PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	Release of Intellectual Property Security Interests

CONVEYING PARTY DATA

Name	Execution Date
NDS Holdco, Inc.	03/10/2011

RECEIVING PARTY DATA

Name:	NDS Limited
Street Address:	One London Road
City:	Staines, Middlesex
State/Country:	UNITED KINGDOM
Postal Code:	TW18 4EX

Name:	News Datacom Limited
Street Address:	One London Road
City:	Staines, Middlesex
State/Country:	UNITED KINGDOM
Postal Code:	TW18 4EX

PROPERTY NUMBERS Total: 155

Property Type	Number
Patent Number:	6772435
Patent Number:	6298441
Patent Number:	5939975
Patent Number:	6637029
Application Number:	12317081
Patent Number:	6499103
Patent Number:	6681393
Patent Number:	6227974
Patent Number:	6424947
Patent Number:	6285396

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Patent Number:	6587561
Patent Number:	7031470
Patent Number:	7386127
Patent Number:	6312336
Patent Number:	6668326
Patent Number:	6466670
Patent Number:	6848051
Patent Number:	7447315
Patent Number:	7149309
Patent Number:	6629243
Patent Number:	6934855
Patent Number:	6785389
Patent Number:	6889322
Patent Number:	7007165
Patent Number:	7200751
Patent Number:	6880081
Patent Number:	7188242
Patent Number:	7263611
Patent Number:	7382884
Patent Number:	7058802
Patent Number:	7013293
Patent Number:	7106749
Application Number:	10637892
Application Number:	11980125
Application Number:	11978086
Application Number:	09515118
Application Number:	11599216
Application Number:	12152551
Application Number:	11136182
Application Number:	11318787
Application Number:	11318788
Application Number:	11595157
Application Number:	12072894
Application Number:	10332868
Application Number:	11494153

Patent Number:	7337332
Patent Number:	7340760
Patent Number:	7397918
Patent Number:	7333610
Patent Number:	7436953
Patent Number:	7337464
Patent Number:	7306522
Application Number:	12005590
Application Number:	12150746
Application Number:	12006402
Application Number:	12006392
Application Number:	12156491
Application Number:	10258497
Application Number:	10297806
Application Number:	10297453
Application Number:	10182639
Application Number:	10471380
Application Number:	10472286
Application Number:	12388717
Application Number:	10479373
Application Number:	10495724
Application Number:	10498888
Application Number:	10516487
Application Number:	11977821
Patent Number:	7370192
Patent Number:	7379548
Patent Number:	7340606
Patent Number:	6980650
Application Number:	10547911
Application Number:	10522069
Application Number:	10505825
Application Number:	12005523
Application Number:	10543765
Application Number:	10541002
Application Number:	10558527

Application Number:	10590002
Application Number:	10556936
Application Number:	11272344
Application Number:	10529026
Application Number:	10584887
Application Number:	11632536
Application Number:	11628677
Application Number:	10589417
Application Number:	10593386
Application Number:	11579651
Patent Number:	7356775
Patent Number:	6880752
Application Number:	11629435
Application Number:	11628402
Application Number:	10592650
Application Number:	11665791
Application Number:	11663930
Application Number:	10555214
Application Number:	12084852
Application Number:	11587714
Application Number:	11887057
Application Number:	11793365
Application Number:	11991819
Application Number:	11989560
Application Number:	11886753
Application Number:	11886989
Application Number:	11918110
Application Number:	12083023
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Application Number:	11795214
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Application Number:	11920605
Application Number:	11990356
Application Number:	12279208
Application Number:	12084539

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Application Number:	12087808
Application Number:	11920800
Application Number:	11921054
Application Number:	12223137
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Application Number:	11920900
Application Number:	12227193
Application Number:	12224749
Application Number:	12309889
Application Number:	11810023
Application Number:	61068712
Application Number:	61128532
Application Number:	61090278
Application Number:	61204505
Patent Number:	5282249
Patent Number:	5481609
Patent Number:	5539450
Patent Number:	5592212
Patent Number:	5590200
Patent Number:	5414773
Patent Number:	5715315
Patent Number:	6634028
Patent Number:	5666412
Patent Number:	5878134
Patent Number:	5774546
Patent Number:	5774527
Patent Number:	5786845

Patent Number:	6405369
Patent Number:	6654721
Patent Number:	6178242
Patent Number:	7124426
Application Number:	11519182

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	S. Anita Sinha

Total Attachments: 43
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RELEASE OF INTELLECTUAL PROPERTY SECURITY INTERESTS dated as of March 10, 2011 (this "***Release***"), by NDS HOLDCO, INC., a Delaware corporation located at 1211 Avenue of the Americas, New York, NY 10105, as VLN Security Trustee for the VLN Secured Parties, (in such capacity, the "***VLN Security Trustee***"), in favor of NDS LIMITED, a corporation incorporated in England and Wales, located at One London Road, Staines, Middlesex, United Kingdom TW18 4EX, and NEWS DATACOM LIMITED, a corporation incorporated in England and Wales, located at One London Road, Staines, Middlesex, United Kingdom TW18 4EX. Capitalized terms used herein and not otherwise defined shall have the meanings assigned to such terms in the Facility Agreements, the Intercreditor Agreement, the Intellectual Property Security Agreement, or the Short-Form Intellectual Property Security Agreement, as applicable, referred to below.

A. Reference is made to (i) the Senior Facilities Agreement dated August 14, 2008, as amended and restated by amendment and restatement agreements dated January 26, 2009 and February 18, 2009, (as amended, supplemented or otherwise modified from time to time, the "***Senior Facility Agreement***"), among NDS Finance Limited (the "***Company***"), J.P. Morgan plc, Morgan Stanley Bank International Limited, BNP Paribas, Lloyds TSB Bank plc and The Governor Of The Bank of Ireland as Arrangers, J.P. Morgan Europe Limited as Facility Agent and Security Agent, JPMorgan Chase Bank, N.A., London Branch as Issuing Bank and the Original Lenders listed therein, (ii) the Mezzanine Facility Agreement dated August 14, 2008 as amended and restated by amendment and restatement agreements dated January 26, 2009, and February 18, 2009 (as amended and/or restated, supplemented or otherwise modified from time to time, the "***Mezzanine Facility Agreement***" and, together with the Senior Facility Agreement, the "***Facility Agreements***") among the Company, J.P. Morgan plc and Morgan Stanley Bank International Limited as Arrangers, with J.P. Morgan Europe Limited acting as Facility Agent and Security Agent and the Original Lenders listed therein, (iii) the Intercreditor Agreement dated as of January 28, 2009 in relation to the Facility Agreements (the "***Intercreditor Agreement***") among the Company, NDS Group Limited, the Obligors set forth therein, J.P. Morgan Europe Limited as Security Agent, Senior Agent and Mezzanine Agent, NDS Holdco Inc. as VLN Security Trustee, the Senior Lenders, the Mezzanine Lenders, the Intra-Group Lenders and the Vendor Loan Note Holder, (iv) the Intellectual Property Security Agreement (the "***Intellectual Property Security Agreement***") dated as of April 28, 2009, among NDS Limited and News Datacom Limited (each of NDS Limited and News Datacom Limited a "***Grantor***" and, together, the "***Grantors***") and VLN Security Trustee, and (v) the Short-Form Intellectual Property Security Agreement (the "***Short-Form Intellectual Property Security Agreement***") dated as of April 28, 2009, among the Grantors and VLN Security Trustee.

B. Pursuant to the Facility Agreements, the Intellectual Property Security Agreement, and the Short-Form Intellectual Property Security Agreement, as

security for the prompt and complete payment and performance in full when due (whether at stated maturity, by required prepayment, declaration, acceleration, demand or otherwise, including the payment of amounts that would become due but for the operation of the automatic stay under Section 362(a) of the Bankruptcy Code) of all VLN Secured Obligations at any time owed or owing to the VLN Secured Parties (or any of them), each Grantor pledged, assigned, transferred and granted to the VLN Security Trustee, for its benefit and the benefit of the VLN Secured Parties, a continuing security interest in and Lien on all of its right, title or interest in, to and under all Intellectual Property Collateral, whether then owned or existing or thereafter acquired or arising.

"***Intellectual Property Collateral***" means each Grantor's right, title and interest in, to and under

(a) all Copyrights and Copyright Licenses to which it is a party, including those referred to on Schedule I;

(b) all Patents and Patent Licenses to which it is a party, including those referred to on Schedule II hereto;

(c) all Trademarks and Trademark Licenses to which it is a party, including those referred to on Schedule III hereto, and all goodwill of the business connected with the use of, and symbolized by, each Trademark and each Trademark License;

(d) all Trade Secrets and Trade Secret Licenses to which it is a party;

(e) all reissues, continuations or extensions of the foregoing; and

(f) all proceeds of the foregoing, including any claim by the Grantor against third parties for past, present, future (i) infringement or dilution of any (w) Copyright or Copyright Licensed under any Copyright License, (x) Trademark or Trademark licensed under any Trademark License, (y) Patent or Patent licensed under any Patent License or (z) Trade Secret or Trade Secret Licenses or (ii) injury to the goodwill associated with any Trademark or any Trademark licensed under any Trademark License.

C. The Short-Form Intellectual Property Security Agreement was recorded with the United States Patent and Trademark Office on May 18, 2009 at Reel/Frame 022703/0071 and Reel/Frame 3988/0841.

D. In connection with the termination of the Commitments under the Facility Agreements and the payment in full of all of the Loans and other Liabilities, and the release of security interests under the Transaction Documents and the Transaction Security Documents, the Grantors have informed the Administrative Agent of their desire to obtain the release of all right, title and interest of the VLN Security Trustee, the Secured Parties and each other grantee or beneficiary in and to the Intellectual Property Collateral granted under the Intellectual Property Security Agreement and Short-Form Intellectual Property Security Agreement.

Accordingly, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the VLN Security Trustee does hereby release, relinquish and discharge any and all of its continuing security interests in and Liens on in, to and under the Intellectual Property Collateral, including the Copyrights and Copyright Licenses listed on Schedule I hereto, the Patents and Patent Licenses set forth on Schedule II hereto, and the Trademark and Trademark Licenses set forth on Schedule III hereto, and reassigns all right, title and interest it has in the Intellectual Property Collateral, including the Copyrights and Copyright Licenses listed on Schedule I hereto, the Patents and Patent Licenses set forth on Schedule II hereto, and the Trademark and Trademark Licenses set forth on Schedule III hereto, to the Grantors. The VLN Security Trustee agrees to make filings with the United States Patent and Trademark Office and other necessary filings, in each case reasonably requested by the Company or the Grantors and at the expense of the Company or the Grantors, to evidence the release and termination of the VLN Security Trustee's security interests in the Intellectual Property Collateral, including the Copyrights and Copyright Licenses listed on Schedule I hereto, the Patents and Patent Licenses set forth on Schedule II hereto, and the Trademark and Trademark Licenses set forth on Schedule III hereto.

THIS RELEASE AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED AND ENFORCED IN ACCORDANCE WITH, THE INTERNAL LAWS OF THE STATE OF NEW YORK (INCLUDING, WITHOUT LIMITATION, SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK), WITHOUT REGARD TO CONFLICTS OF LAW PRINCIPLES THAT WOULD REQUIRE APPLICATION OF ANY OTHER LAW AND SHALL BE BINDING UPON THE VLN SECURITY TRUSTEE'S REPRESENTATIVES, SUCCESSORS, ASSIGNS AND TRANSFEREES.

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IN WITNESS WHEREOF, the VLN Security Trustee has caused this Release of Intellectual Property Security Interests to be executed and delivered by its duly authorized officer as of the date first set forth above.

NDS HOLDCO, INC., as VLN Security Trustee

By _____

Name: JANET NOVA

Title: SENIOR VICE PRESIDENT

SCHEDULE I

Copyrights

None

SCHEDULE II

See Attached.

NDS Granted Patents, Published and Pending

Wednesday, March 04, 2009

NDS Limited

96-12 *NDS Limited*

DIGITAL VIDEO BROADCAST SYSTEM

Transmission synchronization and bandwidth adjustment in a broadcast system are described. At least one service tool in the broadcast system supplies service information useful for selecting, from a series of broadcast events, broadcast events to be viewed by subscribers of the broadcast system. A conditional access (CA) unit in the broadcast system applies conditional access attributes to the series of broadcast events. Transmission synchronizing apparatus in the broadcast system synchronizes the CA unit and the at least one service tool by instructing the CA unit to blackout a particular event from the series of broadcast events to subscribers that are refused access to the particular event and instructing the at least one service tool to provide a replacement service to the subscribers that are refused access to the particular event. Alternatively or additionally, the transmission synchronizing apparatus adjusts transmission bandwidth allocated to the series of broadcast events in response to instructing the CA unit to blackout the particular event to subscribers that are refused access to the particular event and instructing the at least one service tool to provide the replacement service to the subscribers that are refused access to the particular event. Related apparatus and method are also described.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/171,323		6,772,435	15-Apr-2017

P-006-CIP *NDS Limited*

SECURE DOCUMENT ACCESS SYSTEM

A method for downloading a document via a communications medium operatively associated with a communications interface, the method including receiving the document from the communications medium, placing an information storage smart card in removable operative association with the communications interface, and conditionally transmitting the document from the communications interface to the information storage smart card and storing the document in the information storage smart card. Other related methods and apparatus are also provided.

			Application Number	Publication Number	Patent Number	Expiration Date
US	CIP1	Granted	09/115,489		6,298,441	20-Jan-2015

P-013 *NDS Limited*

THEFT PREVENTION SYSTEM

This invention discloses a vehicle theft prevention system which is operative to communicate with a central control station that transmits control signals to the vehicle, the system including an antenna, a receiving unit coupled to the antenna and operative to receive, via the antenna, the control signals transmitted by the central control station, and a processor which is operative to apply interference to operation of at least one critical engine component in the vehicle after an interruption in reception of the control signals at the receiving unit. A method of preventing a theft of a vehicle

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	08/897,013		5,939,975	18-Jul-2017

P-016 *NDS Limited*

INTELLIGENT ELECTRONIC PROGRAM GUIDE

A subscriber unit for use in a television system including a television network and transmitting apparatus for transmitting program schedule information, the subscriber unit including a receiving unit for receiving the program schedule information, a profile storage unit for storing at least one viewer preference profile of at least one television viewer, an intelligent agent for customizing the program schedule information based, at least in part, on the viewer preference profile, to produce a program guide including customized program schedule information, and display

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/242,871		6,637,029	30-Jun-2018
US	D1	Pending	12/317,081			30-Jun-2018

P-018 *NDS Limited*

SYMBOL DISPLAY SYSTEM

This invention discloses a symbol-display subscriber unit for use with a broadcast system, the broadcast system including a headend and a network operative to transmit a composite signal from the headend to a multiplicity of subscriber units, the composite sigincluding an encoded broadcast signal encoded in accordance with a plurality of control words (CWs) and a plurality of encryption control messages (ECMs), each of the plurality of ECMs being associated respectively with one of the plurality of CWs and including CW generating information, the multiplicity of subscriber units including at least one said symbol-display subscriber unit, said symbol-display subscriber unit including: a receiver receiving the composite signal from the network, security apparatus in operative engagement with the receiver, the security apparatus receiving each of the plurality of ECMs from the receiver and generating the associated CW from the CW generating information comprised within each said ECM. and a decoder for decoding the encoded broadcast signal for display on a display device, the decoder receiving the encoded broadcast signal from the receiver and receiving the CW from the security apparatus, wherein the security apparatus supplies symbol display information to the decoder, and the decoder provides a symbol to the display device for display thereon, the symbol being based, at least in part, on the symbol display information. A method for producing a symbol is also disclosed.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/341,075		6,499,103	02-Nov-2018

P-021 *NDS Limited*

VIEWER INTERACTION FEEDBACK METHOD AND SYSTEM FOR USE WITH AN INTERACTIVE TELECOMMUNICATIONS SYSTEM

A viewer response method for use with an interactive telecommunications system. The viewer response method includes accumulating a user interaction history of a user of the system, the user interaction history including user interaction information associated with a plurality of user interaction events and providing user-sensible feedback, based at least in part on the user interaction history.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/089,717		6,681,393	03-Jun-2018
US	C1	Pending OA	10/637,892	2004/0049785		03-Jun-2018

P-022 *NDS Limited*
INTERACTIVE GAME SYSTEM

A gaming method for use with an interactive game which is played at a player unit having an interface device which is coupled to a television and to at least one communication network. The method includes displaying, via the interface device, the interactive game on the television, capturing a picture of a player, transferring the picture of the player to a headend, processing the picture of the player to create an avatar of the player, electronically assimilating the avatar into the interactive game, and enabling the player to interactively play the interactive game by controlling the avatar via the at least one communication network. In another preferred embodiment, a gaming method is provided for use with an interactive game in which, at a first player unit, a first interface device is coupled to a first television and to a communication network, and at a second player unit, a second interface device is coupled to a second television and to the communication network. The method includes displaying, via the first and second interface devices, the interactive game at the first and second televisions, and enabling a first player, playing at the first player unit, and a second player, playing at the second player unit, to play along with the interactive game by competing each against the other via the communication network.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/242,781	99/00163	6,227,974	11-Jun-2018

P-023 *NDS Limited*
DISTRIBUTED IRD

A subscriber unit in a television system including an integrated receiver and decoder (IRD) including a first smart card reader which is operative to accept a first smart card, and a remote control including a second smart card reader which is operative to accept a second smart card. The first smart card and the second smart card, when inserted in the corresponding first and second smart card readers respectively, are operative to communicate with each other in wireless communication over a wireless communication link to control access to services.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/158,952		6,424,947	21-Sep-2018

P-024 *NDS Limited*
DIGITAL GLITCH DETECTOR

A method for detecting glitches in video signals, including the steps of humaniessly sampling pattern information from a frame of video signals, the frame being characterized by known pattern information, comparing sampled pattern information from the frame to the known pattern information, and detecting a glitch if the sampled pattern information differs from the known pattern information.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/130,574		6,285,396	07-Aug-2018

P-025 *NDS Limited*
KEY DELIVERY IN A SECURE BROADCASTING SYSTEM

A key delivery method for use in an encoded communications system in which at least one encoded item including a first item encoded with a first item control word is sent in a communication stream from a sender to a receiver, the method including transmitting an item entitlement control message (IECM) including item control information, transmitting a stream entitlement control message (SECM) including stream control information, and combining at least part of the item control information and at least part of the stream control information to produce the first item control word. Related methods and apparatus are also disclosed.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/244,597		6,587,561	04-Feb-2019

P-026 *NDS Limited*

PROTECTION OF DATA ON MEDIA RECORDING DISKS

This invention discloses a secure recording medium having at least one of audio, video and software content, comprising a plurality of media recording disks (DVD's) with a disk security chip embedded in each the DVD, each the disk chip comprising a security key, wherein at least two of the DVD's have different disk security keys. A method for protecting access to content recorded on a media recording disk (DVD) is also disclosed.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/376,384		7,031,470	05-Jan-2019
US	C1	Granted	11/286,177	2006106724	7,386,127	16-Aug-2019
US	C2	Pending	11/980,125	2008/0101602		16-Aug-2019
US	D1	Pending	11/978,086	2008/0069355		16-Aug-2019

P-028 *NDS Limited*

ELECTRONIC GAME GUIDE SYSTEM

A gaming guide method including providing first gaming guide information from a television network and second gaming guide information from a computer based communication network, and displaying simultaneously at least a portion of the first gaming guide information and at least a portion of the second gaming guide information.Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/244,198		6,312,336	04-Feb-2019

P-029 *NDS Limited*

CONTEXT SAVING SYSTEM

A method for performing a computation task in a secure processor removably operatively associated with a host including a memory external to the secure processor. The method includes computing a portion of the task in the secure processor, obtaining a setting representation of settings of processing components of the secure processor at the end of the computing step, transmitting the setting representation to the external memory, retrieving the setting representation from the external memory, providing the setting representation to the secure processor, and resuming computation of the task in the secure processor by employing the setting representation.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/316,256		6,668,326	21-May-2019

P-032 *NDS Limited*

ANTI PIRACY SYSTEM

This invention discloses an anti-piracy system including video representation signature apparatus for computing a forbidden signature of a forbidden video representation, communication apparatus for communicating the forbidden signature to a playing device, and a playing device adapted to receive and play back a recorded video representation, the playing device including reception apparatus for receiving the forbidden signature communicated by the communication apparatus, recorded video representation signature apparatus for computing a signature of the recorded video representation, and playback control apparatus operative to prevent playback of the recorded video representation if the computed signature of the recorded video representation matches the forbidden signature

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/481,739		6,486,870	04-Mar-2019

P-033 *NDS Limited*

SYSTEM FOR DETERMINING SUCCESSFUL RECEPTION OF A MESSAGE

A method for determining that all of a scrambled message has been successfully received, the scrambled message being scrambled in accordance with a scrambling key and being capable of being descrambled in accordance with a descrambling key, descrambling key generating information for generating the descrambling key being included within a control message (ECM) associated with the scrambled message. The method includes providing a scrambled message scrambled in accordance with a scrambling key, generating an unmodified ECM including descrambling key generating information for generating a descrambling key for descrambling the scrambled message, generating a first derived value based on the scrambled message using a first value derivation function, applying a first modification function to the unmodified ECM, the first modification function being based, at least in part, on the first derived value, thereby producing a modified ECM, transmitting the scrambled message and the modified ECM to a receiver, and performing, at the receiver, the following steps: generating a second derived value based on the received scrambled message using a second value derivation function, applying a second modification function to the modified ECM, the second modification function being based, at least in part, on the second derived value and being an inverse of the first modification function, thereby producing the unmodified ECM, and employing the unmodified ECM to determine that all of the message has been successfully received. Related apparatus and methods are also provided.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/728,824	2001-00422	6,848,051	20-Feb-2020
US	C1	Granted	11/000,254	2005100164	7,447,315	20-Feb-2020

P-034 *NDS Limited*
ADVANCED TELEVISION SYSTEM

A digital television recording method comprising: broadcasting a television program associated with a broadcaster set of parameters enabling access to a first set of predetermined portions of the program; operating an agent for determining whether to record the program and for associating with the program, upon recording of the program, an agent set of parameters enabling access to a second set of predetermined portions of the program; storing the program together with the broadcaster set of parameters and the agent set of parameters to generate an addressable program; retrieving at least a portion of the addressable program; displaying the at least a portion of the addressable program to a user; receiving from the user a user set of parameters enabling access to a third set of predetermined portions of the addressable program; editing the addressable program to include the user set of parameters enabling access to the third set of predetermined portions of the addressable program thereby generating an edited addressable program; and

			Application Number	Publication Number	Patent Number	Expiration Date
US		Pending OA	09/515,118			23-Jun-2019
US	C1	Pending OA	11/599,216	2007/067800		23-Jun-2019
US	D1	Pending	12/152,551	2008/0212949		23-Jun-2019

P-037 *NDS Limited*
TIME DEPENDANT AUTHORIZATION

A method and apparatus for controlling access to broadcast transmissions comprises a subscriber unit for use with a headend (15) which may transmit encoded programs to a plurality of subscriber units (25) via a satellite, cable or conventional wireless terrestrial broadcast television network (10). The subscriber unit includes a set top box (STB, 30) a television (35) and a removable security element such as a smart card (40) which is engageable with the STB. The STB incorporates a processor (110,figure 2) which may be programmed by a user to define at least one preselected time period when decoding of broadcast transmissions is disabled. During time periods in which viewing is authorised, broadcast programs may be decoded under control of the smart card. Alternatively, the time period selected may correspond to a duration within which program decoding is enabled, whilst at all other times decoding is prevented.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/432,668		7,149,309	02-Nov-2020

P-038 *NDS Limited*
SECURE COMMUNICATIONS SYSTEM

A key distribution method for distributing, via a communications network, a key in a multicast communications system in which each one of a plurality of communications is directed to an associated multicast group including a plurality of recipients intended to receive the one communication. The method includes providing a plurality of implemented key distribution methods, dynamically choosing one implemented key distribution method of the plurality of key distribution methods, and distributing at least one key using the one implemented key distribution method.Related apparatus and methods are also provided.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/414,061		6,629,243	07-Oct-2019

P-039 *NDS Limited*

REMOTE ADMINISTRATION OF SMART CARDS FOR SECURE ACCESS SYSTEMS

A method for remote administration of at least one smart card via a communication network is described. The method includes the steps of associating the at least one smart card with a remote administrator by storing administrator identification information of the remote administrator in the at least one smart card, inserting the at least one smart card in at least one user unit, employing the administrator identification information stored in the at least one smart card to identify the remote administrator associated with the at least one smart card, and establishing communication between the at least one smart card and the remote administrator via the communication network in accordance with the administrator identification information.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/415,957		6,934,855	08-Oct-2019
US	D1	Pending OA	11/136,182	2005/0216732		08-Oct-2019
US	D2	Pending	11/318,787	2007/0169183		08-Oct-2019
US	D3	Pending	11/318,788	2006/0107038		08-Oct-2019

P-040 *NDS Limited*

SYSTEM FOR BITSTREAM GENERATION

A bitstream generator including a plurality of linear feed shift registers (LFSRs) operative to generate a bit stream and including: at least a first LFSR operative, when assigned as a generator during a first time period including at least one clock cycle, to provide an output bit in each clock cycle within the first time period, and at least a second LFSR operative, when assigned as an assignor during the first time period, to provide in each clock cycle an output bit for determining assignments of at least some of the plurality of LFSRs for a second time period following the first time period, the assignments including assignment as a generator, and assignment as an assignor, and a first combiner operative to combine output bits from all of the at least a first LFSR being assigned as generators thereby to produce during each clock cycle a single output bit which is provided to the bit stream.Related apparatus and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/691,777		6,785,389	18-Oct-2020

P-041 *NDS Limited*

AUTHENTICATION TECHNIQUE

In a method for verifying, by a verifier, that a prover has access to a private key associated with a public key Kp, in which the method comprises the prover generating a random number R and communicating a disguised form of the random number R to the verifier, an improvement including the prover generating the random number R based on an input received from the verifier.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/480,231		6,889,322	10-Jan-2020

P-043 *NDS Limited*
WATERMARK SYSTEM

A method for examining an electronic representation of an item for a watermark, the method including examining at least a first electronic representation of an item for a watermark in accordance with a first watermark definition, receiving a signal indicating that a second watermark definition is to be used for examining electronic representations, and examining at least a second electronic representation of an item for a watermark in accordance with the second watermark definition. Related apparatus and methods are also provided.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/544,704		7,007,165	07-Apr-2020
US	C1	Granted	11/053,407		7,200,751	07-Apr-2020
US	C2	Pending	11/595,157	2007061585		07-Apr-2020

P-048 *NDS Limited*
KEY MANAGEMENT FOR CONTENT PROTECTION

A method for content access control operative to enable authorized devices to access protected content and to prevent unauthorized devices from accessing protected content, the method comprising: providing a plurality of authorized devices; dividing the plurality of authorized devices into a plurality of groups, each of the plurality of authorized devices being comprised in at least one of the plurality of groups, no two devices of the plurality of authorized devices being comprised in exactly the same groups; determining whether at least one device of the plurality of authorized devices is to be prevented from having access to the protected content and, if at least one device is to be prevented, removing all groups comprising the at least one device from the plurality of groups, thus producing a set of remaining groups; and determining an authorized set comprising groups from the set of remaining groups, such that each device of the plurality of authorized devices which was not determined, in the determining whether step, to be prevented from having access is comprised in at least one group of the authorized set.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/502,867		6,880,081	11-Feb-2020
US	C1	Granted	11/050,103		7,188,242	19-Jun-2020
US	D1	Granted	11/060,110		7,263,611	11-Feb-2020
US	D2	Granted	11/879,703	2008025517	7,382,884	11-Feb-2020
US	D2C1	Pending	12/072,894	2008/0222695		11-Feb-2020

P-049 *NDS Limited*
COMMUNICATION MANAGEMENT SYSTEM

A communication session management method for providing a transmission service having a plurality of service levels, each service level being associated with a separate quality-of-service (QOS), the method including preparing data for transmission at one of a plurality of service levels by uniquely associating a service-level encryption key to form encrypted data uniquely associated with the one of the plurality of service-levels, and transmitting the encrypted data uniquely associated with the one of the plurality of service-levels to users entitled to the one of the plurality of service-levels. The data may include audio, video, multimedia or 'On-demand' data.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/721,053		7,058,802	16-May-2023

P-050 *NDS Limited*
PORTABLE TRANSACTION DEVICE

A portable transaction device including transaction apparatus operative to participate in a monetary transaction, authorization apparatus operative to authorize the transaction apparatus to operate based on stored authorization parameters, and control apparatus operative to store the stored authorization parameters based on user input. The stored authorization parameters include at least one of the following: an identity of a user, a time period, and a distance. Related apparatus and methods are also provided.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/490,540		7,013,293	25-Jan-2020

P-051 *NDS Limited*
CONFIGURABLE HARDWARE SYSTEM

A method for reconfiguring a circuit configuration of a configurable hardware device via a communication network. The method includes transmitting via the communication network from a hardware configuration provider unit to the configurable hardware device a circuit reconfiguration of the configurable hardware device in response to a request from a user of the configurable hardware device to reconfigure the configurable hardware device, implementing the circuit reconfiguration of the configurable hardware device thereby reconfiguring the configurable hardware device and providing a reconfigured hardware device and billing the user in response to a determination of correct operation of the reconfigured hardware device. A user unit in a communication network is also disclosed.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/332,868	2004/0016002		03-Jun-2021

P-052 *NDS Limited*
SYSTEM FOR DATA STREAM PROCESSING

A method for processing a data stream including receiving a transport stream (TS), storing at least a portion of the TS, the at least a portion of the TS having a beginning and including a plurality of TS packets, determining, from among the plurality of TS packets, at least one TS packet including a candidate access point, storing in an index store a byte offset of the candidate access point; and storing in the index store a plurality of indications of byte offset, each byte offset being associated with an arrival time of a received TS packet.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/574,096		7,106,749	18-May-2020
US	C1	Allowed	11/494,153			18-May-2020

P-056 *NDS Limited*

TRANSFERRING ELECTRONIC CONTENT

A method and apparatus for transferring electronic content. The method and apparatus include providing electronic content to a first user, providing the first user with a key packet, the key packet including a decryption key and content rights information, transferring the electronic content and the key packet from the first user to a second user and rendering rights of the first user to the electronic content unusable upon transfer of the electronic content and the key packet from the first user to the second user.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	10/399,747	2004030898	7,337,332	24-Oct-2020
US	C1	Pending	12/005,590	2008/0148069		16-Dec-2022

P-058 *NDS Limited*

DIGITAL CONTENT DELIVERY SYSTEM AND METHOD

A system and a method for flexible, yet secure distribution of digital content items, optionally with an automatic payment mechanism for purchasing such content. The present invention supports the distribution of content to end user devices from a central distribution point (320), as in client-server models and variations thereof, and/or peer-to-peer distribution, for example between end user devices (310). In addition, the present invention also supports distribution models within either of these mechanisms for unitary distribution, to a specified end user device, or broadcast/multicast distribution, to a plurality of end user devices. In any case, in order for the distributed content to be operative, for example to be "played back" or otherwise displayed, the recipient end user device (310) must be in communication with a network control center (240). The network control center then enables the recipient end user device to play back or otherwise display the received content, for example by sending a code to the recipient end user device. Optionally, the network control center may require payment to be received before enabling the content for the recipient end user device. Thus, the present invention supports flexible distribution of content according to a number of different distribution models, while still preventing unauthorized play back or other display throughout the lifecycle of the digital content item, and optionally enabling assured payments.

			Application Number	Publication Number	Patent Number	Expiration Date
US	D1	Pending	12/150,746	2008/0205640		04-Jan-2021

P-068 *NDS Limited*

ADVERTISEMENTS IN AN END-USER CONTROLLED PLAYBACK ENVIRONMENT

This invention discloses a method for displaying advertisements transmitted to a user unit, the method includes receiving, at the user unit, at least one advertisement tagged with a delay tag indicating whether display of the at least one advertisement can be delayed and only if the delay tag allows delaying display of the at least one advertisement, storing the at least one advertisement at the user unit, retrieving the at least one advertisement and displaying the at least one advertisement. A billing system for reporting a commercial broadcast to a multiplicity of users is also

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/914,747		7,340,760	14-Jan-2021
US	D1	Pending OA	12/006,402	2008/0109842		14-Jan-2021
US	D2	Pending OA	12/006,392	2008/0127251		14-Jan-2021

P-069 *NDS Limited*
DYNAMICALLY SHIFTING CONTROL WORD

A method for generating a plurality of control words, each control word controlling access to an object. The method includes providing a control word packet (CWP), generating a first control word (CW) from the CWP, providing a second CW generation input and producing a second CW based, at least in part, on both of the following the first CW and the second CW generation input. Control word generating apparatus for generating a plurality of control words is also

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	10/181,992	2003091188	7,397,918	16-May-2021
US	D1	Pending	12/156,491	2008/0240431		16-May-2021

P-071 *NDS Limited*
SECURE DIGITAL CONTENT DELIVERY SYSTEM AND METHOD OVER A BROADCAST NETWORK

A system and a method for secure distribution of digital media content through a packet-based network such as the Internet. The security of the present invention does not require one-to-one key exchange, but rather enables keys, and/or information required in order to build the key, to be broadcast through the packet-based network. The digital media content is then also preferably broadcast, but cannot be accessed without the proper key. However, preferably only authorized end-user devices are able to access the digital media content, by receiving and/or being able to access the proper key. Thus, the present invention is useful for other types of networks in which digital media content is more easily broadcast rather than unicast, in addition to packet-based networks.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/258,497	2004/101138		22-May-2021

P-075 *NDS Limited*
UNICAST/MULTICAST ARCHITECTURE

A system and method for providing content to users including a multicast sub-system providing content to multiple users and a unicast sub-system providing content to individual users. The multicast sub-system being operative to push to each of a plurality of user communities, content relating to the community and the unicast sub-system being operative to provide on demand to a user, content which has not been previously pushed to the user.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/297,806	2004/0042479		19-Jun-2021

P-077 *NDS Limited*
TIME SHIFTED INTERACTIVE TELEVISION

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/297,453	03/0163832		21-Jun-2021

P-080 *NDS Limited*

SYSTEM AND METHOD FOR PRE- ENCRYPTION OF TRANSMITTED CONTENT

A system and a method for the creation and transmission of "pre-encrypted" digital content, which is encrypted before being placed on a distributed media transmission server. Preferably a plurality of such servers are used, for example in order to be able to place such a media transmission server in physical proximity to the end user client, whether in terms of geographical proximity or proximity through the network. Use of a plurality of transmission servers also optionally enables the media content to be transmitted flexibly, according to the request of the end user through the end

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	10/344,139	2003188154	7,333,610	10-Aug-2021

P-094 *NDS Limited*

METHOD AND SYSTEM FOR CONTROL OF BROADCAST CONTENT ACCESS

A method for controlling access to content, including preventing access to content that corresponds to a blacked out event, until at least one of a time criterion and payment criterion is met. Related methods and apparatus are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Allowed	10/182,639	2003/0126594		24-Dec-2021

P-096 *NDS Limited*

HACKING PREVENTION SYSTEM

A set-top box (STB) in a subscriber unit of a combined digital television and communication system is described. The STB includes a controller and a quadrature amplitude modulation (QAM) based tuner operatively controlled by the controller to selectively enable shared use of the QAM based tuner between the following two functions: tuning to a digital television frequency; and providing a downstream cable-modem link. Related apparatus and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	10/480,413	2004213406	7,436,953	21-Aug-2022

P-099 *NDS Limited*

ANONYMOUS ORDERING SYSTEM

In a pay-per-item system, a method and apparatus of anonymously ordering an item, including ordering the item through an anonymizing intermediary.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/471,380	2004/0111751		12-Nov-2021

P-102 *NDS Limited*

DIGITAL RIGHTS MANAGEMENT SYSTEM AND METHOD

A system and a method for providing variable security mechanisms for securing digital content, in which a single security mechanism is not used for all content. Instead, at least one characteristic or feature of the security mechanism is varied between units, instances or categories of content Therefore, even if unauthorized access is gained to a single unit of content, the overall integrity and security of the system for content distribution is not compromised. Preferably, security is provided through a general mechanism, which is then varied in order to provide variable, dissimilar security schemes for different types of content. By "type of content", it is meant any of a single unit of content, a single instance of content or a single category of content. For example, for a category of content, the content may be characterized according to the identity of the content itself, such as the title of a movie for example, and/or according to the owner of a particular copy of the content. Thus, different security schemes may optionally and preferably be generated from a particular root structure. Related apparatus and methods are also provided.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Allowed	10/472,286	2004/0111613		21-Feb-2022
US	D1	Pending	12/388,717			21-Feb-2022

P-104 *NDS Limited*

SYSTEM FOR RANDOM ACCESS TO CONTENT

A method for accessing a desired point in time-synchronized data within a stream, the stream being associated with time information, the method including providing a desired presentation time associated with a desired point within a time-synchronized data stream, determining a stream access point, decoding the stream beginning at the stream access point, and assigning a time associated with the stream access point as a utilization time. Related apparatus and methods are also disclosed.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/479,373	2004/199658		30-Jun-2022

P-112 *NDS Limited*

SET-TOP BOX REFORMATTER

A broadcasting system including a transmitter operative to transmit a signal in a first transmission format, a receiver operative to receive the signal, a reformatter operative to reformat the received signal into a second transmission format, and a set-top box (STB) operative to decode the second-transmission-formatted signal.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	10/159,967		7,337,464	31-May-2022

P-113 *NDS Limited*

SECURE OFFLINE INTERACTIVE GAMBLING

A secure offline interactive gambling system includes a subscriber unit operative, through interaction with a user, to execute an offline interactive gambling application, a secure processor operatively associated with the subscriber unit and a central gambling facility. The secure processor includes a random gambling input generator operative to randomly or pseudo-randomly generate gambling input to the offline interactive gambling application during execution of the offline interactive gambling application, and a secure memory operatively associated with the random gambling input generator and operative to securely store information related to the execution of the offline interactive gambling application. The information, that is securely stored and the user cannot modify, typically includes the gambling input and user selections made in response to the gambling input and can be used to derive at least one result of the offline interactive gambling application. The information is transmitted to the central gambling facility that re-executes the offline interactive gambling application with the information replacing the gambling input actually generated and the user selections actually entered. By re-executing the offline interactive gambling application at the central gambling facility the at least one result is derived and validated and the user may be credited or debited based on the at least one result. Related apparatus and method are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/495,724	2005107157		27-Dec-2022

P-116 *NDS Limited*

PROCESSING OF SCRAMBLED STREAMS

A method for processing a packet-based scrambled stream, the method including receiving a plurality of scrambled packets in a packet stream, descrambling any of the scrambled packets, and transmitting a modified packet stream including at least one of the descrambled packets and at least one of the scrambled packets. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/498,888	2005157714		17-Feb-2023

P-121 *NDS Limited*

PREVENTION OF TAMPERING IN ELECTRONIC DEVICES

Circuitry for protection of an integrated circuit (20) which includes operational-circuits (24) formed on a chip (21). The circuitry includes a plurality of detectors (26), integrally formed on the chip as part of the integrated circuit and dispersed among the operational-circuits on the chip. The detectors are adapted, in response to radiation incident on the chip, to trigger a security measure so as to prevent tampering with the integrated circuit.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Allowed	10/516,487	2005236683		01-Jun-2023

P-128 *NDS Limited*

INTERACTIVE INTER-CHANNEL GAME

An interactive multi-channel game method is described. The method includes providing a first representation of a game element associated with a first channel of a multi-channel system, replacing the first representation with a second representation of the game element associated with a second channel of the multi-channel system, providing a clue associated with the second channel, and receiving a user input representing a user's response to the clue. Related apparatus and methods are also described.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	10/489,794	2005/0026690	7,306,522	29-Jun-2023
US	C1	Pending	11/977,821	2008/0076555		29-Jun-2023

P-129 *NDS Limited*

METHOD AND APPARATUS FOR PREVENTING CLONING OF SECURITY ELEMENTS

A method for preventing cloning of a genuine security element is described. The method includes associating a random number generator (RNG) in the security element with a portion of a non-volatile memory (NVM) in the security element, and activating the RNG to automatically write, during a normal operation mode of the security element, a new random number into the portion of the NVM whenever an attempt is made to write into the portion of the NVM. Any unit other than the RNG is preferably prevented from writing data into the portion of the NVM during the normal operation mode of the security element. Related apparatus and method are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	10/496,444	2005/123132	7,370,192	31-Mar-2023

P-131 *NDS Limited*

SYSTEM FOR SECURING ACCESS TO DATA STREAMS

A method for protecting digital content is described. The method includes receiving compressed encrypted digital content (810), determining an output format based, at least in part, on all of the following: a user-requested output format; received control information; and a rule determining whether a clear compressed output format is allowed (820); and producing output from the compressed digital content (830) based on a result of the determining (820), wherein, if the rule does not allow clear compressed output format, the compressed encrypted digital content is provided in a form which prevents production of clear compressed output in the producing step. Related apparatus and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/547,911	2007/297603		16-Nov-2023

P-132 *NDS Limited*

SYSTEM FOR MULTIMEDIA VIEWING BASED ON ENTITLEMENTS

An advertising control method is described. The method includes receiving an advertisement identification message (AIM) at a first mobile device, sending the AIM from the first mobile device to a content display unit (CDU) and storing the AIM in the CDU, selecting at least one content item from among a plurality of content items based, at least in part, on at least one stored AIM, the stored AIM being stored in the CDU, and displaying the selected content item on the CDU. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/522,069	2005/0234768		07-Sep-2023

P-134 *NDS Limited*

SECURE CLOCK

Apparatus comprising a secure time element comprising a timing device that outputs to a plurality of delay devices, wherein the delay devices have characteristic delay times which are alterable as a result of a tampering attempt to tamper therewith, and wherein a characteristic delay time of one of the delay devices changes differently from another one of the delay devices as a result of the tampering attempt.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/505,825	2005/132399		15-Apr-2023

P-136 *NDS Limited*

VIRTUAL SMART CARD DEVICE, METHOD AND SYSTEM

A system (300) and a method for secure transmission of protected content to a subscriber, without requiring a smart card or other renewable security element (304) to be in physical proximity of the recipient module (302) of the subscriber, such as a settop box for example. Therefore, the renewable security element (304) may optionally be protected and controlled by the transmitter of the protected content, such as by the broadcaster for example.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	10/713,896	2004/168063	7,379,548	31-Jan-2023

P-139 *NDS Limited*

DIGITAL CERTIFICATES

A method for producing a certificate, the certificate including data, the method including choosing a seed s, the seed s including a result of applying a function H to the data, generating a key pair (E,D), such that E=F(s,t), F being a publicly known function, and including s and t in the certificate. Related methods, and certificates produced by the various methods, are also described.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	10/545,737	2006/0107053	7,340,606	29-Dec-2023
US	C1	Pending	12/005,523	2009/0037738		29-Dec-2023

P-140 *NDS Limited*

GAMECAST ARCADE

An interactive method includes receiving, at a display device, background video including a multiplicity of video frames, at least one of the multiplicity of video frames including a plurality of sub-pictures, each of the plurality of sub-pictures representing an alternative background, and switching, at the display device, between a first sub-picture of the plurality of sub-pictures and a second sub-picture of the plurality of sub-pictures. Related apparatus and methods

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/543,765	2006/0125962		04-Feb-2024

P-144 *NDS Limited*

CFM MODE

A method for producing at least one ciphertext block from at least one plaintext block using a block cipher E and a key K, the method including receiving n plaintext blocks, wherein n is an integer greater than 0, setting Q0 equal to an initial value, and for each plaintext block of the n plaintext blocks: computing Qi = EK(Qi-1) XOR Pi; and computing Ci = M(Pi, Qi), thereby producing n ciphertext blocks, wherein 0 < I <= N, ANDPi denotes an I-th plaintext block of the n plaintext blocks, and Ci denotes an i-th ciphertext block of the n ciphertext blocks, and M is a selector function which, for each bit Cij of block Ci, selects a first argument of M if bit Pij is not to be encrypted, and selects a second argument of M if bit Pij is to be encrypted. Related apparatus and methods are also provided.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/541,002	2006/0088156		16-Feb-2024

P-145 *NDS Limited*

SECURITY SYSTEM FOR REMOVABLE MASS STORAGE

A method for protecting content including providing a host (106), a player (104), a communications link between host and player for communicating content therebetween, a recordable medium adapted to be played by and recorded to by the player, and an encrypted item of content, and producing a secure content license corresponding to the content, the license including a key for accessing the content, a permission list for determining whether the host or the player is allowed to access the content under pre-defined circumstances, the circumstances including a type of use of the encrypted content, an identification of the recordable medium, the recordable medium identification generated in accordance with a predefined recordable medium identification generation algorithm, and describing at least one physical characteristic of the recordable medium, and an identification of the content, the item identification

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/558,527	2007/124602		18-Apr-2024

P-149 *NDS Limited*

PERSONALIZED MULTIMEDIA MESSAGING SYSTEM

A method for providing a personalized multimedia messaging service, wherein the method includes obtaining an MMS message (800). Recipient according to preferences of the at least one targeted recipient (900), thereby producing a personalized MMS message (910), and transmitting the personalized MMS message to the at least one targeted recipient indicate (1000) that the at least one targeted recipient is not interested in receiving the personalized MMS message.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/590,002	2007/275740		23-Mar-2024

P-150 *NDS Limited*

SYSTEM FOR TRANSMITTING INFORMATION FROM A STREAMED PROGRAM TO EXTERNAL DEVICES AND MEDIA

A method for selecting a section from a streamed broadcast program is disclosed. The method includes receiving a streamed broadcast program, rendering the received streamed broadcast program on a display, selecting a section from the received streamed broadcast program substantially when the section is rendered on the display, and producing an indication signal which enables identification of the section based on a time at which selection of the section was carried out with respect to rendering progress of the streamed broadcast program on the display. Related apparatus and

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/556,936	2007/0094703		01-Jun-2024

P-152 *NDS Limited*

SYSTEM FOR PROVIDING KEYS

A method for providing keys for descrambling scrambled content, the scrambled content being divided into frames, the method including: identifying a plurality of frames to be descrambled; for each frame of the plurality of frames, identifying a key period associated with a key for descrambling the frame; and for at least one frame f of the plurality of frames, substituting a substitute frame g for the frame f, the substitute frame g being chosen in order to reduce a total number of key periods associated with keys for descrambling all of the plurality of frames. Related apparatus and

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	10/760,952	2005/0089170	6,980,650	20-Jan-2024
US	C1	Pending	11/272,344	2006/0062385		20-Jan-2024

P-155 *NDS Limited*
SYSTEM FOR PROVIDING VISIBLE MESSAGES DURING PVR TRICK MODE PLAYBACK

A method and system for embedding a message in compressed content comprising at least one key frame and at least one non-key frame, the method comprising embedding a message in the at least on key frame. Related methods and apparatus are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/529,026	2006/168630		02-Apr-2024

P-157 *NDS Limited*
TIMELINE PROTECTION

A method and system for timecode generation including: receiving an encryption key and an implemented encryption method, for each one of a plurality of frames, receiving a timecode and an associated presentation time stamp (PTS) associated with the one frame, for each one of the plurality of frames, encrypting the timecode associated with the one frame using the encryption key and the implemented encryption method, thereby producing a plurality of encrypted timecodes, and at a time associated with the associated PTS associated with the one frame, outputting a packetized elementary stream (PES) including the plurality of encrypted timecodes. Related systems and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/584,887	2007/0127720		21-Dec-2024

P-160 *NDS Limited*
PROGRAM SELECTION SYSTEM

A method and system for enabling a user to select programs in a personal video recorder environment, the method comprising enabling the user to select a program subject category, providing in response to user selection of a program subject category, for subsequent user selection, programs within said selected program subject category, at least one of selected and organized in accordance with past user viewing, and subsequently enabling the user to select among said programs. Related methods and apparatus are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	11/632,536	2007/0240186		02-Nov-2024

P-161 *NDS Limited*
MOBILE PERSONAL VIDEO RECORDER

A method of digital television recording including receiving a content item at a first Personal Video Recorder (PVR), determining whether to transfer the content item based, at least in part, on at least one of the following currentness of the content item, a user preference, and a user profile, and transferring the content item from the first PVR to a mobile PVR only upon a positive result of the determining. Related methods and apparatus are also disclosed.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/628,677	2008/0267591		10-Apr-2025

P-162 *NDS Limited*

OPTIMALLY ADAPTING MULTIMEDIA CONTENT FOR MOBILE SUBSCRIBER DEVICE

A multimedia content distribution method including a) storing an item of a multimedia content, b) firstly transcoding the content for playback on a first multimedia device, c) generating a content ID of the firstly transcoded content, d) storing the content ID of the firstly transcoded content in association with the stored content, e) accessing the stored content using the content ID of the firstly transcoded content, and f) secondly transcoding the stored content for playback on a second multimedia device.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	10/589,417	2007/0204064		21-Mar-2025

P-164 *NDS Limited*

SYSTEM FOR SHIELDING INTEGRATED CIRCUITS

A method for adding an additional layer to an integrated circuit, the method including providing an integrated circuit having an interconnect layer, depositing, over substantially all of an exposed surface of the integrated circuit, an additional layer of material whose conductivity can be altered, and selectively altering the conductivity of a first portion of the additional layer by selective annealing, to produce a sub-circuit in the additional layer, the sub-circuit being in operative electrical communication with the integrated circuit. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/593,386	2008/0093742		04-May-2025

P-165 *NDS Limited*

RESOURCE CONFLICT RESOLUTION FOR MULTIPLE TELEVISIONS

A system for managing resource-usage conflict among a plurality of viewers associated with a plurality of TVs, including a plurality of resources for shared usage among the viewers, the resources including at least one input device adapted to receive a program broadcast and to transmit the program broadcast onward for display, a resolution arrangement operationally connected to the at least one input device, the resolution arrangement being adapted to identify a usage conflict of at least one of the resources, and send an on-screen display having a resource usage action-choice to at least two of the TVs. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending OA	11/579,651	2008/0034391		04-May-2025

P-167 *NDS Limited*
SYSTEM FOR PROXIMITY DETERMINATION

A method for determining proximity between a first device and a second device, the method comprising providing a first device storing a first device private key, the first device having an associated secure first device certificate storing secured information, the secured information comprising a first device public key corresponding to the first device private key, providing a second device storing a second device private key, the second device having an associated secure second device certificate storing secured information, the secured information comprising a second device public key corresponding to the second device private key, and a second device processing delay, providing a copy of the second device certificate to the first device, establishing a secure authenticated channel between the first device and the second device, sending a proximity challenge from the first device to the second device, the proximity challenge including a numeric challenge value, receiving the proximity challenge at the second device, processing the proximity challenge at the second device to produce the response to the proximity challenge, and sending the response to the proximity challenge from the second device to the first device, receiving the response to the proximity challenge at the first device, and performing the following at the first device verifying, at the first device, that the response to the proximity challenge is legitimate, determining a gross time between sending the proximity challenge and receiving the response to the proximity challenge, subtracting the second device processing delay from the gross time to produce a net response time, and comparing the net response time to a first threshold and determining whether the first device and the second device are in proximity based on a result of the comparing. Related methods and apparatus are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/629,435	2007/0300070		11-May-2025

P-168 *NDS Limited*
SPLICING SYSTEM

A method for switching from playing a first compressed data segment to playing a second compressed recorded data segment, the method including playing an uncompressed copy of a start of the second compressed recorded data segment upon switching from playing the first compressed data segment, decoding the second compressed recorded data segment from a preceding random access point, the preceding random access point preceding, in the second compressed recorded data segment, a point at which playing is to be switched to the second compressed recorded data segment, stopping the decoding of the second compressed recorded data segment when reaching a point beyond a point currently being played in the uncompressed copy, and switching to playing the second compressed recorded data segment when playing the uncompressed copy of a start of the second compressed recorded data segment reaches the point at which the decoding of the second compressed recorded data segment was stopped. Related apparatus and

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/628,402	2008/0044161		08-Jun-2025

P-169 *NDS Limited*
DIGITAL RIGHTS MANAGEMENT SYSTEM

A digital rights management system (figure 1) for a mobile telephone (10), including a controlled content disk (16) to store content in an encrypted format, and a mobile telephone processor (18) to run a plurality of mobile telephone applications (36, 38, 40) and a secure device driver (22) thereon, the mobile telephone processor (18) being operationally associated with the controlled content disk (16), the mobile telephone applications (36, 38, 40) being unable to decrypt content from the encrypted format, the secure device driver (22) having a receiving module (24) to receive a request from one of the mobile telephone applications (36, 38, 40) to access the content, a validation module (26) to validate the request, and a transport module (28) to substantially directly transfer the content to the one mobile telephone application, contingent upon a positve result of the validating of the validation module (26). Related apparatus

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/592,650	2008/0052781		02-Jun-2025

P-172 *NDS Limited*
EFFICIENT AND SECURE RENEWAL OF ENTITLEMENTS

A method for granting a grace period entitlement, the method comprising receiving a grace period entitlement message, establishing whether a grace period flag indicates that a grace period may be granted, granting a grace period to an expired entitlement based, at least in part, on the grace period entitlement message, only if the grace period flag is "off", and setting the grace period flag to indicate that the grace period has been granted. Related methods and

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/665,791	2008/0120708		01-Nov-2024

P-173 *NDS Limited*
SYSTEM FOR HANDLING PROGRAM META-DATA

A method of accessing program meta-data is disclosed. The method includes receiving a plurality of program meta-data virtual containers, at least one of the virtual containers comprising normalized program meta-data of programs having instances in a plurality of time windows, receiving an input indicating a selected time window, the input at least one of comprises and refers to a time-window identifier identifying the selected time window, and using the time-window identifier to filter the plurality of virtual containers, so as to obtain a subset of the program meta-data which corresponds to the selected time window. Related apparatus and methods are also disclosed.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/663,930	2008/0092166		28-Jun-2025

P-175 *NDS Limited*
SYSTEM FOR PROVIDING ACCESS TO OPERATION INFORMATION

A method for providing access to operation information relating to a digital signal, including providing a digital signal encoded, in accordance with a layered encoding scheme, in a plurality of layers, and extracting operation information from a first layer of encoding within the digital signal, and placing the extracted information in a data section in a second layer of encoding within the digital signal. Related methods and apparatus are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	10/555,214	2007/0011447		28-Jun-2025

P-176 *NDS Limited*
DISK PROTECTION SYSTEM

A method for protecting content on a medium (120), the method including providing a medium (120) including a token (130), the token (130) implementing at least a portion of a keyed function, providing a plurality of token inputs, each token input being suitable for input to the token (130), providing a first encryption method and a first encryption key, for each one of the plurality of token inputs inputting the token input to the token and receiving a token output from the token, and converting the token output to a function output, the function output representing a result of performing the keyed function on a function input corresponding to the token input, and storing an ordered pair including the function input and the function output, thereby producing a plurality of ordered pairs (160), encrypting the plurality of ordered pairs (160) using the first encryption method and the first encryption key, thereby producing an encrypted plurality of ordered pairs (170), and storing the encrypted plurality of ordered pairs (170) on the medium. Related apparatus and

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/084,852			05-Jun-2026

P-179 *NDS Limited*
CERTIFICATE RENEWAL

An intermediate certificate authority (ICA) for a hierarchical certificate authority structure (HCAS), the HCAS having a plurality of levels, the levels including a root level, at least one intermediate level, and a leaf level, the root level having a root certificate authority, the ICA being in the at least one intermediate level, the ICA including a certificate receiving module to receive a first certificate signed by a certificate authority in a level above the level of the ICA, the first certificate certifying an aspect of the ICA, the first certificate having an expiration time, and a certificate signing module to sign a second certificate for a member of the HCAS, prior to the expiration time of the first certificate, such that the second certificate expires after the expiration time of the first certificate, the member being in a level below the level of the ICA, the second certificate certifying an aspect of the member. Related apparatus and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/587,714	2008/0091952		08-Sep-2025

P-180 *NDS Limited*
FOCUS PRIORITY IN WINDOW MANAGEMENT

A method for managing windows in a window-based display system, the method comprising providing a plurality of windows, each window being associated with an application, at least one of the plurality of windows being able to accept focus, assigning, to each one of the plurality of windows being able to accept focus, a focus priority, assigning focus to exactly one window at any time by choosing, from among the at least one of the plurality of windows able to accept focus, a window having a highest focus priority of the windows able to accept focus, and designating the chosen window as an active window. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	10/551,078	2007/0214426	7,356,775	21-Nov-2025

P-185 *NDS Limited*
DOWNLOADABLE REMOTE CONTROL

A key production system to determine a cryptographic key for a selected cryptoperiod being later than or equal to a cryptoperiod-A, and earlier than or equal to a different cryptoperiod-B, the system including a first receiver to receive a first key-component, associated with cryptoperiod-A, forming part of a first hash-chain progressing via a first one-way function, progressive key-components corresponding to later cryptoperiods, a second receiver to receive a second key-component, associated with cryptoperiod-B, forming part of a second hash-chain progressing via a second one-way function, progressive key-components corresponding to earlier cryptoperiods, first and second key-component determination modules to determine key-components in the first hash-chain and the second hash-chain, respectively, for the selected cryptoperiod, and a key determination module to determine the cryptographic key based on the key-components in the first and second hash chain for the selected cryptoperiod. Related methods and apparatus are

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/887,057			16-Jun-2025

P-190 *NDS Limited*
NETWORK SECURITY SYSTEM

A system for restricting access to encrypted content stored in a consuming device (12) which is part of a network (10) including other devices (14), the system including a content storage medium to store the encrypted content, a secret-share distribution module to distribute secret-shares to the other devices (14), a secret-share receive module to receive the secret-shares from the other devices (14), a secret reconstruction module to form a content decryption input from the secret-shares received by the secret-share receive module, a content decryption module to receive the encrypted content from the content storage medium and the content decryption input from the secret reconstruction module and decrypt the encrypted content using the content decryption input thereby rendering decrypted content, and a content consumer to use the decrypted content, wherein the secret shares distributed to the other devices (14) are in an encrypted format for decryption by the consuming device (12) or the other devices (14).

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/793,365			01-May-2026

P-193 *NDS Limited*
SURFERS PARADISE

A system for a viewer to navigate television programming using a control, the television programming being viewable on a display device having a screen, the system comprising a program guide module to manage program guide information for a plurality of program items for a plurality of channels, the program items including a plurality of current and future scheduled programs, the program guide information including a plurality of links to a plurality of program item representations associated with the program items, a navigation control module to receive program selection instructions from the viewer, via the control, in order for the viewer to surf among the program item representations of the current and future programs, and a program item display module to display a currently selected program item representation which occupies a majority of the screen of the display device. Related apparatus and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/991,819			22-Sep-2025

P-195 *NDS Limited*
ENHANCED ELECTRONIC PROGRAM GUIDES

A method and system for rating programs, the method including, receiving a sample of viewing logs from a plurality of set top boxes (STBs), determining, from the sample of viewing logs, at least groups of viewers sharing similar interests, and groups of programs sharing similar audience, computing time dynamics of rating distribution for the groups of viewers and the groups of programs, and incorporating at least one of the following into broadcast metadata the time dynamics of rating distributions of the groups of viewers for each of the groups of programs, rating distributions of the groups of viewers for each of the groups of programs marginalized by time, rating distributions of the groups of viewers for each program marginalized by time, relative sizes of each group of viewers, and a mapping of each program to groups of programs, thereby making the broadcast metadata available to the plurality of STBs for use in computing

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/989,560			29-Aug-2026

P-196 *NDS Limited*
IMPROVED CIPHER SYSTEM

A system including a pseudo-random number generator having a register to store an extended state having a reduced state and a dynamic constant, an initialization module to initialize a part of the extended state based on a Key and/or an Initial Value, a state update module to update the reduced state, an output word module to generate output words, the state update module and the output word module being adapted to operate through cyclical rounds, each round including updating the reduced state and then generating one of the output words, and an update dynamic constant module to update the dynamic constant, wherein in a majority of the rounds, updating of the reduced state and/or generation of the output word is based on the dynamic constant, and the dynamic constant is only updated in a minority of the rounds. Related apparatus and method are also described. Related systems and methods are described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/886,753	2008/0199004		09-Mar-2026

P-197 *NDS Limited*
NOVEL TRICK MODE SYSTEM

A method is described for trick mode playback, the method including selecting a key-frame in a recording substantially in the vicinity of a trick mode playback starting position, preparing a decryption key associated with a key period including the selected key-frame, sending the prepared decryption key to a descrambler, thereby enabling decryption of video beginning at the selected key-frame, sending a first number P seconds of decrypted video frames, starting at the selected key-frame, at a predetermined speed for a predetermined number of seconds, to a video decoder, in parallel to the sending P seconds of video frames, choosing at least a second video section to stream to the video decoder, sending a decryption key associated with the chosen second video section to the descrambler, and repeating the steps of selecting, preparing, sending the prepared decryption key, and sending a first number P seconds of decrypted video frames. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/886,989	2008/0212775		17-Jan-2026

P-199 *NDS Limited*
NATIVE SCRAMBLING SYSTEM

A system for scrambling / descrambling packets of a stream of content, each packet having a must stay clear (MSC) section, the system including an input handler including a receiving module to receive the stream, a characteristic analyzer to analyze the stream in order to determine a data independent characteristic of each packet, and a scrambling / descrambling device operationally associated with the input handler, the scrambling / descrambling device including a receiving module to receive the data independent characteristic for each packet from the input handler, and an Initial Value module to determine an Initial Value for each packet as a function of the data independent characteristic of one of the packets being processed, wherein the scrambling / descrambling device is adapted to scramble and/or descramble the packets based on the Initial Value and a Control Word. Related apparatus and methods are included.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/918,110	2008/0137851		22-Mar-2026

P-200 *NDS Limited*
SECURE READ-WRITE STORAGE DEVICE

A method is described for securing a read write storage (RWS) device, the method comprising, providing the RWS device, the RWS device comprising a controller comprising a processor and a bit bucket and employing, in response to a decision making process, a sanction in the RWS device. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/083,023			13-Nov-2026

P-202 *NDS Limited*

DIGITAL VIDEO RECORDER ANTI-SKIP SYSTEM

A method for producing scrambled content (Fig. 6A), the method including providing content (600) to be scrambled, identifying a first portion of the content (620), identifying a second portion of the content (630), computing a disguising function of at least part of the first portion (620) of the content and producing a result, and scrambling the second portion (630) of the content, the scrambling being based in part, on the result. Related apparatus and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/992,614			17-Nov-2025

P-206 *NDS Limited*

APPLICATION BLOCKING SYSTEM

A set-top box system for blocking signaled applications from being run on a set-top box, the system comprising an audio/video service receiving module to receive at least one audio/video service, an application receiving module to receive an application, an application signaling module to manage a first table including signaling information indicating that the application is a signaled application authorized for being run on the set-top box, and an application blocking module to receive a second table including blocking information to block running of the signaled application on the set-top box, the second table being received from a broadcasting Headend, and block running of the signaled application on the set-top box in response to receiving the second table. Related

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/795,214	2008/0216108		03-Nov-2025

P-208 *NDS Limited*

MANAGEMENT OF DYNAMIC PROGRAM CHANGES IN DVB SYSTEMS

A method for managing dynamic program changes in a digital video broadcasting (DVB) system, the method including detecting a dynamic program change in a DVB transmission received at a set-top box (STB), and changing a digital video recorder (DVR) recording instruction associated with the program to record the program in accordance with a parameter of the change.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/920,664	2008/0285943		16-Jan-2026

P-212 *NDS Limited*

SYSTEM FOR TESTING, VERIFYING LEGITIMACY OF SMART CARD IN-SITU AND FOR STORING DATA THEREIN

A hand-held battery-operated device for interrogating and/or programming ISO7816 smart cards by means of an ISO7816 compliant card slot, in conjunction with a display, a keypad and barcode reader for data entry, a battery backup RAM for temporary storage of collected data, flash memory for storage of proprietary information provided by a smart card issuer, a RS232 port and RF link for communication with a host computer, in-system programming port for updating the flash program, all connected operatively to an internal microprocessor which perform clock or power glitching to access internal information of a smart card to determine whether the card has been tampered,

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	10/414,298	2004/206815	6,880,752	16-Apr-2023

P-221 *NDS Limited*
ADVANCED DIGITAL TV SYSTEM

A system for displaying electronic program guide information about a plurality of video items on a screen, the system including a display module to display a plurality of pages layering into the screen, each of the pages including a plurality of graphical panels associated with the video items, and a user input module to receive a user input to turn at least one of the pages such that the at least one page is peeled away from other ones of the pages in order to bring the graphical panels of the at least one page in or out of view, wherein the display module is operative to show the turning of the at least one page bringing the at least one page in or out of view. Related apparatus and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/920,605			03-Jul-2026

P-222 *NDS Limited*
VIDEO TRICK MODE SYSTEM

A method for producing an auxiliary video stream arranged for reverse trick mode playback from a video stream including a plurality of uni-directional predicted frames, the method including producing the auxiliary video stream by performing the following steps copying each uni-directional predicted frame included in the video stream into a memory, thereby producing a plurality of copied frames in the memory, replacing each one of the plurality of copied frames with one corresponding supplemental frame, thereby producing a plurality of corresponding supplemental frames, and producing a copy of the video stream arranged in reverse processing order, the producing a copy including replacing each frame which corresponds to one of the plurality of copied frames with the one corresponding supplemental frame from among the plurality of corresponding supplemental frames. Related methods and systems are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/990,356	2008/0273858		29-Jun-2026

P-225 *NDS Limited*
SYSTEM FOR ANALYSIS OF MOTION

A computer system for real-time determination of a motion vector comprising an image processor to apply an image processing filter to a normalized frame element of a first image frame, yielding a filtered frame element having associated filtered pixel values, a pixel selector to select a first reference pixel from the filtered frame element having the highest value of the filtered pixel values, an optic flow module to determine a first optic flow applied at a location of the first reference pixel, a pattern matching module to perform pattern matching between the normalized pixel values of the normalized frame element and normalized frame elements of a second image frame, yielding a plurality of pattern matching scores, and a motion vector determiner to determine a motion vector based on a lowest one of the pattern matching scores. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/279,208			23-Mar-2026

P-236 *NDS Limited*
DIGITAL VIDEO ZOOMING SYSTEM

A system for preparing a digital video stream for zooming by a content consumer system, including a video frame processor to prepare a plurality of video frames of the digital video stream, a zoom location processor to prepare a plurality of zoom location indicators in the digital video stream, each of the zoom location indicators including an element indicative of a least one horizontal position and at least one vertical position in the video frames, and a stream processor to temporally synchronize the zoom location indicators and the video frames in the digital video stream, such that the video frames are available to be zoomed by the content consumer system based on the zoom location indicators during playback of the digital video stream. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/084,539	2008/0266458		15-Nov-2025

NDS Limited

P-238
SECURITY DEVICE AND BUILDING BLOCK FUNCTIONS

A method and system of securing content is described, the method including establishing communication between a secure module source and a content rendering device, loading a dynamically generated pseudo-unique secure module to the content rendering device from the secure module source, establishing communication between the secure module source and the dynamically generated pseudo-unique secure module, and transferring a decryption key from the secure module source to the dynamically generated pseudo-unique secure module, thereby enabling decryption of encrypted content, the encrypted content being encrypted according to the decryption key. Related methods and apparatus are

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/990,720			27-Sep-2026

NDS Limited

P-240
METHOD AND SYSTEM FOR BLOCK CIPHER ENCRYPTION

A method of encrypting a block of data, is described, the method including providing a combining unit operative to combine a key with a block of data, the block of data expressed as a block of bits, providing a mix and condense unit operative to mix bits included in the block of bits among themselves, receiving an input including the block of data expressed as the block of bits, combining, at the combining unit, the block of bits with a key, and mixing, at the mixing and condensing unit, the combined block of bits, wherein the mix and condense unit includes a plurality of layers, each layer among the plurality of layers including a plurality of mini-functions. Related apparatus and methods are described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/992,983	2009/0052656		05-Oct-2026

NDS Limited

P-242
ADDITIONAL CONTENT INFORMATION

A method for reconfiguring a circuit configuration of a configurable hardware device via a communication network. The method includes transmitting via the communication network from a hardware configuration provider unit to the configurable hardware device a circuit reconfiguration of the configurable hardware device in response to a request from a user of the configurable hardware device to reconfigure the configurable hardware device, implementing the circuit reconfiguration of the configurable hardware device thereby reconfiguring the configurable hardware device and providing a reconfigured hardware device and billing the user in response to a determination of correct operation of the reconfigured hardware device. A user unit in a communication network is also disclosed.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/992,568			08-Nov-2026

NDS Limited

P-244
CHIP ATTACK PROTECTION

A system for protecting a chip with an integrated circuit disposed on a first surface, the system including, disposed on the first surface, a first antenna, signal analyzer, chip controller and a signal generator which is operative to supply an outbound signal for transmission by the first antenna, a circuit arrangement, disposed on a second surface of the chip, including a shielding arrangement and a second antenna to receive the outbound signal, the circuit arrangement being operative to transmit a return signal from the second antenna to the first antenna, such that a breach in the shielding arrangement results in a change in, or cessation of, the return signal for detection by the signal analyzer, and a chip controller disposed on the first surface being operative to perform an action on the integrated circuit in response to the detection of the breach. Related apparatus and methods also included.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/087,942	2009/0001821		11-Dec-2026

P-245 *NDS Limited*
PASSWORD PROTECTION

An authentication system, including a pattern module to provide a pattern, a function module to provide a one-way function having a plurality of input and output values, a function processor to find one of the input values for the one-way function such that a corresponding one of the output values has the pattern, a password module to provide the one input value as a password for use in password authentication against the one output value, the one output value being a check value having a length, a compression module to determine a storage value such that: the check value can be reconstructed from the storage value and the pattern, and the storage value has a length which is shorter than the length of the check value, and a storage module to store the storage value in a storage medium for later retrieval.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/228,610	2009/019540		03-Oct-2026

P-247 *NDS Limited*
METHOD AND SYSTEM FOR USAGE OF BLOCK CIPHER ENCRYPTION

A block cipher system for encrypting a plurality of blocks from plaintext to ciphertext, each of the blocks being associated with a constant root key, the system including an encryption key module to determine an input key for each of blocks based on a function having a plurality of inputs including the root key and an initialization vector, for a first one of the blocks, and the plaintext of at least one of the blocks which was previously encrypted and the root key, for the blocks other than the first block, and an encryption module to encrypt each of the blocks based on the input key determined for each of the blocks, respectively. Related apparatus and methods also included.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/085,393			04-Dec-2026

P-255 *NDS Limited*
REVOCATION LIST IMPROVEMENT

A method for enforcing use of certificate revocation lists in validating certificates, the lists being associated with a series of list generation indices such that each list is assigned one index which advances according to a time of generation of the list, the lists and the indices being cryptographically signed, the method including receiving one of the lists and an associated index as an identifier of the one list, checking the certificates against the list, associating each of the certificates, which have been checked against the list, with the index, receiving an enforcement generation index (EGI) associated with a latest list in use, storing the EGI as a last known EGI, and refusing performance of an action associated with a certificate if the one index of the one certificate is earlier in the series than the last known EGI.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/223,642			03-Oct-2026

P-257 *NDS Limited*
PERIOD KEYS

A method for securing encryption keys is described, the method including providing a first device and a second device, the first device including first secure hardware and first insecure hardware, and the second device including second secure hardware and second insecure hardware, generating in the first secure hardware at least two period keys, the at least two period keys stored in the first secure hardware, generating in the first secure hardware a plurality of session keys, the session keys being stored in either the first secure hardware or the first insecure hardware, encrypting at least one of the plurality of session keys generated in the first device according to a first of the two period keys included in the first secure hardware, encrypting at least one of the plurality of session keys generated in the first device according to a second of the two period keys included in the first secure hardware, generating in the second secure hardware at least two period keys, the at least two period keys stored in the second secure hardware, generating in the second secure hardware a plurality of session keys, the session keys being stored in either the second secure hardware or the second insecure hardware, encrypting at least one of the plurality of session keys generated in the second device according to a first of the two period keys included in the second secure hardware, encrypting at least one of the plurality of session keys generated in the second device according to a second of the two period keys included in the second secure hardware, at a time when a session is established between the first device and the second device, decrypting one encrypted session key in the first device and decrypting one encrypted session key in the second device, and establishing an encrypted session between first device and the second device, the encrypted session being encrypted according to the one decrypted session key included in the first device and the one decrypted session key included in the second device, wherein the at least two period keys included in the first device and the at least two period keys included in the second device are periodically regenerated in order to produce new period keys, thereby rendering useless any session keys encrypted according to an old period key.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/087,037			22-Jan-2027

P-261 *NDS Limited*
VIDEO SUBSTITUTION SYSTEM

A video substitution method for use with a Digital Video Recorder (DVR) which is operative to store video is disclosed. The method includes retrieving stored video recorded from a single video stream which includes a first positive integer ni down-sampled video sequences, the ni down-sampled video sequences being mutually synchronized and formatted in a second positive integer n2 video frames, each video frame comprising ni spatially combined sub-pictures each of which corresponds to one frame of the ni down-sampled video sequences, up- sampling at least part of a first one of the ni down-sampled video sequences, thereby producing a first up-sampled video sequence, displaying the first up-sampled video sequence on a display during normal content viewing, detecting activation of a trick mode including one of the following: a fast forward mode; and a rewind mode, and in response to the detecting: up-sampling at least part of a second one of the ni down- sampled video sequences, thereby producing a second up-sampled video sequence, and displaying the second up-sampled video sequence instead of the first up-sampled video sequence during at least part of an activation period of the trick mode. Related apparatus and methods are also disclosed.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/087,808			15-Jan-2027

P-264 *NDS Limited*
HEADEND MODELING OF DATA

A data modeling method for modeling data for an electronic program guide (EPG) at a broadcast headend is described. The method includes grouping receiver types according to a first set of characteristics associated with a receiver type, thereby producing a plurality of groups of receivers, assigning a bit- number to each group of receivers, providing EPG data, the EPG data including data for display at an EPG, the EPG data being included in a data fragment, evaluating the data fragment and the EPG data included therein according to at least one characteristic from a second set of characteristics, thereby producing a result, adding metadata to the data fragment, the metadata including a bit field including the assigned bit number, the bit number being determined in accordance with the result, the metadata being indicative of at least one characteristic from the first set of characteristics with which a data container and EPG data included therein are associated, and broadcasting the data fragment in the data container. Related methods and

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/920,800			09-Jun-2026

P-265 *NDS Limited*
PROGRAM GUIDE OPTIMIZATION SYSTEM

A method and system of optimizing strings comprised in program guide data for transmission is described. The method includes sharing, in the program guide data, a plurality of strings, each string among the plurality of strings including a shared sorting key, implementing an order access of a sorted sharing index, wherein the program guide data and the shared sorting key are comprised in the same data storage structure. Related methods and apparatus are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/921,054			09-Jun-2026

P-268 *NDS Limited*
ROBUST CIPHER DESIGN

In an iterated block cipher, a method for round key encryption and key generation, the method including providing a first function Fi and a second function Fj, providing a round key generation function, the round key generation function being operative to utilize, in any given round, exactly one of the first function Fi, and the second function Fj, providing a round mixing function, the round mixing function being operative to utilize, in any given round, exactly one of the first function Fi, and the second function Fj, utilizing the round key generation function in at least a first round to generate a second round key for use in a second round, and utilizing the round mixing function in at least the first round to mix a first round key with a cipher state, wherein one of the following is performed in the first round the round key generation function utilizes the first function Fi to generate the second round key for use in the second round, substantially simultaneously with the round key mixing function utilizing the second function Fj to mix the first round key with the cipher state, and the round key generation function utilizes the second function Fj to generate the second round key for use in the second round, substantially simultaneously with the round key mixing function utilizing the first function Fi to mix the first round key with the cipher state. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/223,137			20-Mar-2027

P-269 *NDS Limited*
PEER-TO-PEER SET-TOP BOX SYSTEM

A content sharing system, for implementation in a requesting peer, to receive at least a part of a chunk from a serving peer, the chunk being part of a content item, the requesting peer being operationally connected to a plurality of peers including the serving peer via a communications network, the content item being media content originally broadcast in a media stream by a Headend to at least some of the peers, the system including a metadata module to receive chunk metadata identifying the location of the chunk based on an identifier in the media stream originally broadcast by the Headend, a content transfer module to request the at least part of the chunk from the serving peer based on the chunk metadata, and receive the at least part of the chunk from the serving peer. Related apparatus and methods are also

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/308,431			11-Jun-2027

P-270 *NDS Limited*
MOVIE COPY PROTECTION

A method for frustrating piracy of a movie, the movie including a plurality of filmed frames, each of the filmed frames including an image, the method including editing the movie prior to projection such that different regions of the image of one of the filmed frames are in different frames so that the different regions will be projected at different times, and repeating the editing for other ones of the filmed frames. Related apparatus and methods are also described.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	11/920,900			12-Jul-2026

P-272 *NDS Limited*
TIME INFORMATION MANAGEMENT SYSTEM

A rights validator system for controlling access to content, the system including a query processor to receive a rights query and to provide a result to the rights query based on an estimated time, and a time-based query response module operationally connected to the query processor, the time-based query response module being operative to determine the estimated time as a function of a most recently updated time, and a plurality of indications of elapsed time since the most recently updated time, the indications of elapsed time being from a plurality of different sources of time indication. Related apparatus and methods are also included.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/227,193			09-May-2027

P-275 *NDS Limited*
SCRAMBLED DIGITAL DATA ITEM

A method of decrypting a scrambled digital data item at a client is disclosed, the method including: receiving actual control messages at the client, wherein each actual control message includes control word generating information for generating a control word associated with the actual control message; storing the actual control messages at the client; receiving the scrambled digital data item at the client independently of the actual control messages, wherein the scrambled digital data item includes a plurality of segments of scrambled digital data, each segment of scrambled digital data being associated with one of the actual control messages and being scrambled with the control word associated with the one of the actual control messages, and wherein the scrambled digital data item further includes a plurality of reference control messages, each segment of scrambled digital data comprising one of the reference control messages, each of the reference control messages including a control message reference value identifying the actual control message associated with the segment of scrambled digital data; and decrypting the scrambled digital data

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/224,749	2009/0028331		03-May-2027

P-291 *NDS Limited*
CONTROLLED METADATA REVELATION

A method of controlling revelation of one or more metadata items is disclosed. Each of the one or more metadata items is associated with one or more parts of an audio-visual data stream (101). The method comprises: for a given one or more parts (103,105) of the audio-visual data stream (101), revealing one or more metadata items (113,115,117) associated with the given one or more parts (103,105) of the audio-visual data stream (101) only after the given one or more parts (103,105) of the audio-visual data stream (101) have been accessed

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending	12/309,889			07-Aug-2027

P-293 *NDS Limited*
DISPLAYING VIDEO

A method of displaying video is disclosed. The method comprises: receiving a main video sequence receiving an overlay video sequence, the overlay video sequence comprising first and second sections displaying the video on a display by: rendering the main video sequence; rendering the first section of the overlay video sequence over the main video sequence such that the video has the appearance of being rendered from a single video sequence; switching between the first section of the overlay video sequence and the second section of the overlay video sequence; and rendering the second section of the overlay video sequence over the main video sequence such that the video has the appearance of being rendered from a single video sequence.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Pending				30-Aug-2027

P-296 *NDS Limited*
IMPROVED KEY PRODUCTION SYSTEM

A key production system to determine a cryptographic key for a selected cryptoperiod being later than or equal to a cryptoperiod-A, and earlier than or equal to a different cryptoperiod-B, the system including a first receiver to receive a first key-component, associated with cryptoperiod-A, forming part of a first hash-chain progressing via a first one-way function, progressive key-components corresponding to later cryptoperiods, a second receiver to receive a second key-component, associated with cryptoperiod-B, forming part of a second hash-chain progressing via a second one-way function, progressive key-components corresponding to earlier cryptoperiods, first and second key-component determination modules to determine key-components in the first hash-chain and the second hash-chain, respectively, for the selected cryptoperiod, and a key determination module to determine the cryptographic key based on the key-components in the first and second hash chain for the selected cryptoperiod. Related methods and apparatus are

			Application Number	Publication Number	Patent Number	Expiration Date
US		Pending	11/810,023	2008/0085003		04-Jun-2027

P-332 *NDS Limited*
KEY DISTRIBUTION SYSTEM

			Application Number	Publication Number	Patent Number	Expiration Date
US	P1	Pending	61/068,712			10-Mar-2009

P-335 *NDS Limited*
ANTI-ALIASING SYSTEM AND METHOD

			Application Number	Publication Number	Patent Number	Expiration Date
US	P1	Pending	61/128,532			22-May-2009

P-346 *NDS Limited*
AUTOMATIC TV CHANNEL SELECTION ACCORDING TO THE USER VIDEO EQUIPMENTS AND ACCESS RIGHTS

			Application Number	Publication Number	Patent Number	Expiration Date
US	P1	Pending	61/090,278			20-Aug-2009

P-348 *NDS Limited*
METADATA PURGING

			Application Number	Publication Number	Patent Number	Expiration Date
US	P1	Pending	61/204,505			07-Jan-2010

News Datacom Limited

P-001 *News Datacom Limited*

SYSTEM FOR CONTROLLING ACCESS TO BROADCAST TRANSMISSION

A system for controlling access to broadcast transmissions including a transmitter having a transmission encoder for scrambling the broadcast, a multiplicity of subscriber receivers, each having an identical receiving decoder, containing no secret cryptographic keys, for descrambling the broadcast and a plurality of selectable and portable executing apparatus each being operatively associatable with a receiving decoder at a partially different given time and each executing generally identical operations to generate a seed for use by the associated receiving decoder to enable the receiving decoder to descramble the broadcast.

			Application Number	Publication Number	Patent Number	Expiration Date
US	C1	Granted	07/993,823		5,282,249	25-Jan-2011
US	C2	Granted	08/119,734		5,481,609	02-Jan-2013

P-003 *News Datacom Limited*

NON PROGRAM APPLICATIONS FOR SUBSCRIBER TV

A pay television gaming system including a pay television network having a multiplicity of subscriber units each including a television, receiving apparatus for receiving gaming inputs from the multiplicity of subscriber units, transmitting apparatus for transmitting to the multiplicity of subscriber units information relating to gaming results and accounting apparatus for settling gaming debts and winnings via the pay television network. Other services, such as

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	08/080,344		5,539,450	23-Jul-2013
US	C1	Granted	08/478,054		5,592,212	07-Jan-2014

P-004 *News Datacom Limited*

SECURING COMMUNICATION SYSTEMS

A hacking prevention system and method wherein the descrambler receives a data stream including a series of authorization packets and a series of corresponding offset values. A random number is generated in the descrambler. Using this random number, a key is calculated, which corresponds to the authorization packet corresponding to the generated random number. This generated key and the offset value, which corresponds to the generated random number, are used to calculate the descrambling key.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	08/309807		5,590,200	21-Sep-2014

P-005 *News Datacom Limited*
CONDITIONAL ACCESS TV (CATV) SYSTEMS

A CATV system including a CATV network, a multiplicity of subscriber units, apparatus for transmitting over said CATV network encrypted information individually addressed to a subscriber unit and apparatus associated with each of said multiplicity of subscriber units for decoding the encrypted information addressed thereto.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	08/121,349		5,414,773	15-Sep-2013
US	C1	Granted	08/393,443		5,715,315	03-Feb-2015
US	C2	Granted	08/988,826		6,634,028	09-Nov-2013

P-006 *News Datacom Limited*
SYSTEMS USING TWO SMART CARDS

A CATV system including a CATV network and apparatus for transmitting over the CATV network information to a multiplicity of subscriber units, each including a CATV decoder and an IC card reader and writer coupled to the CATV decoder, the IC card reader and writer includes two separate IC card receptacles, such that IC cards inserted into the two separate IC card receptacles are separately accessed by the IC card reader and writer.

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	08/375995		5,666,412	20-Jan-2015
US	C1	Granted	08/925,547		5,878,134	20-Jan-2015
US	D1	Granted	08/780501		5,774,546	20-Jan-2015

P-007 *News Datacom Limited*
INTEGRATED TELEPHONE AND CABLE COMMUNICATION NETWORKS

An integrated telephone and cable network comprising a telephone network including at least one directing center and first network cabling connecting a directing center to a multiplicity of subscribers, a cable network including at least one headend and second network cabling connecting a headend to the multiplicity of subscribers, a subscriber telephone facility including first subscriber cabling and at least one telephone appliance, a subscriber cable facility including second subscriber cabling and at least one cable appliance, and a subscriber interface unit interfacing between the subscriber telephone facility and the subscriber cable facility and the first and second network cabling whereby communication is enabled between the first subscriber cabling and the second network cabling and between the second

			Application Number	Publication Number	Patent Number	Expiration Date
US	CIP1	Granted	08/302,607		5,774,527	15-Sep-2013

P-011 *News Datacom Limited*

CATV TRANSMISSION SYSTEMS

A television receiver assembly including a multi-channel television signal decoder coupled to a source of incoming television signals, a multi-channel television display coupled to the decoder for displaying received decoded television signals, a channel changing device operative to change the channel decoded by the decoder and displayed by the display, the channel changing device being inoperative to display received decoded television signals during a channel changing interval, and an interval message provider operative to display at least one predetermined information message during the channel changing interval.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	08/556,024		5,786,845	13-Nov-2015

P-012 *News Datacom Limited*

SMART CARD CHAINING IN PAY TELEVISION SYSTEMS

A pay television system including a pay television network and a subscriber unit which receives pay television transmissions via the pay television network and displays the pay television transmissions on televisions coupled thereto. The subscriber unit includes at least two pay television decoders, wherein a first decoder includes a first card reader and a second decoder includes a second card reader. The system also includes a first smart card which is operative, upon insertion in a first slot in the first card reader, to activate decoding of the pay television transmissions in the first decoder and a second smart card which is operative, upon insertion in a second slot in the second card reader, to activate decoding of the pay television transmissions in the second decoder. The second smart card deactivates in accordance with predetermined criteria and reactivates upon insertion in the first slot in the first card

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	08/875,868		6,405,369	23-Jan-2017

P-015 *News Datacom Limited*

VOICE ACTIVATED TELEVISION SYSTEM AND PROGRAM GUIDE

A subscriber unit for use with a program guide selection system is described. The program guide selection system provides program guide information which is communicated over a communication network and includes operating characteristics of a communication system and selection codes which are associated with the operating characteristics of the communication system. The subscriber unit includes: a receiver for receiving the program guide information and the selection codes associated with the operating characteristics, a display for displaying the program guide information and the selection codes to a subscriber, a microphone which is employed by the subscriber, when the subscriber identifies on the display a selection code which is associated with a requested one of the operating characteristics, to orally input a voice expression which includes the selection code, and a speech recognition unit which is coupled to the microphone and is operative to enable selection of the requested one of the operating characteristics in response to the

			Application Number	Publication Number	Patent Number	Expiration Date
US	D1	Granted	09/933,097		6,654,721	31-Dec-2016

P-019 *News Datacom Limited*

DIGITAL RECORDING PROTECTION SYSTEM

A system for producing an output scrambled digital data stream from an input scrambled digital data stream. The input scrambled digital data stream includes a plurality of control messages (ECMs), each ECM including coded information for generating a control word (CW) associated with the ECM and being encoded using an ECM key. The input scrambled digital data stream also includes a plurality of segments of scrambled digital data, each segment of scrambled digital data being associated with one of the plurality of ECMs and being scrambled using the CW associated with the ECM. A method for producing the output scrambled digital data stream includes replacing each of the plurality of ECMs with a corresponding transformed ECM (TECM), each corresponding TECM comprising coded information for generating the CW associated with the corresponding ECM and being encoded using a TECM key, thus producing the output scrambled digital data stream, wherein the ECM key is replaced with a new ECM key at an ECM key change time, and the TECM key is not replaced at the ECM key change time.

		Application Number	Publication Number	Patent Number	Expiration Date
US	Granted	09/014,791		6,178,242	28-Jan-2018

P-020 *News Datacom Limited*

ENTERTAINMENT SYSTEM

An entertainment system distributes entertainment to a plurality of entertainment delivery units 100 at least one which includes personalization apparatus 130 adapted to receive a removable personalization element 140 including personalization information to personalize the entertainment, and the personalization information includes at least one of: entertainment preference information; gaming information; and telecommunications information. Parent-child supervision is possible. One unit 100 can indicate presence of a particular person at another. The system can receive the entertainment from a series of satellites in turn, using respective reception parameters, switching over according to position or comparison of signal qualities. Availability of a future programme may be predicted from a prediction of future position. Programme or channel identification codes received permit appropriate billing in the case of

			Application Number	Publication Number	Patent Number	Expiration Date
US		Granted	09/445,207		7,124,426	26-Mar-2018
US	C1	Pending OA	11/519,182	2007/011705		26-Mar-2018

SCHEDULE III

Trademarks

Grantor	Mark	Reg. No. or Appln. No.	Date
NDS Limited	VIDEOGUARD	1,959,173	February 27, 1996
	NDS	2,840,447	May 11, 2004
	NDS	2,840,448	May 11, 2004