By MARCUS HURLEY

he services accept and joint doctrine codifies the fact that a Joint Force Air Component Commander (JFACC) represents the best way to command and control airpower in support of a joint force commander's (JFC's) campaign plan. While there may be differences among the services on the degree of command or control, all acknowledge the importance of, and support, centralized planning and decentralized application of air assets to implement a JFC's concept of operations. The inherent flexibility of airpower makes it a powerful but not infinite theater asset. It would be a grave error to squander this valuable tool by using it in the wrong place or at the wrong time.

Desert Storm was a true test of the JFACC concept. In contrast to the fragmented application of airpower in Vietnam, Desert Storm showed the benefits of centrally controlled airpower. Since the Gulf War we have seen continual improvements in the concept. But we can do better. This article examines these improvements and discusses where we should go with JFACC.

The JFACC Role

Once a theater CINC or JFC develops a concept of operations and designates a JFACC, the air component staff translates it into a cohesive joint air operations plan. In coordination with planners from other assigned functional components (land, sea, space, and special operations), air component planners design a comprehensive master attack plan to meet the overall objectives of the campaign plan. Air operations (which might include deep-strike helicopter missions, Tomahawk cruise missiles, and Army tactical missile strikes beyond the fire support coordination line) are then phased and sequenced in an overall campaign plan to affect enemy operational and strategic centers of gravity. As with all operational-level planning and execution mechanisms, a JFACC provides the linkage between strategic objectives and the tactical application of combat power.

General William Momyer, commander of 7th Air Force during the Vietnam War, noted that airpower can decide battles or win campaigns. The commander's dilemma, he said, is determining the proper balance among competing demands, strategic attack, interdiction, and close air support. All are necessary elements and it is a JFC, with advice from a JFACC and functional commanders, who decides the level of effort he wants

Summary

Designating a Joint Force Air Component Commander (JFACC) has rapidly become the customary procedure for exercising command and control of airpower in support of joint force commanders. This approach enables JFACCs and air component staffs to develop joint operations plans together with staffs from other assigned components. Though limited resources preclude maintaining large standing air component staff for every contingency, it makes sense to have a small, trained cadre augmented by liaison officers from each component as well as trained personnel seconded in times of crisis. Such a mix can foster mutual trust, ensure the correct blend of capabilities, and furnish air assets to implement myriad requirements of the joint force commander's concept of operations. A review of the improvements made in the JFACC concept since the Persian Gulf War points the way to a new age of centrally controlled airpower.

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a JFACC and his staff plan and execute the air operations necessary to achieve campaign objectives

to dedicate to each element by phase of the campaign plan. This apportionment of air assets tells a JFACC what to plan and tells other functional commanders what sort of air support they can expect.

After a JFC's apportionment decision is made, a JFACC and his staff plan and execute the air operations necessary to achieve campaign objectives. The air component staff is made up of trained and ready men and women who develop and execute a JFACC's strategic and operational-level plans. Being an effective JFACC or air component staff member, however, requires theater-wide vision and rigorous study and practice. The Air Force has taken the lead in developing the training, education, and exercise programs that airmen from all services need to become JFACCs and effective air component staff members.

JFACC Training

Training people is as important as giving them the proper tools. General Colin L. Powell, USA, indicated in Joint Pub 1, Joint Warfare of the U.S. Armed Forces, that training the team as they will fight helps build the bonds of trust which are absolutely critical in joint operations. Each functional component (land, sea, air, space, and special operations) must understand and believe that airpower will be used where and when it is needed to achieve a CINC's or JFC's objectives. That is the promise which we airmen, regardless of our service, must keep. We begin by training to a common standard and then maximizing airpower during contingencies and exercises.

The Joint Doctrine Air Campaign Course (JDACC) taught by Air University is a specialized course in air operations planning for company and field grade officers from all services who serve on theater and service air component staffs. JDACC addresses the supporting and supported roles of a JFACC and integrating airpower into a CINC's or JFC's campaign plan. It teaches officers to develop and sequence the different operations which make up theater campaign plans, maximizing the potential of airpower to achieve campaign objectives. Students learn and practice fundamental concepts, principles, and procedures needed to plan and execute joint and multinational theater air operations. The course stresses center-of-gravity analysis, air objectives, and force apportionment.

Officers attending the Air Command and Staff College receive a more in-depth education in campaign planning and execution. They use the air campaign planning tool to build comprehensive theater air operations plans and, by wargaming tactical and operational-level scenarios, they design and phase independent and supporting air operations to achieve a JFC's objectives. The students must try to resolve the dilemma General Momyer posed. In an academic setting these officers deal with the tough apportionment issues that bedevil JFACCs who they will serve after graduation.

After spending a year at Air Command and Staff College, a small group of officers is then selected to spend another year at the School of Advanced Airpower Studies (SAAS). The students (including 25 Air Force officers and one Army officer in academic year 1994–95) take an intensive course on the operational-strategic levels of war. SAAS combines theory, history, and wargaming to train and exercise a cadre of air strategists who can develop effective theater air operations plans. These officers will become air planners for theater CINCs and air component commanders.

The Air Warfare Center conducts battlestaff exercises for numbered Air Force commanders and their assembled joint staffs in the command, control, and intelligence procedures of JFACCs. The computer-based exercises, known as Blue Flag, replicate theater conditions by using friendly and enemy orders of battle, war plans, and theater operating procedures. Participants regularly include members of other services and allied nations to provide a realistic employment experience. State-of-the-art computer technology allows ground, enemy air defense, and maritime simulations to run simultaneously with offensive and defensive air operations. Distributed wargaming makes it possible to direct exercises from other sites and include geographically separated units as

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players. Blue Flag is a world class opportunity for joint and combined air forces to train as they will fight.

The crown jewel in JFACC training will be the JFACC Theater Air Strategy Symposium, a week-long event that will introduce general and flag officers who serve or may serve as JFACCs to the available air operations planning tools. It will prepare participants to seek and exploit synergism through centralized planning and decentralized execution of joint air operations. They will study service-unique capabilities and the means of integrating them to maximize available combat power. This course will be JFACC*ing* from a warfighter's perspective.

Air Tasking Order

The central tenet of airpower is that planning (control) must be centralized and execution decentralized. Centralized planning is key to coordinating efforts among all available air forces. Decentralized execution makes it possible to generate the tempo of operations required and to cope with the uncertainty and disorder of air combat in battle. Field Marshal Sir Bernard Montgomery, who commanded Allied ground forces at Normandy, noted: "Airpower is indivisible. If you split it up into compartments, you merely pull it to pieces and destroy its greatest asset—its flexibility." Airpower's speed, range, and flexibility give it the ability to mass combat power throughout a theater of operations. Massing combat power is the goal of all commanders. Compartmentalizing or dividing command and control responsibilities for airpower degrades the ability to mass.

One difficulty in achieving centralized control of theater-wide air operations arises from the fact that command and control structure has not been responsive enough for centralized planning and rapid execution. In Desert Storm advanced technology offered this ability. Linking computers with theater planning, communications, intelligence, reconnaissance, and targeting systems gave the air component commander the ability to use the intent of the Commander in Chief, U.S. Central Command (CINC-CENT) to produce a comprehensive air operations plan, adjust the air tasking order (ATO) if retargeting was necessary, and execute the plan via the ATO.

In the Gulf War, U.S. Central Command Air Forces (CENTAF) used the 72-hour planning and 48-hour tasking cycles outlined in Joint Pub 3-56.1, Command and Control for Joint Air Operations. While air operations were driven by the JFC's intent, mission guidance, and combat assessment, the critics of the ATO process viewed the air operations plan as too inflexible. They claimed the ATO could not adjust to changes based on reported battle damage assessments (BDA), inflight reports, or the ground commander's requirements. But every night during Desert Storm CINCCENT personally reviewed and revised the next day's air operations plan to address changes in the enemy order of battle. Moreover, he adjusted the next two days' targeting priorities as well as apportionment totals to meet new threat assessments and revised target lists.

It is understandable how one might perceive an ATO as being too rigid. The document is a theater-wide tasker to strike as many targets as possible in a 24-hour period and achieve a CINC's or JFC's campaign objectives. Air component staffs usually work three ATOs simultaneously: one being executed (today's), one in production (tomorrow's), and one in planning (for the day after tomorrow). Differences in intelligence and post-mission reporting which are available to functional components and subunified commands mean that many targets nominated by one component may not be serviced when requested since they have been hit previously or are no longer viable targets (though the component's intelligence organization does not know it). With hundreds of targets and thousands of sorties to schedule, deconflict, recover, regenerate, and relaunch, the ATO is large, comprehensive, and imposing. Today, with the command, control, and communications systems fielded since the Gulf War, the current ATO process allows greater flexibility. We have worked on the training, now we need to give our people better tools.

Contingency Planning

As in Desert Storm ATOs can and will be changed during daily targeting reviews conducted prior to their execution. A new command and control tool, the Contingency



AH-64 Apache at Saudi port.

CTAPS allows real-time communications among operations staffs, including naval aviation aboard carriers Theater Automated Planning System (CTAPS), replaces the automated system used in the Gulf War. CTAPS makes it easier for a JFACC to redirect sorties and missions even after the ATO is

published and distributed since it allows real-time communications among operations staffs, including naval aviation aboard carriers. Additionally, by assigning primary and secondary taskings in the ATO, sorties can be redirected to hit assigned secondary targets or diverted to address unexpected battlefield situations. Procedural and systemic changes allow a JFC to add or shift

combat airpower to main or supporting efforts and afford unprecedented flexibility to meet sudden changes on the modern, dynamic battlefield.

Air Force computer systems used to plan and execute air operations in the

Gulf War were incompatible with those of other services and coalition air forces. The systems were not intended to address unique requirements of joint and multinational air operations in a contingency theater. To overcome the systemic obstacles to a single integrated air operation, paper copies of the ATO being executed were hand delivered to ships and certain coalition forces. This was a great source of frustration for planners, operations controllers on the CENTAF staff, and squadrons tasked with flying missions. The Navy, Marine Corps, and Air Force have expended tremendous efforts to ensure that CTAPS meets the needs of theater air component commanders—regardless of a JFACC's service. The system has been designated the joint standard for ATO generation and dissemination by the Joint Staff. In addition, the software used to develop, transmit, and execute the ATO meets DOD common user standards. While the hardware may be different, both ATO inputs and the products available will be the same among all forces participating in theater air operations.

Initial versions of CTAPS hardware and software have been fielded. The services use the system for exercises and actual deployments. Interoperability and system connectivity simplifies the job of air component staffs and intensifies the effectiveness of airpower. CTAPS represents a great leap forward in technology, ease of operation, communications flow, and customer support. Modern technology has enhanced the ability of a JFACC to support a theater campaign strategy. These tools will undergo refinement as technology and combat change.

Standing Organization

CENTAF planning and execution staffs during the Gulf War were augmented by hundreds of Air Force planners and liaison officers from other services. Since then, CINCs and JFCs have used ad hoc *joint* staffs to plan and execute air operations in contingency and exercise scenarios. This puts a tremendous training burden on air component commanders who are assigned JFACC responsibilities. In a crisis training time may be unavailable or inappropriate because of operational security concerns. An even tougher problem occurs if a CINC requires a JFACC to execute initial air operations and plan others while the staff is deploying. This is extremely difficult for a trained and ready air component staff and nearly impossible for an ad hoc group.

We can overcome such problems by assigning members of all services to a theater CINC's air component staff full time. This joint staff would live together and work as a team every day, most likely at the air component commander's headquarters. The staff would then be a trained and ready core around which a full JFACC staff could be formed in crises. This requires training more people from all services to act as members of air component staffs. Even if they are not actively serving on a joint air component staff, they will be available to augment the assigned staff.

Numbered Air Forces (NAFs) have several hundred people assigned to form an Air Force core around which a theater air component staff can be built. NAF commanders train and exercise assigned Air Force people to build an air operations plan, coordinate plans and operations between service components, and execute initial and subsequent ATOs in the event of crisis. This capability has been tested successfully in real-world contingencies, theater exercises, and at Blue Flag with liaison personnel from other services and some allies. What is missing is full-time representatives from other service components who will provide airpower in response to a regional contingency. JFACCs need this full-time service expertise to wage the joint warfare which General Powell said is essential to victory. It is up to the services to recognize the need and assign the right people.

In the ongoing commitment to Southwest Asia, Operation Southern Watch, 150 Air Force and Navy officers augment CENTCOM

FA–18s taking off from Aviano Air Base.



and CENTAF staffs. Personnel on temporary duty with the joint task force staff plan and execute air operations in support of U.N. Resolutions 687 and 688. In return, they are practicing their skills in an operational setting. The JFACC for

Southern Watch is also the Joint Task

Force-Southwest Asia (JTF–SWA) commander, the Area Air Defense commander, and the Airspace Control Authority. Operational control over Navy and Air Force flying units as well as Army Patriot missile batteries in the theater is retained by the respective service component commanders. The JTF–SWA commander exercises tactical control over Navy and Air Force sorties made available for planning through Commander, U.S. Naval Forces Central Command, and Commander, U.S. Central Command Air Forces. This arrangement gives the JTF–SWA commander local direction and control of sorties. In addition, he ensures airspace is laid out in a coordinated, disciplined manner. By articulating the level of effort required and focusing all players on the mission requirements, the JTF–SWA commander is able to execute the air operations required to achieve CINCCENT objectives.

While it may be desirable, fiscal reality prevents us from forming large, new air component staffs in each theater. The JTF–SWA experience has shown that a small, trained, and ready cadre, augmented by quality liaison officers from each component and trained augmentees, can transform the commander's objectives into a comprehensive air operations plan and an executable ATO.

Effective airpower, capable of meeting the strategic needs of a JFC and addressing direct air support requirements of land and maritime component commanders, depends on a solid foundation of communications and trust. When a JFACC clearly articulates his goals and focuses components and his joint staff to achieve them, we can be successful. As seen in Southern Watch and other contingencies, properly trained, equipped, and motivated personnel (assigned or augmenting) can become a formidable JFACC team when trust is established and communications are maintained.

The Future

While the nature of future conflict is uncertain, U.S. participation in it and the need for responsive and flexible airpower is not. Operations other than war (OOTW) constitute a growth industry in which the Nation will be involved. Thus airpower will also be involved in some form. Ongoing operations in Bosnia, Southwest Asia, the Horn of Africa, Haiti, and other regions are becoming the norm rather than the exception. Experiences in these and other crises are helping us transform the lessons of Desert Storm into experience for present and future air commanders.

We are witnessing the first steps towards controlling all theater air operations via the ATO. The Chairman recently changed Joint Pub 3–56.1, *Command and Control for Joint Air Operations*, to require positive control of all



F–16 returning from Cope North 94–1 mission off Japan.

new tools we are giving JFACCs will make airpower more capable and flexible

air operations in a theater, including Army helicopters, on the ATO or a flight plan. Special Operations Forces have demonstrated that they can make significant contributions to the deep battle. We have the ability to regularly include special operations missions on the ATO. During OOTW, the consequences of not exercising positive control over all air operations could be disastrous. Positive control helps avoid fratricide by giving all team members a copy of the game plan. The contention that doing so

makes a cumbersome document even more unwieldy fails to take into account CTAPS and future command and control systems.

We should also expect to encounter and exercise more frequently with JFACCs who are not Air Force officers or who have a mobility rather than a combat background. A primary reason for such joint training programs is to prepare for scenarios when a non-Air Force service will have the preponderance of air assets and the command and control mechanisms to plan and execute theater air operations. It is not difficult to imagine a scenario when a Navy admiral is the initial

> JFACC in a contingency and then passes his responsibility to an Air Force or a Marine general as operations move ashore. As the commitment to a particular contingency matures, the JFACC may again be

an admiral or general responsible for planning and executing mobility and sustainment activities. This would be difficult to accomplish in a large operation today, but standardized planning and execution tools and joint training programs will make the hand-off easier in the future. Now we need practice.

It is possible and advisable to test this concept. Under different funding and sponsorship Blue Flag could be run with a non-Air Force JFACC and his principle staff. Air Force personnel could serve as deputy JFACC and in liaison functions, providing expertise in areas such as space warfare, airlift, and strategic attack. Another possibility is to structure theater exercises to provide for an Air Force JFACC afloat with a predominantly Navy staff. Linking and sequencing service training simulations such as the Navy's Fleetex and the Army's Battle Training Program with Blue Flag to accomplish a CINC's joint training objectives is yet another area with tremendous potential. Phased simulations, keeping key players in their respective roles, more closely approximates the real execution of a campaign plan. With other innovations like the distributed wargaming system, we can and will do more to simulate and exercise joint procedures that will be in use should we go to war.

The future of airpower is optimistic for both airmen and other functional components. The new tools and training we are giving to JFACCs and their staffs will make airpower more capable and flexible. Shortcomings identified during and after the Gulf War are being addressed and initial results are very promising. As new systems and training programs mature we will see better and more responsive air operations to support a JFC's concept of operations.

With newly acquired capabilities, however, come responsibilities to act as an equal partner beside both land and maritime components as a supporting as well as supported component. This means seeking innovative ways to sequence and phase air operations to achieve theater objectives. It also means massing airpower to delay, disrupt, and destroy enemy combat forces before they close with ground and naval forces. And finally, it means being available to put steel on target when a JFC needs to add or shift weight to a main or supporting effort.

Future JFACCs will wield more control and provide better airpower capability to JFCs and other components of a joint force. In the past centrally planning the execution of limited air assets has been a difficulty, but enhanced training and enhanced command, control, and planning systems will help us realize the theater-wide benefits of flexible, responsive, and lethal airpower. JFQ