12th ICCRTS
Adapting C2 to the 21st Century

Composing Capabilities to Enable Agile Command and Control

C2 Technologies and Systems
Distributed Collaboration
Service Oriented Architecture

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Abstract

The Johns Hopkins University Applied Physics Laboratory (JHU/APL) is involved in several prototype efforts to develop portal-based Command and Control (C2) capabilities that support mission workflow requiring distributed collaboration. These initiatives include elements of the "Distributed Collaborative Action Team" concept (briefed previously at ICCRTS) and address such diverse C2 problems as Global Strike planning, sourcing equipment for a new Joint Task Force Headquarter (JTF HQ), and coordination between operations centers. From our first-hand experience with these examples of net-centric C2 implementation, we have compiled lessons learned that span best practices for developing and sharing web (data) services and portlets, composing workspaces that embody business processes and workflow, re-usable patterns for operational workflow, activation of ad-hoc teams and integrated use of synchronous and asynchronous collaboration to conduct C2. These lessons, captured in the paper, are considered as we then explore the possible use of additional technologies (with an emphasis on collaboration and visualization) to yield composeable C2 capabilities for the 21st century.