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The recent stability phases in Afghanistan and Iraq have highlighted some inefficiencies in carrier based operations due to the extensive movement and sustainment required to traverse great distances to reach areas of operations. Pending available facilities within established forward operating bases in distant areas of operations, detaching an element of the air wing may provide the Joint Force Commander with greater combat effectiveness while reducing supporting requirements. This paper cites the historical precedent of carrier air wing expeditionary detachments and interprets recent guidance advocating innovation in a resource constrained environment that may justify formally integrating this capability. It proposes potential increases in combat effectiveness and operational efficiencies gained by an expeditionary detachment in the context of time, space, and force which may validate the need for such an operating concept. Additionally, it offers mitigating solutions to identified constraints and counter-arguments. Lastly, it recommends a concept of operations to formalize standard operating procedures for future detachment efforts during Phase IV Stabilization and Phase V Enabling Civil Authority.

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BREAKING THE PARADIGM OF CARRIER BASED OPERATIONS: CARRIER AIR WING EXPEDITIONARY DETACHMENTS IN SUPPORT OF PHASE IV STABILIZATION AND PHASE V ENABLING CIVIL AUTHORITY

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.

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Abstract

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The recent stability phases in Afghanistan and Iraq have highlighted some inefficiencies in carrier based operations due to the extensive movement and sustainment required to traverse great distances to reach areas of operations. Pending available facilities within established forward operating bases in distant areas of operations, detaching an element of the air wing may provide the Joint Force Commander with greater combat effectiveness while reducing supporting requirements. This paper cites the historical precedent of carrier air wing expeditionary detachments and interprets recent guidance advocating innovation in a resource constrained environment that may justify formally integrating this capability. It proposes potential increases in combat effectiveness and operational efficiencies gained by an expeditionary detachment in the context of time, space, and force which may validate the need for such an operating concept. Additionally, it offers mitigating solutions to identified constraints and counter-arguments. Lastly, it recommends a concept of operations to formalize standard operating procedures for future detachment efforts during Phase IV Stabilization and Phase V Enabling Civil Authority.

Introduction. On 17 September 2005 a detachment of 13 officers and 49 enlisted personnel from Electronic Attack Squadron ONE FOUR ONE (VAQ-141) departed USS *Theodore Roosevelt* (CVN 71) while the ship anchored for a port visit to Palma De Mallorca, Spain. Their destination was Al Asad Air Base in central Iraq, just west of Bagdad, where they would conduct operations in support of ground forces during a three-week detachment awaiting the aircraft carrier's arrival into the Arabian Gulf.[1] With this initial detachment, Carrier Strike Group (CSG) TWO launched the first carrier based aircraft to support the Joint Force Commander (JFC) in an expeditionary role forward deployed to a shore based airfield during Operation IRAQI FREEDOM (OIF). The Shadowhawks of VAQ-141 went on to fly more than 500 flight hours and over 100 combat sorties.[2] What began as a temporary fill for gapped Navy EA-6B Prowler electronic attack missions became a permanent detachment providing the Joint Force Air Component Commander (JFACC) with crucial air assets for the remainder of CSG2's deployment. Over the next six months VAQ-141 would continuously operate two aircraft forward deployed in Iraq and one aircraft from *Roosevelt*. During a brief port call in the United Arab Emirates, a detachment of FA-18C Hornets from Strike Fighter Squadron ONE FIVE (VFA-15) would join in the expeditionary operations. Meanwhile, the remainder of Carrier Air Wing (CVW) EIGHT continued to conduct carrier based operations in support of OIF from October 2005 until *Roosevelt* departed the Gulf in February 2006.

Given the success of this expeditionary detachment, developing such a core capability within a carrier air wing may be beneficial to a JFC in future operations. The flexibility and maneuverability of an aircraft carrier enables many missions to be best accomplished by ship-based aircraft. However, the increased availability and proximity of an expeditionary force operating from a safe airfield in direct support of ground forces may validate creating

doctrine to enable a detachment capability. Operating from an aircraft carrier has inherent inefficiencies and limitations. In distant environments these inefficiencies and limitations may demand that the U.S. Navy investigate advantages and disadvantages of detached operations. Regardless of the forcing function, a carrier air wing may provide the JFC greater combat effectiveness and efficiency in the operational factors of time, space, and force.[3] This is especially evident while providing force protection support of the Joint Force Land and Special Operations Component Commanders (JFLCC/JFSOCC) in missions over distant, non-coastal/non-littoral environments during Phases IV (Stabilization) and V (Enabling Civil Authority) of an operation.[4] To maximize the JFC's combat capability, the Navy should evaluate an expeditionary detachment concept for operating areas beyond the combat radius of a carrier launched strike when forward operating bases are available.

Historical Precedents. The operational use of an expeditionary detachment is not a new concept for carrier based aircraft. As far back as World War II, the Navy recognized the value of such an operation. Following torpedo damage to USS *Saratoga* (CV 3) on 31 August 1942, Admiral Nimitz sent a message to Admiral King on 2 September:

> All aircraft that can be spared from *Enterprise* and *Saratoga* being transferred ComSoPac for use present campaign. . . employment carrier aircraft and pilots shore bases necessary because of lack of suitable Army type planes for Guadalcanal fighting. . .[5]

From September to November 1942, Scouting Squadron THREE, Fighting Squadron FIVE, and Torpedo Squadron EIGHT detached from *Saratoga* to Henderson Field on Guadalcanal. There they flew combat sorties supporting Marines and Soldiers fighting ashore against the Japanese. Scouting Squadron SEVEN ONE from USS *Wasp* (CV 7) and Air Group TEN from USS *Enterprise* (CV 6) joined the expeditionary operations at various times during the Battle of Guadalcanal.[6] The combined complement of carrier aircraft based ashore operating

alongside U.S. Army Air Corps, Marine Corps, and New Zealand Air Force assets became commonly known as the Cactus Air Force. This detachment was born out of necessity due to an inoperable carrier and a desperate need for tactical air support, but the precedent for expeditionary operations by carrier based aircraft was established. Additionally, this detachment inadvertently allowed the threatened carriers to maneuver outside the operational range of enemy aircraft, preserving the Navy's fleet with the exception of *Wasp* which was sunk by a Japanese submarine while attempting resupply efforts on 15 September 1942.[7]

The Navy conducted few expeditionary detachments throughout the remainder of the 20th century. During NATO operations in the Balkans in the mid 1990s, Navy EA-6B Prowlers flew Suppression of Enemy Air Defense sorties from the Aviano, Italy air base into Bosnia and Kosovo; but these were either land based aircraft permanently assigned to expeditionary units or temporary detachments of carrier air wing aircraft only operating while their ships were in port.[8] However, in 1997, aircraft from the USS *John F. Kennedy* (CV 67) landed at King Faisal Air Base, Jordan to participate in an exercise called Infinite Acclaim. With 10 aircraft and 125 personnel, the Navy conducted its first detachment to an overseas land base with a full cadre of required maintenance and support equipment.[9] Rear Admiral Robert Williamson, commander of the *Kennedy* Battle Group, acknowledged that though expeditionary detachments were not a "core competency" of carrier aviation, the exercise "demonstrated our flexibility and capability. . . that we could do this."[10] The exercise proved that the Navy could provide the wide range of capabilities historically associated with the expeditionary operations of the Marine Corps and Air Force.[11]

A few visionary leaders have continued this trend. In addition to CVW8 previously mentioned, CVW1 recognized the value and flexibility in an expeditionary detachment a year

later, accepting tasking from two different JFCs in September-October 2006. Meeting commitments in both OIF and Operation ENDURING FREEDOM (OEF), the air wing launched a select complement of aircraft, aircrew, and maintenance personnel off USS *Enterprise* (CVN 65) to establish expeditionary operations once again alongside Marine Corps facilities at Al Asad Air Base. With OIF commitments to the JFC covered, *Enterprise* transited the Straits of Hormuz to conduct operations in the Gulf of Oman supporting the multinational forces in Afghanistan with its remaining air assets.[12] This bold decision enabled the air wing to meet the demands of two disparate JFCs, simultaneously launching aircraft to conduct maritime missions while providing operational protection, surveillance, and reconnaissance to ground forces in two distinct locations. A willingness to detach an expeditionary force demonstrated the effectiveness and efficiency of one aircraft carrier and its single air wing to cover separate Joint Operating Areas.

Guidance of Contemporary Leadership. While current naval leadership has not specifically called for such an expeditionary concept within a carrier air wing, the Chief of Naval Operations (CNO) has alluded to the need for increased operational effectiveness through flexibility, adaptability, and interoperability while still maximizing efficiencies in sustainment. In drafting a cooperative strategy between the Navy and Marine Corps, CNO has indicated the need for innovative, unconventional approaches to improving operational performance. Specifically highlighting *Power Projection* and *Humanitarian Aid and Disaster Relief* missions, the cooperative strategy emphasizes expeditionary advantages from the freedom of maneuver provided to the JFC. To facilitate expeditionary forces, the strategy calls for a robust sealift capability that can project integrated forces ashore and sustain them throughout extended operations. To meet the unique demands of various JFCs, CNO

expounds on an integrated approach to developing mission-tailored force packages and vetting and testing innovative strategies through experimentation and analysis. The document calls for an understanding of the potential benefits of dispersed operations and the various responsibilities of the on-scene commander to ensure forces and actions are in accordance with the commander's intent.[13]

The CNO's guidance further stresses the importance of integrated Navy operations with the Marine Corps as well as Joint Forces and Coalition Partners in an expeditionary manner. Specifying the operational level of war and future security environments, tasking outlines the need to codify integrated operations and determine interoperability between CSGs and Expeditionary Strike Groups (ESG). Additionally, the guidance addresses concerns of maintenance redlines, increased operating tempo, and effective and efficient utilization of resources. Further highlights include the need to identify inefficiencies and maximize the use of people, time, and money as well as assessing the return on investment from initiatives. Ultimately the CNO tasks the revalidation of Concepts of Operations for fires in support of the ESG and Expeditionary Strike Force to include refining experimentation programs to test these concepts and identify mitigating options.[14]

Admiral Roughead further expounded on this guidance while specifically stressing energy as a strategic resource and recommending conservation:

> (We) must continue to stimulate innovation. . . emphasizing renewed focus on concepts at the operational level of war. . . we must. . . meet demand without placing unmanageable stress on our force. . . we must manage initiatives to guarantee the appropriate balance of efficiency and risk. . . (and) maximize our effectiveness and return on investment.[15]

The CNO's persistent emphasis on abilities resident in expeditionary forces and new ways of efficiently employing joint forces underscores the viability of an expeditionary

detachment of carrier based aircraft as an operational concept. Additionally, establishing this detachment capability can address many of the tasks that the CNO presents from an operational perspective. Phase IV and V scenarios are especially germane after the JFC has already established dominance over the area of operations and has developed the necessary infrastructure to support such a detachment. The potential for improving force protection and intelligence, surveillance, and reconnaissance (ISR) missions, so commonplace in stability operations, meets the guidance to develop and experiment with innovative strategies that can reduce inefficiencies. Consider the requirements to ensure sustainment for the JFC's forces in order to maintain combat capabilities; efficiencies in consumption and resourcing have a direct impact on the availability of those forces. Specifically with regard to air power, consumption of flight time (reducing the fatigue life of the force), fuel, and resources required to provide such fuel are critical requirements and potential vulnerabilities. The sustainment cost alone associated with fuel requirements is a crucial limitation if it is not readily available via the movement of airborne tankers or fuel trucks. Therefore these efficiencies are just as pertinent to the JFC as improvements in combat effectiveness.

U.S. Joint Forces Command (JFCOM) does provide some warnings with regard to future expeditionary operations. The 2008 Joint Operating Environment specifically identified challenges and implications for future joint operations based on lessons learned from Afghanistan and Iraq. Focusing on the tyranny of distance, the document raises the problems associated with moving forces and maintaining logistics supply lines to provide fuel, munitions, spare parts, and sustenance. Exacerbating these difficulties is the simple reality that a future war may not allow uncontested access to forward operating bases in the immediate area of operations. Highlighting the availability and sophistication of advanced

technology and weapons, an adversary may prevent the projection of an expeditionary detachment into the theater or at least disrupt the logistics flow. On the other hand, this forecasted increase in the threat of an adversary's precise, long-range weapons systems may prevent an aircraft carrier's presence in exposed positions, thus forcing an air wing to conduct detached operations ashore.[16]

JFCOM raises concerns both for and against expeditionary detachments. In terms of logistics, operating from an internally sustained aircraft carrier may prove to be more effective/efficient than transporting sustainment resources to an austere base. Additionally, an adversary's proximity and access to basing inside the battlespace may increase the likelihood of internal threats; the increased operational protection required would not be necessary if operating at sea from the safe haven of an aircraft carrier. However, future land based threats to the aircraft carrier may mandate tremendous stand-off distances to the carrier operating areas (CVOA); deck launched operations may be so far from shore that their inherent inefficiencies become unsustainable or altogether irrelevant. These legitimate issues must be analyzed to determine the validity and vitality of a proposed expeditionary air wing detachment.

Analysis of Operational Factors. The aircraft carrier's niche lies in its ability to maneuver just outside the littorals where the combat radius of its tactical aircraft can project power into a coastal territory. Here an air wing can provide the operational functions of command and control, intelligence, fires, movement and maneuver, sustainment, and protection.[17] Unfortunately, the aircraft carrier is restrained by sea control and available maneuver space while air wing operations are constrained by limited launch and recovery periods and the requirement for significant aircraft fuel reserves due to the difficulty in

landing aboard a tiny, pitching deck. As a result, its arsenal faces more challenges in conducting deep penetration missions into land-locked territories than forward based counterparts. The recent operations in Afghanistan and Iraq highlighted these factors of space and time. Carrier based aircraft were traversing hundreds of miles beyond their combat radius, completely dependent on in-flight refueling resources, to reach targets and provide air support to ground units. As a result, the time-space factors impacted available force as well.

During Phases II (Seizing the Initiative) and III (Dominance) of an operation, the aircraft carrier provides an exceptional launch platform due to its relative security in the vast commons of the sea and its inherent sovereignty as mobile U.S. territory.[18] However, once operational reach over a land mass has enabled establishment of forward operating bases (FOB) at the completion of the dominance phase, elements of a carrier air wing may be better utilized in distant, overland environments by operating an expeditionary detachment ashore during subsequent stability operations to enable civil authority. To determine the potential benefits to a JFC, thorough analysis must be conducted in the context of time-space-force.

The time-space factor for carrier based air power operating over distant land areas is analyzed simply with regard to efficiency. One can compare the time flying an operational mission to the time flying administrative movement. OIF and OEF provide clear case studies. Presently, CVWs are optimized to operate at ranges between 200 to 450 nautical miles (nm) from their carriers, but during OEF naval aircraft launched from the Arabian Sea and typically flew 750 nm up to 900 nm to reach their target areas in Afghanistan.[19] OIF presented similar though slightly shorter distances when the Joint Force Air Component Commander's (JFACC) Air Tasking Order assigned operating areas in Northern Iraq

(Baghdad, Tikrit, Mosul, etc.).[20] During stability operations, ground units submitted Air Support Requests (ASR) for precise air cover during particular missions or generic availability of strike and/or ISR capable aircraft to protect movement of forces. A standard OIF sortie launched from the carrier to fulfill two ASRs. The ASRs specified both operating areas designated by alpha-numeric grids and periods of coverage commonly known as VULs in reference to the vulnerability windows. These periods were typically one hour per request. ASRs were consolidated by the JFLCC and JFSOCC then were submitted to the JFACC. The JFACC prioritized ASR requirements and coordinated individual air assets through the Air Tasking Order (ATO) which scheduled various air units.

To meet their assigned obligations, carrier based aircraft would launch, rendezvous, transit from sea to shore, conduct in-flight refueling, transit to cover a vulnerability window (VUL) in an assigned operating area supporting ground forces, in-flight refuel again, transit to an assigned operating area for a second VUL, in-flight refuel a third time, return to the aircraft carrier with an excess reserve of fuel to account for unique carrier recovery procedures, and eventually make an arrested landing. The extensive distances from the aircraft carrier into Afghanistan and Iraq equated to approximately two hours of movement (launch, transit, in-flight refueling, recovery) for every one hour on-station providing force protection or intelligence (ISR) coverage during a tasked VUL.[21] On the other hand, expeditionary aircraft based at FOBs such as Al Asad in Iraq or Bagram in Afghanistan flying similar missions would launch, proceed directly to their operating area/VUL, in-flight refuel, return to an operating area/VUL, then return to base; these flights equated to approximately one hour of movement for every two hours of VUL coverage.[22]

Analysis of these simple flight time ratios (administrative movement to operational mission) is telling when comparing carrier based aircraft (2:1) to FOB based aircraft (1:2). Assume the JFACC requires carrier air wing assets to supplement FOB based aircraft to meet all of the Air Support Requests from the JFLCC and JFSOCC as was evident in OEF and OIF. Additionally, assume each sortie is tasked with two vulnerability windows of one hour each, the standard ATO assignment during those stability operations. The efficiency of the air assets based within the area of operations provides the JFC with an increased availability of air power by a factor of four. Following the same flight plan, an expeditionary detachment of carrier aircraft would increase the contribution of air wing assets to the operational factor of force by a quantifiable metric. Additionally, capitalizing on the potential efficiencies noted above, an expeditionary detachment will fly fewer hours while still achieving the same JFC directed missions. This reduction in flight time has the added benefit of delaying scheduled maintenance inductions and therefore further contributes to force availability.

This efficiency potentially reduces the JFC's burden of sustainment with less fuel consumption and fewer airborne tanker requirements. The excess flight time associated with carrier based operations drastically increases logistics costs. Contemporary carrier aircraft loaded with combat weapons burn approximately 5,000 to 7,000 pounds of fuel per hour during non-tactical movement.[23] Over time, this additional consumption accumulates to a tremendous drain on energy resources. In OEF and OIF, carrier based aircraft required two additional refueling sessions due to the transit to and from the aircraft carrier as compared to forward based aircraft. An expeditionary detachment launching from a forward operating base would directly eliminate this requirement. The JFC could drastically cut tanker requirements in half, based on the scenario proposed in this analysis.

The time-space factor impacts the effectiveness of operations as well. The most critical need for air protection during stability operations occurs during unforeseen contact with enemy forces. Providing the JFACC with the ability to schedule and man alert aircraft for rapid response is a vital benefit of FOBs within the battlespace. While carrier aircraft historically stood Alert 7s and 15s (the expectation to launch within seven or fifteen minutes respectively) to intercept potential airborne threats to the carrier battle group, the exterior lines of operations requiring transit of an hour or more to the operating area negates any value in setting an alert. Expeditionary air assets with interior lines of operations can legitimately respond to time sensitive targets or troops in contact with enemy forces, launching from an alert status within the limited periods of time dictated by the realities of combative interactions that occur in minutes rather than hours.

Lastly, the time-space factor affects current air wing operations adversely in terms of its primary obligation to support the Joint Force Maritime Component Commander (JFMCC). Under a Joint Task Force in Phase IV/V, maritime air forces are frequently apportioned to the JFACC to augment his assigned forces conducting air support. Meanwhile, the JFMCC is still required to focus on the maritime area of operations. As such, the JFMCC must commit a certain portion of air assets to maritime related missions. Again, OEF and OIF illustrate limitations imposed on the CSGs based on time and space. In order to fulfill JFLCC and JSOCC air support commitments, aircraft carriers were forced to remain in limited spaces, designated Carrier Operating Areas, as close to the theater of operations as possible due to the extensive distances between the maritime commons and the locations of specific ASRs. Consequently, aircraft carrier maneuvers were constrained in littoral regions where they were within threat ranges of other potential adversaries. Add the

projected capabilities of advanced long-range surface to air missiles and anti-ship cruise missiles and a CSG may not be capable of surviving in future coastal environments.[24] This could entirely negate the CSG's contribution to Phase IV/V air support operations ashore without an expeditionary capability. While the aircraft carriers and aircraft supporting OEF and OIF stability operations were never directly threatened, these limitations potentially put these national assets in harm's way. Additionally, the aircraft carriers were unable to patrol the larger maritime AOR. By splitting air assets between forward deployed FOBs focused on air support and the aircraft carrier focused on maritime missions, a carrier regains the freedom of movement which makes such a versatile asset effective in maintaining the maritime commons while projecting power as necessary. An additional proposal argues the advantage of expeditionary capabilities in the option to offload tactical strike aircraft and temporarily leave the theater with non-combatant, logistic aircraft to intervene in crisis actions related to humanitarian aid/disaster response; this mission has become one of the six core capabilities prescribed to the Navy in the latest strategy.[25]

Ultimately, efficiencies gained by air wing expeditionary detachments in the factors of time and space equate to a more effective force. The greater availability of air assets to conduct fires, offer intelligence, and provide ground forces with protection is increased. Sustainment requirements are decreased. Though, with each obvious benefit, the JFC will have to consider many challenges in establishing detachment options for the carrier air wing.

Inherent Challenges and Obstacles to Expeditionary Detachments. Though the metrics associated with an expeditionary detachment's measures of effectiveness are simple to analyze, many would argue that the realities of the inherent challenges and obstacles to staging and conducting such operations make this concept more difficult than simply adding

up the benefits. First and foremost is the operational concept of an aircraft carrier. By design, the aircraft carrier and its carrier air wing are a symbiotic force. A 2006 study summarized this relationship: "An extensive network of repair and maintenance, command, control, communications, and intelligence capabilities supports this air wing and the battle group that surrounds the carrier."[26] In offloading a detachment of the air wing, an expeditionary force would abandon these critical components. Presumably, these logistics would have to be provided elsewhere by the JFC. A contemporary analysis of the advantages of aircraft carriers over land based operations noted the outrageous costs to establish a FOB during wartime:

> Manas Airbase in Kyrgyzstan is a prime example. . . the costs have skyrocketed, tripling to more than $60 million, which does not include $66 million for capital improvements to the airfield.[27]

A startup effort would be cost-prohibitive and would negate any efficiencies gained by the expeditionary detachment. Conversely, if a FOB is already in existence operating aircraft with similar supporting structures, these vital logistics are already in place. A carrier air wing detachment to a Marine FOB operating Hornets and Prowlers as was conducted in OIF or a future Air Force FOB operating the Joint Strike Fighter would merely be occupying additional space on the flight line, in the maintenance hangars, and in the berthing facilities. This effort epitomizes CNO's guidance towards integration and interoperability.

Another argument is the limitation of carrier requirements in terms of currency for pilots. Flexible scheduling to ensure detached crews are cycled back to the aircraft carrier to stay current easily mitigates these restrictive concerns. The JFACC presently accounts for this scheduling in daily ATO sorties. A simple solution would be to provide return options every few days rather than after every sortie. The aircraft are likewise bound to hourly,

daily, and weekly currency limits in terms of maintenance sustainment. While conducting phased maintenance efforts at the FOBs would be possible given that the host services conduct their maintenance on location, a carrier air wing could avoid this extraneous endeavor by cycling its aircraft in conjunction with the aircrew - another simple solution. While phased maintenance would most likely be conducted aboard the aircraft carrier, a minimum detachment of maintenance support personnel and equipment would still be required to manage such an expeditionary air force. This is not new to the CSG since maintenance detachments are regularly established ashore at primary divert locations in the event of an airborne emergency, minimum fuel thresholds, or an unrecoverable configuration due to excess gross weights or asymmetric imbalances. In addition to the Prowler detachment at Al Asad Air Base highlighted in the introduction, CVW8 detached an air wing maintenance team to Kuwait to handle diverting aircraft. Merely duplicating this maintenance force at the associated FOBs would suffice in future expeditionary detachments. Movement of this unit could be conducted organically by the air wing's Carrier Onboard Delivery aircraft, coordinated through the JFACC.

Arguably the most dramatic impediment to an expeditionary detachment is the command and control element. Under a JTF, a CSG apportions a coordinated number of air wing sorties to the JFACC. While the Combined Air Operations Center (CAOC) schedules the operations of these sorties, the aircraft and their aircrew remain attached to their respective naval chain of command (COC). Therefore, all air wing assets are still expected to report to their squadron commanding officers, the air wing commander, and the strike group commander. Operations originating from and returning to the aircraft carrier are relatively easy to manage. Detaching an expeditionary force may create impediments to

communications within the COC. Computer networks and satellite phones can mitigate some of the communications challenges, but there are no guarantees of such connectivity from an austere FOB. Therefore, communications coordination must be planned if pursuing an expeditionary detachment. One potential resource could be the air wing's liaison officer stationed at the CAOC who can coordinate between the CSG, the Naval Air Liaison Element (NALE) permanently based with the JFACC, and the respective officer-in-charge (OIC) of the detachment.[28] While a lack of direct communications within the COC may be a significant challenge, a comprehensive C2 plan incorporated into standardized operating procedures for expeditionary detachments can mitigate these obstacles.

Conclusions and Recommendations. Recently, carrier air wings have been reluctant to detach expeditionary aircraft during actual operations. Many speculate this reluctance is due in part to the Navy's fear of losing budgetary support for aircraft carriers under competing pressure from other armed services.[29] The future relevance of these extremely expensive capital ships has been heavily debated by supporters and detractors discussing Department Of Defense budget alternatives. As a result, the Navy may feel a need to justify the existence of its aircraft carriers through continuous flights in support of JFCs rather than consider expeditionary detachments. Certainly the aircraft carrier is a phenomenal tool of national power; its incredible range, speed, flexibility, mobility, spontaneity, and organic self-sustaining capability all justify existence in addition to its intimidating effect of deterrence. The often cited *four and a half acres of sovereign U.S. steel* with the ability to project air power anytime, anyplace has become the rallying cry of carrier advocates. Flying the vast majority of initial OEF missions because of a lack of suitable land-based operating locations, the carrier proved it is an indispensible national asset with unique capabilities

unmatched by land based aircraft.[30] Unfortunately, debate over the strategic and operational worth of the aircraft carrier is beyond the scope of this paper. Yet the perceived adverse political consequences of detaching a portion of the air wing may be stifling the potential expansion of capabilities in terms of range and persistence. By limiting an air wing's support, the Navy may be hampering the JFC's overall effectiveness and efficiency in maximizing management of the operational force with a greater availability of air assets.

The House Armed Services Committee as well as the Secretary of Defense have addressed the need for military services to improve cost effectiveness and energy efficiency given the constrained resource environment the U.S. government faces in the foreseeable future.[31] Lessons learned from Phase IV/V operations in OEF and OIF illustrate the inefficiencies of carrier based aircraft operating deep inland. By establishing an expeditionary detachment core capability, an air wing drastically improves efficiency, and more importantly to the supported ground forces, improves effectiveness. This win-win scenario would inevitably face initial obstacles. These impediments could be resolved with some flexibility and innovation. A recent Carrier Air Wing Commander summed up the benefits of such an expeditionary force succinctly: "I did not send my squadrons. I think we should for the current war. Makes total sense based on time-on-station and fuel required."[32]

There is little published documentation advancing the expeditionary capability of an air wing detachment. However, numerous sources cite limitations of carrier operations due to a lack of range (independent reach) and persistence (ability to loiter over the target area) in supporting ground forces.[33] This operational shortcoming can defend the need and promote the benefits of an expeditionary option. To ensure the success of such an evolution, a formal concept of operations should be drafted to standardize critical requirements, sustainment

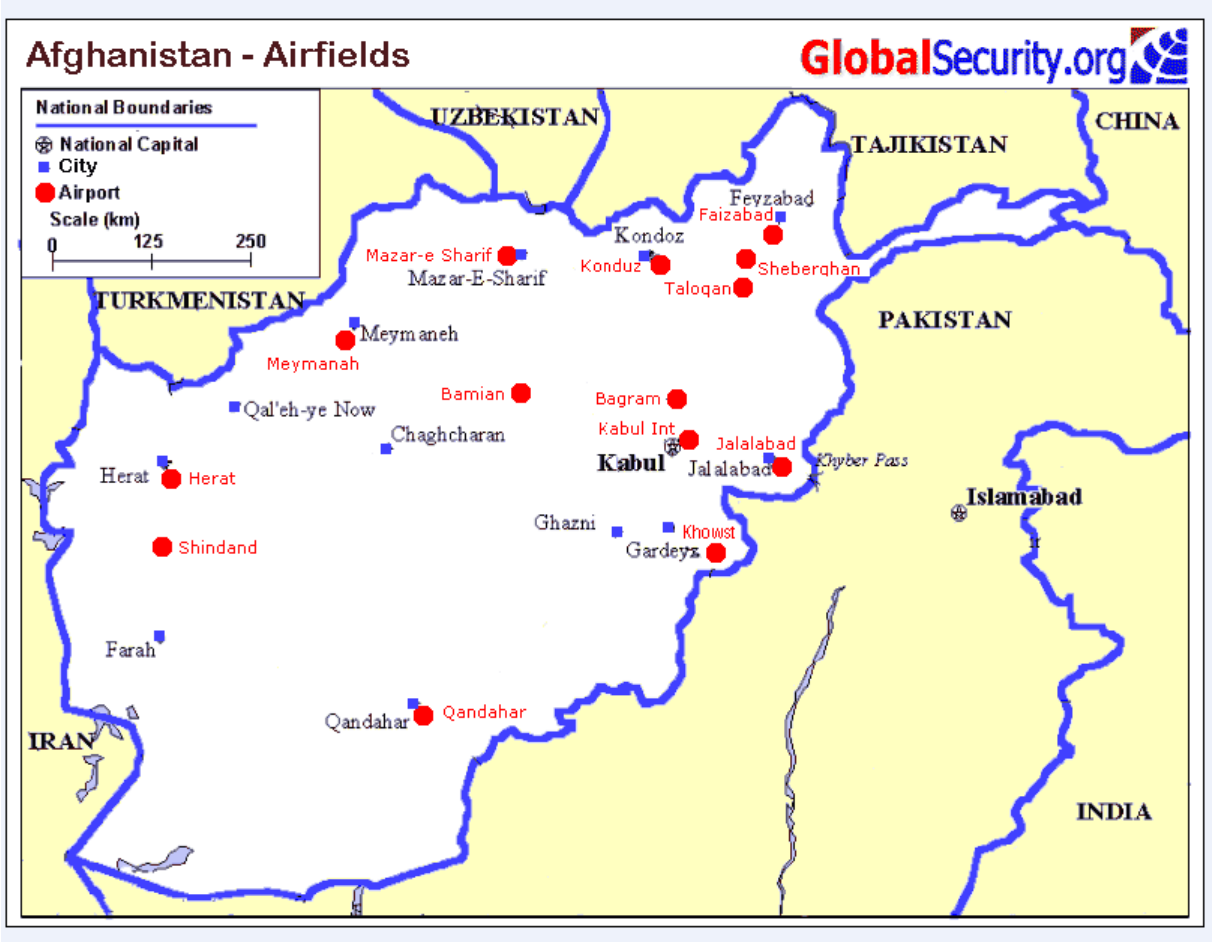
logistics, supporting manpower, and rotational timelines to ensure aircraft and pilots maintain currency. This doctrine would establish standard operating procedures so each CSG arriving in theater could coordinate operations quickly with the JFC, JFACC, and hosting FOBs.[34] VAQ-141 Command Master Chief (AW/SW) Mark Curley summarized the need for doctrine following their OIF expeditionary detachment:

> Being the first Navy Prowler squadron to set up a permanent operational presence in Al Asad presented challenges that were unforeseen. . . We had to. . . build a presence there completely from scratch. . . With all that we have learned--from the combat operations. . . to the logistics involved with working, operating, and living in an expeditionary combat environment--we have built a set of standard operating procedures for any Navy VAQ squadron that deploys into Al Asad after we leave.[35]

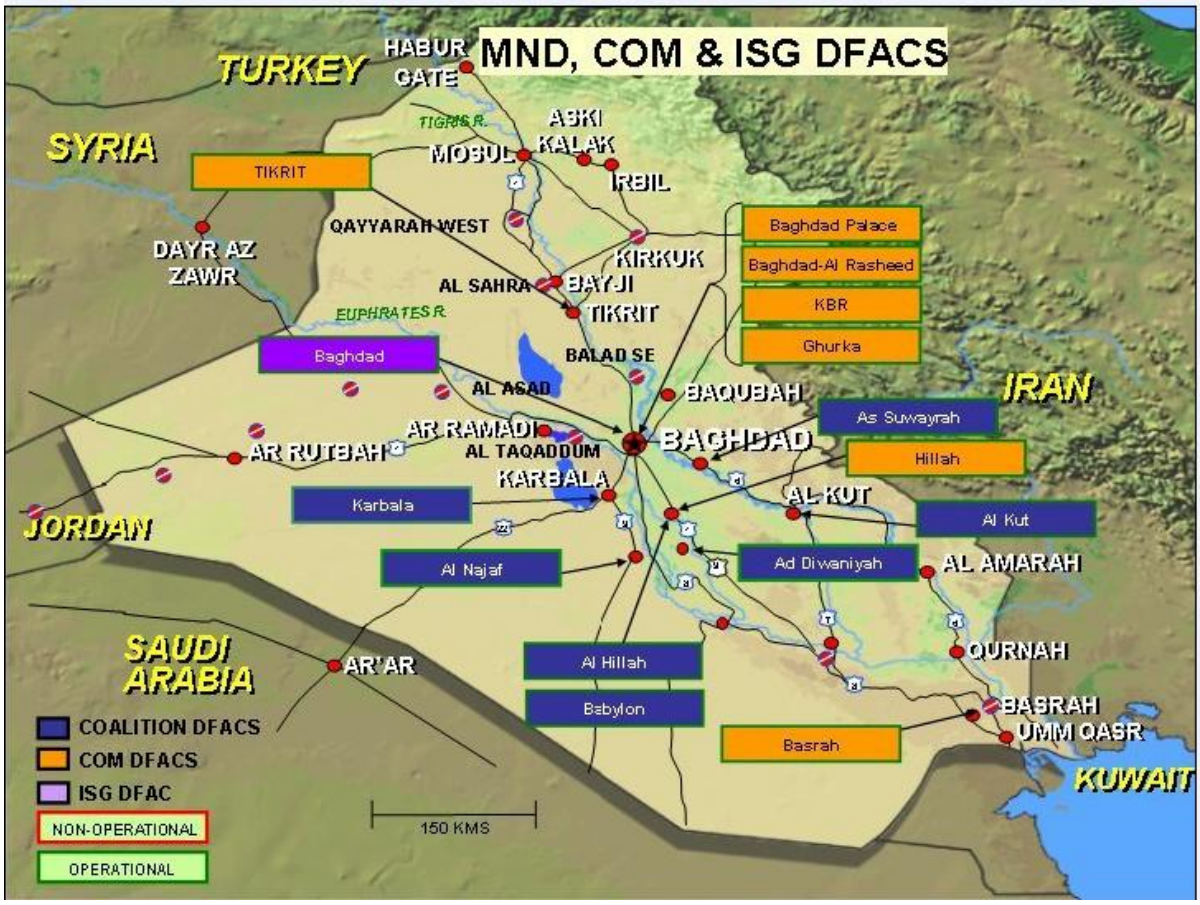
A similar, universal concept of operations would provide doctrine for all future carrier air wing expeditionary detachments to follow.

Final Remarks. Developing an expeditionary detachment option as an additional core capability of the carrier air wing may substantially benefit a Joint Force Commander in future Phase IV (Stabilization) and Phase V (Enabling Civil Authority) operations. This concept can potentially increase the availability and proximity of carrier based aircraft by staging from a previously established forward operating base to support ground forces. In doing so, the air wing may provide the JFC greater combat effectiveness and efficiency in the operational factors of time, space, and force. The inefficiencies and limitations of operating from an aircraft carrier in certain distant environments should inspire the U.S. Navy to investigate the advantages and disadvantages of such an operation. Analysis of an expeditionary detachment concept for areas of operations beyond the combat radius of a carrier launched strike may validate an effort to establish doctrine enabling a detachment capability in order to maximize the JFC's combat capability.

Afghanistan Reference Maps[36]



Iraq Reference Map[37]



Notes

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