Battle Management Symposium

Crawling, walking, & running with the Military Scenario Definition Language (MSDL) and Coalition-Battle Management Language (C-BML) for Integrated Initialization and runtime execution

8 April 2011

Presented by
Dr. Rob Wittman
rwittman@mitre.org
Import Format versus Native Format

• Allows MSDL and specific simulation initialization native formats to evolve at their own appropriate pace.

• Allows simulations to define specific information needs.

• Allows consistent scenario starting point for specific simulation initialization
MSDL Road to Balloting (Evolving)

Successful Product Ballot
- 33 Accepts
- 1 Reject
- 2 No Response

Balloting Begins
Dec 3 – 1 Feb 08

Balloting Invitation
~ 10 Sept 07

PDG Spec Review 28 June 07
PDG Review Period ~ 2 weeks

Update Specification
Update Period ~ 2 weeks

SAC Review ~ 9 Aug 07

SAC Review Period
~ 4 weeks

Comment Collection Begins

Resolve Comments

V 1.0 Standard Accepted
SISO-STD-007-2008 on 14 October 2008
Primary Elements

- 9 Primary elements reusing schema components from
  - Base Object Model SISO Standard
  - JC3IEDM MIP Standard
- OneSAF-based elements not being considered for balloting
  - Plan
  - Course of Action
  - Threats
  - Units and equipment Enumerations
- XML Representation allows for
  - Structure and type Validation
  - Business rule validation
What an MSDL File Provides

- Geographic Extents
- Task Organization
- Unit/Entity Placement
- Tactical Graphics
• Crawl phase – Initial demo using 3 month time-box
  – Multi-federate initialization from common MSDL file
    – Consistent Unit/entity mappings
    – Initial locations
    – Tactical graphics
    – Geographic extents

• Initialization-based federation agreements
  – GDC coordinates

• Initial battle book development
  – Combined spreadsheet

• Initial participant list
  – DEU, ESP, GBR, FRA, SWE, USA
Federate X produces MSDL with ORBAT information→Integrator creates master “integrated” scenario (MSDL) file→Federates receive master MSDL file and import into end-system
Provide to integrator for master update→Federates modify scenario and save as updated MSDL file
Crawling: Initialization Integrator Role 3/3

- **Integration tools** – current and evolving
  - Excel to list, identify, and manage all contributed data
  - Notepad++ for gross edit, cut-and-paste
  - Visual Basic scripting for gross changes to scenario data

- **Coordinating decisions**
  - XML namespaces
  - ScenarioID information
  - Coordinate system
  - Environmental extents
  - Sides and forces
  - Mixed ORBAT
• Transition federation from initialization to running state
  – Provide planned set of C-BML orders referencing MSDL units, entities, and tactical graphics in addition to MSDL file
• Formalize round trip initialization process using MSDL and appropriate federation processes
  – Initialize Decision Support System (DSS) with original MSDL save output from DSS in MSDL and C-BML formatted files
  – Use new set of files to initialize remaining federates
• More complex initialization-based federation agreements
  – Introduce unique identifier federate ranges for important items: units, entities, messages, reports, etc.
  – Introduce standards-based entity & unit naming conventions (Distributed Interactive Simulation enumerations)
  – Create or locate MSDL element to house enumeration or code list
  – Identify FOM for future integrated HLA federation activity
  – Introduce multiple terrain extents
  – Formalize sequence for drawing tactical graphics
  – Continue integrator tool development to provide early, pre-initialization-time federate feedback
Walking 3/3

- Introduce Command C2 Systems
  - Simple C2 initialization of the Joint Advanced Deep Operations Coordination System (JADOCS) with friendly ORBAT
- Initialize George Mason University web-services with MSDL
- Extend MSDL participation
- Enhance battle book
- Provide feedback to MSDL and C-BML PDGs
• Multi-Simulation and C2 federation init process
• Fully integrated C-BML and MSDL
• Demonstrate in operationally useful event
• Extend C-BML/MSDL participation
• Feedback to MSDL/C-BML PDGs
• Pave way for rapid C2/M&S federation initialization and runtime using MSDL/C-BML
Questions

Battle Management Symposium

Crawling, walking, & running with the Military Scenario Definition Language (MSDL) and Coalition-Battle Management Language (C-BML) for Integrated Initialization and runtime execution

8 April 2011

Presented by
Dr. Rob Wittman
rwittman@mitre.org