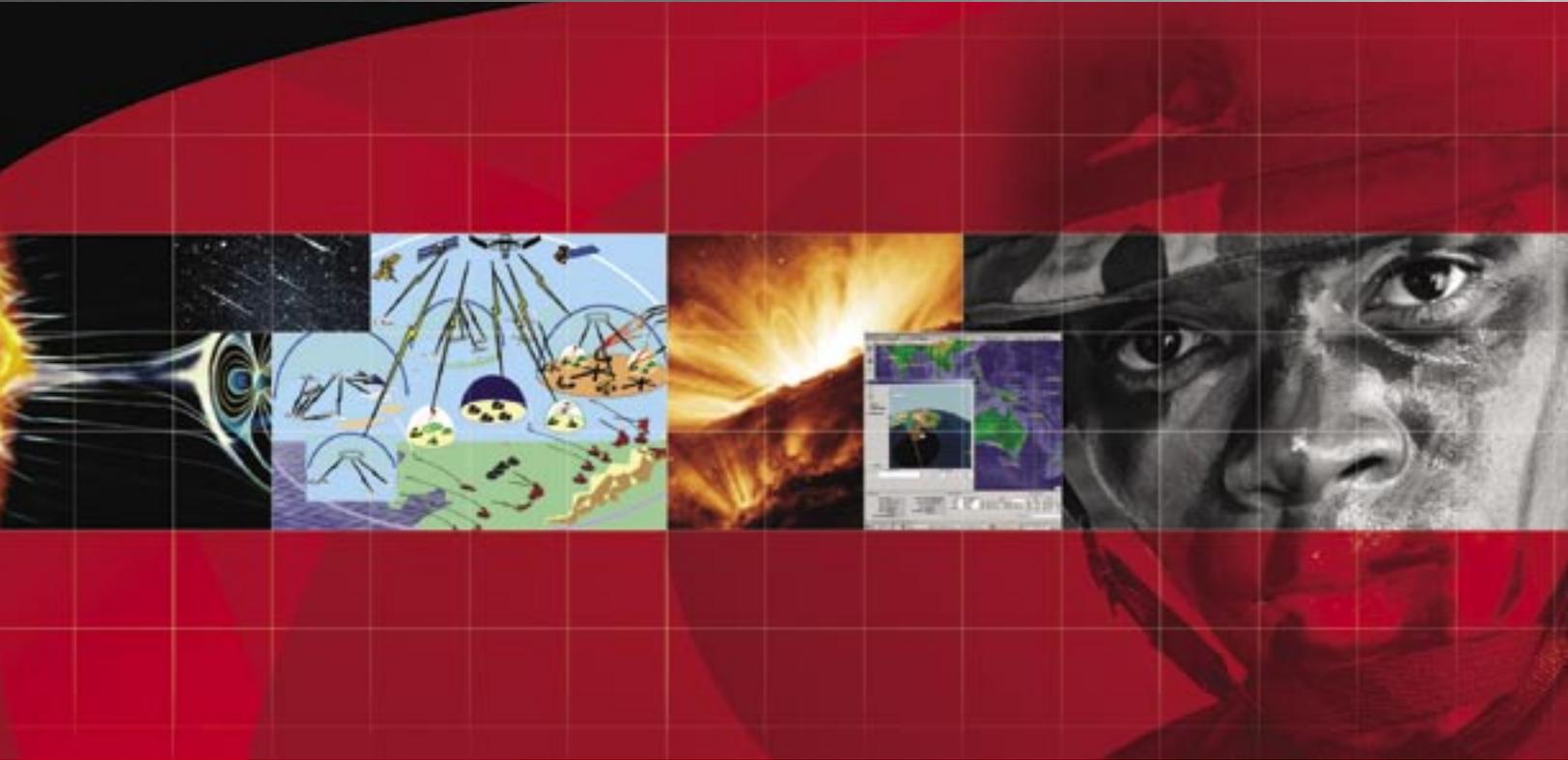




SISP

Single Integrated Space Picture



Summary

- Develops a platform for an independent single integrated space picture display
- Provides a single integrated space picture of all space objects within a theater of operations
- Presents the aggregate data on an inexpensive commercial display system
- Commercial and civil use applications support navigation, astronomy, communications, and satellite launch

The Single Integrated Space Picture's (SISP) goal is to obtain an accurate display of space objects to enable Space Control Actions.

The capability to provide a single integrated space picture of all space objects within a theater of operations is necessary for the U.S. Army to comprehensively support the Future Force. The SISP integrates various sources of space object information into a metalanguage and develops a platform for an independent single integrated space picture display. A prototype SISP display will provide, as a minimum, fast-forward/reverse time displacement, drill down data menus, multiple views, and near optimal use of available display/operation characteristics to browse information in an intuitive and natural manner. The information will be designed to support a broad range of applications for the military's Battle Management System.

Overview

Certain military mission areas such as intelligence, communications, space control, and missile defense have a requirement to know the location of space objects. The Single Integrated Space Picture (SISP) integrates various sources of space object information into a metalanguage and develops a platform for an independent single integrated space picture display. The goal of the SISP is to provide fast, accurate decision making tools for Space Control Actions, as well as support all pillars of Space Control.

Benefits for Tomorrow's Defense

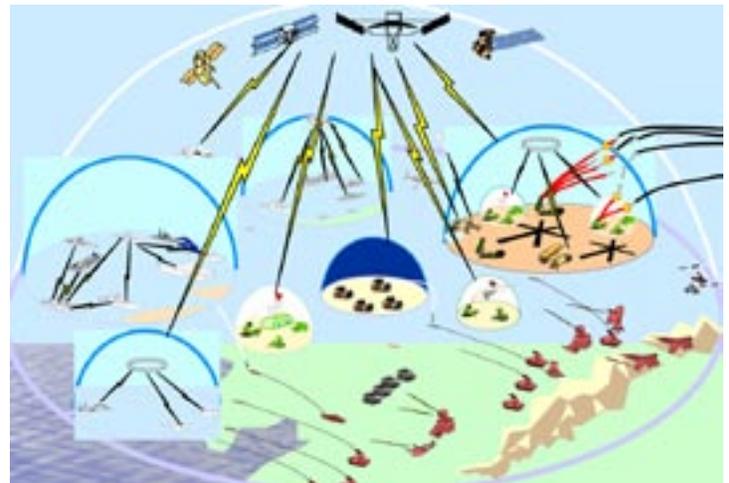
The capability to provide a single integrated space picture of all space objects within a theater of operations is required by the Future Force. The originating data sources for a space picture display use various formats that require translation into a common language for display. The data is generated by sources with diverse, often incompatible, characteristics such as quality ratings and object specifications (for example, radar, IR, visible). A prototype SISP picture of display will provide, at a minimum, fast-forward/reverse time displacement, drill down data menus, multiple views, and near optimal use of available display/operation characteristics to browse information in an intuitive and natural manner. This metalanguage-formatted information will be designed to enable a broad range of applications that support military Battle Management Systems.

Technical Concept

Technical development of the SISP will be managed within the following phases. During Phase I, a prototype aggregate metalanguage data set and schema will be developed from open literature ephemeris and notional real-time sensor data. The aggregate data will then be displayed on a commercial display system.

Phase II will integrate atmospheric data such as weather, clarity, and environment into the aggregate data of Phase I. Further, the display browser will be enhanced to include useful options discovered in Phase I. Satellite coverage areas on a ground map based on the information contained in the metalanguage data set and user preferences will be displayed. Phase II will also demonstrate that the quality of the aggregated data is superior to constituent individual source data.

Phase III will investigate dual-use applications. The SISP will hold practical applications for other government agencies, commercial and civil group use, such as navigation, satellite launch, astronomy, communications, and educational space applications.



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