

Richard M. Goodin, PE

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Goodin & Associates, Inc., Apex, NC. *February 1990 – Current.*

President/Chief Consultant - consulted on various projects including the following:

Hardware:

- Developed an electronics package for an underwater rebreather. Responsibilities included system electronics architecture, board design on all system boards, board bringup, firmware architecture and gas control firmware implementation.
- Provided VGA expertise to design team designing new VGA core for client's graphics accelerators.
- Developed an FPGA based system on chip implementation for military applications. Responsibilities included system electronics architecture, board design on all system boards, FPGA synthesis, and board bringup.
- Architect and implement a 2D graphics and video accelerator for palmtop to light laptop use. Responsibilities included system architecture and system design in Verilog.
- Architected and implemented a high reliability 10GigE Fabric Link for an MPLS switch. Responsibilities included Verilog design and synthesis.
- Testing and analysis of extensions to current graphics architecture to meet Xbox graphics requirements.
- Developed a high performance 32 bit VGA module in synthesizable Verilog designed to provide VGA compatibility for 3D systems. Responsibilities included design, compatibility testing and synthesis. Eventually resold implementation to 6 companies with a variety of simulation, synthesis and verification requirements.
- Architected and assisted in design of a hardware add-on processor to accelerate OpenGL and DirectX 7 transform and lighting.
- CDRAM evangelist. Promoted and assisted adoption of Mitsubishi's CDRAM technology for use in graphics systems.
- Architected and assisted in design of a medium performance 3D accelerator chip using embedded DRAM technology.
- Participated in the simulation, testing and development of a high performance graphics accelerator for the DEC Alpha architecture.
- Architected and developed a Verilog based multiprocess hardware simulation environment for hardware verification.

Software:

- Implemented 2D Windows 2000 and Windows XP drivers for Peritek hardware.
- Architected OpenGL and DirectX firmware for massively parallel MIMD implementation. Responsibilities include development of software architecture, software functional simulator and development of interface software for Verilog simulation.
- Implemented an OpenGL port for Voodoo graphics hardware optimized for game requirements.
- Participated in the architecture and development of Data General's Aview graphics library.
- Developed high speed anti-aliasing algorithms targeted at an Intel i860 based multiprocessor graphics accelerator

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Apple Computer, Cupertino, CA. *November 2004 – October 2006.*

Senior Engineer:

Lead engineer responsible for architecture and implementation of Apple's proprietary EFI graphics extensions across Nvidia, ATI and Intel based platforms. Responsibilities included system architecture and driver design. Implemented Intel drivers for two generations of Intel graphics architectures. Represented Apple in negotiations with EFI group at Intel. Interfaced with driver developers at NVidia and ATI.

Raydiant, Inc., Santa Clara, CA. *January 1999 – October 1999.*

Chief Scientist:

Lead hardware and software architect for advanced scalable PC graphics accelerator. Responsibilities included research and development of hardware acceleration of advanced graphics features and managing architecture group.

Sun Microsystems, Morrisville, NC. *April 1988 - January 1990.*

Member of Technical Staff/Architect:

- Co-architected and implemented the Renderman compliant, high-quality rendering component of Sun's SunVision visualization product.
- Co-architected Sun's XGL proprietary graphics library.
- Developed new approaches for the graphics library and windowing software for a multiprocessor, i860 based, visualization accelerator.
- Ported SunPHIGS to Sun's TAAC-1 application accelerator.
- Implemented NURBS curve and surface extensions to the TAAC-1 graphics library.

Sun Microsystems, Mountain View, CA. *January 1987 - March 1988.*

Software Manager

Managed a ten person group developing software for direct surface rendering accelerator.

Quanta Corporation, Salt Lake City, UT. *August 1985 - January 1987.*

Project Engineer/Graphics

Specifically hired for the purpose of developing a high performance, real-time 3D animation system for use in video production.

Racore Corporation, Salt Lake City UT. *March 1985 - August 1985.*

Chief Engineer

Conceived, designed, implemented and readied for production a very low cost LAN for the IBM PC family.

Evans & Sutherland, Salt Lake City, UT. *November 1981 - March 1985.*

Advanced Development

Worked directly with Vice President of Advanced Development to research and develop new graphics directions.

Project Engineer

Developed three software and two hardware products to integrate the PS300 graphics display system into the IBM environment.

Sperry Univac GSD, Salt Lake City, UT. *January 1979 - November 1981*

Project Engineer

Wrote communications, display and peripheral microcode for a sophisticated terminal featuring advanced windowing and virtual communications.

Education:

Bachelors of Electrical Engineering, University of Delaware, September 1976 – December 1978.
Minor in Mechanical Engineering. Completed 4 year program in 2 ½ years.

Professional:

Senior Member IEEE
Senior Member ACM
Member AIPLA

Registered to practice before the United States Patent and Trademark Office

Licensed as a Professional Engineer in the state of North Carolina

Prior Cases:

- Applied Capital, Inc. v. The ADT Corporation and ADT LLC. Case No. 1:16-cv-815-JB-SCY (D. New Mexico) on behalf of ADT (opposing Applied Capital) 12/01/2019 to 5/17/2021. Source Code Expert.
- AR Design Innovations LLC v. La-Z-Boy Inc., Ashley Furniture Industries, Inc. and Ethan Allen Interiors, Inc., Case No. 4:20-CV-392-SDJ, 4:20-CV-394-SDJ, 4:20-CV-395-SDJ (E. D. Texas) on behalf of La-Z-Boy, Ashley and Ethan Allen (opposing ARDI) 9/21/20 to 4/27/2021. Graphics Expert.
- Marxent Labs, LLC v. AR Design Innovations LLC IPR2021-00085, 00271 (PTAB) on behalf of Marxent (opposing AR Design Innovations) 9/21/20 to 4/27/2021. Graphics Expert.
- Google v. Singular Computing IPR2021-00154, 155, 164, 165, 179 (PTAB) on behalf of Google (opposing Singular) 7/17/20 to current. Floating Point Expert.
- Hong Kong uCloudlink Network Technology Limited and Ucloudlink (America), Ltd. v. SIMO Holdings, Inc., Case No. 1:20-cv-03399(JSR) (S. D. New York) on behalf of SIMO (opposing uCloudLink) 7/15/20 to 12/31/2020. Cellular Expert.
- Sonrai Systems v. Geotab, Case No: 1:16-cv-03371, (N. D. Illinois) on behalf of Geotab (opposing Sonrai) 08/21/19 to 8/01/20. Source Code Expert.
- Palomar Technologies, Inc. v. MRSI Systems, LLC No. 18-10236-FDS (D. Massachusetts) on behalf of Palomar (opposing MRSI Systems) 4/18/19 to 8/26/19. Source Code Expert.
- T-Jat Systems 2006 Ltd. v. Expedia, Inc., C.A. No. 16-581-RGA (D. Delaware) on behalf of Expedia (opposing T-Jat Systems) 3/21/19 to current. User Interface and Communications Expert.
- VR Optics, LLC v. Peloton Interactive, Inc., Case No. 1:16-cv-06392-JPO (S.D. New York) on behalf of Peloton (opposing VR Optics) 10/22/18 to 4/3/20. Source Code Expert.
- CustomPlay LLC v. Amazon.com, Inc., Case No. 9:17-cv-80884 (S.D. Florida) on behalf of Amazon (opposing CustomPlay) 9/20/17 to current. Video Expert.
- REXA, Inc. v. Mark Vincent Chester and MEA Inc., Case No. 1:17-cv-08716 (N.D. Illinois) on behalf of REXA (opposing MEA). 7/4/2018 to 11/21/2019. Source Code Expert.
- Traxcell Technologies, LLC v. AT&T Corp., No. 2:17-cv-00718-RWS-RSP (E.D. Texas) on behalf of AT&T (opposing Traxcell Technologies) 1/15/2019 to 5/15/2019. Source Code Review.

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- In the Matter of Certain Infotainment Systems, Components Thereof, and Automobiles Containing the Same, (International Trade Commission, Inv. No. 337-TA-1119) on behalf of Renesas, et. al. (opposing Broadcom) 7/30/2018 to 3/8/19. Source Code Expert.
- In the Matter of Certain Graphics Processors And Products Containing The Same, (International Trade Commission, Inv. No. 337-TA-1099) on behalf of ZiiLabs, Inc., Ltd. (opposing Nvidia, et. al.) 9/30/2017 to 2/11/19. Graphics Processing Expert.
- Carl Zeiss A.G. & ASML Netherlands B.V. v. Nikon Corporation et al., Case No. 2:17-cv-03221-RGK-MRW (C.D. Cal.) on behalf of Nikon (opposing Zeiss) 11/13/17 to 7/17/2018. Graphics and Image Processing Expert.
- Magna Electronics, Inc. v. Valeo North America, Inc., Valeo S. A.; Valeo GmbH; Valeo Schalter Uno, Sensorum GmbH; Connaught Electronics Ltd., Case No 2:13-cv-11376 (E.D.Michigan) on behalf of Valeo (opposing Magna) 05/16/2017 to 1/12/18. Source Code Review.
- Prisia Engineering Corp. v. Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Electronics Latinoamerica and Miami, Inc., Case No. 1:16-cv-21761-KMM, (Southern Dist. of Florida) on behalf of Samsung (opposing Prisia) 07/19/2017 to 01/12/2018. Source Code Review.
- In the Matter of Certain Automated Teller Machines, ATM Modules, Components Thereof, and Products Containing Same, (International Trade Commission, Inv. No. 337-TA-989) on behalf of Nautilus Hyosung, Inc. (opposing Diebold) 3/05/2018 to 5/31/2018. Source Code Review.
- Westinghouse Air Brake Technologies Corporation (d/b/a Wabtec Corporation) and Wabtec Railway Electronics, Inc. v. Siemens Industry, Inc. (IPR2017-00580) on behalf of Wabtec (opposing Siemens) 1/26/2018-2/17/2018. Virtual Machine and Software Expert.
- In the Matter of Certain Robotic Vacuum Cleaning Devices and Components Thereof Such as Spare Parts, (International Trade Commission, Inv. No. 337-TA-1057) on behalf of Shenzhen and Matsutek (opposing iRobot) August 24, 2017 to 1/8/2018. Source Code Expert.
- In the Matter of Certain Digital Cameras, Software, and Components Thereof, (International Trade Commission, Inv. No. 337-TA-1059) on behalf of Nikon (opposing Zeiss) 8/1/2017-3/12/2018. Source Code and Technical Domestic Industry.
- Global Equity Management (SA) Pty. Ltd. v. eBay and Alibaba. (IPR2016-01828, IPR2016-01829 (PTAB)) on behalf of eBay and Alibaba (opposing Global Equity Management) 5/12/2016 to 8/9/17. Invalidity Expert.
- Implicit LLC v. Trend Micro, Inc. Case No. 6:16-cv-00080 (E.D. Tex.) on behalf of Trend Micro (opposing Implicit LLC) 5/26/17 to 10/28/2017. Source Code Expert.
- In the Matter of Certain Graphics Processors, DDR Memory Controllers, and Products Containing the Same (International Trade Commission, Inv. No. 337-TA-1037) on behalf of ZiiLabs, Inc. Ltd. (opposing AMD, Lenovo, LG Electronics, MediaTek, Qualcomm, Sony) 1/13/2017 to 7/7/2017. Infringement and Validity Expert.
- Zircore, LLC v. Straumann Manufacturing, Inc. et al, 2-15-cv-01557 (E.D. Tex.) on behalf of Straumann (opposing Zircore) 9/20/2016 to 2/10/2017. Source Code Review.

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- Elbit Systems Land and C4I Ltd. and Elbit Systems of America, LLC v. Hughes Network Systems, LLC, Bluetide Communications, and Country Home Investments, Inc., Case No. 2:15-cv-00037-RWS-RSP (E.D. Tex.) on behalf of Elbit Systems (opposing Hughes) 12/20/2016 to 8/7/2017. Source Code Review.
- Chamberlain Group, Inc. v. Techtronic Industries Co. Ltd., et al. (International Trade Commission, Inv. No. 337-TA-1016) on behalf of Chamberlain Group, Inc. (opposing Techtronic Industries) 11/9/2016 to 1/3/2017. Source Code Review.
- Global Equity Management (SA) Pty. Ltd. v. Airbnb, Inc. et al. (E.D. Tex Case Nos. 15-cv-01700, 16-cv-95, 16-cv-96, 16-cv-97, 16-cv-98, 16-cv-99, 16-cv-100, 16-cv-101, 16-cv-102, 16-cv-103, and 16-cv-104) on behalf of Airbnb, eBay, TripAdvisor, Expedia, Hotwire, Orbitz, Trivago, Travelocity, Hotels.com, Expedia CruiseShipCenters, Hipmunk and Booking.com (opposing Global Equity Management) 5/12/2016 to 8/9/17. Invalidity and Non-infringement Expert.
- In the Matter of Certain Automated Teller Machines, ATM Modules, Components Thereof, and Products Containing Same, (International Trade Commission, Inv. No. 337-TA-972) on behalf of Nautilus Hyosung, Inc. (opposing Diebold) 3/18/2016 to 5/16/2016. Source Code Review.
- Texas Instruments v. Advanced Silicon Technologies, (IPR2016-01266 (PTAB)) on behalf of Texas Instruments (opposing Advanced Silicon Technologies) 2/2/2016 to 7/24/2016. Invalidity Expert.
- Texas Instruments v. Advanced Silicon Technologies, (IPR2016-01178 (PTAB)) on behalf of Texas Instruments (opposing Advanced Silicon Technologies) 2/2/2016 to 7/24/2016. Invalidity Expert.
- Texas Instruments v. Advanced Silicon Technologies, (IPR2016-01108 (PTAB)) on behalf of Texas Instruments (opposing Advanced Silicon Technologies) 2/2/2016 to 7/24/2016. Invalidity Expert.
- In the Matter of Certain Computing Devices or Graphics Systems, Components thereof, and Vehicles Containing Same, (International Trade Commission, Inv. No. 337-TA-984) on behalf of Texas Instruments and Renesas (opposing Advanced Silicon Technologies) 2/2/2016 to 7/24/2016. Invalidity and Non-Infringement Expert.
- Electronic Arts v. Terminal Reality, (IPR2016-00930 (PTAB)) on behalf of Electronic Arts, (opposing Terminal Reality). 10/20/2015 to 10/19/2017. Invalidity Expert.
- Electronic Arts v. Terminal Reality, (IPR2016-00929 (PTAB)) on behalf of Electronic Arts, (opposing Terminal Reality). 10/20/2015 to 10/19/2017. Invalidity Expert.
- Electronic Arts v. Terminal Reality, (IPR2016-00928 (PTAB)) on behalf of Electronic Arts, (opposing Terminal Reality). 10/20/2015 to 10/19/2017. Invalidity Expert.
- Infernal Technology, LLC, et al., v. Electronic Arts, Inc., et al., (E.D. Texas Case No. 2:15-cv-01523-JRG-RSP) on behalf of Electronic Arts (opposing Infernal Technology) 10/20/2015 to 10/19/2017. Invalidity and Non-Infringement Expert.
- NFC Technology, LLC v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (Civil Action No. 2: 15-cv-283-JRG-RSP) on behalf of Samsung (opposing NFC Technology) 11/16/15 to 6/2/16. Source Code Review.

- ZiiLabs Inc. Ltd. v. Samsung Electronics Co. Ltd. et al (E. D. Texas Case No. 2:14-cv-00203-JRG-RSP) on behalf of Samsung (opposing ZiiLabs) 4/21/2014 to 11/28/15. Source Code Review.
- In The Matter of Automatic Teller Machines and Point of Sale Devices and Associated Software Thereof (International Trade Commission, Inv. No. 337-TA-958) on behalf of NRT (opposing GCA). 9/22/2015 to 12/23/15. Non-Infringement Expert.
- Enova Technology Corporation v. Seagate Technology (D. Del Civil Action No. 1:13-cv-01011-LPS) on behalf of Enova (opposing Seagate) 1/12/2015 to 5/2/15. Source Code Review.
- Heuresis Corporation v. Venture Technologies, Inc., C. A. No. MICV2014-08305-J and MIC2014-08511 on behalf of Heuresis (opposing Venture Technologies) 7/21/2015 to 9/9/15. Software and Hardware Development Expert.
- In The Matter of Certain Electronic Devices, Including Wireless Communication Devices, Computers, Tablet Computers, Digital Media Players, and Cameras (International Trade Commission, Inv. No. 337-TA-952) on behalf of Apple (opposing Ericsson). 9/7/15 to 9/15/15. Source Code Review.
- Samsung Electronics Co., LTD., et al v. NVIDIA Corporation Case No. 3:14-cv-00757 (E.D. Va) on behalf of Samsung (opposing NVIDIA). 10/10/14 to 9/30/15. Source code review.
- CareCloud Corporation v. Athenahealth, Inc., (CBM2014-00143 (PTAB)) on behalf of Athenahealth, (opposing CareCloud). 2/26/2015 to 5/6/2015. Validity Expert.
- EMC Corporation and EMC Israel Development Center, Ltd. V. Zerto, Inc. Civ. No. 1:12-cv-00956-GMS (D. Del) on behalf of EMC (Opposing Zerto). 10/14/14 to 5/11/15. Source Code Review.
- Athenahealth, Inc. v. AdvancedMD Software, Inc. Civ. No. 1:11-cv-11260-GAO (D. MA) on behalf of Athenahealth (Opposing AdvancedMD). 5/7/14 to 12/18/14. Source Code Review.
- Florida Atlantic University Research Corporation and Domaine Associates, LLC v. Asus Computer International, Civ No. 9:12-cv-80697-PAS (SD Fla) v. TPV Technology Limited Civ. No. 9:12-cv-80701-PAS (SD Fla) v. Acer, Inc. Civ. No. 9:12-cv-80694-PAS (SD Fla) on behalf of Asus, TPV and Acer (Opposing FAU). 5/14/14 to 6/26/14. Source Code Review.
- ContentGuard Holdings, Inc., vs. Amazon.com, Inc., et al., No. 2:13-cv-1112 (EDTX)) on behalf of Apple (opposing ContentGuard).4/8/2014 to 8/24/15. Source Code Review.
- Selene Communication Technologies, LLC v. McAfee, Inc. Civ. No. 1:14-cv-00400 (D Del) on behalf of McAfee (Opposing Selene). 7/23/14 to 10/8/14. Source Code Review.
- In The Matter of Certain Set-Top Boxes, Gateways, Bridges, and Adapters and Components Thereof (International Trade Commission, Inv. No 337-TA-915) on behalf of ViXS. 7/10/14 to 9/11/14. Source Code Review.
- BRK Brands, Inc. et.al. v. Nest Labs, Inc., Civ. No. 13-cv-7900 (ND IL,ED) on behalf of BRK Brands (Opposing Nest) 5/10/14 to 6/22/14. Source Code Review.
- Certain Point-To-Point Network Communication Devices and Products Containing Same (International Trade Commission, Inv. No. 337-TA-892) on behalf of Toshiba (Opposing Straight Path). 4/24/14 to 5/2/14. Source Code Review.

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- EON Corp IP Holdings LLC v. Apple Inc. , Civ. No. 6:12-cv-00943 (E.D. TX) on behalf of Apple (Opposing EON). 1/23/2014 to 6/3/2015. Source Code Review.
- Straight Path v. Sony, Civ. No. 13-427 (E.D. Va.) on behalf of Sony (Opposing Straight Path.) 9/16/13 to 4/24/14. Source Code Review.
- Certain Point-To-Point Network Communication Devices and Products Containing Same (International Trade Commission, Inv. No. 337-TA-892) on behalf of Sony (Opposing Straight Path). 9/16/13 to 4/24/14. Source Code Review.
- Optical Disc Drives, Components Thereof, and Products Containing the Same (U.S. International Trade Commission Inv. No. 337-TA-897) on behalf of Samsung (Opposing Optical Devices). 11/25/13 to 4/16/2014. Source code review.
- Telefonaktiebolaget LM Ericsson v. Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America LLP, Civil Action No. 6:12-cv-895 (E.D. TX) on behalf of Samsung (Opposing Ericsson). 8/30/13 to 10/02/13. Source code review.
- T5 Labs (Delaware), LLC v. Gaikai, Inc., Case No. 1:12-cv-01281-MPT (D. Del.) on behalf of Gaikai (Opposing T5 Labs) 9/30/13 to 11/19/13. Graphics Expert.
- Ericsson Inc., et. al. v. Samsung Electronics Co. Ltd et. al., Civil Action No. 6:12-cv-895 (Eastern District Texas) on behalf of Samsung (Opposing Ericsson) 3/1/2013 to 8/27/13. Source code review
- Certain Electronic Devices, Including Certain Wireless Communication Devices, Tablet Computers, Media Players, and Televisions, and Components Thereof (U. S. International Trade Commission, Inv. No 337-TA-862) on behalf of Samsung (Opposing Ericsson) 1/8/2013 to 8/27/13. Source code review.
- Hybrid Audio LLC v. High Tech Computer Corp., alk/a HTC Corp., et al., Civil Action No. 6: 11-cv-195-LED (E.D. Tex.) on behalf of HTC (Opposing Hybrid Audio) 9/13/2012 to 12/07/2013. Source code review.
- Certain Consumer Electronics And Display Devices And Products Containing Same., (U. S. International Trade Commission, Inv. No 337-TA-836) on behalf of Sony, Samsung, LG and RIM (Opposing GPHI) 2/21/2012 to 12/14/2012. Graphics Expert
- GPHI v. Sony et al., Case No. 11-1166 (District Delaware) on behalf of Sony (Opposing GPHI) 2/21/2012 to 12/14/2012. Graphics Expert
- Apple Inc. v Samsung Electronics Co., Ltd, Case No. 11-cv-01846-LHK (Northern District California) on behalf of Apple (Opposing Samsung) 1/25/12 to 3/21/12. Source code review
- Apple Inc. and Next Software, Inc. v. Motorola, Inc. and Motorola Mobility, Inc., Case No. 11-cv-8540 (RAP) (Northern District Illinois) on behalf of Apple (Opposing Motorola) 12/21/2010 to 1/9/2013. Graphics and Software Expert
- Electronic Devices with Graphics Data Processing Systems, Components Thereof, and Associated Software, (U. S. International Trade Commission, Inv. No 337-TA-813) on behalf of Apple (Opposing S3G) 1/3/2012 to 10/16/2012. Source code review

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- Electronic Devices with Communication Capabilities, Components' Thereof and Related Software, (U. S. International Trade Commission, Inv. No 337-TA-808) on behalf of Apple (Opposing HTC) 10/7/2011 to 7/25/2012. Source code review
- Motorola Mobility v. Microsoft Corporation, Case No. 10-cv-24063 (Southern District of Florida) on behalf of Microsoft (opposing Motorola) 1/18/2011 to 8/31/2011. Source code review
- Digital Televisions and Components Thereof, and Certain Electronic Devices Having a Blu-Ray Disc Player and Components Thereof (U. S. International Trade Commission, Inv. No 337-TA-764) on behalf of LG (Opposing Sony) 7/11/2011 to 7/23/2011. Source code review
- Apple Inc. and Next Software, Inc. v. Motorola, Inc. and Motorola Mobility, Inc., Case No. 10-cv-662 (Western District Wisconsin) on behalf of Apple (Opposing Motorola) 2/28/2011 to 1/9/2013. Graphics and Software Expert
- Apple Inc. v. Motorola, Inc. and Motorola Mobility, Inc., Case No. 10-cv-661 (Western District of Wisconsin) on behalf of Apple (Opposing Motorola) 2/28/2011 to 1/9/2013. Graphics and Software Expert
- Apple Inc. v. Motorola Mobility, Inc., Case No. 11-cv-178 (Western District of Wisconsin) on behalf of Apple (Opposing Motorola) 2/28/2011 to 1/9/2013. Graphics and Software Expert
- Motorola Mobility, Inc. v. Apple Inc., Case No. 1:10-cv-23580-UU (Southern District of Florida) on behalf of Apple (Opposing Motorola) 2/28/2011 to 1/9/2013. Graphics and Software Expert
- Motorola Mobility, Inc. v. Apple Inc., and Next Software, Inc., Case No. 1:10-cv-00867 (District of Delaware.) on behalf of Apple (Opposing Motorola) 2/28/2011 to 1/9/2013. Graphics and Software Expert
- Gaming and Entertainment Consoles, Related Software, and Components Thereof (U. S. International Trade Commission, Inv. No 337-TA-752) on behalf of Microsoft (Opposing Motorola) 11/11/10 to 8/28/11. Source code review
- Mobile Devices and Related Software (U. S. International Trade Commission, Inv. No 337-TA-750) on behalf of Apple (Opposing Motorola) 2/28/2011 to 1/9/2013. Graphics and Software Expert
- Wireless Communication Devices, Portable Music and Data Processing Devices, Computers and Components Thereof (U. S. International Trade Commission, Inv. No 337-TA-745) on behalf of Apple (Opposing Motorola) 2/28/2011 to 1/9/2013. Graphics and Software Expert
- Mobile Devices, Associated Software, and Components Thereof (U. S. International Trade Commission, Inv. No 337-TA-744) on behalf of Microsoft (Opposing Motorola) 11/11/10 to 8/28/11. Source code review
- Eastman Kodak Co, v Apple, Inc., Case No. 6:10-CV-06022 (Western District of New York) on behalf of Apple (opposing Kodak) 8/25/10 to 1/31/11. Source code review
- Certain Electronic Devices With Image Processing Systems, Components Thereof, and Associated Software (U.S. International Trade Commission, Inv. No. 337-TA-724) on behalf of Apple (Opposing S3G) 11/18/2010 to 4/07/2011. Source code review

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- Digital Televisions and Components Thereof (U.S. International Trade Commission, Inv. No. 337-TA-742) on behalf of LG Electronics (Opposing Vizio) 10/31/2009 to 8/13/2010. Source code review
- Gerber Scientific Internat'l, Inc. v. Roland DGA Corporation, Case No. 3:06-cv-02024-CFD (District Connecticut) on behalf of Roland DGA deposition April 16, 2012 (Opposing Gerber Scientific) 10/29/2010 to 6/3/2015. Raster Image Processing Expert
- Certain Digital Imaging Devices and Related Software (U.S. International Trade Commission, Inv. No. 337-TA-717), Software and image processing expert on behalf of Apple Inc., deposition November 12, 2010 and hearing January 31, 2011 (Opposing Kodak) 8/25/2010 to 1/31/11. Software Expert
- Vizio, Inc., v. LG Electronics, Inc., and LGElectronics U.S.A., Inc., Case No. 1:09-CV-1481 (BEL)(D.Md.) on behalf of LG Electronics (opposing Vizio) 10/31/2009 to 8/13/2010. Source code review
- Video Displays, Components Thereof, and Products Containing Same (U.S. International Trade Commission, Inv. No. 337-TA-687) consulting on behalf of LG Electronics (Opposing Vizio) 10/31/2009 to 8/13/2010. Source code review
- Electronic Devices Having Image Capture or Display Functionality (U.S. International Trade Commission, Inv. No. 337-TA-672) consulting on behalf of LG Electronics (Opposing Kodak) 9/11/2009 to 11/25/2009. Source code review
- Mobile Telephones and Wireless Communication Devices Featuring Digital Cameras, Components Thereof (U.S. International Trade Commission, Inv. No. 337-TA-663) consulting on behalf of LG Electronics (Opposing Kodak) 9/11/2009 to 11/25/2009. Source code review
- LG Electronics, Inc. vs. Hitachi, Ltd, et al. (Civil Case # 5:07cv90-DF) on behalf of LG Electronics (Opposing Hitachi) 7/30/2008 to 2/27/2009. Source code review
- Semiconductor Devices, DMA Systems, and Products Containing Same (U.S. International Trade Commission, Inv. No. 337-TA-607) consulting on behalf of Samsung (Opposing Renesas Technology 12/19/2007 to 3/26/2008. Source code review
- LG Electronics Inc. v. Q-Lity Computer Inc., Quanta Computer Inc., and Quanta Computer USA Inc. (Northern District of California, Oakland Division, Case No. C01-02187 CW), VHDL and VHDL expert on behalf of LG Electronics Inc., deposition July 19, 2007. 10/24/2006 to 8/10/2007. RTL expert
- LG Electronics Inc. v. Asustek Computer Inc. and Asus Computer International, Inc. (Northern District of California, Oakland Division, Case No. C01-00326 CW); LG Electronics Inc. v. Everex Systems, Inc. (Northern District of California, Oakland Division, Case No. C01-01552 CW); LG Electronics Inc. v. Bizcom Electronics Inc., Compal Electronics Inc., and Sceptre Technologies Inc. (Northern District of California, Oakland Division, Case No. C01-01375 CW); LG Electronics Inc. v. First International Computer Inc. and First International Computer of America Inc. (Northern District of California, Oakland Division, Case No. C01-01594 CW); LG Electronics Inc. v. Q-Lity Computer Inc., Quanta Computer Inc., and Quanta Computer USA Inc. (Northern District of California, Oakland Division, Case No. C01-02187 CW) [combined for purposes of discovery], Verilog and VHDL expert on behalf of LG Electronics Inc., deposition March 3 and 4, 2004. 11/12/2003 to 8/10/2007. RTL expert.