John Peck

Bay2Sierra Silicon Services, Inc.
601 Duncan St.
San Francisco, CA 94131
Business: 415-643-9428
Cell: 415-420-8449
Email: peck@bay2sierra.com
Website: www.bay2sierra.com

PROFESSIONAL SUMMARY

John Peck is an expert in complex constrained random design verification and board validation environments. He has developed and performed verification of memory controllers (SDRAM, DDR), on-chip interconnect networks, SoC integration, SPI controllers, and processor instruction set architectures (ISAs). He is knowledgeable about performance modeling and architectural validation of network processors and has designed high throughput software applications including search indexers and text extractors. He holds a bachelor's degree in Computer Engineering from Carnegie Mellon University and a master's degree in Computer Science from the University of California, Los Angeles.

John Peck has over 25 years of experience as a software and hardware engineer with over 10 years of experience as a technical analyst for hardware and software intellectual property cases. He has drafted numerous claim charts and prepared expert reports for software copyright, trade secret, and patent litigation. He is comfortable researching and expressing complex technical issues. He is experienced with source code review and able to explain its operation in ways that most people can understand.

EXPERIENCE

1/08 – Present – Bay2Sierra Silicon Services Inc., San Francisco, CA

Principal Engineer, Consulting and contracting services:

- Reads patents to understand infringement and validity issues
- Examines software source code for determining patent infringement
- Examines HDL code (e.g. Verilog and VHDL RTL) for determining patent infringement
- Examines schematics for determining patent infringement
- Writes expert reports
- Performance analysis and modeling
- ASIC/FPGA design verification, architecture, and design
- Complex SOC platform: IP design vetting/integration, and integration-level verification
- Design of memory controllers, system and device-level error management technologies
- Design verification/validation of FPGA designs implemented in PCIe platforms
- Design of hardware and software for high throughput applications
- Development of electronic design automation (EDA) tools
- Development of OpenSSL crypto-engine software integration for hardware devices including Atmel ATECC508A

12/03 – 12/07 – Kazeon Systems, Mountain View, CA

Senior member of technical staff, office of the CTO:

- Responsible for system hardware and set performance goals and expectations
- Managed technical engagement with vendors and customers
- Designed high throughput search indexer based on Lucene
- Designed and implemented vectorized algorithms on x86 processors for text extraction at 1Gbps line rate throughputs

08/99 – 12/03 – Redback Networks, San Jose (formerly with Siara Systems)

Senior member of technical staff: **Network processors**:

- Architectural validation using performance modeling methodologies: Implemented custom cycle-based model in C++.
- Functional verification of processor ISA, inter-chip interface blocks, performance measurement counters.
- RTL design of DDR SDRAM memory controller optimized for high throughput.

10/97 – 08/99 – Advanced Micro Devices, Inc., Sunnyvale

Senior design engineer, Platforms Products Division: **K7 Northbridge chipset** design team responsibilities include: Design, writing RTL, verification, synthesis, and hand placement. Wrote verification testbench for SDRAM memory controller, implemented RTL/verified GART virtual address translation block, enhanced AGP block for 4x operation.

1994 - 1997 – University of California, Los Angeles

Graduate Student Researcher on ARPA funded project (Supercomputer Supernetwork joint work of UCLA and the Jet Propulsion Laboratory). Co-Designed/Co-implemented Optical Channel Interface Gateway for Myrinet Network.

02/96 - 06/97 Consultant/Software Engineer (contractor w/Activision Studios), Los Angeles, CA

- Video Game Software Engineer for Win95 Platform. Product implemented is entitled "Dark Reign: The Future of War"
- Video Game Software Engineer for PC Platform. Product implemented is entitled "Mechwarrior 2: Mercenaries."

05/95 – 07/95 – Software Engineer Redline Games (contractor to Activision Studios), Los Angeles, CA

- Video Game Software Engineer for PC platform. Product implemented is entitled "Mechwarrior 2: 31st Century Combat."

Summer 1994 – Redline Games (under contract with Activision Studios)

Video Game Software Engineer for SNES platform (Nintendo game machine). Product implemented is entitled "Pitfall: The Mayan Adventure."

Summer 1992 - NCR Corporation E&M Atlanta

OS Development group: Programmer / Analyst device driver development DOS 5.0.

Summer 1991 – Transarc Corporation

Product Support: Distributed system testing and debugging.

1988 - Summer 1993 – Foxfire Technologies Corporation

Analysis and Computer Programming:

Inquiry system for real time shop floor control, Controller for real time data collection, Capacity planning and scheduling system, Finished goods inventory system, Shipping system, Control software for Rapistan automated conveyor sortation system, Router for real time data collection.

LEGAL CONSULTING

I have consulted on a total of 22 litigations. I have provided expert testimony once at deposition and twice at trial. I have obtained permission to disclose the matters listed below. Undisclosed matters pertain to ongoing litigations with accused products including natural language processing, and marketing analytics.

<u>03/2020 – 10/2020: VLSI Technology LLC. v. Intel Corporation.</u>
Law Firm: Irell & Manella LLP
Client: VLSI Technology, LLC.
Court: U.S. District Court, for the District of Delaware
Case: 1:2018-cv-00966

- Alleged patent infringement
- Reviewed HDL, C, and assembly language source code
- Assisted with response to claims of patent invalidity

<u>03/2020 – 10/2020: VLSI Technology LLC. v. Intel Corporation.</u>
Law Firm: Irell & Manella LLP
Client: VLSI Technology, LLC.
Court: U.S. District Court, for the Western District of Texas
Case: 6:19-cv-00254

- Alleged patent infringement
- Reviewed HDL, C, and assembly language source code

- Assisted with response to claims of patent invalidity

03/2020 – 08/2020: GPU++ LLC. v. Qualcomm Incorporated; Qualcomm Technologies, Inc.
Law Firm: Steptoe & Johnson LLP
Client: GPU++
Court: U.S. District Court, Western District of Texas
Case: 6:19-cv-00474-ADA

- Alleged patent infringement

11/2019 – 08/2020: Motorola Solutions, Inc. v. Hytera Communications Corporation, Ltd.
Law Firm: Shelston IP
Client: Hytera
Court: Federal Court of Australia
District Registry: New South Wales
Division: General
Case: NSD1283/2017

- Gave evidence at trial (Testified at trial)
- Submitted affidavits (expert reports)

08/2019 – 12/2019: Motorola Solutions, Inc. and Motorola Solutions Malaysia Sdn. Bhd. v. Hytera Communications Corp Ltd., Hytera America, Inc., and Hytera Communications America (West), Inc.
Law Firm: Steptoe & Johnson LLP
Client: Hytera
Court: U.S. District Court, Northern district of Illinois
Case: 1:17-cv-01973

- Alleged theft of trade secrets
- Testified at deposition
- Testified at trial
- Reviewed source code
- Wrote expert report

07/2019 – 12/2019: Neodron v. Samsung, Microsoft, Lenovo, Motorola, Dell, and HP
Law Firm: Russ August & Kabat
Client: Neodron
Court: U.S. International Trade Commission
Case: Inv. No. 337-TA-1162

- Alleged patent infringement of capacitive touch screens
- Reviewed source code
- Assisted with writing expert reports

04/2018 – 06/2019: Broadcom Corporation. vs. Toyota Motor Corporation, Japan, Toyota Motor North America, Inc. Toyota Motor Sales, U.S.A. Inc., Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor Manufacturing, Indiana, Inc., Toyota Motor Manufacturing, Kentucky, Inc. Toyota Motor Manufacturing, Mississippi, Inc., Toyota Motor Manufacturing, Texas, Inc. Panasonic Corporation, Japan, Panasonic Corporation of North America, Denso Ten Limited, Japan, Denso Ten America, Limited., Renesas Electronics Corporation, Japan, Renesas Electronics America, Inc., Japan Radio Corporation, Japan.
Law Firm: Steptoe & Johnson LLP
Client: Broadcom Corporation
Court: U.S. International Trade Commission
Case: Inv. No. 337-TA-1119

- Alleged patent infringement of SoC integrated circuits in audiovisual products
- Examined HDL and firmware source code
- Wrote expert report pertaining to source code analysis

03/2018 – 12/2018: Blast Motion, Inc. vs. Diamond Kinetics, Inc.
Law Firm: Wilson Sonsini Goodrich & Rosati
Client: Blast Motion, Inc.
Court: U.S. District Court, Western District of Pennsylvania

Case: 2:17-cv-00733-MRH

- Alleged patent infringement of patents related to natural motion capture
- Examined source code including sensor firmware and mobile applications
- Prepared infringement contentions pertaining to source code analysis and assisted with depositions

06/2017 – 12/2017: Broadcom Corporation. vs. MediaTek Inc., MediaTek USA Inc., MStar Semiconductor Inc., Sigma Designs Inc., LG Electronics Inc., LG Electronics U.S.A., Inc., Funai Electric Company, Ltd., Funai Corporation Inc., P&F USA, Inc., Vizio, Inc.
Law Firm: Steptoe & Johnson LLP
Client: Broadcom Corporation
Court: U.S. International Trade Commission
Case: Inv. No. 337-TA-1047

- Alleged patent infringement of SoC integrated circuits in audiovisual products
- Examined HDL and firmware source code
- Wrote declaration regarding source code production
- Wrote expert report pertaining to source code analysis

06/2015 – 12/2017: Blast Motion, Inc. vs. Zepp Labs Inc.
Law Firm: Wilson Sonsini Goodrich & Rosati
Client: Blast Motion, Inc.
Court: U.S. District Court, Southern District of California
Case: 3:2015cv00700

- Alleged patent infringement of patents related to natural motion capture
- Examined source code including sensor firmware and mobile applications
- Wrote expert report pertaining to source code analysis and assisted with depositions

06/2017 – 06/2017: Avatar Integrated Systems
Law Firm: Davis Wright Tremaine LLP
Client: Avatar Integrated Systems
Project: Clean room re-development of EDA tool control language to copyright infringement

2/2017 – 5/2017: Blackberry Limited vs. BLU Products, Inc.
Law Firm: Cozen O'Connor LLP
Client: BLU Products
Court: U.S. District Court, Southern District of Florida
Case: 16-23535-CIV-MORENO

- Alleged patent infringement of standards essential patents
- Assisted with the writing of an inter partes review (IPR) declaration and an expert report

12/2016 – 2/2017: Papst Licensing v. Apple, LG Electronics, ZTE Corporation, Samsung Electronics, Lenovo, Motorola Mobility, Huawei Technologies
Law Firm: DiNovo Price Ellwanger
Client: Papst Licensing
Court: U.S. District Court, Eastern District of Texas, Tyler Division
Case: Civil Action No. 6:15-cv-1095

- Alleged patent infringement of mobile phones

09/2016 – 10/2016: Immersion Corporation v. Apple Inc., et al.
Law Firm: DLA Piper
Client: Apple Inc.
Court: U.S. International Trade Commission
Case: Inv. No. 337-TA-1004 and Inv. No 337-TA-990 (consolidated)

- Reviewed Apple product source code in support of rebuttal to infringement contentions

1/2016 – 6/2016: Verasonics v. Alpinion Medical Systems
Law Firm: Davis Wright Tremaine LLP
Client: Verasonics
Venue: American Arbitration, International Centre for Dispute Resolution

Case: 01-15-0002-9484

- Alleged trade secret theft of software for an ultrasound research platform
- Compared software source code using CodeSuite
- Assisted with the writing of a declaration and an expert report

09/2015 – 04/2016: Objectivision Pty Ltd. v. Visionsearch Pty Ltd and University of Sydney
Law Firm: Marque Lawyers
Client: Objectivision Pty Ltd.
Case: NSD2433 of 2013

- Alleged trade secret theft and copyright violation of software that comprises a medical diagnostic system relating to vision.

2/2015 – 1/2016: NNG, Kft. v. Ava Enterprises, Inc.
Law Firm: Lewis Roca Rothgerber Christie LLP
Client: NNG, Kft
Court: U.S. District Court, Central District of California
Case: 2:14-CV-00220

- Alleged copyright infringement

1/2015 – 6/2015: Salesforceone LLC. & PARS International Computer, Inc. v Salesforce.com, Inc.
Law Firm: Wilson Sonsini Goodrich & Rosati
Client: Salesforce.com, Inc.
Court: U.S. District Court, Northern District of California
Case: 4:2015-cv-02174

- Alleged trademark infringement

1/2015 – 6/2015: NVidia Corporation vs. Samsung Electronics, Qualcomm Inc.
Law Firm: Orrick LLP
Client: NVidia Corporation
Court: U.S. International Trade Commission
Case: Inv. No. 337-TA-932

- Alleged patent infringement of GPU integrated circuits
- Examined HDL code
- Wrote expert report pertaining to source code analysis

11/2012 – 5/2014: Intellectual Ventures v. Altera, Microsemi, Lattice Semiconductor, And Xilinx
Law Firm: Desmarais LLP
Client: Intellectual Ventures
Court: U.S. District Court, District of Delaware
Case: C.A. No. 10-1065-LPS

- Alleged patent infringement of FPGA and ASIC integrated circuits
- Examined schematics and Verilog code
- Assisted with writing expert reports and with depositions

EDUCATION

Masters Degree in Computer Science, University of California, Los Angeles, March 1995
Bachelor of Science in Computer Engineering, Carnegie Mellon University, May 1992

PUBLICATIONS

1. J. Cong, J. Peck, et. al., "The Supercomputer Supernet Testbed: A WDM-based Supercomputer Interconnect," *Journal of Lightwave Technology*, 1996.
2. J. Cong, J. Peck, Y. Ding, "RASP: A General Logic Synthesis Systems for SRAM-based FPGAs," *ACM/IEEE Inter. Symposium on FPGAs*, 1996.
3. J. Cong, J. Peck, et. al., "The Supercomputer Supernet (SSN): A High-Speed Electro-Optic Campus and Metropolitan Network," *Society of Photo-Optical Instrumentation Engineers*, 1996.
4. J. Cong, J. Peck, "On Acceleration of Logic Synthesis Algorithms using FPGA-based Reconfigurable Coprocessors," *IEEE Inter. Symposium on FPGAs for Custom Computing Machines*, 1997.

PATENTS

1. Peck, John; Davis, Gregory; Huynh Quoc, "Serial peripheral interface," U.S. Patent 8,589,717.
2. Novak; Stephen T., Peck, Jr.; John C., Waldron; Scott, "Method and apparatus for optimizing memory performance with opportunistic refreshing," U.S. Patent 6,046,952.
3. Novak; Stephen T., Peck, Jr.; John C, Waldron; Scott, "Method and apparatus for optimizing memory performance with opportunistic refreshing," U.S. Patent 6,147,921.
4. Novak; Stephen T., Waldron; Scott, Peck, Jr.; John C., "Queue-based memory controller," U.S. Patent 6,295,586.
5. Novak; Stephen T., Peck, Jr.; John C., "Method and apparatus for optimizing memory performance with opportunistic pre-charging," U.S. Patent 6,360,305.
6. Novak; Stephen T., Peck, Jr.; John C., "Queue-based control mechanism for queue-based memory controller," U.S. Patent 6,393,531.
7. Novak; Stephen T., Waldron; Scott, Peck, Jr.; John C., "Queue-based memory controller," U.S. Patent 6,496,906.
8. Peck, Jr.; John C., Subramanian; Sridhar P., "Optimized static sliding-window for ACK sampling," U.S. Patent 6,601,182.
9. Peck, Jr.; John C., Subramanian; Sridhar P., Waldron; Scott, "Optimizing the translation of virtual addresses into physical addresses using a pipeline implementation for least recently used pointer," U.S. Patent 6,686,920.
10. Peck, Jr.; John C., Subramanian; Sridhar P., Waldron; Scott, "Distributed translation look-aside buffers for graphics address remapping table," U.S. Patent 6,741,258.

SPECIAL KNOWLEDGE AND SKILLS

- FPGAs, ASICs, SoCs, Processors including GPUs, Chipsets
- HDL-Software Interfaces:
    - Programming Language Interface (PLI)
    - SystemVerilog Direct Programming Interface (DPI)
    - Verilog Procedural Interface (VPI)
- Operating systems:
    - Linux
    - UNIX
    - Windows
- Programming languages:
    - C, C++
    - Assembly language, including x86 vector programming
    - Python, including embedded python
    - Perl
    - Java
- Scripting languages
    - Bash
    - Csh
- Synopsys Design Compiler (DC)
- Verilog
- System Verilog
- Verification methodologies
    - Universal Verification Methodology (UVM)

CERTIFICATIONS AND COURSE TRAINING

- Code Suite Certified by SAFE Corporation
- Computer Forensics CNIT 121
- Ethical Hacking and Network Defense CNIT 123
- Intellectual Property PLS 13

PROFESSIONAL ORGANIZATIONS

Senior member of the IEEE and IEEE Consultants' Network of Silicon Valley (CNSV)
Member of the Association for Computing Machinery (ACM)