

Matthew B. Shoemake

Curriculum Vitae

Last updated June 16, 2025

 Personal Information

 Born
 February 1971 in Pauls Valley, Oklahoma, USA

 Citizenship
 United States of America

 Marital Status
 Married to Bobbie Jo DeKay Shoemake since 1998

Education

- 1999 Ph.D. in Electrical Engineering, Cornell University, Ithaca, New York.
- 1997 M.S. in Electrical Engineering, Cornell University, Ithaca, New York.
- 1994 **B.S. in Computer Science**, *Texas A&M University*, College Station, Texas, *with honors*.
- 1994 **B.S. in Electrical Engineering**, *Texas A&M University*, College Station, Texas, *with honors*.
- 1989 Valedictorian, Mexia High School, Mexia, Texas.

Work Experience

- 2016–Present **Owner & President**, PERITUM LLC, Fairview, Texas.
 - Peritum provides expert consulting services.
 - Providing services since 2008. Incorporated in 2016.
 - 2008–2018 President & CEO, BISCOTTI INC., Allen, Texas.
 - Biscotti develops high-definition, video calling systems for the home and office.
 - Used relational database to store customer, video mail, and video recording information to the cloud. Storage involved the use of JSON and XML formats.

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> AT&T Services, Inc. v. USTA Technology, LLC IPR2025-01166 | AT&T EX1003 | Page 1 of 24

- 2003–2008 President & CEO, WIQUEST COMMUNICATIONS, INC., Allen, Texas.
 - Developed world's first 1 Gbps ultrawideband chipset
 - Developed world's first wireless VGA/DVI system for notebook computers
 - Customers put into product: Dell, Toshiba, Lenovo, Belkin, D-Link and Kensington
 - Built company from inception to 120 employees with offices and personnel in Texas, India, California, Taiwan and Japan.
- 2000–2003 Director Advanced Technology, Wireless Networking Business Unit, TEXAS INSTRUMENTS, INC., Dallas, Texas.
 - Lead development of Bluetooth and Wi-Fi coexistence technology
 - Lead TI efforts to enhance the IEEE 802.11 standards with quality of service extensions
 - Lead development of very low power Wi-Fi technology for mobile phones
 - Designed Wi-Fi into Nokia Communicator
- 1998–2000 Manager, Baseband Systems Team, ALANTRO COMMUNICATIONS, INC., Santa Rosa, California.
 - Developed 802.11b compliant physical layer
 - Shipped over 100M units in 2nd generation of Intel's Centrino technology
 - Company backed by Cisco and Vantage Point Venture Partners
 - Acquired by Texas Instruments for \$300MM
- 1991–1995 Intern and Engineer, Digital Signal Processing Group, TEXAS INSTRU-MENTS, INC., Stafford, Texas.
 - Product engineering for TMS320C2X Digital Signal Processors
 - Applications engineering for TMS320C3X Digital Signal Processors

Ph.D. Dissertation

Title Turbo Codes: Bounds and Applications, Ph.D., August 1999.

Supervisor Professor Chris D. Heegard

Committee Professors Toby Berger, Chris D. Heegard, Dexter Kozen, Venugopal V. Veeravalli Members and Stephen Wicker

Masters Thesis

Title *Topics in Turbo Coding, M.S., May 1997.* Supervisor Professor Chris D. Heegard

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Fundraising

- 2010-2016 **\$10M Series A**, Palomar Ventures, Biscotti Inc.
- 2009, 2016 \$1.35M Seed Investment, Texas Emerging Technology Fund, Wham! Inc.
 2008 \$50k Grant, Allen Economic Development Center, Wham! Inc.

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- 2008 \$420k Seed Round, Private Individual Investors, Wham! Inc.
- 2007 **\$5M Debt Line**, Triple Point Capital, for WiQuest Communications, Inc.
- 2007 **\$23M Series C**, Lead by Adams Street Capital, WiQuest Communications, Inc.
- 2006 **\$18M Series B**, Lead by Sequoia Capital, WiQuest Communications, Inc.
- 2005 **\$50k Grant**, Allen Economic Development Center, WiQuest Communications, Inc.
- 2004 **\$15M Series A**, Menlo Ventures, Palomar Ventures and iD Ventures America, WiQuest Communications, Inc.
- 2003 **\$827k Seed Round**, Private Individual Investors, WiQuest Communications, Inc.

Computer Skills

Languages C, C++, Fortran, Python, Pascal, Java, Verilog, VHDL, BASIC, MATLAB, Languages, Lisp, Swift, Golang, Javascript, HTML.

Standards IEEE 802.3, IEEE 802.11, ADSL, HDSL, DOCSIS, Bluetooth, I²C, I²S, USB, and Protocols CAN bus, HDMI, 3GPP, LTE, IS-95, EDGE, LTO, RS-232, HTTP, FTP, Telnet, Internet Protocol (IP), TCP, UDP, RTP, RTCP, SIP, STUN, TURN, ICE, CSMA/CD, CSMA/CA, ITU-T G.8031/8032, ITU, ITU-T J83B, MQTT, IEEE 802.15, IEEE 802.16, SSL, TLS, WEP, WPA, WPA2.

Professional Activities

- 2006-2020, External Advisory Committee, Texas A&M University, Department of
- 2023-2024 Electrical and Computer Engineering.
- 2008-2010 **Board Member, TeXchange, Dallas Chapter** TeXchange is a non-for-profit organization dedicated to helping entrepreneurs succeed.
- 2003-2004 Chairperson, IEEE 802.11n Task Group Lead committee of over 300 engineers through initial stages of standardization of data rate enhancements in excess of 100 Mbps
- Jan. 2002 IEEE 802.11 Meeting Organizer and Host, Wyndham Anatole, Dallas, Texas
- 2000-2003 **Chairperson, IEEE 802.11g Task Group** Lead committee of over 200 engineers to set standard for 54 Mbps data rates in the 2.4 GHz band in a fashion that is backward compatible with IEEE 802.11b. Standard become the basis for the most widely used version of Wi-Fi.

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- Sept. 1999 IEEE 802.11 Meeting Organizer and Host, Hilton Sonoma County, Santa Rosa, California.
 - 1999 **Chairperson, IEEE 802.11g Study Group**Lead committee of 20 engineers to set project requirements for IEEE 802.11g.
- 1991-Present IEEE Member

Awards

- 2012 CES Innovation Award for the Biscotti TV Phone
- 2008 **CES Innovation Award for Wireless Digital Video Technology** This highspeed digital video technology shipped in notebook computers from Toshiba.
- 2006 Intel Technology Innovation Award Awarded to WiQuest for innovations in Wireless USB technology.
- 2003 **PC Magazine Technology Excellence Award for IEEE 802.11g** This award was bestowed on the IEEE 802.11 Working Group and the Wi-Fi Alliance for the protocols incorporated in the IEEE 802.11g standard under my leadership.
- 2002 Texas Instruments Senior Member Technical Staff
- 1997-1998 Intel Foundation Graduate Fellowship Award

Consulting & Litigation Services

- 2025-Present **Sonos, Inc. v. Google LLC, Case No. 2:20-cv-00169-JAK (C.D. California)**, Matter pertains to alleged patent infringement of ten Sonos patents. Retained by Google via their counsel Quinn Emanuel.
- 2025–Present **Estelgia, LLC**, Pertains to Wi-Fi patents. Estelgia submitted a complaint against ASUS, D-Link, Linksys, and Plume on or about May 16, 2025 to the International Trade Commission regarding infringment of U.S. Patent Nos. 7,936,714, 11,246,016, 10,735,973, 9,775,164 and 9,277,591.
- 2025-Present CommWorks Solutions, LLC v. Qualcomm Incorporated, et al., Case No. 2:25-cv-154 (E.D. Tex.), Matter pertains to alleged patent infringement of US Patent Nos. 7,177,285, 7,463,596, 7,911,979, RE44,904, 7,027,465, and 6,891,807. Retained by Norton Rose Fulbright on behalf of Qualcomm.
 - 2025 *Fleet Connect Solutions LLC v. Bose Corporation*, Matter pertains to alleged patent infringement of US Patent No. 7,742,388 to Shearer and Webster. Engaged by Kelley Drye & Warren LLP on behalf of Bose. No reports, declarations, depositions or trial testimony.

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- 2025-Present Malikie Innovations Limited et al. v. Sophos Ltd., (Case No. 2-24cv00905 (Eastern District of Texas)), Retained by Reichman Jorgensen Lehman & Feldberg LLP on behalf of Malikie. Matter pertains to patent infringement and a portfolio of about 32,000 patents from Blackberry Ltd.
- 2025-Present Malikie Innovations Limited et al. v. Nintendo Co. Ltd. and Nintendo of America, Inc., (Case No. 2-24-cv-01490 (Western District of Washington)), Retained by Reichman Jorgensen Lehman & Feldberg LLP on behalf of Malikie. Matter pertains to patent infringement and a portfolio of about 32,000 patents from Blackberry Ltd.
- 2024-Present **Emerging Automotive LLC v. Toyota Motor Corp., Toyota North America, Inc., and Toyota Motor Sales U.S.A., Inc., (Case No. 2:23cv-00434-JRG (Eastern District of Texas))**, Retained by Toyota via their counsel, Finnegan Henderson. Matter pertains to alleged patent infringement. Technical topics include electronic keys for accessing vehicles and user profiles. The patents at issue include US Patent Nos. 9,365,188; 10,407,026; 11,738,659; and 9,171,268.
- 2024-Present Murata Electronics North America, Inc. and Murata Manufacturing Co., Ltd., Engagement relates to alleged infringement of US Patent No. 7,489,914 titled Multi-band RF Transceiver with Passive Reuse in Organic Substrates. Counsel for Murata is Haynes and Boone, LLP.
- 2024-Present USTA Technology, LLC v. AT&T Mobility LLC, et al. (Case No. 4:24cv-513-SDJ (E.D. Texas)), Engagement relates to alleged infringement of US Patent No. RE47,720. Counsel for AT&T is Norton Rose Fulbright US LLP.
 - 2024 Netgear Inc. v. Huawei Techs. Co., Ltd., (Case No. 2:24-cv-00824 (Central District of California)), Retained by Huawei via their counsel, Susman Godfrey LLP. Matter pertains licensing of patents related to Wi-Fi. No reports, declarations or testimony provided.
- 2024-Present Adaptive Spectrum and Signal Alignment, Inc. v. Charter Communications, Inc. et al., (Case No. No. 2-24-cv-00124 (E.D. Tex.)), Retained by Charter Communications via their counsel, Quinn Emanuel. Matter concerns allege patent infringement including U.S. Patent Nos. 7,809,996 and 10,848,398.
- 2024-Present **Pendrall Corporation**, Matter relates to Wi-Fi patents. Retained via Pendrall's counsel, Norton Rose Fulbright.
 - 2024 Malikie Innovations Limited v. D-Link Corporation, (Case No. 2-24-cv-00244 (Eastern District of Texas)), Retained by Malikie via their counsel, Reichman Jorgensen Lehman & Feldberg LLP. Matter pertains to patent infringement. U.S. Patent Nos. 8,583,980, 9,313,065, RE48,212, and 8,879,994 are at issue. No expert reports, deposition, or testimony.

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- 2024-Present **WSOU Investments, LLC v. Salesforce, Inc., (Case No. 6:20-cv-01165-ADA (Western District of Texas))**, Retained by Salesforce via their counsel, Quinn Emanuel. Matter pertains to US Patent No. 8,280,928 titled "Multi-level enmeshed directory structures." WSOU alleged patent infringement. Expert reports submitted. Deposition testimony provided.
 - April 2024- InQuisient Inc. v. ServiceNow, Inc., (Case No. 22-900 (CJB) (District
 - December **of Delaware))**, Retained by ServiceNow via their counsel, Quinn Emanuel. 2024 Matter pertains to databases, alleged patent infringement, and US Patent Nos. 7,979,468; 8,219,585; and 8,224,855. Expert report submitted. Deposition taken. Matter settled before trial.
- 2024-Present **Emerging Automotive LLC v. Kia Corporation and Kia America, Inc.,** (Case No. 2:23-cv-00437-JRG (Eastern District of Texas)), Retained by Kia via their counsel, Quinn Emanuel. Matter pertains to alleged patent infringement. Technical topics include electronic keys for accessing vehicles. The patents at issue include US Patent Nos. 9,365,188; 10,407,026; and 11,738,659. Claim construction declaration submitted. Deposition testimony provided.
- 2024-Present International Semiconductor Group, Retained by ISG via their counsel, Quinn Emanuel. Consulting relates to Wi-Fi patents. Technology tutorial presented to ALJ.
- 2024-Present *Smartsky Networks, LLC v. Gogo Business Aviation, LLC and Gogo Inc* (Case No. 22-266-VAC (District of Delaware)), Retained via Gogo's counsel, Quinn Emanuel. Matter pertains to in-flight Wi-Fi service and US Patent Nos. 9,312,947; 11,223,417; 10,257,717; and 9,730,077. Expert reports submitted. Deposition testiony provided.
 - 2023-2024 Freedom Patents LLC v. AT&T Inc, et al. (Case No. 4:23-cv-418 (E.D. Texas)), Retained via AT&T's counsel, Norton Rose Fulbright US LLP. Patents related to antenna selection in a MIMO system. No deposition, reports or testimony.
 - 2023-2024 *Redwood Technologies v. Qualcomm* (Case Nos. 6:23- cv-696 and 6:23-cv-697 (W.D. Texas)), Retained via Qualcomm's counsel, Jones Day. Matter relates to allegations of patent infringement of US Patent Nos. 7,664,130; 7,917,102; 7,688,901; 7,974,371; 8,155,224; 8,744,005; 8,873,517; 9,628,300; 7,359,457; 7,460,485; 7,701,920; 7,826,555; 7,983,140; 8,218,501; 9,374,209; and 10,270,574. Matter settled before trial. No reports submitted nor testimony provided.
- 2023-Present **Four Batons Wireless, LLC**, Engagement pertains to wireless communications patents.

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- 2023-2024 NextGen Innovations, LLC v. AT&T Services, Inc. et al. Case Nos. 2:22-cv-00308-JRG-RSP and 2:23-cv-00263-JRG-RSP (E.D. Tex.), Retained via AT&T's counsel, Norton Rose Fulbright US LLP. Matter relates to allegations of patent infringement including of US Patent No. 8,374,508 titled Augmenting Passive Optical Networks. Non-infringement report served. Validity report served. Deposition taken. Claim construction resolved case and NextGen Innovations conceded non-infringement.
- 2023-Present **Fintech and Asset Managment Company**, Matter relates to analysis of fintech software and technology including database storage techniques, techniques for organizing data, metadata storage, and retrieval of data sets.
 - 2023-2024 **AX Wireless, LLC**, Retained via AX Wireless's counsel, Latham & Watkins LLP. Retention relates to US Patents 9,584,262, 9,614,566, 10,079,707, 9,973,361, 10,291,449, 10,554,459, 10,917,272, and 11,212,146 and related district court cases and IPR proceedings. Defendants include Dell, HP, Lenovo, and Acer. Deposition testimony provided in *AX Wireless v. Dell*.
 - 2023-Nov Sectra Communications AB v. Absolute Software, Inc. and NetMo 2024 tion Software, Inc. No. 2:22-cv-00353-RSM (W.D. Wash.), Retained
 via Sectra's counsel, McDermott Will & Emery. Case relates to US Patent
 No. 7,797,437 and handover across heterogeneous networks. Expert reports
 submitted. Deposition testimony provided. Case settled before trial.
 - 2023 ADVA Optical Networking North America, Inc. et al. v. Huawei Technologies Co. Ltd. No. 2:23-cv-201 (E.D. Tex.), Retained as a technical expert for ADVA via their counsel McKool Smith. Case involves optical networking and data communications products. Certain ITU-T may be relevant as well as the Common Patent Policy for ITU-T/ITU-R/ISO/IEC. Matter settled shortly after retention. No declarations, reports nor testimony.
 - 2022–2024 *Silvaco v. Anderson, et al.* No. 20CV374355 (Superior Court of the State of California, County of Santa Clara), Case relates to dispute regarding a stock purchase agreement, allegations of fraud, SPICE including HSPICE and SmartSPICE, Foundational IP (including standard cells, memory compilers, and GPIOs), digital library characterization, advance sub-micro process nodes, semiconductor manufacturing, and tools qualification. Expert report served and deposition taken. Trial testiony provided.
 - 2022–2023 **Caltech v. Samsung.** No. 2:21-cv-00446-JRG (E.D. Tex.), Case relates to use of forward error correction in Wi-Fi products. More specifically the case relates to the use of Caltech's patented IRA encoding and decoding techniques when using LDPC coding specified in the IEEE 802.11 standard. Expert reports submitted. Deposition testiony provided. Case settled before trial.

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- Oct 2022–Apr 2023 **Rosen Technologies LLC v. Lennox Industries, Inc. No. 3:22-cv-00732-**2023 **K (N.D. Tex.)**, Retained vis Baker Botts for Lennox. Accused products are Wi-Fi-enabled thermostats. Claims pertain to Internet-connected thermostats and graphical user interfaces. Patents at issue are U.S. Patent Nos. 6,619,555, 6,789,739, 7,153,318, 7185,825, and 7,232,075. Submitted claim construction declaration.
 - 2022-2023 Yu Capital, Matter relates to patent analysis in the Wi-Fi space.
 - 2021–2022 K. Mizra LLC v. General Motors LLC, No. 2:21-cv-00244-JRG (E.D. Tex.), Retained by General Motors via their counsel Quinn Emanuel. Case involved U.S. Patent No. 7,394,423. Infringement contentions were based on GM's OnStar service. No reports, no deposition, and no trial testimony.
 - 2021–2024 Cal Inst. of Tech. v. HP Inc. No. 6:20-cv-1041 (W.D. Tex.), Cal. Inst. of Tech. v. Dell Techs. Inc., et al. No. 6:20-cv-1042 (W.D. Tex.), and Cal Inst. of Tech. v. Microsoft Corp. No. 6:21-cv-0276 (W.D. Tex.), Case relates to use of forward error correction in Wi-Fi products. As of September 2022, cases still stayed pending resolution of IPRs. Case settled.
 - 2021–2022 Blitzsafe Texas LLC, v. Aptiv PLC, No. 2:21-cv-00160-JRG (E.D. Tex.) and Aptiv Services US, LLC v. Blitzsafe Texas LLC, No. 2:21-cv-12040-DHP-APP (E.D. Mich.), Retained by Baker Botts L.L.P.
 - 2021–2022 Blitzsafe Texas, LLC v. Harley-Davidson Motor Company, Inc., No. 2:21-cv-00295-JRG (E.D. Tex.), Retained by Baker Botts L.L.P.
 - 2021–2024 **Caltech v. Dell, HP and Microsoft (W.D. Tex.)**, Cases related to Caltech's IRA patents for error control coding. Deposition testimony provided in *Caltech v. Dell.* Case settled.
 - 2021–2022 StratosAudio, Inc. v. Mazda Motor of America, Inc., 6:20-cv-01126-ADA (W.D. Tex) and StratosAudio, Inc. v. Subaru of America, Inc., 6:20-cv-01128-ADA (W.D. Tex), Retained via Mazda and Subaru's counsel, DLA Piper. Products accused of infringement based at least in part of alleged use of iTunes Tagging and Apple CarPlay. Project also relates to HD Radio. Mazda settled before submissions of reports. Submitted expert report on invalidity on behalf of Subaru. Subaru case settled shortly before trial. Submitted noninfringement and invalidity reports and sat for deposition for Subaru. All four patents at issue were ultimate invalidated in January 2023 by the PTAB in a parallel proceeding by Hyundai Motors of America.

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- 2021-2024 WSOU Investments, LLC d/b/a Brazos Licensing and Development v. Juniper Networks Inc., No. 20-cv-00813, -00814, -00815, -00902, and -00903 (W.D. Tex. (venue change granted)), Retained via Juniper's counsel, Quinn Emanuel. Federal Circuit ordered transfer of case to N.D. Cali. As of September 2022 case was stayed pending IPR decisions. As of August 2022 the case was still stayed pending WSOU appeal of the IPR decisions.
- 2021-2023 **Vivint v. ADT, No. 2:21-cv-00115-JNP-DBP (C.D. Utah.)**, Retained via Vivint's counsel, Maschoff Brennan. Case relates to security systems and communication networks. Matter includes use of cloud databases for storage of security information in the cloud. As of August 2023 the case was stayed in deference to IPR proceedings.
 - 2021 SB IP Holdings LLC v. Vivint Smart Home, Inc., No. 4:20-cv-00886 (E.D. Tex.), Retained via Vivint's counsel, Maschoff Brennan. Case relates to security systems.
- 2021–2022 American Patents LLC v. Qualcomm Inc. and Qualcomm Technologies, Inc., No. 6:22-cv-774-ADA, (W.D. Tex.), Retained via Qualcomm's counsel, Norton Rose Fulbright. Patents at issue were U.S. Patent Nos. 7,088,782, 7,310,304, 7,706,458. Technical topics included timing and frequency synchronization, channel parameter estimation, and MIMO. No deposition nor trial testimony provided..
- 2021–Present **Qualcomm Inc.**, Retained via Qualcomm's counsel, Norton Rose Fulbright for consulting related to Wi-Fi.
 - 2021–2024 **AGIS Software Development LLC v. Lyft Inc., et al., Case No. 2:21cv-00072-JRG (E.D. Tex.)**, Retained by Lyft's counsel, Baker Botts LLP. Case transferred to N.D. Cali. and stayed for IPR. As of August 2023 the case remains stayed pending IPR proceedings, EPR proceedings, and/or related appeals. As of July 2024 invalidation of asserted patents was on appeal to the Federal Circuit. No reports, depositions, or expert testimony provided.
 - 2021–2024 *Quartz Auto Technologies LLC v. Lyft Inc.*, Case No. 1:20-cv-00719 (W.D. Tex.), Retained by Lyft's counsel, Baker Botts LLP. Case stayed for IPRs. As of August 2023 the case remains stayed pending IPR proceedings, EPR proceedings, and/or related appeals. As of July 2024 proceedings in W.D. Texas were restarting after many years due to delay of IPRs and reexams. No reports, depositions, or expert testimony provided.

- 2021–2023 Intellectual Ventures LLC I and II v. Hewlett Packard Enterprise Company, Case No. 6:21-cv-226 (W.D. Tex.), Retained by HPE's counsel Greenberg Traurig, LLP. Case involves U.S. Patent Nos. 6,816,464, 8,725,132, and 8,023,991. Topics include route quality checking and management, transmit power adjustment, and automatic channel selection by access points. I wrote expert declarations in support of invalidation of all three patents. On March 8, 2022, IPR2021-01378 ('464 patent) and IPR2021-01376 ('132 patent were instituted. On April 18, 2022, IPR2021-01377 ('991 patent) was instituted. Sat for deposition on the '132 patent on June 8, 2022. Sat for deposition on the '464 patent on June 10, 2022. Parties settled in January 2023, shortly after oral arguments for the '132 IPR.
 - 2021 **WSOU v. NEC**, Retained by NEC's counsel, Jones Day. Western District of Texas, Case Nos. 6:20-cv-00923-ADA, -00924, -00925, -00926, -00927. Deposition testimony.
- 2021–2023 ParkerVision v. Hisense and TCL, Retained by Hisense and TCL via their counsel Kilpatrick Townsend & Stockton LLP. Generally related to direct conversion receivers. Submitted expert report for IPRs both of which were instituted. IPR decisions forthcoming in late 2022. ParkerVision sought stay of district court case. Invalidated U.S. Patent No. 7,292,835 in IPR2021-985. Invalidated U.S. Patent No. 7,110,444 in IPR2021-990.
- 2021–2022 In the Matter of Certain LTE-Compliant Cellular Communication Devices, ITC Inv. No. 337-TA-1253, Retained by Samsung via their counsel Quinn Emmanuel Urquhart & Sullivan, LLP. Submitted non-infringement and invalidity reports. Deposition. No trial nor trial testimony.
- 2021–2022 **WSOU v. OnePlus Technology (Shenzhen) Co., Ltd.**, Retained via their counsel Morgan Lewis & Bockius LLP. Technologies relate to random access channels, power adjustment, qualify feedback, battery charge estimation, link adaptation, and buffer reporting.
- 2021–Present Atlas, Retained via their counsel Heim, Payne & Chorush, L.L.P. Retention relates to IEEE 802.11ax and Wi-Fi 6 patents. Cases include Atlas v. TP-Link (E.D. Texas), Atlas v. Sercomm, and Atlas v. AsusTek. In all three cases I wrote claim construction declarations. In Atlas v. TP-Link, I wrote an infringement report, was deposed, and provided trial testimony. Infringement work included analysis of TP-Link products, source code, data sheets, marketing material, and the IEEE 802.11ax-2021 standard. The jury found TP-Link infringed Atlas's patent(s) and awarded \$37.5M in damages. In Atlas v. Sercomm and Atlas v. AsusTek, I wrote an infringement report and was deposed. The case settled on the eve of trial. This retention also includes Atlas v. Vantiva and may include future litigation based on the same patent portfolio.

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- 2021–2023 Intelligent Agency, LLC v. NeighborFavor, Inc., Case No. 1:20-cv-777-ADA (W.D. Texas), Relating mobile applications. Retained via NeighborFavor's counsel, Baker Botts LLP. Matter involved alleged infringement of U.S. Patent Nos. 9,286,610 and 9,894,476. Patents pertained to principal and agents in mobile commerce and location-based machine-assisted interactions for business transactions, respectively. Case settled in December 2023.
 - 2021 **FK Ironworks, et al.**, Related wireless power charging systems.
- 2020-2021 **TrickleStar v. American Conservation Group**, Related to efficient power distribution technology. Trial testimony at preliminary injunction hearing.
- 2020–2022 *MediaTek Inc. v. NXP*, Related to Wi-Fi. Matter includes work on ITC investigation 337-TA-1272. In ITC investigation 337-TA-1272 I provided an expert declaration on claim construction declaration, an expert report on infringement, an expert report in validity, deposition, and hearing testimony. The technology related to dual-carrier modulation (DCM) and OFDMA.
- 2021–2022 **NXP v. MediaTek Inc.**, Related to Wi-Fi. Matter includes work on ITC investigation 337-TA-1287. In ITC investigation 337-TA-1287 I provided an export report on invalidity, an expert report on non-infringement, a standards report including opinions on essentiality, and provided deposition testimony. ITC investigation 337-TA-1287 dealt with MultiSta Block Acknowledgements and the Packet Extension field of 802.11ax (Wi-Fi 6). Parties settled shortly before ITC hearing. Staff agreed with my opinions on non-infringement and invalidity.
- 2021–2022 *MediaTek Inc. v. NXP*, Related to Wi-Fi. Matter includes C.D. Cali. case 2:21-cv-04970-SB-AFM. No reports, declarations, nor depositions.
- 2020–2022 **Intelligent Agency v. 7-Eleven Inc.**, Relating mobile applications. Retained via 7-Eleven's counsel, Baker Botts LLP. Counsel subsequently changed to McDermott Will & Emery.
- 2020–2023 **Caltech**, Related to Wi-Fi and error correction coding and other communications systems-related technologies.
- 2020-2021 *Quartz Auto Technologies LLC v. Uber Technologies, Inc.*, Case No. 1:20-cv-00720 (W.D. Tex.), Retained by Uber via their counsel Gibson Dunn & Crutcher LLP.
- 2020–2021 Blitzsafe Texas, LLC v. Fiat Chrysler Automobiles, N.V. et al., E.D. Tex., Retained by FCA US LLC and Maserati North America, Inc. via their counsel Venable LLP. Matter relates to use of USB and Bluetooth in automobiles. Submitted invalidity report.
- 2020–2021 Blitzsafe Texas, LLC v. Navistar, Inc. and Navistar International Corp., Case No. 2:19-cv-00403-JRG (E.D. Tex.), Retained by Navistar via their counsel DLA Piper. Matter relates to use of USB and Bluetooth in automobiles.

- 2020–2021 Blitzsafe Texas, LLC v. General Motors, LLC, Case No. 2:19-cv-00377-JRG (E.D. Tex.), Retained by GM via their counsel Quinn Emanuel. Matter relates to use of USB and Bluetooth in automobiles. Submitted invalidity and non-infringement reports.
- 2020–2021 **Traeger v. GMG Grills in ITC Investigation No. 337-TA-1237, titled Certain cloud-connected wood-pellet grills and components thereof**, Retained by Traeger via their counsel McDermott Will & Emery. Involved multiple patents related to Wi-Fi, storage and retrieval of information to cloud databases, mobile apps, and/or device configuration and setup. Work on the matter included product testing and source code analysis. Submitted infringement and validity reports. Provided deposition and ITC trial testimony. On December 6, 2021, the CALJ found infringement of the '720 patent. On March 8, 2022, the Commission determined there was no need to review the initial determination of the CALJ. The Commission set the target date for completion of the investigation to May 12, 2022. The matter is now resolved.
- 2020–2021 **Cornell University**, Relating to communication networks, specifically inventions related to channel access mechanisms and Wi-Fi. No related proceeding, no reports, and no testimony.
 - 2020 Castlemorton Wireless, LLC v. Juniper Networks, Inc., Civil Action No. 6-20-cv-00026 (W.D. Tex.), Retained for Juniper via their counsel Covington & Burling LLP. Matter relates to IEEE 802.11 products.
- 2020–2022 **Essential WiFi and NTT v. MediaTek, et al., Civil Case No. 6:20-cv-225 (W.D. Tex.)**, Retained for by MediaTek via their counsel Quinn Emanuel. Also retained by Texas Instruments and Acer. Related to Wi-Fi including MIMO and wide channels. Submitted expert reports on non-infringement and invalidity. Provided deposition testimony. Case settled before trial.
- 2020–2023 DeCurtis LLC v. Carnival Corp., Case No. 6:20-cv-00607 (M.D. Fla) and Carnival Corp. v. DeCurtis Corp., et al., Case No. 1:20-cv-21547 (S.D. Fla), Retained for DeCurtis LLC via their counsel Quinn Emanuel (2020) and Morgan, Lewis & Bockius, LLP (2022). Technologies at issue include Bluetooth Low Energy (BLE), beaconing technology, NFC, RFID, infrared communication, and automatic door locks. Submitted claim construction declaration. Provided deposition testimony regarding claim construction. Provided opening report on invalidity and rebuttal report on non-infringement. Provided deposition testimony. Provided testimony at trial regarding source code copying allegations, non-infringement, and invalidity.
 - 2020 **Samsung Electronics Co., Ltd**, Retained for Samsung via their counsel Quinn Emanuel. Related to analysis of patent infringement in cellular phones, e.g. antenna subsystems..

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- 2020–2021 Huawei Technologies Co. Ltd. v Verizon Communications, Inc., et. al., 6:20-cv-00090 (E.D. Tex., Retained by Verizon via their counsel Quinn Emanuel. Case related to network communication systems including fiber rings. Case also related to ITU-T Recommendations G.709 and G.8032. Patents Case settled mid-trial the day before I was to testify. Invalidity and non-infringement reports submitted in case and deposition testimony provided. Worked on U.S. Patent No. 8,995,253. Also submitted standards report regarding violations of ITU-T patent policy. Provided deposition testimony. Case settled mid-trial. No trail testimony was provided.
 - 2020 KAIFI LLC v. AT&T Corp. et al., Civil Case No. 2:19-cv-138 (E.D. Tex.), Retained for AT&T via their counsel Gibson, Dunn & Crutcher LLP. Submitted IPR declaration regarding to U.S. Patent No. 6,922,728.
 - 2020 Castlemorton Wireless, LLC v. T-Mobile US, Inc. et al Civil Action No. 6:20-cv-00027-ADA (W.D. Tex.), Retained for T-mobile via their counsel McGuireWoods LLP.
- 2020–2021 **Sonos v. Google**, Retained for Google via their counsel Quinn Emanuel. Submitted invalidity report. Deposition and ITC trial testimony.
 - 2020 Sisvel International S.A. and 3G Licensing S.A. v. Cradlepoint, Inc., Civil Case No. 1:19- CV-1142-MN (D. Del.), Retained for Cradlepoint, Inc. and Sierra Wireless, Inc. via their counsel Perkins Coie LLP.
- 2020–2021 LG Electronics, Inc. v. Hisense Electronics Manufacturing Company America, Civil Case No. 2:19-cv-9474 (C.D. Cal.), Retained for Hisense via their counsel Covington & Burling LLP.
 - 2020 *Blitzsafe Texas, LLC v. PACCAR Inc.*, Retained for PACCAR via their counsel Baker Botts LLP.
 - 2020 *Castlemorton Wireless, LLC v. Sprint Corporation, et al.* (W.D. Tex.), Retained for Sprint via their counsel McGuireWoods LLP. Patent at issue is US 7,835,421. The accused products are alleged "to practice IEEE 802.11b and/or IEEE 802.11g" standards.
- 2019–2021 Wapp Tech Ltd., et al. v. Seattle SpinCo, Inc., Micro Focus LLC, et al. ("Micro Focus") (E.D. Tex., D. Del.), Retained for Micro Focus by Gibson Dunn and Shelton Coburn. Patents at issue in case are US 9,971,678, 9,298,864, and 8,924,192. Patents relate to emulation of mobile devices and application development. Deposition and trial testimony.
 - 2019 *Blitzsafe v. Bosch* (N. D. Tex.), Retained by Bosch via their counsel DLA Piper. Patents asserted against the use of USB and Bluetooth in vehicles.

- 2019–2021 Linksmart Wireless Technology LLC v. Panasonic Avionics Corp. (C. D. Cal.), Retained by Panasonic Avionics via their counsel Haynes & Boone LLP. Case related to Wi-Fi, Internet access on airplanes, satellite communications, DHCP, IEEE 802.3, gateways, redirection servers and proxies. Patent at issue was US RE46,459 to Ikudome and Yeung. Submitted experts reports. No deposition testimony. No trial. Case No. 8:18-cv-00662-AG-JDE (C. D. Cali.).
- 2019–2021 United Access Technologies, LLC v. CenturyTel Broadband Services LLC and Qwest Corporation (D. Del.), Retained by defendants, collectively "CenturyLink," via their via their counsel Duane Morris LLP. Patents at issue were U.S. 5,844,596, 6,243,446 and 6,542,585. Accused products were splitterless ADSL systems with POTS. Wrote non-infringement report. Court found noninfringement on motion for summary judgement. No trial nor trial testimony..
- 2019–2021 Uniloc v. Blackberry (N. D. Tex.), Retained by Blackberry via their counsel Baker Botts LLP. Case No. 3:18-cv-03068-N (N.D. Texas) Patents in-suit are US 6,868,079, US 6,993,049, US 7,020,106, and US 7,167,487.
 - 2019 **Traxcell v. Sprint and Verizon (E. D. Tex.)**, Retained by Sprint via their counsel McGuireWoods. Retained by Verizon via their counsel Holland & Knight LLP. Patents deal with network tuning, location determination and navigation. Patents at issue are US Patents 8,977,284, 9,510,320, 9,642,024 and 9,549,399. Wrote invalidity reports for Sprint and Verizon, and wrote a non-infringement report for Verizon. Depositions taken. No trial testimony, since cases settled shortly before trial due to granted summary judgement motions on non-infringement.
 - 2019 *Blitzsafe v. Daimler* (E. D. Tex.), Retained by Daimler via their counsel Quinn Emmanuel. Patents asserted against the use of USB and Bluetooth in vehicles.
- 2018–2020 Sol IP v. Sprint (E. D. Tex.), Retained by Sprint via their counsel McGuire-Woods. Sol IP, LLC v. Sprint Corporation, et al., Civil Action No. 2:18-cv-00527 (E.D. Tex.) Additionally retained via Gibson Dunn for AT&T Mobility LLC (Civil Action No. 2:18-cv-00526) and via Alston & Bird for Verizon Wireless (Civil Action No. 2:18-cv-00528).
- 2018–2019 *Parity Networks v. Hewlett Packard Enterprise Co.* (E. D. Tex.), Retained by HPE via their counsel Morgan Lewis. No reports, testimony nor depositions. HPE was dismissed from the case in March 2019 for unknown reasons.
- 2018–2021 **Uniloc v. AT&T (E. D. Tex.)**, Retained by AT&T via their counsel Baker Botts LLP. Matter pertains to LTE License Assisted Access (LAA).

- 2018–2019 Bell North Research LLC v. Kyocera Corp. (S. D. Cali.), Retained by Kyocera. via their counsel Jones Day. Bell Northern Research LLC v. Kyocera Corp. Case No. 3:18-cv-1785 (S.D. Cal.).
- 2018–2019 *Koninklijke KPN N.V. v. Sierra Wireless, Inc., et al.* (D. Del.), Retained by Sierra Wireless Inc. via their counsel Kirkland & Ellis LLP. Matter involves ETSI and TIA licensing obligations. Expert report(s) submitted.
- 2018–2019 *Hewlett Packard Enterprise Company v. ChriMar Systems, Inc.*, Retained by Hewlett Packard Enterprise Company via their counsel Morgan Lewis. Matter involves *inter partes* review of certain US Patents. Matter relates to power-over-ethernet (PoE). Patents owned by ChriMar Systems include 8,155,012, 8,942,107, 8,902,760, 9,019,838, 9,049,019, and 9,812,825.
- 2018–2020 *Hera Wireless and Sisvel v. Belkin Int'l. and ARRIS Group*, Retained by Belkin International and ARRIS Group via their counsel Duane Morris LLP. Case Nos. 1:17-cv-00948-RGA and 1:17-cv-00949-RGA. No reports, declarations nor deposition testimony. Case resolved before trial.
- 2018–2020 **Blackberry v. Facebook**, Retained by Blackberry in patent case dealing with text messaging and user interfaces.
- 2018–Dec *Fundamental Innovation systems v. ZTE Corporation*, Retained in USB 2019 power case by ZTE via their counsel McDermott Will & Emory.
 - 2018 **Intel Corporation**, Retained via Intel's counsel, Kirkland & Ellis, in matter related to Wi-Fi in notebook computers.
- 2017–2018 Intel Corporation, Retained via Intel's counsel, Weil, Gotshal & Manges LLP. Matter relates to patents asserted against MIMO and/or beamforming in wireless OFDM communication systems.
- 2017–2018 **PrefNet v. Sprint**, Working with Sprint's counsel, McGuireWoods. Case relates to management of bandwidth in network servers.
- 2017–2023 XR Communications, LLC, dba Vivato Technologies v. Cisco Systems, Inc., 2:17-cv-02951 (C.D. Cal. 2017), Patent case regarding US Pat. No. 6,611,231 and adaptive antenna arrays. Retained originally via Cisco's counsel Kirkland & Ellis LLP and subsequently via Perkins Coie. Additional case number is 6:21CV-623-ADA in W.D. Tex. 2021 which involves US Pat. Nos. 8,289,939 and 10,594,376. Analyzed MU-MIMO algorithms and products regarding noninfringement. Identified invalidating prior art. Case settled shortly before initial expert reports were due.
- 2017–2018 **Sharp Corporation**, Retained by Sharp's counsel, K&L Gates. Matter concerns intellectual property and Wi-Fi. No deposition nor trial testimony.

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- 2017 **Harmon International Industries**, Retained by Harmon's counsel, McDermott, Will & Emory. Matter relates to car stereos and audio equipment in vehicles. No deposition nor trial testimony.
- 2017-2018 **Wistron Corporation**, Retained by Wistron's counsel, JW Law Group. Matter relates to alleged Wi-Fi patents.
- 2017–2019 **Blitzsafe v. Mitsubishi**, Retained via Mitsubishi Electric Corporation's counsel, Pillsbury, Winthrop, Shaw, Pittman LLP. Case relates to the use of Bluetooth and USB in vehicles. No deposition nor trial testimony.
- 2016–2017 *Mtel v. Google*, Retained by Quinn Emanuel for Google. Case is a patent infringement case regarding US Patents 5,809,428, 5,894,506, 5,581,804 and 5,754,946. Case no. is 2:16-cv-00002 in E.D. Texas Marshall Division.
- 2016–2017 **SPH America LLC v. Huawei Technology Co. Ltd.**, Retained by Foley and Lardner LLP for Huawei. Case no. is 13-cv-2323-CAB-KSC (S.D. Cal). Draft invalidity report written but not served. No deposition nor trial testimony. Huawei joined JDG with Blackberry.
- 2016–2017 **IV v. AT&T**, Retained by AT&T. AT&T's counsel is Baker Botts. Case is a patent infringement case related to DSL. No depositions nor trial testimony at this time.
- 2016–2019 **Fujifilm v. Sony**, Retained on half of Fujifilm by their counsel Baker Botts. Cases relate to alleged standards and LTO data storage products. The matters are being heard in the ITC and in an associated district court case. Deposition and trial testimony.
- 2016–2017 **Blitzsafe v. Honda**, Retained via Honda's counsel, Jones Day. Case relates patent infringement and use of Bluetooth and USB in vehicles. Deposition take. No trial testimony.
 - 2016 **Network-1 vs. Dell Inc.**, Retained via Dell's counsel K&L Gates in a patent litigation related to power over Ethernet. No depositions nor trial testimony.
- 2016–2023 **California Institute of Technology (Caltech) vs. Broadcom Corporation and Apple Inc.**, Retained via Caltech's counsel, Quinn Emanuel. Case relates to use of forward error correction in Wi-Fi products. Technology tutorial presented to district court. Expert reports submitted. Testimony provide to court at various hearings. Testified on infringement and technical value of patents at trial in January 2020. Was sole technical expert witness for Caltech. Jury found Apple and Broadcom infringe and awarded \$1.1B in damages.
- 2015–2016 **California Institute of Technology (Caltech)**, Analysis of IEEE 802.11 patents. No depositions nor trial testimony.
- 2015–2016 **Wistron Corporation**, Retained to analyze certain communication system patents in the LTE space. No depositions nor trial testimony.

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- 2015–2016 **Wistron Corporation**, Retained via Wistron's counsel, K&L Gates, to perform analysis related to Wi-Fi. No depositions nor trial testimony.
- 2015–2016 **LSI v. Funai**, Retained by Baker & Hostetler to provide services in connection with LSI Corp. et al. v. Funai Electric Co. Ltd. Case relates OFDM patent asserted against Wi-Fi products. No deposition nor trial testimony.
- 2015–2016 *Mtel v. Blackberry*, Retained by Blackberry via their counsel McDermott Will & Emery LLP. Patent case related to pagers. Patents asserted against mobile phones. Deposition taken. No trial testimony.
 - 2015 *Ericsson v. Apple*, Retained by Apple via their counsel Fish & Richardson. Patent case related to Wi-Fi and cellular. Deposition and trial testimony in ITC case..
 - 2015 Antennatech LLC v. Mercedes-Benz USA LLC, Retained by Mercedes-Benz via their counsel Quinn Emanuel Urquhart & Sullivan, LLP. Patent case related to Wi-Fi inside vehicles. No deposition nor trial testimony..
 - 2015 **Samsung**, Retained via Williams & Connolly LLP on behalf of their their client Samsung. Case relates to cross license between two parties, including access by Samsung to Nokia's Wi-Fi patent portfolio. No deposition nor trial testimony.
 - 2015 **Cablevision v. Verizon**, Retained via Kirkland & Ellis on behalf of their client Verizon. Matter relates to false advertising claims tied to use of IEEE 802.11ac routers. No deposition. Testified at trial.
 - 2014 **Blitz Stream Video LLC**, Retained as consultant related to portfolio of video patents. No deposition nor trial testimony.
- 2014-2016 **SPH America v. Blackberry Limited**, Retained by Blackberry via their counsel Quinn Emanuel Urquhart & Sullivan, LLP. No deposition nor trial testimony.
- 2014-2015 **CSIRO v. MediaTek**, Nokia, Texas Instruments, Realtek and Barnes & Noble via a joint defense group including Covington & Burling LLP. Serving both as expert for JDG and 30(b)(6) witness for Texas Instruments. No trial testimony.
- 2014-2018 **ChriMar v. Cisco**, Retained by Cisco via their counsel Kirkland & Ellis. Matter relates to power over Ethernet. Deposition. No trial testimony.
- 2014-2016 *Intellectual Ventures v. CenturyLink, et al.*, Retained by CenturyLink via their counsel O'Melveny & Myers LLP. No deposition nor trial testimony.
- 2013-2015 *Intellectual Ventures v. Canon Inc., et al.*, Retained by Canon Inc, et al. via their counsel Quinn Emanuel Urquhart & Sullivan, LLP. Deposition. No trial testimony.
- 2013-2017 **Intellectual Ventures v. AT&T Mobility LLC, et al.**, Retained by Sprint Spectrum LP via their counsel McGuireWoods LLP. Case relates to security in IEEE 802.11 networks. No deposition nor trial testimony.

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- 2014 **NXP v. Blackberry**, Services retained by Blackberry via their counsel McDermott Will & Emery. No deposition. Testified at trial..
- 2013-2014 **Realtek Semiconductor Corp v. LSI Corporation et al.**, Retained by Realtek Semiconductor Corp via their counsel ReedSmith. Deposition and trial testimony.
- 2013-2017 **CSIRO v. Cisco System Inc.**, Retained by Cisco via their counsel Duane Morris. Deposition and trial testimony..
 - 2013 *Cisco Systems, Inc. and Motorola Solutions, Inc. v. Innovatio IP Ventures LLC*, Retained by Kirkland and Ellis on behalf of Cisco Systems, Motorola Solutions, Inc. and NETGEAR. Deposition and trial testimony.
 - 2013 *Wi-LAN v. HTC, et al.*, Retained HTC Corporation, HTC America Inc., and Exedea, Inc. via their counsel Sheppard Mullin Richter & Hampton, Novatel via their counsel K&L Gates, and Sierra Wireless via their counsel Nixon Peabody. Expert reports also filed on behalf of other defendants including Apple and Alcatel Lucent. Deposition. Case settled prior to trial.
- 2012-2013 *Ericsson, et al. v. D-Link, et al.*, Retained via Intel via their counsel Kirkland & Ellis. Deposition and trial testimony.
- 2011-2013 *Mosaid Technologies Incorporated v. Dell, Inc. et al.*, Retained by Intel via their counsel WilmerHale, and retained by Marvell via their counsel Quinn Emanuel Urquhart & Sullivan, LLP. No deposition. Case settled prior to trial..
- 2011-2012 Broadcom Corporation and Atheros Communications, Inc. vs. Commonwealth Scientific and Industrial Research Organization., Retained by Broadcom via Potter Minton. Deposition. Case settled prior to trial.
- 2010-2011 *Wi-LAN vs. RIM, PCD, Motorola, LG, et al.*, Was an expert witness for the defense. Retained by PCD and a major Korean cell phone manufacturer. PCD distributes phones made by HTC. Deposition. No trial testimony.
- 2009-2011 *Wi-LAN vs. Acer, Intel, Broadcom, Atheros, Marvell, et al.*, Was expert witness for defense. Focused specifically on US Patent 5,282,222 related to OFDM technology. Served as expert related to wireless, the IEEE standards process and provided testimony related to damages. Retained by Intel, Broadcom and Marvell. Deposition. Case settled on the eve of trial.
- 2008-2009 **CSIRO vs. Intel, Broadcom, Microsoft, HP, Dell, D-Link, et al.**, Served as fact witness related to 802.11 standardization, rules, process and events related to the formation of the 802.11 standard. Testified at trial.

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 Chris Heegard et al. "High Performance Wireless Ethernet". In: IEEE Communications Magazine 39 (11 Nov. 2001), pp. 64–73. DOI: 10.1109/35.965361.

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- [3] Chris Heegard, Matthew B. Shoemake, and Stanley Ling. "Short Preamble for High Performance 802.11 Physical Layer". In: IEEE 802.11 Working Group. IEEE 802.11-98/366. Oct. 7, 1998. URL: http://www.ieee802.org/11/ Documents/DocumentArchives/1998_docs/83667A-Short%20Preamble% 20for%20High%20Performance.pdf.

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- [7] Matthew Shoemake, Chris Heegard, and Eric Rossin. "Turbo Codes for High Order Constellations". In: IEEE Information Theory Workshop. IEEE 802.11-98/304. Killarney, Kerry, Ireland, June 1998.
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- [12] Matthew B. Shoemake. "How to Raise Capital from Tier 1 VCs". In: Dallas Blue. Aug. 21, 2008.
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- [12] Jie Liang et al. "System for Operational Coexistence of Wireless Communication Technologies". U.S. pat. 7,340,236. Aug. 5, 2003.
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- [15] Matthew B. Shoemake, Carl Panasik, and Jie Liang. "Wireless Communications System using both Licensed and Unlicensed Frequency Bands". U.S. pat. 7,400,903. Apr. 15, 2003.

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- [25] Fred S. Stivers et al. "System, Method, and Computer-Readable Medium for Reducing Required Throughput in an Ultra-Wideband System". U.S. pat. 8,300,699. May 3, 2007.
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- [38] Matthew B. Shoemake and S. Nadeem Ahmed. "Virtual Remote Functionality". U.S. pat. 9,654,563. May 1, 2015.

Recent Talks

- 20 October Spoke at Texas A&M University's Department of Electrical & Computer Engi-2023 neering on the virtues of attending graduate school.
- 8 March 2019 Texas A&M University Department of Electrical & Computer Engineering, Distinguished Speaker Series for Leaders & Innovators. Talk on LDPC error correction coding in the IEEE 802.11 standard.
- 21 July 2019 Duke University TIP program. Talk on the history of security in IEEE 802.11 with focus on cryptological errors made in WEP.

Community Service

2021 Director for Fairview Oak Meadows Homeowners Association Inc.

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- Feb 2019 Southern Methodist University judge of business plans for entrepreneurship course.
 - 2019 Official Scorekeeper for D-Bat Elite 13U Majors Boys Baseball Team.
- 2016-2018 Official Scorekeeper for NTX Eagles 10U-12U Majors Boys Baseball Team.
 - 2017 Head Coach of Patriots 12U Boys Competitive Basketball in Allen Sports Association.
- 2013-2015 Head and Assistant Coaching Positions for 8U-9U Boys Competitive Baseball in Allen Sports Association.
 - 2009 Advocated and Succeeded in Moving Entire Grade of Elementary School Children from Temporary to Permanent Facilities.
 - 2008 Advocated and Established After School Science Program at Local Elementary School.