



Providing Comprehensive System & Software Engineering Solutions

Our Mission

Provide complete software engineering services in support of repeatable, cost-effective system solutions. Make efficient use of state-of-the-industry engineering practices in all life-cycle stages: customer interview, requirements analysis, system design, implementation, and sustainment.

Core Competencies

- System & Software Engineering
- Large-scale Distributed Systems
- Systems Integration
- Program Management
- Classified Systems



Domains

- Real-time Telemetry, Tracking and Command Systems
- Navy Control Centers
- USAF Control Centers
- Commercial Control Centers
- NASA Control Centers
- Mission Critical Data Processing
- Simulation
- Expert Systems
- Graphical User Interfaces



Applications

- Mission Planning
- Schedule Execution
- Resource Management
- Device Control & Status
- Command & Telemetry Systems
- Personnel Scheduling



System and Software Engineering

The Principals in our company have provided system and software engineering services to industry leaders, including Lockheed Martin, Computer Sciences Corporation, Boeing North America, Honeywell, GTE, NASA, the Naval Research Laboratory, the Department of Energy and the Naval Reactors Program.

Systems Integration

Industry is moving away from custom, monolithic systems towards COTS-based distributed solutions, and there is an increased demand for experienced system integrators. Cost-effective solutions typically require a combination of COTS and mission-unique development elements. Integration of these elements requires practical and experienced engineering. Our engineers have seamlessly integrated COTS and custom sub-systems into unified, user-friendly solutions.



Large-scale Distributed Systems

The design and development of large-scale distributed systems with centralized control elements forms the foundation of our experience. These systems require a detailed understanding of network and inter-network latencies, and the ripple effect these have on mission-critical data processing functions.

Real-time Telemetry, Tracking and Command Systems

We have experience in all aspects of the design, development and deployment of command and control systems for large satellite constellations, including NAVSTAR



GPS. Multi-processing and multi-threading techniques have allowed us to deploy robust, time-critical control systems.

Program Management

Our management team has practical experience at both leading and participating in T&M, CPAF, CPFF, and FFP contracts. We have successfully managed cost and schedule on programs involving multi-site coordination without exceeding approved variances.

Expert Systems

Our staff has developed rule-based expert systems using several COTS development environments. Delivered systems include a resource allocation and autonomous fault resolution system for GPS, a personnel scheduling system and a diagnostic system for analyzing eddy current measurements, both for the Department of Energy / Naval Reactors Program. This last expert system has been granted a US Patent.

Schedule Planning and Execution

Our engineers have developed and assisted in the development of applications providing constraint-based mission planning capabilities. We have deployed systems that support distributed execution subject to multi-site, multi-step dependencies. A design goal of our systems has been to support "closed-loop" planning and execution, whereby real-time execution status immediately and directly affects the future of the mission plan.

Device Control and Status

We have extensive experience developing device drivers in support of RS-232, IEEE-488 (GPIB), and IP interfaces. Device control is available via point-and-click GUIs



as well as device-specific directives that can be included in script files. Device connectivity can be graphically manipulated in environments supporting switching-matrix capabilities.