

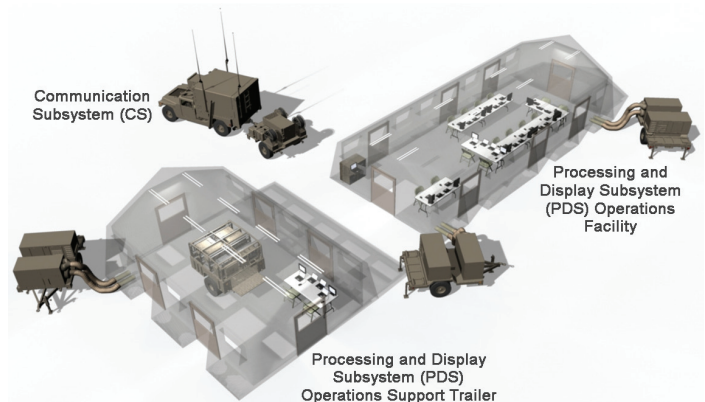
Common Aviation Command and Control System (CAC2S)

Executive Summary

- The Marine Corps restructured the Common Aviation Command and Control System (CAC2S) program in April 2009 following a Critical Change Report to Congress. The Navy, as the Milestone Decision Authority (MDA), rescinded Milestone C in December 2009.
- The restructured CAC2S program divided Increment 1 into a two-phased approach.
- The Marine Corps Operational Test and Evaluation Activity conducted a CAC2S Phase 1 operational assessment in August 2010. The operational assessment report is expected to support the program's Phase I Milestone C acquisition decision in 1QFY11.
- The Marine Corps runs the risk of not testing all required Phase 1 operational capabilities prior to the 3QFY11 IOT&E.
- The Marine Corps currently does not have an alternate IOT&E test venue and runs the risk of not completing an adequate test should the currently planned live exercise preclude full execution of all operational test requirements due to real-world training priorities.

System

- CAC2S will provide Marine Corps operators with the ability to share mission-critical voice, video, sensor, and command and control (C2) data and information in order to integrate aviation and ground combat planning and operations in support of the Marine Air-Ground Task Force (MAGTF).
- CAC2S will consist of tactical shelters, software, and common hardware. The hardware components are expeditionary, common, modular, and scalable, and may be freestanding, mounted in transit cases, or rack-mounted in shelters and/or general purpose tents that are transported by organic tactical mobility assets.
- CAC2S Increment 1 is comprised of three functional subsystems:
 - Processing and Display Subsystem (PDS) – Provides the operational command post and functionality to support mission planning, decision making, and execution tools for all aspects of Marine Aviation.
 - Communication Subsystem (CS) – Provides the capability to interface with internal and external communication assets and the means to control their operation.
 - Sensor Data Subsystem (SDS) – Provides an open architecture interface capable of integrating emerging active and passive sensor technology for organic and non-organic sensors of the Marine Air Command Control System (MACCS).
- CAC2S Increment 1, Phase 1 will include the PDS and CS to establish the baseline Direct Air Support Center (DASC)



for the Marine Air Support Squadron and limited Tactical Air Operations Center (TAOC) mission capability for the Marine Air Control Squadron (MACS). Phase 2 will be enhanced by the SDS and should meet remaining MACCS aviation battle management C2 requirements.

Mission

- The MAGTF commander will employ CAC2S to integrate Marine Corps aviation into joint and combined air/ground operations in support of Operational Maneuver From the Sea, Sustained Operations Ashore, and other expeditionary operations. The CAC2S will support the MAGTF C2 concept and will provide an expeditionary and common joint air command and control capability.
- CAC2S will enable the MAGTF commander to execute command and control of assigned assets afloat and ashore in joint, allied, or coalition operational environments by providing a display of a common, near real-time integrated tactical picture. The picture will facilitate the control of friendly assets and the engagement of threat aircraft and missiles and have access to theater and national intelligence sources from a single, multi-function C2 node.

Major Contractors

Phase 1

- Government Integrator: Naval Surface Warfare Center – Crane, Indiana
- Component Contractor: Raytheon-Solipsys – Fulton, Maryland
- Component Contractor: General Dynamics – Columbia, Maryland

Phase 2

- To be determined (Contract Award planned for FY11)

NAVY PROGRAMS

Activity

- The Marine Corps restructured the CAC2S program and divided Increment 1 into two phases. The MDA approved a new Phase 1 Acquisition Strategy in August 2010 and scheduled Milestone C for 1QFY11. The Marine Corps began developmental testing of CAC2S Phase 1 in July 2010.
- The Marine Corps Operational Test and Evaluation Activity observed the developmental test and conducted a dedicated CAC2S Phase 1 operational assessment in August 2010.
- The operational assessment was conducted in accordance with a DOT&E-approved test plan and consisted of operationally realistic scenarios with only a DASC element operating the CAC2S. The operational assessment did not assess the system employment in a limited TAOC configuration. The operational assessment results will support the Milestone C decision for acquisition and production of five Limited Deployment Units (LDUs) for use during the IOT&E in 3QFY11.
- The Marine Corps is working to finish the CAC2S Phase 1 Test and Evaluation Master Plan (TEMP) to support the Milestone C decision currently scheduled for November 2010.
- The Marine Corps runs the risk of not testing the operational capability and integration of the CAC2S Phase 1 with the TAOC until IOT&E. Only the DASC functionality was evaluated during the operational assessment in August 2010.
- The Marine Corps currently does not have an alternate IOT&E test venue and runs a risk of not completing an adequate test should the currently planned live exercise preclude full execution of all operational test requirements due to real-world training priorities.
- The Marine Corps faces scheduling challenges on completing the TEMP prior to the scheduled Milestone C.

Assessment

- Evaluation of the CAC2S Phase 1 operational assessment is in-progress and is expected to be completed 1QFY11 to support the Milestone C and LDU acquisition decision.

Recommendations

- Status of Previous Recommendations. This is the first annual report since restructuring of the program.
- FY10 Recommendations.
 1. The Program Office should consider an additional event prior to IOT&E that tests the operational functionality, integration, and employment of the CAC2S with both the DASC and TAOC.
 2. The Program Office should plan and resource an alternate IOT&E test venue should the currently planned live exercise venue not provide the requisite test environment.
 3. Update the CAC2S TEMP to provide clear expectations and priorities for testing and fielding prior to the Milestone C.