



Overview

Emergent Space Technologies, Inc. leverages its IT experience to provide ground system solutions that reduce cost and enable the next generation of missions to fly. As part of this charter, Emergent has developed the Ground Enterprise Management Systems (GEMS). GEMS provides users with situational awareness (SA) of the ground system and an understanding of how events and automated actions are affecting the system in real-time. GEMS has many features and uses for designing, developing, operating, and managing a mission operations center in an enterprise environment.

Situational Awareness

GEMS contains multiple features to enable SA, including data driven displays with a drag-and-drop display builder, the services control panel to start, stop, and monitor ground system components, the process monitor to view the output and status of system processes in a centralized location, the event monitor allows users to view all current, past, and future activities to be monitored, and the action items interface alerts users of failures, tasks, or other important information that must be attended to. All features collectively allow a user to gain exceptional oversight into their ground system.

Ground System Integration

GEMS is a 100% service-oriented architecture (SOA) built using open Java Enterprise Edition (JEE) standards. It integrates with standard architecture frameworks, including the GSFC Mission Services Evolution Center (GMSEC) and the Advanced Multi-Mission Operations System (AMMOS). What sets GEMS apart from other SOA monitoring solutions is its capability to monitor legacy systems, such as standalone scripts that simply print log messages to a systems standard output. Interfaces are also available for desktop clients, web browsers, mobile devices, and command line clients.

Enterprise Management

Managing an enterprise extends far beyond monitoring capabilities. GEMS has a focus on working with standards-based architectures to manage interfacing with disparate data sources and protocols. GEMS allows system administrators to centrally manage software installations for the entire operations center from the software manager. There is also a message recorder that can record and play back system message traffic from all connected software interfaces.

