

Vince Socci

**MBA, MSEE/BSEE, MA, M.Div., FE, PMP Certified, VOSB
President, CTO, Engineering Director, Business Manager, R&D Leader**

Synopsis

Cross-disciplined, innovative, executive leader with engineering, business, sales, R&D skills who drives teams, businesses, and technology development. Created and developed \$100M+ business segments in aerospace, automotive, and power/energy industries. A proven leader in business development, engineering management, technology innovation, sales, project leadership, product development. Visionary – strategic – Effective.

Professional

(30+ years of progressive technical, management, and leadership experience bringing consistent value to my customers)

8/2000–Present *On Target Motion, www.ontargetmotion.com Endicott, NY*
Owner, Director Adv Tech, Chief Engineer, Principal Investigator, Founder

- Founded engineering design company developing high reliability embedded power control systems for aerospace and automotive vehicle platforms, medical systems, and communication electronics.
- Directed business units, P/L, contracts, program performance, strategic development & services.
- Pulsed power control and delivery system for medical, MRI, radar, C3ISR, and industrial applications
- Rugged, real-time, analog/digital circuit design, multiprocessing core, software control algorithms.
- Developed and managed funded and investment research and development programs.
- DSP/FPGA redundant actuator control system, hardware, software used in aircraft and personal transporter
- Electrical design of ground and air vehicle navigation/communication systems with DO178B/DO254.
- DSP-based electro-hydraulic motor control system for aircraft fueling application
- Hybrid and Electric vehicle motor controls and power management systems
- Biosensor-based, prognostic and control instrumentation for medical applications through FDA certification.
- Military vehicle power systems engineering for pulsed-power radar platforms.
- Radar T/R, sensing, analysis, communication, cyber-security, ISR and spatial mapping system.
- High power system (>250 kW) design and control, including grounding and arc flash fault management
- Graduate School Adjunct Faculty: Developed and taught courses in MBA program (R&D, capstone, PM) and technology programs (programming, product development).
- Consulting for high-reliability applications and UAS/UAV technical/business services.

5/2017–Present *National Instruments Endicott, NY*
Principal Business Development Manager, Automotive Validation

- Delivered expert business and technical acumen required in customer engagements to build credibility and increase revenue in automotive and off-highway, aerospace, and power HIL applications.
- Developed electric vehicle powertrain validation methods, SiC product solutions, and test processes to enable customers to validate and certify their electric vehicle powertrains 100kW-500kW.
- Took accountability; raised the value delivered to customers and partners; achieved 50-75% YoY growth.
- Applied domain expertise to assess customer applications and tailor solutions for battery, power transfer, inverter, motor validation and production test, engaging partners and acquisitions where needed.
- OEM application consulting; developed partnerships; defined go-to-market and sales strategy; created strategic architectures; led business and technical development teams; delivered customer-centric solutions.

5/2014–5/2017 *LHP Engineering Solutions Columbus, IN*
President, Product Platform Division and Director, R&D

- Created and operated the products division of LHP, developing engineering tools and services to accelerate embedded controls engineering in a variety of industries such as automotive, aerospace, medical devices, energy systems, and industrial controls. Built LPP from empty room to multi-million-dollar business.
- Launched value streams in systems, software, electronics, manufacturing, engineering services
- Designed model-based design software, rapid prototyping environments, hardware-in-loop test platforms, IOT systems, diagnostic/prognostic analyzers, calibration tools, test platforms, and control software.
- Managed engineering development teams using agile methods for control systems, model-based design processes, training, consulting, turn-key system development, and model design and integration.
- Responsibilities include division leadership, P/L management; business strategy, planning, operations; product line strategic planning; engineering leadership; customer coordination, technical sales.
- Industry pioneering in controls, model-based design, test automation, telematics, rapid prototyping.

8/2011–1/2014 *Parker Aerospace Hauppauge, NY*
Business Unit Leader; Director, Large Transport Fuel Systems; Principal Investigator, Power & Controls

- Product line director for aircraft fuel systems business team, responsible for P/L, performance, and growth.
- Lead AS9100 product development efforts of an international team of 50+ people.
- Manage cost, schedule, performance of \$50M global engineering program to highest-profile customer.
- Directed international team to develop high-performance, complex aircraft electronics and software.
- Program turnaround, corrective actions, and recovery for critical business unit.

- Drove change in organization, work processes, optimized team dynamics and behavior.
- Develop and maintain key customer business and technical relationships.

6/1994–8/2000 Lockheed Martin Control Systems Johnson City, NY

Principal Project Engineering Manager

- Electronic, power, mechanical and hydraulic modeling and simulation.
- Project manager for avionics, data communications, power system, automotive and military projects.
- R&D management for HEV, aerospace, PHM, and engine control programs.
- Systems engineering lead on aerospace/automotive programs and proposals
- C-17 advanced avionics road-mapping, planning, development and leadership
- Embedded system and FPGA development in compliance with DO178B/DO254
- Test equipment design for integration, qualification, EMI, certification

5/1992–6/1994 Cummins Electronics Company Columbus, IN

Systems Engineer

- Developed control algorithms for diesel engine, power generators, and fuel pump controllers.
- Designed HW and SW for embedded systems and diagnostic tools.

8/1990–5/1992 Pennsylvania Power and Light Scranton, PA

Distribution Engineer

- Responsible for maintenance and voltage quality analysis of distribution lines.
- Managed division operations to include load projections and power quality.

8/1988–8/1990 CertainTeed Mountaintop, PA

R&D Engineer (Internship)

- Developed visual computer system to automatically scan insulation, measure quality control parameters, perform SPC and control manufacturing process.

Education

(Business, technology, relationship expertise)

MBA / Technology Management – University of Phoenix, 2000 Phoenix, AZ
MSEE – State University of New York, 1996 Binghamton, NY
MA Counseling – Liberty University, 2011 Lynchburg, VA
M. Div. Chaplaincy – Liberty Seminary, 2011 Lynchburg, VA
BSEE – Wilkes University, Summa Cum Laude, 1992 Wilkes-Barre, PA
Continuing Education – IEEE, PE, PMI, UOP Faculty, SUNY Proj Mgmt Instructor, US Army PLDC
US Veteran – Military training and leadership, with distinguished awards.

Expert Witness

(Consulting expert for litigation, testimony, advice, forensic services, and related expert witness services)

- **Product Liability**
Testifying, depositions, expert reports. Incident analysis and forensics; product design review and development investigation; scene reconstruction; product simulations.
- **Patents and Intellectual Property**
Testifying, prior art investigation, trade secret misappropriation, patent infringement analysis (including source code). Recreation of engineered designs. Audit and validation of engineering work and quality.
- **Industries and Areas of Expertise**
Medical devices, aerospace/automotive electronics/software, safety-critical systems, real-time embedded controls, electromechanical power conversion, avionics modeling.
- **Case List (deposition and testimony list available separately)**
Electric vehicles, biomechatronic devices, power systems liability; energy management; control system robustness; patent protection and IP infringement; accident investigation; trade secret disclosure.

Leadership Skills

(Solid ability to lead program teams, coach people, and manage technology)

- **Leadership** – Project leader on major critical business programs. Launched engineering company from the ground up. CTO on several business projects. Led life-cycle development of several winning multi-million-dollar ventures. Over 25 years' experience managing multiple projects more than \$80M concurrently.
- **Innovative** – Forward-looking, effective individual and team worker. Self-starter, proactive, creative, out-of-the-box thinker. Innovative and entrepreneurial spirit has created businesses and captured several new business opportunities. Received supplier awards for driving changes to turn around red programs.
- **Negotiator** – Recognized for leadership and focus on achieving program goals while directing teams of over 60 diverse personnel. Knowledgeable and aggressive, with a high degree of personal and professional integrity. Accomplished problem-solver, troubleshooter, and decision-maker. Closed must-win programs.
- **Strategic** – Skilled at evaluating future business needs and strategizing technologies to meet them. Experienced in strategic planning and implementation. Active member of several steering committees.
- **Interpersonal** – Built business relationships and led sales programs. Motivated underperformers. Licensed pastor, chaplain, and counselor. Led groups/individuals through crises and solution-focused counseling.
- **Communicator** – A solid communicator with excellent team leadership and customer interaction skills. Global and international business experience with language and culture awareness. Written Spanish fluency.

	<ul style="list-style-type: none"> • Profession – Expert witness, with deposition experience, for safety-critical systems. Technology advocate for humanitarian technology awareness. Active on IEEE position policies. Developed key technology standards. • Learner – Lockheed Martin Leadership Curriculum and Technical Leadership Program, US Army Primary Leadership Development Program. Strong background and presence in education. Life-long learner.
Technical Skills <i>(Diverse skills applied across applications over project life-cycles)</i>	<p>Applications – Automotive powertrains, embedded systems, model-based, design, mechatronics, aerospace, avionics, automotive, radar, UAV, communications, hybrid electric vehicles, robotics, military and defense systems, radio/navigation, medical devices, locomotives, power electronics, autonomous systems</p> <p>Management – New product development, portfolio management, technology/R&D leadership, agile Project Management, product roadmaps, Lean & Six Sigma, customer requirements development, technical marketing, operations management, SWOT, sales forecasts, operations management.</p> <p>Systems – MBSE, Platform integration, safety-critical development, data communication, trade studies, requirements management, architecture, electrical systems, DSP, FPGA, CAN, electromechanical, sensors, production, aftermarket, Python, DOORS, Saber, C/C++, MATLAB, Simulink, LabVIEW, Solidworks, LTSpice</p> <p>Standards – Various IEEE, DO-, SAE, ISO standards; ISO9001/AS9100, IEEE12207, DO-178C, ARP-4761/4754, DO-254, DO-260, SAE-J1939/J1708/J1772, IEC60601, MISRA, CMMI, ISO26262, ARINC</p>
Patents	Patent Invention 5533489 – Exhaust Gas Recirculation Control System
Papers and Research	Presented papers in Rapid Prototyping, Embedded Development Workflow, Hardware-in-Loop Testing, Autonomous Systems, Power management, Embedded Controls, Adaptive Product Management; Safety-Critical Systems Engineering; Medical devices, Electrical system simulation, New Venture/Partnership Development; Knowledge Management and Collaboration; Remote Project Development; Virtual Prototyping; Power Systems; Digital Communications; Project Management; Technical Teaming Practices; IEEE Smart Micro grids team. Chair of many technical conferences on medical technology, electric vehicles, power systems and controls.
Selected Publications	How It's Made: Drone Edition (2016); Accelerating Embedded Controls Development with an Integrated Workflow (2016); Rapid Controls Prototyping for Complex Automotive Controls (2016); Model-Based Development of a Real-Time Prototype of an Automotive Engine Control (2015); The Myths and Magic of Autonomous Vehicles (2015); Performance-Enhancing Biomechanics: A Competitive Advantage? (2013); So You Want to be a Consultant? 12 Steps to Success (2011); Electric Vehicle Power Management (2010); Actuator Control Design for Safety-Critical Medical Applications (2009); Performance Requirements & Simulation of Aircraft Power Systems (2006); Power System Modeling, Simulation and Performance Evaluation (2005); System Design of Vehicle-based Mobile Electric Power Applications (2005); Failsafe Avionics Control Algorithms (2004); Aircraft Structural Health Management Data Parameters (2003); Avionics Communication Workshop: Mil-Std-1553, ARINC429, RS485 (2002)
Awards received	Boeing Golden Eagle Award, Boeing Silver Eagle Award, Lockheed Martin Tradition of Excellence Award, UAS/UAV Technical Panel Award. Exemplary performance reviews by employers. Supplier awards from several customers. US Army leadership awards. Lockheed Martin Advanced Course in Engineering Instructor of the Year Award. IEEE Regional and Lifetime Leadership Awards. Several community service awards.
Teaching, Mentoring and Training	Adjunct Faculty, MBA – Faculty for graduate and undergraduate courses, trained and approved for R&D mgmt, strategic mgmt, business consulting, project mgmt, programming and global business courses. Leader for MBA Capstone Course and innovation management curriculum Binghamton University Continuing Education adjunct faculty for project management and corporate training. IEEE Instructor – Developed and taught graduate-level courses in Biomechanics, radar, safety-critical embedded controls, and signal processing systems. Developed/delivered professional courseware in product management, embedded systems development, control system design, systems engineering, debugging embedded systems, digital data communication, power systems design, technical business development, engineering development processes and signal processing.
Certifications and Professional Associations	IEEE Board of Directors (2014-15), IEEE AES Board, UAV/UAS Tech Panel Chair, SAE chair, FAA liaison; UAV standards; Project Management Professional (PMP #1503011), Project Management Institute (PMI), Certified First Aid responder and instructor. Certified LM Project Manager. Certified UOP Faculty, SEI. Licensed amateur radio operator (Extra Class – AC2NA), ARRL, Senior Member of IEEE (Engineering in Medicine and Biology, Power Electronics, Communications, Computer, Engineering Management, Aerospace and Electronics, Power Engineering Societies) Previously held Secret clearance, no obstacles to reinstatement. Licensed pastor, chaplain, and pastoral counselor. Pastor/Leader for New Life Ministries.