

AC2

Airspace Command and Control

**Combined Arms Center
Capabilities Development Integration Directorate
Concepts Development Division
Special Concepts Branch
AC2 Proponency Office**

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Agenda

- Airspace Problem Statement
- OIF/OEF Specific challenges
- Airspace Command and Control Action Plan
- Plan for Future Modular Force

AC2 Problem Statement

“Airspace command and control has become a **complex challenge for commanders** that can no longer be addressed with simple pre-planned routes, fixed altitudes and static control measures. The current **plan-centric** method of controlling airspace use **does not enable commanders** to fully integrate all airspace users with ongoing operations in near real-time. The operational environment has **increased in complexity** with the proliferation of **unmanned aerial systems** and the introduction of **host nation, non-governmental agencies and civil aviation** to the battlefield. This presents **commanders** with airspace **challenges not previously encountered**. In order to successfully operate in this OE, **commanders at all echelons** must be capable of **synchronizing forces and warfighting functions** in the **vertical dimension** in near real-time.”

OIF/OEF Airspace Observations

- Based on CAAT observations in Iraq, the 4th ID A2C2 element showed incredible potential to provide a low altitude air picture and deconflict airspace below the coordinating altitude over Baghdad*
- However, without proper manning, equipment, and training all Army A2C2 organizations are not prepared to assume responsibility for sector control*

CALL JIIM Lessons Learned Report 2007, Chap 4

(8) Joint TTPs Required to Support Airspace Clearance Requirements: Changes to planned airspace use above the coordinating altitude or in high-use airspace areas required tactical airspace control elements to coordinate directly with the Airspace Control Authority's (ACA) - Control and Reporting Center (CRC) and others like radar approach control (RAPCON). High demand tactical Unmanned Aerial Systems (UAS) and responsive fires, required the division to routinely work directly with the CRC to gain airspace clearance.

JJIM Gaps: Air-Ground Specific

- Difficulty **understanding the Air Tasking Order (ATO)** process (C2)
- Difficulty **understanding Joint air support** (C2)
- BCT **Army Airspace Command and Control** elements do not adequately plan, synchronize, disseminate, and execute airspace control within the BCT AO (C2)
- BCTs experience difficulty in the **planning, synchronization, and execution** of lethal and non-lethal Joint Fires (Fires)
- **Clearance of fires procedures** in a JJIM environment at BCT and below are not established and trained (Fires)

OIF/OEF Airspace Observations

- “Clearing” airspace for immediate fires
- Understanding ACMs; how to request, employ, monitor
- Coordinating Altitude... “Army” airspace
- Multiple “Supported Commanders” in AO
- Roles/responsibilities of TAGS C2 nodes
- Reading/Understanding relevant documents
- Multiple “Supported Commanders” in AO
- Standardization of procedures/TTP

AC2 Key Take Aways

Large portion of stated AC2 challenges are actually C2 challenges...decision-making, prioritization, risk.

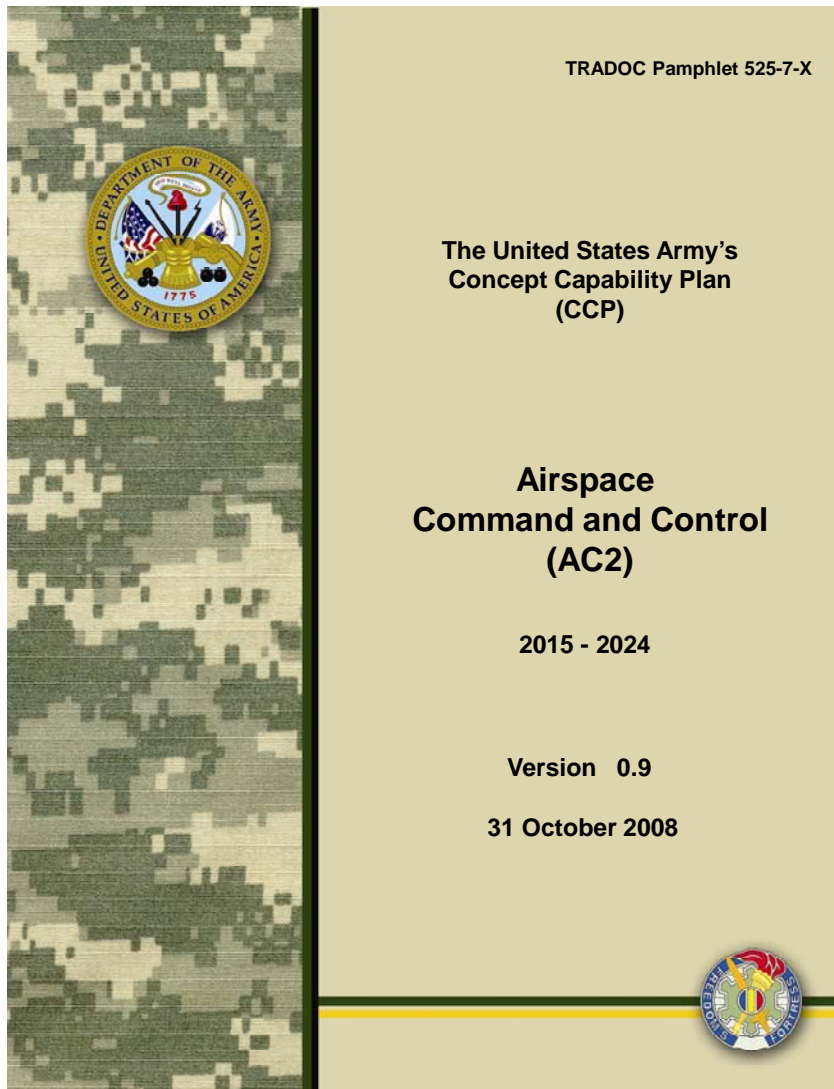
Some AC2 specific challenges.....

- Lack of understanding – Joint and Army doctrine
- Organizations – personnel assigned other duties
- Training – Not replicating realistic conditions in HST/CTCs
- Leader Development – not educating senior leaders
- Education – No dedicated course for AC2; Tactical Airspace Management

Actions for Current Force

	Task		
Proponency Actions	AC2 ICDT (AC2 CCP)	T	AC2 Collective Tasks
	Joint Air Ground Integration Cell (JAGIC)		AC2 Individual Tasks
	Army Air Force Integration Forum (AAFIF)		HST Improvement Plan
	TRADOC Air Ground Integration CoC		CTC Improvement Plan
	ADAM/BAE Action Plan Working Group		AC2 Distance Learning
	ALSA Joint AC2 MTTP	M	TAIS AC2 requirements
D	JP 3-30 (C2 of Joint Air Ops)	L	Coord with TCM BC; LT; AVN Sys
	JP 3-52 (Airspace C2 in Combat Zone)		PME Standardization
	FM 3-52	ILE AC2 integration/instruction	
	FM 3-01.50	SCP AC2 instruction	
	FM 3-92	P	Coord with 14/15 Pers Proponents
	FM 3-93		Division WFX
	Corps/Division Design		Omni Fusion
O	ASCC Design	E	Earth, Wind and Fire
			Scenario Development

Airspace Command and Control (AC2) Concept Capability Plan (CCP)



AC2 CCP Problem Statement

“Airspace command and control has become a **complex challenge for commanders** that can no longer be addressed with simple pre-planned routes, fixed altitudes and static control measures. The current **plan-centric** method of controlling airspace use **does not enable commanders** to fully integrate all airspace users with ongoing operations in near real-time. The operational environment has **increased in complexity** with the proliferation of **unmanned aerial systems** and the introduction of **host nation, non-governmental agencies and civil aviation** to the battlefield. This presents **commanders** with airspace **challenges not previously encountered**. In order to successfully operate in this OE, future Modular Force **commanders at all echelons** must be capable of **synchronizing forces and warfighting functions** in the **vertical dimension** in near real-time.”

AC2 CCP Solution Synopsis

Commander Centric. Cdr's use AC2 to synchronize forces and warfighting functions in the vertical dimension.

Joint. The Army will contribute to the ACA's capability to control airspace by Integrating AC2 Control Nodes into combined arms headquarters.

Efficient. Changes the focus of airspace management from today's practice of reserving blocks of airspace to protecting airspace users.

Near Real-Time. While detailed planning will remain critical, AC2 will shift to an execution-centric activity to respond to immediate needs.

Network Enabled. Automated decision making will integrate airspace users in accordance with commander's priorities and risk

Collaborative. Airspace control elements will have BLOS/NLOS data and voice communications with all airspace users (Army, Joint, Multinational, Governmental and Civil) to the platform level

Key Findings

CCP addresses 33 specific DOTMLPF required capabilities, combined into five overarching categories. The five major capabilities categories are:

- Capability 1. The ability to view and contribute to an all altitude, integrated, consolidated air picture in near real-time.
- Capability 2. The ability to maintain reliable, secure, long range (beyond/non-line of sight), all altitude, jam resistant communications between all airspace users (Army, Joint, Multinational, Governmental and Civilian) down to platform level.
- Capability 3. The capability of the AC2 system to automatically integrate airspace users in accordance with commanders' priorities and risk assessment during planning and execution.
- Capability 4. The capability for Army C2 systems to interoperate with Joint and Intergovernmental C2 systems (data and voice).
- Capability 5. The capability of the AC2 system to control all airspace users (Army, Joint, Multinational, Governmental and Civilian) operating over an Army AO IAW all Joint and Intergovernmental standards for airspace control in a combat zone.