



Resume/C.V. Myles H. Kitchen

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Summary

Automotive Electronics Engineer, Consultant, Expert. Also a Car Guy/Racer, Technology Angel Investor, and Musician. I have more than 40 years involved with hands-on design, development, testing, manufacturing, and technical marketing of Automotive Electronics Components & Systems for both OEM and Aftermarket. Over this period, I have worked on nearly every electronic system used in vehicles. Also have experience with Consumer Electronics Products, Medical Devices, Musical Effects, Voice Recognition/Dialogue, and Automotive Cybersecurity testing and solutions.

Employment/Contractor Experiences

M.H. KITCHEN CONSULTING - 1986 - Present (www.tech4cars.com)

Owner/Principal of consulting practice specializing in Vehicle Electronics, Consumer Electronics, Medical Devices, and more. Have fun and make a living applying my years of technology experience to hardware and software design, manufacturing guidance, technical marketing, business development, intellectual property, and forensic investigative services for clients. See Employment/Forensic/Consulting experience highlights below.

SPEAK WITH ME - 2007 - Present (www.speakwithme.com)



Investor/Shareholder/Contractor Advisor: Advise this Silicon Valley startup, developing an advanced software platform for AI-based, natural-language, dialogue management, combining voice recognition and other modalities in a seamless, high performance, scalable hybrid (client/server) platform for vehicles and other consumer electronics. This solution employs advanced AI Deep Learning, Neural Network technology to recognize conversational speech, and emotional expressivity, resulting in a full "cockpit voice/AI solution". Company currently engaged with high-end auto manufacturers in proof of concept for upcoming deployments of this advanced technology.

VISUAL THREAT - 2015 - 2016 (www.visualthreat.com)




Consultant/Shareholder/Advisor to Company: Retained as consultant to assist this startup business developing Cybersecurity solutions for connected vehicles. Worked with design teams in Silicon Valley, and Shanghai China on a security framework consisting of a proprietary smart firewall, wirelessly connected to a Cloud Platform and Portal to monitor, learn, analyze, all in-vehicle network traffic to automatically detect anomalous activity in real-time to identify and stop any unauthorized intrusions. Also helped develop Cybersecurity penetration test tools to automatically identify and detect software/firmware vulnerabilities in embedded vehicle software.

SAFETY MATE INC. - 2004 - 2009 (www.dcsafety.com)



Investor/Shareholder/Contractor Consultant Served as Director of Product Development for this award-winning, start-up Medical Device/Software firm. Directed development, tooling, and manufacturing of hardware, software, and other intellectual property for interactive, multi-lingual, life-saving emergency information products for medical emergencies. SafetyMate acquired in 2015 by DC Safety. Acted as consultant/advisor to DC Safety (www.dcsafety.com) 2016/2017.

QUANTIC INDUSTRIES INC. - 1993 - 1997 (www.psemc.com) 

Part Owner/Employee /Vice President, Automotive Marketing - While consulting for this electronics/pyrotechnics firm, participated in a management LBO of this privately-held Aerospace/Defense firm, and directed Engineering and Marketing to focus on Automotive energetic devices as used in Airbag, and Seatbelt Pretensioner products. Successfully built the automotive business and sold company as two separate entities to both Nippon Kayaku, and Pacific Scientific in 2001.

ZEMCO GROUP INC - 1981 - 1986 (www.dunyoung.com) 

Employee /Vice President , Marketing & Vice President, Product Development.. Helped take this aftermarket trip computer pioneer, started by a former Mattel toy designer, from retail accessories to Tier I OEM Automotive supplier. Company developed, and manufactured cruise controls, trip computers, security systems, compasses, and many other automotive electronic devices. Company ultimately acquired by shareholder LITEON, and is now DunYoung/LITEON Automotive Corp.

INTEL CORP - 1980 - 1981 (www.intel.com) 

Employee /Director, Automotive Marketing: Specifically recruited to direct this renowned semiconductor manufacturer's marketing efforts in penetrating the automotive electronics O.E.M market with standard and custom microprocessors, and memory devices. Key member of custom 8061 engine control processor development team (for Ford EEC-IV). Successfully repaired a key business relationship with former Delco Electronics (now split as Delphi & Aptiv).

NATIONAL SEMICONDUCTOR INC. - 1978 - 1980 (www.ti.com) 

Employee /Director, Automotive Marketing: Helped take this semiconductor manufacturer's market share in automotive from 0 to #2 in just two years with a wide range of semiconductor products, including analog, digital, custom ASIC, memory, I/O, opto-electronics, micro-controllers, and other devices. National acquired in 2011 by Texas Instruments.

MOTOROLA INC. 1973 - 1978 (www.continental-corporation.com) 

Employee Automotive Products Division: Product Marketing Manager, and Design/Project Engineer. Provided technical marketing support for underhood automotive electronic products, including advanced engine controls (Ford EEC-III). Designed and developed Aftermarket and OEM automotive electronic ignition systems, and diagnostic test equipment. Got to meet and work directly with Bob Galvin and Elmer Wavering, industry pioneers. Motorola's Automotive business segment was acquired by Continental in 2006.

Education/Qualifications

Bachelor of Science in Electrical Engineering - University of Kentucky, 1973

Associate Degree in Electronic Engineering Technology- University of Cincinnati, 1971

also 44 hours completed toward Masters of Business Administration - Northern Illinois University, 1977

also 12 hours completed toward Masters of Science in Electrical Engineering- University of Kentucky, 1973

Other Relevant Training/Experience:

Society of Automotive Engineers, Airbag TOPTEC, Course Completed 1992

Bondurant School of High Performance Driving, 1984, 1985, 1986

Jim Russell School of Motor Racing, 1985, Jim Russell Racing Series, 1986

3-time Racing Champion, USRRC Seniors Tour, Under 2.0 litre GT Class 1994, 1995, 1996

Performance Driving Instructor - Ferrari Club of America, Shelby American Automobile Club

Licensed Racing Driver, SCCA, & Vintage Motorsport Council

Professional Organizations

Society of Automotive Engineers (SAE) - Lifetime Member

Member, SAE J3061 Cybersecurity Committee

Member, SAE J3061 Cybersecurity Testing Sub Committee

Member, SAE J3061 Cybersecurity Trust Anchor Sub Committee.

Member SAE J3138 Data Link Connector Vehicle Security Committee

Prior Member, SAE J2657 Tire Pressure Monitoring Standards Committee

Member, Forensic Expert Witness Association (FEWA)

Member, Institute of Electrical Electronics Engineers (IEEE)

Expert/Forensic Cases - Product Related

- Engaged by Plaintiff Counsel to examine download data from a Toyota Prius involved in a “rollaway” incident resulting in an impact with a parked vehicle. Reported vehicle data did not appear consistent with events. Analyzing data, and have proposed exemplar testing. Current case.
- Engaged by Plaintiff Counsel to examine/download a side impact airbag non-deployment fatality resulting from a multi-vehicle, multi-event accident. Conducting exemplar testing and analysis. Current case.
- Engaged by Defendant Counsel representing a vendor/manufacturer to investigate connectors and wiring for an electro-hydraulic dump trailer involved in a fatality accident. Case settled.
- Engaged by Plaintiffs Counsel to examine/download two Tesla S's, and a BMW 3 series (different cases) for alleged SUA events. After reviewing downloaded vehicle data, further actions not pursued.
- Expert for Plaintiff Counsel representing a Police Officers' Organization for the benefit of two County Sheriff officers that were fatally injured in solo vehicle accident while on duty involving their Ford Explorer Police vehicle. Engaged to download and analyze crash data, investigate vehicle systems/components, and report and opine on contributing factor(s). Current Case.
- Expert for Plaintiff Counsel in Federal Class Action against auto manufacturer and one of their Tier 1 vendors as defendants. This case alleges design defects in production vehicles which allowed cyber hackers to remotely hack into and take control of certain vehicles, networks, and critical systems. Provided expert report, and was deposed. Current case, class has been certified.

- Expert for Plaintiff Counsel in three separate cases involving “rollaway” incidents related to vehicles with electronic transmission controls unexpectedly going into reverse instead of PARK resulting in injury to the drivers. Two separate vehicle manufacturers involved. Cases now resolved.
- Expert for Plaintiff Counsel in fatality accident involving popular luxury SUV. Vehicle hesitated upon acceleration and was struck by a bus. A forensic vehicle inspection of EDR data showed anomalies in vehicle acceleration performance. Parties reached settlement.
- Expert for Plaintiff Counsel in case involving popular Electric Luxury Vehicle. Retained to investigate alleged faults related to battery charging components and process, and claims that vehicle’s charging time and charging levels deviate from manufacturer’s claims. Current case, trial scheduled in 2019.
- Expert for Plaintiff Counsel in case involving popular hybrid/electric vehicle. Retained to investigate vehicle after alleged unintended vehicle startup and movement pinned owner against a pole with injury. Inspected and performed electronic data retrieval from subject vehicle. Case dropped.
- Expert for Defense Counsel in murder case where law enforcement performed electronic data retrieval of certain vehicle data from the accused’s vehicle. Engaged to review and opine on the systems, data, and processes used to obtain the data as related to its accuracy validity, and/or admissibility. Current Case, trial proceeding.
- Expert for Defense Counsel in fatality rollover accident involving multiple events, including potential SUA of Plaintiff vehicle. Performed forensic analysis of Plaintiff vehicle components/systems. Deposed and prepared for trial. Case settled just prior to trial.
- Expert for Plaintiff Counsel in case involving personal injury related to faults in the electronically controlled transmission shifter design and operation in popular luxury vehicles. Conducted forensic investigation, research of vehicle systems, testing, review of exemplar hardware. Parties reached settlement.
- Expert for Plaintiff Counsel in multiple cases linked to a Federal class action, and other venues regarding wrongful death, injury, and damages involving alleged Sudden Unintended Acceleration (SUA) in popular vehicles, including hybrid vehicles. Conducted forensic investigation, research, exemplar testing, and expert reporting on electronic throttle control systems, cruise controls, data recorders and more. Designed and built a custom 128 channel vehicle data acquisition system to monitor the vehicle ECU and systems to aid in this investigation. Deposed by opposing counsel. Retained in over 20 individual cases where settlements were reached.
- Expert for Defendant Counsel for auto dealer defendant in lawsuit alleging pre-sale faults in vehicle involving airbags. Conducted research, forensic investigation, and reporting. Defendant won dismissal as a defendant in the case based on my expert report.
- Expert for Plaintiff Counsel in unintended airbag deployment involving injury. Conducted forensic investigation and report confirming unintended inadvertent deployment. Parties settled case prior to trial.
- Expert for Defense Counsel for auto dealer defendant in fatality accident case in which vehicle’s side airbags did not deploy. Investigated airbag sensors for proper installation as directed by the vehicle manufacturer’s technical service bulletin. Determined that sensors had been properly installed as directed. Client won dismissal from case.
- Expert for Defense Counsel representing a regional water utility company defendant in wrongful death case due to a drowning near an irrigation pumping station in a river. Work included forensic investigation, research, reporting, deposition, and testimony at trial. Client won jury trial case.
- Expert for Defense Counsel in murder trial involving automotive electronics. Researched and reported on the effects of water and decreasing voltage over time on automatic vehicle occupant restraint system

in submerged vehicle. Work included forensic research, testing and demonstration of exemplars, technical reporting, deposition and testimony at jury trial. The defendant, a law enforcement officer, won acquittal.

Patent/IP Expert Matters

- Expert retained by Plaintiff Counsel for patent/IP matter involving issued patents related to Automotive Adaptive Cruise Controls and sensors. Patent owner alleges patent infringement by various auto OEMs and suppliers. Assisting with patent/claims review, and researching the operation of existing OEM ACC systems and sensors. Current matter.
- Expert retained by Counsel for Unified Patents Inc. in USPTO *INTER PARTES* review of patents related to Vehicle Object Detection Systems and features. This matter involved validity/invalidity, prior art, claim construction, and expert reporting and testimony. USPTO recently ruled in client's favor based in part on my review, report, and testimony that opposing patent was invalid.
- Expert retained by Plaintiff Counsel for patent/IP matter involving multiple patents related to Automotive rear seat video entertainment products where both Plaintiff and Defendant were competing manufacturers of such products. Served as expert for both infringement/non-infringement, and validity/invalidity in this matter involving cross complaints between the parties. Parties have agreed to settle this matter after expert review and reporting.
- Expert for Defense Counsel representing automotive component supplier Laird Inc. in patent/IP matter regarding Automotive GPS design features. Conducted research and identified prior art examples for counsel. Parties settled prior to trial.
- Served as Automotive Technology Subject Matter Expert as a sub-contractor to Thomson Reuters Consulting services advising a large South Korean based Global Auto Manufacturer in their negotiation to acquire a large portfolio of patents from a Technology Supplier and a Non Practicing Entity. Engaged to help assess those patents applicable to Mobile and Vehicle technology applications. Completed patent technical assessment and received the following feedback. "The client was really happy with the final report and also your comments. R&D units have made comment that your comments were insightful and easy to understand."
- Expert in Federal copyright dispute involving artists royalty payments for the current and future delivery of media content to vehicles via Satellite Radio and Integrated Internet Connectivity in vehicles. Researched and forecasted trends in technology integration in future OEM vehicles as independent resource for another testifying expert working for Sound Exchange.
- Expert for Defense Counsel representing BMW in patent litigation involving voice controlled media player features. Contributed to claim construction and definition phase of litigation. Case dismissed after favorable claim construction ruling.
- Expert for Defense Counsel representing OnStar, and their suppliers as defendants in patent litigation for alleged infringement involving telematics products and features. Case involved non-infringement analysis, prior art research, and reporting. Case dropped after favorable claims construction ruling.
- Expert for Defense Counsel representing Braun, a specialized vehicle manufacturer/converter of accessible vans for handicap access in patent litigation involving automated control system and features for doors and ramps used in wheelchair access van conversions. Expert research and reporting for both non-infringement, and validity. Cross-complaints involved with both parties. Deposed by opposing counsel. Parties reached settlement just prior to trial.

- Expert for Defense Counsel representing General Motors in patent litigation involving Tire Pressure Monitoring systems. Researched and identified prior art to subject patent. Case dropped after initial reporting.
- Expert for Defense Counsel representing BMW in a patent/IP matter involving Adaptive Cruise Controls. Conducted document review, vehicle testing, and expert report on non-infringement. Client won summary judgment after initial expert reporting.

Technical Due Diligence Projects

- In 2009, was retained by an international investor group including SAIC (a large Chinese auto manufacturer) and U.S. Investment Banking Group to research and provide technical due diligence on potential North American automotive electronic system and component supplier acquisition candidates.
- In 2002, was retained by Blackstone Group (www.blackstone.com) to perform technical due diligence during their \$4.7 Billion acquisition of TRW Automotive, which was the largest private equity purchase of that year. In 2014, TRW Automotive was acquired by ZF Friedrichshafen. (www.zf.com)
- In 2000, was retained by Magneti Marelli (www.magnetimarelli.com) to research and identify potential acquisition candidates in the areas of Fuel Injection/Engine Control ECUs, Interior and Exterior Lighting Modules, Instrument Panel/Navigation products, and Suspension modules.
- In 1989, was retained by LITEON Group's Automotive Division (www.dunyoung.com) to conduct research and technical due diligence for a potential acquisition of a North American automotive electronics components supplier.
- In 1987, was hired by Thomson CSF (now Thales Group, www.thalesgroup.com) to identify, research, and report on an initial list of 100 firms involved with advanced automotive electronic technologies as potential acquisition candidates. This list was then jointly pared to 20, and then 4, which Thomson engaged in acquisition discussions.

Other Consulting Project Highlights

- Consulting for diagnostic tool designer/manufacturer. Assisted this vendor of specialized automotive electronic/diagnostic tools in the development and support for advanced wiring harness adapters, adapter cables, and specialized electronic diagnostic equipment products for vehicles and markets. (strategictq.com) (www.svd.tools)
- Made design revisions to guitar effects device, Janglebox (an analog compressor), to improve the power supply, reduce audible noise, add features, and reduce cost. Coordinated off-shore manufacturing of the lower cost design for the company.
- Retained by haptics technology developer and licensor, Immersion Corp (www.immersion.com), to conduct a global market research assessment of the market for haptics applications within vehicles, and worked with their team to focus on specific applications to develop new business. Immersion developed the technology behind BMW's, programmable iDrive knob, and has also developed touch-feedback for touchscreen applications.
- Hired by vision technology start-up, Canesta Corp.,(acquired by Microsoft, <http://en.wikipedia.org/wiki/Canesta>) to review their in-house design of a multi-technology vision sensor system targeted at automotive applications such as occupant detection, blind-spot assist, and more. Reviewed and revised

their hardware designs to meet automotive environments, and assisted in providing ruggedized prototypes for vehicle testing.

- Worked with electric and PHEV vehicle charging equipment start-up Coulomb Technologies (www.chargepoint.com) to provide engineering services involving the communication between Coulomb's proprietary charging station network, and on-board vehicle CAN networks, to enable advanced user features. Also, assisted this firm with business development efforts with a major Tier-1 supplier in Detroit.
- Consulted for Silicon Valley startup, Unistar Technology during the development of a patented Automatic Sun Visor system. This innovative product utilized a sensor measuring the angle of the sunlight as compared to the driver's position to keep a small, moving visor that travelled around the headliner between the driver's eyes and the bright sun. A prototype was developed for a concept vehicle for Magna Corp. (see video at <https://www.dropbox.com/s/h5t2hb8yj3xhg8z/Unistar%20AutoVisor.mp4?dl=0>).
- Engaged by Bay Area startup Joalto Design (named changed to JATECH) to redesign and build a ruggedized wireless electronic control system for an innovative, patented rotary drop car door design (see <https://www.youtube.com/watch?v=pkUwrRGftY>). Our design was used in the production of multiple operational displays and prototype vehicles. Joalto Design later became JATECH LLC and relocated to the Detroit area.
- Retained by wiring harness and electronics supplier, Yazaki Corp. (<https://www.yazaki-group.com/global/>), to study and forecast the emerging global market for hybrid, PHEV, electric, and fuel-cell vehicles, with an emphasis on the technical requirements for DC-to-DC converters, and other specialized electronics these vehicles may require.
- Contracted by GPS pioneer, Trimble Navigation (www.trimble.com), for multiple assignments. First, to research, assess, and propose how Trimble should approach the "12 Volt Aftermarket" with vehicle tracking products targeted for aftersale distribution, fleet users, and value-added distributors. Second, to conduct an engineering assessment of their product design for potential OEM applications. And third, as a contract engineering resource to design, develop and transfer to off-shore manufacturing, an integrated module enabling their stand-alone Trimtrac product to be permanently installed in a vehicle.
- Contracted by Trimble Navigation customer, Numerex Corp. (www.numerex.com), to design and source a custom vehicle interface module for the Trimble Trimtrac incorporating proprietary features for Numerex.
- Engaged by LITEON Automotive Corp (www.dunyoung.com) as consultant, managing the U.S. Technical and Business Liaison with customer Rosen Products for the off-shore contract manufacture of rear seat video entertainment systems for the automotive OEM and Aftermarket, and for custom police car video systems for Rosen. Involved with system design for Automotive requirements, ease of manufacturing, and to meet performance and cost objectives.
- Engaged by Alps Automotive (www.alpsautomotive.com) for multiple assignments. Contracted to design a stand-alone, self-compensating, flux-gate compass engine meant for use as an external sensor for multiple applications, including vehicle navigation, industrial controls, mobile antenna positioning, and more. This included development of proprietary, patented features assigned to Alps, and support during the patent process. Also, researched, and specified a family of on-board vehicle control modules communicating over CAN as a line of standard products.

Advisor Roles

- Advisor to SpeakWithMe (www.speakwithme.com), a startup software provider which uses AI and Neural Networks to provide state of the art advanced Voice and Dialogue recognition and speech response with emotion recognition. Expanding this platform to provide a full cockpit solutions for interacting with Autonomous Vehicles.
- Advisor to SeeControl Inc., a start-up software platform provider of Machine-to-Machine (M2M) applications used for asset tracking, remote control and reporting, and business integration of widespread resources, assets, and personnel. SeeControl acquired by Autodesk (<http://autodeskfusionconnect.com>) in 2015.
- Advisor to VisualThreat (www.visualthreat.com), a startup developing cybersecurity applications, and cloud services for mobile devices and connected vehicles to circumvent/prevent vehicle “hacking” intrusions. Company also provides Penetration Testing services for vehicles, systems, modules, and apps.
- Advisor to DC Safety (www.dcsafety.com) after their acquisition of the assets and IP of SafetyMate Corp.

Publications/Articles/Events

- Presented technical paper, “Using CDR Pre Crash Throttle Data to Drive Subject/Exemplar Vehicle Testing”, at the 2018 EDR Summit Conference in Houston, TX, March, 2018.
- Co-author of technical paper presented at escar USA Security Conference in June, 2017, “Toward Automated and Black-box Vehicle Cybersecurity Testing”, Wei Yan, Myles Kitchen, Di Ma” (https://www.dropbox.com/s/7zo856jb4d0n6a4/Yan_Wei_Kitchen_Myles_VisualThreat_PAPER.pdf?dl=0)
- Speaker at Western Automotive Journalists (WAJ) event October, 2016 at the Silicon Valley Computer Museum. The presentation titled, “Do You Trust Your Vehicle’s Software?”.
- Speaker at Silicon Valley Auto Tech Council (www.autotechcouncil.com) event, “Connected Vehicle Security”, identifying connected vehicle vulnerabilities. December 12, 2014
- Speaker for Auto Hack Silicon Valley Meetup, “Autonomous Vehicles, What Could Possibly Go Wrong?”, May 7, 2014.
- Moderator for Panel Discussion for Silicon Valley Auto Tech Council event, “Autonomous Vehicle - Panel: Under the Hood”, April 11, 2014.
- Speaker for American Bar Association Webcast Meetup, “Autonomous Vehicles, What Could Possibly Go Wrong?”, Jan 22, 2014.
- Telematics Update - Authored article for Telematics Update 2005 conference, “Conference Report – Navigation 2005 Navigation on the Move!”
- Telematics Update - Authored article for Telematics Update 2004 covering Navigation conference, San Jose, CA. Hosted Panel Discussion for User Interfaces for Navigation/Telematics devices.
- Hosted Panel Discussion for Telematics Update Las Vegas 2005 Event on Storage Technologies for Telematics devices, FLASH vs. Auto-Grade Disk Drives.

- Between 2000 - 2005, retained by consulting firm, Prismark Partners LLC (www.prismark.com) to research and author a comprehensive annual review of the market and developments in Automotive Electronics (including semiconductors), for their annual "Electronics Industry Report" publication, a "coffee table" type book provided by Prismark to their clients and Fortune 100 CEOs.
- Architect, researcher, and co-author of an extensive multi-client study of the Automotive Electronics Market between 1988-1995, for Dataquest Inc. This was the first such study to create a multi-level, searchable forecast database by vehicle type, platform, make & model, forecasting to the individual electronic module level used on each vehicle, and further to the individual type of integrated circuits and components used in each module. This project eventually spun out of Dataquest to become Tier One, an independent automotive data research firm.