

Cluster	Title Original	EP patent		US patent		China patent		relevant for
		Grant	Exp date	US Grant	Exp date	CN grant	Exp date	
A/V	CHOOSING BETWEEN LOSSLESS AND NOT-LOSSLESS CODED SIGNALS					CN99800722.6	3/2/2019	FLAC
A/V	CHOOSING BETWEEN LOSSLESS AND NOT-LOSSLESS CODED SIGNALS			US6522695	3/16/2019			FLAC
A/V	CHOOSING BETWEEN LOSSLESS AND NOT-LOSSLESS CODED SIGNALS			US7197079	3/16/2019			FLAC
A/V	JOINT SOURCE-CHANNEL CODING FOR WIRELESS MPEG-4	EP1303918	7/5/2021					
A/V	JOINT SOURCE-CHANNEL CODING FOR WIRELESS MPEG-4			US7583693	10/14/2024			
A/V	A REMOTE CONTROL APPARATUS AND RECEIVER AND AN AUDIO SYSTEM			US6954538	6/4/2021			
A/V	PHASE JITTER IN SINUSOIDAL CODING					CN01801727.4	6/14/2021	HE AC-3 ; AAC ; SSC
A/V	PHASE JITTER IN SINUSOIDAL CODING			US7739106	10/25/2027			HE AC-3 ; AAC ; SSC
A/V	PHASE JITTER IN SINUSOIDAL CODING	EP1203369	6/14/2021					HE AC-3 ; AAC ; SSC
A/V	ERROR PROTECTION OF STREAMING AUDIO	EP1417842	7/29/2022					AAC (ADTS Transport); DTS-XLL
A/V	ERROR PROTECTION OF STREAMING AUDIO			US7039850	5/27/2023			AAC (ADTS Transport); DTS-XLL
A/V	ERROR PROTECTION OF STREAMING AUDIO					CN02815194.1	7/29/2022	AAC (ADTS Transport); DTS-XLL
A/V	SPATIAL SCALABLE COMPR. USING SPATIAL SHARPNESS	EP1442603	10/16/2022					
A/V	SPATIAL SCALABLE COMPR. USING SPATIAL SHARPNESS			US7421127	3/23/2025			
A/V	SPATIAL SCALABLE COMPR. USING SPATIAL SHARPNESS					CN02821029.8	10/16/2022	
A/V	INTERCHANNEL LEVEL DIFF IN DECORRELATION MATRIX			US7933415	12/27/2027			MPEG Surround; UniAAC , AC-4 , USAC
A/V	INTERCHANNEL LEVEL DIFF IN DECORRELATION MATRIX	EP1500082	4/22/2023					MPEG Surround; UniAAC , AC-4 , USAC

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A/V	SIGNAL SYNTHESIZING			US8798275	12/22/2025			MPEG Surround; UniAAC , AC-4 , USAC
A/V	INTERCHANNEL LEVEL DIFF IN DECORRELATION MATRIX					CN1312660	4/22/2023	MPEG Surround; UniAAC , AC-4 , USAC
A/V	ENHANCING THE FREQUENCY RESOLUTION OF (QMF) FILTER BANKS			US8073685	9/16/2025			MPEG Surround; UniAAC , AC-4 , USAC
A/V	ENHANCING THE FREQUENCY RESOLUTION OF (QMF) FILTER BANKS			US8260607	9/16/2025			MPEG Surround; UniAAC , AC-4 , USAC
A/V	ENHANCING THE FREQUENCY RESOLUTION OF (QMF) FILTER BANKS			US7519538	9/16/2025			MPEG Surround; UniAAC , AC-4 , USAC
A/V	ENHANCEMENT OF VIDEO IMAGES BY BOOST OF SECONDARY COLORS.			US7714938	11/27/2026			
A/V	SCALABLE PARAMETRIC AUDIO CODING					CN20068000211	1/6/2026	3GPP, 3D Audio
A/V	SCALABLE PARAMETRIC AUDIO CODING			US7937272	8/27/2028			3GPP, 3D Audio
Advertisement	USER SELECTED COMMERCIALS IN PROGRAM BREAK					CN97193951.9	12/22/2017	
Advertisement	USER SELECTED COMMERCIALS IN PROGRAM BREAK			US6473903	1/15/2017			
Advertisement	TV SIGNAL RECEIVER WITH USER INFO PROFILE	EP0901733	2/12/2018					
Advertisement	TV SIGNAL RECEIVER WITH USER INFO PROFILE					CN98800130.6	2/12/2018	
Advertisement	TV SIGNAL RECEIVER WITH USER INFO PROFILE			US6177960	2/12/2018			
Advertisement	DIGITAL TV SYSTEM WHICH SELECTS IMAGES IN A VIDEO SEQUENCE			US6160570	4/20/2018			
Advertisement	BACKGROUND MONITORING OF ONE VIDEO INPUT SOURCE			US6944877	3/15/2023			
Advertisement	BACKGROUND MONITORING OF ONE VIDEO INPUT SOURCE	EP1125436	8/3/2020					
Advertisement	BACKGROUND MONITORING OF ONE VIDEO INPUT SOURCE					CN00802310.7	8/3/2020	

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Advertisement	METHOD AND APPARATUS FOR CREATING A PERSONALIZED...					CN03805314.4	2/21/2023	
Advertisement	METHOD AND APPARATUS FOR CREATING A PERSONALIZED...	EP1486073	2/21/2023					
Advertisement	LINKING APPLICATIONS TO STREAMS FOR ACCESS CONTROL OF APPLIC	EP1644934	6/30/2024					
Advertisement	LINKING APPLICATIONS TO STREAMS FOR ACCESS CONTROL OF APPLIC					CN20048001894	6/30/2024	
Advertisement	TWO-STEP COMMERCIAL RECOMMENDATION.	EP1685712	11/8/2024					
Broadcast	DVB SUBTITLING			US7647620	1/13/2019			ETSI EN 3 743
Broadcast	SUBTITLE DURATION			US8594204	10/20/2023			ETSI EN 3 743
Broadcast	ANNOUNCING NEXT TIME OF DATA TRANSMISSION	EP0917805	6/5/2018					
Broadcast	NEW BACKWARD COMPATIBLE DUAL DATA STREAM TRANSM. SYSTEM...			US6889351	3/30/2020			
Broadcast	HYBRID QPSK/NON-UNIFORM 8-PSK MODULATION	EP1502439	4/11/2023					
Broadcast	HYBRID QPSK/NON-UNIFORM 8-PSK MODULATION					CNZL03809725.7	4/11/2023	
Broadcast	HYBRID QPSK/NON-UNIFORM 8-PSK MODULATION			US7315582	5/1/2024			
Broadcast	DVB-T HANDLING OF PARENTAL RATING.			US7712115	9/16/2026			
Broadcast	LCN (LOGICAL CHANNEL NUMBER) SORTING.	EP1654868	8/4/2024					
Broadcast	LCN (LOGICAL CHANNEL NUMBER) SORTING.			US7697077	10/7/2026			
Broadcast	LCN (LOGICAL CHANNEL NUMBER) SORTING.					CN20048002260	8/4/2024	
Broadcast	Smooth A/V synchronization in broadcast streams					CN20098012175	6/4/2029	
Broadcast	Smooth A/V synchronization in broadcast streams			US8819749	6/4/2029			

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Broadcast	Smooth A/V synchronization in broadcast streams	EP2292013	6/4/2029					
Broadcast - Interactive	FORMATTING MPEG VIDEO FOR TRICK MODES	EP0945010	10/8/2018					
Broadcast - Interactive	FORMATTING MPEG VIDEO FOR TRICK MODES			US7046916	10/28/2020			
Broadcast - Interactive	NAVIGATION THROUGH LINKED INFORMATION	EP0920778	4/20/2018					ETSI TS 12 89 ETSI ES 22 184 DTG D-book
Broadcast - Interactive	NAVIGATION THROUGH LINKED INFORMATION					CN98800674.X	4/20/2018	ETSI TS 12 89 ETSI ES 22 184 DTG D-book
Broadcast - Interactive	RESPONSE TV SIGNALLING	EP0914741	3/5/2018					ETSI TS 12 89 ETSI ES 22 184 DTG D-book
Broadcast - Interactive	RESPONSE TV SIGNALLING					CN98800405.4	3/5/2018	ETSI TS 12 89 ETSI ES 22 184 DTG D-book
Broadcast - Interactive	SECTION FILTER FOR MPEG2 SECTIONS					CN98800551.4	2/16/2018	ISO/IEC13818-1 ETSI TS 12 727 OCAP
Broadcast - Interactive	SECTION FILTER FOR MPEG2 SECTIONS			US6175577	2/26/2018			ISO/IEC13818-1 ETSI TS 12 727 OCAP
Broadcast - Interactive	SECTION FILTER FOR MPEG2 SECTIONS	EP0978175	2/16/2018					ISO/IEC13818-1 ETSI TS 12 727 OCAP
Broadcast - Interactive	MANAGEMENT OF USER INTERFACE IN DIGITAL TV BROADCAST			US6295647	10/8/2018			HbbTV, D-Book
Broadcast - Interactive	MANAGEMENT OF USER INTERFACE IN DIGITAL TV BROADCAST	EP1046301	9/14/2019					HbbTV, D-Book
Broadcast - Interactive	CACHE PRIORITIES IN DVB SERVICE INFORMATION	EP1034652	6/3/2019					ETSI TS 12 796 ETSI TS 12 89 DTG D-book

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Broadcast - Interactive	CACHE PRIORITIES IN DVB SERVICE INFORMATION					CN99801295.5	6/3/2019	ETSI TS 12 796 ETSI TS 12 89 DTG D-book
Broadcast - Interactive	CACHE PRIORITIES IN DVB SERVICE INFORMATION			US6757305	6/10/2019			ETSI TS 12 796 ETSI TS 12 89 DTG D-book
Broadcast - Interactive	AUTHENTICATION, AUTHORISATION IN CATV			US7386879	10/27/2019			
Broadcast - Interactive	PRE-FETCHING OF DSM-CC MODULES			US7590111	5/6/2021			ETSI TS 12 727 OCAP
Broadcast - Interactive	PRE-FETCHING OF DSM-CC MODULES					CN99801340.4	6/3/2019	ETSI TS 12 727 OCAP
Broadcast - Interactive	SYSTEM FOR BROADCASTING SOFTWARE APPLICATIONS	EP1145495	10/9/2020					DVB-H
Broadcast - Interactive	SYSTEM FOR BROADCASTING SOFTWARE APPLICATIONS			US9158523	10/29/2019			DVB-H
Broadcast - Interactive	SYSTEM FOR BROADCASTING SOFTWARE APPLICATIONS			US6928468	1/14/2020			DVB-H
Broadcast - Interactive	SYSTEM FOR BROADCASTING SOFTWARE APPLICATIONS					CN00804406.6	10/9/2020	DVB-H
Broadcast - Interactive	FINDING TV-ANYTIME LOCATION RESOLUTION PROVIDERS					CN01803938.3	9/12/2021	HbbTV
Broadcast - Interactive	FINDING TV-ANYTIME LOCATION RESOLUTION PROVIDERS			US8510405	6/3/2022			HbbTV
Broadcast - Interactive	FINDING TV-ANYTIME LOCATION RESOLUTION PROVIDERS	EP1329077	9/12/2021					HbbTV
Broadcast - Interactive	CLOCK EXTRACTION FROM A PARTIAL TRANSPORT STREAM			US7190697	1/8/2024			
Broadcast - Interactive	PARTIAL TRANSPORT STREAM WITH MPEG					CN00804979.3	12/20/2020	
Broadcast - Interactive	PARTIAL TRANSPORT STREAM WITH MPEG			US6937620	11/8/2022			
Broadcast - Interactive	IDENTIFYING ESSENTIAL COMPONENTS OF AN OBJECT CAROUSEL					CN100370833-C	5/2/2022	

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Broadcast - Interactive	A TECHNIQUE FOR TRACKING MODULE VERSIONS IN A HARD-DISK ..(HbbTV carousels)					CN02813037.5	6/24/2022	
Broadcast - Interactive	A TECHNIQUE FOR TRACKING MODULE VERSIONS IN A HARD-DISK ..(HbbTV carousels)			US6915383	11/5/2023			
Broadcast - Interactive	TRANSPARENT ACCESS OF STB MHP			US8001570	8/4/2026			
Broadcast - Interactive	TRANSPARENT ACCESS OF STB MHP	EP1464176	12/16/2022					
Broadcast - Interactive	TRANSPARENT ACCESS OF STB MHP					CN02826439.8	12/16/2022	
Broadcast - Interactive	MAINTAINING ACCESS TO BROADCAST DATA			US7917921	3/21/2031			
Broadcast - Interactive	MAINTAINING ACCESS TO BROADCAST DATA					CN02818253.7	9/16/2022	
Broadcast - Interactive	MAINTAINING ACCESS TO BROADCAST DATA	EP1430397	9/16/2022					
Broadcast - Interactive	ATTACHING SEMANTICS TO A TV ANYTIME CRID			US8272018	5/5/2023			
Broadcast - Interactive	ATTACHING SEMANTICS TO A TV ANYTIME CRID					CN03802642.2	1/14/2023	
Broadcast - Interactive	ATTACHING SEMANTICS TO A TV ANYTIME CRID			US8046808	1/14/2023			
Broadcast - Interactive	SINGLE BIT STREAM REPRESENTS LOW AND HIGH QUALITY			US7109894	10/2/2023			
Broadcast - Interactive	SINGLE BIT STREAM REPRESENTS LOW AND HIGH QUALITY					CN20038010084	10/2/2023	
Broadcast - Interactive	APPLY STORAGE AUTHORISATION INFORMATION WITH MHP MODULES					CN20038010788	12/5/2023	
Broadcast - Interactive	APPLY STORAGE AUTHORISATION INFORMATION WITH MHP MODULES			US8191102	7/3/2026			
Broadcast - Interactive	APPLICATION ON STB CONTROLLED BY APPL. ON VIDEO RECORDER					CN20038010941	12/16/2023	

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Broadcast - Interactive	APPLICATION ON STB CONTROLLED BY APPL. ON VIDEO RECORDER			US7810126	6/16/2026			
Broadcast - Interactive	Carousel application data stored as stream					CN20048000672	3/3/2024	
Broadcast - Interactive	Carousel application data stored as stream			US8266669	8/28/2025			
Broadcast - Interactive	CORRECTION OF TIMELINE DISCONTINUITIES IN RECORDED I-TV					CN20048002016	7/7/2024	
Broadcast - Interactive	RESOLVING NON-UNIQUE CRID WITH VALIDITY INTERVALS					CN20058003938	11/11/2025	
Broadcast - Interactive	RESOLVING NON-UNIQUE CRID WITH VALIDITY INTERVALS			US8225368	3/13/2026			
Broadcast - Interactive	Implementation of 'On Request Service' via MHP and SMS					CN20068002383	6/29/2026	
Broadcast - Interactive	Implementation of 'On Request Service' via MHP and SMS			US8225346	1/18/2028			
Broadcast - Interactive	An Efficient Notification Message Filtering Mechanism for the DVB IPDC Standard	EP2122949	2/28/2028					
Broadcast - Interactive	A dual scripting engine to prevent privacy leakage while supporting communication with the server					CN20108000489	1/13/2030	
Broadcast - Interactive	A dual scripting engine to prevent privacy leakage while supporting communication with the server			US9258136	1/13/2030			
Content protection	MEANS FOR REQUESTING A PLAY BACK AUTHORIZATION	EP0925686	6/25/2018					Playready; Widevine
Content protection	MEANS FOR REQUESTING A PLAY BACK AUTHORIZATION			US6308269	7/7/2018			Playready; Widevine
Content protection	CREATING AN INDICATOR SYSTEM IN AN E-COMMERCE SYSTEM	EP1135729	4/25/2020					Playready; Widevine
Content protection	CREATING AN INDICATOR SYSTEM IN AN E-COMMERCE SYSTEM					CN00800802.7	4/25/2020	Playready; Widevine
Content protection	CREATING AN INDICATOR SYSTEM IN AN E-COMMERCE SYSTEM			US6847949	9/30/2019			Playready; Widevine

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Content protection	USING TEMPORAL PROXIMITY VERIFYING PROXIMITY OF DATA			US8352582	10/30/2021			HDCP 2.x DTCP-IP
Content protection	USING TEMPORAL PROXIMITY VERIFYING PROXIMITY OF DATA			US8997243	12/5/2032			HDCP 2.x DTCP-IP
Content protection	USING TEMPORAL PROXIMITY VERIFYING PROXIMITY OF DATA	EP1405482	6/28/2022					HDCP 2.x DTCP-IP
Content protection	USING TEMPORAL PROXIMITY VERIFYING PROXIMITY OF DATA					CN20071009219	6/28/2022	HDCP 2.x DTCP-IP
Content protection	USING TEMPORAL PROXIMITY VERIFYING PROXIMITY OF DATA					CN02812883.4	6/28/2022	HDCP 2.x DTCP-IP
Content protection	USING TEMPORAL PROXIMITY VERIFYING PROXIMITY OF DATA			US8107627	6/28/2021			HDCP 2.x DTCP-IP
Content protection	DISTANCE MEASUREMENT USING SECRET ALSO AUTHENTICATES DEVICE			US8543819	6/27/2023			HDCP 2.x DTCP-IP
Content protection	DISTANCE MEASUREMENT USING SECRET ALSO AUTHENTICATES DEVICE			US8886939	6/27/2023			HDCP 2.x DTCP-IP
Content protection	DISTANCE MEASUREMENT USING SECRET ALSO AUTHENTICATES DEVICE			US9436809	1/0/1900			HDCP 2.x DTCP-IP
Content protection	DISTANCE MEASUREMENT USING SECRET ALSO AUTHENTICATES DEVICE	EP1527586	6/27/2023					HDCP 2.x DTCP-IP
Content protection	DISTANCE MEASUREMENT USING SECRET ALSO AUTHENTICATES DEVICE	EP1973297	6/27/2023					HDCP 2.x DTCP-IP
Content protection	DISTANCE MEASUREMENT USING SECRET ALSO AUTHENTICATES DEVICE			US9590977	8/5/2036			HDCP 2.x DTCP-IP
Content protection	DISTANCE MEASUREMENT USING SECRET ALSO AUTHENTICATES DEVICE					CN03817847.8	6/27/2023	HDCP 2.x DTCP-IP
Content protection	METHOD AND APPARATUS FOR SECURE LOCALITY VERIFICATION...			US8239676	9/22/2023			DTCP-IP
Content protection	METHOD AND APPARATUS FOR SECURE LOCALITY VERIFICATION...					CN03823268.5	9/22/2023	DTCP-IP
Content protection	METHOD AND APPARATUS FOR SECURE LOCALITY VERIFICATION...					CN20131014007	9/22/2023	DTCP-IP
Content protection	METHOD AND APPARATUS FOR SECURE LOCALITY VERIFICATION...			US7991998	8/31/2025			DTCP-IP
Content protection	VERIFYING THE LOCALITY of a node	EP1550285	9/22/2023					



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Content protection	VERIFYING THE LOCALITY of a node					CN03823282.0	9/22/2023	
Content protection	VERIFYING THE LOCALITY of a node			US8762727	9/22/2023			
Content protection	DEVICES WITHIN RANGE CAN ACCESS CONTENT					CN20048003603	11/19/2024	Playready
Content protection	DEVICES WITHIN RANGE CAN ACCESS CONTENT			US7627903	1/3/2025			Playready
Content protection	DEVICES WITHIN RANGE CAN ACCESS CONTENT	EP2284645	11/19/2024					Playready
Content protection	TEMPORARY PERSON-BASED ACCESS TO DEVICE-BASED AD	EP1810481	10/28/2025					
Content protection	TEMPORARY PERSON-BASED ACCESS TO DEVICE-BASED AD			US8561210	2/17/2026			
Content protection	TEMPORARY PERSON-BASED ACCESS TO DEVICE-BASED AD					CN20058003770	10/28/2025	
EPG & Content Search	FAVOURITE PROGRAM SELECTION	EP0835588	4/3/2017					
EPG & Content Search	SPATIAL BROWSING APPROACH TO MULTIMEDIA INFO. RETRIEVAL			US6281898	6/6/2017			
EPG & Content Search	CONTEXT-BASED AND USER-PROFILE DRIVEN INFORMATION RETRIEVAL			US6256633	6/25/2018			
EPG & Content Search	USER INTERFACE PROVIDING AUTOMATIC GENERATION AND ERGONOMIC (FINETUNE SEARCH)	EP1384167	3/21/2021					
EPG & Content Search	USER INTERFACE PROVIDING AUTOMATIC GENERATION AND ERGONOMIC (FINETUNE SEARCH)					CN01801484.4	3/21/2021	
EPG & Content Search	USER INTERFACE PROVIDING AUTOMATIC GENERATION AND ERGONOMIC (FINETUNE SEARCH)			US6463428	3/29/2020			
EPG & Content Search	DATA SEARCH USER INTERFACE WITH ERGONOMIC MECHANISM....	EP1384171	3/19/2021					
EPG & Content Search	DATA SEARCH USER INTERFACE WITH ERGONOMIC MECHANISM....					CN01801483.6	3/19/2021	
EPG & Content Search	DATA SEARCH USER INTERFACE WITH ERGONOMIC MECHANISM....			US6484164	3/29/2020			

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EPG & Content Search	SEARCH USER INTERFACE FOR CONSTRUCTING AND MANAGING...					CN100409235C	3/19/2021	
EPG & Content Search	METHOD AND APPARATUS FOR EVALUATING THE CLOSENESS			US7533093	11/13/2021			
EPG & Content Search	CONTROLLING APPLICATION DEVICES SIMULTANEOUSLY					CN02826880.6	12/9/2022	
EPG & Content Search	CONTROLLING APPLICATION DEVICES SIMULTANEOUSLY			US8966561	12/9/2022			
EPG & Content Search	USER INTERFACE FOR THE CONTENT AUGMENTATION APPLICATION.			US7934233	4/21/2026			
EPG & Content Search	EPG Fast Navigation			US9282272	7/10/2026			
EPG & Content Search	EPG Fast Navigation					CN20068002690	7/10/2026	
EPG & Content Search	One button audio navigation			US8621392	10/2/2027			
EPG & Content Search	One button audio navigation					CN20078002364	6/21/2027	
Hardware & PVR	DETECTING A TELEVISION DISPLAY FOR A PERSONAL COMPUTER			US6275266	11/12/2017			
Hardware & PVR	HARDWARE VIRTUAL MACHINE INTERPRETOR			US6996703	2/7/2023			
Hardware & PVR	HARDWARE VIRTUAL MACHINE INTERPRETOR	EP0950216	9/17/2018					
Hardware & PVR	HARDWARE VIRTUAL MACHINE INTERPRETOR			US6349377	9/28/2018			
Hardware & PVR	MPEG-2 TRANSCODER WITH INSERTION OF LOGO			US6493389	3/24/2019			
Hardware & PVR	CUSTOMIZED UPGRADING OF INTERNET-ENABLED DEVICES	EP1044400	9/7/2019					
Hardware & PVR	GROUP-WISE VIDEO CONFERENCE USES 3D MODEL OF BROADCAST EVENT					CN99800903.2	4/1/2019	
Hardware & PVR	PARALLEL PROC. OF SEPARABLE TRANSFORMATIONS			US6397235	3/16/2019			

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Hardware & PVR	TIME- AND LOCATION-DRIVEN PERSONALIZED TV					CN00800434.X	3/29/2020	
Hardware & PVR	TIME- AND LOCATION-DRIVEN PERSONALIZED TV			US6611654	3/31/2019			
Hardware & PVR	TIME- AND LOCATION-DRIVEN PERSONALIZED TV			US7403693	7/22/2025			
Hardware & PVR	TIME- AND LOCATION-DRIVEN PERSONALIZED TV	EP1084575	3/29/2020					
Hardware & PVR	METHOD AND APPARATUS FOR CONVERTING DATA STREAMS	EP1208698	12/4/2020					
Hardware & PVR	METHOD AND APPARATUS FOR CONVERTING DATA STREAMS					CN00806989.1	12/4/2020	
Hardware & PVR	METHOD AND APPARATUS FOR CONVERTING DATA STREAMS			US6901078	5/8/2023			
Hardware & PVR	C.E. DEVICES WITH ADAPTABLE UPGRADE CAPABILITY			US6469742	4/12/2019			
Hardware & PVR	METHOD AND DEVICE FOR ENCODING A VIDEO-STREAM			US7362959	4/15/2025			
Hardware & PVR	METHOD AND DEVICE FOR ENCODING A VIDEO-STREAM					CN00800960.0	3/9/2020	
Hardware & PVR	METHOD AND DEVICE FOR ENCODING A VIDEO-STREAM			US6798978	3/24/2020			
Hardware & PVR	DATA FORMATTING FOR RECORDING DIGITAL TV SIGNALS					CN01801464.X	3/20/2021	
Hardware & PVR	DATA FORMATTING FOR RECORDING DIGITAL TV SIGNALS			US7313315	1/17/2024			
Hardware & PVR	HANDLING OF IMPULSIVE NOISE IN DVB-T RECEIVERS			US6701128	4/30/2022			
Hardware & PVR	CONFIGURABLE PROCESSOR			US7290157	11/19/2024			
Hardware & PVR	CONFIGURABLE PROCESSOR					CN03811753.3	4/28/2023	
Hardware & PVR	CONTINUE RECORDING CHANNEL FEATURE			US7570871	1/8/2026			
Hardware & PVR	CONTINUE RECORDING CHANNEL FEATURE					CN20038010303	10/17/2023	

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Hardware & PVR	DIGITAL CROSS CAPACITANCE SENSING METHOD					CN20048001210	4/28/2024	
Hardware & PVR	DIGITAL CROSS CAPACITANCE SENSING METHOD	EP1623313	4/28/2024					
Hardware & PVR	DIGITAL CROSS CAPACITANCE SENSING METHOD			US7560938	11/4/2025			
Hardware & PVR	Channel Impulse Response length estimation based on IDFT	EP1980071	1/15/2027					
Hardware & PVR	Inter-TS zapping method for TV channel browsing on mobile			US8151299	12/2/2028			
Hardware & PVR	Inter-TS zapping method for TV channel browsing on mobile	EP2084899	11/13/2027					
Hardware & PVR	Inter-TS zapping method for TV channel browsing on mobile					CN20078004241	11/13/2027	
Hardware & PVR	LCD panel backlight control in 3D shutter glasses application.			US8482511	12/16/2029			
Hardware & PVR	LCD panel backlight control in 3D shutter glasses application.			US9355488	6/11/2033			
Hardware & PVR	LCD panel backlight control in 3D shutter glasses application.					CN20088011813	11/6/2028	
Hardware & PVR	Switched Video Bandwidth Optimization for Personal Channels			US8984572	7/16/2030			
Hardware & PVR	Switched Video Bandwidth Optimization for Personal Channels					CN20108003332	7/16/2030	
InHomeNetworking	DOWNLOADABLE ABSTRACT MODEL OF CONSUMER SYSTEM	EP0867004	8/21/2017					DLNA -UPnP v3; DLNA
InHomeNetworking	DOWNLOADABLE ABSTRACT MODEL OF CONSUMER SYSTEM					CN97192052.4	8/21/2017	DLNA -UPnP v3; DLNA
InHomeNetworking	FLEXIBLE AND EFFICIENT FRAME STRUCTURE FOR DAVIC					CN97192204.7	9/26/2017	
InHomeNetworking	FLEXIBLE AND EFFICIENT FRAME STRUCTURE FOR DAVIC	EP0873631	9/26/2017					
InHomeNetworking	FREE-STYLED MULTI-MEDIA ITEMS FOR SCREEN-BASED HOST			US6354947	2/27/2018			

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InHomeNetworking	FREE-STYLED MULTI-MEDIA ITEMS FOR SCREEN-BASED HOST	EP0916116	2/27/2018					
InHomeNetworking	FREE-STYLED MULTI-MEDIA ITEMS FOR SCREEN-BASED HOST			US7883416	11/1/2020			
InHomeNetworking	SWITCHING BETWEEN AUDIO BIT STREAMS IN DVD PLAYER			US6694030	4/30/2018			SPDIF
InHomeNetworking	SWITCHING BETWEEN AUDIO BIT STREAMS IN DVD PLAYER	EP0920698	4/20/2018					SPDIF
InHomeNetworking	SWITCHING BETWEEN AUDIO BIT STREAMS IN DVD PLAYER					CN98801122.0	4/20/2018	SPDIF
InHomeNetworking	PROCESSING OF SIMILAR COMMAND ON PERIPHERALS					CN99801369.2	6/3/2019	HDMI-CEC
InHomeNetworking	PROCESSING OF SIMILAR COMMAND ON PERIPHERALS	EP1038394	6/3/2019					HDMI-CEC
InHomeNetworking	PROCESSING OF SIMILAR COMMAND ON PERIPHERALS			US6704063	6/15/2019			HDMI-CEC
InHomeNetworking	ENUMERATING A DEVICE ONTO A LOW POWER RADIO NETWORK	EP1145491	9/28/2020					RF4CE
InHomeNetworking	RELATIVISATION OF ABSOLUTE TIMESTAMPS					CN00800548.6	1/24/2020	1394
InHomeNetworking	RELATIVISATION OF ABSOLUTE TIMESTAMPS			US6661811	1/20/2020			1394
InHomeNetworking	RELATIVISATION OF ABSOLUTE TIMESTAMPS			US7508845	3/24/2026			1394
InHomeNetworking	RELATIVISATION OF ABSOLUTE TIMESTAMPS	EP1072166	1/24/2020					1394
InHomeNetworking	AN ADAPTIVE DOWNLINK MESSAGE TRANSFER MECHANISM FOR USE IN L			US6963764	3/14/2023			RF4CE
InHomeNetworking	AN ADAPTIVE DOWNLINK MESSAGE TRANSFER MECHANISM FOR USE IN L	EP1317826	8/31/2021					RF4CE
InHomeNetworking	AN ADAPTIVE DOWNLINK MESSAGE TRANSFER MECHANISM FOR USE IN L					CN1328888	8/31/2021	RF4CE
InHomeNetworking	SMART STATUS MESSAGING PROTOCOL	EP1442440	9/25/2022					RF4CE

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InHomeNetworking	SMART STATUS MESSAGING PROTOCOL			US7009528	7/3/2023			RF4CE
InHomeNetworking	RF HOME CONTROL PROTOCOL USING XML	EP1529379	7/24/2023					
InHomeNetworking	RF HOME CONTROL PROTOCOL USING XML			US8078742	7/31/2024			
InHomeNetworking	RF HOME CONTROL PROTOCOL USING XML			US8943213	11/9/2031			
InHomeNetworking	RF HOME CONTROL PROTOCOL USING XML					CN03818857.0	7/24/2023	
InHomeNetworking	EMBEDDING A UPNP AV MEDIASERVER OBJECT ID IN A URI					CN20048001874	6/28/2024	UPnP
InHomeNetworking	EMBEDDING A UPNP AV MEDIASERVER OBJECT ID IN A URI	EP1642417	6/28/2024					UPnP
InHomeNetworking	CONSISTENT USER INTEFACE FRONT END FOR REMOTE...					CN20048003327	11/11/2024	DLNA-UpnP-v3
InHomeNetworking	CONSISTENT USER INTEFACE FRONT END FOR REMOTE...			US8479101	3/21/2025			DLNA-UpnP-v3
InHomeNetworking	CONSISTENT USER INTEFACE FRONT END FOR REMOTE...	EP1685679	11/11/2024					DLNA-UpnP-v3
InHomeNetworking	Master-based non-cooperative network topology for RF remote control	EP2255502	3/11/2029					RF4CE
InHomeNetworking	Master-based non-cooperative network topology for RF remote control					CN20098010952	3/11/2029	RF4CE
InHomeNetworking	Master-based non-cooperative network topology for RF remote control			US8451815	11/15/2029			RF4CE
InHomeNetworking	Scalable key distribution			US8542828	12/7/2029			RF4CE
InHomeNetworking	Scalable key distribution	EP2314016	8/6/2029					RF4CE
Streaming & Services	PARTITIONING OF MP3 CONTENT FILE FOR EMULATING STREAMING			US7529806	11/4/2019			MPEG DASH MS Smooth Streaming HTTP Live streaming

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Streaming & Services	LINKING A VIDEO SEGMENT TO ANOTHER SEGMENT OR INFO SOURCE			US7356830	7/9/2019			
Streaming & Services	PROPORTIONAL UNEQUAL ERROR PROTECTION	EP1303917	7/9/2021					
Streaming & Services	SMOOTH PRESENTATION AFTER DISCONTINUITIES IN TIMEBASE					CN20041009057	1/5/2021	MPEG-DASH
Streaming & Services	SMOOTH PRESENTATION AFTER DISCONTINUITIES IN TIMEBASE	EP1936999	1/5/2021					MPEG-DASH
Streaming & Services	SMOOTH PRESENTATION AFTER DISCONTINUITIES IN TIMEBASE	EP1163802	1/5/2021					MPEG-DASH
Streaming & Services	SMOOTH PRESENTATION AFTER DISCONTINUITIES IN TIMEBASE					CN01800448.2	1/5/2021	MPEG-DASH
Streaming & Services	SMOOTH PRESENTATION AFTER DISCONTINUITIES IN TIMEBASE			US8942539	12/15/2031			MPEG-DASH
Streaming & Services	SMOOTH PRESENTATION AFTER DISCONTINUITIES IN TIMEBASE			US8098973	9/30/2021			MPEG-DASH
Streaming & Services	BROADCAST VIDEO CHANNEL SURFING SYSTEM BASED ON			US7386870	7/22/2024			
Streaming & Services	BROADCAST VIDEO CHANNEL SURFING SYSTEM BASED ON					CN02816307.9	8/2/2022	
Streaming & Services	METHOD FOR DYNAMIC SORTING OF BROADCAST CHANNELS			US9032440	10/9/2023			
Streaming & Services	METHOD FOR DYNAMIC SORTING OF BROADCAST CHANNELS					CN20038010143	10/9/2023	
Streaming & Services	EXTENSIBLE DISC PLAYER with means for accessing the server to download the appropriate decoder			US8170209	5/30/2024			
Streaming & Services	EXTENSIBLE DISC PLAYER with means for accessing the server to download the appropriate decoder	EP1579453	12/4/2023					
Streaming & Services	EXTENSIBLE DISC PLAYER with means for accessing the server to download the appropriate decoder					CN100412843	12/23/2022	
Streaming & Services	METHOD AND SYSTEM FOR RETRIEVING INFORMATION					CN03804513.3	2/12/2023	

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Streaming & Services	METHOD AND SYSTEM FOR RETRIEVING INFORMATION			US8453189	8/13/2033			
Streaming & Services	MPEG OVER IP : NPT CLOCK IN RTP					CN03817120.1	7/4/2023	
Streaming & Services	MPEG OVER IP : NPT CLOCK IN RTP			US7526000	12/25/2024			
Streaming & Services	MULTIVIDEO STREAMS WITH PIP					CN03822897.1	9/25/2023	
Streaming & Services	MULTIVIDEO STREAMS WITH PIP			US9226017	10/31/2025			
Streaming & Services	MULTIVIDEO STREAMS WITH PIP	EP1547372	9/25/2023					
Streaming & Services	MULTIVIDEO STREAMS WITH PIP			US7865058	7/26/2026			
Streaming & Services	PACKETIZATION OF LAYERED BITSTREAM.					CN20038010500	11/28/2023	
Streaming & Services	PACKETIZATION OF LAYERED BITSTREAM.	EP1570620	11/28/2023					
Streaming & Services	PACKETIZATION OF LAYERED BITSTREAM.			US7450612	7/20/2025			
Streaming & Services	WATCHING PAST PROGRAMMES THROUGH INTERNET URL					CN20058004217	12/5/2025	
TV Display	DIGITAL MONITOR WITH DIGITAL TUBE CORRECTIONS			US6369810	6/22/2019			
TV Display	DIGITAL MONITOR WITH DIGITAL TUBE CORRECTIONS			US6812922	7/22/2018			
TV Display	DIGITAL MONITOR WITH DIGITAL TUBE CORRECTIONS	EP0928479	5/18/2018					
TV Display	DYNAMIC CONTRAST IMPROVEMENT (de Vaan)			US6905216	9/2/2019			
TV Display	DYNAMIC CONTRAST IMPROVEMENT (de Vaan)			USRE42428	9/2/2019			
TV Display	DYNAMIC CONTRAST IMPROVEMENT (de Vaan)			US6631995	9/2/2019			



Cluster	Title Original	EP patent		US patent		China patent		relevant for
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TV Display	DECREASING POWER CONSUMPTION BY BACKLIGHT IMAGES			US6621482	4/4/2021			
TV Display	LIGHT SYSTEM WITH SLAB WAVEGUIDE	EP1231430	1/18/2022					
TV Display	LIGHT SYSTEM WITH SLAB WAVEGUIDE			US6964497	6/15/2022			
TV Display	WINDOW BRIGHTNESS ENHANCEMENT FOR LCD	EP1356367	12/19/2021					
TV Display	WINDOW BRIGHTNESS ENHANCEMENT FOR LCD					CN01807031.0	12/19/2021	
TV Display	WINDOW BRIGHTNESS ENHANCEMENT FOR LCD			US6980195	12/22/2022			
TV Display	fast boosting BACKLIGHT SWITCHING	EP1500075	3/11/2023					
TV Display	fast boosting BACKLIGHT SWITCHING					CN03807610.1	3/11/2023	
TV Display	fast boosting BACKLIGHT SWITCHING			US7205974	3/25/2024			
TV Display	DEVICES FOR CREATING BRIGHTNESS PROFILES			US6974229	5/21/2023			
TV Display	LCD BACKLIGHT USING TWO-DIM LEDS			US7052152	10/3/2023			
TV Display	Drive concept for local dimming and boosting in a 2D-LED backlight for LCD-TV	EP2168118	6/4/2028					
TV Display	Drive concept for local dimming and boosting in a 2D-LED backlight for LCD-TV			US8344633	4/3/2029			
TV Display	Drive concept for local dimming and boosting in a 2D-LED backlight for LCD-TV					CN20088001926	6/4/2028	
TV Display	Power-saving ECO-TV Television					CN20088011682	11/13/2028	
TV Display	Power-saving ECO-TV Television	EP2212880	11/13/2028					
TV Display	Power-saving ECO-TV Television			US8648844	10/7/2029			
User Interface & Control	CAROUSEL OF MENU OPTIONS	EP0888687	11/10/2017					
User Interface & Control	LIBRARY BROWSER WITH ADAPTIVE 3-D CLASSIFICATION			US6029172	8/19/2017			
User Interface & Control	MENU BLENDING with transparant background	EP0838117	4/30/2017					

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User Interface & Control	MENU BLENDING with transparant background					CN100352288	4/30/2017	
User Interface & Control	AUDIO ON DEMAND WITH PARALLEL ATTRIBUTE DISPLAY			US5959627	12/2/2017			
User Interface & Control	COMPUTER-CONTROLLED HOME THEATER WITH INDEPENDENT USER-CONTR			US6577326	3/26/2019			
User Interface & Control	COMPUTER-CONTROLLED HOME THEATER WITH INDEPENDENT USER-CONTR	EP0954821	8/18/2018					
User Interface & Control	NAVIGATION THROUGH A MOSAIC EPG			US6405371	6/3/2018			
User Interface & Control	NAVIGATION THROUGH A MOSAIC EPG	EP0916222	4/9/2018					
User Interface & Control	PORTABLE PRESET STATION AND PREFERENCES TABLE			US6611209	6/25/2018			
User Interface & Control	PORTABLE PRESET STATION AND PREFERENCES TABLE	EP0928541	6/11/2018					
User Interface & Control	SELECTION OF OPTION THROUGH GESTURE RECOGNITION			US6283860	12/22/2017			
User Interface & Control	SELECTION OF OPTION THROUGH GESTURE RECOGNITION	EP0961965	12/14/2018					
User Interface & Control	SELECTION OF OPTION THROUGH GESTURE RECOGNITION			US6176782	12/22/2017			
User Interface & Control	VCR TO ASSEMBLE AND DISPLAY A PROPOSAL LIST			US6473128	5/21/2019			
User Interface & Control	VCR TO ASSEMBLE AND DISPLAY A PROPOSAL LIST	EP0998821	5/20/2019					
User Interface & Control	REMOTE CONTROL PROGRAM SELECTION GENRE			US6445306	3/31/2019			
User Interface & Control	REMOTE CONTROL PROGRAM SELECTION GENRE	EP1084571	3/9/2020					
User Interface & Control	METHOD FOR DISPLAYING MULTI-LEVEL MENU			US6842653	10/17/2021			

Cluster	Title Original	EP patent		US patent		China patent		relevant for
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User Interface & Control	METHOD FOR DISPLAYING MULTI-LEVEL MENU					CN01800543.8	3/6/2021	
User Interface & Control	METHOD FOR DISPLAYING MULTI-LEVEL MENU	EP1196839	3/6/2021					
User Interface & Control	JUMP TO NEXT SIMILAR (IMAGE) BUTTON					CN100392749	9/5/2021	
User Interface & Control	JUMP TO NEXT SIMILAR (IMAGE) BUTTON			US6957387	2/15/2023			
User Interface & Control	JUMP TO NEXT SIMILAR (IMAGE) BUTTON	EP1319230	9/5/2021					
User Interface & Control	SEARCH USER INTERFACE WITH ENHANCED ACCESSIBILITY....					CN01801500.X	3/21/2021	
User Interface & Control	SEARCH USER INTERFACE WITH ENHANCED ACCESSIBILITY....			US6505194	3/29/2020			
User Interface & Control	SEARCH USER INTERFACE WITH ENHANCED ACCESSIBILITY....	EP1384170	3/21/2021					
User Interface & Control	RAPID RETRIEVAL UI DESIGNED AROUND SMALL DISPLAY			US7698652	5/18/2027			
User Interface & Control	RAPID RETRIEVAL UI DESIGNED AROUND SMALL DISPLAY					CNCN1322402-C	1/15/2022	
User Interface & Control	RAPID RETRIEVAL UI DESIGNED AROUND SMALL DISPLAY	EP1384134	1/15/2022					
User Interface & Control	REAL-WORLD MOVEMENTS AS INPUT FOR STREAM MANIPULATION					CN02801631.9	5/14/2022	
User Interface & Control	REAL-WORLD MOVEMENTS AS INPUT FOR STREAM MANIPULATION	EP1428108	5/14/2022					
User Interface & Control	EASY CONTENT NAVIGATION THROUGH CLICKABLE KEYFRAMES					CN100346420	4/9/2022	
User Interface & Control	EASY CONTENT NAVIGATION THROUGH CLICKABLE KEYFRAMES	EP1382040	4/9/2022					
User Interface & Control	FREEZE BANNER	EP1486061	2/12/2023					
User Interface & Control	FREEZE BANNER					CN03805714.X	2/12/2023	

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User Interface & Control	FREEZE BANNER			US7319468	3/4/2023			
User Interface & Control	UI FOR CONTROLLING THE DISPLAYING OF LONG SORTED LISTS	EP1956468	1/7/2023					
User Interface & Control	UI FOR CONTROLLING THE DISPLAYING OF LONG SORTED LISTS					CN03802008.4	1/7/2023	
User Interface & Control	UI FOR CONTROLLING THE DISPLAYING OF LONG SORTED LISTS			US8004496	8/30/2022			
User Interface & Control	CARROUSELS FOR ENABLING TO CONTROL AT LEAST ONE MEDIA DEVICE					CN20058003047	9/8/2025	
User Interface & Control	Combining 3D image and graphical data					CN20108000810	2/9/2030	
User Interface & Control	Combining 3D image and graphical data			US9438879	2/9/2030			