Craig S. Rosenberg, Ph.D.

An accomplished human factors engineer, user interface designer, project manager, and systems and software engineer specializing in analyzing and designing mobile computing devices, complex systems, user-centered design, information architecture, user experience, systems and software engineering, object-oriented analysis, and modeling and simulation. Extensive experience in the entire software design, development, and project management life cycle applied to a wide range of domains, from embedded mobile devices to enterprise-class mission-critical applications.

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SUMMARY OF QUALIFICATIONS

*** Human Factors, User Interface Design, Information Architecture, Cognitive Engineering, Experimental Design
*** Systems Engineering, Software Architecture, Modeling and Simulation, Virtual Environments, Animation, Art
*** C, C++, C#, Objective C, JAVA, UML, .NET, VISUAL BASIC, HTML, XML, PYTHON, LISP, FORTRAN, SAS
*** Visual Studio, Eclipse, Rhapsody, RSA/RSM, ClearCase, ClearQuest, Dreamweaver, Photoshop
*** Unity 3D, 3D Studio, Alias, AutoCAD, Rogue Wave, GD Pro, Motif, Builder Accessory, MS Office
*** Windows, Linux, OSX, PC, Macintosh, Sun, HP, IBM, StereoGraphics
*** Scholarship from the Interservice/Industry Training Simulation & Education Conference
*** Founder of the Northwest Alias Users Group
*** US Secret Security Clearance - expired

EDUCATION

Ph.D. Human Factors, University of Washington, 1994
M.S. Human Factors, University of Washington, 1990
B.S. Industrial Engineering, University of Washington, 1988
Graduating GPA: **3.83**

PROFESSIONAL EXPERIENCE

WarmCaller, Seattle, WA — March 2024 - Present
Cofounder and CTO of a marketing technology startup company creating an innovative software as a service company utilizing big data retrieval and analysis combined with artificial intelligence for prospect ranking and outreach. Responsible for software design and software project management.

StratoScientific, Seattle, WA — Jan 2014 - Present
Cofounder and CTO of a medical technology startup company creating an innovative case for smartphones that turns it into a digital stethoscope for enhanced diagnosis, serial comparisons, and telemedicine. Responsible for software project management.

Healium, Seattle, WA — May 2013 – July 2016
Cofounder and CTO of a medical technology startup company leveraging wearable technologies such as Google Glass and Apple Watch to allow physicians to interact more easily with their electronic medical records. Responsible for software project management.

Disney, Seattle, WA — March 2012 – Dec 2013
Lead user interface designer working on the Disney FastPass+ system. Developed user interfaces and modeling and simulation tools for operators at Disney World Florida. Responsible for user interface design and implementation.

PlaceFull, Seattle, WA — March 2010 – April 2012
Lead user interface designer and software architect for an e-commerce company involved in renting out event spaces for businesses and individuals. Responsible for all user interface design and software project management. www.placefull.com

WhereWuz, Seattle, WA — March 2010 – Jan 2014
Founder, inventor, user interface designer, and software architect for a company producing advanced mobile software running on GPS-enabled smartphones. WhereWuz allows users to record exactly where they have been and query this data in unique ways for subsequent retrieval based on time or location. Currently available for iPhones and Android handheld devices. www.wherewuz.com

Entrepreneur in Residence, Spyglass Ventures, Los Angeles, CA April 2008 – Dec 2009
Lead technologist and entrepreneur in residence for a Los Angeles-based media-oriented venture capital firm focusing on early-stage private equity investing. Responsibilities include evaluating investment opportunities, generating new business ideas, and providing functional expertise to assist existing investments in the mobile and entertainment sectors.

User Interface Designer, ObjectSpeed, Seattle, WA Feb 2006 – June 2007
Lead user interface and interaction designer for a technology company specializing in consumer hand-held VoIP products. Responsible for all user interface design, user interaction, information architecture design, industrial design and human factors activities. Additional responsibilities include functional specification, human factors analysis, requirements analysis, application prototyping, graphical design, and user interface programming for a hand-held VoIP mobile consumer device.

User Interface Designer, Ahaza Systems, Seattle, WA June 2001 - Dec 2001
Lead user interface and interaction designer responsible for all user interface design and development activities associated with a complete line of advanced IPv6 network hardware devices. Duties include user interface design, human factors analysis, and interactive application prototyping.

User Interface Designer, Eyematic Interfaces, Seattle, WA Oct 99 - April 2001
Lead human factors and interaction designer responsible for all user interface design and development activities associated with real-time mobile hand-held 3D facial tracking, animation, avatar creation, and editing software. Duties include requirements analysis, functional specification, user interface design, and human factors analysis.

User Interface Designer, Boeing, Seattle, WA June 97 - June 2012
Lead human factors engineer for Boeing Commercial Aircraft and Boeing Defense and Space. Responsible for system design and implementation of a very large number of high-profile and safety-critical engineering projects in the areas of Flight Deck, Computer Aided Design, Air Traffic Control, UAVs, Missile Defence Systems, Army Communications, and Homeland Security Applications.

User Interface Designer, AT&T / Teague Corporation, Redmond, WA June 95 - March 96
Lead human factors and interaction designer for a large industrial design firm. Responsible for all functionality, human factors analysis, user interface design, graphical design, systems analysis, and documentation for the world's first two-way wireless pager produced by AT&T Wireless.

Associate Assistant Professor, University of Washington, Seattle, WA Dec 94 - Dec 95
Human Factors Professor at the University of Washington Industrial Engineering Department. Duties include teaching, writing research proposals, designing and conducting funded human factors experiments for the National Science Foundation, and hiring and supervising students.

Global Technica, Seattle, WA Nov 1994 - Present
CEO of an advanced engineering consulting and software development company providing systems design, development, and project management in the areas of custom software development, human factors engineering, user interface design, and simulation for a wide range of advanced commercial and military programs. Responsibilities include project management, subcontractor management, outsourcing, system engineering, requirements analysis, functional specification, use case development, prototyping, modeling and simulation, object-oriented software architecture, graphical user interface analysis and design, and software development.

Software Design Engineer, Socha Computing, Bellevue, WA Aug 94 - Sept 95
Responsible for designing and developing interactive multimedia games and educational software for children and adults. Duties include functional specification, software design and architecture, user interface design, application prototyping, software development, focus group testing, and internet research.

Network Engineer, PSF Industries, Seattle, WA March 92 - Nov 96
Independent consultant to a mechanical engineering firm specializing in designing, fabricating, and installing large-scale, high-pressure vessels. Responsible for designing, procuring, and installing an advanced networked computer-aided engineering system to improve design quality and engineer productivity.

Alias Animator, Technology Design, Bellevue, WA April 91 - Jan 92
Independent contractor to an industrial design firm specializing in technology hardware design for computers and consumer electronics products. Created models, animations, and renderings that were used for product engineering and marketing. Services also included training, hardware and software installation, and system optimization.

Human Factors Researcher, University of Washington, Seattle, WA Jan 89 - June 94
Responsible for designing and performing advanced human factors experiments relating to virtual worlds and advanced visualization research. Funded by the National Science Foundation to conduct research on advanced software and hardware interfaces for virtual

environments. Duties include user interface design, systems design, software development, graphics programming, experimental design, and hardware and software interfacing.

Operations Manager, Micro Products, Bellevue, WA June 88 - Sept 88
Managed large-scale computer graphics conversion contracts. Installed and optimized a custom optical scanning and capture system for a computer graphics scanning company. Responsibilities included employee management, production scheduling, subcontracting and outsourcing, and software development.

Industrial Engineering Consultant, Avtech Corporation, Seattle, WA Jan 88 - June 88
Professional industrial engineer for a large aerospace digital electronics company. Solely responsible for completely redesigning the entire manufacturing facility to optimize the assembly of multiple lines of digital avionics communication equipment. Additional responsibilities included integrating software for a CNC milling center to automate the production of lighted instrument completely displays panels.

ADDITIONAL INFORMATION

I have published over twenty research papers in professional journals and proceedings on user interface design, computer graphics, and spatial, stereographic, and auditory display design. I was the sole recipient of a $10,000 scholarship award from the I/ITSEC for advancing the field of interactive computer graphics for flight simulation. I received an award from the Link Foundation for my work furthering the field of virtual interface design. I created five book covers for books by Harcourt Brace Publishing that feature the authors Arthur C. Clarke, Isaac Asimov, and Stephen King. Several minutes of my computer graphics animations appear in the movie Beyond the Mind's Eye, produced by MIRAMAR. I have won an engineering design award from the City of Los Angeles for designing an energy-saving product. I enjoy playing tennis, skiing, and composing, playing, and recording music in my free time. You can view my company's website at: www.globaltechnica.com

SELECTED PUBLICATIONS

Parks P., Rosenberg C., Interactive Distributed Simulation Environment for Collaborative Technology Experiments and Analysis, SimTecT, Brisbane, Australia, 2008.

Crutchfield J., Rosenberg C., Predicting Subjective Working Ratings: A Comparison and Synthesis of Operational and Theoretical Models, HCI-Aero Conference Proceedings, Seattle, WA, 2006.

Barfield, W., Cohen, M., Rosenberg, C., Visual and Auditory Localization as a Function of Azimuth and Elevation, The International Journal of Aviation Psychology, 7(2), pages 123-138, 1997.

Barfield, W., Rosenberg, C., & Lotens, W. A., Augmented-Reality Displays. In W. Barfield & T. A. Furness III (Eds.) Virtual Environments and Advanced Interface Design (pp.542-575), New York, NY: Oxford University Press, 1995.

Barfield, W., Rosenberg, C., & Furness, T.A., Situation Awareness as a Function of Frame of Reference, Computer-Graphics Eyepoint Elevation, and Geometric Field of View, International Journal of Aviation Psychology, Vol 5, pages 233-256, 1995.

Barfield, W., and Rosenberg, C., Judgments of Azimuth and Elevation as a Function of Monoscopic and Binocular Depth Cues Using a Perspective Display, Human Factors, Vol 37, Number 1 1995.

Rosenberg, C., Barfield, W., Estimation of Spatial Distortion as a Function of Geometric Parameters of Perspective, IEEE Transactions on Systems, Man and Cybernetics, Volume 25, Issue 9, Sept. 1995.

Barfield, W., and Rosenberg, C., Perspective versus Stereoscopic Displays for Spatial Judgments, accepted for publication, Human Factors, 1994.

Barfield, W., and Rosenberg, C., and Furness, T., Situational Awareness as a Function of Frame of Reference, Virtual Eyepoint Elevation, and Geometric Field of View, International Journal of Aviation Psychology, 1994.

Rosenberg, C., Moses, B., Future Human Interfaces to Computer Controlled Sound Systems, 95th Annual Audio Engineering Conference, New York, New York, October, 1993.

Barfield, W., and Rosenberg, C., Comparison of Stereoscopic and Perspective Display Formats for Spatial Tasks, SID Conference, Seattle, Washington, September, 1993.

Barfield, W., and Rosenberg, C., Spatial Situational Awareness as a Function of Frame of Reference, Virtual Eyepoint Elevation, and Geometric Field of View, SID Conference, Seattle, Washington, September, 1993.

Barfield, W., Rosenberg, & Cohen., Presence as a Function or Frame of Reference within Virtual Environments (Technical Report). Seattle, WA USA: University of Washington, Sensory Engineering Lab, 1993.

Lion, D., Rosenberg, C., and Barfield, W., Overlaying Three-Dimensional Computer Graphics with Stereoscopic Live Motion Video: Applications for Virtual Environments, SID Conference, Seattle, Washington, September, 1993.

Barfield, W., and Rosenberg, C., The Effect of Geometric Field of View and Tunnel Design for Perspective Flight-Path Displays, Transactions of the Society of Automotive Engineers, Seattle, Washington, July, 1992.

Rosenberg, C., and Barfield, W., The Effects of Scene Complexity and Object Density for Low Level Flight, Sixth International Symposium on Aviation Psychology, Columbus Ohio, September, 1991.

Barfield, W., Rosenberg, C., and Levasseur, J., The Effect of Icons, Earcons, and Commands on the Design of a Hierarchical On-line Menu, IEEE Transactions on Professional Communication, 1991.

Barfield, W., Rosenberg, C., and Kraft, C., Relationship Between Scene Complexity and Perceptual Performance for Computer Graphics Simulations, Displays: Technology and Applications, 179-185, 1990.

Barfield, W., Lim, R., and Rosenberg, C., Visual Enhancements and Geometric Field of View as Factors in the Design of Perspective Displays, Proceedings of the Human Factors Society 34th Annual Meeting, Orlando, Florida, 1470-1473, 1990.

Barfield, W., and Rosenberg, C., The Effects of Scene Complexity on Judgments of Aimpoint and Altitude During Final Approach, Proceedings of the Human Factors Society 34th Annual Meeting, Orlando, Florida, 61-65, 1990.

Barfield, W., Rosenberg, C., and Kraft, C., The Effect of Visual Cues to Realism and Perceived Impact Point During Final Approach, Proceedings of the Human Factors Society 33rd Annual Meeting, Denver Colorado, 1989.

TESTIFYING EXPERIENCE

- *Foursquare Labs v.* ***Silver State Intellectual Technologies***, IPR2014-00159, P.T.A.B.. Filed: November 18, 2013.
- ***Silver State Intellectual Technologies*** *v. Garmin, 2:11-cv-01578-GMN-PAL, District of Nevada. Filed: September 29, 2011*
- ***Select Retrieval LLC v.*** *B & H Foto & Electronics Corp. et al*, 1:11-cv-00812-RGA, District of Delaware. Filed: September 13, 2011.
- ***Wavemarket, Inc. d/b/a Location Labs*** *v. LocatioNet Systems*, IPR2014-00199, P.T.A.B.. Filed: November 27, 2013.
- Google v. ***Intellectual Ventures***, IPR2014-00787
- *Federal Trade Commission v.* ***Amazon.com, Inc.***, C14-1038-JCC (Western District of Washington at Seattle)
- ***Lindsay Corporation*** *vs. Valmont Industries,* IPR2015-01039, P.T.A.B.. Filed: April 10, 2015.
- ***In re Myford Touch Consumer Litigation,*** 13-cv-3072-EMC, Northern District of California. Filed: July 2, 2013
- *BeUbiq v.* ***Curtis Consulting Group***, 1-14-cv-270691 (Superior Court of California, County of Santa Clara)
- *Education Logistics, Inc. v.* ***Datasopoulus, MacDonald & Lind***, DV-06-1072 (Montana Fourth Judicial Court, Missoula)
- ***Global Equity Management (SA) PTY. LTD.*** *v. Alibaba,* 6:16-cv-00098 (M.D. Florida)
- ***Level One Technologies*** *v. Penske Truck Leasing,* 4:14-cv-1305-RWS, Eastern District of Missouri. Filed: July 24, 2014.
- ***Title Source, Inc.*** *v. HouseCanary Inc., 2016-CI-06300* (Texas Dist. (state court), Bexar Co.)
- ***Digital Cable and Satellite Products, Set-Top Boxes, Gateways, and Components Thereof****, 337-TA-1049,* International Trade Commission. Filed: March 9, 2017.
- ***Tatsoft*** *v. InduSoft, D-1-GN-14-001853*, Texas District Court Travis County. Filed: June 12, 2014.
- ***Courthouse News Service*** *v. Yamasaki, 8:17-cv-00126 AG (KESx), Central District of California. Filed: January 24, 2017*

- *Princeton Digital Image Corp. v.* ***Konami Digital Entmt Inc.****, 12-1461-LPS-CJB, District of Delaware. Filed: November 13, 2012*
- ***FCA US LLC Monostable Electronic Gearshift Litigation****, 16-md-02744, Eastern District of Michigan. Filed:* October 5, 2016.
- ***Barbaro Technologies, LLC.*** *v. Niantic, Inc., 3:18-cv-02955-RS, Northern District of California. Filed: May 18, 2018*
- ***Blackberry Limited*** *v. Facebook, Inc., 2:18-cv-01844, Central District of California. Filed: March 6, 2018.*
- ***Blackberry Limited*** *v. Snap, Inc., 2:18-cv-02693, Central District of California. Filed: April 3, 2018.*
- ***Saracen LLC*** *v. Sylvain Ross, Marginal Unit, Inc. 4:18-cv-3714,* Southern District of Texas. Filed: October 09, 2018.
- ***Fidelity Information Services, LLC*** *v. Groove Digital, Inc. IPR2019-00050.* Filed: October 17, 2018.
- *U.S. Oil & Refining Co., v.* ***City of Tacoma****, Washington Dept. of Public Utilities, ABB INC., 18-2-07232-3 (Superior Court of Washington for Pierce County)*
- *X One, Inc., v.* ***Uber Technologies, Inc.****, 5:16-CV-06050-LHK, Northern District of California San Jose Division. Filed: October 16, 2019.*
- ***Kipu Systems, LLC.*** *v. ZenCharts, LLC., 1:17-cv-24733-KMW-EGT, Southern District of Florida. Filed: December 31, 2017.*
- ***Maxell, LTD.*** *v. Apple, Inc., 5:19-cv-0036-RWS, Eastern District of Texas. Filed: March 15, 2020.*
- *Aatrix Software, Inc. v.* ***Green Shades Software, Inc.****, 3:15-cv-00164-J-lOMCR, Middle District of Florida. Filed: February 13, 2015*
- ***Certain Electronic Devices, Including Streaming Players, Televisions, Set Top Boxes, Remote Controllers, and Components Thereof***, 337-TA-1200, I.T.C. Filed: April 15, 2020.
- *Opal Labs, Inc., v.* ***Sprinklr, Inc****., 3:18-cv-01192-HZ, District of Oregon. Filed July 3, 2018.*
- ***ExactLogix, Inc****.* ***d/b/a AccuLynx.com****, v. JobProgress, LLC., 3:18-cv-50213, Northern District of Illinois Western Division. Filed: June 19, 2018.*
- *Samsung Electronics and Apple, Inc.* ***v. Neonode Smartphone LLC****, IPR2021-00145. P.T.A.B. Filed: November 6, 2020.*
- *Roku, Inc v.* ***Universal Electronics, Inc.*** IPR2021-00261. P.T.A.B. Filed: December 14, 2020.
- ***Utherverse Gaming LLC*** *v. Epic Games, 2:21-cv-799-RSM-TLF,* Western District of Washington. Filed: June 11, 2021
- *Samsung Electronics LTD. And Apple, Inc. v.* ***Neonode Smartphone LLC****, IPR2021-00144 P.T.A.B. Filed: November 6, 2020.*
- *District of Columbia v.****Maplebear Inc. d/b/a Instacart****, 2020-CA-003777-B, Superior Court of the District of Columbia Civil Division. Filed: August 27, 2020.*
- ***Colleen Whatton*** *v. The Goodyear Tire & Rubber Co*, et al., OCN-L-1580, Superior Court of New Jersey
- ***Masimo Corp*** *v. Apple Inc., IPR2023-00664, P.T.A.B. Filed: March 06, 2023.*
- *Apple Inc. v.* ***Masimo Corp****., 1:22-1378-MN-JLH, District of Delaware. Filed: October 20, 2023.*
- *Design With Friends, Inc. v.* ***Target Corp****., 1:21-cv-01376-LPS, District of Delaware. Filed: September 28, 2021.*
- ***BMW of North America, LLC*** *et al. v. NorthStar Systems, LLC*, IPR2023-00890, P.T.A.B. Filed: June 09, 2023.
- *Lenovo v.* ***AsusTek.****, 337-TA-1382, International Trade Commission. Filed: November 15, 2023.*
- ***Multimedia Technologies*** *v. LG Electronics, 2:22-CV-494-JRG-RSP*, *Eastern District of Texas. Filed: December 23, 2022.*
- ***Moement*** *v. Groomore, 22-CV-02871-WLH-JEM, Central District of California. Filed: April 29, 2022.*

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