AVIATION WEEK

a&d COMPANIES to WATCH

AltaSim Technologies

ENGINEERING SVCS

Jeffrey Crompton, Principal
130 E. Wilson Bridge Road
Suite 140
Columbus, OH USA 43085
614 861 7015 x11
jeff@altasimtechnologies.com
www.altasimtechnologies.com

WHAT WE DO/TECH FITNESS

The business has developed a number of new products, most recently these have been:

1. Released software to design and develop micro-plasma devices for aerospace applications
2. Commercialized software to predict the effect of manufacturing process technology on the production of Ceramic Matrix Composites for aerospace applications
3. Developed commercial prototype device for detecting the integrity of implanted prosthetic heart valves
4. Developed tools to predict the effect of MRI exposure on implanted medical devices
5. Released novel cloud-based computational analysis tools for routine use by non-domain experts to address problems in the aerospace material production industry.

PERFORMANCE

The business was established in 2002 using personal equity financing. Since that time it has grown to employ 6 full time personnel and provides services for a range of industries including Aerospace and Defense contractors and Federal agencies. We routinely perform over 100 projects per year and have provided services for over 400 individual companies. In addition to providing traditional engineering consulting services we also provide training in computational analysis using both traditional class room approaches and modern web based services. To extend the application of the technology we have developed individual stand alone products that can be used by people with limited or no experience in computational analysis to allow them to apply the analytical tools on a daily basis. Most recently we have established joint ventures with other service providers to integrate our products and services with other capability so that the combined activities can address the comprehensive nature of problems in specific industry and market segments.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

AltaSim Technologies provides multiphysics computational simulation capability to enable accurate simulation of real world technologies and processes that can replace the traditional prototype build and testing mentality. As a consequence new technologies and products can be developed faster and cheaper, benchmark studies have shown that our approaches can simultaneously save up to 90% of the cost and 50% of the time for any new product or technology development. In the space and defense arena our simulation capability has been successfully applied to the development of micro-plasma devices for electronic circuits, establishment of manufacturing process technology for advanced materials used in aerospace engines and rocket motors, design of structures with improved resistance to explosion, development of electromagnetic rail gun technology and design of emergency power switching devices for on-board US Navy ship applications. In the commercial arena, our expertise has supported technology developments in the aerospace, medical products, automotive, consumer goods and petrochemical areas.

CPI Aerostructures

MATERIALS/MANUFACTURING

Douglas McCrosson
Chief Operating Officer
91 Heartland Blvd.
Edgewood, NY USA 11717
(631) 586-5200
dmccrosson@cpiaero.com
www.cpiaero.com

WHAT WE DO/TECH FITNESS

CPI Aero is a U.S. manufacturer of structural aircraft parts for fixed wing aircraft and helicopters in both the commercial and defense markets. Within the global aerostructure supply chain, CPI Aero is either a Tier 1 supplier to aircraft OEMs or a Tier 2 subcontractor to major Tier 1 manufacturers. CPI also is a prime contractor to the U.S. Department of Defense, primarily the Air Force. In conjunction with its assembly operations, CPI Aero provides engineering, program management, supply chain management, and MRO services. In anticipation of a defense downturn, in advance of the sequester, we increased our focus from defense platforms to commercial aircraft. Since 2010, we have been awarded commercial aircraft structure for business aircraft such as the Gulfstream G650, HondaJet from Honda Aircraft Corp.,Phenom 300 from Embraer and the relaunched Citation Ten from Cessna. CPI Aero is unique in the global aerospace supply chain. We are positioned between the large, highly fragmented market of detail parts manufacturers and the OEM. We have Tier 1 capabilities with the entrepreneurial spirit and responsiveness of a small business. We do not manufacture any of the detail parts that are used in the structural assemblies we manufacture. Rather, we provide for our customers an efficient supply chain management, program management and production solution. With CPI, OEMs can move subassembly and bench level assembly operations from their facilities. This helps them shrink their factory footprint, lower overhead costs and increase their cost competitiveness. CPI assumes the OEM role as the purchaser of parts, management of the supply chain and execution of the program. As prime manufacturers are faced with tough budget and cost cutting decisions in the future, we believe that they will choose to outsource many of these types of activities in order to retain funds for developing new products that will be required to launch the next upward cycle. This decision will be made easier if they know that companies such as CPI are able to provide the skilled workforce required to execute their current production programs.

PERFORMANCE

Over the past several years, our business model has caught the attention of the world's largest A&D companies, including Boeing Defense, Northrop Grumman, United Technologies (UTAS and Sikorsky), Spirit AeroSystems, and Textron (Bell and Cessna). For Northrop Grumman, we provide approximately 300 separate kits containing all of the structural parts required to build the outer wing panels of the Navy's E-2D Advanced Hawkeye. For Boeing, we are partnered with them to manufacture enhanced wings for the USAF A-10. As aircraft modification and service life extension programs take priority over fielding entirely new aircraft, CPI believes our track record of providing new aircraft structure for older airframes will secure more work of this type in the future. For UT, CPI manufactures the entire housing for the DB-110 reconnaissance pod. This is one of our largest and most complex structural assemblies and CPI will be responsible for installing many of the subsystems as well as have some level of design authority for this structure (as opposed to simply build to print). CPI is a United Technologies Gold Supplier for 2012 and 2013 which is the highest level of supplier recognition within UT. We are a two time winner of Supplier of the Year honors for Northrop Grumman.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

In 2009, CPI Aero's CEO was a the Northeast Regional winner and a national finalist in the annual Entrepreneur of the Year Award sponsored by Ernst and Young. E&Y recognized the unique and innovative approach CPI Aero has used to great success within a very mature and industrial industry.

FINANCIAL STABILITY

We are a publicly owned corporation listed on the NYSE MKT Ticker CVU. Last year we had approximately $89 million revenues, more than two times 2010 revenue of $44 million. The 2012 annual report to shareholders is available at http://fs2.formsite.com//AW-Events/files/f-32-42-7357276_ilhD-fJGr_CPI_2012_Annual_Report.pdf

EWI — *EWI translates to Edison Welding Institute and as such is a cross between company, lab and institute.*

ENGINEERING SVCS

Brian Bishop
Business Development Manager — Aerospace/Aviation
1250 Arthur E. Adams Drive
Columbus, OH USA 43221
614.688.5132
614.270.7052
bbishop@ewi.org
www.ewi.org

WHAT WE DO/TECH FITNESS

EWI is the leading engineering and technology organization in North America dedicated to developing, commercializing, and implementing advanced manufacturing technologies for materials joining and related manufacturing operations. Our strength lies in developing, applying, and transferring new manufacturing technologies for joining, forming, machining, inspecting, testing, additive manufacturing, and modeling for the benefit of the manufacturing industry. This knowledge and experience is then shared with our member companies and customers to improve their productivity and profitability. To date, EWI holds more than 40 patents in the US and Canada, has developed several products internally, and has spun off two technological innovations into independent companies. Some of our latest developments are:

- LPS/LSP (Laser Paint Stripping/Laser Surface Preparation) Polygon Scanner: US and foreign air forces and global commercial aircraft interests have been investigating laser paint and coating removal technologies for three decades, with no full-aircraft production applications to date. EWI has developed a patented, polygon laser scanner which provides substantially higher (2 to 4 times) paint stripping rates and efficiencies than previous scanners, improved paint stripping uniformity, higher laser power handling capability, flexibility in use of laser types, ease of process control, reduced size and weight, and higher robustness than conventional laser scanners. The scanner can be used on metallic or composite materials to remove paint, coatings or residues on a variety of products.
- AcousTech™ Machining (Ultrasonic Assisted Machining): AcousTech Machining facilitates a reduction in cutting forces (torque/tool load) by as much as 70% as compared to conventional processes, dramatically increases machining speed while improving surface finish, and greatly expands the machinability of hard materials. The application of intense acoustical vibrations increases tool life and productivity from 2 to10 times (depending on the application). The AcousTech Machining system has been developed as a modular accessory device that can be adapted to new machining centers or those already in use. The technology was an R&D100 award winner in 2012.
- RealWeld Trainer™: A completely unique welder training system used by manufacturers and welding training facilities that integrates to existing welding equipment to monitor welding technique in real-time. It can be used for screening skill level of new hires, assessing skill certification levels, and cloning the technique of master welders into documented welding procedures. The patent-pending technology was invented at EWI and commercialized via an EWI spin-out company, which is selling systems to both industries and community colleges.
- Fabrisonic™ Ultrasonic Additive Manufacturing: EWI has developed a revolutionary 3D Printing technology that uses ultrasonic welding to deposit layers of metal foil to produce net shape metal components of aluminum, stainless steel, copper, nickel and, most important, combination of several dissimilar metals. EWI developed the process/equipment and has since commercialized the technology through a new spin out, Fabrisonic, which is currently performing SBIR projects with the Army, Navy, NASA, as well as aerospace commercial customers. Fabrisonic sells three industrial machines of which the largest can 'print' fully dense metal parts of sizes up to 6-ft. x6-ft.x3-ft.
- EWI SpotSight™: EWI has developed a new patented technology for automated inspection of resistance spot welds in automotive and aircraft structures. EWI SpotSight uses matrix phased array ultrasonic testing technology to quickly scan the internal structure of a weld and automatically assess whether it meets acceptance standards. Similar to medical ultrasound, the technology paints a detailed picture of the internal weld features, allowing much greater accuracy in inspection while reducing operator skill requirements associated with other techniques. The technology has been proven in production and is in the process of being commercialized.

PERFORMANCE

EWI's clients recognize the importance of advanced manufacturing technology to their competitiveness. In a 2011 EWI member survey, over 90% of respondents indicated that having world-class manufacturing technologies would be very important to their overall competitiveness in the next five years. This is particularly important to the aerospace industry which is introducing new materials and manufacturing technologies to reduce weight while increasing performance, quality, reliability, and cost effectiveness. For nearly three decades EWI has helped customers meet their business objectives by developing and implementing advanced manufacturing technologies. With a staff of nearly 130 people, a membership base of 225 companies, and a state-of-the-art laboratory facility, EWI now provides services to clients throughout the world. One of the unique aspects of EWI's technical capabilities is that we work at full scale, helping clients beta test, prototype, and prove out new manufacturing approaches for their actual components. Our consistent record of developing processes and providing new technologies to our customers on time and on cost has established our reputation and allowed us to grow by pushing the boundaries of technology development. EWI has thousands of client engagements each year to answer technical inquiries, perform design reviews, conduct engineering level training courses, and execute client funded projects. EWI conducts over 500 client-funded projects each year, including collaborations with universities, non-profits, commercial businesses, entrepreneurial start-ups, and government agencies. These projects span the Manufacturing Readiness Level (MRL) 4-8 range from pre-competitive jointly funded programs, to highly proprietary work to implement manufacturing technology for individual clients. EWI also performs manufacturing technology development projects for a range of government agencies, including Air Force, Navy, Army, NASA and others, and has performed hundreds of Department of Defense ManTech development projects in support of a wide range of weapon system platforms including: U.S. Navy DDG-51 Class Destroyers, LPD-17 Landing Platform, CVN Carrier Program, NAVAIR F-18 and Joint F-35 Strike Fighter and the M1A2 Abrams Main Battle Tank. Currently, EWI has been selected as a finalist to submit a full proposal for the Navy's NNMI Lightweight and Modern Metals Manufacturing Initiative (LM3I) Center with the University of Michigan and The Ohio State University, and others. This NNMI center is planned as a $140M initiative.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

While EWI's core business is providing engineering services, commercialization of technologies is becoming an increasingly important part of what we do. EWI has a growing portfolio of commercialization investments and entrepreneurial successes including:

- Two spinout companies: Fabrisonic LLC (2011), RealWeld Systems (2012)
- Existing products: EWI SonicSolder®, EWI DuraStir®, EWI WeldPredictor®, EWI DeepTIG®, EWI Titanium Weld Color Inspection Kit, and EWI In-Service Welding Guidelines. Several other products are in development.
- Awards in the past year: 2012 R&D 100 Award (AcousTech™ Machining), 2012 TechColumbus Outstanding Start-up Business Award (Fabrisonic)
- Licenses pending for two new innovative EWI technologies for automated inspection of spot welds (EWI SpotSight™) and for cladding metals with corrosion resistant alloys.

FINANCIAL STABILITY

For a financial viability report covering the last five years, contact Jim Tighe, VP/CFO, 614.688.5132

Frontier Electronics Systems

ELECTRONICS

Dr. Brenda Rolls, President and CEO
4500 West 6th Avenue
Stillwater, OK USA 74074
405-624-7703
brendar@fescorp.com
www.fescorp.com

WHAT WE DO/TECH FITNESS

Committed to excellence with focus on infusing new technologies into current products and developing new technologies to reduce costs/cycle time. On-time delivery/quality ranks above 99%. Received four Boeing Supplier of the Year Awards, four consecutive Boeing Performance Excellence Awards; three Northrop Grumman WorldClass Team and Gold performance awards; two Lockheed Martin Star Supplier Awards; Two DoD Nunn-Perry awards with Northrop Grumman for performance excellence in Mentor-Protege program; two NASA Special Achievement Awards; Small Business Admin. Region VI Subcontractor of the Year for work on the Joint Stars Program under Cubic subcontract; Native American Small Business of the Year Award; Process Quality and Technical Performance certifications.

PERFORMANCE

Developed ELINT (digitizer) system; manufacture and install Radar Data Distribution Systems (RADDS) on US combat vessels. FES IR&D funding was used to develop vastly improved versions of RADDS by converting discreet technologies into uniquely designed Virtual Measurement Extended (VME) systems reducing costs/size/improved system capability; LAN based Data Distribution System improvements; FES has identified a potential market for a low cost, low power, lightweight display platform that is easily adapted to a variety of cockpit applications; FES developed under IR&D a platform in 3AT1 form factor and has manufactured two prototype units. Performing research to develop an improved lithium-ion (L-I) battery system. Several other IR&D projects in work.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

DoD Mentor Protégé program. Developed processes, acquisition of specialized equipment such as Thermal Vacuum Chamber. FES LAN based Radar & Video Distribution Systems (converts common digital format and transmits it over the Ethernet to shipboard displays). FES multipurpose Avionics Display platform. FES President formed New Initiatives Tech. Group to provide organizational focus on developing new technologies and commercial applications for future use.

FINANCIAL STABILITY

While financial records were not submitted, the firm has been named Boeing Supplier of the Year, Ball Aerospace Supplier Excellence Award winner and Lockheed Martin Star Supplier.

Millennium Engineering and Integration Company

ENGINEERING SVCS

Janice Mendonca
Program Director, Special Projects
2231 Crystal Drive, Suite 711
Arlington, VA USA 22202
321-473-4944 321-704-4528
jmendonca@meicompany.com
http://www.meicompany.com

WHAT WE DO/TECH FITNESS

JARSS – Millennium's JARSS is used operationally for deterministic analysis for every launch from the Eastern Range (Cape Canaveral AFS), for X-37 re-entry and landings at USAF Western Range (Vandenberg AFB), and is being phased in for orbital launches from NASA's Wallops Flight Facility. Additionally, Millennium is developing the Autonomous Flight Safety System Flight Safety Analyst Workstation and leads the joint User Group for this effort. RRSW - We are applying these innovations to the ORS-2, - 3, and - 4 spacecraft that are in various stages of development, and are expected to have this capability fully operational in the 2015 time frame. Our team is based in Albuquerque at Kirtland Air Force Base with the plan to develop similar capability at several of our Nation's space-ports (Wallops Flight Facility, Western Range (Vandenberg AFB), and the Florida Space Coast). Model Based Software Development - NASA Ames Research Center (ARC) Common NanoSat launch vehicle Avionics Technology (CNAT) project. Millennium chosen for this ongoing effort to design, develop and demonstrate a prototype suite of inter-connectable low-cost common avionics modules that are physically and electrically suitable for packaging into NanoSats, and NanoLaunchers to perform all of the Navigation, Guidance, Control and Communications (NGCC) functions. ARMY SWORDS project avionics currently in critical design. Millennium is leading the software and avionics design efforts for the SWORD launch vehicle. This effort is a direct application of the common avionics work that has been produced from the CNAT effort. Autonomous Flight Safety and Guidance System – Millennium was awarded the Autonomous Flight Safety Inference Engine Phase 1 SBIR in May 2013. This effort exploits reliable low-cost COTs sensor hardware architecture and combines proven NASA- developed Autonomous Flight Safety System (AFSS) algorithms and Millennium's Joint Advanced Ranges Safety System (JARSS) dynamic hazard envelopes with a Model-based On-board Inference Engine. The onboard state estimation inference engine monitors navigation states, mission rules and onboard anomaly instrumentation allowing the inference engine to predict and detect failures and failure modes within the vehicle and provide most accurate information to the AFSS decision engine.

PERFORMANCE

JARSS – In 2007, Millennium was commissioned by the X-37 program office to design, develop, deploy, and test a processing and display system that performs critical safety and mission assurance tasks in support of the X-37 high performance space vehicle re-entry. Millennium's JARSS mission planning tools support the assessment of the risks of these proposed missions and adjustment of planned mission profiles in managing risk. During real time JARSS assesses the actual public risk and provides situational awareness during these missions to allow preventative flight termination decisions to be made if necessary. JARSS X-37 provides the highest level of situational awareness for vehicle re-entry and landing. Millennium received commendation from the program when JARSS successfully supported the historic landing of the X-37B re-entry vehicle. After 15 months in orbit, the spacecraft touched down at California's Vandenberg Air Force Base at 5:48 a.m. local time Saturday, June 16th, 2012. Without JARSS mission planning tools, the 30th Space Wing Safety analysts could not have met the critical time lines for this mission. During re-entry, JARSS flawlessly processed vehicle telemetry data and provided both critical flight safety information and high fidelity mission awareness information. In 2012, Millennium was selected to support the development of Northrop Grumman's Rapid Mission Planning Tool for the ALASA Phase I program using our JARSS technology in the areas of flight safety analysis and rapid AFSS configuration file generation for flight processor data load. RRSW - Our novel approach for design, integration and test is being applied to launch of ORS-class spacecraft such as the ORS-2 Synthetic Aperture Radar (SARSAT). For the ORS-2 SARSAT mission, we've leveraged our common architecture to rapidly adapt the bus configuration several times to influence detailed design of the space vehicle subsystems. Model Based Software Develop-ment –NASA ARC Lunar Hover Test Software developed and delivered for the ground based hover testing in 2008. NASA ARC Lunar Atmosphere and Dust Environment Explorer (LADEE) Embedded Flight Software developed, delivered and tested for the LADEE currently at WFF ready for launch (6 Sept. 2013).

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

System Engineering and Integration Mechanical Engineering and Analysis Integration, Test and Evaluation Design and Rapid prototyping Sensor Technologies and Power Systems Launch Systems and Ranges Software Design and Simulation Command and Control Communications Safety, Reliability, Quality and Mission Assurance Program Integration and Management JARSS - Millennium Engineering and Integration Company's flagship range safety product, the Joint Range Safety System (JARSS) tool suite, development began in 2004. JARSS is a high-tech, highly advanced range safety analysis system that supports launch and re-entry space vehicle activities, and unmanned aerial systems flight. The JARSS tool suite is the only single system that provides pre-mission analysis coupled with real time tracking and situational awareness displays. It is also the only single system that provides a flight safety analysis environment that is integrated with development of the mission safety rules flight data upload for the Autonomous Flight Safety System – a joint development effort of NASA and DOD that provides game-changing approach to aerospace flight safety. JARSS integrates best available range safety and analysis tools and technologies into a single platform that utilizes well-defined and common interfaces, innovative computation techniques, data handling and display approaches. The core of JARSS is an innovative debris integration engine that uses the Julier-Ulhmann technique (borrowed from robot vision systems) to propagate many debris impact distributions (100 times faster) without the huge computational load inherent in traditional Monte Carlo implementations. We applied our internal system engineering processes to design and deploy a sophisticated software architecture that is comprised of COTS/GOTS components and custom, innovative algorithms that are hosted on standard, COTS hardware to ensure rapid deployment and ease of sustainment. During real time operations, JARSS ingests and fuses multiple types of tracking and sensor data (radar, telemetry, inertial guidance, GPS) and provides a probabilistic debris contour at 10 pps that enables the range safety office and vehicle customer to see at any point in flight where debris would fall in the event of a catastrophe during re-entry. The system also provides a real time data loss flight time based on the nominal flight to ensure positive control of the vehicle at all times. Rapid Response Space Works (RRSW) - In support of NASA and DoD's Operationally Responsive Space (ORS) office, Millennium is developing and implementing a ground-breaking approach to rapidly deliver spacecraft from requirements definition to operation in support of our nation's warfighters in a matter of days and weeks rather than the months/years previously required. We are supporting development of hardware (standardized spacecraft bus, mission kits, instruments, other spacecraft components including a green propulsion module), flight software, processes for rapid integration and test, risk reduction processes including pre-coordination with launch ranges for rapid launch, and specialized environmental test and spacecraft checkout procedures that all fit within the highly compressed schedule for spacecraft callup, integration, launch processing, launch, and on-orbit checkout. Specifically, Millennium developed a highly innovative manufacturing approach to the processing and testing of spacecraft by applying modern manufacturing techniques to these low volume high demand assets. To provide the most robust Mission Design and Analysis through Assembly, Integration, and Test through Mission Operations capability, we developed a rapidly adaptable architecture of handling fixtures, a modular test network, integrated work instructions, and modular analysis/design tools.

We use integrated tools, including virtual 3D environments and manufacturing analysis tools, with a high emphasis on modularity of system design and implementation to create and deliver a low cost responsive design for the space vehicle and mission. The concept is anchored by data-driven risk probability assessments and trades. Model Based Software Development - Grown out of the control system environment, Millennium's approach and techniques use a model based description/simulation environment that is part of Matlab (previously Matrix X system Build) and Simulink an autocode generation tool to design, develop, integrate and test embedded flight code that is processor agnostic.

Through model base development process, we then integrate these model blocks as atomic entities into a suitable Simulink-based 6DoF simulation to perform non-real-time testing, and then Simulink Embedded Coder with extensions that enable targeting of the flight executive from the Simulink models. The POSIX compliant I/O device driver code modules are compiled and linked through the flight executive and the guidance and control tasks are compiled and linked to create a load module for the embedded processor. This allows us to quickly move from design to test in a processor and hardware in the loop environment. Autonomous Flight Safety and Guidance System - Our AFSGS aims to provide an Application-Configurable Modular Autonomous Flight Safety and GNC System for Launch Vehicles and Unmanned Aircraft Systems. This system features Integrated Ground and Vehicle Subsystems, a Lower Cost, Light Weight/ Small Footprint, Lower Power system than is currently available. We are building this system on a Common Small Lightweight COTS Hardware Architecture. This reduces non-recurring engineering, testing and qualification costs since the hardware architecture design supports the broad set of flexible applications. This robust application flexibility includes Autonomous Flight Safety System (AFSS) only, Flight vehicle navigation and guidance only or the combined guidance and navigation function.

NanoRacks LLC

ENGINEERING SERVICES

Jeffrey Manber
Chief Executive Officer
18100 Upper Bay Road #150
Houston, TX 77058 USA
815 425 8553 202-569-4638
jmanber@nanoracks.com
www.nanoracks.com

WHAT WE DO/TECH FITNESS

Our payload development and payload integration services streamline the NASA payload process, allowing our customers to go from contract signing to launch to the International Space Station in 9 months. Our use of standardized hardware on the International Space Station, which we self-financed and own fully, allows us to use commercial components assuring cutting-edge research equipment at low prices. In short, we met the need for the USG at this time in space services that we "must do more with less" as the Deputy Secretary of Defense has stated. Because of NanoRacks systems and procedures, DoD and the USG can rapidly deploy payloads to the space station, and have them returned. Regarding the future of space exploration, our business model of a) standardization, b) miniaturization, c) open source and d) commercial hardware is the core to how space exploration can be done. We base our business model on the tried and true of any maturing hardware industry, which is what we believe LEO is today, and future exploration can become (in terms of customer use).

PERFORMANCE

In just three years of operations (our company is four years old) we have flown 94 payloads to the International Space Station. We have over 100 payloads under contract, including 50 small satellites for ISS deployment. We have self-financed our hardware, all of which has been produced on time and on budget and passed NASA safety 100% of the time. Currently, we have close to $10 million of capital at risk for space station utilization. Our customers include everyone from high schools to foreign space agencies (German and Romanian) to NASA and DoD. All with no government funding as a contractor but with USG agencies as commercial customers. For example, NanoRacks is now manufacturing it's own CubeSat and small sat deployers for ISS, which is creating a new market for LEO and ISS. Customers range from American commercial ventures to Lincoln Labs to NASA. We are manufacturing our own External Platform with EADS/Astrium for a test bed for advanced sensors and electronics outside the space station which is of strong interest to the DoD community Our unique selling point is very low prices and rapid delivery, far faster then the 3-5 years it takes the average USG payload. And no peer group review. We believe the Company is at a tipping point with more and more USG agencies coming to us for rapid, low cost deployment of their payloads. Today we focus on LEO, soon we will move beyond LEO.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

We have for the first time in the industry created an accepted and robust commercial pathway to space utilization. Our low costs have for the first time produced an entire pipeline of non-aerospace customers.

FINANCIAL STABILITY

NanoRacks is four years old and has now had two rounds of financing. For me personally? I was CEO of MirCorp, which leased the Russian space station Mir and when the Mir was de-orbited we had $170 million in customer backlog. Before that I represented the Russian company RKK Energia as they developed US business. I was involved in the first contract between the United States and Soviet Union in space, for Soyuz rescue and helped usher in the modern era of US-Russian space relations.

Novati Technologies Inc.

MANUFACTURING

Nelson Soo
Director of Sales, Western Region
2706 Montopolis Drive
Austin, TX 78741 USA
(512) 356-2000 (858) 531-1543
nelson.soo@novati-tech.com
http://www.novati-tech.com/

WHAT WE DO/TECH FITNESS

Novati offers a technology development solution utilizing fabs optimized for development, combined with engineering, operations and program management expertise to deliver fast learning and accelerated time to market. Novati's offerings are designed and implemented to help customers improve their time to revenue. By operating 24x7 with high equipment up-times, process expertise and sophisticated scheduling and wafer tracking, Novati consistently provides the fastest turnaround times and collapses time to market. Customers consistently report cycles of learning 3 to 4 times faster than that of other semiconductor fabs. Novati consistently meets more than 90% on-time delivery with its scheduled commitments.

PERFORMANCE

We enable enterprise value. Work done at Novati has supported over $1.5B in capital raises since 2010. Some examples of those companies include:

- Matrix Semiconductor: Acquired by SanDisk for $262M
- Crocus Technology: $300M manufacturing agreement with RUSNANO
- Complete Genomics: $130M IPO and secondary offering
- Silicon Clocks: Acquired by Silicon Labs for $22M
- Spatial Photonics: Secured $6.5M for 15% equity
- D-Wave Systems: Sold $20M computers to Lockheed & NASA
- Origin Energy: Joint Venture worth $30M+ Some examples of those companies include:
- Matrix Semiconductor: Acquired by SanDisk for $262M
- Crocus Technology: $300M manufacturing agreement with RUSNANO
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- D-Wave Systems: Sold $20M computers to Lockheed & NASA
- Origin Energy: Joint Venture worth $30M+
- Confidential customer #1: Raised $200M+ in IPO
- Confidential customer #2: Acquired for $700M+

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Novati Technologies has worked on nearly a dozen DARPA and IARPA programs in the areas of photonics, IR imaging, compound semiconductors, power semiconductors, MEMS. 2.5D & 3D packaging and superconducting applications. Novati supports advanced technology development for aerospace & defense customers who need more than a lab, but not a high volume production fab to develop new technologies for their systems. Novati supports low-to-medium volume production for many defense contractors. Defense contractors who need to outsource their development and production to a cost-effective, on-shore foundry with deep sub-micron capabilities, due to limitations with their existing "in house" foundries use Novati. Customers utilize Novati's analytical services with advanced microscopy, material analysis, process characterization, failure analysis, and in-line metrology services. Novati is ITAR certified and the process to clear the facility to the Secret level is nearly complete. Upon successful completion of the clearance process, Novati will submit documentation to become a trusted foundry.

FINANCIAL STABILITY

See Performance Section

Nuvotronics LLC

MANUFACTURING

Noel Heiks
CEO
7586 Old Pepper Ferry Loop
Radford, VA 24141 USA
800-341-2333 540-230-9855
nheiks@nuvotronics.com
http://nuvotronics.com/

WHAT WE DO/TECH FITNESS

Nuvotronics has 4 offices and 2 manufacturing sites, featuring full service design-to-delivery of completed RF modules. Our design engineering staff is equipped with a full suite of EM modeling and 3D CAD software. Once designed, architectures are manufactured in one of our cleanroom microfabrication centers, with up to 8" diameter individual part sizes available in 2013. We then integrate and assemble internal or external components such as backplanes, power amplifiers, active and passive die, antenna arrays, and interconnects to complete an assembly. We test completed products for DC and RF up to 110 GHz.

PERFORMANCE

The Nuvotronics' team has a history of success in technology transition to high volume products, having previously sold cutting edge components at volumes of millions units/year for the telecommunications industry. The company has successfully converted development programs such as SBIRs into Phase II and Phase III programs--persistently transitioning R&D to military platforms. In fact, the PolyStrata technology itself resulted from our aggressive commercialization of its original DARPA 3D-MERFS program at the inception of the company. These examples demonstrate Nuvotronics' focus on delivering innovative hardware to the defense, space, and security communities.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Nuvotronics' proprietary PolyStrata® technology provides 10 to 100x improvement in SWAP-C for RF systems, especially at Ka-band and above. It is a microfabrication technology that creates substrate-free 3D micro-coax architectures — unlike any other transmission line for these frequencies. For space exploration, for example, we are developing small form factor, non-gimballed, radar modules at frequency ranges (W-band, G-band) capable of navigation through heavy dust clouds. These small fixed antenna array units will enable sensing and navigation never before possible in this form factor. They easily extrapolate to applications in defense and homeland security, manned and unmanned applications, where missions hampered by a Degraded Visual Environment (DVE) like dust or snow cover could now be navigated safely. Nuvotronics also produces Solid State Power Amplifiers (SSPAs) made using our proprietary architecture, for a broad array of applications including radar, as well as satellite communications. Again, the SWAP-C benefit shines through: in many modules Nuvotronics offers 10x the power per unit volume compared to its competitors, allowing greater deployment of higher frequency communications and radar systems in increasingly mobile and miniaturized platforms.

Plasma Ruggedized Solutions

ENGINEERING SERVICES

James Stameson
CEO
2284 Ringwood Ave., Suite A
San Jose, CA 95131 USA
408 954 8405
jim@plasmarugged.com
www.plasmarugged.com

WHAT WE DO/TECH FITNESS

Plasma Ruggedized Solutions, Inc. is an engineering services partner to OEM's that designs, tests, and applies chemical and mechanical agents /devices to ruggedize and encrypt (mechanically) odd geometry/asymmetric PCBs and electronic assemblies. The company was founded in 1990 as a CA subchapter "S" corporation. Shareholders are Institutional Capital and Management. Two facilities (San Jose and Huntington Beach) with ~55,000 sq ft and 115 employees. Customers in A&D, Medical, Automotive, Robotics and Communications sectors.

PERFORMANCE

Conformal coating and potting = 90% of revenues. Differentiation based on short lead-time, high-barrier technical problem-solving, complex applications of highly engineered chemical and mechanical technologies for asymmetric and complex PCBs/electronic assemblies for ruggedization, security and performance enhancement. AS9100 Program, Complete ISO cert, 'scaled' Six Sigma program.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Plasma has a consistent 97% or better on-time delivery record.

FINANCIAL STABILITY

Founded in 1990, consistent return and investment, expansion into larger facilities and workforce.

Revolution Composites

MANUFACTURING

David Dahlheimer
Director of Manufacturing
340 Vanderbilt Avenue
Norwood, MA 02062 USA
781-255-1111
david.dahlheimer@revolutioncomposites.com
www.revolutioncomposites.com

WHAT WE DO/TECH FITNESS

Although only in business for 2.5 years, Revolution Composites has delivered biax and triax fabrics, braided performs, and high tolerance resin transfer molded (RTM) composite parts and tooling to multiple customers in the aerospace, defense, medical, and commercial community. Most recently, Revolution Composites was approved as a supplier of flight hardware to Northrop Grumman as well as delivered critical composite components in support of NASA's Commercial Crew Program. It is our intention to grow the company by transitioning short run development efforts into production.

PERFORMANCE

Revolution Composites is a relatively new company, having only opened its doors in 2011. Founded by hands-on engineers with 40+ years of combined experience in the design, development, and production of aerospace, defense, and commercial grade composite structures, we have spent the past 2.5 years setting up a manufacturing system that is capable of producing high quality composite hardware. Although not yet certified, we used our previous experience building aerospace composites and familiarity with ISO9000 and AS9100 requirements to define our initial systems. We have invested in production ready composite manufacturing equipment such as braiders, ovens, traverse systems, and resin injection machines. We monitor and record cold storage and manufacturing shop floor temperature / humidity as required and our composite curing ovens have both analog and digital data collection for pressure and temperature. A third party is under contract to calibrate all instruments used to validate customer requirements. We are very proud as to what we have accomplished in a short amount of time.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Revolution Composites specializes in the braiding and molding (RTM and VARTM) of carbon, glass, aramid, and ceramic fiber composites. The semi-automated braiding process is unique in its ability to combine continuous fibers in a controlled pattern directly over a mandrel / tool of nearly any shape and size. Conformal complex shapes can be braided without the need for darts or splices, saving time during layup and creating a more uniform structure. Combined with our proven in-house resin transfer molding process, dry fiber performs are transformed into rigid composite structures. By managing both ends of the process (braided preform fabrication and molding) in a single facility, we are able to better control part quality, cost, and delivery. It is our goal to deliver the highest quality research, development, and manufacturing services to the high performance composites industry.

Sechan Electronics

ELECTRONICS

David Williams
President
525 Furnace Hills Pike
Lititz, PA 17543 USA
717 627-4141
dwilliams@sechan.com
www.sechan.com

WHAT WE DO/TECH FITNESS

Optimize manufacturing flow for small lot sizes, with each manufacturing work center graphic data tools provided. Routinely exceeds 97% on-time deliveries. Received Silver Supplier award from Boeing, 3-start supplier award from Raytheon NCS and supplier of the year nominations from Northrop Grumman. As a favored manufacturer chosen by the most significant prime contractors, Sechan continues to demonstrate its commitment to quality and delivery for each customer. However, given military electronics (today) do not typically have the production volume typical of consumer electronics, Sechan Electronics has optimized its manufacturing flow for smaller lot sizes, and provided each manufacturing work center with graphic data showing exactly which product is furthest behind internal schedules so that 'later' products are automatically emphasized in the flow over those which have arrived 'early' to that manufacturing step. The result of this due-date focus throughout the flow is that Sechan routinely exceeds 97% on-time delivery performance across all its prime contracts and subcontracts. Sechan believes that this is the expectation of today's customers and that less is not taking your customer needs seriously. For its customers which report performance back to Sechan, the metrics have been averaging 98.78% for the trailing 12 months. Sechan is a Silver Supplier to The Boeing Company, a 3-star supplier to Raytheon NCS and has won awards from Northrop Grumman, and the services as well. The challenge, of course, is meeting these demands in the face of continued obsolescence, implementing frequent design changes necessary on evolving new products, and still maintaining the quality that customers expect. Customers often compliment Sechan on its flexibility and responsiveness to changing requirements, and appreciate that Sechan makes significant effort to approach a customer with the problem and several alternative solutions, not just the problem alone. Continually stressing the ownership culture of the ESOP and how satisfied customers bring more repeat revenue has been a motivational message, but the rewards of the ESOP are in the distant future for younger generations. To that end, Sechan has also implemented a near-term, immediate-reward program of Profit Sharing which creates quarterly cash bonuses based on 1) projected corporate profit - to emphasize efficiency and minimization of scrap, 2) customer need date performance – to emphasize the importance of meeting schedules, and 3) customer quality metrics. In order that no employee confuses quality for speed, deductions in the metric are twice(2x) as painful as missing a customer due date. Each month, all employees are very interested in the numeric results as well as reviewing the publicly displayed data on failures to meet customer expectations; this review provides the opportunity to learn from our mistakes.

PERFORMANCE

Implementation of real-time Theory-of-Constraints-based factory scheduling. Development of the Paladin M109A6 Automated Fire Control System for which Sechan received awards om TACOM and the Secy. of the Army. As a small business, Sechan Electronics has an entrepreneurial nature. This is evident both in breadth of products manufactured for all services(review website), evolving manufacturing processes, product development, and improving customer satisfaction. In order to continually differentiate Sechan Electronics, the corporation is always seeking new methods to meet customer needs. One area where Sechan implemented a non-standard manufacturing technology is the implementation of real-time Theory-of-Constraints-based factory scheduling. This computer-driven data - which is available to all the manufacturing employees - lets everyone see any product with respect to all other products, their respective schedules and the work remaining in the manufacturing process. In a multi-customer job shop environment this tool automatically prioritizes products furthest from delivery based on the amount of manufacturing time ahead of it. Sechan believes this technology is unique in the military electronic contract manufacturing business and that it has been a significant contributor to meeting customer needs. Sechan has also seized the occasional product development opportunity when the design team envisions a novel, cost-effective solution to a need that other might not have been willing to tackle in the allowed schedule. One such R&D effort which has huge paid dividends over the years is the development of the Paladin M109A6 Automated Fire Control System for which Sechan received awards from TACOM and the Secretary of the Army for cost-effectiveness and timely development. Sechan is now delivering the 3rd generation of fire control systems spun from this original R&D investment in the late 90's. More than five (5) years ago, Sechan unveiled its first Customer Portal from which all customers can gather live data regarding certain aspects of the design and manufacturing process directly from the corporate website, without unnecessary phone calls. Typical data available include order dates, technical drawing configurations, proposed engineering change status, customer furnished material inventory, invoice status, payment history, return materials inventory, product test data from the manufacturing process and product shipping status complete with FEDEX and UPS tracking links. The Portal will continue to evolve as Sechan finds new ways of making customers' business easier. Over the last 15 years Sechan has made novel improvements in many areas to stay differentiated from competitors; all these improvements are directed to greater customer satisfaction which eventually drives the business and the value of the corporate shares owned by every employee. When employee, corporation and customer goals are all aligned, good things will happen!

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Obsolescense redesign capability using state-of-the-art CAD tools in both electronics/PWB-layout and mechanical areas. Rapid-prototype solid-modeling and 3-D printing. Work instructions are live online at each work station. When changes occur, update is electronically released for next manufacturing assembly. Paperless/green environment. Sechan Electronics operates solely in the Department of Defense electronics sector with only indirect exposure to the space or security sectors. Sechan operates primarily as an electronics contract manufacturer and manufactures products for other well-known defense contractors, as well as directly to the Dept. of Defense as a prime contractor itself, and occasionally designs custom solutions to specific customer requirements. The design team does original design for design-to-specification requirements in the military electronics sector, but also provides the obsolescence-redesign capability to our current customers, freeing their top engineering staff to focus on the new requirements while Sechan redesigns the last generation products when required. Design is performed using state-of-the-art CAD tools in both electronics/PWB-layout and mechanical areas, and using industry standard techniques to incorporate designs between the two disciplines. Often schedule-driven customers get to experience their design concepts quickly through rapid-prototype solid-modeling and 3-D printing on-site. Recent development programs from specification include designs for G-BOSS program from the U.S. Navy, and products for Northrop Grumman. In order to be responsive to the tight design schedules common in the industry, Sechan has built a robust internal capability to perform stress screening and environmental qualification testing in-house from the routine thermal requirements through to complete EMI/EMC qualification. Maintaining this capability in-house is not always the least cost solution, but it is the best solution for the customers' development timelines. In manufacturing electronics which are just arriving from the R&D design teams at prime contractors, Sechan must be equipped and responsive to the needs of the newest manufacturing technology. At the same time, this pace must be balanced with the maintenance of legacy equipment and technology for the notably interminable sustainment of legacy electronics in this sector. Some products being manufactured at Sechan were designed 25 days ago, while others are 25 years old. To facilitate the rapid pace of design changes into the manufacturing environment, all the Work Instructions for assembly personnel are live online at each work station whether building cables, circuit cards or systems. When changes occur, the update is released electronically for next manufacturing batch. Likewise, all Inspection and QA data is collected electronically throughout the facility, allowing fast trend analysis and corrective actions. Paper data files have almost disappeared entirely.

Signal Systems Corporation

ENGINEERING SVCS

Laurence Riddle
President
877 Baltimore Annapolis Blvd., Suite 210
Severna Park, MD USA 21146-4700
410.431.7148
larry@signalsystemscorp.com
www.signalsystemscorp.com

WHAT WE DO/TECH FITNESS

Signal Systems Corporation has a commercialization achievement index, as measured by the Department of Defense that is superior to 90% of other companies participating in the Small Business Innovation Research (SBIR) program. This index measures the ability for the company to take innovative technology and transition it to a viable product or service. Numerous technologies developed by Signal Systems Corporation have been fully transitioned to the Department of Defense and are integrated into operational search and surveillance systems.

PERFORMANCE

Signal Systems Corporation provides an unattended ground sensor useful for border surveillance or hostile fire indication on vehicles. This unit is sold to the U.S. Government and prime contractors. Signal Systems Corporation has entered into several joint development programs for developing active noise control solutions for commercial use, including an innovative Personal Sound Space (PSS) system suitable for consumer automobiles.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

SSC's three technology specialty areas are: air coupled acoustic sensors, active multistatic underwater sonar (including automation) and active noise control. Our technology development and transition efforts assist in the defense of our nation through improved underwater search and surveillance, securing our borders, and protecting warfighters from hostile fire and damaging sound. An overview of publicly available information of Signal Systems Corporation's technology can be found at http://www.sbir.gov/sbirsearch/detail/307392.

Silicon Turnkey Solutions

MANUFACTURING

Zef Malik
CEO
801 Buckeye Ct.
Milpitas, CA 95035 USA
408-904-0200
zmalik@sts-usa.com
www.sts-usa.com

WHAT WE DO/TECH FITNESS

STS operates on the cutting edge of providing ultra high-speed futuristic devices. We are currently highly involved in developing IC benchmarking and reliability work, with special emphasis on IP validation.

PERFORMANCE

We have been involved in every major space program at Northrop Grumman and Lockheed. Recently, STS developed a remanufacturing and form factor design solution for Northrop Grumman's legacy SRAM flight module, including qualifying the die in concert with the Nike team, manufacturing, qualifying, and assembling the device so that NG could continue to use its SRAM module.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Silicon Turnkey Solutions deploys specialty application-specific integrated circuit (ASICS) in custom form factors for modular, high-density solutions meeting defense & security requirements. STS is a Trusted Supplier, providing domestic-content solutions for Military and Aerospace applications. Our core team has been committed to the engineering & service lab concept for over 30 years, successfully providing ASICs, memory, and other semiconductor devices for specialty, boutique, and niche solutions.

FINANCIAL STABILITY

Silicon Turnkey serves several diverse industry clusters, beyond A&D; founded 1997 and categorized under semi-conductor devices -- estimated at ~$75mm by outside sources with fewer than 50 employees.

Stauder Technologies

ENGINEERING SVCS

Gerard Stauder
President
114 Mexico Court
St. Peters, MO 63376 USA
636-498-6658
jstauder@staudertech.com
www.staudertech.com

WHAT WE DO/TECH FITNESS

Stauder Technologies' witnessed the exploding growth of the personal cell phone market several years ago and took early action to capitalize on this emerging market. As an example, our Targeting / Hand-Off system (Gusto®) now operates on an Android platform in commercial phones and tablets and our avionic solutions now utilize technology first developed for the cell phone market. Under an on-going internal R&D initiative, we developed a digital communications software suite, called the "Joint Effects Communication Link" (JECL®) that is used across all of our products to ensure interoperability across both ground and air networks. We work in close collaboration with key government labs including the Naval Air Warfare Center, the Marine Corps Warfighting Labs, Defense Advanced Research Projects Agency and Air Force Research Labs and with our industry partners. Our small company size enables innovation through collaboration and allows us the flexibility to pivot quickly to emerging warfighter requirements. Listed below are some of our proudest accomplishments: • First to use digital mapping, integrated with GPS and Laser Range Finders for targeting and improved situational awareness • First to track aircraft over Combat Net Radios • First to create Combined Arms Targeting System (CAS, Artillery and Naval Fires) • Worked closely with Boeing on the transfer of imagery and image overlay data • Developed the Joint Effects Communication Link (JECL®) – a proven method to ensure network interoperability • Early integration with Network Enabled Weapons in close collaboration with Lockheed Martin • Early adopter of Mobile devices (iPhone and Android) products • Developed Combat Radio Auto-Recognition Capability • Developed a Network Auto-Recognition Capability • Hide® device – bridges legacy military gear and platforms with current commercial technologies • AVT concept – adds processing and the Raytheon Tactical modem to aircraft without requiring aircraft changes • Digital Carry-On / Carry-Off Contract CAS concept to reduce training costs and increase experience for JTACs • Demonstrated the Northrop Grumman Corp. developed Heterogeneous Airborne Reconnaissance Team (HART) concept with commercial (Android) devices • Currently developing new apps for the important Assault Support missions

PERFORMANCE

Although a small company, Stauder Technologies prides itself by performing well above average on both development and production programs. As a testament to our past performance, we have consistently received CPAR scores from our Navy and USMC customers at the top tiers for all categories evaluated. Our team continues to learn better ways to develop and produce both software and hardware products, including the use of agile software methodologies and lean manufacturing principles. We embrace external audit opportunities to help us focus on our weaknesses so that we can make the right changes to continually improve. We provide on-time/on-budget performance on our prime contracts and with our industry partners.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

The shared vision of all Stauder Technologies' employees is to equip our warfighters with the optimal digital capability to provide the decisive advantage to protect our troops, our friends and our freedom. We complete our mission when we have provided our troops with the most effective and intuitive tools possible for conducting their mission, including the connection of all necessary nodes in the network. Our agile software processes and rapid hardware prototyping techniques allow us to react quickly to the ever changing mission of the warfighter. We capitalize on commercially developed hardware and software to reduce or eliminate costs for our customers. We are a "not for profit only" company, meaning that we focus on the warfighter's needs ahead of our own. We provide: • Innovative ways to optimize and integrate existing commercial and military technologies • Commercial Agile Scrum processes integrated with DoD 5000 Acquisition Process – getting the warfighter what they need while meeting mandatory Government regulations • 16 years of proven performance providing Engineering, Management and Support Services • ISO-9001:2008 certification • CMMI Level 3 capability

FINANCIAL STABILITY

We are a "not for profit only" company, meaning that we focus on the warfighter's needs ahead of our own. • 16 years of proven performance providing Engineering, Management and Support Services • Stauder Technologies is a privately held firm, founded in 1997, which has evolved into a leading provider of targeting, geodetic and communications software for the United States military. Stauder's StrikeLink® and Gusto® systems are designed to support ground troops and save lives by distinguishing between enemy targets and friendly forces and reducing the human error and time involved in the manual method of target identification, location and handoff. Stauder's office and manufacturing complex are located in St. Peters Commercial Park in St. Peters, Missouri, located just outside of St. Louis, Missouri.

Swift Engineering, Inc.

ENGINEERING SVCS

Rick Heise
Director of Business Development
1141-A Via Callejon
San Clemente, CA 92673 USA
949-492-6608
rheise@swiftengineering.com
www.swiftengineering.com

WHAT WE DO/TECH FITNESS

Swift Engineering won the prestigious Northrop Grumman Small Business Supplier of the Year award for 2012. Swift was selected from over 1500 suppliers for support of programs including BAT UAS, Firebird, Firescout, UCAS, F-35 and HALE Enterprise.

PERFORMANCE

In 2007, Swift designed and built a single engine concept jet for Eclipse Aviation in 200 days. In 2006, Swift designed and built 40 Formula Atlantic open wheel race cars in 226 days. From 2003 to 2011 Swift designed and developed five generations of a STUAS/Tier II class all-composite blended wing body UAV, along with dedicated launch, recovery, and ground control systems (now owned by Northrop Grumman and named Bat™). Between 2009 and 2011, Swift has performed the mechanical design and manufactured 2 ducted fan UAVs. Swift supplies aerospace production quality structural composite components to Northrop Grumman and Gulfstream for a variety of programs including Global Hawk, Fire Scout VTOL UAV, G650, V-22 Osprey, and J-UCAS.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Swift Engineering has played an active role in A&D industry leadership over the past eight years, beyond what its size indicates. Listed with SBIR Source; not heavily reliant on grants.

FINANCIAL STABILITY

Active members of SAMPE, SAE and The Composites Consortium (TCC). In 2012, Swift Engineering won the JEC Process innovation of the year award for innovations with out-of-autoclave composite processing.

Systima Technologies, Inc.

ENGINEERING SVCS

Tom Prenzlow
President
1832 180th St. SE
Bothell, WA 98012 USA
425-487-4020
Tom.Prenzlow@Systima.com
www.systima.com

WHAT WE DO/TECH FITNESS

Systima offers a wealth of experience and capability in the engineering, design and development of systems including aircraft carriage and release systems, pyrotechnic actuators, missile shroud and stage separators, dispense and deployment systems, and inflation products. Our engineering teams provide rapid end-to-end engineering support to expedite transition from concept to production. In our development effort we place high emphasis on development type programs finding solutions for close to impossible requirements. Systima Technologies prides itself on developing solutions for difficult problems that have proven to have significant impact on future platforms whether that is for defense, aerospace, space exploration or homeland security.

PERFORMANCE

It is the philosophy and commitment of Systima Technologies to provide our customers the responsiveness they are seeking from us. We manage our own internal measurement to outline our tactical successes and shortcomings. Shortcomings are reviewed and determined if corrective action is needed to provide assurances of recurrence with high assurances of future successes. From this, we are able to consistently provide significant levels of strength that will continue to increase our awareness of our services and provide the growth to the organization for which we seek. Attached are two documents showing our methods of measurements in the key areas of operations, production and delivery.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Systima Technologies is a 13 year company that has been driven in the areas of product development within the ordnance world. From the beginning of our business and through today, we pride ourselves on our entrepreneurial spirit consistently driving our business to be a top ordnance system solution provider. Much of our business has purely focused on development programs coupled with our philosophies on providing our customer with a full package of technical solutions in the time they need it. We recognize that reputation is key for continued successes and this reputation has driven the organization in growth as well as focusing on new and/or parallel markets. Initially much of its business was sought out through such initiatives in the Small Business Innovation Research (SBIR) supporting multiple organizations such as the United States Air Force, Missile Defense Agency, DARPA, NASA, Special Forces and United States Navy. Much of this business was also supported by prime contractors which has enabled us to continue maturing our innovations/technologies through future programs and fulfilling requirements with those same prime contractors. With these development relationships Systima has been given much opportunity to continue building our business through means of future requirements with similar like or newer solutions. Though we continue to support and pursue many SBIR type programs, we continue to build upon our business as we begin to reach out into other Aerospace and Defense markets presenting our strengths to our customers as well as identifying parallel markets that would being more benefit to our growth. Systima Technologies is known for our innovations and responsiveness and is why our customers continue to return our organization with new business opportunities.

FINANCIAL STABILITY

Notsubmitted; SBIR indicates >10mm in awards as of mid-year

Techsburg, Inc.

ENGINEERING SVCS

Wing Ng, PH.D.
Owner
265 Industrial Drive
Christiansburg, VA 24073 USA
540.818.2668
wng@techsburg.com
www.techsburg.com

WHAT WE DO/TECH FITNESS

Techsburg is an engineering services provider to aerospace firms seeking propulsion system R&D. Techsburg provides turbine engine component testing for industry OEMs such as United Technologies, General Electric, Rolls Royce, and Goodrich. Techsburg was the primary wind tunnel testing provider for Honeywell's unmanned aircraft programs (principal among these was the RQ-16 T-Hawk ducted fan UAS), and led R&D efforts on aircraft control improvements for the program, with three patents resulting from this work. Techsburg is currently working with Northrop Grumman on analysis and testing of propulsion systems technologies for a variety of platforms.

PERFORMANCE

Founded in 1998, Techsburg has grown from a 2 person, $200k/year operation to over 15 people in 2013, with almost $3 million in projected revenue. Techsburg has successfully transitioned from contract research for DoD, NASA, and other government agencies to working directly with aerospace industry in many cases, helping industry to deliver improved products at lower cost.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Two new and improved test sections have been added to Techsburg's blow-down wind tunnel laboratory in 2013, along with additional flow measurement capability (high-frequency hotwire and stereo PIV system). Techsburg is currently working with Northrop Grumman on analysis and testing of propulsion systems technologies for a variety of platforms. In addition to this work, ducted fan design, fabrication, and testing is a current R&D area. Producing designs with improvements in flow quality, efficiency, noise, or reduced weight are often key project goals at Techsburg.

TTTech North America Inc

AVIONICS/NAV

Kurt Doppelbauer
VP
300 Brickstone Square
Andover, NH 01810 USA
(978) 933 79 79
kdo@tttech.com
www.tttech.com

WHAT WE DO/TECH FITNESS

TTTech provides determinsitic databus / network solutions uniquely address mixed criticality applications e.g. from dual fault tolerant level A to maintenance data. TTTech products have been certified to DO254 and DO178b level A. With ever more powerful electronics with the goal of substantial reduction in SWaP - there needs to be a highly reliable, highly powerful, modular, flexible yet deterministic databus/network architecture - that enables these growth, and is the glue logic - and at the same time allows to do MORE with less. TTTech technologies and products are uniquely used cross industry in production applications e.g. automotive, power, off-highway - which provides the economies of scale to aerospace - while on the other hand these industries benefit from the safety and reliability of aerospace. TTTech also teamed with Cisco for the IoT (Internet of Things) to provide unique connectivity opportunities e.g. for engine health management data, ... see articles about IoT and aircraft, GE on Industrial Ethernet,... TTTech named Frontrunner for innovation and technology by Austrian Transportation Ministry.

PERFORMANCE

TTTech databus products (based on TTP and AFDX/ TTEthernet) are used on: - Aermacchi M346 Engine Control (FADEC - Lockheed Martin F-16 Engine Control (DEC) - Airbus A380 Cabin Pressure Control System - Boeing 787 complete electric system and Cabin Pressure control system - NASA ORION MPCV Avionics - Embraer 450 and 500 fly-by-wire - Bombardier CSeries electric power and fly-by-wire system - several more aircraft using TTTech products for fly-by-wire, avinionics, electric power, other systems (not announced yet) - NASA MPCV SM (service module) - other ESA programs - see TTTech web site for further information - see also upcoming ESA 7th Workshop on Avionics, Data, Control and Software Systems - ADCSS - that have a focus on Avionics based on Ethernet in Space: http://space-env.esa.int/indico/sessionDisplay.py?sessionId=14&confId=22#20131023

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

see NASA SAA (Space Act Agreement) with TTTech on the standardization of TTEthernet for open cross industry usage; - TTTech teamed with CISCO to make TTEthernet an IEEE standard. - TTTech North America Inc was incorporated in 2000 in Tucson AZ. Currently based in Andover MA.

FINANCIAL STABILITY

TTTech Group (founded in 1998) had US$50 million revenue worldwide in 2012 and was profitable. In Aerospace TTTech had US$10 million revenue - of which ~ 60% in the USA. For financial information please look at Dun & Bradstreed - which we are happy to send. Among TTTech minority shareholders are companies like AUDI AG, and AERIS Capital AG.

UB Technology Innovations

SOFTWARE

Santosh Swamidass
Senior Technical Manager
2400 East Katella Ave., Suite 570
Anaheim, CA 92806 USA
(714) 912-1617
Santosh.Swamidass@ubtiinc.com

WHAT WE DO/TECH FITNESS

WHO WE ARE UBTI's Aerospace team delivers configurable software solutions, innovative products and IT professional services to Tier 1 and Tier 2 Aerospace firms. WHAT WE DO We solve technology-related business challenges addressing: • Inefficiency • Productivity • Service Delivery • Operational Costs • Time to Market • Supply Chain Optimization • High End Data Visualization • Large Data set Analytics • Data Aggregation OUR SOLUTIONS & SERVICES • Cybersecurity Solutions • Software Prototype Development • Business Process Reengineering • Software Architecture • Decision Support Portal Design • CONOPS Support • System Engineering Support • Software Development Support • Software Configuration • User Interface Engineering • Predictive Analysis • Cloud Computing • Data Mining • Predictive Modeling • Business Intelligence OUR TECHNOLOGY EXPERTISE • Dashboards, BizTalk, .Net, SOA, Microsoft SQL Server, SharePoin.Net, XML and ASP.net Platforms • Oracle and SQL Server Database Applications & Integration with Legacy Systems • Microsoft Technologies including Windows Servers, SQL Server, Exchange, Visual

PERFORMANCE

AWARDS & RECOGNITION • Northrop Grumman Supplier of the Year 2011, 2008 and 2005 • 2008 Anaheim Chamber of Commerce Small Business of the Year CERTIFICATIONS • Certified Small Business (SB) • Microsoft Certified Partner • Minority Owned Business (MOB)

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Differentiates itself with speed/lower cost service. Founded in 1996, salaries on par with Defense companies, privately held.

FINANCIAL STABILITY

Currently executing on several multi-sector initiatives for Northrop Grumman Corporation • Have been providing software services for Aerospace Systems and Information Systems sectors on multi-year contracts • Have been selected and short-listed to participate in Mentor-Protégé programs for the Information Systems sector from 2011

Verify, Inc.

SOFTWARE

Sarah Willis
Director, Global Marketing
2525 Main Street, Suite 100
Irvine, CA 92614
USA
949-622-1218
swillis@vscnet.com
www.vscnet.com

WHAT WE DO/TECH FITNESS

SUPPLIER PERFORMANCE PLATFORM Verify's Supplier Performance Platform integrates over 30 years of quality and delivery assurance best practices and methodologies developed for and with almost every major A&D integrator in the North American market. Combining customizable data management, ERP/MRP integration, analytics, reporting, and seamless management of Verify's field services, the Supplier Performance Platform and its predecessors (eLaunch and eConnect) currently service over 70 aerospace vendors including seventeen Fortune 500 aerospace firms. SUPPLIER REGISTRATION AND QUALIFICATION PLATFORM Verify's Supplier Registration and Qualification solution assists in qualifying suppliers against established standards and capability requirements, delivering a standardized, innovative, and secure combination of software and processes. In addition to best-practice risk assessment and integration with third-party data feeds for financial and geopolitical risks, Verify's innovative solution will be the first platform on the market capable of integrating actual supplier performance data into the qualification and selection process. DELIVERY ASSURANCE PLATFORM Verify's Delivery Assurance service utilizes the Supplier Performance Platform as an information repository and reporting platform tracking customer purchase orders against supplier production and delivery. This solution is uniquely designed to provide Verify's field resources with the tools they need to work with suppliers to expedite recovery and to relay accurate supplier delivery dates to the customer's planning department. Suppliers are tracked across multiple levels of the supply chain, providing the intelligence necessary for robust root cause analysis. A flexible multi-tenancy architecture gives Verify's Delivery Assurance service the tractability to handle a wide variety of data formats, custom validation rules, and customer-specific tracking and alerting. Verify's Delivery Assurance service can operate in tandem with our Quality Assurance service, giving suppliers the unprecedented ability to streamline the inspection scheduling process. SUPPLY CHAIN CYBERSECURITY AND INFORMATION MANAGEMENT Verify has committed significant resources to leading the industry in the area of supply chain cybersecurity and information management. The company is actively driving this field across several avenues including R&D, participation in the development of national and international standards, and working with companies at all levels of the supply chain on assessment, implementation, and ongoing management of this critical area.

PERFORMANCE

Verify has a 35-year track record of helping Aerospace and Defense companies manage the performance of their supply chains. Through supplier quality services, delivery assurance solutions and on-site engineering support, Verify demonstrates its value in the field every day.

TRACK RECORD FOR BRINGING NEW PRODUCTS/SERVICES TO MARKET

Since its formation in 1976, Verify's entrepreneurial spirit has been evident. Its mission to be the global leader in supplier performance management solutions drives its entrepreneurial initiatives. Below are three entrepreneurial ventures that demonstrate rigorous support of that vision over the last decade. ESTABLISHING A GLOBAL FOOTPRINT Verify acquired CQMS (UK) Ltd (a European Engineering Service Company) in July, 2000, in order to strengthen both our European capabilities and leadership team. CQMS (UK) Ltd came to be Verify Europe Ltd in July 2002 and has remained an essential part of Verify's global service. The founder and Managing Director of CQMS, Alan McIntosh, is now the President and Chief Operations Officer for the global Verify group of companies. After years of supporting our Asia Projects remotely, Verify established the Verify Asia corporate presence in Hong and Mainland China in November 2008. Verify Asia is now an essential part of our global service – selling and support service product delivery to the Asia Pacific marketplace. CREATING REAL TIME INFORMATION FLOW In 2002, Verify made a significant technological investment in its online capabilities and launched both its eConnect and eLaunch portals creating a true marketplace differentiator. Verify has invested in excess of $10M USD over the last decade to design, develop, and continually improve our online capabilities. The next generation of these technologies will emerge at the close of our 2013 fiscal year via our Supplier Performance Platform. INVESTMENT IN ENGINEERING EXPERTISE As we recognize continued and increasing customer demand for on-site consultative engineering support, we invested in the expansion of our captive SME engineering team, to hire, retain, and develop the best engineers to provide superior customer support.

FINANCIAL STABILITY

Verify demonstrates its financial stability through almost a decade of year-over-year revenue growth while maintaining a healthy balance sheet, no debt and a positive working capital ratio trend.