Center for Transportation Analysis

Modeling and Simulation Data Generation

An ORNL team supported the Rapid Data Generation (RDG) Project from 2009 to 2012. This work was performed for the Joint Training Integration and Evaluation Center and the Modeling and Simulation Coordination Office. The objective of RDG is to reduce the resources required to produce, integrate, and correlate data, eliminate or reduce duplicative efforts, and promote data commonality for modeling and simulation (M&S) activities across the Department of Defense (DoD). A Planner's perspective was provided to the project by developing over 20 products including:

- Conducting and analyzing an Adaptive Planning questionnaire which gathered information on the use of 57 different data sources by the Planning Community, and creation of metadata files (Metacards) for 26 key data sources to assist users in discovery of the sources. A Planning Use Cases Baseline Report was also developed for transportation analysis.

- Conducting an RDG Planning Pilot to address M&S challenges for transportation feasibility analysis using a combat and a humanitarian assistance scenario. Simulated actual unit movement data was used to demonstrate that using increased amounts of actual, rather than notional data can result in more accurate Planning being performed. More accurate Planning may lead to improved execution and increase the likelihood of mission success.

- Determining Planning Community RDG Order of Battle (OOB) Data Requirements for transportation modeling, and developing a Planning Community OOB Data Concept of Operations. Demonstration of generation and sharing Planning data by other M&S communities of interest (analysis, training, test and evaluation, experimentation, acquisition, and intelligence) will leave an enduring capability for the future.

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- Conducting and analyzing results from an OOB Data users' questionnaire designed to determine appropriate OOB source candidates for inclusion in the Common Data Production Environment (CDPE). The RDG CDPE will be a standards-based, secure, service oriented architecture environment that will enable data discovery, data retrieval, and common data processing capabilities between existing data providers. The CDPE is being developed with two core components, the CDPE Portal, and the CDPE Discovery.

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