

## MINERVA ENGINEERING EXECUTIVE SUMMARY

Minerva Engineering is a Service-Disabled Veteran-Owned Small Business specializing in integrating conventional and unconventional technologies, tools and techniques to design, develop, integrate and test, critical systems for the Defense & Intelligence Communities. Minerva Engineering strives to provide "Engineering Excellence for the Warfighter<sup>SM</sup>" by focusing on quality and a detailed understanding of customer needs. With a demonstrated history of performance, cost and schedule success, Minerva's experienced, innovative & professionally dedicated multi-disciplinary engineering team of "Integrationeers" mitigates program risk and changes problem areas into success areas.

### Systems and Software Engineering Services

### Cyber-Security Engineering Services & Products

### Simulation & Training Systems Services & Products

### Tactical Systems Development Services & Products

#### ENGINEERING EXCELLENCE FOR THE WARFIGHTER<sup>SM</sup>

Minerva Engineering is dedicated to providing the highest quality products & services to the Defense and Intelligence Communities. Contact us to see what we can do for you.

#### OUR GUIDING PRINCIPLES

Minerva Engineering will strive to treat business associates, customers and employees in a fair and equitable manner;

Deal with our business associates, customers, and employees openly, honestly and with integrity in all matters;

Use common sense;

Encourage the continual mental, social and professional growth of its employees;

Always strive to represent ourselves and our company with the greatest integrity, professionalism and highest ethical standards, and

Constantly strive to exceed our customer expectations and bring innovation to resolving issues or technical problems.



*"Responsibility, discipline, motivation, experience, and achieving success for the mission are all a part of what a veteran brings to your team".*

- Mark Volcheff, Maj Gen (ret), Executive Director, Colorado Homeland Defense Alliance

## LEADERSHIP IN FOUR BUSINESS AREAS

### *Engineering Services*

Minerva Engineering provides systems and software engineering services for space systems, distributed C4ISR systems, software defined radios, cryptographic communications systems and Intelligence Data Management Systems. Minerva Engineering's systems engineering capability includes user needs evaluation, requirements development, architecture synthesis, requirements verification & validation, modeling and simulation and system documentation development. Our engineers and scientists are experts in providing support to all major program reviews and the deliverables required to make them successful. Minerva Engineering's software engineering capability is focused on N-tier application and algorithm development using rapid prototyping and spiral model development with an emphasis on use of object oriented analysis/design (OOA/OOD), design pattern, and object library re-use techniques.

### *Cyber-Security Engineering Services & Products*

Minerva Engineering provides Cyber-Security engineering services and products for the DoD and Intelligence Community. We provide network and information security services, encryption system development and analysis, hardware and software vulnerability assessment, penetration testing and Information Systems Security Engineering (ISSE) services.

Our network and information security team provides the expertise to help our clients secure their infrastructure from the ground up. Our engineers can help you evaluate and harden an individual software package or an entire network system. Big or small, from the smallest embedded system to satellite control systems, we have experience with it all.

Minerva Engineering's software products teams have developed Type 1, Type 2 and Suite B software products and cryptographic algorithms using both Elliptic Curve Cryptography (ECC) and Finite Field Cryptography (FFC) techniques. With a detailed knowledge of NSA crypto processes, Minerva Engineering also provides key generation algorithm development, key distribution/key agreement and management engineering and key exchange system development in accordance with FIPS 140-1, 140-2 and ECDSA Standards.

Need a vulnerability assessment of your system (**Blue Team**)? Minerva Engineering has experience in determining how

secure your system is even if it's not a network. We've worked on many different types of systems to include crypto-communication systems, software defined radios, space systems, application packages and many other systems. Aggressively evaluating your network, software and the personnel using it (**Red Team**) can be an effective test of how well your infrastructure team has prepared your network and the people that use it against intruders.

Minerva Engineering has a demonstrated history of providing information protection analyses, security architecture design, information assurance (IA) analyses, security policy evaluations and new technology assessments in accordance with Certification & Accreditation (C&A) techniques as documented in DIACAP/DITSCAP standards.

### *Simulation and Training Systems*

Minerva Engineering's mission critical equipment emulators and Advanced Core Emulator<sup>SM</sup> (ACE, patent pending) software combines with simulated equipment and stimulated actual equipment in providing a high fidelity and realistic training environment for the Warfighter. Minerva's flexible hardware and software architecture allows for integration of our mission critical equipment emulators with any VR training system which garnered us top honors in 2009 as Top Training & Simulation company for most innovative company by Military Training Technology Magazine. What distinguishes Minerva Engineering's hardware and software emulators from any others is the incredible realism, flexibility and transportability. Our equipment has been lauded by mission operators as "just like the real thing". This attention to form, fit and functional detail means that Warfighters train like they fight.

### *Tactical Systems*

Minerva Engineering is a full system lifecycle developer of small, one-of-a-kind or limited-rate production systems for the DoD and Intelligence Community. Our facilities are state-of-the-art production centers and are designed to support low-risk development of unique systems. Minerva Engineering's rapid prototyping and integration facility produces power distribution units, signal conditioning units, mobile solar charging systems, communication system integration, integrated equipment racks, cabling and test kits which are easily integrated into a diversity of mobile platforms in support of forward deployed C4ISR systems.

Minerva Engineering has earned the reputation of delivering key products that meet customer requirements, are on time, within budget, and surpassing customer expectations.