

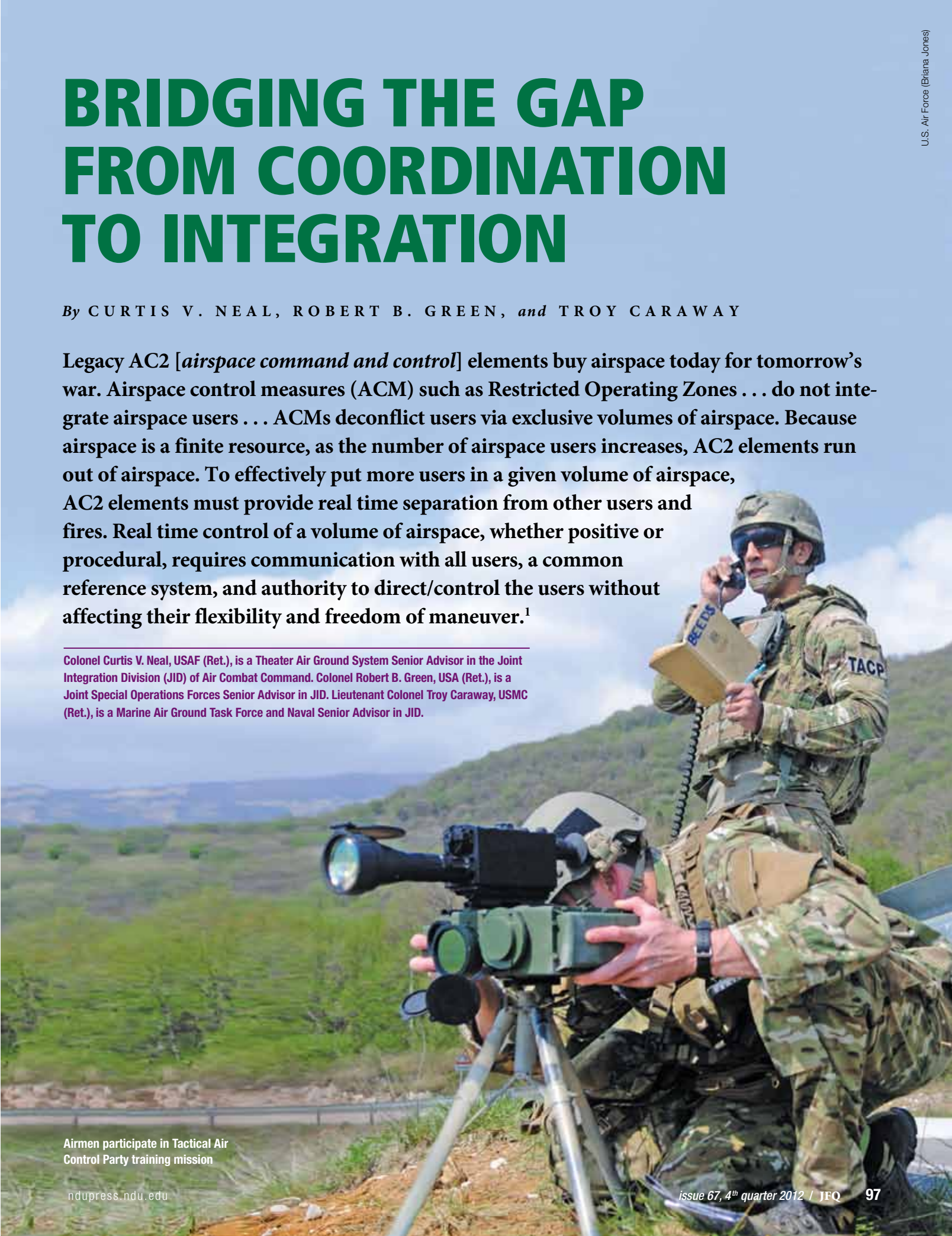
BRIDGING THE GAP FROM COORDINATION TO INTEGRATION

By CURTIS V. NEAL, ROBERT B. GREEN, and TROY CARAWAY

Legacy AC2 [*airspace command and control*] elements buy airspace today for tomorrow's war. Airspace control measures (ACM) such as Restricted Operating Zones . . . do not integrate airspace users . . . ACMs deconflict users via exclusive volumes of airspace. Because airspace is a finite resource, as the number of airspace users increases, AC2 elements run out of airspace. To effectively put more users in a given volume of airspace, AC2 elements must provide real time separation from other users and fires. Real time control of a volume of airspace, whether positive or procedural, requires communication with all users, a common reference system, and authority to direct/control the users without affecting their flexibility and freedom of maneuver.¹

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Airmen participate in Tactical Air Control Party training mission



In the past, when faced with a large number of competing airspace users and limited command and control capabilities, it has generally been easier to deconflict competing demands for airspace by implementing procedural control methods that placed heavy emphasis on the increased use of airspace and fire support coordinating measures. Prior to Operations *Enduring Freedom* and *Iraqi Freedom*, military operations demonstrated little need for the much more difficult real- or near real-time deconfliction and integration of airspace and fires.

Beginning about 2004, emerging military capabilities and ongoing operations in Iraq began to provide insight into how future military operations would increasingly challenge our current airspace control abilities. These included large numbers of manned military, civil aviation, other government agency, special operations, and coalition aircraft, as well as rapidly expanding numbers of unmanned military aircraft of all sizes. In addition, combat operations demanded increasingly large volumes of responsive ground-based fires that had to be integrated into the airspace.

In a 2007 Joint Urgent Operational Need Statement, Lieutenant General Raymond Odierno, Commander, Multi-National Corps–Iraq, stated, “The joint community and the U.S. Army are not equipped to manage or adequately deconflict airspace

of a joint campaign, executing operational-level actions to achieve strategic effects.²

To maintain responsiveness and flexibility, the Air Force, in coordination with the Army, made a decision to increase the number of Air Support Operations Centers (ASOC) from 6 Cold War–legacy ASOCs aligned with each Army corps to 10 ASOCs, aligned and collocated with the 10 active Army divisions. Each ASOC is responsible for the coordination and control of air component missions requiring integration with other supporting arms and ground forces.³ Three additional ASOCs will remain non-aligned. While still functionally unique, the aligned ASOCs are being integrated with the division Tactical Air Control Party (TACP) as part of each division’s Air Support Operations Squadron. The ASOC realignment is scheduled to be complete by fiscal year 2015.

A New Approach

This new ASOC alignment makes it possible to improve the integration of joint airspace control and joint fires at the division level through an organizational concept called the Joint Air Ground Integration Cell (JAGIC). The JAGIC is the result of a 6-year Army–Air Force Integration Forum effort, spearheaded by Air Combat Command’s Joint Integration Division and the U.S. Army Training and Doctrine Command (TRADOC) Fires Center of Excellence Joint and Combined Integration

elements integrate organizationally and procedurally to conduct operations in a more efficient, linked, and situationally aware manner.

Unlike most military capability improvements based on new systems and technology, the JAGIC is based on organizational and procedural changes that emphasize proximity and teamwork by collocating Theater Air Control System (TACS) personnel with their ground element counterparts. By doing so, the JAGIC builds Soldier–Airman relationships, improves communication effectiveness, and increases situational awareness and understanding. Essentially, the JAGIC creates a joint decision-oriented command and control organization resulting in faster decisions based on better information that increases effectiveness while decreasing risk.

The JAGIC is neither a staff nor a planning cell, but is composed of those personnel directing and monitoring the current fight through the arrangement of operators performing related functions in close physical proximity. Such an arrangement not only integrates the air and ground component operators, but also collocates the decisionmaking authorities from the land and air components with the highest levels of situational awareness, that is, the senior air director and deputy fire support coordinator, while building habitual relationships to support the maneuver commander’s concept of operations. This arrangement also ensures support of joint forces air component commander (JFACC) objectives and intent and requirements of joint force commander (JFC)-designated authorities such as Airspace Control Authority and area air defense commanders.

While procedural control methods will remain a mainstay of airspace and fires integration for the foreseeable future, the integration of personnel from both Services who are directing and monitoring ongoing operations permits dynamic coordination, activation, and deactivation of airspace and fire support coordination measures rather than “buying airspace today for tomorrow’s war.” When the JAGIC is empowered with the means and authority to pass control instructions directly to the airspace users, mutually supporting operations can rapidly be integrated, conflicts can be resolved on the fly, and real-time coordination of competing requests can either be resolved through the use of flexible, informal control measures or by direct coordination requiring no control measures at all. For the airspace user, the JAGIC provides a

to maintain responsiveness and flexibility, the Air Force, in coordination with the Army, made a decision to increase the number of Air Support Operations Centers

of high-traffic density.” As a result of these challenges, the way the U.S. military controls airspace during joint operations began to fundamentally change. In 2006, the Army began fielding an organic airspace command and control (AC2) capability comprised of over 1,600 trained operators with dedicated AC2 cells at corps, division, and brigade levels, all linked through the tactical airspace integration system. In 2007, the Army also began a migration from a division-centric force toward a more expeditionary brigade-centric force, with the Brigade Combat Team becoming the primary combined arms building block unit of the Army. Today, the divisions employ brigades to fight battles and engagements while corps conduct large-scale land operations, employing divisions as part

Directorate. It has been exercised in multiple Army–Air Force warfighting experiments and exercises and resulted in increased air-ground effectiveness during each event.⁴

The JAGIC is created by organizing the ASOC operations crew, division TACP personnel, the Division Fires Support Element, AC2, air and missile defense, and aviation personnel into a single integrated cell within the division Current Operations Integration Cell.⁵ The important point is that the JAGIC is simply an integrating cell⁶ created from Air Force and Army personnel already supporting, or assigned to, the division headquarters (HQ). No additional manpower is required to form the JAGIC, and it does not replace any current division cells or command and control nodes. Quite simply, the JAGIC improves the way these ele-

single “center” for coordinating requests and resolving joint airspace conflicts within the division area of operations.

While the overarching function of the JAGIC is to fully integrate joint airspace control and joint fires at the division level, it executes integrated tactics, techniques, and procedures (TTP) to support numerous joint processes including direction and monitoring of fires and effects, command and control of some volume of airspace overlying the division area of operations, rapid attack of emerging targets, interdiction coordination, improved friendly force identification, increased situational awareness for air defense, and synchronization and integration of tactical intelligence, surveillance, and reconnaissance, electronic warfare, information operations, and airlift assets.

The design and manning of the JAGIC is such that a subset of the JAGIC, called a Joint Air Support Element (JASE), can be task-organized and sent forward to extend control and integration of air operations in High Density Aircraft Control Zones, support displacement operations, or extend support to a subordinate maneuver unit for named operations of limited duration. The JASE will normally be provided in coordination with an Army tactical aviation control team. The JASE and Army control team effectively extend the JAGIC capability forward of the division when needed.

As noted earlier, corps conduct large-scale land operations, employing divisions as part of a joint campaign, executing operational-level actions to achieve strategic effects.⁷ The corps TACP will remain the JFACC’s primary liaison for providing advice, planning, synchronization, and integration of airpower at the operational level in support of corps operations. When a corps is designated as a joint force land component command or joint task force, it may receive an Air Force Joint Air Component Coordination Element, in addition to the corps TACP, to better integrate joint air operations with corps operations.⁸

As the Services have moved forward with JAGIC development and implementation, some have questioned its origins and purpose. The most common criticism is that the JAGIC was developed as a solution for the challenges the TACS faced as it adapted to irregular warfare operations and therefore does not have universal application.

The JAGIC concept actually evolved out of three experiences that occurred during

recent major combat operations. The first was the development of air coordination elements by U.S. Air Forces Central and special operations forces during early operations in *Enduring Freedom*.⁹ The second was the integration of a joint air coordination element with a special operations joint fires element during early operations in *Iraqi Freedom*, which resulted in a small JAGIC-like cell integrating air operations and joint fires in real time.¹⁰ The third was the V Corps and 4th Expeditionary Air Support Operations Center experience in *Iraqi Freedom* during early 2003, in which the V Corps commander, Lieutenant General William S. Wallace, noted, “The critical ingredient in successful focusing of joint fires lay in the organization of the main command post to place the [all

was subsequently briefed at the Army–Air Force Warfighter Talks in February 2009, where it was well received.

In the interim, a JAGIC concept of employment containing detailed TTP has been developed by the Air Force Command and Control Integration Center, working together with Air Combat Command’s Joint Integration Division and the TRADOC Fires Center of Excellence Joint and Combined Integration Directorate.

Relocation and alignment of ASOCs with 25th Infantry Division and 1st Infantry Division is complete, and the 82nd Airborne Division ASOC alignment is happening in fiscal year 2012. As the ASOCs relocate to their aligned divisions, Air Combat Command’s Joint Integration Division and

the Tactical Operating Concept is currently in final coordination at the Air and Army staff

source collection element], the [Fires and Effects Coordination Cell] and the ASOC in close proximity for current operations.”

Just as the Army has evolved over time, so has the TACS. Prior to 1965, ASOCs were aligned with each Field Army headquarters, but over time close air support coordination and control problems became apparent. In September 1962, a new concept for improved joint air-ground coordination was approved in principle and the respective Army and Air Force chiefs of staff approved the new system in 1965.¹¹ Among the revisions to the TACS, the ASOC was renamed the direct air support center (DASC) and located at the corps level. During the Vietnam War, up to six of these centers supported the American and Vietnamese corps, each working directly for the 7th Air Force Tactical Air Control Center collocated with the Military Assistance Command, Vietnam.

The Way Ahead

In September 2008, the Army–Air Force Board, General Officer Steering Committee, approved development and staffing of the JAGIC Tactical Operating Concept for the Air Force and Army chief of staff signatures. The Tactical Operating Concept is currently in final coordination at the Air and Army staff. The October 2008 CORONA (Air Force four-star conference) approved JAGIC development as one of a series of measures designed to enhance the TACS. The concept

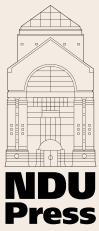
TRADOC Fires Center of Excellence Joint and Combined Integration Directorate are contributing a joint training team to provide education, training, and exercise support for JAGIC implementation.

An ongoing revolution in military operations has transformed airspace into the new high ground. All the Services are rapidly fielding new and more dynamic capabilities to exploit this environment. Past practices of deconflicting operations primarily through procedural control methods are proving to be insufficient for current and future operations as both the use of and the users of airspace proliferate and often limit and restrict, rather than enable and enhance responsive, integrated operations. While new systems and technologies will enhance airspace and fires integration in the future, today the JAGIC is demonstrating a very real capability to improve integration at the division level using existing personnel and systems. **JFQ**

NOTES

¹ Center for Army Lessons Learned, Air Force Office of Lessons Learned, Operation *Iraqi Freedom*–Operation *Enduring Freedom* Airspace Command and Control Collection and Analysis Team Initial Impressions, 2006.

² Field Manual (FM) 3-94 (initial draft), *Echelons Above Brigade* (Washington, DC: Headquarters Department of the Army, October 28, 2011), 3-2, paragraph 3-1 [sic].



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Managing Sino-U.S. Air and Naval Interactions: Cold War Lessons and New Avenues of Approach

By Mark E. Redden and Phillip C. Saunders

The United States and China have a complex, multifaceted, and ambiguous relationship where substantial areas of cooperation coexist with ongoing strategic tensions and suspicions. One manifestation involves disputes and incidents when U.S. and Chinese military forces interact within China's Exclusive Economic Zone (EEZ). Three high-profile incidents over the last decade have involved aggressive maneuvers by Chinese military and/or paramilitary forces operating in close proximity to deter U.S. surveillance and military survey platforms from conducting their missions. Why do these incidents continue to occur despite mechanisms designed to prevent such dangerous encounters? Could new or different procedures or policies help avoid future incidents?

According to authors Mark Redden and Phillip Saunders, if U.S. policymakers seek a change in Chinese behavior, they need to understand the underlying Chinese policy calculus, how it may change over time, and potential means of influencing that calculus. U.S. policymakers have several broad avenues of approach to alter the Chinese policy calculus and thereby influence Chinese behavior, but given the importance that China places on sovereignty, no single option is likely to be sufficient. A mixed approach, particularly one that influences a larger number of Chinese decisionmakers, may maximize the probability of success. Cooperative approaches require time for the benefits of cooperation to accrue and for normative arguments to be heard and heeded, both in China and internationally.



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³ Joint Publication (JP) 3-09.3, *Close Air Support* (Washington, DC: Joint Chiefs of Staff, July 8, 2009).

⁴ Warfighting experiments include the Fires Battle Lab Earth, Wind, and Fire 08 and 09, AFCIE (Air Force Capabilities Integration Environment) 10, AGILE (Air Ground Integrated Layer Exploration) Fire I, II, and III, Fort Leavenworth Mission Command Battle Lab Joint Forcible Entry Warfighting Experiment, and Austere Challenge 11.

⁵ FM 5-0, *The Operations Process* (Washington, DC: Headquarters Department of the Army, March 2010), para. 5-22.

⁶ *Ibid.*, para. A-24.

⁷ FM 3-94, 3-2, para. 3-1 [sic].

⁸ The Joint Air Component Coordination Element is a component-level liaison that serves as the direct representative of the joint forces air component commander.

⁹ Jody Jacobs, Gary McLeod, and Eric V. Larson, *Enhancing the Integration of Special Operations and Conventional Air Operations—Focus on the Air-Surface Interface* (Santa Monica, CA: RAND, July 2007).

¹⁰ Robert B. Green, "Joint Fires Support, the Joint Fires Element, and the CGRS [Common Grid Reference System]: Keys to Success for CSJOTF-West," *Special Warfare*, April 2005.

¹¹ Concept for Improved Joint Air-Ground Coordination (Revised Tactical Air Control System), signed by the chief of staff, U.S. Air Force, March 19, 1965, and chief of staff, U.S. Army, April 28, 1965, 2.