#### 506397176 12/10/2020

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6443932

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
ELDON TECHNOLOGY LIMITED	10/29/2014

#### **RECEIVING PARTY DATA**

Name:	ECHOSTAR UK HOLDINGS LIMITED		
Street Address:	BECKSIDE DESIGN CENTRE		
Internal Address:	MILLENNIUM BUSINESS PARK STATION ROAD		
City:	STEETON, KEIGHLEY		
State/Country:	UNITED KINGDOM		
Postal Code:	BD20 6QW		

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	16653405	

#### **CORRESPONDENCE DATA**

**Fax Number:** (206)332-7198

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

**Phone:** 3034542955

**Email:** patentprocurement@perkinscoie.com, sserrano@perkinscoie.com

Correspondent Name: PERKINS COIE LLP
Address Line 1: P.O. BOX 1247

Address Line 4: SEATTLE, WASHINGTON 98111-1247

ATTORNEY DOCKET NUMBER:	120299-8050.US01
NAME OF SUBMITTER:	SHANNON SERRANO
SIGNATURE:	/Shannon Serrano/
DATE SIGNED:	12/10/2020

#### Total Attachments: 20

ı	source=Eldon_Technology_Limited_to_Echostar_UK_Holdings_Limited_120299-8050US01#page1.tif
	source=Eldon_Technology_Limited_to_Echostar_UK_Holdings_Limited_120299-8050US01#page2.tif
	source=Eldon_Technology_Limited_to_Echostar_UK_Holdings_Limited_120299-8050US01#page3.tif
	source=Eldon_Technology_Limited_to_Echostar_UK_Holdings_Limited_120299-8050US01#page4.tif
	source=Eldon_Technology_Limited_to_Echostar_UK_Holdings_Limited_120299-8050US01#page5.tif

PATENT 506397176 REEL: 054610 FRAME: 0543

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#### PATENT ASSIGNMENT

WHEREAS, Eldon Technology Limited, a limited liability company organized and existing under the laws of the England and Wales, and having a principal place of business of Beckside Design Centre, Millennium Business Park Station Road, Steeton, Keighley, BD20 6QW ("ASSIGNOR"), owns rights in, to and under the patent applications set forth in the attached Exhibit B (the "Properties"); and

WHEREAS, EchoStar UK Holdings Limited, a limited liability company organized under the laws of the England and Wales, and having a principal place of business of Beckside Design Centre, Millennium Business Park Station Road, Steeton, Keighley, BD20 6QW ("ASSIGNEE"), is desirous of acquiring ASSIGNOR'S entire right, title and interest in, to and under the Properties.

WHEREAS, Assignor, to the extent they own any right, title and interest in and to the Properties is desirous of assigning any and all such rights, title and/or interest to Assignee.

NOW, THEREFORE, USD \$1.00 and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Assignor has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the Properties and any and all letters patent or patents in the United States of America and all foreign countries which may be granted therefore and (including any divisions, continuations, continuations-in-part, reissues, reexaminations or extensions of letters patents and other related applications arising from, corresponding to and/or claiming priority to any of the Properties) and the registration thereof, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the ASSIGNEE for its own use and enjoyment and for the use and enjoyment of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent may be granted, as fully and entirely as the same would have been held and enjoyed by the ASSIGNOR had this assignment not been made, and further including all income, royalties, damages and payments for past or future infringements and misappropriations thereof, all rights to sue for past, present and future infringements or misappropriations thereof, and all rights corresponding to any of the above throughout the world and for the full term or terms of assigned Properties, including the right to claim priority to any of the patents or applications listed in the Properties or any patents or applications resulting from the listed Properties that have not yet been filed;

AND for the same consideration, ASSIGNOR hereby covenants and agrees to and with ASSIGNEE, its successors, legal representatives and assigns, that ASSIGNOR will encourage its employees named as inventors on one or more of the assigned Properties, to make, execute and deliver any and all other instruments in writing as may be necessary to assign the Properties to ASSIGNEE, including, but not limited to, any and all further application papers, affidavits, assignments and other documents, and that ASSIGNOR will

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communicate to ASSIGNEE, its successors, legal representatives and assigns, all facts known to ASSIGNOR relating to the Properties, and that ASSIGNOR will testify in all legal proceedings and generally do all things which may be necessary or desirable to more effectually secure to and vest in ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in and to the Properties;

AND THE ASSIGNOR HEREBY authorizes and requests the Commissioner of the United States Patent and Trademark Office, and any official of any country or countries foreign to the United States, whose duty is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

Assignor hereby authorizes Assignee to insert in this instrument the filing date and Application Serial Number in the above fields if not already present at the time of execution of this instrument.

IN WITNESS WHEREOF, the undersigned have executed this Patent Assignment and License Agreement as of the 29th day of October 2014.

Eldon Technology Limited

By:

Name: Dean A. Manson

Title: Executive Vice President,

General Counsel & Secretary

EchoStar UK Holdings Limited

Ву:

Name: Michael T. Dugan

Title: CEO & President

On this 29th day of October, 2014, before me a notary public in and for the county of Arapahoe in the State of Colorado, appeared Dean A. Manson, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he signed, seals and delivered the same instrument as a free and voluntary act for the use and purposes therein set forth. KAITLYN O'HARA NOTARY PUBLIC STATE OF COLORADO NOTARY ID: 20004020733 MY COMMISSION EXPIRES: OCTOBER 28, 2015 (al) Notary Public On this 29th day of October, 2014, before me a notary public in and for the county of Arapahoe in the State of Colorado, appeared Michael T. Dugan, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he signed, seals and delivered the same instrument as a free and voluntary act for the use and purposes therein set forth. TARA FITZSIMMONS NOTARY PUBLIC STATE OF COLORADO NOTARY ID: 20134077861 MY COMMISSION EXPIRES: DECEMBER 13, 2017 Notary Public (Seal)

# Exhibit B ASSIGNED PATENTS AND PATENT APPLICATIONS

### U.S. Patents

Issue Date	Patent No.	Title
Feb 27, 2013	8239897	Method and Apparatus for Multiple Audio
		Outputs
Feb 21, 2012	8875192	Method and Apparatus for Multiple Audio
		Outputs
Sep 26, 2013	8032771	Systems and Methods for Controlling Power
		Consumption of Power Supply of Electronic
		Devices
Jun 25, 2013	8768143	Handling of Recording Clashes Which Are Not
		Know When User Creates Recording Request
Jun 10, 2013	7868480	Saturating Series Clipper
Nov 15, 2013	8462275	A REMOTE CONTROL DEVICE FOR CONTROLLING
		THE PRESENTATION OF BROADCAST
		PROGRAMMING
Nov 21, 2013	8301270	SYSTEMS AND METHODS FOR FACILITATING
		HOME AUTOMATION
Sep 4, 2014	8798311	Scrolling Display of Electronic Program Guide
·		Utilizing Images of User Lip Movements
Apr 3, 2014	8035916	Hard Disc Drive Counter-Vibration System
Feb 7, 2014	8358482	Hard Disc Drive Counter-Vibration System
Jul 15, 2013	8762978	Content Receiver Having a Low-Power Mode
Mar 27, 2013	8850488	Systems And Methods For Accessing Electronic
		Program Guide Information Over A Backchannel
		Communication Path
Mar 27, 2013	8060861	Tool to Generate Active Page Interface
		Instructions
Mar 27, 2013	8327401	Alteration of Electronic Program Guide Data
		Based on Ratings Lock
Mar 27, 2013	8739222	Alteration of Electronic Program Guide Data
		Based on Ratings Lock
Mar 27, 2013	8831399	Systems and Methods for Managing Files on a
		Digital Video Recorder
Aug 21, 2013	8468636	Apparatus, Systems and Methods for Debris
		Removal from an Antenna
Apr 30, 2014	8282740	Apparatus, Systems and Methods for Removing
		Debris From a Surface
Oct 22, 2014	8454751	Apparatus, Systems and Methods for Removing
		Debris From a Surface
Oct 22, 2014	8706093	Predictive Calendar
Dec 11, 2013	8724971	Recording System
Aug 12, 2014	8804050	Peak Time Power Saving
Oct 1, 2014	÷	Methods and apparatus for tracking user's

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		remote control handling signatures
Oct 16, 2013	8704877	SYSTEMS AND METHODS FOR PRESENTING
0.10 0.07 0.00		THREE-DIMENSIONAL CONTENT USING
		APERTURES
Oct 22, 2014	8477400	SYSTEMS AND METHODS FOR PRESENTING
out any acat	3,7,7,00	THREE-DIMENSIONAL CONTENT USING
		PHOTOSENSITIVE LENSES
Oct 22, 2013	8316413	Apparatus for Displaying Electrical Device Usage
00, 88, 8080		Information on a Television Receiver
Feb 27, 2013	8588575	Apparatus and Methods for High-Speed Video
,		Presentation
Feb 21, 2012	8745688	A Method and Device for Operating a Television
,		Located in a Premises to Simulate Occupation of
		the Premises
Sep 26, 2013	8364009	Apparatus, Systems and Methods for a
, ,		Thumbnail-Sized Scene Index of Media Content
Jun 25, 2013	8655335	Playback pause before signal loss of a mobile
·		device
Jun 10, 2013	8781824	Offline generation of subtitles
Nov 15, 2013	8836276	Charging Batteries for Electronic Devices by
		Talking
Nov 21, 2013	8363411	Passive, Low-Profile Heat Transferring System
Sep 4, 2014	8619427	Media Content Device Chassis with Internal
		Extension Members
Apr 3, 2014	8681495	Media Device Having a Piezoelectric Fan
Feb 7, 2014	8682169	Apparatus, Systems and Methods for Detecting
		Infrared Signals at a Media Device Configured to
		be Positioned in Different Orientations
Jul 15, 2013	8638199	Apparatus, Systems and Methods for Power Line
		Carrier Data Communication to DC Powered
		Electronic Device
Mar 27, 2013	8830040	Apparatus, Systems and Methods for Power Line
		Carrier Data Communication to DC Powered
		Electronic Device
Mar 27, 2013	8792054	Auto-resizing for Subtitles
Mar 27, 2013	8629623	Smart Illumination for Electronic Devices
Mar 27, 2013	8732754	Expanded Programming Guide
Mar 27, 2013	8750673	Systems and Methods for Reducing a User's
		Ability to Perceive Hard Drive Noise
Aug 21, 2013	8595768	Enhanced Program Preview Content
Apr 30, 2014	8724026	APPARATUS, METHOD AND ARTICLE FOR A DUAL-
		PROGRAM DISPLAY
Oct 22, 2014	8873938	Handling Requests when Available Channel
		Selectors Are in Use
Oct 22, 2014	8855466	Separate video file for I-frame and non-I-frame
		data to improve disk performance in trick play
Dec 11, 2013	8704948	Apparatus, Systems and Methods for Presenting

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		Text Identified in a Video Image
Oct 1, 2014	8793724	IMAGE DOMAIN COMPLIANCE
Nov 4, 2014	8881187	LOGGING NETWORK DISCOVERABLE
		INFORMATION

# U.S. Patent Applications

Filing Date	Application No.	Title
Nov 20, 2008	12275058	Systems and Methods for Providing Distributed
		Television Services to a Subscriber
Sep 30, 2008	12242286	Segmented Progress Indicator
Sep 3, 2008	12203286	CONTROLLING AN ELECTRONIC DEVICE BY WAY OF
		A CONTROL DEVICE
Dec 29, 2009	12648789	A SYSTEM AND METHOD FOR PRESENTING
		SELECTED BROADCAST PROGRAMMING
Dec 4, 2008	12327977	RANDOMLY SELECTING CURRENT PROGRAMMING
Mar 19, 2009	12407208	ARCHIVING BROADCAST PROGRAMS
Aug 29, 2008	12201928	Data Transcoding
Jan 17, 2011	13054563	Dynamic QOS in a Network Distributing Streamed
		Content
Dec 24, 2008	12344049	Seperate Smartcard Rights for External HDD Library
Sep 18, 2008	12233274	METHODS AND APPARATUS FOR PROVIDING
		MULTIPLE CHANNEL RECALL ON A TELEVISION
		RECEIVER
Sep 15, 2008	12210831	METHOD AND APPARATUS FOR RECORDING AND
		VIEWING OF AN AUDIO/VIDEO PROGRAM IN
		RESPONSE TO A NON-RECORDING EVENT DURING
		THE PROGRAM
Dec 23, 2008	12342807	Enhanced Electronic Program Guides, Systems and
		Methods
Jan 30, 2009	12363391	Enhanced Display Panels of Television Receiving
		Devices and Methods
Oct 8, 2012	13647254	SYSTEMS AND METHODS FOR FACILITATING HOME
		AUTOMATION
Jan 14, 2010	13145980	Making available previously broadcast
		programming
Jan 30, 2009	12363228	Channel change insert
Aug 1, 2014	14449568	SYSTEMS AND METHODS FOR LIP READING
		CONTROL OF A MEDIA DEVICE
Nov 19, 2008	61116155	Hard Disc Drive Counter-vibration suspension
		mount
Apr 14, 2009	12423630	Systems and Methods for Catch-Up Electronic
		Program Guide
Jun 16, 2009	12485611	SYSTEMS AND DEVICES FOR PRESENTING SOCIAL
		NETWORKING EVENTS VIA A TELEVISION RECEIVER
Jun 17, 2009	12486617	Automatic Web Searches Based on EPG

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Jun 25, 2009	12492038	Apparatus and Systems For Heating A Satellite Antenna Reflector
Com 14 3000	12558846	SYSTEMS AND METHODS FOR INSURING DIGITAL
Sep 14, 2009	12008646	MEDIA DOWNLOAD TRANSACTIONS
May 16, 2012	13510258	A Method and System for Media Content Playback and Storage
Dec 30, 2009	12650168	Device Control Bus Command Translation for
Dec 30, 2003	15030100	Noncompliant and Incompatible Devices
May 12, 2014	14275538	Recording System
Feb 4, 2010	12700430	Highlights of Premium Multimedia Content
May 30, 2013	13905949	SYSTEMS AND METHODS FOR PRESENTING THREE DIMENSIONAL CONTENT USING PHOTOSENSITIVE LENSES
Feb 4, 2010	12700310	Electronic Appliance Status Notification via a Hom Entertainment System
Nov 19, 2012	13680934	Apparatus for Displaying Electrical Device Usage Information on a Television Receiver
Feb 23, 2011	13033496	ANTI FARE EVASION SYSTEM
Feb 23, 2011	13033459	Automatic Spoiler Prevention
Oct 12, 2010	12902320	VARIABLE TRANSPARENCY HEADS UP DISPLAYS
Oct 11, 2010	12901849	Holographic 3D display
Oct 12, 2010	12903058	Thought control of set top box
Oct 12, 2010	12902969	Metadata origination verification
Sep 23, 2010	12889218	Systems and Methods for Filtering Access to Content During Selected Time Periods
Jan 28, 2013	13752004	Apparatus, Systems and Methods for a Thumbnail Sized Scene Index of Media Content
Oct 18, 2010	12906656	DYNAMIC RECOGNITION OF WEB ADDRESSES IN VIDEO
Dec 23, 2010	12977948	RECOGNITION OF IMAGES WITHIN A VIDEO BASEI ON A STORED REPRESENTATION
Nov 5, 2010	12940735	Apparatus, Systems and Methods for Automatical Presenting Stored Media Content at Its Beginning
Mar 14, 2012	13420204	Dynamic video display delay based on historical channel change times
Apr 18, 2013	13880091	Content Recognition and Censorship
Dec 23, 2010	12977507	METHODS AND APPARATUSES TO FACILITATE PRESELECTION OF PROGRAMMING PREFERENCES
Nov 5, 2013	14071648	Playback pause before signal loss of a mobile devi
Feb 15, 2012	13397243	CONTROLLING PLACESHIFTED CONTENT
Feb 13, 2012	13371912	Copy Protection
Feb 14, 2012	13396470	Controlling Playback of Recordings
Dec 20, 2013	14136192	Media Content Device Chassis with Internal Extension Members
Mar 29, 2011	13074971	Media Content Device with Customized Panel
Aug 22, 2014	14466542	Apparatus, Systems and Methods for Power Line
		Carrier Data Communication to DC Powered

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		Electronic Device
Mar 22, 2011	13053492	Apparatus, Systems and Methods for Securely
		Storing Media Content Events on a Flash Memory
		Device
Mar 22, 2011	13053487	Apparatus, Systems and Methods for Control of
		Inappropriate Media Content Events
Jan 25, 2013	13750792	REMOTE VIEWING OF MEDIA CONTENT USING
		LAYERED VIDEO ENCODING
May 18, 2012	13475794	Improved Progress Bar
Jul 25, 2014	14341633	AUTOMATIC SUBTITLE RESIZING
Sep 28, 2012	13630967	AUTOMATIC SEARCH
Nov 9, 2012	13673079	Network Content Monitoring
Nov 4, 2013	14071613	Enhanced Program Preview Content
May 6, 2014	14271015	APPARATUS, METHOD AND ARTICLE FOR A DUAL-
1410) 0, 2027	276,2020	PROGRAM DISPLAY
Oct 3, 2011	13251770	Search and Display Techniques for an Electronic
	2323277	Programming Guide
Dec 28, 2012	61746644	HYBRID VOLTAGE REGULATOR CIRCUITS AND
occ au, auxa	02740044	SYSTEMS INCLUDING THE SAME
Nov 1, 2011	13286944	VIDEO SERVICES RECEIVER THAT MANAGES
1100 1, 2011	13200344	INCOMPLETE PROGRAM RECORDINGS, AND
		RELATED OPERATING METHODS
Oct 17 2011	14517373	
Oct 17, 2014	1431/3/3	Handling Requests when Available Channel Selectors Are in Use
C 22 3022	1222222	
Sep 14, 2011	13232829	Associating Macro User Input Events with Content
Mar 28, 2012	61616557	Transient Electrical Load Decoupling for a Direct
	42770000	Current Power Supply
Aug 8, 2012	13569800	Transient Electrical Load Decoupling for a Direct
	40700070	Current Power Supply
Jan 11, 2013	13739878	VIDEO VEHICLE ENTERTAINMENT DEVICE WITH
		DRIVER SAFETY MODE
Dec 14, 2011	13325964	Mapping Visual Display Screen to Portable Touch
		Screen
Feb 1, 2013		Display zoom controlled by Proximity detection
May 1, 2012	13461564	Smooth H264 reverse video playback on low-cost
		current generation set-top box hardware.
Mar 15, 2013	61791985	ADVANCE NOTIFICATION OF CATCH-UP EVENTS
		THROUGH BROADCAST META-DATA
Mar 10, 2014	14202265	ADVANCE NOTIFICATION OF CATCH-UP EVENTS
		THROUGH BROADCAST META-DATA
Dec 20, 2012	13722608	TELEVISION RECEIVER CLOUD SERVICE
		AUGMENTATION
Dec 31, 2012	61747539	AUTO CATCH-UP
Jan 9, 2013	13737832	AUTO CATCH-UP
Mar 15, 2013	<i>ֈ</i> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	BROADCAST CONTENT RESUME REMINDER
Mar 7, 2014	\$	BROADCAST CONTENT RESUME REMINDER
Feb 11, 2013	<del></del>	Simulated Touch Input

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Nov 29, 2012   13689482		NAVIGATION TECHNIQUES FOR ELECTRONIC		
		PROGRAMMING GUIDES AND VIDEO		
Dec 10, 2012	13710069	Temporal based embedded meta data for voice		
		queries		
Nov 29, 2012	13689516	Photosensitivity Protection for Video Display		
Dec 28, 2012	13730145	Volume Level-Based Closed-Captioning Control		
Jun 12, 2014	14303218	IMAGE DOMAIN COMPLIANCE		
Mar 15, 2013	61790611	SHEET FORMED INDUCTIVE WINDING		
Mar 7, 2014	14201570	SHEET FORMED INDUCTIVE WINDING		
Mar 15, 2013	13839195	SYSTEMS AND METHODS FOR AVOIDING MISSING		
		TELEVISION PROGRAMMING WHEN CHANGING		
		BETWEEN TELEVISION CHANNELS		
Mar 15, 2013	13385940	SHARED DATA COMMUNICATION BANDWIDTHS		
		AMONG MOBILE DEVICES		
Mar 6, 2013	13787333	TRICK PLAY TECHNIQUES FOR A PICTURE-IN-		
		PICTURE WINDOW RENDERED BY A VIDEO		
		SERVICES RECEIVER		
Sep 18, 2013	14030607	Use of Active Shutter Device to Securely Display		
•		Content		
Aug 1, 2014	14449546	LOUDNESS LEVEL CONTROL FOR AUDIO RECEPTION		
<i>.</i>		AND DECODING EQUIPMENT		
Aug 1, 2014	14449525	LOUDNESS LEVEL CONTROL FOR AUDIO RECEPTION		
<b>.</b>		AND DECODING EQUIPMENT		
Jul 15, 2013	13942451	LOCATION-BASED TARGETED ADVERTISING		
Jan 30, 2014	14168181	METHODS AND APPARATUS FOR CREATION OF A		
,		REFERENCE TIME INDEX FOR AUDIO/VIDEO		
		PROGRAMMING		
Aug 5, 2014	14451894	SYSTEMS, METHODS, AND APPARATUS FOR		
<i>3</i> ,		FACILITATING EXPANSION OF MEDIA DEVICE		
		INTERFACE CAPABILITIES		
Jun 11, 2014	14302058	Systems and Methods for Facilitating Device		
		Control, Device Protection, and Power Savings		
Sep 25, 2014	14497130	SENSORS FOR CARBON MONOXIDE IN THE HOUSE		
		AND OPENS VENTS OR WINDOWS		
Aug 27, 2014	14470225	CONTEXTUAL VOLUME CONTROL		
Aug 22, 2014	; , ,	DEVICE-SPECIFIC LOGO ACTIVATION		
Sep 5, 2014	<u> </u>	GAZE-BASED SECURITY		
Aug 27, 2014	ф	PROVISIONING PREFERRED MEDIA CONTENT		
Aug 27, 2014 Aug 27, 2014	<del>}</del>	TELEVISION RECEIVER-BASED NETWORK TRAFFIC		
MUE 27, 2014	144/0334	CONTROL		
LUID DOIA	1/000017			
Jul 3, 2014	14323817	Methods and Systems for Managing Consecutive		
A 37 303 *	14470415	Recordings		
Aug 27, 2014	14470415	SOURCE-LINKED ELECTRONIC PROGRAMMING		
	}	GUIDE		
e	00000000	THE SAME ASSESSED ASSESSED ASSESSED ASSESSED ASSESSED ASSESSED ASSESSED ASSESSED ASSESSED ASSESSED.		
Sep 3, 2014	14476377	HOME AUTOMATION CONTROL USING CONTEXT SENSITIVE MENUS		

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		ADVERTISEMENTS DURING A TRICK PLAY MODE
Aug 27, 2014	14470352	IN-RESIDENCE TRACK AND ALERT
Aug 27, 2014	14470248	MEDIA CONTENT OUTPUT CONTROL
May 12, 2014	14275080	SYSTEMS AND METHODS FOR TIMING
		COMMERCIAL BREAKS
Jul 29, 2014	14446120	METHODS AND SYSTEMS FOR PROVIDING
		ADDITIONAL CONTENT
Sep 5, 2014	14479007	BROADCAST EVENT NOTIFICATIONS
Jul 28, 2014	14444071	METHODS AND SYSTEMS FOR CONTENT
		NAVIGATION
Jul 1, 2014	14321613	SYSTEMS AND METHODS FOR FACILITATING
		ENHANCED DISPLAY CHARACTERISTICS BASED ON
		VIEWER STATE
Aug 14, 2014	14459517	PERSONALIZED AMBIENT TEMPERATURE
		MANAGEMENT
Jul 8, 2014	14326022	Systems and Methods for Timing the Recording and
		Playback of Television Programming
Jul 28, 2014	14444320	APPARATUS, SYSTEMS AND METHODS FOR
		SYNCHRONIZING CALENDAR INFORMATION WITH
		ELECTRONIC PROGRAM GUIDE INFORMATION
Sep 7, 2010	12876383	Apparatus, Systems and Methods for Storing Music
		Program Content Events Received in a Content
		Stream
Oct 29, 2012	13663249	Enhanced Programme Preview Content
Feb 24, 2014	14188470	Representation of Online Discussion in Conjunction
		with Primary Visual Content

# Unfiled U.S. Patent Applications

EchoStar Docket Number	Application No.	Title
P2013-07-		STB Infra-Red Remote Control volume control
06.EP.US		improvements and programming improvements
P2014-01-		CUSTOMIZED TELEVISION PROGRAM SELECTOR
23		
P2014-01-		PAUSING PLAYBACK OF MEDIA CONTENT BASED
24		ON USER PRESENCE
P2014-08-		Systems and Methods for Advertising Insertion and
06		Replacement
P2014-08-		FITNESS OVERLAY AND INCORPORATION FOR
07		HOME AUTOMATION SYSTEM
P2014-08-		Auto unlock on fire
08		

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Foreign Patents

	·····	Foreign Pa	ienis
Issue Date	Patent No.	Country	Title
Jul 25, 2012	2455987	GB	A POWER SUPPLY UNIT INCORPORATING
			A CURRENT MONITORING DEVICE
Feb 27,	2461768	G8	Dynamic QoS in a Network Distributing
2013			Streamed Content
Feb 21,	2730953	CA	Dynamic QOS in a Network Distributing
2012			Streamed Content
Sep 26,	2009317232	AU	Hard Disc Drive Counter-Vibration
2013			System
Jun 25, 2013	212894	IL	Hard Disc Drive Counter-Vibration
			System
Jun 10, 2013	310384	MX	Hard Disc Drive Counter-Vibration
			System
Nov 15,	171339	SG	Hard Disc Orive Counter-Vibration
2013			System
Nov 21,	1416511	TW	Hard Disc Drive Counter-vibration
2013			suspension mount
Sep 4, 2014	2010252780	AU	Systems And Methods For Accessing
• •			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
Apr 3, 2014	10-1384028	KR	Systems And Methods For Accessing
			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
Feb 7, 2014	317888	MX	Systems And Methods For Accessing
			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
Jul 15, 2013	175964	5G	Systems And Methods For Accessing
			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
Mar 27,	2273607	EP	Apparatus and Systems For Heating A
2013			Satellite Antenna Reflector
Mar 27,	602010005777.	DE	Apparatus and Systems For Heating A
2013	<b>!</b>		Satellite Antenna Reflector
Mar 27,	2273607	FR	Apparatus and Systems For Heating A
2013			Satellite Antenna Reflector
Mar 27.	2273607	G8	Apparatus and Systems For Heating A
2013			Satellite Antenna Reflector
	2273607	NL	Apparatus and Systems For Heating A
2013			Satellite Antenna Reflector
	2362644	EP	Recording System
2013			Δ
***********	319802	MX MX	A Method of Notifying a User of the

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2014			Status of an Electrical Appliance
Oct 22,	2431956	EP	Intrusion Deterrence Employing a
2014			Television
Oct 22,	2431956	GB	A Method and Device for Operating a
2014			Television Located in a Premises to
			Simulate Occupation of the Premises
Dec 11,	316357	MX	Automatic 'spoiler' prevention
2013			
Oct 1, 2014	2628042	EP	VARIABLE TRANSPARENCY HEADS UP
			DISPLAYS
Oct 16,	2503863	EP	Media Content Device Chassis with
2013			Internal Extension Members
Oct 22,	2506699	EP	Media Device Having a Piezoelectric Fan
2014			
Oct 22,	314454	MX	Systems and Methods for Reducing a
2013			User's Ability to Perceive Hard Drive
			Noise

Foreign Patent Applications

***************************************	Foreign Patent Applications			
Filing Date	Application No.	Country	Title	
Aug 18, 2009	PCT182009006600	wo	Data Transcoding	
Jul 16, 2009	PCTEP2009059187	wo	Dynamic QOS in a Network Distributing Streamed Content	
Jul 16, 2009	097807382	EP	Dynamic QOS in a Network Distributing Streamed Content	
Sep 4, 2009	PCTEP2009061501	wo	Handling of Recording Clashes Which Are Not Know When User Creates Recording Request	
Aug 19, 2009	098127905	TW	Handling of Recording Clashes Which Are Not Know When User Creates Recording Request	
Sep 4, 2009	PCTEP2009061499	wo	METHODS AND APPARATUS FOR PROVIDING MULTIPLE CHANNEL RECALL ON A TELEVISION RECEIVER	
Sep 4, 2009	PCTEP2009061492	wo	METHOD AND APPARATUS FOR RECORDING AND VIEWING OF AN AUDIO/VIDEO PROGRAM IN RESPONSE TO A NON-RECORDING EVENT DURING THE PROGRAM	
Dec 16, 2009	PCTEP2009067345	wo	Enhanced Electronic Program Guides, Systems and Methods	
Jan 23, 2009	091512723	EP	Making Available Previously Broadcast Programming	
Jan 14, 2010	PCTEP2010050405	wo	Making available previously broadcast programming	

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Jan 14, 2010	2750283	CA	Making available previously broadcast programming
Jan 14, 2010	MXa2011007781	МХ	Making available previously broadcast
81m., 10	Derenananaeraaa	wo	programming Hard Disc Drive Counter-Vibration
Nov 18,	PCTEP2009065383	WO	
2009	MIMANA C C MM	25.75	System
•	PI09215522	BR	Hard Disc Drive Counter-Vibration
2009	226222	~	System
Nov 18,	2743973	CA	Hard Disc Drive Counter-Vibration
2009		es a :	System
Jun 16, 2011	2009801508367	CN	Hard Disc Drive Counter-Vibration System
Nov 18,	097564793	EP	Hard Disc Drive Counter-Vibration
2009			System
Nov 18,	4077CHENP2011	IN	Hard Disc Drive Counter-Vibration
2009			System
Nov 18,	2011543775	JP	Hard Disc Drive Counter-Vibration
2009			System
Nov 18,	1020117014048	KR	Hard Disc Drive Counter-Vibration
2009			System
Nov 18,	PI2011002216	MY	Hard Disc Drive Counter-Vibration
2009			System
May 17,	PCTG82010000996	wo	Systems And Methods For Accessing
2010			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
May 17,	PI10129820	BR	Systems And Methods For Accessing
2010			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
May 17,	2763050	CA	Systems And Methods For Accessing
2010			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
May 17,	2010800227481	CN	Systems And Methods For Accessing
2010			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
May 17,	107252421	EP	Systems And Methods For Accessing
2010			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
May 17,	216227	IL	Systems And Methods For Accessing
2010			Electronic Program Guide Information
			Over A Backchannel Communication
			Path
May 17,	8642CHENP2011	IN	Systems And Methods For Accessing

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2010			Electronic Program Guide Information Over A Backchannel Communication Path
May 17, 2010	2012512444	JP	Systems And Methods For Accessing Electronic Program Guide Information Over A Backchannel Communication Path
May 17, 2010	2014002659	ΊÞ	Systems And Methods For Accessing Electronic Program Guide Information Over A Backchannel Communication Path
May 17, 2010	PI2011005379	MY	Systems And Methods For Accessing Electronic Program Guide Information Over A Backchannel Communication Path
May 14, 2010	099115551	TW	Systems And Methods For Accessing Electronic Program Guide Information Over A Backchannel Communication Path
Jun 4, 2010	PCTGB2010001093	wo	Automatic Web Searches Based on EPG
Dec 7, 2010	2783270	CA	Method and Apparatus for Recording Television Content
Dec 7, 2010	PCTEP2010069108	wo	Method and Apparatus for Recording Television Content
Dec 7, 2010	107909228	EP	Method and Apparatus for Recording Television Content
Dec 7, 2010	MXa2012006302	MX	Method and Apparatus for Recording Television Content
Nov 16, 2009	091761429	EP	A Method and System for Media Content Playback and Storage
Nov 12, 2010	PCTEP2010067420	WO	A Method and System for Media Content Playback and Storage
Feb 9, 2011	111538609	EP	A Method and System for Obtaining Content for a Calendar
Feb 19, 2010	131640757	EP	Recording System
Feb 19, 2010	102503026	DE	Recording System
Feb 19, 2010	102503026	FR	Recording System
Feb 19, 2010	102503026	GB	Recording System
Feb 19, 2010	102503026	NL	Recording System
Feb 4, 2011	111534095	ЕР	Highlights of Premium Multimedia Content

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Feb 9, 2011	111538773	EP	Tracking user remote signatures
Feb 1, 2011	PCTEP2011051418	wo	Systems and Methods for Presenting
			Three-Dimensional Video Content to a
***************************************			Viewer
Feb 1, 2011	2788626	CA	Systems and Methods for Presenting
			Three-Dimensional Video Content to a
			Viewer
Feb 1, 2011	117034157	EP	Systems and Methods for Presenting
			Three-Dimensional Video Content to a
			Viewer
Feb 1, 2011	MXa2012008568	MX	Systems and Methods for Presenting
			Three-Dimensional Video Content to a
			Viewer
Feb 3, 2011	PCTEP2011051603	wo	A System and Method for Presenting
			Three-Dimensional Content
Feb 3, 2011	2788996	CA	A System and Method for Presenting
			Three-Dimensional Content
Feb 3, 2011	117038505	EP	Stereoscopic Display System Based on
,			Glasses Using Photochromatic Lenses
Feb 3, 2011	MXa2012009003	MX	A System and Method for Presenting
, , , , , , , , , , , , , , , , , , , ,			Three-Dimensional Content
Feb 3, 2011	PCTEP2011051608	wo	A Method of Notifying a User of the
,,			Status of an Electrical Appliance
Feb 3, 2011	2788744	CA	A Method of Notifying a User of the
· · · · · · · · · · · · · · · · · · ·			Status of an Electrical Appliance
Feb 3, 2011	117076083	EP	A Method of Notifying a User of the
			Status of an Electrical Appliance
Apr 21,	111635306	ΕP	A Method of Presenting Video Frames
2011	22200000		at a Non-Standard Speed and a Video
de es es es			Content Device
Sep 17,	101773976	DE	Intrusion Deterrence Employing a
2010			Television
Sep 17,	101773976	FR	Intrusion Deterrence Employing a
2010	202775570	1 "	Television
Sep 17,	101773976	NL	Intrusion Deterrence Employing a
2010	101/100/0	147	Television
Jun 21, 2010	102511193	EP	Anti Fare Evasion System
	. <del>-</del>		
Jun 21, 2010	102511193	DE Tra	Anti Fare Evasion System
Jun 21, 2010	102511193	FR	Anti Fare Evasion System
Jun 21, 2010		NL	Anti Fare Evasion System
Jun 21, 2010		G8	Anti Fare Evasion System
Oct 11,	PCTEP2011067751	wo	VARIABLE TRANSPARENCY HEADS UP
2011			DISPLAYS
Oct 11,	2813512	CA	VARIABLE TRANSPARENCY HEADS UP
2011			DISPLAYS
Oct 11,	MXa2013003899	MX	VARIABLE TRANSPARENCY HEADS UP
2011			DISPLAYS

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Can 10		l wo	Walancankie 3D dienlau
Sep 15, 2011	PCTIB2011002725	AAC	Holographic 3D display
Sep 15,	2814130	CA	Holographic 3D display
2011	2014130		Holographic 30 dispisy
Sep 15,	118045913	EP	Holographic 3D display
2011	230040020	b. (	noing aprile ou display
Apr 5, 2013	MXa2013003902	MX	Holographic 3D display
Sep 15,	PCTUS2011051693	WO	Metadata origination verification
2011		***	metassa ongmanan remassar
Sep 15,	2814211	CA	Metadata origination verification
2011		u	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Sep 15,	117617597	EP	Metadata origination verification
2011			G
Dec 20,	118081884	wo	RECOGNITION OF IMAGES WITHIN A
2011			VIDEO BASED ON A STORED
			REPRESENTATION
Dec 20,	2822727	CA	RECOGNITION OF IMAGES WITHIN A
2011			VIDEO BASED ON A STORED
			REPRESENTATION
Dec 20,	118081884	EP	RECOGNITION OF IMAGES WITHIN A
2011			VIDEO BASED ON A STORED
			REPRESENTATION
Jun 21, 2013	MXa2013007386	MX	RECOGNITION OF IMAGES WITHIN A
			VIDEO BASED ON A STORED
			REPRESENTATION
Mar 6, 2012	2770760	CA	Dynamic video display delay based on
			historical channel change times
Mar 14,	111581427	EP	Dynamic vídeo display delay based on
2011			historical channel change times
Mar 13,	MXa2012003100	MX	Dynamic video display delay based on
2012			historical channel change times
Mar 13,	MXa2012003100	MX	Dynamic video display delay based on
2012			historical channel change times
Dec 10,	101945103	EP	CONTENT RECOGNITION AND
2010		-	CENSORSHIP
Dec 12,	PCTEP2011072460	wo	CONTENT RECOGNITION AND
2011		1.1.1.	CENSORSHIP
Dec 23,	PCTEP2011073985	WO	METHODS AND APPARATUSES TO
2011			FACILITATE PRESELECTION OF
n		ļ	PROGRAMMING PREFERENCES
Dec 23,	2822753	CA	METHODS AND APPARATUSES TO
2011			FACILITATE PRESELECTION OF
	440000400		PROGRAMMING PREFERENCES
· ·	118086487	EP	METHODS AND APPARATUSES TO
2011			FACILITATE PRESELECTION OF
lum 50 2032	8 8 W - 201 222200 1	0.43	PROGRAMMING PREFERENCES
Jun 19, 2013	MXa2013007084	<u>MX</u>	METHODS AND APPARATUSES TO

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		T	FACILITATE PRESELECTION OF
			PROGRAMMING PREFERENCES
Dec 23,	PCTEP2011074015	wo	Offline generation of subtitles
2011			
Dec 23,	2822751	CA	Offline generation of subtitles
2011			
Dec 23,	118086511	EP	Offline generation of subtitles
2011			
Dec 23,	MXa2013006972	MX	Offline generation of subtitles
2011		ļ	
Feb 15,	111545174	EP	CONTROLLING PLACESHIFTED
2011			CONTENT
Feb 10,	2767902	CA	CONTROLLING PLACESHIFTED
2012	111 2012001007	A #24	CONTENT
Feb 10,	MXa2012001835	MX	CONTROLLING PLACESHIFTED
2012	111545000	En	CONTENT
Feb 15, 2011	111545802	EP	Copy Protection
Feb 9, 2012	2767597	CA	Copy Protection
Feb 10,	MXa2012001834	MX	Copy Protection
2012	MIVGEOTEOOTOO	IVIA	Copy riblection
Feb 15,	111545885	EP	Controlling Playback of Recordings
2011	111343003		Controlling Colores of Incorollings
Feb 10,	2767909	† CA	Controlling Playback of Recordings
2012	2,3,303		controlling includes of the controllings
Feb 10,	MXa2012001833	† <sub>MX</sub>	Controlling Playback of Recordings
2012			
Mar 2, 2012	121578660	EP	Passive, Low-Profile Heat Transferring
			System
Mar 9, 2012	121587935	DE	Media Content Device Chassis with
			Internal Extension Members
Mar 9, 2012	121587935	FR	Media Content Device Chassis with
			Internal Extension Members
Mar 9, 2012	121587935	GB	Media Content Device Chassis with
			Internal Extension Members
Mar 9, 2012	121587935	NL	Media Content Device Chassis with
			Internal Extension Members
	121615777	NL	Media Device Having a Piezoelectric
2012		<u> </u>	Fan
•	121615777	DE	Media Device Having a Piezoelectric
2012	44404		Fan
•	121615777	FR	Media Device Having a Piezoelectric
2012	4.0.4.0.4.		Fan
•	121615777	G8	Media Device Having a Piezoelectric
2012			Fan
,	121590715	EP	Media Content Device with
2012			Customized Panel

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		1	
Feb 28,	121573679	EP	Apparatus, Systems and Methods for
2012			Detecting Infrared Signals at a Media
			Device Configured to be Positioned in
			Different Orientations
Mar 15,	121596753	EP	Apparatus, Systems and Methods for
2012			Power Line Carrier Data
			Communication to DC Powered
			Electronic Device
Mar 9, 2012	121587570	EP	Apparatus, Systems and Methods for
			Securely Storing Media Content Events
			on a Flash Memory Device
Mar 22,	121608673	EP	Apparatus, Systems and Methods for
2012			Control of Inappropriate Media
			Content Events
Feb 1, 2012	121534242	EΡ	Place shifting using synchronisation
, , , , , , , , , , , , , , , , , , , ,			and Layered video encoding
	2802264	† CA	Place shifting using synchronisation
	LOCALOY		and Layered video encoding
Eab 11	121534242	MX	Place shifting using synchronisation
2013	121734242	IVIA	
}	1115550400	CD	and Layered video encoding
May 20,	111668489	EP	Improved Progress Bar for Variable
2011	A3334AA		Speed Actions / Downloads
May 16,	2777200	CA	Improved Progress Bar for Variable
2012		ļ	Speed Actions / Downloads
May 16,	MXa2012005697	MX	Improved Progress Bar for Variable
2012			Speed Actions / Downloads
May 19,	111666905	EP	Auto-resizing for Subtitles
2011			
Sep 30,	111835468	EP	Automatic Search
2011	***************************************		
Sep 27,	2791026	CA	Automatic Search
2012			
Sep 24,	MXa2012011037	MX	Automatic Search
2012			
Nov 9, 2011	111883815	EP	Network Content Monitoring
Apr 26,	121658132	EP	Smart Illumination for Electronic
2012			Devices
May 21,	PCTEP2012059341	wo	3D Content Down-Conversion to 2D
2012			Content
May 20,	111669917	TEP TEP	Expanded Programming Guide
2011			margarette and the second section of the section of the second section of the section of the second section of the section of
May 15,	2777082	CA	Expanded Programming Guide
2012	2. 5 5 5 55000	~ · · ·	repairmed ingramming before
<u> </u>	MANATOTOTOTO	1 NAV	Cunnedad Oragens wins Cuida
May 20,	MXa2012005699	MX	Expanded Programming Guide
2011	44460000	rn	C. A
May 20,	111669941	EP	Systems and Methods for Reducing a
2011	<u> </u>		User's Ability to Perceive Hard Drive

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***************************************			Noise
May 16,	2777280	CA	Systems and Methods for Reducing a
2012			User's Ability to Perceive Hard Drive
			Noise
May 20,	111668927	EP	Enhanced Programme Preview
2011			Content
May 18,	2777439	CA	Enhanced Programme Preview
2012			Content
May 18,	MXa2012005830	MX	Enhanced Programme Preview
2012			Content
Oct 1, 2012	121867857	EP	Search and Display Techniques for an
			Electronic Programming Guide
Oct 30,	121906226	ЕР	Video Services Receiver for Managing
2012	22270220		Incomplete Program Recordings
Sep 14,	121845325	EP	Associating Macro User Input Events
2012	22.1040020	.,	with Content
	131615478	EP	System and Method for Mitigating
2013	131013470	L	Voltage Droop in DC Circuit
*******	121511554	EP	Use of Audio Descriptor in mobile
Jan 13, 2012	121311334	C.F	applications
00	171040771	ro	
Nov 29,	121948731	EP	A Method and System for Mapping
2012			Visual Display Screens to Touch
	424650650	- ro	Screens
Apr 29,	131658650	EP	Method to Play a Video Data Stream,
2013	474F2020		Device and Computer Program
Feb 3, 2012	121539290	EP	Display zoom controlled by Proximity
A	424550504		detection
Apr 29,	131658684	EP	Method to Play Video in Reverse and
2013			Related Entertainment Device and
0.0 0.8	a xa ranana	~ m	Computer Program
Mar 14,	141598961	EP	Method for Managing Recording
2014			Resources for Programming Events of
			Interest, Television Receiver and
	40404000	<i>e</i> n	Computer Program
Nov 25,	131942054	EP	AUTO CATCH-UP
2013			
Mar 14,	141601401	EP	BROADCAST CONTENT RESUME
2014	2 4 4 10 4 10 4 10 10 10 10 10 10 10 10 10 10 10 10 10	** **	REMINDER
Feb 10,	141545053	EP	Simulated Touch Input
2014			
Nov 20,	131936866	EP	System, Method and Computer
2013			Program for Remote Navigation of
			Content
Dec 9, 2013	131962961	EP	Method in a System for Providing
			Information About Program Content
			and System
Dec 24,	131995367	EP	Volume Level-Based Closed-

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2013			Captioning Control
Nov 8, 2013	131921694	EP	IMAGE DOMAIN COMPLIANCE
Mar 13,	PCTEP2014054977	WO	SHEET FORMED INDUCTIVE WINDING
2014			
Feb 24,	PCTUS2014018071	wo	SYSTEMS AND METHODS FOR
2014			AVOIDING MISSING TELEVISION
			PROGRAMMING WHEN CHANGING
			BETWEEN TELEVISION CHANNELS
Mar 6, 2014	PCTGB2014050670	wo	SHARED DATA COMMUNICATION
			BANDWIDTHS AMONG MOBILE
			DEVICES
Oct 31,	131912271	EP	LOGGING NETWORK DISCOVERABLE
2013			INFORMATION
Mar 6, 2014	141579813	EP	TRICK PLAY TECHNIQUES FOR A
			PICTURE-IN-PICTURE WINDOW
			RENDERED BY A VIDEO SERVICES
			RECEIVER
Feb 11,	131547879	EP	Use of Active Eyeware to Securely
2013			Display Content
Aug 1, 2013	131789471	EP	Volume-match different audio codecs
			on external equipment
Nov 8, 2013	131922023	EP	STB Infra-Red Remote Control volume
			control improvements and
			programming improvements

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PATENT
RECORDED: 12/10/2020 REEL: 054610 FRAME: 0564