Folsom, California, USA
roland@woosters.com

Roland Wooster

+1 (916) 983-7087 Home
+1 (916) 799-2879 Cell

Summary

As a Principal Engineer at Intel I have demonstrated a sustained track record of increasing technical depth across multiple business groups at the company, culminating in my current LCD display and HDR (High Dynamic Range) innovation role in the Client Architecture & Innovation group. As an industry recognized change-agent, I proactively set direction and have driven significant technical development acceleration across the industry. I've leveraged my direct relationships with our customers' technical staff from Principal Engineers to CTOs, to drive development of elegant and robust solutions, whilst aligning our technology roadmaps to achieve very high incremental revenue for all involved. I am the chairman of VESA's HDR task group, Intel's singular representative to the UHD-Alliance, and Intel's HDR display hardware ecosystem innovation leader.

I have a wealth of experience successfully leading both engineering and business/marketing projects, combining years of team management with industry leadership, strong problem solving skills, and a broad experience of: software as a service, firmware engineering, technology marketing, winning support from ecosystem partners and developing new products, Internet software development, HR data system automation, financial and audit controls, and enterprise systems development. I have excellent written, public speaking, and management skills, which I combine with strong business savvy and a global network of business colleagues spanning: the display industry, IT, HR, PC architecture, storage, networking, media, content creation, standards bodies, and the TV and broadcast industries.

Current Role

Principal Engineer, Display & Platform Technologist. Client Architecture and Innovation Group, Intel.
Leader of Intel's external HDR engagements. Chairman of the VESA Display Performance Metrics group, responsible for VESA's development of the DisplayHDR standard for HDR display-hardware performance. I am Intel's sole representative in the UHD-Alliance and chaired the "Battery-Operated Devices" workgroup. I work with the entire display ecosystem including: LED, TCON, Scaler, LCD/OLED panel, film, and backlight vendors and also with display ODMs and OEMs building and branding monitors and laptops.

For Computex 2016 I led the project specification, assembly, debug, and validation of the world's first HDR PC monitor showing this technology to ~50 of our partners and customers. As a follow up to this, to reduce cost, and also to prove the viability of the DisplayHDR 1000 spec, I led a project to: specify, develop, test, and optimize the world's first panel that met the new VESA DisplayHDR 1000 spec, for Computex 2017. This was almost a year before the release of the first display certified as meeting the Display HDR 1000 spec.

From initial concept in early 2017 to the marketing ramp of a production launch expected in 2018 I have led Intel's TV on PC strategy, working with TV Tuner silicon vendors, Software UI vendors, and branded OEMs. I pitched the concept idea to a number of business partners and have led the collaborative effort to bring this concept to fruition. Thus far I have led the strategy, integration, validation, debug, and refinement of the solution incorporating the components of multiple suppliers together into a solution we showed at CES 2018 to prospective partners.

Prior Experience

June 2010 – November 2017. Platform Innovation Manager, Desktop Platform Group, Intel.
Lead technologist for the Desktop Group, responsible for technology innovation, 3rd party engagements, R&D, driving new technologies and usages to market, running industry collaboration projects, and representing Intel in standards bodies. Presented HDR technology at SID Displayweek 2016, led Intel's HDR activities at Computex 2016 & 2017, and CES 2017 and 2018.

More generally my role was to focus on development of high-value leading-edge technology and usage scenarios for the premium segment of the desktop PC market. Beyond HDR, I worked on the 4K ecosystem build out, high speed storage, high speed networking, and dozens of R&D projects both internal and with third parties.

From 2013 through 2016 I led significant parts of Intel's involvement with 4K resolution displays and media. I was responsible for Intel's first desktop 4K LCD panel project, obtaining funding from our CEO, selecting a supplier, developing the panel specification, and then bringing this panel to market in numerous branded monitors. The project

goal was to reduce 4K monitor prices from $3500 (the price at the start of the project) down to $400. My third party partners hit the $400 target on launch, and then maintained price leadership with this panel in monitors for almost a year. Within our planning and media teams I have played a significant role in Intel's work with streaming media providers to enable 4K movie playback on the PC.

During the planning cycle for 6th Gen Core processors I identified usage scenarios that required significant changes to the bandwidth requirements of our CPU to PCH interconnect. Given that my proposals would add cost to the processor my recommendation received the highest level of scrutiny, however, by ultimately prevailing in winning support for my proposal many aspects of IO on the 6th, 7th, and 8th Gen Core processors are now 2x faster than they would have been without my early stage analysis. In a similar analysis I was first to identify several critical user requirements that ultimately led to the initial justification to establish a new CPU on our roadmap, this ultimately became our 7th Gen Kaby Lake CPU.

Nov 2008 – June 2010. Engineering Manager, PC Client Services, Intel Architecture Group (IAG), Intel.
Engineering manager for Intel's Remote PC Assist (RPAT) program. Responsible for the engineering output of ~ 45 people located in Jerusalem, Folsom, Hillsboro, Cordoba, and through our partnership company in both Boston and Budapest. We architected, built, validated, and deployed an Internet based 'software as a service' solution using Intel AMT (vPro) technology to connect to the software cloud based infrastructure and service we built to enable managed service providers and Telcos to provide out-of-band network and OS support to end customers even when their customer's network, or OS, may be down. We successfully landed major firmware design wins with HP, Lenovo and several smaller OEM's. We launched partnerships with two ISV's building remote PC support applications using our RPAT SDK, and we also achieved a major customer design win with AT&T. My role involved leadership of all engineering aspects of software, firmware, validation, data center infrastructure, security, performance investigation, driving process change, problem solving, setting strategic prioritization, and collaborating with multiple business groups to set plans and meet our goals.

Oct 2006 – Oct 2008. Systems, Tools, and Controls Team Manager, Global Workforce Mobility, HR, Intel.
Manager of a team of 12, across 4 campuses, responsible for the entire global systems infrastructure, financial controls, process controls, and audit of: relocation, expense reimbursement, corporate travel, and corporate calling cards. Collectively $650M of spends were processed through these systems annually.
In 2007 my team landed a completely redesigned relocation systems infrastructure doubling the transactional efficiency of our operations group. Within the organization we simultaneously completed a series of outsource RFP's, ultimately validating our dramatically superior internal cost efficiency versus any external vendor. Of particular note we demonstrated a 5x cost benefit versus the leading technical outsource solution. My most unique achievement of 2007 was the licensing of our technology and software to a third party relocation services company, a first ever external licensing from within HR at Intel, in a deal that ultimately earned $3M.

July 2002 – Sept 2006. Global Processes & Systems Team Manager, Worldwide Relocation, HR, Intel.
During 2002 and 2003 I managed a team of 25 business analysts and project managers across six global locations, driving the initial deployment of Intel's first global Relocation automation data system, handling legal, tax, and reporting compliance automation and driving global standardization of both processes and systems.

From 2004 through 2006 I directed all global systems improvements in Relocation, architecting the design of a multi-year roadmap. This involved providing vision, leadership, and influence to drive Relocation's systems strategy to further automate improvements in: quality, through put time, and eliminating manual work of our operational staff, during this time the organization handled greater complexity while achieving a 30% reduction in HC largely due to our systems improvements. During this period I successfully managed a team of up to 15 direct reports, often receiving 100% scores in Intel's management surveys.

Sept 2001 – July 2002. Internet Software Development Manager
Intel Online Services (IOS) Engineering, NBG, Intel
When our group was restructured into Intel Online Services (IOS) I became the manager of two additional teams beyond my original team from the Advanced Technology Organization, for a total of 12 direct reports. These teams were responsible for the IOS Server Build System and the Customer Care Portal. Both products were in daily use by IOS staff, and IOS customers respectively. I rapidly merged the three teams and the functionality of the projects creating a more effective single team and integrated solution.

Under my management the Customer Care Portal transitioned into a key "Up-Sell" tool used by Marketing and the Customer Account Managers. Under my leadership the Customer Care Portal flourished from being ranked almost last by industry analysts to being ranked in the top quartile of 38 competitors. Numerous patent applications were filed for the creative ideas and implementations of innovative technology used in the Customer Care Portal.

March 2000 – Sept 2001. Internet Software Development Manager
Advanced Technology Organization (ATO), NBG, Intel.
I was responsible for managing the engineering and development of major components of a large scale Internet and Business systems management solution for Internet Service Providers and Managed Service Providers. In the latter part of the development phase my team was brought into Intel Online Service (IOS) to leverage our software, making IOS our primary customer. Numerous technologies and languages were used, including: Java, (Core, Servlets, Applets, and Swing), SQL2000, XML, CIM, DHCP, PXE, BOOTP, IIS, Apache, SSL, and Windows 2000.

October 1999 – March 2000. Architect/Manager, Capability Development and Engineering, IT, Intel.
I was promoted to managing my 12 software development peers in the team in which I had worked during the previous three years. Projects included: eCommerce development supporting www.intel.com, development and support of the corporate-wide account management system (Rialto), secure document transfer (ERCD), and the encrypted file transfer with our financial partners for the Stock Options Program.

January 1997 – October 1999. Software Design Engineer, Capability Development and Engineering, IT, Intel.
I was the designer and lead developer of the Electronic Registered Confidential Documents (ERCD) project. This project involved integrating our software with numerous third party vendors and an even larger number of groups at Intel. The software used digital certificates, strong encryption, custom tailored "click to accept" agreements and also supported instant revocation of user rights when necessary. The implementation included ASP and C++ COM for the front end, C++ for the middle tier, and a Microsoft SQL backend.

I designed and implemented components of the authentication and authorization software to provide secure eCommerce support for Intel's customer business. The project achieved $1B of E-commerce exchange in the first two weeks after release. As a direct result of the software developed by our team, Intel, at one point, held the record for the largest eCommerce dollar-transaction-volume of any company worldwide.

June 1995 – August 1995. Software Engineer, The Technology Partnership, Melbourn, England
I was a software engineer developing parallel execution software to run on multi-CPU based Windows NT 3.5 and Windows 3.11 systems for custom hardware including an exceptionally high speed printing press and a bacteria laser scanner.

Large public industry presentations & standards documents

- 2017: Chair of VESA's DisplayHDR workgroup, singular author of the spec, and technical leader for the workgroup.
- 2017: Initiated, led, and presented two Global HDR symposiums, with Dell and Microsoft, to audiences of ~100, and 115.
- 2016: Led business and technical discussions at the UHD-Alliance with audiences of 30-80 people, and drove the development of the UHD-Alliance's Battery Operated HDR Spec.
- SID Display Week 2016 presented to an audience of 100-150 Intel's position on 4K and HDR.
- Presented Intel's IDF/IRUM Chipset Technical Roadmap Review for two years to an audience of about 100-150.

Additional Internal & External Whitepapers & Training Guides

- Internal HDR presentation, and webcast, to Intel's Tech Connect series – with an audience of over 130 plus many more after the event via web replay.
- Newegg technical interview on HDR, posted to YouTube & Newegg's Unlocked website, over 4600 views.
- HDR on Intel Graphics Whitepaper – contributor & reviewer.
- Internal technical sales training in 2017 on 4K Displays, HDCP2.2, HDR Technology, and Ultra-Wide display innovation
- "Stunning 4K Display Technology for Desktop Computing" Whitepaper, published at intel.com

Patents filed and granted:

2016 US Patent **granted** P41967US: “Transfer of communication from one device to another.” Roland Wooster & Itamar Sharoni.
2016 US Patent filed P98369: “Stacked Light Wave Guides” Duncan Glendinning, Jim Zhuang, Roland Wooster.
2017 US Patent filed P112084: “Tiled Light Guides” Roland Wooster, Jun Jiang, Jim Zhuang, Duncan Glendinning.
2017 US Patent filed P116856Z: “System and Method for adding EHF link to a desktop Computer” Roland Wooster, Tushar Kulkarni.
2018 Pre-Filing, Invention Disclosure Submission related to laptop HDR.

Technology Licensing

Relocation “Cost Modeling Tool” software licensing.
In 2007 I was the primary driver in licensing our internally developed Relocation Cost Modeling technology and software in a deal earning $3M. This was the first time technology had ever been sold out of HR in Intel’s 40 year history.

Education

Master of Business Administration. University of Phoenix, Sacramento, CA. September 1999. G.P.A. 3.95.

Master of Science in Computer Science. Virginia Polytechnic Institute & State University, VA. December 1996, G.P.A. 3.81.
Thesis: “Optimizing response time, rather than hit rates, of WWW proxy caches.” To provide a proxy cache for the C.S. department by modifying an existing proxy cache of 50,000 lines of C. The implementation ran on a DEC Alpha and a Sun Sparc 10. This was the second most frequently downloaded Thesis at Virginia Tech during the following year.

Bachelor of Science in Computer Science. Lancaster University, England. June 1995, 1st Class Honors.
Final year research project: ANSAware, C, and OSF/Motif for X-windows. I developed a color video communication system (like Microsoft NetMeeting and Intel ProShare, prior to the existence of either), providing both sound and video frames bi-directionally across Ethernet using a Sun Sparc Classic.