
01974AB.KR	KR	1020137020586	Dec 22, 2011	Adaptive Bitrate Streaming of Media Stored in Matroska Container Files Using Hypertext Transfer Protocol		
01974B	US	13221794	Aug 30, 2011	Systems and Methods for Encoding Source Media in Matroska Container Files for Adaptive Bitrate Streaming Using Hypertext Transfer Protocol	9247312	Jan 26, 2016
01974B.CON	US	15005990	Jan 25, 2016	Systems and Methods for Encoding Source Media in Matroska Container Files for Adaptive Bitrate Streaming Using Hypertext Transfer Protocol		
01978A	US	13341504	Dec 30, 2011	Systems and Methods for Encoding Alternative Streams of Video for Use in Adaptive Bitrate Streaming	9020039	Apr 28, 2015
01978A.CON	US	14696035	Apr 24, 2015	Systems and Methods for Encoding Alternative Streams of Video for Use in Adaptive Bitrate Streaming	9667967	May 10, 2017
01978A.CON2	US	15453714	Mar 8, 2017	Systems and Methods for Encoding Alternative Streams of Video for Use in Adaptive Bitrate Streaming		
01978B	US	13341667	Dec 30, 2011	Systems and Methods for Performing Adaptive Bitrate Streaming Based Upon the Delay of Each stream and the Channel Rate	9021119	Apr 28, 2015
02084	US	13339992	Dec 29, 2011	Systems and Methods for Performing Multiphase Adaptive Bitrate Streaming	8832297	Sep 9, 2014
02089	US	13341838	Dec 30, 2011	Systems and Methods for Estimating Available Bandwidth and Performing Initial Stream Selection When Streaming	8812662	Aug 19, 2014

				Content		
02089.CON	US	14461674	Aug 18, 2014	Systems and Methods for Estimating Available Bandwidth and Performing Initial Stream Selection When Streaming Content	9313249	Apr 12, 2016
02261	US	13339315	Dec 28, 2011	Binding of Cryptographic Content Using Unique Device Characteristics with Server Heuristics	9721071	Aug 1, 2017
02262B	US	13436930	Mar 31, 2012	Systems and Methods for Securing Cryptographic Data Using Timestamps	8938625	Jan 20, 2015
02271A	US	13436888	Mar 31, 2012	Method To Identify Consumer Electronics Products		
02271B	US	13436898	Mar 31, 2012	Systems and Methods for Identifying Consumer Electronic Products Based on a Product Identifier	9092646	Jul 28, 2015
02300A	US	13341789	Dec 30, 2011	Systems and Methods for Automatically Generating Top Level Index Files	8787570	Jul 22, 2014
02300A.CON	US	14336392	Jul 21, 2014	Systems and Methods for Automatically Generating Top Level Index Files	9270720	Feb 23, 2016
02300A.CON2	US	15009593	Jan 28, 2016	Systems and Methods for Automatically Generating Top Level Index Files		
02300A.CON3	US	15658057	Jul 24, 2017	Systems and Methods for Automatically Generating Top Level Index Files		
02300AB.CN	CN	2011800740871	Dec 31, 2011	Systems and Methods for Automatically Generating Top Level Index Files	201180074087.1	
02300AB.CN.DIV	CN	2016107511168	Dec 31, 2011	Systems and Methods for Automatically Generating Top Level Index Files		
02300AB.CN.DIV.HK	HK	171031850	Dec 31, 2011	Systems and Methods for Automatically Generating Top Level Index Files		
02300AB.JP	JP	2014528376	Dec 31, 2011	Systems and Methods for Automatically Generating Top Level Index Files	6076347	Jan 20, 2017
02300AB.JP.DIV	JP	2015202602	Dec 31, 2011	Systems and Methods for Automatically Generating Top Level Index Files		
02300AB.KR	KR	1020147005609	Dec 31, 2011	Systems and Methods for Automatically Generating Top Level Index Files		
02300B	US	13341801	Dec 30, 2011	Systems and Methods for Performing Adaptive Bitrate Streaming Using Automatically Generated Top Level Index Files	8806188	Aug 12, 2014
02348	US	13430032	Mar 26, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	9467708	Oct 11, 2016
02348.CN	CN	201280050318X	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	CN103858419B	Oct 26, 2016
02348.CON	US	15287608	Oct 6, 2016	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content		
02348.DE	DE	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	602012032363.9	May 10, 2017
02348.EP	EP	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017
02348.FR	FR	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017
02348.GB	GB	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017
	BE	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017
	CH	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017

[Exhibit A to Patent Assignment - 5]

	IE	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017
	LU	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017
	MC	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017
	SK	128289568	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	2751984	May 10, 2017
02348.HK	HK	141085073	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content		
02348.JP	JP	2014528581	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content	6159329	Jun 16, 2017
02348.KR	KR	1020147005628	Aug 30, 2012	Selection of Resolutions for Seamless Resolution Switching of Multimedia Content		
02349	US	13432521	Mar 28, 2012	Systems and Methods for Encoding Alternative Streams of Video for Playback on Playback Devices having Predetermined Display Aspect Ratios and Network Connection Maximum Data Rates	8818171	Aug 26, 2014
02349.CON	US	14464146	Aug 20, 2014	Systems and Methods for Encoding Alternative Streams of Video for Playback on Playback Devices having Predetermined Display Aspect Ratios and Network Connection Maximum Data Rates	9510031	Nov 29, 2016
02349.CON2	US	15334068	Oct 25, 2016	Systems and Methods for Encoding Alternative Streams of Video for Playback on Playback Devices having Predetermined Display Aspect Ratios and Network Connection Maximum Data Rates		
02350	US	13600046	Aug 30, 2012	Systems and Methods for Encoding and Streaming Video Encoded Using a Plurality of Maximum Bitrate Levels		
02350.CN	CN	2012800503211	Aug 30, 2012	Systems and Methods for Encoding and Streaming Video Encoded Using a Plurality of Maximum Bitrate Levels		
02350.KR	KR	1020147005603	Aug 30, 2012	Systems and Methods for Encoding and Streaming Video Encoded Using a Plurality of Maximum Bitrate Levels		
02353B	US	13224298	Sep 1, 2011	Systems and Methods for Encoding Media Including Subtitles for Adaptive Bitrate Streaming	9025659	May 5, 2015
02357A	US	13223186	Aug 31, 2011	Systems and Methods for Performing Smooth Visual Search of Media Encoded for Adaptive Bitrate Streaming via Hypertext Transfer Protocol Using Trick Play Streams	8649669	Feb 11, 2014
02357A.CON	US	14175929	Feb 7, 2014	Systems and Methods For Performing Smooth Visual Search of Media Encoded for Adaptive Bitrate Streaming via Hypertext Transfer Protocol Using Trick Play Streams	9210481	Dec 8, 2015
02357AB.EP	EP	118551035	Dec 23, 2011	Systems and Methods for Performing Smooth Visual Search of Media Encoded for Adaptive Bitrate Streaming Using Trick Play Streams		
02357AB.KR	KR	1020137020594	Dec 23, 2011	Systems and Methods for Performing Smooth Visual Search of Media Encoded for Adaptive Bitrate Streaming Using Trick Play Streams		
02358	US	13340594	Dec 29, 2011	Systems and Methods for Application Identification	8799647	Aug 5, 2014

02358.CON	US	14451299	Aug 4, 2014	Systems and Methods for Application Identification	9268923	Feb 23, 2016
02358.CON2	US	15018721	Feb 8, 2016	Systems and Methods for Application Identification		
02358.CON3	US	15682453	Aug 21, 2017	Systems and Methods for Application Identification		
02359A	US	13340623	Dec 29, 2011	Systems and Methods for Playing Back Alternative Streams of Protected Content Protected Using Common Cryptographic Information	8909922	Dec 9, 2014
02359A.CON	US	14564003	Dec 8, 2014	Systems and Methods for Playing Back Alternative Streams of Protected Content Protected Using Common Cryptographic Information	9247311	Jan 26, 2016
02359A.CON2	US	14970412	Dec 15, 2015	Systems and Methods for Playing Back Alternative Streams of Protected Content Protected Using Common Cryptographic Information	9621522	Apr 11, 2017
02359A.CON3	US	15481340	Apr 6, 2017	Systems and Methods for Playing Back Alternative Streams of Protected Content Protected Using Common Cryptographic Information		
02359B	US	13341265	Dec 30, 2011	Systems and Methods for Protecting Alternative Streams in Adaptive Bitrate Streaming Systems	8918636	Dec 23, 2014
02360	US	13436922	Mar 31, 2012	Systems and Methods for Saving Encoded Media Streamed Using Adaptive Bitrate Streaming	8964977	Feb 24, 2015
02360.CON	US	14629154	Feb 23, 2015	Systems and Methods for Saving Encoded Media Streamed Using Adaptive Bitrate Streaming	9667684	May 30, 2017
02360.CON2	US	15587182	May 4, 2017	Systems and Methods for Saving Encoded Media Streamed Using Adaptive Bitrate Streaming		
02459A	US	13436900	Mar 31, 2012	Systems and Methods for Accessing Digital Content Using Electronic Tickets and Ticket Tokens	8918908	Dec 23, 2014
02459A.CON	US	14567994	Dec 11, 2014	Systems and Methods for Enabling Playback of Digital Content Using Electronic Tickets and Ticket Tokens Representing Grant of Access Rights	9626490	Apr 18, 2017
02459A.CON2	US	15484534	Apr 11, 2017	Systems and Methods for Enabling Playback of Digital Content Using Electronic Tickets and Ticket Tokens Representing Grant of Access Rights		
02459AB.CN	CN	2013800083597	Jan 7, 2013	Systems and Methods for Accessing Digital Content Using Electronic Tickets and Ticket Tokens	201380008359.7	Apr 5, 2017
02459AB.EP	EP	137336301	Jan 7, 2013	Systems and Methods for Accessing Digital Content Using Electronic Tickets and Ticket Tokens		
02459AB.HK	HK	141125262	Dec 12, 2014	Systems and Methods for Accessing Digital Content Using Electronic Tickets and Ticket Tokens		
02459AB.JP	JP	2014551398	Jan 7, 2013	Systems and Methods for Accessing Digital Content Using Electronic Tickets and Ticket Tokens	5837234	Nov 13, 2015
02459AB.KR	KR	1020147021418	Jan 7, 2013	Systems and Methods for Accessing Digital Content Using Electronic Tickets and Ticket Tokens	10-1707435	Feb 10, 2017
02499B	US	13457911	Apr 27, 2012	Systems and Methods for Adaptive Streaming with Augmented Video Stream Transitions Using a Media Server	9060184	Jun 16, 2015
02549	US	13536891	Jun 28, 2012	Systems and Methods for Fast Video Startup Using Trick Play Streams	9197685	Nov 24, 2015
02550	US	13495757	Jun 13, 2012	Systems and Methods for Adaptive Streaming Systems with Interactive Video Timelines	9354799	May 31, 2016

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02611A	US	13539337	Jun 30, 2012	Systems and Methods for Compressing Geotagged Video		
02616A	US	13629306	Sep 27, 2012	System and Methods for Encoding Live Multimedia Content with Synchronized Audio Data	9281011	Mar 8, 2016
02665	US	13631017	Sep 28, 2012	System and Method for Decreasing an Initial Buffering Period of an Adaptive Streaming System		
02711	US	13797829	Mar 12, 2013	Systems and Methods for Region of Interest Background Smoothing and Compression Enhancement	8731282	May 20, 2014
02948	US	13906952	May 31, 2013	Synchronizing Multiple Over the Top Streaming Clients	9380099	Jun 28, 2016
02948.CN	CN	2014800309545	May 30, 2014	Synchronizing Multiple Over The Top Streaming Clients		
02948.CON	US	15192695	Jun 24, 2016	Synchronizing Multiple Over the Top Streaming Clients	9648362	May 9, 2017
02948.CON2	US	15587200	May 4, 2017	Synchronizing Multiple Over the Top Streaming Clients		
02948.EP	EP	148050263	May 30, 2014	Synchronizing Multiple Over The Top Streaming Clients		
02948.HK	HK	161049806	May 30, 2014	Synchronizing Multiple Over The Top Streaming Clients		
02948.JP	JP	2016517052	May 30, 2014	Synchronizing Multiple Over The Top Streaming Clients		
02948.KR	KR	1020157037083	May 30, 2014	Synchronizing Multiple Over the Top Streaming Clients	10-1748198	Jun 12, 2017
02949	US	13907791	May 31, 2013	Playback Synchronization Across Playback Devices	9100687	Aug 4, 2015
02949.CON	US	14814247	Jul 30, 2015	Playback Synchronization Across Playback Devices	9432718	Aug 30, 2016
02949.CON2	US	15234768	Aug 11, 2016	Playback Synchronization across Playback Devices		
03001.CN	CN	2014800386486	May 23, 2014	Systems and Methods of Encoding Multiple Video Streams with Adaptive Quantization for Adaptive Bitrate Streaming		
03001.JP	JP	2016-515129	May 23, 2014	Systems and Methods of Encoding Multiple Video Streams with Adaptive Quantization for Adaptive Bitrate Streaming		
03001.KR	KR	1020157036373	May 23, 2014	Systems and Methods of Encoding Multiple Video Streams with Adaptive Quantization for Adaptive Bitrate Streaming		
03145	US	14042532	Sep 30, 2013	Device Robustness Framework		
03259B	US	14144268	Dec 30, 2013	Systems and Methods for Playing Adaptive Bitrate Streaming Content by Multicast	9386067	Jul 5, 2016
03259B.CON	US	15190069	Jun 22, 2016	Systems and Methods for Playing Adaptive Bitrate Streaming Content by Multicast	9774646	Sep 26, 2017
03259B.CON2	US	15691616	Aug 30, 2017	Systems and Methods for Playing Adaptive Bitrate Streaming Content by Multicast		
03335.CON	US	14943004	Nov 16, 2015	Systems, Methods, and Media for Controlling Delivery Of Content		
03336.EP	EP	147631402	Mar 17, 2014	Systems, Methods, and Media for Delivery of Content		

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03351A.CON	US	14810345	Jul 27, 2015	Network Video Streaming with Trick Play Based on Separate Trick Play Files	9712890	Jul 18, 2017
03351A.CON2	US	15651817	Jul 17, 2017	Network Video Streaming with Trick Play Based on Separate Trick Play Files		
03427	US	14679469	Apr 6, 2015	Systems and Methods for Encoding and Playing Back Video at Different Frame Rates Using Enhancement Layers		
03510	US	14728997	Jun 2, 2015	Systems and Methods for Binding Content Playback to the Pairing of a Playback Device and Removable Memory Storage Device	9798865	Oct 24, 2017
03510.CON	US	15710495	Sep 20, 2017	Systems and Methods for Binding Content Playback to the Pairing of a Playback Device and Removable Memory Storage Device		
03510.PCT	WO	PCTUS20150338 43	Jun 2, 2015	Systems and Methods for Binding Content Playback to the Pairing of a Playback Device and Removable Memory Storage Device		
03569	US	14807751	Jul 23, 2015	Systems and Methods for Streaming Video Games Using GPU Command Streams		
03569.PCT	WO	PCTUS20150418 28	Jul 23, 2015	Systems and Methods for Streaming Video Games Using GPU Command Streams		
03578	US	14821454	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles	9762937	Sep 12, 2017
03578.CA	CA	2952847	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.CN	CN	2015800331276	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.CON	US	15693016	Aug 31, 2017	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.EP	EP	158290056	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.HK	HK	17108695.2	Aug 29, 2017	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.JP	JP	2016-574978	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.KR	KR	1020177005695	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.MX	MX	2016015022	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.PCT	WO	PCTUS20150443 25	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03578.SG	SG	11201609457U	Aug 7, 2015	Systems and Methods for Protecting Elementary Bitstreams Incorporating Independently Encoded Tiles		
03639	US	15055467	Feb 26, 2016	Systems and Methods for Frame Duplication and Frame Extension in Live Video Encoding and Streaming		
03639.CN	CN	2016800120532	Feb 26, 2016	Systems and Methods for Frame Duplication and Frame Extension in Live Video Encoding and Streaming		
03639.EP	EP	167565266	Feb 26, 2016	Systems and Methods for Frame Duplication and Frame Extension in Live Video Encoding and Streaming		
03639.JP	JP	2017544732	Feb 26, 2016	Systems and Methods for Frame Duplication and Frame Extension in Live Video Encoding and Streaming		

03639.KR	KR	1020177023590	Feb 26, 2016	Systems and Methods for Frame Duplication and Frame Extension in Live Video Encoding and Streaming		
03639.PCT	WO	PCTUS20160199 55	Feb 26, 2016	Systems and Methods for Frame Duplication and Frame Extension in Live Video Encoding and Streaming		
03639.SG	SG	11201706160U	Feb 26, 2016	Systems and Methods for Frame Duplication and Frame Extension in Live Video Encoding and Streaming		
03758	US	15183562	Jun 15, 2016	Systems and Methods for Encoding Video Content		
03758.PCT	WO	PCTUS20170311 14	May 4, 2017	Systems and Methods for Encoding Video Content		
03762	US	14989551	Jan 6, 2016	Systems and Methods for Encoding and Sharing Content Between Devices		
03762.CN	CN	2016800049246	Jan 6, 2016	Systems and Methods for Encoding and Sharing Content Between Devices		
03762.EP	EP	167353614	Jan 6, 2016	Systems and Methods for Encoding and Sharing Content Between Devices		
03762.JP	JP	2017535744	Jan 6, 2016	Systems and Methods for Encoding and Sharing Content Between Devices		
03762.KR	KR	1020177021754	Jan 6, 2016	Systems and Methods for Encoding and Sharing Content Between Devices		
03762.PCT	WO	PCTUS20160123 48	Jan 6, 2016	Systems and Methods for Encoding and Sharing Content Between Devices		
03783	US	15085598	Mar 30, 2016	Systems and Methods for Quick Start-Up of Playback		
03783.PCT	WO	PCTUS20170223 48	Mar 14, 2017	Systems and Methods for Quick Start-Up of Playback		
03985	US	15163370	May 24, 2016	Systems and Methods for Providing Audio Content During Trick-Play Playback		
03985.PCT	WO	PCTUS20170310 97	May 4, 2017	Systems and Methods for Providing Audio Content During Trick-Play Playback		
04143	US	15163333	May 24, 2016	Systems and Methods for Providing Variable Speeds in a Trick-Play Mode		
04143.PCT	WO	PCTUS20170311 09	May 4, 2017	Systems and Methods for Providing Variable Speeds in a Trick-Play Mode		
04353	US	15409443	Jan 18, 2017	Systems and Methods for Adaptive Buffering for Digital Video Streaming		
04353.PCT	WO	PCTUS20170501 41	Sep 5, 2017	Systems and Methods for Adaptive Buffering for Digital Video Streaming		
04881	US	15436456	Feb 17, 2017	Systems and Methods for Adaptive Switching between Multiple Content Delivery Networks during Adaptive Bitrate Streaming		
T03331	US	13931198	Jun 28, 2013	Systems, Methods, and Media for Streaming Media Content		
T03335	US	13732140	Dec 31, 2012	Systems, Methods, and Media for Controlling Delivery Of Content	9191457	Nov 17, 2015
T03336	US	13844445	Mar 15, 2013	Systems, Methods, and Media For Delivery of Content		
T03337	US	13841943	Mar 15, 2013	Systems, Methods, and Media for Transcoding Video Data Using Metadata		
T03339	US	14145457	Dec 31, 2013	Methods, Systems, and Media for Certifying a Playback Device	9332290	May 3, 2016
T03341A	US	14068881	Oct 31, 2013	Systems and Methods for Supplementing Content From a Server	9343112	May 17, 2016
T03342	US	13631083	Sep 28, 2012	Systems and Methods for Fast Startup Streaming of Encrypted Multimedia Content	8997254	Mar 31, 2015
T03345	US	13631118	Sep 28,	Systems, Methods, and Computer Program	8914836	Dec 16,

			2012	Products for Load Adaptive Streaming		2014
T03347A	US	13731949	Dec 31, 2012	Use of Objective Quality Measures of Streamed Content to Reduce Streaming Bandwidth	9313510	Apr 12, 2016
T03347B	US	13731972	Dec 31, 2012	Use of Objective Quality Measures of Streamed Content to Reduce Streaming Bandwidth	9264475	Feb 16, 2016
T03349	US	13852501	Mar 28, 2013	Downloading and Adaptive Streaming of Multimedia Content to a Device with Cache Assist	9344517	May 17, 2016
T03350	US	13905804	May 30, 2013	Content Streaming with Client Device Trick Play Index	9247317	Jan 26, 2016
T03351A	US	13905852	May 30, 2013	Network Video Streaming with Trick Play Based on Separate Trick Play Files	9094737	Jul 28, 2015
T03354	US	13930753	Jun 28, 2013	System, Method, and Computer Program Product for Providing Test Logic to User Devices	9648086	May 9, 2017
DIVX-1001	US	13537254	Jun 29, 2012	Adaptive Streaming of Multimedia	9143812	Sep 22, 2015
DIVX-1002PCT	WO	PCTUS1621536	Mar 9, 2016	Session Based Watermarking of Media Content Using Encrypted Content Streams		
DIVX-1002	US	14680998	Apr 7, 2015	Session Based Watermarking of Media Content Using Encrypted Content Streams	9516359	Dec 6, 2016
DIVX-1002CN	CN	201680019207		Session Based Watermarking of Media Content Using Encrypted Content Streams		
DIVX-1002EP	EP	16777021.3		Session Based Watermarking of Media Content Using Encrypted Content Streams		