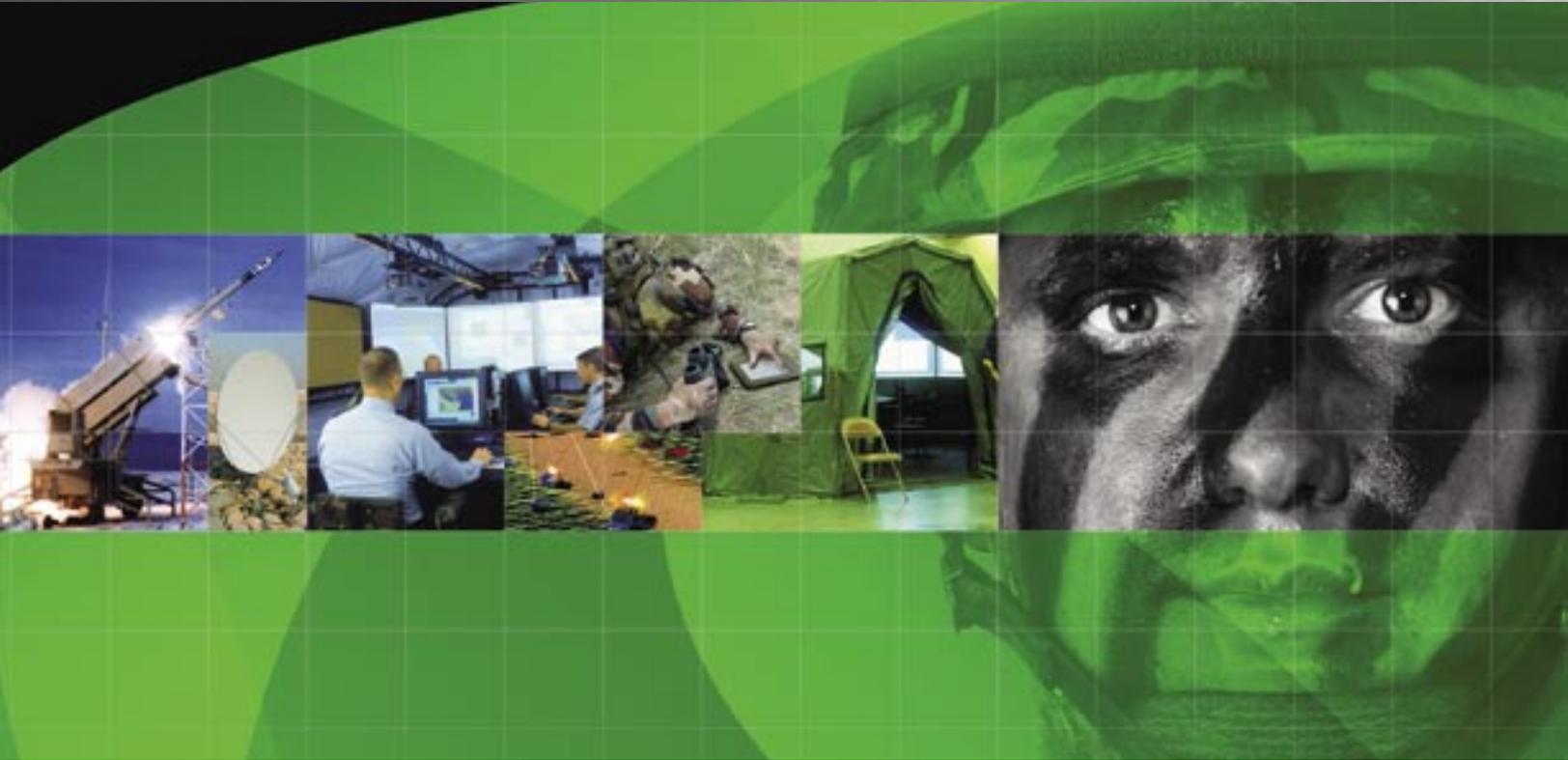




# SMD-BL

Space & Missile Defense Battle Lab



## Summary

- Development of innovative prototypes
- Experimentation – space, missile defense, information ops, C4ISR, global strike
- Development and management of models and simulations
- Management of high-performance computational facilities
- Studies and operational analyses

## Delivering Innovations to the Warfighter.

The Space and Missile Defense Battle Lab (SMD-BL) is a split-based organization with operations in both Huntsville, Ala., and Colorado Springs, Colo. Our mission is to rapidly infuse innovations for space, missile defense, command and control, computers, communication, intelligence, surveillance and reconnaissance (C4ISR), and information operations to the warfighter. We accomplish this mission through experimentation in laboratory and field environments, analytical assessments, and in simulation environments; leading to proven candidates tested by warfighters in Army and Joint-force exercises and experiments, as well as current military operations.

Space and Missile Defense Battle Lab (SMD-BL) has headquarters in Huntsville, Ala., with split-based operations in both Huntsville and Colorado Springs, Colo.

SMD-BL's Mission is to deliver space, missile defense, information operations, C4ISR, and global strike innovations to the warfighter.

SMD-BL's core competencies include development of innovative prototypes; experimentation – space, missile defense, information operations, and C4ISR; development and management of model and simulations; management of high-performance computational facilities; and studies and operational analyses.

### SMD-BL's Products and Services

- Experimentation management
- Models and simulations
- Space and missile defense and information operations prototypes/innovations
- Military utility assessments
- Operational analyses
- Exercise and training tools
- Mission essential computer resources
- Threat scenario design
- Command and control engineering
- Advanced Concept Technology Demonstration (ACTD) operation management

### Experimentation

- Support Combat Development and Doctrine, Training, Leadership, Organization, Materiel, Personnel, and Facilities (DTLOMPF) requirement determination.
- Support materiel requirement development.
- Provide opportunities to streamline acquisition testing and evaluation.
- Provide insights and solutions to warfighter needs.

### Examples

TACSPACE Initiative—provides Space Operations officers a mobile platform equipped with the necessary tools to bring space to the warfighting commander (includes Space Support Element Toolset (SSET) and various space communications and analytical tools). Demonstrated in multiple venues, including Joint Forces Command experiment Millennium Challenge 02, SSET-Light was developed for use in OPERATION IRAQI FREEDOM and OPERATION ENDURING FREEDOM.

Unit of Action—concept exploration program which investigates value of future space concepts to the warfight at the tactical level, ISR asset integration, and simulation.

Future Operational Capability (FOC) TOC—a demonstrated advanced C4ISR operations center capability. The FOC provides a reduced footprint (one HMMWV w/DRASH tent) for the theater commander's enhanced visibility, control and interoperability of Theater Air and Missile Defense forces and has been used by the Army, Air Force, and Marines in Roving Sands, Northern Edge, Fleet Battle Experiments, OPERATION CLEAR SKIES, and OPERATION NOBLE EAGLE.

Total Defender (TD). The focus of the TD Program is to identify, through experimentation and analysis, joint integration requirements for global air and missile defense, space operations, and information operations. TD efforts result in recommendations for modifications to architectures, planning processes, doctrine, and materiel.

### Simulation

SMD-BL leverages the growth and maturation of computer-based models and simulations, by expanding use of its space and missile defense models and simulations beyond the materiel development and analysis domain to provide sophisticated capabilities to the warfighter. SMD-BL is lead for the Army's Space Modeling and Simulation Focus Area Collaborative Team (FACT) "to ensure Army space requirements are captured in current and future M&S." SMD-BL operates two large computing centers to conduct supporting operations: the Advanced Research Center (ARC) and the Simulation Center (SC). Additionally, the Ground-based Midcourse Defense (GMD) User Lab, located in Colorado Springs, provides warfighters an independent environment and capability for the operator to train, exercise, and experiment with GMD systems prior to fielding. SMD-BL's simulation capabilities also include Extended Air Defense Simulation (EADSIM) and Israeli TestBed.

### Studies and Analysis

The SMD-BL Studies and Analysis program supports experimentation; materiel development activities; requirements determination; science and technology reviews; assessment of advanced concepts; and the definition of space and missile defense architectures for the future warfighter. Studies and analyses have been conducted for SMDC, the Army, the Air Force, the Joint Staff, and the Office of the Secretary of Defense to support major acquisition and operational decisions.

The Army Space Exploitation Demonstration Program (ASEDP) leverages the commercial community's space technology advances to address warfighter needs. ASEDP has advanced utility of the global positioning system and individual Soldier space-based communications. The objectives of the ASEDP are to:

- Educate commanders on the use of space-based assets to enhance Army operations
- Assist in defining requirements for Army development
- Demonstrate technology for further development
- Influence design and use of future space systems
- Provide rapid prototyping of contingency operations



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