

# Christopher Horn

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## Summary

Dynamic problem solver with a keen strategic eye and entrepreneurial spirit. Broad experience successfully applying technology to meet the needs of government, non-profit, military, and commercial organizations. Curious, with a desire to serve human needs through practical solutions. Seeking a diverse, collaborative team working to improve the state of the art and/or social good.

## Education

Carnegie Mellon University  
30 units toward Master of  
Human-Computer Interaction

Brown University  
Bachelor of Arts in Economics  
2001

## Recent

### Designer & Researcher Applied Visions

MAY 2010 – PRESENT

- Lead interaction designer and principal design resource within company of 40
- Future product research, ideation, and design – including hardware & software
- Designing architecture and user interface for next-generation Naval cyber defense system
- Active in business development: concepts, writing, graphics, and work breakdown
- Developed company-wide design and user testing guidance; training staff on its application
- Use cases, requirements discovery, wireframe and workflow design, web-based prototyping

### Interaction Designer MAYA Design

MAY 2007 – APRIL 2010

- Design products and services, with a focus on complex, information-rich systems
- Sole interaction designer for web-based logistics tool that enabled client to earn the only Army 2008 Secretary of Defense Performance Based Logistics Award
- Kiosk design saved client \$300k and won 'Best in Show' at KioskCom Expo
- Successfully managed \$30k to \$550k+ projects
- Active in business development and proposal writing; helped win \$600k+
- Taught human-centered design training course to engineering staff of client firms
- Practices include study design, contextual inquiry, think-aloud testing, wireframing

### Co-Founder Brring!

JAN 2006 – NOV 2008

- Worked all aspects of service creation while bootstrapping the company
- Wrote patent, designed logo, wrote & recorded phone tree, wrote backend code
- Built internal collaborative infrastructure to allow the team to work
- Co-designed internal policies and helped grow service to 16,000+ subscribers

## Past

### Independent Research Carnegie Mellon University

OCT 2006 – JUN 2007

- Performed review of dynamic decision making/time perception literature
- Designed and coded subject task (Java game) and conducted experimental sessions

### Research Assistant, Research Programmer RAND Corporation

JUN 2001 – AUG 2005

- Developed agent-based simulation models of military C4ISR systems
- Identified need and built a grid computing system that spanned the CA and VA offices; grid performance decreased the time to develop simulation models by at least 50%
- Wrote report sections describing model, modeling approach, and findings
- Gave presentation on grids and RAND's Condor grid to ~50 programmers
- Statistically analyzed a large volume of survey data in Stata and Excel

## Skills

Human-centered design  
Project management  
Research (including modeling)  
Business systems analysis

Experimental design  
Physical & digital prototyping  
Human-computer interaction  
Creative & strategic thinking

## Tools

Microsoft Office	SQL	HTML5/CSS/JS
Adobe Illustrator	Java	LAMP
Octave	Stata/R	Python/Perl
Eclipse		
Git/Subversion	GNU/Linux	
Paper & pencil	Mac OS 9 & 10	
Many others	Windows NT/2000/XP/7	

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## Book Chapters

Valorie S. Valencia, Ph.D. with Christopher Horn. "Biometrics Liveness Testing" in *Biometrics*. Berkeley, CA: Osborne McGraw Hill, 2003.

## Articles

John D. Woodward, Jr., Christopher Horn, Julius Gatune and Aryn Thomas. "Biometrics: A Look at Facial Recognition," RAND DB-396-PSJ, Aug 2002.

John D. Woodward, Jr. and Christopher Horn. "Biometrics for Lawyers," *Privacy & Security Law*. Vol. 1, No. 18 (May 2002): 557-561.

## Papers

D'Amico, A., Verderosa, C., Horn, C. and Imhof, T. "Integrating Physical and Cyber Security Resources to Detect Wireless Threats to Critical Infrastructure," 2011 IEEE International Conference on Technologies for Homeland Security, 15-17 November 2011, Waltham, MA.

Buchanan, L., Walczak, P., D'Amico, A., & Horn, C. (2011). *NetDemon: Naval Network Defense Decision Making Model* (Final Report No. NETD-2011-1; Office of Naval Research, Contract #N00014-10-C-0374).

Verderosa, C., Horn, C., Ellsworth, C., Imhof, T., Jermyn, J., Prole, K., D'Amico, A., (2011). *Situational Awareness of Wireless Threats to Critical Infrastructure* (Final Report No. WildCAT/FTR-2011; Department of Homeland Security Science and Technology Contract #HSHQDC-10-C-00062).

Buchanan, L., Rosenstein, M., & Horn, C. (2011). *Deucalion: A Navy Common Operational Security Decision System* (Final Report; Office of Naval Research/Naval Research Lab, Contract #N00014-11-D-0029/Order 0001).

Horn, C. and D'Amico, A. "Visual Analysis of Goal-Directed Network Defense Decisions," *Proceedings of the 8th International Symposium on Visualization for Cyber Security*, 20 July 2011, Pittsburgh, PA.

Horn, C., Roth, S., Szecket, D. "User-Centered Logistics Management Tools Analysis: An analysis of GD current tools and practices for supporting logistics management processes, and MAYA Design's recommendations for the future," *MAYA Design Doc. No. General-07121*, Dec 2007.

Gonzales, D, Martinez, A, Moore, L, Bonds, T, Horn, C, DeRiggi, J, Radaelli-Sanchez, R, and Nealy, D. "Estimating Theater Level Situation Awareness for Campaign Level Force Analysis", unpublished RAND Corporation research, 2007.

Gonzales, D, Horn, C, Alkire, B, and Moore, L. "Analysis Methods for Assessing the Utility of Space Radar for Future Army Forces," RAND DRR-3465-A, 2006.

Gonzales, D, Moore, L, Pernin, C, Uy, R, Sullivan, T, Matonick, D, Dreyer, P and Horn, C. "Measuring the Impact of C4ISR on Ground Force Mission Effectiveness," RAND AB-641-OSD, 2006.

Gonzales, D, Horn, C and Sullivan, T. "Grid Computing at RAND," RAND DRR-3153-RC, 2005.

Gonzales, D, Moore, L, Menthe, L, Elrick, P, Horn, C, Pernin, C, Tseng, M and Houser, A. "Measuring Essential Communications, Fusion, Intelligence, Surveillance, and Reconnaissance Characteristics of the Army Future Combat Systems (FCS) Milestone B," RAND MG-266-A, Dec 2004.

Gonzales, D, Moore, L, Menthe, L, Elrick, P, Horn, C, Tseng, M and Houser, A. "Applying New Analysis Methods to Army Future Force C3-ISR Issues: Focus on Future Combat System (FCS) Milestone B," RAND DRR-3217-A, May 2004.

Harris, Carol, Nadel, Lawrence D., Ph.D., Nichols, Linda Jones, D.Sc. and Horn, Christopher. *Impact of Biometrically Encoded Driver Licenses on Law Enforcement*. Mitretek Systems, Dec 2003. Contract Number: 2001-LT-BX-K002 Project Number: 0401355B

Horn, Christopher and D'Amato, Donald P. "JPEG 2000 Investigation Findings," Mitretek Systems, December 2003. Contract Number: S-OPRAQ-98-D-0029 Delivery Order: S-LMAQM-03-F-3952

Horn, Christopher and D'Amato, Donald P. "Report on Activities at the M1-Biometrics Meeting 18-22 August 2003," Mitretek Systems, October 2003. Contract Number: S-OPRAQ-98-D-0029 Delivery Order: S-LMAQM-03-F-3074

Horn, Christopher and D'Amato, Donald P. "Final Report on Image Quality Management for Passport Color Images (Deliverable h)," Mitretek Systems, September 2003. Contract Number: S-OPRAQ-98-D-0029 Delivery Order: SLMAQM-01-F-4503

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## Papers, cont.

Horn, Christopher and D'Amato, Donald P. "Report on Potential Upgrades to the PhotoDigitization Scanners and Printers (Deliverable f)," Mitretek Systems, September 2003. Contract Number: S-OPRAQ-98-D-0029 Delivery Order: SLMAQM-01-F-4503

Gonzales, D, Moore, L, Elrick, P, Menthe, L, Pernin, C, Sullivan, T and Horn, C. "New Approaches to Communications Network and Intelligence, Surveillance, and Reconnaissance Analysis," RAND AB-662-A, Jun 2003.

Woodward, J, Horn, C and Tseng, M. "RAND Comments on the Department of Defense Enterprise Biometrics Concept of Operations, (CONOPS), Version 0.3," RAND PM-1426-A, Jan 2003.

Woodward, J, Gabriele, M, Webb, K and Horn, C. "Review of Department of Defense & Federal Biometric System Protection Profile for Medium Robustness Environments," RAND PM-1343-A, Jul 2002.

John D. Woodward, Jr. Mark Gabriele, Katharine W. Webb and Christopher Horn. "Review of Department of Defense & Federal Biometric System Protection Profile for Medium Robustness Environments," RAND PM-1343-A, Jun 2002.

John Ausink, Robert Clemence, Robert Howe, Sheila Murray, Chris Horn and John Winkler. Workforce Planning for the Information Technology Field. Santa Monica, CA: RAND, Mar 2002.

Michael Schoenbaum, Katherine Harris, Gary Cecchine, Ana Suarez, Chris Horn and C. Ross Anthony. Final Evaluation Report for the TRICARE Senior Supplement Demonstration Program. Santa Monica, CA: RAND, Mar 2002.

John D. Woodward, Jr., Christopher Horn. "Facial Recognition for Identifying Terrorist Threats (FRITT)," RAND PM-1264-A, Oct 2001.

John D. Woodward, Jr., Christopher Horn. "Focus Group Contribution: Biometrics for Surveillance and Detection," RAND PM-1266-A, Oct 2001.

Christopher Horn, Brent Bell, John D. Woodward, Jr., Katharine W. Webb, Brian Jackson and Kristina Larson. "Review of Testing and Evaluation Documents Related to Biometrics," RAND PM-1214, Jul 2001.

## Presentations

"Information Visualization Primer: Guidelines for applying scientific principles of information visualization to the design of information security visualizations," Company Confidential, 29 Jan 2013, Bedford, MA.

"Visual Analysis of Goal-Directed Network Defense Decisions," 8th International Symposium on Visualization for Cyber Security (VizSec2011), 20 July 2011, Pittsburgh, PA.

"Human-Centered Design Training Course," General Dynamics Corporation. Multiple sessions 2007-2009, Pittsburgh, PA, Scottsdale, AZ, Honolulu, HI.

"Grid Computing at RAND: An Introduction to the Technology and Survey of Potential Demand," RAND Corporation, Santa Monica, CA, June 29, 2005.

"Emerging Imaging Technologies and Standards: JPEG 2000," Department of State Image Quality Improvement Program (IQIP) Conference, 3 Dec 2003, Falls Church, VA.