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Adapting C2 to the 21st Century

Use of an Executable Workflow Model to Evaluate C2 Processes

Network-centric Metrics
C2 Modeling and Simulation
C2 Experimentation

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Abstract

This paper present interim results of a Johns Hopkins University Applied Physics Laboratory (JHU/APL) multi-year command and control (C2) evaluation project. The purpose of the project is to develop methods for evaluating whether or not the application of net-centric principles to command and control improves the effectiveness and efficiency of C2. This year's effort focuses on the development of a model to evaluate execution of a time sensitive planning (TSP) process. The model characterizes the activities and associated capabilities of that process including activity completion times. It represents the sequencing relationships among the process elements in the form of a workflow. Execution of the model drives a visual representation of workflow completion status, which is used to synchronize the actual conduct of the time sensitive planning process by participants in response to a scenario-driven event. The model has the ability to record the amount of time required to complete the work of each workflow element and to compare those times against historic temporal execution information stored in its knowledgebase. It is postulated the executable workflow model will serve as an effective means for evaluating C2 processes.