Expert Witness Consultant—Curriculum Vitae

W. Leo Hoarty leo@wlhconsulting.llc
Mountain View, CA **408-500-9999**

Professional Profile

A professional engineer with over 40 years of experience in both electronics engineering and computer science holding 48 granted US patents in many areas of technology. He is an experienced Expert Witness consultant with over 15 years of experience in multiple patent infringement matters in jury trials as well as with IPRs/PTAB. His background includes considerable experience in the development of all levels of complex software systems as well as designing and bringing to market electronic hardware products. He has authored numerous technology papers on data communications, consumer electronics, and broadcast & cable television technology and he has served on the Standards Committees of ATSC, ISO/MPEG, OpenCable, and IEEE.

Technology Background

Technology Expertise:
Artificial Intelligence (AI/ML), [Enterprise Neurosystem, Vizio]
Audience measurement [Vizio]
Automatic Content Recognition (ACR), audio&video [Viggle, SweetVinyl, Vizio]
Cable and satellite settop design [Motorola, ActiveVideo, MovieBeam]
Consumer electronics product design [MovieBeam, Mediatronics, SweetVinyl]
DSP, audio/video codecs [ActiveVideo, Dotcast, SweetVinyl, Vizio]
Digital watermarking, digital rights mgmt. [19 Entertainment, MovieBeam, Vizio]
Electronic circuit design [ActiveVideo, Dotcast, SweetVinyl, Enterprise Neurosystem]
Interactive television systems [ActiveVideo, Inscape]
Mobile app development, iOS & Android [Aviga, 19 Entertainment, SweetVinyl]
Speech recognition [Aviga, 19 Entertainment, Vizio]
Video-on-demand [Inscape, ActiveVideo, Google]

Software Languages and Tools:
Languages: all C languages, F#, Java, Python, HTML/CSS/JavaScript
OS: Android, Linux, iOS, MacOS, Windows
VM & Cloud: VMware, AWS
Debug: Android Studio, adb, Eclipse, Understand, Wireshark, Xcode
ML/AI Tools: TensorFlow, PyTorch, OpenAI API

Expert Witness Summary

Expert witness, PTAB declarations, source code reviews, depositions, court appearances for: AC Nielsen, ActiveVideo Networks, Amazon, Arris Corp., DirecTV, DISH Networks, Fandango, Google, LG Electronics, Motorola, Roku, Rovi (TiVo), Solaborate, Vizio

Total cases: 40 | PTAB: 11 | Depositions: 20 | Court appearances: 3
Detailed case history available on request.

AMR EX. 2002
Roku v AMR
IPR2024-01054

Employment History

To	Present	**WLH Consulting, LLC**
From	2011	Mountain View, CA
Position	*Principal*	

Expert Witness Consultant: Expert witness consulting for patent litigation matters with significant experience in prior art analysis; expert witness/IPR report generation; software analysis of complex code bases; court room testimony experience in US federal court and the High Court of England including significant international patent litigation experience.

IP Development Summary: Intellectual property consulting for technology companies drafting patent applications and assisting in patent prosecution. Companies include: Vizio, Google, ActiveVideo Networks, Viggle, epoxy.ai

Technology Consultant in cloud-based media management, automated content recognition (ACR), voice recognition systems, video-on-demand, targeted advertising and dynamic ad insertion, Internet streaming technologies, and mobile and automotive app development. Currently developing machine learning models for biodiversity and water resource management for developing nations.

Technology Manufacturing: Owner and President of SweetVinyl, Inc., a boutique manufacturer of high-end audio products. The company imports Linux-based subsystems from Asia combined with locally manufactured components. Proprietary software integrated with imported subsystem. Published iOS and Android apps for tablets/smart phones for remote control of products.

To	2011	**Interactive Mobile Media Inc.**
From	2007	Campbell, CA
Position	*President*	

Summary: dba Aviga, company provided development of voice-activated mobile device applications for major media companies as well as embedded systems for automotive applications. Customers included: **19 Entertainment:** (Owner of *American Idol*) developed voice-response music player; **Viggle:** TV affinity iOS & Android app—developed proprietary automated content recognition (ACR) technology for identifying TV programming via a mobile app.

To	2007	**Google Inc.**
From	2006	Mountain View, CA
Position	*Technology Consultant*	

Summary: Managed special projects group in the development of a new product division for auctioning of television ad time for placement with major satellite and cable television operators. Developed architecture for ad network-connected ingest system that automated the processing of television ads for the Google service.

To	2006	**Dotcast Inc.**
From	2000	Mountain View, CA
Position	*Founder, President & Chief Technology Officer*	

Summary: Formed company and raised funds of over $250 million from a mix of strategic partners and VC's including Samsung Electronics, Cisco Linksys, the Walt Disney Company; grew company to over 170 employees; as CTO, built group to developed proprietary TV settop box using custom system-on-a-chip (SoC) for a consumer service called *MovieBeam* that won Best of Show at the Consumer Electronics Show in Las Vegas two years (2004 & 2005). The

settop was distributed nationwide in top 100 DMAs thru major consumer product outlets and provided first-run (day and date) feature films from all major film studios.

To 1999 **EnCamera Sciences Corp.**
From 1997 Scottsdale, AZ
Position *Partner*

Summary: Developed novel metropolitan-area wireless data transmission technology embedding high-speed data signal in existing TV broadcast channels as well as developed a novel MPEG video compression system. Acquired by The Walt Disney Company, both technologies became foundation for its *MovieBeam* wireless set-top service.

To 1997 **ICTV Inc. (renamed ActiveVideo Networks in 2006)**
From 1990 San Jose, CA
Position *Founder, President & Chief Technology Officer*

Summary: Developed and deployed one of the first interactive TV and video-on-demand systems for cable TV. Designed and built custom interactive TV settop box integrated with GI/Motorola base. Worked with CableLabs on many cable TV standards including the OpenCable initiative. Partnered with IBM and deployed the first interactive TV/VOD system on Cox Cable in 1994.

To 1989 **PaineWebber**
From 1986 New York, NY
Position *Vice President, Capital Market Systems*

Summary: VP in charge of the development of advanced real-time equities trading and hedging advisory system. Deployed one of the first functioning artificial intelligence-based system on Wall Street providing real-time hedging advisories to the equities block desk.

To 1986 **Goldman Sachs & Co.**
From 1984 New York, NY
Position *Vice President, Trading Support Systems*

Summary: Developed real-time securities information systems. Designed and supervised trading systems installations in branch offices in London and Tokyo. Designed financial data analysis system working with the noted economist, Fischer Black, to develop real-time equities hedging analysis using the Black-Scholes pricing model.

To 1984 **United Nations**
From 1979 New York, NY
Position *Technical Advisor, United Nations Development Program (UNDP)*

Summary: served as Technical Advisor in Computer Methods in support of various projects in developing nations, based at UN headquarters in New York and Geneva. Traveled extensively to countries in Africa, South America, the Caribbean, and Asia to assist with providing computer automation for UNDP field projects including population census, agricultural surveys, and water resource development.

To 1979 **ACM Technology**
From 1973 San Francisco, CA
Position *Owner*

Summary: Operated a contract electronics engineering firm. Designed custom computer numerically controlled (CNC) systems using microprocessor and minicomputer-based controllers. Provided automation to medical research lab, professional photo printing, and wood products

manufacturer. Contracted by the United Nations to design and build a digital voting system for the General Assembly Hall.

Extracurricular Activities:

To	current	**Enterprise Neurosystem (sponsored by the Red-Hat division of IBM)**
From	2022	San Francisco, CA
Position	*Data Acquisition, Signal Processing & ML Consultant*	

- Designed biological monitoring systems for agricultural and climate monitoring projects. Developed novel system for monitoring beehives using MEMS-based ultrasonic acoustic sensors. System design also includes atmospheric sensors to measure temperature, humidity, methane, CO2, among other parameters. An on-site processor system digitizes and preprocesses the data for transmission to a machine learning system.
- Beehive clusters from all over the world will link to an IBM federated learning ML system allowing scientists to better understand stresses on honeybee colonies and help mitigate the significant decline in the honeybee population. The system will also be useful for monitoring regional climate change.
- The USDA announced collaborating with our group at the COP27 conference in Egypt (11/22). We co-sponsored in May 2023 a smart agriculture technology summit with the USDA called "AIM4C". I presented a paper on sensor systems for monitoring nature's networks. Al Gore and John Kerry both spoke at the conference along with Agriculture Secretary Vilsack.
- The group is further working with the United Nations CNTC, a peer group of the Inter-governmental Panel on Climate Change (IPCC). At COP28 in Dubai, the UN CNTC announce engaging Enterprise Neurosystem for multiple environmental monitoring projects in East Africa.

Professional Associations, Standards Bodies Participation and Awards:

- Delivered papers to and presented at numerous technical conferences in U.S., Asia and Europe including the National Association of Broadcasters (NAB), National Cable Television Association (NCTA), Society of Cable Telecommunication Engineers (SCTE), International Broadcast Conference (IBC) and the Montreux International Television Symposium, as well as many IEEE conferences and other industry related trade shows. (Papers available upon request.) Published two technical articles in trade magazines on graphics systems and networking.
- Member of IEEE, SMPTE, SCTE and Association of Computing Machinery (ACM).
- Served on many standards bodies over several decades including: ISO MPEG2, ATSC (HDTV standards), IEEE (802.14), CableLabs for plant and set-top standards efforts, EIA for cable TV compatibility (IR pass-through) and, in conjunction with CableLabs, cable TV interfaces such as CableCard.
- Awards: Society of Cable Television Engineers (SCTE)—Best New Technology at National Cable Television Association (NCTA) 1996 for ICTV's interactive TV and VOD service; Best of Show at CES 2004 and 2005, MovieBeam set-top and service; 2003 Emmy Award went to Vizio, Inc for their precision audience measurement service which utilizes my patented audio automated content recognition (ACR) technology.

Education:

To:	1972	**Ohio State University**
From:	1970	Electrical Engineering

Expert Witness Consultant—Case History

W. Leo Hoarty leo@wlhconsulting.llc
Mountain View, CA **408-500-9999**

Expert Witness Summary

Expert witness, PTAB declarations, depositions, and court appearances for:
ActiveVideo, Akami, Alphonso.tv, Amazon, Arris Corp., Charter Cable, Cox Communications, DirecTV, DISH Networks, Fandango, Google, HSN, LG Electronics, Motorola, AC Nielsen, NEC, Roku, Rovi (TiVo), Solaborate, Vizio

Total cases: 40 | PTAB: 11 | Depositions: 20 | Court appearances: 3

Litigation Support Experience: (Representing the underlined party)

40. Expert Engagement:

Type of Matter:	Theft of Trade Secret
Law Firm:	Jeffer Mangels Butler & Mitchell, LLP
Case Name:	RoadRunner Recycling, Inc. v. Recycle Track Systems
Services Provided:	Representing as expert witness Trade Secret analysis, software code review, and declaration drafting. Jury trial expected in early 2025.
Disposition:	Case on-going
Date:	2024

39. Expert Engagement:

Type of Matter:	Theft of Trade Secret
Law Firm:	Sterne Kessler LLP
Case Name:	Global TelLink v. JACS Solutions
Services Provided:	Representing as expert witness; trade Secret analysis and declaration drafting.
Disposition:	Case settled in favor of the plaintiff.
Date:	2023

38. Expert Engagement:

Type of Matter:	Patent Infringement
Law Firm:	Kilpatrick Townsend
Case Name:	Entropic Inc. v. Cox Communications, et al.
Services Provided:	Representing Cox Comm. as expert witness; patent analysis and declaration drafting of infringement defense response.
Disposition:	Jury trial expected in 2024.
Date:	2023

37. Expert Engagement:

Type of Matter:	Patent Infringement
Law Firm:	Arnold & Porter Kaye Scholer LLP
Case Name:	Touchstream Technologies, Inc., v. Charter Cable, et al.
Services Provided:	Representing Charter as expert witness; patent analysis and declaration of infringement defense response.

Disposition: Jury trial expected in 2024.
Date: 2023

36. Expert Engagement:

Type of Matter: Inter-Partes Review
Law Firm: Fish & Ricardson, P.C.
Case Name: SafeCast Limited v. DISH Network
Services Provided: Representing Dish Network as expert witness
Patent analysis and declaration drafting of PTAB defense response.
Disposition: Awaiting response
Date: 2023

35. Expert Engagement:

Type of Matter: Inter-Partes Review
Law Firm: Liston Abramson LLP
Case Name: WAG Acquisitions v Walt Disney Company
Services Provided: Representing WAG as expert witness
Patent analysis and declaration drafting of multiple PTAB defense responses; *deposed on each of three declarations.
Disposition: Awaiting response
Date: 2023

34. Expert Engagement:

Type of Matter: Software Source Code Review
Law Firm: Liston Abramson LLP
Case Name: WAG Acquisitions v Walt Disney Company
Services Provided: Representing WAG as expert witness
Completed software code review of Disney+, Hulu, MLB streaming software, prepared expert report
Date: 2022

33. Expert Engagement:

Type of Matter: Theft of Trade Secrets
Law Firm: Goodwin Procter, LLP
Case Name: Alphonso v. Tremor, Inc.
Services Provided: Representing Alphonso as expert witness; researched and prepared expert report.
Disposition: Case settled
Date: 2022

32. Expert Engagement:

Type of Matter: Software Source Code Review
Law Firm: Fabricant LLP
Case Name: Jawbone v. Samsung, Inc. et al.
Services Provided: Representing Jawbone as expert witness;
complete code review of Samsung subsidiary digital signal process software system; prepared report.
Date: 2022

31. Expert Engagement:

Type of Matter: Patent Infringement
Court and No.: D. Del. - No. 22-cv-00987
Law Firm: Baker Botts LLP
Case Name: NEC Corporation v. Peloton Interactive, Inc. et al.

Services Provided:	Representing NEC as expert witness, initial research completed.
Disposition:	Motion to dismiss granted Dec 2023.
Date:	2022

30. Expert Engagement:

Type of Matter:	Theft of Trade Secrets
Court and No.:	California State Court - No. 1113
Law Firm:	Jeffer Mangels Butler & Mitchell, LLP
Case Name:	Solaborate v. Avaya, Inc.
Services Provided:	Representing Solaborate as expert witness and providing both electronic hardware and software source code examination; *deposed June 2022.
Disposition:	Defendant settled in 2023.
Date:	2022

29. Expert Engagement:

Type of Matter:	Patent Infringement
Court and No.:	W.D. Tex. - No. 20-cv-00921
Law Firm:	Fenwick & West LLP
Case Name:	Broadband iTV, Inc, v. Amazon.com, Inc.
Services Provided:	Representing Amazon as expert witness; researched and wrote expert report.
Disposition:	Case settled
Date:	2021

28. Expert Engagement:

Type of Matter:	Patent Infringement
Court and No.:	D.N.J. - No. 21-cv-13405
Law Firm:	Irell & Manella, LLP
Case Name:	WinView Inc. v. DraftKings Inc.
Services Provided:	Representing WinView as expert witness; initial report drafted.
Disposition:	Case dismissed June 2024
Date:	2021

27. Expert Engagement:

Type of Matter:	Patent Infringement
Court and No.:	W.D. Tex. - No. 19-cv-00044
Law Firm:	Jackson Walker LLP
Case Name:	ESW Holdings, Inc. v. Roku, Inc.
Services Provided:	Representing Roku as expert witness; *deposed by ESW counsel.
Disposition:	Case decided by judge in favor of defendant in summary judgement.
Date:	2021

26. Expert Engagement:

Type of Matter:	Patent Infringement
Court and No.:	E.D. Tex. - No. 19-cv-00089
Law Firm:	Choate Hall
Case Name:	Personalized Media Communications v Akamai
Services Provided:	Representing Akamai as technical expert;
Disposition:	Case settled.
Date:	2020

25. Expert Engagement:

Type of Matter:	Patent Infringement
Court and No.:	D.N.J. - No. 18-cv-10238
Law Firm:	Morgan, Lewis & Bockius LLP
Case Name:	TVnGO v LG Electronics
Services Provided:	Representing LG Electronics as expert witness; appeared in Federal court to testify as expert at Markman hearing.
Disposition:	Case dismissed by judge post Markman.
Date:	2019

24. Expert Engagement:

Type of Matter:	Patent Infringement / IPR
Law Firm:	Goodwin Procter, LLP
Case Name:	First Media v Alphonso
Services Provided:	Represented Alphonso as expert witness; participated in two PTAB matters; wrote expert declarations in defense of two Alphonso patents; *deposed twice in 2020.
Disposition:	Both patents successfully defended, petitions rejected.
Date:	2019

23. Expert Engagement:

Type of Matter:	Patent Infringement
Court and No.:	C.D. Cal. - No. 17-cv-07534
Law Firm:	Rothwell, Figg, Ernst & Manbeck, P.C.
Case Name:	Maxell v. Fandango
Services Provided:	Represented Fandango as expert witness.
Disposition:	Matter settled.
Date:	2018

22. Expert Engagement:

Type of Matter:	Patent Infringement / IPR
Court and No.:	PTAB – Nos. IPR2016-01469 and IPR2016-01470
Law Firm:	Cooley LLP
Case Name:	TQ Delta v. DISH Network
Services Provided:	Represented DISH Network as expert witness; prepared two expert declarations for PTAB submission; *deposed twice (2017 & 2018); supported petitioner defense from appeal.
Disposition:	Both petitions instituted and survived appeal.
Date:	2016-2018

21. Expert Engagement:

Type of Matter:	Patent Infringement
Court and No.:	Never filed
Law Firm:	Johnson Law Group, LLP
Case Name:	SV Technologies v. Samsung
Services Provided:	Represented SV Technologies as technical expert; prepared research for expert declaration for infringement suit.
Disposition:	Matter abandoned.
Date:	2017

20. Expert Engagement:

Type of Matter: Patent Infringement / IPR
Law Firm: Baker Botts LLP
Case Name: CRFD Research v. DISH Network
Services Provided: Represented DISH Network as expert witness; prepared expert declaration for PTAB submission; *deposed by CRFD counsel.
Disposition: Petition instituted; patent ruled invalid.
Date: 2015

19. Expert Engagement:

Type of Matter: Patent Infringement / IPR
Law Firm: Akin Gump LLP
Case Name: HBAC MatchMaker Media v. DirecTV
Services Provided: Represented DirecTV as expert witness; provided prior art and technical analysis research; wrote expert report; *deposed by HBAC counsel.
Disposition: Case settled
Date: 2015

18. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Kaye Scholer LLP
Case Name: HBAC MatchMaker Media v. Google
Services Provided: Represented Google as technical expert; assisted in preparation of expert report.
Disposition: Case decided at trial in favor of defendants.
Date: 2014

17. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Powell Gilbert (UK)
Case Name: Rovi Corp. v. Virgin Media
Services Provided: Expert witness to Rovi in UK matter (patent #6) Testified in the High Court of England
Disposition: Case decided by judge in favor of Virgin Media
Date: 2014

16. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Latham & Watkins LLP
Case Name: Telebuyer LLC v. Amazon.com Inc.
Services Provided: Representing Amazon as expert witness; provided research on prior art; wrote expert report; *deposed 2014.
Disposition: Case settled
Date: 2014

15. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Baker McKenzie LLP
Case Name: Straight Path IP Group, Inc. v. Vizio, Inc.
Services Provided: Represented Vizio as expert witness; analyzed prior art, assisted with claim charts; wrote expert report; *deposed 2014.
Disposition: Case settled

Date: 2013

14. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Powell Gilbert (UK)
Case Name: Rovi Corp. v. Virgin Media
Services Provided: Represented Rovi as expert witness in U.K. case (patent 5); assisted in preparation of expert report.
Date: 2013

13. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Powell Gilbert (UK)
Case Name: Rovi Corp. v. Virgin Media
Services Provided: Represented Rovi as technical consultant (patent 4); Assisted in preparation of expert report.
Date: 2013

12. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Kilpatrick Townsend
Case Name: Mitsubishi Electric Corp. v. Motorola Mobility Corp.
Services Provided: Represented Motorola as expert witness; researched and analyzed prior art; wrote expert report; *deposed by Mitsubishi counsel.
Disposition: Case settled
Date: 2013

11. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Powell Gilbert (UK)
Case Name: Rovi Corp. v. Virgin Media
Services Provided: Represented Rovi as technical consultant in U.K. case (patent 3); Assisted in preparation of expert report.
Date: 2012

10. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Powell Gilbert (UK)
Case Name: Rovi Corp. v. Virgin Media
Services Provided: Represented Rovi as technical consultant in U.K. case (patent 2); assisted in preparation of expert report.
Date: 2012

9. Expert Engagement:

Type of Matter: Patent Infringement
Law Firm: Powell Gilbert (UK)
Case Name: Rovi Corp. v. Virgin Media
Services Provided: Represented Rovi as a technical consultant in U.K. case (patent 1); assisted in preparation of expert report.
Date: 2012

8. Expert Engagement:

Type of Matter:	Patent Infringement
Law Firm:	Powell Gilbert (UK)
Case Name:	Motorola, Inc. v. Virgin Media
Services Provided:	Represented Motorola as expert witness in U.K.; prepared expert report.
Disposition:	Case settled
Date:	2012

7. Expert Engagement:

Type of Matter:	Patent Infringement
Law Firm:	Winston & Strawn LLP
Case Name:	Technology Development and Licensing LLC v Arris Corp.
Services Provided:	Represented Arris as expert witness; researched and wrote expert report; *deposed in 2012.
Disposition:	Case settled
Date:	2012

6. Expert Engagement:

Type of Matter:	Patent Infringement
Law Firm:	Quinn Emanuel LLP
Case Name:	HSN client exploratory evaluation.
Services Provided:	Technology expert and prior art research.
Disposition:	Not brought
Date:	2012

5. Expert Engagement:

Type of Matter:	Theft of Trade Secret/Patent Infringement
Law Firm:	Morgan, Lewis & Bockius LLP
Case Name:	ActiveVideo Networks, Inc. v Verizon, Inc.
Services Provided:	Represented ActiveVideo as fact witness; five of my patents assigned to company asserted against defendant; *deposed and testified in trial Eastern District Court, July 2011
Disposition:	Decision in favor of ActiveVideo and won on appeal with substantial eight figure grant.
Date:	2011

4. Expert Engagement:

Type of Matter:	ITC challenge / import restriction
Law Firm:	Morgan, Lewis & Bockius LLP
Case Name:	Verizon v Cablevision Systems Inc.
Services Provided:	Represented ActiveVideo (enabling party) as technical expert; *deposed by Verizon counsel.
Disposition:	Decision in favor of Cablevision.
Date:	2010

3. Expert Engagement:

Type of Matter:	Patent Infringement
Law Firm:	Morrison Foerster
Case Name:	Finisar v Sirius
Services Provided:	Represented Dotcast Inc. as fact witness; *deposed by Finisar counsel.
Disposition:	Case continued past Dotcast company sale.
Date:	2007

Expert Witness Consultant—Case History

2. Expert Engagement:

Type of Matter:	Patent Infringement
Law Firm:	Morrison Foerster
Case Name:	Broadcast Innovation v Charter Cable
Services Provided:	Represented Dotcast Inc. as fact witness; *deposed by Broadcast Innovation counsel.
Disposition:	Case settled
Date:	2005

1. Expert Engagement:

Type of Matter:	Patent Infringement
Law Firm:	Cooley Godward LLP
Case Name:	RTT v ICTV
Services Provided:	Represented ICTV as fact witness; *deposed by RTT counsel.
Disposition:	Case settled
Date:	1999

Expert Witness Consultant—Patent Portfolio

W. Leo Hoarty
Morgan Hill, CA

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408-500-9999

Patent Publication History

This expert has written and filed in his name more than 35 granted patents in various technologies and has written and assisted in filing more than 50 patents for third parties as an intellectual property consultant. List of allowed patents below.

US Patents Issued to inventor W. Leo Hoarty, et al:

1	**US 5,093,718**	9/28/1990	Interactive home information system
2	**US 5,220,420**	9/10/1991	Interactive home information system for distributing compressed television programming
3	**US 5,412,720**	5/1/1992	Interactive home information system
4	**US 5,319,455**	12/23/1992	System for distributing customized commercials to television viewers
5	**US 5,361,091**	12/23/1992	Interactive home information system for distributing video picture information to television viewers over a fiber optic telephone system
6	**US 5,526,034**	5/3/1993	Interactive home information system with signal assignment
7	**US 5,594,507**	5/27/1994	Compressed digital overlay controller and method for MPEG type video signal
8	**US 5,485,197**	9/22/1994	Carousel display user interface system
9	**US 5,557,316**	9/29/1994	System for distributing broadcast television services identically on a first bandwidth portion of a plurality of express trunks
10	**US 5,550,578**	10/6/1994	Interactive and conventional television information system
11	**US 5,587,734**	11/3/1994	User interface for selecting television information services through pseudo-channel access
12	**US 5,883,661**	11/1/1995	Output switching for load leveling across multiple service areas
13	**US 6,100,883**	6/4/1996	Home interface controller for providing interactive cable television
14	**US 5,812,665**	6/7/1996	Switched channel system
15	**US 6,034,678**	12/6/1997	Cable television system with remote interactive processor
16	**US 6,305,020**	12/9/1997	System Manager and Hypertext Control Interface for Interactive Cable Television Systems

17	**US 6,064,377**	5/20/1998	Subscriber directed simultaneous multiple signal presentation for interactive cable television system
18	**US 6,205,582**	9/18/1998	Interactive cable television system with frame server
19	**US 6,253,238**	12/2/1998	Interactive cable television system with frame grabber
20	**US 7,936,311**	11/21/2005	Directive, broadband, high gain, active antenna system
21	**US 7,853,978**	12/9/2005	Remote antenna and local receiver subsystems for receiving data signals carried over analog television
22	**US 8,521,766**	11/12/2008	Systems and methods for providing information discovery and retrieval
23	**US 8,862,615**	7/25/2013	Continuation of Systems and methods for providing information discovery and retrieval--Continuation of '766
24	**US 9,190,052**	11/17/2015	Continuation of Systems and methods for providing information discovery and retrieval--Continuation of '766
25	**US 9,005,309**	6/09/2015	Systems and methods for Identifying Video Segments for Displaying Contextually Relevant Content
26	**US 9,607,650**	11/2/2015	Systems and methods for reducing audio distortion during playback of phonograph records using multiple tonearm geometries
27	**US 9,465,867**	11/30/2015	System and method for continuous media segment identification, (by means of continuous audio content recognition)
28	**US 9,824,150**	11/30/2015	System and method for providing information discovery and retrieval
29	**US 9,838,753**	12/05/2017	Monitoring Individual viewing of television events using tracking pixels and cookies
30	**US 9,955,192**	4/24/2018	Monitoring Individual viewing of television events using tracking pixels and cookies (cont. of 9,838,753)
31	**US 9,607,650**	3/28/2017	Systems and methods for reducing audio distortion during playback of phonograph records using multiple tonearm geometries
32	**US 10,306,274**	5/28/2019	Monitoring Individual Viewing of Television Events Using Tracking Pixels and Cookies (cont. of 9,838,753)
33	**US 11,039,178**	6/15/2021	Monitoring individual viewing of television events using tracking pixels and cookies
34	**US 11,132,758**	9/28/2021	Embedding data in video without visible impairments
35	**US 11,757,951**	12/1/2022	System and Method for Configuring Video Watch Parties with Gesture-Specific Telemojis
36	**US 11,785,280**	10/10/2023	System And Method for Recognizing Live Event Audiovisual Content to Recommend Time-Sensitive Targeted Interactive Contextual Transactions Offers and Enhancements
37	**US 12,114,002**	10/8/2024	Embedding Video Watermarks without Visible Impairments

38	**US 12,126,661**	10/22/2024	System And Method for Configuring Video Watch Parties with Gesture-Specific Telemojis
39	**US 12,125,120**	10/22/2024	Embedding Data in Video without Visible Impairments