



Services

Space Vector maintains the development and support capabilities to propel a program from concept through production to program support. Our engineering and manufacturing teams have the mission-proven experience and creativity to provide innovative solutions to the most complex development and support challenges.



Our multi-disciplined and experienced team provides expertise in:

- Aerospace Engineering
- Hardware, Software and Systems Engineering
- Mechanical Engineering
- Production Control
- Program Management and Mission Support

SVC provides a range of services throughout the life cycle of a program including:

- Modern and classical control system analysis techniques
- Extensive CAD analysis and modeling
 - Solid modeling
 - Orbital mechanics simulation using Matlab, Simulink, and Space Vector proprietary 6-DOF software
 - Hardware simulation using SPICE, Matlab, and VHDL simulators
 - Electrical hardware design, layout, and verification using Orcad/Cadence
- Analog, digital, and mixed-mode design and analysis using flight proven SMT, μ P, μ C, and FPGA technology
- Hardware and software co-design
- Mission-critical embedded software for a variety of popular platforms
- An established system of HWIL and environmental tests to validate software over mission critical limits
- Extensive development and flight operation support capabilities for telemetry



Let Space Vector conduct an independent review of an existing or proposed system. We would be happy to provide you with a report that includes a comprehensive analysis along with recommendations for improvement.



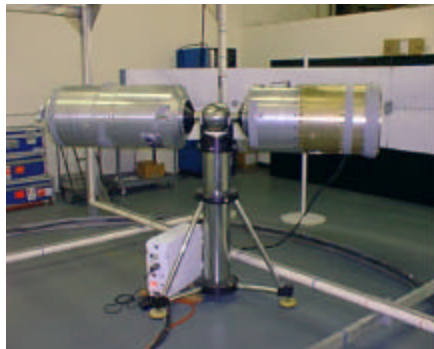
Services

Mission Analysis and Planning

- Comprehensive data base of booster and vehicle performance parameters
- 6-DOF trajectory simulation tools that include vehicle bending modes
- Wind loading profiles and Monte Carlo dispersion predictions
- Visualization aids like STK and Truespace
- Trajectory shaping to optimize mission parameters (i.e. look times, LOS, etc.)
- Multibody and complex geometry engagement analysis techniques
- Aerodynamic prediction codes (Missile Datcom, AP98)
- Finite Element Analysis (FEA) using CosmosWorks
- Flight and ground handling load generation
- Thermal protection system design and analysis

Air Bearing Testing

The Space Vector air bearing facility is used to test post boost attitude control systems in a space-like environment. This is a complete hardware-in-the-loop (HWIL) test running the flight software. TM data and laser pointer traces are used to verify system performance.



Launch Services and Support

Space Vector can provide a variety of launch support activities based on our extensive experience integrating vehicles and payloads at ranges worldwide including: White Sands, NM; Wallops Is., VA; San Nicholas Is., CA; Matagorda Is., TX; Kiruna, Sweden; Kodiak, AK; Poker Flats, AK; and Shemya, AK.

- Range documentation preparation (PI, PRD, OSHA, SSHA, TM Handbooks, etc.)
- Site surveys and range interface support
- Ground Support Equipment (GSE) development that includes transporter erectors, lifting slings, launch stools, pad boxes, launch consoles and remote fill stations