SOFTWARE and HARDWARE ENGINEERING SOLUTIONS!

MAS

SOFTWARE ENGINEERING DIVISION • OGDEN AIR LOGISTICS CENTER

a CMM Level 5 Organization

World-Class Systems

FROM THE GROUND UP!

WORLD-CLASS CAPABILITY

The Software Engineering Division is a recognized world leader in "cradle-to-grave" systems support, encompassing hardware engineering, software engineering, program management, data management, consulting, and much more.

WORLD-CLASS EXPERIENCE

With over two decades of expertise in software, hardware, and systems engineering, the Software Engineering Division at Hill Air Force Base has the right people, technology, and processes to support myriad systems in any life-cycle phase.

WORLD-CLASS RECOGNITION

In 1998, the Software Engineering Division was assessed a Level 5 on the Software Capability Maturity Model®, which ranks the division in the top 2 percent of all software companies in the United States. Today, we are still the only Department of Defense organization to have achieved this feat.

AND WE ARE NOT STOPPING THERE!

"The engineers at Hill AFB are considered heroes back in Washington D. C."

Brig Gen David A. Brubaker
Deputy Director, Air National Guard

CMM® LEVEL 5 RATING*

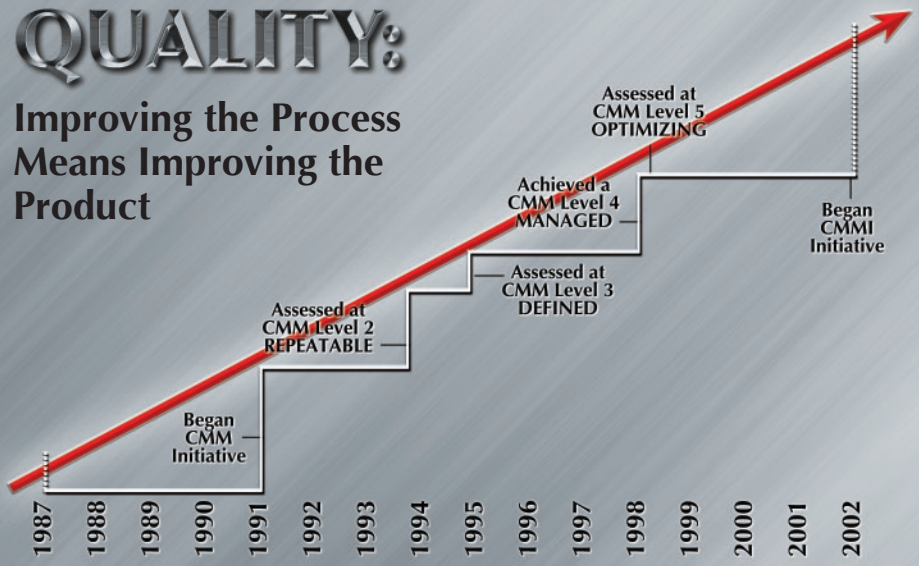
The Software Engineering Division is recognized worldwide as a leader in software development and maintenance. The division was independently assessed a Software Capability Maturity Model® (SW-CMM)® Level 5 organization. We are the only government organization to have achieved the highest level rating.

The division devoted many years to process improvement in the pursuit of excellence, using the SW-CMM, ISO (International Organization for Standardization) 9000, and best practices from business. Our focus is to do the right things for the right reasons. We pride ourselves on our continual process improvements, which enable us to provide quality products at the best value.

In keeping with our commitment to continual process improvement, the division is transitioning to the next generation of maturity models, the CMMI®, which integrates systems engineering practices with software. This model more closely matches the complex hardware, software, and systems products and capabilities representative of the Software Engineering Division.

QUALITY:

Improving the Process Means Improving the Product



How a Level 5 Benefits Our Customers

- The right product the first time
- Accurate estimates for cost and schedule
- Lower overall costs
- Early risk mitigation
- Accurate and timely status reporting
- High-quality and reliable software products
- Excellent response time to customer needs

The division's Vision Statement encompasses our view on process improvement:

> *"We are the team of choice providing exceptional weapon system software and related hardware solutions and technology adoption expertise to enhance our nation's defense.*
>
> *Our continually improving processes, skills, and business practices ensure a stable, productive, and technically challenging environment that results in high customer satisfaction."*

More detailed information on the Capability Maturity Model (CMM) and the Capability Maturity Model Integration (CMMI) can be found on their web site: http://www.sei.smu.edu

"The performance of this software development team...has been nothing short of miraculous. this team is a model for the Air Force and has our highest recommendation."

Col Frank E. Anderson
301st Maintenance Group Commander

SOFTWARE ENGINEERING

The division's software engineering solutions include development and maintenance of embedded systems, avionics, test equipment, PC-based systems, and system support applications. We develop and maintain software for a variety of systems, using both legacy and state-of-the-art languages. Our software solutions consist of complete system support during the entire development lifecycle to include requirements definition, software design, implementation, test, and delivery. In addition to our nationally recognized software development processes, our technical expertise, facilities, tools, and pro-active management approach make us the right solution to meet the needs of any software project.

SYSTEMS ENGINEERING

We are experienced in using well-defined processes to successfully design systems in all phases of systems engineering to include integration, testing, and maintenance. Commercial-Off-The-Shelf (COTS) or custom designed hardware and software products are integrated into the systems. We work closely with our customers throughout the project lifecycle, helping with requirements definition to ensure the end product is what they need and want. The systems we have delivered range in size from relatively small projects to multimillion-dollar programs that extend over many years and involve numerous personnel as well as contractor teaming.

WEB-BASED DESIGN

The division has high-end Web site design, development, and maintenance professionals with vast experience in dynamic, database-backed Web sites for both MS Windows and UNIX servers. Using state-of-the-art equipment and the latest development tools, we build modern Web sites with eye-catching graphics and a back-end system that will handle any data management requirement. We have expertise in using modern development platforms, to include Lotus Notes/Domino (Administration & Development), ASP, ColdFusion, Perl, and JavaScript, and can easily integrate complex databases using Microsoft SQL Server, Microsoft Access, or Oracle.

SOFTWARE CONFIGURATION MANAGEMENT (SCM)

The SCM group supports the customer by providing quality assurance as well as managing the elements of each project and its processes. They define, implement, and manage product lifecycles by planning, identifying, controlling, auditing, and improving the elements by which they are created. SCM enhances the sustainment stage of the product by carefully tracking each software activity. This establishes integrity and quality through repeatable auditing and data control. SCM provides a firm foundation upon which software development and sustainment are achieved.

HARDWARE ENGINEERING

We provide state-of-the-art hardware solutions, using the latest instrumentation, interface technology, and reverse engineering techniques. Products developed include production systems as well as conceptual and prototype designs. We use sound engineering principles to provide superior support from requirements definition through deployment and maintenance. Being a government agency, we can relate to and understand the need to produce newer and better systems at lower cost. We fulfill the need to support system upgrades and replacements that meet DoD standards, to include Form, Fit and Function requirements, with high reliability and supportability.

TECHNOLOGY UPGRADES

The Software Engineering Division can provide upgrades to essentially any legacy system. We can help bring outdated legacy systems up to modern COTS or custom state-of-the-art technologies. We are leaders in designing and implementing technology upgrades for operational and logistics systems, computer platforms, test systems, and in re-hosting their associated programs. Whether it is development on a new processing platform or a complete system upgrade, our broad engineering experience and focus on quality ensures customers have the ability to maintain the edge in system efficiency and product excellence in a radically changing environment.

SIMULATION AND EMULATION

We have successfully designed, written, and tested software-based hardware emulators that exceed the speed of the hardware being emulated. These emulators allow binary programs to be loaded and run in place of the real hardware. We have delivered software and hardware simulators (models) for a full range of aerospace systems and technologies: aircraft; space; missiles; radar; electronic and electro-optic countermeasures; air defense systems; and command, control, and communications systems. By understanding your requirements and working closely with you throughout the project, we will ensure the product meets your needs.

CONSULTING SERVICES

In the continual pursuit to make systems and software better, faster, and cheaper, the division's Software Technology Support Center provides world-class consulting services. Our consultants train, mentor, and assess numerous organizations with widely varied workloads and personnel. As a transition partner to Software Engineering Institute, we offer consulting and training for cutting edge process improvement techniques, such as the SW-CMM, SA-CMM®, CMMI, PSP℠, and TSP℠. In addition, we provide software acquisition assistance on such essential subjects as project management, configuration management, software test, software measurement, and software quality.

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®SA-CMM is registered in the U.S. Patent and Trademark Office

"A model organization by which I would compare all other suppliers."

Mr. Jon W. Shively
Chief, F-16 Logistics Operations Division

...OF QUALITY PRODUCTS AND SERVICES

OPERATIONAL FLIGHT PROGRAM (OFP)

We have extensive experience in maintaining and upgrading OFP software for the F-16 aircraft. Our expert engineers use outstanding facilities and cutting edge software development tools to incorporate significant functional improvements into F-16 avionics. These enhancements make a direct contribution to war-fighter capability and survivability and have a lasting impact on the operational life span and utility of the weapons systems. In addition, many enhancements that we have implemented on the F-16 are applicable to many other weapons systems.

AIR FORCE TOTAL OWNERSHIP COST (AFTOC)

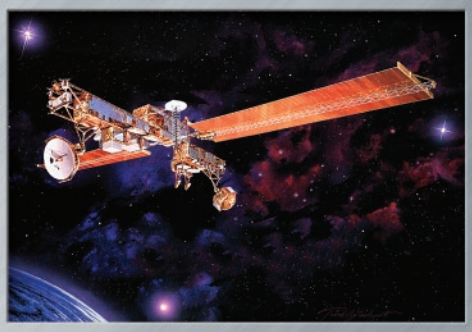
The Software Engineering Division provides information technology (IT) and development services for the AFTOC program. AFTOC is a Web-based data warehousing system that has standardized how total ownership costing is calculated for the Air Force and DoD. Our IT experts enable analysts to discover trends, perform regression analysis, and create "what if" scenarios almost instantaneously on most Air Force weapons platforms. AFTOC provides routine, timely, credible, and uniform visibility into Air Force total ownership costs for all major weapons systems to include components, flying hour costs, logistics, and more.

WEAPONS SYSTEMS MISSION PLANNING

We have experience in developing and sustaining mission-planning software for many different weapons systems, such as the F-16, the A/OA-10, and the B-1B. Our software functions with the Portable Flight Planning Software (PFPS), the Air Force Mission Support System (AFMSS), and the Joint Mission Planning System (JMPS) to allow the performance of mission planning and execution. Our software also provides the capability of delivering Precision Guided Munitions (PGMs). Our mission planning expertise allows users to work faster, easier, and accurately than previously possible.

AUTOMATIC TEST SYSTEMS (ATS)

We provide expertise in producing and maintaining customized and COTS-based automatic test systems. Our expertise has been proven with microwave (MDTS) and analog (FATTS) circuit card test systems, which have been fielded with minimal re-host cost and maximum capability. We team with various contractors on systems, such as the Ground Minuteman Automatic Test System (GMATS) and the Digital Analog Test System (DATS). These highly successful programs pay huge dividends to both domestic and world-wide customers. At all levels, we are ready to solve your most intricate test issues and ensure that your sustainment programs are effective and efficient.



MILSTAR – SPACE COMMUNICATION AND WARNING SYSTEM

We provide systems engineering, logistics management, and communications software maintenance to space and communications programs that support NORAD, AF Space Command, and US Space Command operators. Delivered ahead of schedule, our first software maintenance release for the Milstar satellite Air Force Command Post Terminal had the most successful "sell-off" in program history! Collocation with our customers over a 10-year period has significantly helped our ability to understand and completely integrate with their internal processes, execute "government-only" tasks, and establish "honest-broker" relationships between program offices and private contractors.

COMMON MODULAR ENVIRONMENT (COMET)

The COMET test stands are designed to create a user-friendly environment that is conducive to develop and test software used in real-time embedded computer systems, such as the F-16. COMET test stands can easily be built to support the various phases of the software development process. COMET uses a modular design with COTS and custom hardware and software to support the specific environment desired. With the wide variety of COTS products available, we can develop a COMET test stand to support any embedded computer system, such as those used on airplanes, ships, and tanks.

GROUND THEATER AIR CONTROL SYSTEM (GTACS)

The Software Engineering Division maintains the complex software for GTACS operations modules. These are ground-based computer network systems that coordinate dozens of radar and communication data signals. GTACS modules use visual, touch-screen environments to coordinate ground, airborne, and naval elements to plan, execute, and evaluate joint operations. Our expertise in radar and data-link messaging provides new and vital capabilities to this system in support of such crucial and diverse missions as high- and low-intensity conflicts, enforcement of no-fly zones, and homeland defense.

HUMAN ENGINEERING DEVELOPMENT STATION (HEDS)

The Software Engineering Division designed and fabricated the Human Engineering Development Station—a rapid prototype simulator to preview F-16 OFP change candidates. In addition, the division provides updates as the technology advances. The HEDS is a tool OFP design engineers use to refine requirements, by viewing various implementation options, and identify potential pitfalls. Pilots also use HEDS to verify that their requirements were accurately captured. The HEDS ensures that only the most desirable candidates are put through the costly implementation process. This results in enormous cost savings and a higher-quality product delivered to the customer.

SOFTWARE CONTROL CENTER (SCC)

The SCC is the single receiving, storage, and distribution point for all Mission Critical Computer Resources (MCCR) software managed at Hill AFB. The center provides service for all electronic media and associated documentation as well as direct support to worldwide DoD agencies and Foreign Military Sales (FMS) customers. The SCC uses the Automated Computer Program Identification Number System (ACPINS) to manage over 30,000 computer program data files. The center reproduces and verifies such media as CDs, diskettes, PCMCIA Flash Cards, and data cartridges. The SCC provides a direct support function to worldwide customers.

BUILDING SOLUTIONS FOR THE SYSTEMS OF THE PAST, PRESENT AND FUTURE!

MAS

SOFTWARE ENGINEERING DIVISION

If you are tired of spending more and getting less, let us—a successful organization with a proven track record—help you.

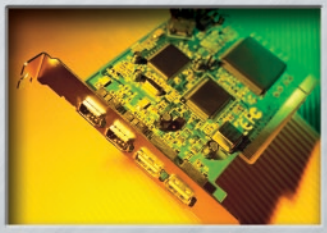
We are the only government organization rated SW-CMM® Level 5, which positions us in the Top 2 percent of software suppliers in the United States!

This results in low cost solutions and high-quality products!

We are customer and user oriented!

WE CAN SUPPORT YOUR DEVELOPMENT AND SUSTAINMENT NEEDS...

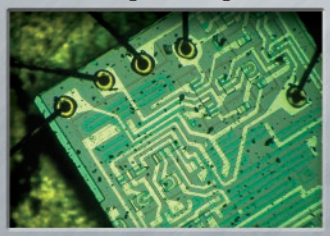
Software Engineering



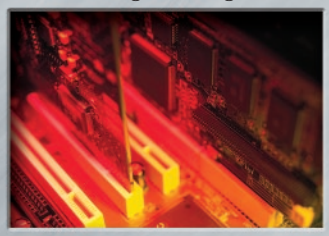
Systems Engineering

Web-Based Design

Software Configuration Management



Hardware Engineering



Technology Updates

Simulation and Emulation

Consulting Services

ON A WIDE RANGE OF SYSTEMS AND PRODUCTS...

- Avionics
- Automatic Test Equipment
- Electronics
- C^3I
- Weapons
- Mission Planning
- Web-Based Products
- Space and Missile Systems
- Ground Support Equipment

...AND MANY MORE!

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