Dr. Jeffrey Everson

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EMPLOYMENT HISTORY

JHEverson Consulting LLC: SBIR/STTR Proposal Support

April 2009–present

<u>Mission Statement</u>: For understaffed companies, who submit SBIR/STTR proposals under stringent deadlines and encounter stiff competition, *JHEverson Consulting* provides a timely competitive advantage with proposal research and commercialization planning. Unlike consultants, who focus more on either technology or business, *JHEverson Consulting* has both broad technical expertise and demonstrated successful business development results within and external to the SBIR/STTR space.

<u>Services</u>: JHEverson Consulting offers assistance in the following areas:

- Identify funding opportunities within and external to the SBIR/STTR space
- Create a technically credible proposal with a roadmap to commercialization
- Coach, review, and critique proposals
- Perform market and competitive research
- Provide general business development consulting
- Form partnering and team building

Director for Business Development – Energy Technology Development

QinetiQ North America, Technology Solutions Group (previously Foster-Miller, Inc.) Waltham, MA

March 2006–April 2009

Identified and cultivated a major North American gas producer in Houston:

- Won contracts for technology development related to deliquification of gas wells
- Obtained access to client gas fields to acquire production data
- Planned for deliquification product manufacture, distribution, sales, and installation
- Work in progress leading to multimillion dollar markets for improved gas production

Conducted detailed technology and market studies on the following subjects:

- Coal gasification—Plant data, gasifier technologies and trends, U.S. Department of Energy projects, feed stocks, feeders, gasifier issues, bio-mass co-firing, and underground gasification; established contact with major original equipment manufacturers
- President Obama's energy plan—American Recovery and Reinvestment Act of 2009 energy funding, smart grid, electric grid physics, impact of renewable energy, transmission and distribution grids, energy storage, wind turbine bottlenecks, and business development topics
- Electric grid and wind energy integration—Primary drivers for renewable energy, wind integration constraints and constraint mitigation, grid stability and phasors, cyber security, power line sensors, and business development topics

• Stirling engines—Performance comparisons, combined heat and power (CHP), market drivers, European Union directives, European Union CHP examples, landfills, solar, free-piston Stirling engines, and tax credits

Business development projects (along with their rationale and results):

- Worked with venture capital source regarding robotic platforms for inspecting natural gas pipelines to support a federal government inspection mandate; results pending
- Analyzed possibilities to improve downhole steam generation for bitumen production in Canadian tar sands with the Universities of Alberta/Calgary, Alberta Research Institute; monitoring opportunities
- Performed technology and market research to preserve electric grid stability using overhead power line sensors; still in progress
- Wrote a white paper about preventing explosions in underground steam pipes using long wave ultrasonic inspection; client review is in progress
- Visited ethanol plants in South Dakota to review improving their maintenance; decided this subject was not worth pursuing as ethanol from corn is problematic and has few maintenance issues

Senior Engineer

Foster-Miller, Inc. Waltham, MA December 1998–March 2006 Served as the principal investigator for multiple SBIR programs, including:

- U.S. Department of Transportation (DOT) Phases I/II—Developed and evaluated a collision warning system for inner-city transit buses (Phase II work won U.S. Small Business Administration's Tibbett's Award)
- U.S. DOT Phases I/II—Designed and laboratory tested a friction sensor for vehicular collision warning systems
- U.S. DOT's Federal Railroad Administration (FRA) Phase I—Designed and evaluated an acoustical sensor to detect defects in overhead railroad catenary wire
- National Aeronautics and Space Administration (NASA) Phase I/Air Force Phase I— Designed and computer modeled microelectricalmechanical sensors (MEMS) for gas turbine engines (in conjunction with Northeastern University)
- U.S. DOT FRA Phase I—Developed and evaluated a real-time strain measurement system for railroad wheels, including a radio frequency link for data transmission
- National Academy of Sciences, Phase I—Developed and field tested a highway railroad gate-crossing system

Senior Research Scientist

Battelle Memorial Institute Cambridge, MA *March 1991–September 1998* Won and managed \$1.5 million in contracts from the U.S. DOT regarding collision-avoidance and driver-assistance systems:

• Provided technical support for computer simulations with vehicle dynamical effects, roadway geometry, driver performance, and countermeasure algorithms

• Performed engineering trade studies involving millimeter wave radar, laser radar, video and infrared cameras, acoustical sensors, and magnetometers

Previous Positions

Managed and provided technical support to programs involving antisubmarine warfare, the Strategic Defense Initiative, infrared sensor systems, and adaptive optical systems for

- The Analytic Sciences Corporation (TASC), Reading, MA
- WJ Schafer Associates, Chelmsford, MA
- Kollsman, Merrimack, NH
- Honeywell Electro Optics Systems Division, Lexington, MA
- Itek Optical Systems Division, Lexington, MA

EDUCATION

Boston College, Newton, MA

- PhD in physics
- Thesis topic: prenucleation effects of metallurgical phase transitions measured by Moessbauer spectroscopy in iron-nickel alloys

Northeastern University, Boston, MA

- MS in physics
- BS in physics

PROFESSIONAL AFFILIATIONS AND AWARDS

- Member, Society of Petroleum Engineers
- SBIR Tibbett's Award winner in October 2001 for a Phase II program to develop a collision warning system used on inner-city transit buses. This Tibbett's Award was the first one for a U.S. DOT contractor since the inception of the SBIR program in 1982. This national award is made annually to small firms, projects, organizations, and individuals judged to exemplify the best in SBIR achievement.
- Honeywell Technical Innovation Award, 1984, Apparatus and Method for Contactless Characterization of Photodiode Mosaics

PATENTS

- Humidity sensor and method for monitoring moisture in concrete, U.S. Patent and Trade Office application 20070116402
- Wavefront sensor using a surface acoustic wave diffraction grating, U.S Patent 4474467

PERSONAL

- Violinist and member of the board of directors, Reading Symphony Orchestra
- Member, I-93/I-95 Interchange Task Force established by the Massachusetts Department of Transportation

PUBLICATIONS

Reinach, S. J., Everson, J. H., "Driver-Vehicle Interface Requirements for a Transit Bus Collision Avoidance System," Paper (01B-247) submitted to the Society of Automotive Engineers Conference, SAE 2001, March 2001, Detroit, MI.

Reinach, S. J., Everson, J. H., "The Preliminary Design of a Driver-Vehicle Interface for a Transit Bus Collision Avoidance System," Paper submitted to ITS2001, Intelligent Transportation Society of America's Eleventh Annual Meeting and Exposition June 4–7, 2001.

Campbell, J. L., Pittenger, J. L., Everson, J. H., "Human Factor Research Issues for the Integration of ITS Devices," SAE International Congress and Exposition, March 1–4, 1999, Detroit, MI.

Pape, D., Hadden, J., McMillan, N., Narendran, V., Everson, J., "Performance Considerations for Run-Road Countermeasure Systems for Cars and Trucks," SAE International Congress and Exposition, March 1–4, 1999, Detroit, MI.

McMillan, N. J., Pape, D. B., Hadden, J. A., Narendran, V. K., Everson, J. H., A Statistics-Based Simulation Methodology for Evaluating Collision Countermeasure Systems Performance, Intelligent Vehicles Symposium, Boston, MA, November 1997.

Narendran, V. K., Pape, D. B., Hadden, J. A., Everson, J. H., Battelle; Pomerleau, D. A., Carnegie Mellon University, Analytical Methodology for Design and Performance Assessment of Run-Off-Road Crash Avoidance Systems SAE Technical Paper Series 970455, International Congress and Exposition, Detroit, MI, February 24–27, 1997.

Pape, D. B., Narendran, V. K., Koenig, M. J., Hadden, J. A., Everson, J. H., Battelle; Pomerleau, D. A., Carnegie Mellon University, A Dynamic Vehicle Simulation to Evaluate Countermeasure Systems for Run-Off-Road Crashes SAE Technical Paper Series 960517, International Congress and Exposition, Detroit, MI, February 22–26, 1996.

Everson J., Kopala E., Lazofson L., Pomerleau, D., "Military Sensor Performance Prediction Software and Vehicle Control Systems for Intelligent Transportation Systems," 5th Annual Dual-Use Technologies and Applications Conference, SUNY Institute of Technology at Utica/Rome, NY, May 22–25, 1995.

Everson J., Hadden J., Kopala, E., Lazofson, L., Tijerina, L., "An Integrated Vehicle/Driver/Countermeasure Model for Single Vehicle Roadway Departure Crashes," Transportation Research Board 74 the Annual Meeting, Washington, DC, January 22–28, 1995.

Everson, J., Kopala, E., Lazofson, L., Choe, H., Pomerleau, D., "Sensor Performance and Weather Effects Modeling for Intelligent Transportation Systems ITS) Applications," SPIE's Photonics for Industrial Applications, Boston, MA, October 31–November 4, 1994.

Chovan, J., Tijerina, L., Everson, J., Pierowicz, J., Hendricks, D., "Analysis of Intersection/Left Turn Across Path Crashes," Final Report, Omni Task RA1039-Intelligent Vehicle/Highway Systems (IVHS) Program (Contract No. DTRS-57-89-D-00086), May 23, 1994. Chovan, J., Everson, J., Hendricks, D., Pierowicz, J., "Analysis of Opposite-Direction Crashes," Final Report, Omni Task RA1039-Intelligent Vehicle/Highway Systems IVHS Program (Contract No. DTRS-57-89-D-00086), June 1994.

Tijerina, L., Hendricks, D., Everson, J., Kiger, S., "Examination of Backing Crashes and Potential IVHS Countermeasures," Final Report No. DOT-VNTSC-NHTSA-93-1, Omni Task RA1039-Intelligent Vehicle/Highway Systems (IVHS) Program (Contract No. DTRS-57-89-D-00086, September 1993.

Hendricks, D., Allen, J., Tijerina, L., Everson, J., Knipling, R., Wilson, C., "VNTSC IVHS Program Topical Report No. 1: Rear-End Crashes," Final Report, Omni Task RA1039-Intelligent Vehicle/Highway Systems (IVHS) Program (Contract No. DTRS-57-89-D-00086) Final Report, July 1992.

Hendricks, D., Allen, J., Tijerina, L., Everson, J., Knipling, R., Wilson, C., "VNTSC IVHS Program Topical Report No. 2: Single Vehicle Roadway Departures," Final Report, Omni Task RA1039-Intelligent Vehicle/Highway Systems (IVHS) Program (Contract No. DTRS-57-89-D-00086), Final Report, July 1992.