

Charles J. Cohen, Ph.D., PMP

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Career Summary: Leads the company's research and development (R&D) programs, oversees all R&D activities, and provides technical leadership and staff mentoring. Develops, grows and manages the R&D organization which drives products to commercialization while maintaining profitability. Actively participates in setting corporate goals, developing strategic plans, and formulating and administering corporate policies. Develops and ensures R&D plans are executed successfully, on time, and within budget. Reports to the President and CEO and is a key member of the senior management team.

Qualifications:

Leadership

- Proven success as a corporate executive, program manager, lead engineer, and contributing team member involving project budgets ranging from \$70K to \$8M, with timelines ranging from six months to multi-year cradle to sustainment efforts.
- Over ten years of high level management and business development experience in a high-tech, cutting-edge company. Supervisor of 40 engineering and 10 support staff.
- Project Management Professional, certification achieved December 13, 2008.
- Innovative, reliable, highly motivated, fast learner and problem solver.

Business Development

- Demonstrated ability to write proposals and win contract awards.
- Developed and deployed systems for the Department of Defense. This included product conception, design, spiral development, testing, evaluation, and deployment for \$8M program for the Navy, paralleled by business development and negotiations for commercial sales.
- Worked with major Primes (SAIC, Harris, Ball Aerospace, LMCO, etc.) on funded contracts and business generation.
- Managed and wrote proposal leading to the award of two STOC-II Omnibus IDIQ contracts from PEO-STRI, each with a ceiling of \$17.5 billion as a proposal lead. As well as created and integrated multi-company proposal team.
- Developed commercial software and hardware products.
- Awarded eleven patents as co-inventor in machine vision and human-computer interaction.
- Current Secret level security clearance, with past high-level clearances at the National Security Agency.

Education

Ph.D. Electrical Engineering Systems	University of Michigan, May 1996.
M.S. Engineering Management	Eastern Michigan University, May 2010.
M.S. Electrical Engineering Systems	University of Michigan, June 1991.
B.S. Computer Engineering	Drexel University, June 1989.

Additional Skills

Expertise in the areas of machine vision and image processing (feature extraction, tracking, localization, surveillance), computer programming (C/C++/C#, MATLAB), artificial intelligence, interfaces, sensors, system integration, hardware integration, algorithms, and sensor fusion.

Employment:

Vice President, Research & Development, Cybernet Systems Corporation, Ann Arbor, Michigan, May 2000–Present

Accomplishments

- Increased R&D funded activities from less than \$1M a year to over \$5.5M a year.
- Spearheaded efforts resulting in three years of Congressional funding totaling \$10M for product development, system deployment, and commercialization
- Redirected network message handling system from military focus to computer game business activity. Managed technology development through to completed commercial product.

- Established company-wide research and development path including advanced planning with quarterly project review, which resulted in better utilization of resources, projects completed on time and under budget, and satisfied customers.
- Implemented activities and organizational changes that reduced corporate overhead by 12%.
- Management of medical support device sales that resulted in division revenue of \$750K/year.
- Led the expansion of intellectual property to cover core business activities.

Responsibilities

- Determine annual corporate goals, corporate budgets, major internal research programs, bonus structure, and external business activities.
- Perform competitive analysis and market definition, establish product specifications and design, define engineering processes, foster government relations, and create/maintain strategic partnerships.
- Direct and supervise six division managers, including annual performance reviews, mentoring, resource allocation, etc.
- Authorize, review, and maintain business agreements, including NDAs, PIAs, Teaming Agreements, and Licensing Agreements.
- Direct successful product development programs and business plans for machine vision system (ex: GestureStorm), maintenance support tablet and software (ex: Supportability Wireless Maintenance Assistant and TabletTools), and others.
- Establish and maintain key relationships with large and small businesses, universities, military, and government agencies as prime contractor, sub contractor and joint research, development, and product creation participant.
- Establish procedures for monitoring and completing deliverables on time. These include externally driven contract deliverables and internally generated ones.
- Define and implement bi-annual company-wide employee review system. Responsible for company-wide salary evaluations, hiring, firing, and promotions. Mentor employees resulting in strong, active, and committed company personnel.
- Presentation of briefings (technical, business, and corporate) to government organizations, businesses, and professional conferences and participate in press/media interviews.
- Continue to fulfill responsibilities for Director position below.

Director, Research & Development, and Senior Research Engineer, Cybernet Systems Corporation, Ann Arbor, Michigan, April 1996 to May 2000

Accomplishments

- Directed and improved Small Business Innovative Research proposal and Broad Agency Announcement response activities, including more direct and targeted proposals, training of junior employees with less writing experience, and after action review of awards and debriefings. This resulted in a reduction in overhead costs 20% for proposal writing while increasing win rate by 15%.
- Expanded use of Subject Matter Experts and large prime subcontractors for proposals.
- Led development of GestureStorm from a machine-vision based Small Business Innovative Research project to a commercial product which has been sold to several television stations nationwide.

Responsibilities

- Keep projects within budget by motivating employees to work efficiently, working with customers to have focused, realistic and attainable results, and maximizing efficient use of resources by assessing requirements for multiple projects and identifying opportunities for multiple application of resources.
- Present technical research papers at conferences for initiating business development.
- Conduct technical due diligence for go/no-go internal research and development programs.
- Coordinate research program planning including resource management and goal setting, establishing milestones and deadlines.
- Negotiate contracts with Large Government Primes (as prime contractor and sub contractor).
- Directly supervise more than 20 government contracts and internal research projects.
- Directly supervise more than 40 engineers and support staff.

Undergraduate Engineer: National Security Agency (NSA), Fort Meade, Maryland, January to June of 1986, 1987, and 1988.

- Involved in the design, construction, and testing of a microwave receiver system. This included analog and digital design, board layout, purchasing and requisitioning of parts and lab equipment, testing equipment and components, calculation of signal to noise ratios and other required data, and signal simulation.
- Designed, built, and tested a Dual Channel R7000 receiver to RS-232 Interface Box. Assisted Project Manager/Engineer in the design and construction of a medium size receiver system. Involved in the purchasing and requisition of components for the receiver system and interface box. Traveled overseas to assist in the installation of a receiver system.
- Created user-friendly PC software which performed complex radio propagation phenomenon calculations. Program was adapted from several related Radio Science articles.

Selected Patents (out of 11 total):

- U.S. Patent #8,407,625 Cohen, Charles; Beach, Glenn; Cavell, Brook; Foulk, Gene; Jacobus, Charles; Obermark, Jay; Paul, George; "Behavior recognition system." Issued March 26, 2013.
- U.S. Patent #8,150,101 Haanpaa, Douglas; Cohen, Charles; Beach, Glenn; Charles, Jacobus; "Orientation invariant object identification using model-based image processing." Issued April 3, 2012.
- U.S. Patent #7,460,690 Cohen, Charles; Beach, Glenn; Cavell, Brook; Foulk, Gene; Charles, Jacobus; Obermark, Jay; Paul, George; "Gesture-controlled interfaces for self-service machines and other applications." Issued December 2, 2008.
- U.S. Patent #7,121,946 Beach, Glenn; Cohen, Charles; Jacobus, Charles; Paul, George; "Real-time head tracking system for computer games and other applications." Issued October 17, 2006.
- U.S. Patent #7,050,606 Paul, George; Beach, Glenn; Cohen, Charles; Jacobus, Charles; "Tracking and gesture recognition system particularly suited to vehicular control applications." Issued May 23, 2006.
- U.S. Patent #5,652,849 Conway, Lynn; Cohen, Charles; "Apparatus and method for remote control using a visual information stream." Issued July 29, 1997.

Societies: Interservice/Industry Training, Simulation and Education Conference (I/ITSEC Tutorial Board - 2011-Present), Applied Image Pattern Recognition (2001 and 2008 conference chair, committee member and officer 1998-Present), Simulation Interoperability Standards Organization (Board of Directors - 2009-2010), IEEE, Association of the U.S. Army, Phi Eta Sigma, Eta Kappa Nu, SWE, Engineer in Training.

Published Papers: Over fifty papers published in conferences and journals.

Volunteer Work:

Future City Competition Judge: The Annual Michigan Regional Future City Competition, coordinated by ESD-The Engineering Society and sponsored by the DTE Energy Foundation and Ford Motor Company Fund, Livonia, MI, 2003-Present.

Artificial Intelligence Journal: Reviewer, 2006.

International Journal of Computer Vision: Reviewer, 2003.

National Science Foundation: Reviewer, 2002-2003.

Science Fair Judging: IEEE-SEM Professional Awards at the 41st Annual Science and Engineering Fair of Metropolitan Detroit (SEFMD). April 1, 1998.

Public Instruction in Medieval Science, Mathematics, and Engineering: these subjects were taught at various venues (such as Scout meetings, public schools, and adult seminars) since 1991.

Personal Interests: Graduate of the Conservatory improvisation program at The Second City, medieval history, and juggling.