OneSAF Integration with C2SIM

Al DiSanto, OneSAF Production & Support, U.S.A.
Previous OneSAF C2SIM Integration Work

• Done by Redstone Test Center (RTC)
• Included a basic interface through OneSAF’s Universal Data Gateway that provided the following functionality
  ▪ Send Entity Position Reports to a C2SIM server
  ▪ Translated orders via C2SIM into OneSAF behaviors
• Scenario was loaded as a file (not initiated via C2SIM)
• Looking to leverage lessons learned from this effort

Information taken from “Lessons learned implementing the C2Sim standard in a practical exercise” – Bears, et al, 2019
2024 OneSAF C2SIM Integration - Overview

• Being Developed as part of OneSAF Product Line V12.2
• Official Release Nov 2024
• Will be used as an engineering release for CWIX 2024
• Primary Goals:
  ▪ Scenario ingestion and scenario control commands via C2SIM
  ▪ Send Position and Observation reports via C2SIM
  ▪ Convert incoming orders to OneSAF behaviors
• Interface will be done as a Bifrost client
  ▪ This facilitates future re-use by other simulations
2024 OneSAF C2SIM Integration – High-Level Design

• OneSAF: Constructive Simulation. Physical and Behavioral models at the platform / individual combatant level
• Bifrost: Service Oriented Architecture facilitating interoperability between simulations, applications, etc
2024 OneSAF C2SIM Integration – Path Forward

- Work with Redstone Test Center group to leverage previous work, lessons learned, etc.
- Work with C2SIM team from George Mason University as needed to ensure proper integration with server and proper use of test utilities.
- Work with STTC to support goals of Mission Command Agent effort
  - This is an effort to use AI to generate orders and send to OneSAF via C2SIM.
- Implement Exercise Control, Report, and Order messages (Types of reports and orders supported are TBD).
- CWIX 2024 Support
  - Attend working group meetings, etc to better understand federation agreements, “handshakes”, identify high-value reports and orders for implementation.
  - Build terrain for event exercise.
  - Implement NETN FOM support for interoperability with other participating simulations.
  - Mix of remote and onsite support.
Goal is for OneSAF to participate as both a C2SIM and a NETN federate
2024 OneSAF CWIX Support Architecture

- Will be primarily supporting from Orlando, but planning for onsite personnel also in Bydgoszcz
- All OneSAF software will run at the unclassified level
- Only interface to CWIX networks will be HLA and C2SIM