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Newport, R.I.**

**Bringing a Grenade to a Knife Fight:
Historical and Current Trends Challenge the Future Viability of the JFACC**

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Abstract

The JFACC construct, as it exists today, is, at best, narrowly viable in a twenty-first century context, and is, at least, structurally and procedurally cumbersome, as well as doctrinally inconsistent with real-world practice. The JFACC is, simply, the JFC's delegated commander of air operations. However, the concept encompasses a wider context, to include: the air component command authority or the individual who wields it, JFACC doctrine, the JFACC staff and its organizational structure, and the processes that constitute the various JFACC command, control, and staff functions. Primarily, this paper focuses on JFACC doctrine, process, and to a lesser extent, structure. Through these lenses, a historical, evolutionary profile of the JFACC concept is developed explaining the JFACC's doctrinal pedigree. Following that analysis, the JFACC is examined critically in the light of recent, current and foreseeable twenty-first century conflict. That critique will validate the conclusion that a gap exists between current JFACC doctrine and practice, using as a focal point the doctrinal tenet of "centralized control and decentralized execution." The processes that characterize both the Air Tasking Order (ATO) development and the Time-Sensitive Target (TST) engagement will serve as research examples. The discussion finishes with recommendations for further investigation into viable solutions or alternatives to the imperfect status quo.

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Introduction

We have a moral obligation to ensure military force is applied in the most effective and efficient manner in order to save lives, shorten the conflict period, and achieve victory.

—Lt Gen Charles A. “Chuck” Horner
Joint Force Air Component Commander,
Operation DESERT STORM

General Horner—believed by many to be the quintessential Joint Force Air Component Commander (JFACC)¹—spoke volumes about American values, history, and warfighting style in the statement above. In theory, the JFACC construct was developed as a means to achieve those very ends—efficiency and efficacy—through unity of command of air operations. However, the JFACC we have today may not be the JFACC we need tomorrow. This essay will demonstrate that the JFACC concept, as it exists today, is, at best, narrowly viable in a twenty-first century context, and is, at least, structurally and procedurally cumbersome, as well as doctrinally inconsistent with real-world practice.

Joint Publication 1-02, in a lengthy definition, describes the JFACC as the functional component commander “responsible . . . for making recommendations on the proper employment of assigned, attached, and/or made available for tasking air forces; planning and coordinating air operations; or accomplishing such operational missions as may be assigned.”² The JFACC concept, for the purposes of this paper, encompasses a wider context, to include: the air component command authority or the individual who wields it, JFACC doctrine, the JFACC staff and its organizational structure, and the processes that constitute the various JFACC command, control, and staff functions. Primarily, the paper will focus on JFACC doctrine, process, and to a lesser extent, structure.³ First, a historical, evolutionary profile of the JFACC concept will be developed that is crucial to understanding

the JFACC as it currently exists. Following that analysis, the JFACC will be examined critically in the light of recent, current and foreseeable twenty-first century conflict. That critique will validate the conclusion that a gap exists between current JFACC doctrine and practice, using as a focal point the doctrinal tenet of “centralized control and decentralized execution.” The processes that characterize both the Air Tasking Order (ATO) development and the Time-Sensitive Target (TST) engagement will serve as research examples. The discussion will finish with recommendations for further research into viable solutions or alternatives to the imperfect status quo.

The Evolution of the JFACC: Precedents

The JFACC concept is not a timeless, fundamental principle of warfare that merely required discovery by some inspired intellect. Rather, it evolved, originating from the principle of mass and invented by operational and tactical necessity. It has since grown by fits and starts, and has been perpetually changed by events, personalities, service cultures and the needs of operational mission objectives. Before the JFACC existed as such, historical events influenced the institutional norms and cultures of the services—particularly the Air Force—and set the doctrinal foundation for the concept. This foundation was still wet at the outset of Operation DESERT STORM, but was firmly set by that conflict. The doctrinal, structural, and procedural paradigms that define the JFACC have not been challenged since. This paradigm is characterized by, but not limited to, the linked principles of centralized control and decentralized execution of airpower, and the primacy of the linear, sequential, symmetric, attrition-based, archetypal Industrial Age combat paradigm over “lesser included” but complex, nonlinear conflicts.

World War I and World War II: Tension in Airpower Theory

World War I was the genesis of centralized command and control of airpower. The Chief of Air Service of the First American Army, Brig Gen William L. “Billy” Mitchell, orchestrated the efforts of 1,500 allied aircraft during the St. Mihiel offensive in September 1918. He sequenced and concentrated normally dispersed American and French units, achieving tactical and operational success and adhering to the war principles of mass and unity of effort.⁴ Perhaps this was a lesson learned from the Germans themselves, who in March 1918 massed the effects of 300 aircraft in support of their ground offensive in accordance with early doctrinal instruction which dictated that aircraft be concentrated at the decisive point of attack.⁵

These early successes segued into broader airpower theories during the interwar period, most notably those of some founding fathers of strategic bombing—Mitchell and Giulio Douhet. These men conjectured that airpower could achieve coercive effects on the will of enemy populations and could cripple the industrial support infrastructure of an enemy’s war machine. Inherent in the theory was unity of command of airpower and centralization of its planning and direction.

World War II seemed to validate the nested hypotheses of centralized control of air assets, strategic bombing, and coercive air power. Advocates of this school of thought pointed to the failure of (decentralized and dispersed) U.S. Army Air Force (AAF) units in North Africa, most infamously at Kasserine Pass in February 1943.⁶ Centralized airpower proponents celebrated the operational vision of General George Kenney, MacArthur’s air commander in the Southwest Pacific Area, who executed the first joint air operations—in a manner similar to the modern JFACC.⁷ In Europe, the strategic bombing campaign carried

out by the USAAF and the RAF made its objective “the progressive destruction . . . of the German military, industrial and economic system, and the undermining of the morale of the German people.”⁸ Roosevelt and Churchill mandated the effort be unified under the control of a single commander, a tenet subsequently codified into (Army) doctrine.⁹ Coercive airpower supporters additionally held up the post-war *United States Strategic Bombing Surveys* (USSBS) as proof that strategic bombing campaigns had similarly intimidated the Japanese into capitulation.¹⁰

Korea, Vietnam, and the Cold War Influence

Both Korea and Vietnam were marked by significant departures from the principle of unity of command in air operations and dominated by inter- and intra-service turf wars. Not coincidentally, the respective air campaigns were judged to be less than successful. In Korea, “Fifth Air Force maintained day to day control of fighter and fighter-bomber operations, while FEAF [Far East Air Forces] maintained centralized control of B-29 operations.”¹¹ Meanwhile, Task Force 77 of the U.S. Navy “operated independently throughout the war, even to the extent of carving out a separate geographic area of operations.”¹² The Marine Corps begrudgingly gave up control of select sorties—those not supporting Marines on the ground—to FEAF, no doubt a remnant of the Corps’ resentment at being abandoned at Guadalcanal.¹³ These exceptions to unity of command—and the absence of centralized planning—“resulted in incoherent operations, some at cross-purposes.”¹⁴

Any vestige of centralized command and control of air forces in Korea was forsaken in Vietnam, which was divided geographically and parceled out to the various providers:

By 1965 . . . five distinct air forces existed. They were Naval, Air Force fighters, Marine, Air Force bombers and the Vietnamese Air Force. Each had different chains of command and each service kept control of its own air. The Navy . . . had operational control of Naval fires (primarily carrier

based air) called, again, Task Force 77. Marine air was in direct support of . . . the Marine ground commander. Even the Air Force, the banner carrier for centralized control had two separate command lines. The fighters fell under . . . 7th Air Force . . . and reported to Pacific Air Forces. The bombers remained under Strategic Air Command . . . for the duration of the war.¹⁵

Without central direction, the air war in Vietnam amounted to a patchwork of service-centric operations lacking any purpose save the destruction of targets, which were infamously selected and vetted at the highest levels of government. This perceived micromanagement was labeled “a major misuse of airpower”¹⁶ and left many airmen bitter.

The latter years of the Cold War brought the focus back to Europe and the perpetual threat of war with the Soviets. At the prodding of the Defense Secretary, the Army and Air Force doctrinally integrated a combined arms battle plan for the defense of NATO called the AirLand Battle, which “emphasized maneuver and firepower to defeat Soviet echelon forces flowing across a linear battlefield. The basic premise . . . was to defeat the second echelon and follow on forces prior to those forces being engaged in battle . . . The Army Corps Commander divided the battlefield . . . into Close (current battle to 24 hours out), Integrated (24-48 hours out) and Deep (72 or more hours out).”¹⁷ The Fire Support Coordination Line (FSCL) separated out the “deep” battle as the purview of the Air Force, while in the “close” and “integrated” battles, air assets operated in more direct support of the Army corps commander. The resultant Command and Control (C2) structure was bifurcated into “operations” (today) and “plans” (tomorrow) divisions. This 72-hour planning routine was the seed of the Air Tasking Order (ATO) cycle.¹⁸

Desert Storm

The leaders of the Operation DESERT STORM (ODS) effort were students of the Cold War game and vanguards of the newly-legislated era of Joint Operations. Command of

ODS air forces was delegated to General Horner, and the overall planning fell to Brig Gen “Buster” Glosson, USAF, who conceived an air campaign that was influenced by AirLand Battle and Col John Warden’s “Five Rings” model but tailored to Central Command (CENTCOM) Commander-in-Chief Gen H. Norman Schwarzkopf’s (and the JFACC’s) operational desires.¹⁹ This plan would—by direction and in the absence of a joint doctrine standard—employ as its primary execution tool the Air Force’s ATO process.²⁰

The ATO process—and product—was not without its limitations and friction. Since the ATO was in essence a mission order in the form of a massive flight schedule, it did not adequately bridge the leap from JFC (or JFACC) objective to task. This deficiency was not lost on General Glosson’s Guidance-Appportionment-Targeting (GAT) team (known as “The Black Hole”), which concocted a new product, the Master Attack Plan (MAP), to implicitly articulate commander’s intent and provide a targeting framework for ATO development.²¹ The subsequent ATO target-vetting process was highly centralized; General Glosson went so far as to admit that he micromanaged the ATO.²² Both the invention of the MAP and the personal involvement in the processes at the general officer level are as indicative of the nascent inadequacy of joint doctrine at the time as they are demonstrative of the innovative and forward-leaning nature of the personalities in the Black Hole.²³

The imperfections of the ATO process were also—and most painfully—felt across service lines. As one example, the aforementioned target vetting process was nominally joint, insofar as the targets selected by the GAT cell and forwarded by General Glosson had to be approved at the CENTCOM level by the Joint Targeting Coordination Board (JTCB); however, the JTCB was populated by junior officer liaisons and served as “a rubberstamp of the MAP proposal.”²⁴ The larger perception of the ATO was that it “supported an air

campaign that was, in the view of many Army, Navy, and Marine Corps officers, an Air Force-dominated process that reflected Air Force conceptions about the appropriate use of air power.”²⁵ Service interoperability issues punctuated this perception. Lacking compatible computer and communications systems, the Navy had to have the entire ATO hand-delivered daily to the ships in the region, creating delays, inefficiencies, and interservice resentment.²⁶ Perhaps most contentious of all was the perceived level of support granted to the land component by the JFACC: by the end of January 1991, less than twelve percent of Army-nominated targets had been struck.²⁷

Despite the friction, the resounding victory of coalition forces in ODS cemented the JFACC construct—and the ATO’s AirLand pedigree—as a proven model. To be sure, the air “campaign” was a tremendous success, and even President Bush credited much of the coalition’s triumph to the value of airpower.²⁸ The MAP was later codified as the Master Air Attack Plan (MAAP) in the foundational joint air operations doctrine publication 3-56.1, *Command and Control of Joint Air Operations*. The “jointness” of the effort was celebrated, even though the success of the air arm was “due in large part to . . . the adoption of USAF Service doctrine, procedures and communications systems by the coalition.”²⁹ Failures of interservice integration and cooperation were eclipsed by the notion that “Desert Storm vindicated the belief of many airmen that the integrated application of airpower, centrally controlled by an airman, could be a decisive instrument of national policy.”³⁰

Recent Trends: Doctrinal, Procedural and Structural Implications

Airpower’s prominence in military strategy following ODS shaped its role in subsequent conflicts in the late twentieth and early twenty-first centuries. Improved service interoperability brought about the full buy-in of Naval and Marine air forces into the JFACC

/ ATO concept—albeit with residual tensions—which was applied with vigor to three campaigns.³¹ Operation ALLIED FORCE (OAF), NATO’s mission to compel Serbian leader Slobodan Milosevic to quit the ethnic cleansing of Albanian Kosovars, was almost entirely—due to political restraints—an air campaign.³² The initial effort of Operation ENDURING FREEDOM (OEF) that toppled the Taliban in Afghanistan was largely a cooperative effort by Special Operations Forces (SOF) and airpower delivered predominantly by the Navy. The Major Combat Operations (MCO) phase of Operation IRAQI FREEDOM (OIF) included such a conspicuous display of airpower that it acquired the moniker “Shock and Awe,” a term lifted from coercive air power theory. A full historical treatment of each conflict is beyond the scope and limitations of this paper, but some crucial historical context will be drawn out. It suffices to say that in each case, airpower was judged (at least initially) to be fundamental to U.S. victory. Thousands of people performed tirelessly and admirably in the respective Air Operations Centers (AOC), and were justifiably proud of airpower’s success.

However, the undercurrent to this streak of JFACC-validating events was a handful of trends that cut across the paradigmatic grain of the concept. These included a centralization of nearly all facets of air operations—to include planning, control and execution—due in part to the emergence of Time-Sensitive Targeting (TST) as a glaring caveat to the AirLand-based ATO model. Additionally, a trend in the environment of warfare emerged—away from Industrial Age, linear combat toward more fluid, dynamic conflict with adversaries who refuse to fit the traditional mold.

TST creates a discontinuity in the JFACC concept along procedural, doctrinal and structural lines. A time-sensitive target is defined as “a joint force commander designated

target requiring immediate response because it is a highly lucrative, fleeting target of opportunity or it poses (or will soon pose) a danger to friendly forces.”³³ TST is doctrinally distinct but shares many challenges with other time-critical missions like Close Air Support (CAS) in that it cannot be anticipated, planned or allocated within a 72-hour cyclic construct. Some interesting statistics from ODS foreshadowed the emergence of TST: Eliot Cohen’s *Gulf War Airpower Survey Summary* reported that, “on average, about 20% of the sorties were changed from conception to execution. Of note, however, is the dramatic increase, up to 40%, in changes after the ground portion of the campaign began.”³⁴ This seemed to imply that an ATO conceived 72 hours out and approved 48 hours out was at best a 60 percent solution at execution when ground forces were present. ODS provided another, even more compelling statistical figure: zero—the number of Scud missiles confirmed destroyed by the roughly 2,500 sorties assigned to the task.³⁵

These kinds of dynamic missions, involving targets that were either mobile or that emerged well inside the ATO cycle, became the percentage strike mission during OAF. Planning for such missions was eventually performed by the so-called Flex Targeting Cell in the Combined Air Operations Center (CAOC) in Vincenza, Italy. Despite the ODS-proven need for the capability, the cell was not instituted until the final month of the 78-day air war. Flex targeting involved the use of either ground-based or airborne alert aircraft, or required the “re-role” of aircraft from pre-planned, ATO-assigned missions.³⁶ Flex targeting “made up an unusually large proportion of the total strikes.”³⁷ However, it was troubled by obvious inefficiencies such as the need to maintain continuous presence of orbiting strike aircraft when transit times revealed the inability of ground-based alert aircraft to strike fleeting

targets. The excess sortie capacity enjoyed by the CFACC, Lt Gen Michael Short, hid these inefficiencies.³⁸

By OEF and OIF, flex targeting had been incorporated into doctrine as Time-Sensitive Targeting, and took on an almost fad-like proportion of missions. One estimate surmised that over 80 percent of Navy strike sorties in OEF launched with no preplanned targets.³⁹ This rendered the ATO nearly obsolete except as a repository for callsigns, control frequencies, and a rudimentary friendly air order of battle.⁴⁰ To be sure, the paucity of military and industrial infrastructure, air defense, and C2 targets in Afghanistan—combined with the dispersal of both the Taliban and friendly SOF forces—made TST obligatory.⁴¹ In Iraq, on the other hand, a modern regime with a traditional military existed. Nevertheless, the JFACC TST cell grew from 4-5 people during OEF into a 25-member team covering three geographic sectors in the OIF AOR.⁴² OIF also saw the emergence of Killbox Interdiction and Close Air Support (KI/CAS) missions. While (even today) not doctrinally defined, KI/CAS “missions would take off and be directed to wherever airpower was needed without having been assigned any preplanned targets,” and comprised fully 80 percent of OIF strike output as measured by Desired Mean Points of Impact (DMPI) struck.⁴³

TST challenges the doctrine of decentralized execution, a close-held tenet in Air Force culture.⁴⁴ This was first seen in OAF:

The lack of joint and service TST doctrine, processes, training, and hardware negatively impacted OAF operations. The absence of training focused on the prosecution of emerging targets at both the operational and tactical levels resulted in the requirement for centralized control and engagement authority that frequently resided with the JFACC himself, and many times at the Combined Force Commander (CFC) or senior political leader levels. The requirement to consistently communicate with the CAOC quickly highlighted the lack of required communication bandwidth between the CAOC and other tactical-level command and control elements. Centralized control exacerbated the communication limitations . . .⁴⁵

In practice, the centripetal force of centralization has pulled even functions normally embodied by TACON away from the JFACC. During OEF, Lt Gen Charles Wald, General Tommy Franks's (CENTCOM's) JFACC, was denied target approval authority. All targets named to the Joint Integrated Prioritized Target List (JIPTL) were vetted at the CENTCOM level. Further, General Franks retained strike approval authority for TST, fearing the strategic effects of collateral damage "that could be caused with a tactical mistake such as an errant bomb."⁴⁶

It is arguable that decentralized execution is even practical in an environment where technology has brought the operational commander to the tactical level in a virtual sense: so-called forward reach. One recent article begs the question of relevance of the tenet of decentralized execution:

Air Force doctrine defines decentralized execution as delegating "execution authority to responsible and capable lower level commanders . . . to achieve span of control and to foster initiative, situational responsiveness, and tactical flexibility." Does this statement accurately reflect the realities of air operations since . . . Allied Force, Enduring Freedom, and Iraqi Freedom? Have the joint air operations planning process, air tasking order cycle, theater air-to-ground system, and C4ISR fusion capabilities within the air weapons operation center subsumed all responsibility from subordinate air commanders on the wing and squadron level and made joint commanders the focal point for every aspect of air operations?⁴⁷

Another study argues that centralized execution, given today's communications technology, better provides the very tactical and operational advantages—effective span of control, disciplined initiative, situational responsiveness, and tactical flexibility—that Air Force doctrine insists that *decentralized* execution provide.⁴⁸ So, while centralized control remains the codified doctrinal tenet, its spirit is being challenged both academically and practically.

A potential counterpoint to this apparent gap between doctrine and practice is the emergence of the Killbox Interdiction and Close Air Support (KI/CAS) mission in OIF. While even today not doctrinally defined, KI/CAS missions “would take off and be directed to wherever airpower was needed without having been assigned any preplanned targets. The aircraft would either be directed to a 30 mile by 30 mile grid to search for targets or would be handed off to a controller for CAS.”⁴⁹ Defenders of decentralized execution point to the “model of Killbox Interdiction in Operation Iraqi Freedom . . . Of the 41,404 sorties flown in the operation, only 156 were flown in support of TST targets. Contrast that with the 15,592 targets that were struck using the KI/CAS. It is obvious the decentralized model was more capable of handling a large amount of targets.”⁵⁰ This argument has merit and statistical weight, but is incomplete. The Rules of Engagement (ROE) during OIF were permissive enough to allow decentralization of strike decision making, but in practice, aircrew accustomed to centralized control typically sought permission to take action anyway. Furthermore, the target-richness of the environment and the extreme excess sortie capacity enjoyed by the JFACC simply overwhelmed the C2 nodes, forcing a more decentralized mode except in cases of TST. In these cases, tasking and strike authority were relayed from the AOC floor to the aircrew via C2 platforms acting effectively as communications relays. Additionally, since most strike platforms could not solve Positive (target) Identification (PID) requirements in the cockpit, the vast majority of KI/CAS strikes fell under CAS, which, from the JFACC’s perspective, is not a decentralization of airpower, but rather a handoff of effects to the JFLCC in a supporting/supported exchange.⁵¹

These trends toward TST, KI/CAS, and, in the more recent counterinsurgency environment of OIF, “Armed Overwatch,” highlight the changing nature of the battlefield.

Whatever one calls the mission, and wherever it falls along the Range of Military Operations (ROMO), the undeniable trends of future warfare have implications with respect to the JFACC model. While COIN and other aspects of Irregular Warfare (IW) dominate current strategic and operational thought, planning and doctrinal disputes, conventional war with a state-fielded military cannot be ignored; either way, the common lexicon of future warfare will in all likelihood include such terms as speed, precision, bandwidth, media transparency, casualty and collateral damage aversion, nonlinearity, and asymmetry. These changes require a reevaluation of the JFACC paradigm. This is easier said than done; as a complex dynamic system of systems, the JFACC is subject to the inertia of its successful strategies.⁵²

TST exists as a function not because it can be done (arguably it cannot, at least not effectively *and* efficiently), but because it must be done. That the JFACC's primary guidance, apportionment, targeting and direction tool, the ATO, fails to handle it is a problem. As shown above, the ATO was built around a sequential battle prototype. Its success in ODS validated the process, and the process seemed to become more important than the mission. When TST suggested that the paradigm was wrong, the system (and the process) responded by spinning faster, as was the case in OAF. When the enemy continued to work inside the accelerated cycle, the JFACC system built doctrinal "patches"—processes outside the process—to address the need. Some of these processes have been captured by doctrine, but the foundational theory remains the same.

The Way Ahead

History demonstrated the precedents and cultural norms that established the JFACC as it exists today. Current trends highlight the gaps between what the JFACC is (and does) and what it is supposed to be. The JFACC concept, with all its attendant processes wrapped

up in the ATO, is unresponsive to a dynamic, nonlinear enemy or environment. Changes are needed, but the glacial, evolutionary changes since the JFACC paradigm congealed following Operation DESERT STORM have been ad hoc, inadequate, or contradictory to doctrine. Either the doctrine and processes need to be reevaluated and changed to reflect real-world practice, or the practice of airpower command and control needs to be changed to reflect some better doctrinal theory or systemic process. This paper does not have the scope to invent fieldable solutions, but can ask some hard questions and shine light on existing ideas.

The first case is rather straightforward. From a doctrinal standpoint, decentralized execution in the age of forward reach seems almost passé.⁵³ Joint doctrine should revisit this valued tenet from a practical perspective. Doctrine is not mystical or divine; it is the product of real people with personalities and sensitivities, and while they do not always agree, they develop a cascading consensus that often makes doctrine difficult to change. That is not to say that it cannot be changed. For example, prior to the publication of JP 3-30, the governing C2 doctrine for air operations was JP 3-56.1, *Command and Control for Joint Air Operations*. The phrase “centralized control” did not appear in JP 3.56.1; indeed, it did not exist in doctrine at the time. JP 3-56.1 referred to “unity of command, centralized *planning*, and decentralized execution.”⁵⁴ Control, according to joint doctrine, is inherent in command, and is essentially the manner in which execution is directed. In that sense, centralized control and decentralized execution become semantically contradictory.⁵⁵ Joint doctrine was later changed to reflect the practice of centralized control. This creates some points of friction in practice. First, the Joint Force Air Component *Commander* is not imbued with command authority—the JFACC normally executes tactical *control* (TACON) of air assets

assigned and apportioned for tasking. To be sure, this can be a Herculean task. The ATO is the tool to exercise TACON, and it also ensures vital deconfliction of myriad air assets in physical space as well as purpose. This requires, for safety, that all airborne platforms in the AO must be on the ATO. However, doctrine allows for retention of TACON by the services in specific cases. This creates the contradiction whereby an asset is issued an authorized control “order” (the ATO) by the JFACC, but executes under control and command of another authority, creating a disunity of control within a technical state of unity of command. This serves to fray the principle of unity of effort.

Conversely, JFACC processes in real-world practice might be changed to reflect a better theory; that is, the underlying foundations of JFACC doctrine need to reflect properly the new, nonlinear environment. Absent such an all-encompassing Information Age worldview, the procedures embedded within the JFACC model could at least be improved to handle the challenges that already exist. The weakness of the Joint Targeting process and the ATO cycle to address near-term emergent targets is clear. Both the targeting process and the ATO cycle could be modified to deal with this problem. In the ATO case, a new way of thinking might be applied to the ATO in light of the changed environment since the days of AirLand Battle, resulting in modified JFACC organizational structure. Winkler suggests that MAAP, GAT, and Strategy/Plans personnel be fused in a parallel, collaborative environment to create a more synergistic and responsive process than the serial, sequential model currently in place.⁵⁶ He makes the further suggestion that the ATO cycle divorce itself from the 24-hour clock. This would create an “X-hour ATO” where “X is any number from 24 to 1.”⁵⁷ Emergent targets would not have to wait 72 hours (48 on a good day) for inclusion in the ATO. This would require a more difficult scheduling problem at the tactical level, and

would require pushing much more of the mission planning process to the tactical level, but could better ensure strike success by increasing the proportion of aircrews taking off with pre-planned targets.

In the TST case, the targeting kill chain, Find-Fix-Track-Target-Engage-Assess (F2T2EA) has been shortened considerably since ODS, mostly thanks to improved communications. However, the AOC floor is still the hub for the fusion of intelligence (F2T), the decision making center for targeting (T) and the clearinghouse of combat assessment (A). Decision making times have not been reduced in proportion to the improvements in sensor and communications capabilities.⁵⁸ Practical, procedural decentralization of as much of the kill chain as possible might shrink reaction times even further. This would require an articulation of commander's intent and ROE robust enough to mitigate the strategic risk of such tactical blunders as collateral damage events. If ROE, PID, commander's intent, and the sensor inputs could all be pushed to the tactical and/or local level, much of the communication and decision time could be subsumed by clusters of sensor-shooter relationships. The SOF example from OEF would be an excellent model—the “sensor” has PID, ROE, and commander's intent embedded in its tasking. Paired with the most effective or most readily available engagement asset, effects are achieved quickly. This is a proven model in the OEF case; lacking the SOF portion creates a technological need for improved sensor and shooter processing and persistence.

Another recommendation might include reexamining the functional component commander (FCC—for example, the JFACC, the JFLCC, the JFMCC, et cetera) concept as a whole. As it stands, the lines between the FCCs are blurring. Army systems with reach beyond the FSCL, like attack helicopters and the Army Tactical Missile System (ATACMS),

occupy JFACC-controlled airspace but are typically not controlled by the JFACC. Similarly, who should control maritime air assets? What about sea-based Theater Ballistic Missile Defense (TBMD) assets? The various lines drawn between the FCCs were a necessary control to prevent both fratricide and duplication of fires, and served to establish or clarify supporting/supported commander relationships. Technological trends point to the ability to track blue forces down to the individual. In such an environment, effects can be synchronized across all FCC boundaries. The supporting commander could be the commander who brings the effect needed locally; regardless of in whose “lane” the effect is felt. Under this paradigm, FCC boundaries like the FSCL tend toward obsolescence, which challenges the relevance of the FCCs themselves. With appropriate C2 technology and network architecture, the functions could be reabsorbed by the JFC and his staff.

Summary

The JFACC, even as it existed before the term was coined, proved itself in practice as a competent and often effective construct for the planning, direction and execution of air operations. But as the concept was reinforced by Industrial Age success, Information Age reality began to pull away. The defining historical events with respect to the JFACC concept were arguably Vietnam (lessons in defeat) and Desert Storm (validation in victory). As discussed above, Vietnam drove home emotionally turbulent lessons about the principle of centralized control and decentralized execution in air operations. Desert Storm reaffirmed those lessons and confirmed the logic of AirLand Battle, creating the entwined ATO and targeting processes. In light of the more recent trends highlighted above, significant JFACC shortcomings come to light. First is the disconnect between the evolved C2 and execution practices and the prevailing doctrine. TST highlights the mismatch. Second is the increasing

obsolescence of the JFACC's primary apportionment, targeting and control tool—the ATO, with all of its implied processes and products—exemplified by the emergence of TST and other “time critical fires.”

Notes

(All notes appear in shortened form. For full details, see the appropriate entry in the Selected Bibliography.)

1. When in command of only U.S. air forces, the component commander is referred to as the *Joint Force Air Component Commander* (JFACC). When operating under the auspices of an alliance or coalition, and delegated command authority over allied or coalition assets, the title becomes *Combined Force Air Component Commander* (CFACC). Throughout this paper, “JFACC” will refer to either, except in reference to a specific person’s actual title.
2. JP 1-02, *Dictionary of Military Terms*, 287. Other functional component commanders (FCC) include, for example, the Joint Force Land Component Commander (JFLCC) and the Joint Force Maritime Component Commander (JFMCC), and the Joint Force Special Operations Component Commander (JFSOCC).
3. Morgan, “A Reexamination of the JFACC Concept,” 1-2. Then-LCDR Morgan cast a similarly wide net over the JFACC in his critique of JFACC service-centricity, bureaucratic hierarchy, and manning. The author acknowledges that LCDR Morgan properly and logically formatted JFACC analysis along structural and procedural lines.
4. *JFACC Primer*, 2.
5. New, “Where to Draw the Line.”
6. *JFACC Primer*, 2-3.
7. *Ibid.*, 3.
8. Weigley, *The American Way of War*, 338.
9. Winkler, “Evolution of the ATO,” 6.
10. Gunzinger, “Airpower as a Second Front,” 4.
11. *JFACC Primer*, 4.
12. *Ibid.*, 4.
13. Winkler, “Evolution of the ATO,” 8.
14. *JFACC Primer*, 4.
15. Winkler, “Evolution of the ATO,” 9-10.
16. *JFACC Primer*, 5.
17. Winkler, “Evolution of the ATO,” 16.
18. *Ibid.*, 18-19.
19. *Ibid.*, 21-23.
20. *Ibid.*, 20.
21. *Ibid.*, 24-26.
22. *Ibid.*, 27.
23. *Ibid.*, 26-28.
24. *Ibid.*, 26.
25. Johnson, *Learning Large Lessons*, 35. Johnson is paraphrasing Gordon and Trainor, *The Generals’ War*, 472.
26. *JFACC Primer*, 6.
27. Gordon and Trainor, *The Generals’ War*, 319-320.
28. Winkler, “Evolution of the ATO,” 21.
29. Freitas and Parker, *A Common Sense Approach*, 9.
30. Gunzinger, “Airpower as a Second Front,” 7.
31. Some doctrinal incompatibilities were never resolved. As a result, for example, doctrine makes exceptions to the tenet of centralized control of joint air operations under the JFACC in the case of MAGTF air assets. See JP 0-2, *Unified Action Armed Forces*, V-4.

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32. Johnson, *Learning Large Lessons*, 65-66.
 33. JP 1-02, *Dictionary of Military Terms*, 551.
 34. Winkler, "Evolution of the ATO," 29.
 35. Fyfe, *Evolution of TST*, 5.
 36. Ibid., 6-7.
 37. Kometer, *Command in Air War*, 99.
 38. Fyfe, *Evolution of TST*, 6.
 39. Ibid., 11.
 40. Winkler, "Evolution of the ATO," 38.
 41. Fyfe, *Evolution of TST*, 11.
 42. Ibid., 20.
 43. Winkler, "Evolution of the ATO," 41. Personal experience bears this out: the author flew 10 OIF missions during the MCO phase of March/April 2003. Only one involved planning for, and striking, a "traditional" target. Over half involved no preplanned target at all.
 44. To be fair, this principle is fundamental to Navy culture as well. See Builder, *The Masks of War*. The centrality of the concept to Air Force culture is emphasized because the applicable doctrine is based on Air Force doctrine.
 45. Fyfe, *Evolution of TST*, 7.
 46. Winkler, "Evolution of the ATO," 36.
 47. Davis, "Forward Reach," 97.
 48. Schaefer, "Centralized Execution in the U.S. Air Force," 1.
 49. Winkler, "Evolution of the ATO," 40.
 50. Ibid., 54.
 51. The statements about ROE, KI, TST and CAS are all based on the personal experience of the author flying strike (mostly KI/CAS) missions in northern Iraq during the MCO phase of OIF.
 52. See Glenn, "Complex Targeting," for a fascinating study of the dynamics of complex adaptive versus Newtonian systems. The JFACC system may be subject to what Glenn and others refer to as "lock-in."
 53. Schaefer, throughout "Centralization in the U.S. Air Force" argues this very point.
 54. JP 3-56.1, *C2 for Joint Air Operations*, vi. Emphasis added.
 55. Davis, "Forward Reach," 96.
 56. Winkler, "Evolution of the ATO," 49.
 57. Ibid., 60.
 58. Ibid., 37.

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