SBIDEE

Space Battlefield Integration and Data Exploitation Environment

Summary

- Lab environment for development and demonstrations
- Acquisition tool for collaborating and advancing current emerging technologies
- Transfers applied research projects into Warfighting capabilities
- Facilitates collaboration amongst industry and academia leading solution providers

Benefits
- Increase space contribution to the fight
- Provide relevant, current information tailored to specific mission requirements
- Enhance situational awareness
- Provide battlefield superiority
- Expedite delivery of solutions through collaborative development

SBIDEE is a government-managed environment focusing on cutting edge technologies, techniques and operational studies that leverage multiple phenomenologies to substantially support tactical and unified command operations.

The Space Battlefield Integration and Data Exploitation Environment (SBIDEE) consists of a physical lab for development and demonstrations, an acquisition tool for leveraging existing technologies, and the necessary resources for facilitating collaboration amongst other government agencies, industry and academia leading solution providers. SBIDEE integrates current and emerging technologies into research and development projects to expedite the delivery of tools to meet the requirements of today's Warfighter. The mission of SBIDEE is to focus on space, cyberspace, and missile defense technologies that are tactical in nature and directly add support to operations and the Warfighter.

Overview

Warfighters are constantly asking for capabilities to provide them with an advantage over the enemy. Current and emerging technologies exist that can provide our Warfighters with an increased situational awareness, the ability to rapidly respond, and tactical battlefield superiority. However, to deliver these enhanced capabilities to the Warfighter, one must:

- Apply technologies and techniques to extract relevant information down to a classification level for rapid insertion to support tactical and strategic operations
- Apply machine learning technologies to improve the real-time course of action decision cycle
- Develop cloud computing applications that fuse and correlate multiple sources for actionable information

Benefits for Tomorrow's Defense

Understanding how to work with space-based capabilities and knowing how to react when these capabilities are threatened is critical to the success of deployed troops. Space Battlefield Integration and Data Exploitation Environment (SBIDEE) seeks to exploit the current and emerging space and cyberspace technologies to integrate satellite communications and multi-INT data such as Imagery Intelligence (IMINT), Signals Intelligence (SIGINT), Measurement & Signature Intelligence (MASINT), Communications Intelligence (COMINT), and Human Intelligence (HUMINT) into the battlefield to directly support the Warfighter operations. SBIDEE seeks to leverage emerging machine learning technologies to speed up the data delivery and to provide the Warfighter with near real-time situational awareness. SBIDEE also plans to leverage emerging encryption technologies to ensure the most critical data can securely be delivered to the right Warfighter at the right time.

Examples of Possible Delivered Solutions

- Behavioral trajectories modeling coupled with machine reasoning technologies to provide a quantitative reasoning capability to predict future enemy activities or movement.
- Cloud computing applications on hand-held smart phone coupled with encryption software to provide Warfighters near real-time situational awareness
- Video images combined with data mining techniques to extract from multiple sources and applying reasoning technologies to automate identifying hostile intent within scene

Technical Concept

SBIDEE facilitates research, development, and demonstration in the areas of space, cyberspace, and missile defense that directly support operations and the Warfighter at the tactical level by leveraging:

- State-of-the-art laboratory for development, demonstrations, and assessment
- Acquisition expertise to team sources together to develop leading edge solutions to meet Warfighter requirements
- All source data feeds to allow for data exploitation and gap analysis studies

Benefits

- <u>Warfighter needs are met</u> – Developed solutions driven by Warfighter requirements. This provides the Warfighter with direct input into delivered tools
- <u>Expedited delivery of solutions</u> – Development efforts will have rigorous schedules and metrics with planned capabilities delivered at 6-, 12-, and 18-month increments
- <u>Battlefield superiority</u> – Warfighters will have the advantage through the use of SBIDEE-delivered cutting edge applications and/or capabilities to observe, orient, decide, and act within the dynamic battlefield environment