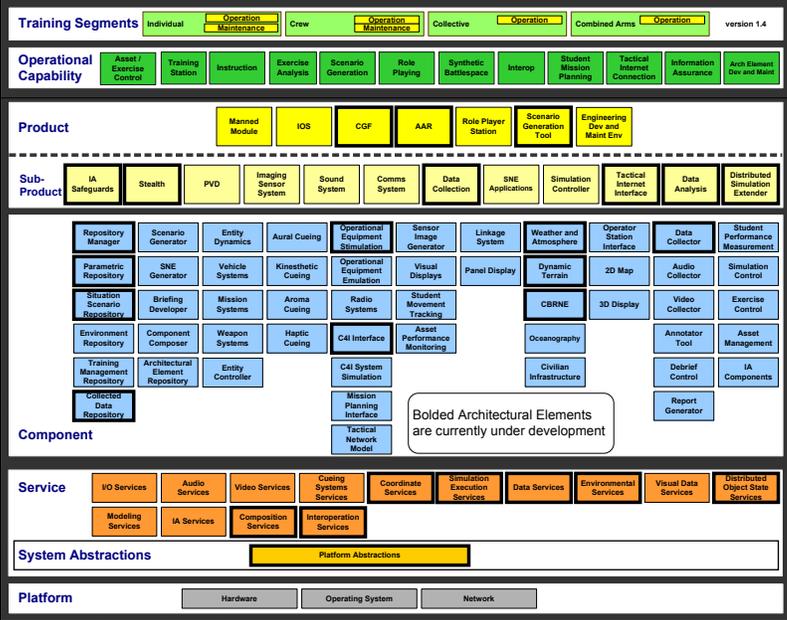




VSA Fact Sheet

Virtual Simulation Architecture



Operational View (OV)

System View (SV)

Overview of VSA Product Line Architecture Approach

Mission

- Provide a Common Virtual Environment (CVE) that links system and non-system simulations into a fully integrated and interoperable training capability.

Architecture Motivations

- Interoperability – Common protocols & data model, synchronized time, common, correlated SNE, model compatibility (fair fight)
- Reuse – Systematic. Reduce development & maintenance costs; Improve reliability, availability, maintainability (RAM)
- Current System Investment – Allow migration to VSA Products and services. Share costs of upgrades
- Adaptability and Extensibility – Engineer flexibility to support domain

SE Core PLA Goals

- Support incremental evolution of current virtual simulation systems.
- Extendable to support the needs of future virtual simulation systems.
- Define a set of Architectural Elements.
- Define common elements to promote systematic reuse
- Define standards and protocols to support interoperability
- Architectural element boundaries that maximize the reuse potential across the domain

SE Core Compliance Levels

- Interoperable
- Mixed Compliance
- Full Compliance

SE Core Portal

Repository to contain SE Core products, services, and documentation:

- Support SE Core Users
- Access to PLAF Architectural Elements
- Configuration Management
 - Software and Documentation Distribution
 - Baseline Management/CCB
 - IP Rights
- User Feedback
- Discussion Forums
- Issue Tracking

VSA Interoperability Standards in development

- **VSA DIS Dialect (V-DIS)**
Common DIS dialect for use across the virtual domain
- **Software Data Model (SDM)**
Defines a consistent data schema for data exchanges between VSA Components and the VSA Services
- **Spatial Reference Model (SRM)**
Standardizes coordinate and orientation representation within the VSA
- **Common Image Generator Interface (CIGI) commercial specification.**
SE Core proposed enhancements to the CIGI protocol to address shortcomings / limitations relative to Army virtual training needs

VSA Services in development

The VSA services are a set of common software service interfaces that provide the framework or infrastructure on which VSA common components are built including the following:

- Distributed Object State Services
- Environmental Services
- Simulation Execution Services
- Interoperation Services
- Data Services
- Composition Services
- Coordinate Services

Architecture Definition Products

- PLAS/PLAF
- DoDAF Products
- Information Support Plan (ISP)
- SSS/SRS
- Style Guides
- Design Notes

- **Reduce development, maintenance and training cost**
- **Provide common training components**
- **Promote commonality and efficiency across virtual training**
- **Permit rapid technology insertion/improvement**