

SoSAT Enterprise

Multi-Echelon Enterprise Lifecycle Cost Analysis Tool

Highlights

What does SoSAT Enterprise Enable?

- A unique enterprise-level system of systems (SoS) analysis
- Cost model analysis and trade studies for long-term lifecycle operations
- Capability to evaluate support and cost metric trade-offs between multiple infrastructure configurations and scenarios
- Extension of SoSAT to include global logistics capabilities
- Enterprise-level integrated supply and repair chain analysis including the modeling of resource contention

Why is SoSAT Enterprise Important?

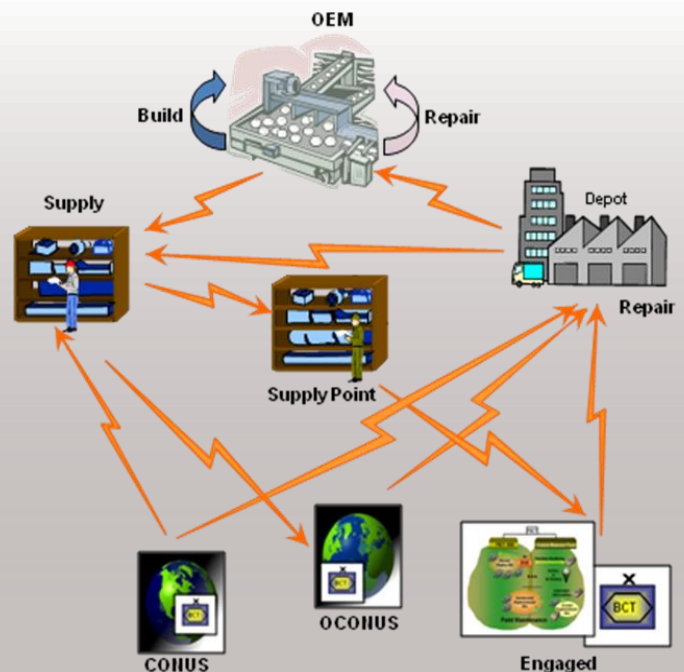
- Allows analysts to evaluate lifecycle cost drivers of complex SoS
- Provides analysts with the capability to support business decisions at a global logistic scale
- Enables trade studies and impact analysis resulting from architecture changes

Example Applications

- Lifecycle/total ownership cost component analysis
- Enterprise global logistics analysis
- Production schedule risk analysis
- Sustainment assessment
- Acquisition decision support
- Inventory management assessment
- Resource usage and cost analysis
- Performance Based Logistics (PBL) analysis
- Operational Availability (Ao) and Materiel Availability (Am) analysis

SoSAT Enterprise Overview

The System-of-Systems Analysis Toolset Enterprise (SoSAT Enterprise) provides the ability to model global logistics. The tool enables analysts to perform SoS analysis for understanding characteristics of large-scale interdisciplinary problems that involve multiple distributed systems that are embedded in networks at multiple levels and domains. SoSAT Enterprise allows analysts to define detailed and integrated enterprise-level components for assessing lifecycle operational and support sustainment analysis. It allows analysts to identify cost drivers and characterize the impact of changes in support architecture, process, business rules, equipment usage, and maintenance characteristics. SoSAT Enterprise is a robust decision support tool for evaluating readiness, sustainment performance, and logistics support issues.



SoSAT Enterprise

Key Features

Basic Modeling Features

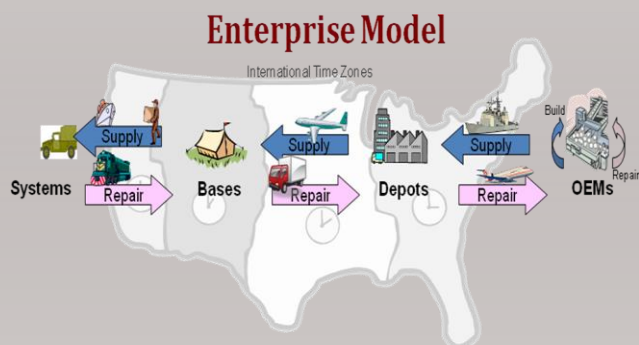
- Global logistic infrastructure simulation
- Capability to model individual sites, and interdependency among multiple levels of sites
- Modeling of support structure including repair and supply chain management and resources constraints
- OEM part build simulation model
- Transportation network

Advanced Modeling Features

- Resource usage and resource contention to identify bottlenecks
- Dynamic simulation changes over time to model shortages, surges, deployment etc. (e.g., site dependent inventory rules modifications, resource and inventory allocations)
- Detailed resource model for personnel and support equipment including scheduled and unscheduled maintenance models
- Detailed workflow models

Advanced Data Visualization

- Real-time status of individual systems and their components
- Detailed information for all systems in the model provided at the individual system level, system type level, and organizational structure level
- Customizable results display with selectable amount and type of data for finer control of the output



Key Benefits

High Fidelity Simulation

- Integrated repair and supply chain simulation
- Resource contentions
- Detailed workflow modeling
- Multi-echelon distribution structure

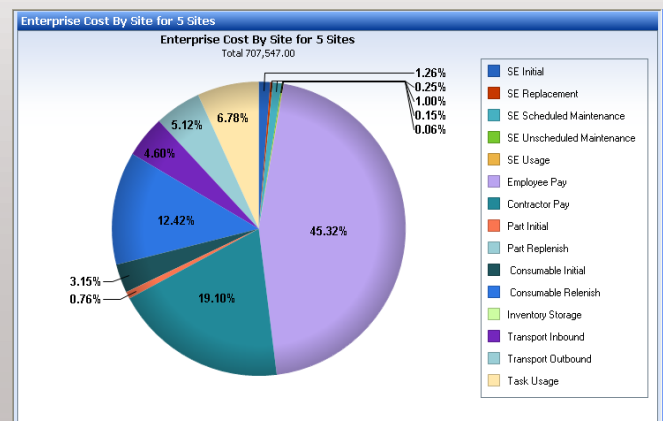
High Performance Simulation

- Code optimization for simulation speed
- System state model enables the tracking of individual system's element by states
- Capability to model large problem scales with thousands of systems and hundreds of sites over multiple years operations

Provides Detailed Cost Analysis Capabilities

- Captures key lifecycle cost components
- Support resource related costs (e.g., labor, support equipment, maintenance, tasks, etc.)
- Supply and repair item costs (e.g., parts and consumables investment, build, replenishment, etc.)
- Transportation and storage costs

Cost Summary Results



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