David S. Koplow

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Mr. Koplow is a Founding Vice-President, project manager and senior electrical engineer at AlareTech with over 15 years professional experience in the aerospace industry and electronic product development. He received his Bachelors of Science in Electrical Engineering from Florida Atlantic University and will obtain his Masters in Electrical Engineering from California State University Northridge in December 2013. He has designed, developed and performed validation tests of unmanned aircraft and submersible rover electrical systems including avionics and payload cameras for several SUAS including the Switchblade SUAS and its derivatives. He ran the production line of the Block 1 Switchblade aircraft with over 95% reliability rate.

Mr. Koplow's specialties include system /power architecture design, power / RF electronics and system integration. He has led teams of engineers and technicians from proof-of-concept projects to full rate production programs. Mr. Koplow regularly performs power supply circuit design and analysis with strengths in design for manufacturing and cost restraints. His areas of expertise include: RF & High Performance Analog Instrument Development, Digital & Power Instrument Development, as well as Mechanical, Thermal and PCB Design.

Education

2013 M.S. Electrical Engineering, California State University at Northridge*. In progress, expected December 2013*.

1999 B.S. Electrical Engineering, Florida Atlantic University.

Professional Experience

2012 - Pres. Alare Technologies, LLC – Vice President. Co-founder of this startup company providing technical consulting and engineering services in addition to basic research and development supporting new concept and market feasibility assessments for government and industry.

2005 - 2012 AeroVironment Inc., Simi Valley, CA – Project Manager, Sr. Electrical Engineer.

- Lead electrical engineer for Switchblade program; responsible for the design and development of the avionics package, sensor integration and image processing electronics, data and video link, power management, and electric propulsion system integration.
- Managed teams up to 15 engineers and technicians from concept development, system implementation and transition into production.
- Integrated several unmanned air vehicles involving detailed sensor analysis and calibration procedures.
- Designed and developed full electrical systems for a variety of aircraft involving power and systems architecture, battery charging systems, mixed signal conditioning of sensor outputs, data acquisition, communication systems, interface boards requiring embedded software, and RF systems including GPS, VHF and UHF.
- Designed printed circuit interface boards ranging from two to twelve layers.
- Successfully troubleshooted many complex electrical systems using laboratory electronic test equipment.

2000 - 2005 Lockheed Martin Corporation, Riviera Beach, FL. - Electrical Hardware Engineer.

- Applied engineering principles to design, test, and integrate system level and subsystem level requirements for an unmanned submersible vehicle.
- Determined the feasibility of new designs by performing tradeoff studies, which included technical requirements, cost, form factor restrictions, time limitations, and historical confidence.
- Compiled and analyzed operational, test, and research data to establish performance specifications and requirements.
- Composed detailed test procedures to confirm that engineering designs have met all requirements and specifications.
- Received the RAVE Achievement Award in 2001 and the Leadership Excellence Award 2003

Technical Skills

Hardware: Mixed Signal Conditioning and Amplification Circuits, DC-to-DC Converters, ADC and DAC Circuits, Servo Control Systems, Anti-Aliasing Filtration Circuits, Analog and Digital Instrumentation, RF Amplifier systems, Battery Charging Systems.

Micro-Controllers: Microchip PIC 8Bit Series, Atmel AVR 8-Bit RISC Series, Motorola 6800 Series, ST STR7 STR9 Cortex (ARM) 32 Bit Series.

Telemetry Systems: Ethernet (10Base2, 10BaseT, 100BaseT, 1000BaseT), I2C, CAN, USB 2.0, Fibre Channel, RS232, RS422, RS485, ARINC-429, MIL-STD-1553, SPI.

Software: Altium, ORCAD, PSPICE, P-CAD, Matlab, C, C++, Assembly, AutoCAD, Excel, Visio, Project and other Microsoft Office programs.

Analysis Tools: Oscilloscopes, Spectrum Analyzers, Function Generators, Network Analyzers, Power Meters, Digital Analyzers, TDRs, OTDRs.