

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT6087489

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MK SYSTEMS US SUB-HOLDCO INC.	08/08/2019
RECEIVING PARTY DATA	
Name:	MK SYSTEMS USA INC.
Street Address:	251 LITTLE FALLS DRIVE
City:	WILMINGTON
State/Country:	DELAWARE
Postal Code:	19808
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	10831960
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<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>	
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NAME OF SUBMITTER:	R. ROSS VIGUET
SIGNATURE:	/R. Ross Viguet/
DATE SIGNED:	05/01/2020
Total Attachments: 13	
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ASSIGNMENT

WHEREAS, MK Systems US Sub-HoldCo Inc., a corporation organized under and pursuant to the laws of Delaware, having its principal place of business at 251 Little Falls Drive, Wilmington, Delaware 19808 (hereinafter referred to as "Assignor"), is the sole and exclusive owner, by assignment, of the Patent Applications and Patents (hereinafter referred to as "Assigned Patents") listed in Schedule A; and

WHEREAS, MK Systems USA Inc., a corporation organized under and pursuant to the laws of Delaware, having its principal place of business at 251 Little Falls Drive, Wilmington, Delaware 19808 (hereinafter referred to as "Assignee"), is desirous of acquiring the right, title and interest in, to and under said Assigned Patents and the inventions covered thereby;

NOW, THEREFORE, in consideration of and in exchange for the sum of One Dollar (\$1.00) and other good and valuable consideration, receipt of which is hereby acknowledged, the said Assignor has sold, assigned, transferred and set over, and does hereby sell, assign, transfer and set over to the said Assignee, the entire right, title and interest for the United States of America and all other countries in and to said applications for all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefore in the United States of America and all other countries on the attached list of *Schedule A*, and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on *Schedule A* to said assignee herein, as assignee of the entire interest therein; and the undersigned for itself and its legal representatives, heirs and assigns does hereby agree and covenant without further remuneration, to execute and deliver all divisional, continuation, continuation-in-part, reissue and other applications for Letters Patent and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said inventions listed on *Schedule A* whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said inventions listed on *Schedule A* in the United States of America and all

other countries, the expenses incident to said applications listed on *Schedule A* to be borne and paid by said assignee.



Authorized Signature

DATE: August 8, 2019

Name: Angel Ruiz

Title: Chief Executive Officer

MK Systems US Sub-HoldCo Inc.



Authorized Signature

DATE: August 8, 2019

Name: Angel Ruiz

Title: Chief Executive Officer

MK Systems USA Inc.

SCHEDULE A

Assigned Patents

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
AU	Granted	REDUCE THE MINIMUM BITRATE	2010358370	7/28/2010	2010358370	6/18/2015
BE	Granted	CONTROL OF FRAME TYPES IN VIDEO COMPRESSION	05255175.1	9/23/2005	1646246	10/17/2007
BE	Granted	A METHOD AND APPARATUS FOR REDUCING DISTORTION OF DIGITAL DATA	99950917.7	10/22/1999	1129556	8/22/2007
BR	Filed	REDUCE THE MINIMUM BITRATE	BR1120130010142	7/28/2010		
BR	Filed	IMS-ENABLED IPTV CONTROL CHANNEL	PI0621350-2	2/24/2006		
CA	Granted	METHOD AND SYSTEM FOR MODELLING THE RELATIONSHIP OF THE BIT RATE OF A TRANSPORT STREAM	2535453	8/12/2004	2535453	4/15/2014
CA	Granted	REMULPLEXING OF CONTENT-MODIFIED MPEG-2 TRANSPORT STREAMS USING PCR INTERPOLATION	2535457	8/12/2004	2535457	4/23/2013
CA	Granted	SYNCHRONIZATION AND AUTOMATION IN AN ITV ENVIRONMENT	2554306	2/4/2005	2554306	4/8/2014
CA	Granted	SYSTEM AND METHOD FOR DESCRIBING PRESENTATION AND BEHAVIOUR INFORMATION IN AN ITV APPLICATION	2555276	3/1/2005	2555276	5/15/2012
CN	Granted	CONTROL OF FRAME TYPES IN VIDEO COMPRESSION	200510093554.1	8/26/2005	ZL200510093554.1	5/5/2010
CN	Granted	SYNCHRONIZATION AND AUTOMATION IN AN ITV ENVIRONMENT	200580003855.9	2/4/2005	ZL200580003855.9	6/13/2012
CN	Granted	SYSTEM AND METHOD FOR DESCRIBING PRESENTATION AND BEHAVIOUR INFORMATION IN AN ITV APPLICATION	200580006817.9	3/1/2005	ZL200580006817.9	5/18/2011
CN	Granted	STATISTICAL ADAPTIVE VIDEO RATE CONTROL	200810009927.6	2/13/2008	ZL200810009927.6	3/14/2012
CN	Granted	FLASH DETECTION WITH DISCRETE HISTOGRAM AND L	200880120469.1	12/11/2008	ZL200880120469.1	12/18/2013
CN	Granted	CONTENT ADAPTIVE GOP LENGTH AND GOP STRUCTURE IN MPEG2 VIDEO ENCODER	200880129541.7	5/22/2008	ZL200880129541.7	6/12/2013
CN	Granted	METHOD FOR IMPROVING PERFORMANCE OF P2P SYSTEMS IN MOBILE NETWORKS	200980159716.3	5/29/2009	ZL200980159716.3	3/25/2015
CN	Granted	PRE-RATE BUFFER, PCR INSERTION	201080068720.1	8/23/2010	ZL201080068720.1	12/7/2016
CN	Granted	INTER-SITE- DISTANCE ADAPTIVE BROADCASTING	200680055954-6	7/27/2006	ZL200680055954-6	10/30/2013
CN	Granted	SYNCHRONIZATION AND AUTOMATION IN AN ITV ENVIRONMENT	201210143945.X	2/4/2005	ZL201210143945.X	5/27/2015

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
DE	Granted	CONTROL OF FRAME TYPES IN VIDEO COMPRESSION	05255175.1	9/23/2005	602005002907.9	10/17/2007
DE	Granted	STATISTICAL ADAPTIVE VIDEO RATE CONTROL	08101259.3	2/4/2008	602008004378.8	1/12/2011
DE	Granted	EXPAT TRANSPONDER FOR IPTV NETWORKS	08705341.9	1/22/2008	602008041787.5	1/6/2016
DE	Granted	DETERMINATION OF A TYPE OF PICTURE ENCODING OF A DECOMPRESSED VIDEO SIGNAL	08717181.5	2/27/2008	602008054979.8	4/25/2018
DE	Granted	FLASH DETECTION	08859796.8	12/11/2008	2240886	7/4/2018
DE	Granted	PRE-RATE BUFFER, PCR INSERTION	10751588.4	8/23/2010	602010021630.6	1/7/2015
DE	Granted	PRIVATE DATA INCLUSION FOR MULTIPLEXED SYSTEMS	10784506.7	11/26/2010	602010051303.3	6/13/2018
DE	Granted	A METHOD AND APPARATUS FOR PROCESSING COMPRESSED VIDEO DATA STREAMS	99200599.1	3/3/1999	69917971.8-08	6/16/2004
DE	Granted	DECODING SYMBOLS REPRESENTING DIGITAL WORDS	99202924.9	9/8/1999	69901765.3-08	6/12/2002
DE	Granted	A METHOD AND APPARATUS FOR REDUCING DISTORTION OF DIGITAL DATA	99950917.7	10/22/1999	69936930.4-08	8/22/2007
DE	Granted	SYSTEMS AND METHODS FOR NEXT GENERATION CABLE	602006026544.1	4/14/2006	1875640	12/21/2011
EP	Granted	CONTROL OF FRAME TYPES IN VIDEO COMPRESSION	05255175.1	9/23/2005	1646246	10/17/2007
EP	Granted	IMS-ENABLED IPTV CONTROL CHANNEL	06708519.1	2/24/2006	1987647	11/3/2010
EP	Granted	SYSTEMS AND METHODS FOR NEXT GENERATION CABLE	06750130.4	4/14/2006	1875640	12/21/2011
EP	Filed	LOCAL DIGITAL ASSET STORAGE MANAGEMENT TECHNIQUE	07254829.0	12/12/2007		
EP	Granted	STATISTICAL ADAPTIVE VIDEO RATE CONTROL	08101259.3	2/4/2008	1978745	1/12/2011
EP	Granted	EXPAT TRANSPONDER FOR IPTV NETWORKS	08705341.9	1/22/2008	2245855	1/6/2016
EP	Granted	DETERMINATION OF A TYPE OF PICTURE ENCODING OF A DECOMPRESSED VIDEO SIGNAL	08717181.5	2/27/2008	2127393	4/25/2018
EP	Granted	TIMESTAMP CONVERSION	08760351.0	6/2/2008	2163096	10/14/2015
EP	Granted	FLASH DETECTION	08859796.8	12/11/2008	2240886	7/4/2018
EP	Filed	VIDEO BIT RATE TRACKING/MAXIMISING	10175907.4	9/9/2010		
EP	Granted	REDUCE THE MINIMUM BITRATE	10742791.6	7/28/2010	2599309	6/19/2019
EP	Granted	PRE-RATE BUFFER, PCR INSERTION	10751588.4	8/23/2010	2609743	1/7/2015
EP	Granted	PRIVATE DATA INCLUSION FOR MULTIPLEXED SYSTEMS	10784506.7	11/26/2010	2643954	6/13/2018
EP	Filed	ADAPTIVE TRANSFER FUNCTIONS FOR HIGH DYNAMIC RANGE VIDEO COMPRESSION	15716036.7	4/10/2015		
EP	Filed	N-SCREEN INTERACTIVE WEB-APP EDITOR	15781145.6	8/31/2015		

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
EP	Filed	METHOD AND SYSTEM FOR ENCODING AND MULTIPLEXING PROGRAMMES FROM A PLURALITY OF TELEVISION CHANNELS	16193799.0	10/13/2016		
EP	Filed	DYNAMIC CLIENT-SIDE SELECTION OF FEC FRAGMENTS	16795422.1	10/27/2016		
EP	Granted	DECODING SYMBOLS REPRESENTING DIGITAL WORDS	99202924.9	9/8/1999	986180	6/12/2002
FR	Granted	IMAGE CODING OR DECODING DEVICE AND METHOD INVOLVING MULTITHREADING OF PROCESSING OPERATIONS OVER A	305531	5/6/2003	2854754	12/16/2005
FR	Granted	MULTIPLE- REFERENCE MOTION ESTIMATION METHOD AND DEVICE, CODING METHOD AND DEVICE, COMPUTER PROGRAM P	510096	10/3/2005	2891685	4/18/2008
FR	Granted	METHOD AND DEVICE FOR DETECTING TRANSITIONS IN A VIDEO SEQUENCE, METHOD AND DEVICE FOR CODING, COMPU	510097	10/3/2005	2891686	4/18/2008
FR	Granted	REAL TIME ENCODER WITH TIME AND BIT RATE CONSTRAINT, METHOD, COMPUTER PROGRAM PRODUCT AND CORRESPOND	609473	10/27/2006	2907990	4/17/2009
FR	Granted	IMAGE ENCODING OR DECODING METHOD AND DEVICE, WITH PARALLELIZATION OF PROCESSING OVER SEVERAL PROCES	853225	5/19/2008	2931280	1/7/2011
FR	Granted	SYSTEM AND METHOD FOR THE DYNAMIC REDUCTION OF THE ENTROPY OF A SIGNAL UPSTREAM TO A DATA COMPRESSION	1351277	2/14/2013	3002062	6/23/2017
FR	Granted	METHOD FOR MANAGING PERSONALIZED PLAYING LISTS OF THE TYPE COMPRISING A URL TEMPLATE AND A LIST OF S	1354503	5/17/2013	3005820	5/29/2015
FR	Granted	METHOD FOR SELECTING AT LEAST ONE ENCODING PARAMETER IN A VIDEO ENCODER	1455665	6/19/2014	1455665	6/29/2018
FR	Granted	METHOD AND SYSTEM FOR ENCODING AND MULTIPLEXING PROGRAMMES FROM A PLURALITY OF TELEVISION CHANNELS	1653964	5/2/2016	FR3042361 B1	12/8/2017
FR	Granted	CONTROL OF FRAME TYPES IN VIDEO COMPRESSION	05255175.1	9/23/2005	1646246	10/17/2007
FR	Granted	STATISTICAL ADAPTIVE VIDEO RATE CONTROL	08101259.3	2/4/2008	1978745	1/12/2011

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
FR	Granted	FILTERING VIDEO SIGNALS CONTAINING CHROMINANCE INFORMATION	99200597.5	3/3/1999	0948215	4/13/2005
FR	Granted	A METHOD AND APPARATUS FOR PROCESSING COMPRESSED VIDEO DATA STREAMS	99200599.1	3/3/1999	0948205	6/16/2004
FR	Granted	DECODING SYMBOLS REPRESENTING DIGITAL WORDS	99202924.9	9/8/1999	0986180	6/12/2002
FR	Granted	A METHOD AND APPARATUS FOR REDUCING DISTORTION OF DIGITAL DATA	99950917.7	10/22/1999	1129556	8/22/2007
GB	Granted	P2P IPTV KEY INDICATOR INSERTION	1008838.3	12/21/2007	2468068	10/10/2012
GB	Granted	P2P IPTV STREAM INTERLEAVE VIA SUBSCRIPTION	1009598.2	2/22/2008	2469763	3/9/2011
GB	Granted	P2P IPTV MEDIA DISTRIBUTION	1011865.1	2/22/2008	2470493	3/23/2011
GB	Granted	CONTROL OF FRAME TYPES IN VIDEO COMPRESSION	05255175.1	9/23/2005	1646246	10/17/2007
GB	Granted	SYSTEMS AND METHODS FOR NEXT GENERATION CABLE	06750130.4	4/14/2006	1875640	12/21/2011
GB	Granted	STATISTICAL ADAPTIVE VIDEO RATE CONTROL	08101259.3	2/4/2008	1978745	1/12/2011
GB	Granted	TIMESTAMP CONVERSION	08760351.0	6/2/2008	2163096	10/14/2015
GB	Granted	FLASH DETECTION	08859796.8	12/11/2008	2240886	7/4/2018
GB	Granted	PRE-RATE BUFFER, PCR INSERTION	10751588.4	8/23/2010	2609743	1/7/2015
GB	Granted	PRIVATE DATA INCLUSION FOR MULTIPLEXED SYSTEMS	10784506.7	11/26/2010	2643954	6/13/2018
GB	Granted	FILTERING VIDEO SIGNALS CONTAINING CHROMINANCE INFORMATION	99200597.5	3/3/1999	0948215	4/13/2005
GB	Granted	A METHOD AND APPARATUS FOR PROCESSING COMPRESSED VIDEO DATA STREAMS	99200599.1	3/3/1999	0948205	6/16/2004
GB	Granted	DECODING SYMBOLS REPRESENTING DIGITAL WORDS	99202924.9	9/8/1999	0986180	6/12/2002
GB	Granted	A METHOD AND APPARATUS FOR REDUCING DISTORTION OF DIGITAL DATA	99950917.7	10/22/1999	1129556	8/22/2007
IN	Filed	PARENTAL CONTROL IN MOBILE TV CONSUMPTION	1012/DELNP/2012	6/9/2010		
IN	Filed	REDUCE THE MINIMUM BITRATE	217/DELNP/2013	7/28/2010		
IN	Filed	STATISTICAL ADAPTIVE VIDEO RATE CONTROL	301/DEL/2008	2/4/2008		
IN	Granted	P2P IPTV STREAM INTERLEAVE VIA SUBSCRIPTION	4573/DELNP/2010	2/22/2008	311690	4/26/2019
IN	Granted	EXPAT TRANSPONDER FOR IPTV NETWORKS	4577/DELNP/2010	1/22/2008	310294	3/28/2019
IN	Filed	P2P IPTV MEDIA DISTRIBUTION	4624/DELNP/2010	2/22/2008		
IN	Granted	IMS-ENABLED IPTV CONTROL CHANNEL	6174/DELNP/2008	2/24/2006	284285	6/16/2017

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
JP	Granted	IMPROVED MEDIA SYNCHRONISATION USING PREDETERMINED MEDIA PROPERTIES	2002-590029	5/10/2002	4290995	4/10/2009
JP	Granted	DISTRIBUTION METHODS FOR STORAGE SYSTEM BASED ON P2P AND MULTICAST TECHNOLOGY	2011-549442	2/17/2009	5269208	5/17/2013
KR	Granted	SYSTEMS AND METHODS FOR NEXT GENERATION CABLE	10-2007-7020108	4/14/2006	10-0883572	2/6/2009
NL	Granted	DETERMINATION OF A TYPE OF PICTURE ENCODING OF A DECOMPRESSED VIDEO SIGNAL	8717181.5	2/27/2008	2127393	4/25/2018
NL	Granted	FLASH DETECTION	8859796.8	12/11/2008	2240886	7/4/2018
NL	Granted	PRE-RATE BUFFER, PCR INSERTION	10751588.4	8/23/2010	2609743	1/7/2015
NL	Granted	PRIVATE DATA INCLUSION FOR MULTIPLEXED SYSTEMS	10784506.7	11/26/2010	2643954	6/13/2018
NL	Granted	IMPROVEMENTS IN OR RELATING TO COMPRESSING A DIGITAL SIGNAL	98302236.9	3/27/1997	0868084	11/27/2002
TW	Granted	SOCIAL QUANTIFIED SELF	104103959	2/5/2015	I558189	11/11/2016
US	Granted	ENCODING DIGITAL SIGNALS	09/088831	6/18/1997	6421383	7/16/2002
US	Granted	RECOVERY OF A CARRIER SIGNAL FROM A MODULATED INPUT SIGNAL	09/249936	2/12/1999	6208201	3/27/2001
US	Granted	FILTERING VIDEO SIGNALS CONTAINING CHROMINANCE INFORMATION	09/280770	3/29/1999	6437827	8/20/2002
US	Granted	METHOD AND APPARATUS FOR PROCESSING COMPRESSED VIDEO DATA STREAMS	09/286371	5/4/1999	6370199	4/9/2002
US	Granted	DECODING SYMBOLS REPRESENTING DIGITAL WORDS	09/392501	9/9/1999	6611940	8/26/2003
US	Granted	ENCODING INPUT DIGITAL WORDS TO FORM ENCODED OUTPUT SIGNALS	09/392503	9/9/1999	6553539	4/22/2003
US	Granted	DE-INTERLACING A VIDEO SIGNAL REPRESENTING INTERLACED FIELDS	09/444464	11/22/1999	6414718	7/2/2002
US	Granted	METHOD AND SYSTEM OF PLAYING AND CONTROLLING A CONTEST FOR A LARGE NUMBER OF SIMULTANEOUS CONTESTANTS	09/536518	3/22/2000	7076434	7/11/2006
US	Granted	SINGLE-PASS MULTILEVEL METHOD FOR APPLYING MORPHOLOGICAL OPERATORS IN MULTIPLE DIMENSIONS	09/697479	10/26/2000	6978053	12/20/2005
US	Granted	METHOD AND APPARATUS FOR ENCODING VIDEO HYPERLINKS	09/697483	10/26/2000	6944228	9/13/2005
US	Granted	METHODS FOR OUTLINING AND FILLING REGIONS IN MULTI-DIMENSIONAL ARRAYS	09/697774	10/26/2000	6816628	11/9/2004

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
US	Granted	SYSTEM AND METHOD FOR GENERATING DATA STRUCTURES FOR A HYPERLINKED TELEVISION BROADCAST	09/697775	10/26/2000	7117517	10/3/2006
US	Granted	METHOD AND APPARATUS FOR SWITCHING BETWEEN MULTIPLE PROGRAMS BY INTERACTING WITH A HYPERLINKED TELEVISION BROADCAST	09/747677	12/22/2000	7249367	7/24/2007
US	Granted	METHOD AND APPARATUS FOR REDUCING DISTORTION OF DIGITAL DATA	09/807857	4/19/2001	6963621	11/8/2005
US	Granted	SYSTEM AND METHOD FOR MERGING INTERACTIVE TELEVISION DATA WITH CLOSED CAPTION DATA	09/840497	4/23/2001	7607149	10/20/2009
US	Granted	SYSTEM AND METHOD FOR RECORDING AND PLAYING BACK INTERACTIVE CONTENT DURING A BROADCAST EVENT	09/931590	8/16/2001	7668928	2/23/2010
US	Granted	CONTROLLING MULTIPLE NODES DIVIDED INTO GROUPS	09/933260	8/20/2001	7054314	5/30/2006
US	Granted	CONTROLLING MULTIPLE NODES TO EXECUTE MESSAGES ONLY ONCE	09/933265	8/20/2001	7058054	6/6/2006
US	Granted	CABLE BILLING SYSTEMS AND METHODS ENABLING INDEPENDENCE OF SERVICE MARKETING AND PROVISIONING FROM BILLING AND COLLECTION OF REVENUE	10/054719	1/18/2002	7620574	11/17/2009
US	Granted	INTERACTIVE STREAMING MEDIA PRODUCTION TOOL USING COMMUNICATION OPTIMIZATION	10/076879	2/13/2002	6727915	4/27/2004
US	Granted	SATELLITE COMMUNICATION APPARATUS	10/097495	3/13/2002	6957044	10/18/2005
US	Granted	SYSTEM AND METHOD FOR COORDINATING INTERACTIVE TELEVISION PROGRAMS	10/142756	5/9/2002	8555313	10/8/2013
US	Granted	METHOD AND SYSTEM FOR SCHEDULED STREAMING OF BEST EFFORT DATA	10/147010	5/15/2002	8880709	11/4/2014
US	Granted	APPARATUS FOR REDUNDANT MULTIPLEXING AND REMULTIPLEXING OF PROGRAM STREAMS AND BEST EFFORT DATA	10/159787	5/31/2002	7061942	6/13/2006
US	Granted	OPTIMIZED SCENE GRAPH CHANGE-BASED MIXED MEDIA RENDERING	10/159989	5/31/2002	7439982	10/21/2008
US	Granted	SYSTEM AND METHOD FOR DISTRIBUTING NETWORK-BASED PERSONAL VIDEO	10/210278	8/1/2002	8024766	9/20/2011
US	Granted	INTERACTIVE TELEVISION WITH EMBEDDED UNIVERSAL TIME CODES	10/212859	8/5/2002	7725918	5/25/2010

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
US	Granted	INTERACTIVE TELEVISION TRACKING SYSTEM	10/222445	8/16/2002	7861259	12/28/2010
US	Granted	QUANTIZATION AND COMPRESSION OF INFORMATION IN A DIRECT ACYCLIC GRAPH	10/222954	8/15/2002	6711300	3/23/2004
US	Granted	IMAGE CODING OR DECODING DEVICE AND METHOD INVOLVING MULTITHREADING OF PROCESSING OPERATIONS OVER A PLURALITY OF PROCESSORS, AND CORRESPONDING COMPUTER PROGRAM AND SYNCHRONISATION SIGNAL	10/555498	5/6/2004	7885334	2/8/2011
US	Granted	METHOD AND SYSTEM FOR RE-MULTIPLEXING OF CONTENT-MODIFIED MPEG-2 TRANSPORT STREAMS USING INTERPOLATION OF PACKET ARRIVAL TIMES	10/640866	8/13/2003	7227899	6/5/2007
US	Granted	METHOD AND SYSTEM FOR RE-MULTIPLEXING OF CONTENT-MODIFIED MPEG-2 TRANSPORT STREAMS USING PCR INTERPOLATION	10/640871	8/13/2003	7693222	4/6/2010
US	Granted	METHOD AND SYSTEM FOR MODELING THE RELATIONSHIP OF THE BIT RATE OF A TRANSPORT STREAM AND THE BIT RATE OF AN ELEMENTARY STREAM CARRIED THEREIN	10/640872	8/13/2003	7342968	3/11/2008
US	Granted	MODEL AND MODEL UPDATE TECHNIQUE IN A SYSTEM FOR MODELING THE RELATIONSHIP OF THE BIT RATE OF A TRANSPORT STREAM AND THE BIT RATE OF AN ELEMENTARY STREAM CARRIED THEREIN	10/641322	8/13/2003	7274742	9/25/2007
US	Granted	SYSTEMS AND METHODS FOR PROVIDING FLEXIBLE PROVISIONING ARCHITECTURES FOR A HOST IN A CABLE SYSTEM	10/712832	11/12/2003	7757261	7/13/2010
US	Granted	QUANTIZATION AND COMPRESSION OF INFORMATION IN A DIRECT ACYCLIC GRAPH	10/806055	3/22/2004	7039251	5/2/2006
US	Granted	METHODS FOR OUTLINING AND FILLING REGIONS IN MULTI-DIMENSIONAL ARRAYS	10/820949	4/8/2004	6879720	4/12/2005
US	Granted	INTERACTIVE STREAMING MEDIA PRODUCTION TOOL USING COMMUNICATION OPTIMIZATION	10/831960	4/26/2004	7376153	5/20/2008
US	Granted	METHOD AND SYSTEM FOR THE MANAGEMENT OF TARGETED MATERIAL INSERTION USING A CAMPAIGN MANAGER	10/976286	10/28/2004	7568209	7/28/2009

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
US	Granted	SYNCHRONIZATION AND AUTOMATION IN AN ITV ENVIRONMENT	11/051405	2/4/2005	8010986	8/30/2011
US	Granted	DETECTING AND SELECTING BETWEEN PROGRESSIVE SCANNED AND INTERLACED SIGNALS	11/058870	2/16/2005	7417688	8/26/2008
US	Granted	SYSTEM AND METHOD FOR DESCRIBING PRESENTATION AND BEHAVIOUR INFORMATION IN AN ITV APPLICATION	11/070698	3/1/2005	7913286	3/22/2011
US	Granted	CONTROL OF FRAME TYPES IN VIDEO COMPRESSION	11/208276	8/18/2005	7848424	12/7/2010
US	Granted	METHOD AND SYSTEM FOR SCHEDULED STREAMING OF BEST EFFORT DATA	11/274371	11/14/2005	7636306	12/22/2009
US	Granted	METHOD AND SYSTEM FOR SCHEDULED STREAMING OF BEST EFFORT DATA	11/274610	11/14/2005	7778249	8/17/2010
US	Granted	STATISTICAL CONTENT BLOCK MATCHING SCHEME FOR PRE-PROCESSING IN ENCODING AND TRANSCODING	11/329685	1/10/2006	7983341	7/19/2011
US	Granted	METHOD AND SYSTEM FOR SCHEDULED STREAMING OF BEST EFFORT DATA	11/339899	1/25/2006	7680151	3/16/2010
US	Granted	QUANTIZATION AND COMPRESSION OF INFORMATION IN A DIRECT ACYCLIC GRAPH	11/406061	4/18/2006	7277588	10/2/2007
US	Granted	SYSTEMS AND METHODS FOR ANALOG CHANNEL REUSE IN A CABLE SYSTEM	11/531900	9/14/2006	7751451	7/6/2010
US	Granted	METHOD AND DEVICE FOR DETECTING TRANSITIONS IN A VIDEO SEQUENCE, METHOD AND DEVICE FOR CODING, COMPUTER PROGRAM PRODUCTS AND CORRESPONDING STORAGE MEANS	11/542632	10/3/2006	7990477	8/2/2011
US	Granted	SYSTEMS AND METHODS FOR PROVISIONING A HOST DEVICE FOR ENHANCED SERVICES IN A CABLE SYSTEM	11/560046	11/15/2006	7730513	6/1/2010
US	Granted	APPARATUS AND METHOD TO FIND THE MAXIMUM OR MINIMUM OF A SET OF NUMBERS	11/588733	10/27/2006	7552155	6/23/2009
US	Granted	METHOD AND ARCHITECTURE FOR TEMPORAL-SPATIAL DEBLOCKING AND DEFICKERING WITH EXPANDED FREQUENCY FILTERING IN COMPRESSED DOMAIN	11/591098	11/1/2006	7760964	7/20/2010
US	Granted	DECODING A CONCATENATED CONVOLUTIONAL-ENCODED AND BLOCK ENCODED SIGNAL	11/597153	5/19/2005	7783963	8/24/2010

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
US	Granted	LOCAL DIGITAL ASSET STORAGE MANAGEMENT TECHNIQUE	11/644601	12/21/2006	7680993	3/16/2010
US	Granted	IMS-ENABLED CONTROL CHANNEL FOR IPTV	11/661550	2/24/2006	8078733	12/13/2011
US	Granted	STATISTICAL ADAPTIVE VIDEO RATE CONTROL	11/704826	2/9/2007	8050320	11/1/2011
US	Granted	REAL TIME ENCODER WITH TIME AND BIT RATE CONSTRAINT, METHOD, COMPUTER PROGRAM PRODUCT AND CORRESPONDING STORAGE MEANS	11/857099	10/19/2007	8254442	8/28/2012
US	Granted	QUANTIZATION AND COMPRESSION OF INFORMATION IN A DIRECT ACYCLIC GRAPH	11/906534	10/2/2007	7474796	1/6/2009
US	Granted	METHOD AND APPARATUS FOR INTERACTION WITH HYPERLINKS IN A TELEVISION BROADCAST	11/937246	11/8/2007	8356329	1/15/2013
US	Granted	FLASH DETECTION	12/001320	12/11/2007	8218086	7/10/2012
US	Granted	METHOD OF SELECTING QUANTIZER VALUES IN VIDEO COMPRESSION SYSTEMS	12/004369	12/20/2007	8189663	5/29/2012
US	Granted	TIME-SHIFTING AND CHASE-PLAY FOR AN IPTV SYSTEM	12/281723	3/7/2006	8752107	6/10/2014
US	Granted	HIERARCHICAL BROADCAST TRANSMISSION VIA MULTIPLE TRANSMITTERS	12/375254	7/27/2006	8781391	7/15/2014
US	Granted	IMAGE ENCODING OR DECODING METHOD AND DEVICE, WITH PARALLELIZATION OF PROCESSING OVER SEVERAL PROCESSORS AND COPROCESSORS, CORRESPONDING COMPUTER-READABLE STORAGE	12/468374	5/19/2009	8111749	2/7/2012
US	Granted	DETERMINATION OF A TYPE OF PICTURE ENCODING OF A DECOMPRESSED VIDEO SIGNAL	12/529040	2/27/2008	8724695	5/13/2014
US	Granted	TIMESTAMP CONVERSION	12/663387	6/2/2008	8379674	2/19/2013
US	Granted	METHOD AND APPARATUS FOR OBTAINING MEDIA OVER A COMMUNICATIONS NETWORK	12/918341	2/22/2008	8316148	11/20/2012
US	Granted	METHOD AND APPARATUS FOR OBTAINING MEDIA OVER A COMMUNICATIONS NETWORK	12/918375	2/22/2008	8316108	11/20/2012
US	Granted	CONTENT ADAPTIVE VIDEO ENCODER AND CODING METHOD	12/994036	5/22/2008	8837602	9/16/2014
US	Granted	SUPPORTING FUNCTIONS FOR QUALITY-ASSURED P2P VOD SERVICES	13/123412	10/8/2009	9003467	4/7/2015
US	Granted	SYNCHRONIZATION AND AUTOMATION IN AN ITV ENVIRONMENT	13/180756	7/12/2011	8505058	8/6/2013
US	Granted	VIDEO BIT-RATE CONTROL	13/226755	9/7/2011	8848784	9/30/2014

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
US	Granted	METHOD OF AND A SYSTEM FOR PROVIDING BUFFER MANAGEMENT MECHANISM	13/262881	4/16/2009	9060192	6/16/2015
US	Granted	BITRATE DISTRIBUTION	13/812187	7/28/2010	10205943	2/12/2019
US	Granted	SYSTEM AND METHOD FOR INSERTION OF A PROGRAM CLOCK REFERENCE DURING PACKETIZATION OF AN ENCODED DATA STREAM	13/816788	8/23/2010	9374580	6/21/2016
US	Granted	METHOD AND DEVICE FOR BUFFERING DATA FOR MULTIPLEXING	13/988856	11/26/2010	9078017	7/7/2015
US	Granted	SYSTEM AND METHOD FOR THE DYNAMIC REDUCTION OF THE ENTROPY OF A SIGNAL UPSTREAM TO A DATA COMPRESSION DEVICE	14/181242	2/14/2014	9635362	4/25/2017
US	Granted	CONTENT-AWARE WEIGHTED IMAGE MANIPULATIONS	14/184620	2/19/2014	9336567	5/10/2016
US	Granted	METHOD FOR MANAGING PERSONALIZED PLAYING LISTS OF THE TYPE COMPRISING A URL TEMPLATE AND A LIST OF SEGMENT IDENTIFIERS	14/281560	5/19/2014	9710473	7/18/2017
US	Filed	INTERACTIVE WEB APPLICATION EDITOR	14/580172	12/22/2014		
US	Granted	METHOD FOR SELECTING AT LEAST ONE ENCODING PARAMETER IN A VIDEO ENCODER, WITH A SUPPLEMENTARY SMOOTHNESS CONSTRAINT	14/745005	6/19/2015	9888254	2/6/2018
US	Filed	DYNAMIC CLIENT-SIDE SELECTION OF FEC FRAGMENTS	14/930543	11/2/2015		
US	Granted	METHOD AND APPARATUS FOR RELIABLE TOKEN REVOCATION	14/937800	11/10/2015	10038723	7/31/2018
US	Granted	TECHNIQUES FOR GENERATING AND PROVIDING PERSONALIZED DYNAMIC LIVE CONTENT FEEDS	14/942858	11/16/2015	9762943	9/12/2017
US	Filed	REMOTE MONITORING AND CONTROL OF MULTIPLE IPTV CLIENT DEVICES	15/096542	4/12/2016		
US	Granted	CAPTION RENDERING AUTOMATION TEST FRAMEWORK	15/098883	4/14/2016	9900665	2/20/2018
US	Filed	AUTOMATION TESTING APPARATUS	15/132129	4/18/2016		
US	Granted	SYSTEM AND METHOD FOR INSERTION OF A PROGRAM CLOCK REFERENCE DURING PACKETIZATION OF AN ENCODED DATA STREAM	15/157516	5/18/2016	10080050	9/18/2018
US	Granted	METHOD AND SYSTEM FOR ENCODING AND MULTIPLEXING PROGRAMS OF A PLURALITY OF TELEVISION CHANNELS	15/291752	10/13/2015	9848220	12/19/2017

Country	Status	Title	Appl. No.	Appl. Date	Grant No.	Grant Date
US	Filed	IMPROVED COMPRESSION IN HIGH DYNAMIC RANGE VIDEO	15/559594	4/10/2015		
US	Expired	MULTI-DRM AND ADDING SECURE SERVICE-LEVEL ENTITLEMENTS ON TOP OF NATIVE DRM	62/598272	12/13/2017		