Oracle Engineering LLC

Microprocessor Based Product Design

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curriculum vitae for:

Bob Weiman

President, Oracle Engineering LLC

Expertise

Founded a consulting firm designing innovative software and electronic products for more than 35 years. Served as an Expert for cases involving software and electronics for medical devices, consumer products, and industrial control systems. Experience in medical tort cases, patent cases, workers' compensation and trade secret cases.

Engineering Experience

1992 to present   **Oracle Engineering LLC**   **Sudbury, MA**
(formerly Oracle Engineering Inc.)

President

Oracle Engineering LLC is a consulting company that develops electronic products for medical, industrial, automotive, and consumer applications. Experienced with FDA QSR, ISO 13485, IEC 60601, 62304 regulatory processes.

Developed C, C++, and assembly language **Computer Software** for Embedded Systems including:

* Artificial Heart (Blood Perfusion System).
* Laser Dental Drill
* Blood Infusion Pump
* Artificial Lung
* Hysteroscopic Pump
* Blood Imaging Analyzer
* Superconducting Magnetic Quench Detector
* Pharmaceutical Scanning System
* Cervical Cancer Screening
* Real Time Blood Gas Analyzer
* Custom Microprocessor for Pacemakers
* Analysis of Medical Clinical Trials
* Heart Defibrillator
* Portable Fuel Cell for personal electronic devices
* Portable Diesel-powered battery charger for DOD
* Cellular Remote Data Monitor
* Commercial Alarm System
* Laser Scanning system for verification of silicon wafers
* Automotive Sound System used in Mercedes, Porshe and Ferrari

Designed **Electronic Hardware** and microprocessor systems including:

  * Proton Beam radiation treatment system for Cancer treatment
  * Autonomous Sonar scanning robot for the US Navy
  * Automated Steering Fins for underwater robot
  * Point of care blood analysis
  * Microfluidics systems for medical sample testing
  * Video Processing System
  * Virtual Reality System
  * Oceanographic Spectroradiometer
  * Gas Chromatography System
  * Electric Company Power Control System

Other projects including:

 * Wrote device driver software for Windows and real-time operating systems.
 * Developed hardware, software, FPGA for multiprocessor robotic vehicle.
 * Developed Xilinx and Altera FPGAs for image processing and high-speed control.

10/2005 to 11/2006   Cambridge Consultants Inc.   Boston, MA

Project Manager for Electrical Engineering, Design Engineer

* Designed electronics and firmware for medical instruments.
* Designed system architecture of electronic subsystems for medical products.
* Managed project teams.
* Recruited new clients.
* Wrote and presented client proposals.
* Wrote Software Coding Standards, chose software and hardware tools for the Electrical Engineering department.
* Experience with FDA QSR, ISO 13485, IEC 60601 regulatory process.

12/2003 to 10/2005   Bluefin Robotics Corporation   Cambridge, MA

Senior Electrical Engineer

* Designed electronics for multiprocessor control system and analog motor drive hardware.
* Wrote firmware for all three of the processors controlling the system.
* Wrote functional specification for closed loop electric motor propulsion system for robotic vehicles.
* Designed Xilinx CPLD to handle motor commutation and logic control tasks.
* Wrote the diagnostic software to test systems and evaluate the performance.
* Developed a computerized power system that controls the proper sequencing of the vehicle computers.
* Wrote the functional specification for this system.

1989 to 1992   Woods Hole Oceanographic Institution   Woods Hole, MA

Research Engineer

* In charge of hardware and software development of the on-board computer systems for robotic vehicles, including the JASON vehicle used to find the Titanic.
* Developed remote control system to operate robotic vehicles from distant sites via satellite links.   Remote system demonstrated at The White House for President Bush.
* Developed telemetry interfaces for Ethernet and fiber optic systems.
* Member of many oceanographic expeditions including National Geographic Society expedition to explore two shipwrecks from the War of 1812.

1985 to 1989   Oracle Engineering   Sunnyvale, CA

Principal

* Started a successful Silicon Valley consulting company.
* Developed software for embedded systems.
* Designed digital hardware for consumer, industrial and medical products.
* Designed custom gate arrays and ASICs.

1981 – 1985   Logical Services Inc.   **Santa Clara, CA**

Project Manager

* Designed digital hardware and microprocessor-based products.
* Wrote software for embedded products.
* Met with clients and wrote client proposals.
* Managed project teams, including scheduling and budget.

1980 - 1981 SRI International   Menlo Park, CA

Research Engineer

* Developed Fault Tolerant computer networks.
* Developed computer architectures for satellite control.
* Wrote computer simulations to test security of Army communications system.
* Wrote client research proposals and organized client briefings.
* Coauthored 2 journal papers, presented paper at SPIE conference.

Software Experience

C, C++, Assembler, Forth, Python and Visual Basic, on a wide variety of systems ranging from embedded microcontrollers to PCs and microcomputers running Windows, Linux, uCos, and other Real Time Operating Systems (RTOS) and bare–metal systems.

Hardware Experience

ARM, Zync, MicroBlaze, MSP430, dsPIC, 8051, 68HC11, PIC, 80x86, Pentium, 68xx, 68000, 68332, TMS320, 8085, PCI, ISA, STD bus, Multibus, Modbus, IBM PC architectures, PCMCIA, CPLD, Altera and Xilinx FPGA, SPI, I2C, CAN, USB, and PWM.

Expert Witness	**Litigation Experience**
2011-2013	1) Testifying Expert Witness in a medical device tort case alleging injury from an Insulin pump. Performed software source code review and analysis for plaintiff. Wrote Expert Report and testified at deposition. Plaintiff's attorney: Bubalo - Rotman PLC. Dalton v Animas, Civil Action no: 3:09-CV-354H, US District Court, Western District of Kentucky at Louisville.
2012	2) Consulting Expert for defendant. Analyzed medical software for radiation treatment. Smith, Solvik, Kendrick and Sugnet, Black v Prowess, Inc, State of New York Supreme Court, County of Ontario, Docket 102070
2012-2013	3) Consulting Expert for defendant. Evaluated medical device hardware purchased by a hospital to see if was working according to manufacturers' specifications. Defendant's attorney Sloan & Walsh. JACO Inc. v South Shore Hospital, Inc, Commonwealth of Massachusetts Superior Court, CA No 10-01792
2014-2015	4) Consulting Expert for defendant in a patent infringement case involving towed seismic sonar arrays. Reviewed source code of plaintiff devices for report on patent validity. Defendant's attorney, Irell & Manella LLP. Western GECO v Petroleum Geo Services ASA, US District Court for the Southern District of Texas, Civil Action No 4:13-cv-0272
2015	5) Consulting Expert for defendant in a Workman's Compensation claim. Investigated plaintiff claim of fatal injury from electronic equipment. Wrote expert report. Pacific Indemnity Company, attorney Moriarty, Shay & Associates, PC.
2016	6) Testifying Expert Witness in a case involving electronic control system for adjustable mattresses. Performed software source code review of products. Wrote Expert Report, testified at deposition and in court for a patent infringement case. Respondent's attorney Spencer Fane LLP. Select Comfort vs. Sizewise Rentals LLC. Testified at trial before the United States International Trade Commission, Washington, DC, INV-337-TA-971.
2018-2019	7) Consulting Expert in a patent infringement case involving pressure management control systems. Performed computer source code review and analysis. Respondent's attorney Spencer Fane LLP. Select Comfort vs. American National Manufacturing, Inc, United States District Court for the Central District of California.
2019	8) Testifying Expert Witness in a patent case involving electronics cooking scales that connect to smartphones. Purchased several representative competing devices. Took detailed measurements running both scales as well as several similar products from the same time period. Wrote Expert Reports (non-infringement and invalidity). Testified at deposition for defendant in patent infringement case. Defendant's attorney Baker Botts L.L.P., Perfect Company v. Adaptics Limited, United States District Court for Western District of Washington at Tacoma, Civil Action No. 3:14-cv-05976-RBL
2021	9) Consulting Expert in a patent case involving personal fitness watches that measure an individuals' activity. Respondent's attorney ERise IP. .LoganTree LP v. Garmin International Inc. and Garmin USA.
2021	10) Consulting Expert in a patent case involving the accelerometers in game controllers for home video games. Reviewed electronics schematics, tested comparable models from other manufacturers, disassembled devices and took electronic measurements for an Expert Report.

	Respondent's attorney ERise IP. Genuine Enabling Technology LLC v. Sony Corporation.
2021	11) Consulting Expert in a medical case for defendant in case involving a system for cardiac catheterization. Performed a software source code review and analysis. Analyzed logged data for Expert Report. Defendant's attorney Fredrikson & Byron, PA, King v Acist Medical Systems, Inc., Circuit Court for the City of Richmond, Case No. CL20001466-00.
2023	12) Consulting Expert in a trade secrets case for plaintiff. Case involved computer-controlled sawmills for the logging industry. Performed a software code review and analysis. Plaintiffs' attorney, Preti, Flaherty, Beliveau & Pachios, LLP, Progress Engineering, LLC v. Todd M. Bennet, United States District Court, District of Maine, Case No: 1:22-cv-00257-LEW.

Publications

1) "**Creating Real-Time Applications under Windows**", Weiman, Bob; Embedded Systems Programming, June 1995, vol 8, number 6, p 28

2) "**The Win32 Driver Model and Embedded PCs**", Weiman, Bob; Embedded Systems Programming, April 1999, vol 12 number 4, p 46

3) "**Remote Control of an Underwater Vehicle Via Satellite**", Yoerger, D.R.; Weiman, R.; Somers, T.; IEEE Telerobotics, Telesystems Conference, 1991. Proceedings. Vol.1.

4) "**Cooperative Highly Available Multiprocessor (CHAMP) networks have great potential for signal processing**", Wischmeyer, C. Edward; Weiman, Robert M., , SPIE Proceedings Vol. 298, 1981

5) "**On-board Surveillance Satellite Signal Processing Without Battle Fatigue**", IEEE Signals and Circuits, Monson, Phillp R. Weiman, Robert M. et al. 1981

Professional Memberships

Institute of Electrical and Electronic Engineers (IEEE) – Senior Member
IEEE Boston Consultants Network
Microchip Design Partner

Education

BS, Computer Engineering, Boston University, 1980

References

View references at www.AskTheOracle.com/expert-witness