

CARR ENGINEERING, INC.

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Steven E. Kent

Specialized Professional Competencies

- Electronic Controls - electrical system analysis, data collection, development of test and measurement hardware related to supplemental restraints, throttle controls, electronic power steering systems, transmission and brake controls.
- Vehicle Testing and Instrumentation – data acquisition system hardware and software development, reverse engineering vehicle CAN networks, test data analysis, evaluation and implementation of new test instruments and test-driving.
- Advanced EDR (Airbag Control Module) capabilities: Chip-level retrieval and analysis of data using in and out of circuit retrieval techniques; retrieval of data from water damaged, mechanically compromised and thermally damaged EDR and PCM's.
- Crash Analysis and Reconstruction – computer-aided crash analysis including EDCRASH, EDSMAC; exemplar vehicle analysis; speed analysis; rollover analysis.
- Vehicle Dynamics Analysis – application of physics, background knowledge and experience to the analysis and understanding of vehicle dynamics and the effect of driver, vehicle and environment on vehicle performance. Detailed data analysis utilizing software tools and custom scripting.

Professional Qualifications

- Bachelor of Science (Information Systems), University of Redlands, CA. 1995
- Co-wrote SAE Paper 2015-01-1448 “EDR Pulse Component Vector Analysis” - 2015
- “Acquiring and Analyzing Data From Sensors and In-Vehicle Networks” – 2011
- Bosch Crash Data Retrieval (CDR) Data Analyst Course (32 Hour course) – 2008
- Bosch Crash Data Retrieval (CDR) Technician Course (8 Hour course) – 2008
- “Automobile Accident Reconstruction” (40 Hour course) Northwestern University -2006
- “Advanced PC-Crash Training Workshop” MEA Forensic Engineers and Scientists (16 Hr course) - 2003
- Graduate Engineer, Carr Engineering, Inc. – 2002 – present
Engineer responsible for vehicle test data, instrumentation development, vehicle testing and crash reconstruction. Activities include performing: data analysis, scene and vehicle inspections, electronic controls inspections, crash analysis, computer crash simulations, vehicle dynamics analysis, vehicle dynamics testing, test procedures and related programming tasks.
- Hardware Application Engineer, Hewlett Packard, Incorporated – 2001
Responsible for ASIC design-in services to international OE manufacturers. Member of OEM inkjet hardware product development team. Duties include: circuit verification, defining power conditioning requirements, providing firmware development assistance, developing application notes and datasheets for core logic, color processing, and nozzle driver ASICs.
- Technical Services Account Engineer , Toshiba America Inc. Information Systems Div. – 1997 – 2001
Responsible for failure analysis of mobile and server PC's within enterprise customers. Worked with hardware product development team on pre and post release product revisions.
- Sr. Systems Engineer, Epson America, Inc. – 1988-1997
Responsible for chip-level verification testing of chipsets for new portable and desktop PC products. Developed hardware and software test plans and documented results. Responsible for developing scripting tools for OEM software preload.

Other Related Experience

- Developed electronics used in: Electronic throttle and cruise control demonstrative exhibits; airbag diagnostic tool hardware devices for domestic and imported vehicle restraint systems; specific instrumentation used in collecting control shift force and position data; a programmable steering controller with data acquisition capability and integrated motion control functions; ruggedized stand-alone data acquisition hardware and software development.
- Developed roll-rate feedback hardware to comply with the NHTSA Fish Hook maneuver standard
- MATLAB, National Instruments LabView, DiaDEM programming and data analysis
- Powertrain control module (Engine) calibration, programming, data logging & analysis
- Open-Track amateur racing and high performance driving education instructor