



MSG-085



Joint and Combined Mission Planning Demonstration

C2-SIMULATION INTEROPERABILITY

MILITARY REQUIREMENT: Enable and enhance command and control of operations.

PROBLEM STATEMENT: Need an effective and efficient way to connect C2, simulation and autonomous systems to:

- Enhance realism and overall effectiveness
- Reduce cost and workload
- Decrease preparation and response times

SOLUTION: Standardize the exchange of digitized military information for C2-Simulation interoperation.

THURSDAY DECEMBER 12TH 2013

LIVE DEMOS (AM)

0930-1000	INTRODUCTION
1000-1030	DEMO 1—INITIAL COA DEVELOPMENT
1030-1100	DEMO 2—COA REFINEMENT
1100-1130	DEMO 3—MISSION REHEARSAL

VIP BRIEFING (PM)

1330-1345	WELCOME & INTRODUCTION
1345-1430	DEMONSTRATION HIGHLIGHTS
1430-1500	LIVE DEMO & CONCLUSIONS

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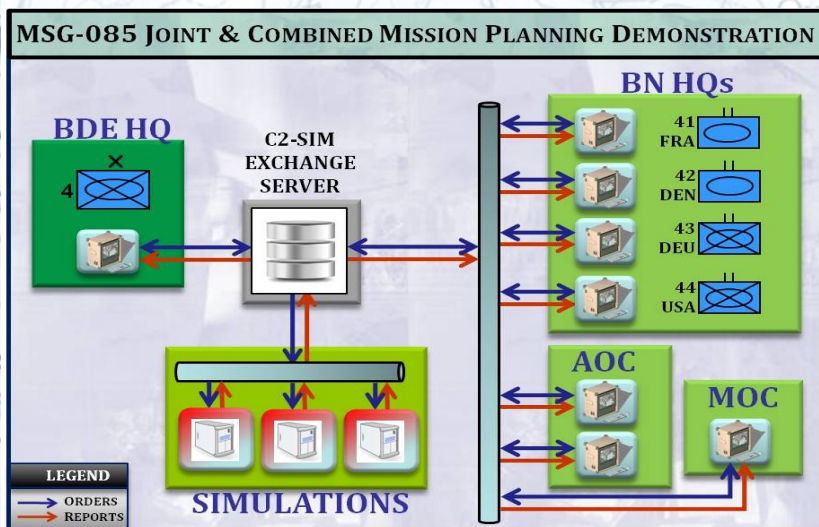
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Joint and Combined Mission Planning Demonstration

BACKGROUND: The NATO Modelling and Simulation Group (NMSG) efforts include a wide range of activities supporting major NATO initiatives. One such initiative, MSG-085, has been working since 2010 in the area of **interoperation between C2 and Simulation Systems** toward the following objectives: establishing a “train as you fight” environment in support of NATO operations; propose enhancements for collaborative joint and coalition mission planning; and facilitate experimentation. Through the use of the standardised **Coalition Battle Management Language (C-BML)** and the **Military Scenario Definition Language (MSDL)** simulated systems can easily exchange orders and reports with real C2 Systems in distributed exercises, mission planning and experimentation activities. One of the key goals of MSG-085 is to establish a capability that can be deployed in the medium-term and that will improve NATO Forces effectiveness.

During 2013 the results from various MSG-085 Working Groups were integrated to form the basis for the **Joint Mission Planning Demonstration**. In addition to highlighting the **operational relevance and benefits** of utilizing C2-simulation interoperability standards, this demonstration also illustrates how the use of standards such as C-BML and MSDL can lead to significant **cost-reduction and decreased preparation times**. Also demonstrated is how these standards can be utilized to support the concurrent use of multiple information exchange infrastructures and thus facilitate the preparation for joint and multinational exercises and planning activities. Moreover, the distributed nature of these infrastructures can support remote collaborative planning activities, also shown in the demonstration.

DEMONSTRATION CONTEXT & DESCRIPTION: As a result of a broken ceasefire agreement in BOGALAND, a NATO Response Force (NRF) has been activated and will conduct combined and joint operations in order to separate the parties and reinstate adherence to the peace agreement. The Multi-National Brigade 4 MNB is tasked to rout out the aggressor and restore a safe and secure environment and therefore must perform operational planning. The demonstration proposes a mission planning cycle consistent with the NATO Comprehensive Operational Planning Directive (COPD) and uses C2-simulation linkages to facilitate collaborative planning between the BDE and the BN commanders. The demonstration is comprised of three parts:



1. Initial COA Development;
2. COA Refinement; and
3. Mission Rehearsal.

During the first part, the BDE informs the BN commanders of the initial COA and sends it to the simulation for execution. Based on the simulation results, the BDE refines the COA which is communicated to the BNs who then generate their company orders and in turn send them to simulations for execution. Based on the simulation results the BNs may ask for further refinements to the support requests. Finally, the BDE performs final adjustments to the orders that are communicated to the BNs for the purposes of mission synchronisation.