The AirSea Battle concept is gaining traction and momentum both within the hallowed halls of the Pentagon and across the United States Air Force and Navy. As high-level decision makers armed with advancing technology and new tactics, techniques, and procedures grapple with budgetary constraints, the Departments of the Navy and Air Force must integrate to guarantee freedom of movement for not only military forces, but also maritime trade servicing the world’s economy. This paper will explore how AirSea Battle is an adaptive application of naval and air forces designed to counter Anti-Access/Area-Denial. Specifically, the Command and Control of this joint concept should incorporate the Composite Warfare Commander structure currently used by the United States Navy. By applying the Composite Warfare Commander concept to the Joint Task Force command structure, we will better accomplish the objectives of AirSea Battle.
WHO’S ON FIRST?
COMMAND AND CONTROL IN AIRSEA BATTLE

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.

Signature: //signed//

04 MAY 2012
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Paper Abstract

The AirSea Battle concept is gaining traction and momentum both within the hallowed halls of the Pentagon and across the United States Air Force and Navy. As high-level decision makers armed with advancing technology and new tactics, techniques, and procedures (TTPs) grapple with budgetary constraints, the Departments of the Navy and Air Force must integrate to guarantee freedom of movement for not only military forces, but also maritime trade servicing the world’s economy. This paper will explore how AirSea Battle is an adaptive application of naval and air forces designed to counter Anti-Access/Area-Denial (A2/AD). Specifically, the Command and Control (C2) of this joint concept should incorporate the Composite Warfare Commander (CWC) structure currently used by the United States Navy. By applying the CWC concept to the Joint Task Force command structure, we will better accomplish the objectives of AirSea Battle.
INTRODUCTION

“America’s greatness is not assured – each generation’s place in history is a question unanswered.”1 - President Barack Obama

Much like the President’s challenge to the American people, we too, in the military have an obligation to guarantee the United States of America continues to stand as a beacon for the world populations to look to as a positive example. In the 2010 Department of Defense (DoD) Quadrennial Defense Review (QDR) report, the Secretary of Defense calls for his forces to “develop a joint air-sea battle concept.”2 This concept addresses integration “across all operational domains – air, sea, land, space, and cyberspace – to counter growing challenges to U.S. freedom of action.”3 Facing a foreign deficit of $14.71 trillion, meager economic growth, and bipartisan stagnation, the DoD must not only be judicious with its spending on technology, but it must also must discover new methods to make more with the same forces (or possibly more with less available forces).4

Technological breakthroughs involving both offensive and defensive systems will partially answer the advanced threats of a near-peer nation such as the People’s Republic of China (PRC). We must also consider the largely asymmetric threats posed by considerably less developed nations (e.g. Iran and North Korea). The AirSea Battle concept is aimed at the full spectrum of A2/AD. Uniform throughout the spectrum is the need for a closely synched and cooperative C2 network for both application of force and the dissemination of information. The U.S. Navy currently uses the CWC framework to face threats above,

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3 Ibid.
below, and on the surface of the world’s oceans. The DoD uses a Joint Task Force (JTF) command structure delineating responsibility in the areas of Air, Land, and Maritime.

**Thesis:** This paper will explore how the CWC concept should be integrated into the current JTF command structure for application in AirSea Battle.
AIRSEA BATTLE: THE OBJECTIVE

“I anticipate the next century will see... [our] foes striving to target concentrations of troops and materiel ashore and attack our forces at sea and in the air. This is more than a sea-denial threat or a Navy problem. It is an area denial threat whose defeat or negation will become the single most crucial element in projecting and sustaining US military power where it is need.”

- Admiral Jay Johnson, Chief of Naval Operations

Unlike the majority of conflicts faced by the United States and her allies over the past century, AirSea Battle is not designed as “war-winning.” The objective is to restore a stable, conventional balance of military in a region by countering A2/AD. This reintroduction of stability would, once again, allow international freedom of movement and navigation and further deter coercion from the nation-state implementing A2/AD. AirSea Battle also covers a spectrum of operations comparable to any land-based conflict. On one end of the spectrum we must address the advanced, technological threat of a near-peer, like the PRC. On the other end, a less developed country, such as Iran, employing rudimentary technology and tactics.

Because the objective, more likely than not, will not involve soldiers or Marines holding a position on land with an American flag waving high above, the DoD must look back on history and reflect on the importance of freedom of navigation/movement from a strategic vantage point. From the Peloponnesian War to the Battle of Midway, Seapower is the lifeblood of the maritime nation. AirSea Battle will maintain, and restore if necessary, conventional military balance in a region. From “A Cooperative Strategy for 21st Century Seapower:"

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“Credible combat power will be continuously postured in the Western Pacific and the Arabian Gulf/Indian Ocean to protect our vital interests, assure our friends and allies of our continuing commitment to regional security, and deter and dissuade potential adversaries and peer competitors.”

Inherently, the United States prefers to use sanctuary and strike from a distance when involved in armed conflict. With A2/AD nullified, the DoD as a whole may proceed with a more traditional application of military power, should the need arise.

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OPERATIONAL FACTORS: FORCE, SPACE, AND FORCE-SPACE

“The factor of space must be controlled with the available forces to such a degree that the ultimate objectives of a campaign or major operation are accomplished.”

– Milan Vego

To further understand the challenges faced by the forces involved in AirSea Battle, we should consider the operational factors of Force, Space, and the relationship between the two.

Given the integrated nature of modern DoD employment, all services offer not only their broad mission set, but the niche as well. Though all military services will be utilized to varying extents, this paper focuses on the interaction between the Navy and Air Force.

Factor Force: Capabilities

To better understand how C2 in AirSea Battle will be executed, we must look to the sailors and airmen and the capabilities they will bring to the fight. First, we will examine a few of the relevant core functions of the Air Force.

Air Superiority, as the hallmark of our Air Force, provides “dominance in the air battle of one force over another which permits the conduct of operations… without prohibitive interference by the opposing force.” With expeditionary squadrons of fighter aircraft, the Air Force can quickly deploy to allied airfields and provide both offensive and defensive counter air operations.

Space Superiority is a mission set owned solely by the Air Force. This core function offers “dominance in space of one force over another… [providing] freedom of action in

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space for friendly forces and, when directed, denies the same freedom to the adversary.”

We use space satellites not only for navigation and smart weapon terminal guidance through the Global Position System (GPS), but also as intelligence gathering and communication platforms through Low Earth Orbit (LEO) Intelligence, Surveillance, and Reconnaissance (ISR), Space-based Infrared System (SBIRS)... and communication satellites.”

Another critical core function is Global Integrated ISR. With extremely capable platforms and highly skilled airmen, the Air Force not only collects information, but also processes the raw data and disseminates their intelligence products to appropriate operators and decision makers.

Global Precision Attack “is the ability to hold at risk or strike rapidly and persistently... any target and to create swift, decisive, and precise effects.” As Air Superiority is the bread and butter of the fighter community, Global Precision Attack is the bomber community’s wheelhouse.

And, the final critical core function of the Air Force pertaining to AirSea Battle (and particularly pertinent to this paper) is Command and Control. C2 is the “exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission.”

Relaying C2 through an Air Operations Center (AOC), Regional Air Defense Center (RADC), or an airborne E-3A Airborne Warning and Command System (AWACS) is a mission the Air Force has gone to great lengths to master.

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13 Ibid.
Mirroring the Air Force’s core functions, the Navy employs core capabilities. Among them is Forward Presence. Forward deployed maritime forces operate in a myriad of regions, gaining “familiarity with the environment, as well as the personalities and behavior patterns of regional actors… [contributing] to effective responses in the event of crisis.”

Deterrence is an extension of Forward Presence by demonstrating our resolve to potential adversaries and allies alike. The Navy utilizes Theater Security Operations (TSO) and maritime ballistic missile defense (BMD) “providing an umbrella of protection to forward-deployed forces and friends and allies, while contributing to the larger architecture planned for defense of the United States.” The goal is war prevention, deterring aggression across the globe, ranging from unconventional to nuclear means.

The ability to operate freely at sea is captured through Sea Control. A Cooperative Strategy for 21st Century Seapower (CS-21) calls for American maritime forces to have the ability to “impose local sea control wherever necessary,” thus allowing freedom of movement and maneuver, while preventing the disruption of the global supply chain.

When necessary, America delivers extreme violence upon her enemies, followed by a retrograde to safety. For the Navy, their sanctuary, or rear area, is the sea; the delivery method is dubbed Power Projection, “the basis of our combat credibility.”

The overarching requirement for the Navy to conduct Forward Presence, Deterrence, Sea Control, and Power Projection is properly manned, trained, and equipped ships, submarines, and aircraft.

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16 Ibid.
17 Ibid.
18 Ibid.
**Factor Space: The Environment**

As both General Ron Fogleman, former Chief of Staff of the Air Force, and Admiral Jay Johnson, former Chief of Naval Operations, agreed, “anti-access strategies aim to prevent US forces from operating from fixed land bases in a theater of operations, then area-denial operations aim to prevent the freedom of action of maritime forces operating in the theater.”

A2/AD is a threat to the *space* in which our Air Force and Navy have traditionally operated with impunity.

Because the AirSea Battle is a concept meant to cover the spectrum of A2/AD, we must be reluctant to formulate TTPs based on a specific region or crisis. Though threat nations may use A2/AD as a means of imposing their will through manipulation of terrain, Clausewitz warns us “never to depend completely on the strength of the terrain and consequently never to be enticed into passive defense by a strong terrain.”

A2/AD is not invulnerable, and the *terrain* (surrounding sea and air space, in this case) may be used with thoughtful insight and improved technology, to our advantage.

The space involving AirSea Battle encompasses:

1. Friendly airfields from which Air Forces will emanate;
2. Sea surface for vessels;
3. Subsurface for submarines and unmanned underwater vehicles (UUVs);
4. Air for aircraft and unmanned aerial vehicles (UAVs);
5. Coastal geography for possible employment of amphibious forces or control of enemy port infrastructure;

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6. Limited landlocked geographical positions holding critical integrated air defense system (IADS) nodes, ballistic/cruise missile launch locales, or space vehicle control stations;

7. Space for satellites and transitory ballistic missiles; and

8. Cyberspace

Factor Force-Space: Where the rubber meets the road

“The factors of space and force have become increasingly intertwined in the evolution of warfare.”21 Again, addressing the full spectrum of AirSea Battle, the DoD must be poised to counter A2/AD along the length of the Second Island Chain of the Western Pacific (thousands of miles) or the coastal borders of Iran or North Korea (hundreds of miles).

Each of the services has exclusive mission areas required to effectively counter A2/AD. For the Air Force, Space Superiority rises to the top. If space assets are properly denied, corrupted, or destroyed, AirSea Battle forces will face degraded (or lost) communications, accurate position keeping, and space-based intelligence. All three of these functions are critical for a commander to execute C2. Without question, the Air Force is the domain manager of outer space.

The Navy, on the other hand, has complete ownership of fighting the undersea battle. With friendly submarines, surface vessels, and aircraft, naval forces strive to find, fix, and identify all unknown subsurface contacts. An untracked enemy submarine in close proximity is the bane of any ship captain’s existence (and his crew for that matter!).

A majority of the other skill-sets are generally shared, providing a service overlap or redundancy. For instance, both surfaces strive to provide Air Superiority, Deterrence, ISR,

Global Strike, and, of course, Command and Control of assigned forces. Both services offer similar angles of approach to tackle these problems. The major difference in execution spanning these mission areas is from where the assets operate. The Air Force functions from fixed land bases and travels, often, great distances to arrive to the forward edge of the battle area (FEBA), sometimes launching from the continental United States. The Navy, conversely, will operate forward, launching aircraft and weapons much closer to the FEBA. Regardless of distance traveled, capabilities brought to the FEBA, nor loiter time over an area of interest, Air Force and Navy assets share the domain of the sea’s surface, the land-sea interface, and the air above both.
The Challenge: Command and Control

“… Same as you! Same as YOU! I throw the ball to Who. Whoever it is drops the ball and the guy runs to second. Who picks up the ball and throws it to What. What throws it to I Don’t Know. I Don’t Know throws it back to Tomorrow, triple play. Another guy gets up and hits a long fly ball to Because. Why? I don’t know! He’s on third and I don’t give a darn!”

- Bud Abbott to Lou Costello

As humorous as the timeless dialogue between Abbott and Costello regarding peculiarly named players positioned about a baseball field may be, the comparison to how a navy and air force, not all that familiar with one another, may prove to be uncanny. The congestion of forces and mission overlap of different services on and above the sea’s surface poses an interesting dilemma for the services to learn. Perhaps relearn would be a more appropriate word. Since the advent of aircraft serving in a military capacity, aviation has continually adapted to assist the battlefield commander. Close air support (CAS) of ground forces is a terrific example of how effective the Air Force came into existence and, to this day, capitalizes on their domain. In concert with support of land-based objectives, the Navy also uses aviation as an extension to their operational reach. The goal of AirSea Battle is to bring the myriad of DoD capabilities to the FEBA in order to counter A2/AD. We will adapt, but how?

“Potential problems in the joint employment of air and naval forces include differences in the services’ ways of warfare, doctrine and tactical procedures, command and control, logistical support and interoperability.”

After the Goldwater-Nichols Department of Defense Reorganization Act of 1986, the sister services were directed to create joint doctrine and capitalize from each others’ strengths. The revamped concept is not new,

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22 *Who’s on First?*, performed by Bud Abbott and Lou Costello, New York, c. 1944.
having been tested in Iraq twice, the Balkans, Afghanistan, and multiple smaller clashes. All of these conflicts have one main theme in common; the objective was land-based. In AirSea Battle, the objective is to restore a stable, conventional balance of military in a region by countering A2/AD. The objective, especially with a near-peer, will most likely not involve any ingress of ground forces. Therefore, the successes and learning opportunities of the past twenty years will most likely not apply to AirSea Battle. As we develop AirSea Battle, we must resist the temptation of fighting our next war the way we fought our last.

Joint Publication 3-33 addresses establishing the Joint Task Force Headquarters and guides the Joint Force Commander (JFC) to “aggressively” establish C2, both internal and external, prior to activating a JTF. The JFC’s discretion should encompass relationships based on “the nature of the mission and the objectives to be accomplished,” including a clear delineation of supported and supporting commanders relationships. An example of a typical JTF command structure is pictured below.

25 Ibid.
Under a typical JTF command organization, the key commanders in AirSea Battle are the Joint Force Air Component Commander (JFACC) and the Joint Force Maritime Component Commander (JFMCC). After full mission analysis during the planning stages of an operation, the JFC will delineate which will be the supported/supporting commanders and when/if those roles will reverse. For instance, the JFC may determine the Air Superiority must be obtained prior to entry of maritime forces into the Joint Operations Area (JOA); thus, the JFACC will be supported by the JFMCC. The Air Superiority issue seems simple enough, and Sea Control seems equally as obvious, but, to the naval commander, Sea Control
involves subsurface, surface, and air. Accordingly the Officer in Tactical Command (OTC) will use the Navy’s CWC command structure, as seen below.

![CWC Command Structure Diagram](Derived from NWP 3-56)

This CWC construct is most notably seen overlaid upon the command structure of a carrier strike group (CSG). For a CSG, the OTC will be the rear admiral commanding the CSG (CCSG). Very similar to the JTF command structure, the CCSG assigns domains in which subordinate commanders are responsible. Based on the perceived threat, the CCSG will issue his priorities of tasking. Typically, enemy submarines and strike capable aircraft are at the top of the list. With the advent of high-level technology, anti-ship cruise missiles and anti-ship ballistic missiles have risen in priority. Should a spontaneous threat become apparent to the CSG, units assigned to one warfare commander may be re-tasked to counter the more critical threat under another.

Here is an anecdotal example. Two strike-fighter aircraft positioned near the CSG as Defensive Counter Air would be under the tactical control of the Air Missile Defense Commander. The aircraft have just arrived on station and will not require fuel or landing for
over an hour. Two more aircraft are similarly tasked and positioned 50 miles away. The air picture is clear; no threats or unknown contacts in the vicinity. Meanwhile, the Surface Warfare Commander has a new contact of interest, and his only assigned airborne asset is an MH-60S helicopter operating 150 miles from the contact. Through a relatively easy prioritization and approval process, two of the strike-fighter aircraft may be lassoed to investigate the new surface contact of interest.

Surface combatants and submarines, alike, are often given new priority missions with little or no notice. Simply put, after decades of trial and error, the Navy has found that under the guidance of a sound commander the CWC command structure is an exceptional method for C2.

A single CSG conducting medium-level contingency operations is well within the ability of the commander and his assigned forces. However, amplifying the problem to an A2/AD constrained environment, considerably more forces will be required and the need for integration with Air Force will be paramount.
RECOMMENDATIONS

“The example I’ve used is if we are in a land war in Korea and Iran does something in the Strait of Hormuz – to go after [Iran] and to deal with [the] threat is largely going to be the responsibility of the Air Force and Navy.”—Secretary of Defense Leon Panetta, commenting on AirSea Battle

The preponderance of resources allocated to counter A2/AD will be forward deployed naval forces and air forces. A technologically advanced threat will be capable of denying our ability to effectively employ space and air positioned ISR assets, degrading our ability to communicate via voice or computer network, and conducting long-range strikes against friendly bases, airfields, and aircraft carriers. AirSea Battle will not only have to overcome these technological dangers, but also coordinate counter operations from multiple axes and several spatial/virtual domains. Furthermore, the most likely objective will not be a land-based geographic position, but rather the nebulous goal of freedom of movement for our forces and freedom of navigation for global shipping. Thus, AirSea Battle is intrinsically Navy-centric by design.

For decades, the Navy has developed and overhauled the CWC concept to deal exclusively with overlaying domains involving maritime operations. The traditional JTF command structure is inherently land-based because it matured under land conflicts with support from naval and air forces. To adequately counter A2/AD, we must look at the Joint Force fight through a maritime lens, addressing of the sea as the medium in which we will be fight. As Themosticles pontificated, “whosoever can hold the sea has command of everything.”

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While the CWC concept efficiently functions at the CSG level, AirSea Battle would likely involve multiple CSGs and multiple Air Expeditionary Wings (even against a developing threat nation like Iran). Overall command should rest squarely on the shoulders of a 3- or 4-star Navy admiral. Headquarters facilities should be based out of existing Air and Space Operations Centers positioned about the Earth and aboard one of our two amphibious command ships. The existing JTF structure should still stand but with subdivisions, identifying the domains under their purview. Further partitioning the JFACC into Air and Space and the JFMCC into Surface and Subsurface would improve understanding amongst the operators assigned beneath each component. In the event of a short-notice re-tasking from higher command, the asset lassoed to another mission will have a better understanding of what is expected, just by virtue of the component command to which he is reporting. An example of this hybrid JTF-CWC command structure may be better grasped by the following graphic:

Figure 3
A simple drawing coupled with publications on joint doctrine for AirSea Battle is an excellent start to our future combating A2/AD. The true application of doctrine will be in a controlled, training environment where the Navy and Air Force use the crawl-walk-run mentality to work through doctrinal differences practically and at a measured pace. As Admiral Stavridis wrote twenty years ago, “the real essence of integrating air and sea power is the conduct of efficient training.”

Counter Argument: The JTF Structure Will Work Just Fine

As stated, the JFC may build his command structure to address the “nature of the mission and the objectives to accomplished.” Joint Doctrine implies the component commanders are supported or supporting based on the primary mission. In some cases, a component commander may simply have a representative to liaise with the other component commanders should he not have any forces assigned to the JTF. Where one component may have minimal (or no) tasking, another may have an overwhelming force. The JTF command structure is designed to expand and contract as demand increases and decreases.

Some may argue that the current JTF structure is more than adequate to not only handle the A2/AD problem set, but also gives centralized command to a core cadre of leaders that understand the spectrum of the joint mission. Finally, component commanders may interpret the further partitioning of domains as a risk to their ability to adequately achieve their assigned objectives.

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**Rebuttal**

The JFACC and JFMCC have long been accustomed with giving orders with the expectation that the orders will be followed. At these high level commands, the *tactical general/admiral* is a perilous position to find oneself. Senior commanders across the services continue to delegate authority with confidence for they are well practiced at formulating and communicating mission objectives and their own commander’s intent. By subdividing the JFACC and JFMCC areas of responsibility, the whole force will better understand *Who’s on first, What’s on second, and I Don’t Know is on third*. Thus, the lines of effort and operations towards the common operational goal will, also, be better understood.
FINAL REMARKS

“War is merely the continuation of policy by other means.” - Carl von Clausewitz

The United States Armed Forces will continue to posture itself to meet any threat preventing the movement of our forces, coercing of our allies, or denying freedom of navigation to global shipping. Of course, peaceful methodology is our first goal through the strengthening of international relations, but we, as fighting force, must be able to restore balance through violence if required.

Regardless of warfighting technology, the sister services will face excruciating losses and in blood, treasure, and time if they do not train to the mission. *Train like you fight, fight like you train.* Too many times in military history have forces arrived to the battlespace and had to either reinvent the wheel or develop a new strategy while being fired upon by the enemy. Service doctrine is different by design and must continue to exist as such. AirSea Battle is not necessarily the future of the military, but it will definitely become a most desired mission set on which our national security will depend. By further dividing the JFMCC and JFACC areas of responsibility and familiarizing the Joint Force as a whole with the model, we will ensure that the capabilities that each service brings to the enemy will deliver maximum results in minimal time with minimal losses.
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<th>Abbreviation</th>
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<td>A2/AD</td>
<td>Anti-access/area-denial</td>
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<td>AOC</td>
<td>Air operations center</td>
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<td>ASUW</td>
<td>Anti-surface warfare</td>
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<td>ASW</td>
<td>Anti-submarine warfare</td>
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<td>AWACS</td>
<td>Airborne warning and command system</td>
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<td>BMD</td>
<td>Ballistic missile defense</td>
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<td>C2</td>
<td>Command and control</td>
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<td>CAS</td>
<td>Close air support</td>
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<tr>
<td>CS-21</td>
<td>A <em>Cooperative Strategy for 21st Century Seapower</em></td>
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<td>CSG</td>
<td>Carrier strike group</td>
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<td>CWC</td>
<td>Composite Warfare Commander</td>
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<td>DoD</td>
<td>Department of Defense</td>
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<td>FEBA</td>
<td>Forward edge of the battle area</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System</td>
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<tr>
<td>IADS</td>
<td>Integrated air defense system</td>
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<tr>
<td>ISR</td>
<td>Intelligence, surveillance, and reconnaissance</td>
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<td>JFACC</td>
<td>Joint force air component commander</td>
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<td>JFC</td>
<td>Joint force commander</td>
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<tr>
<td>JFMCC</td>
<td>Joint force maritime component commander</td>
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<tr>
<td>JTF</td>
<td>Joint Task Force</td>
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<tr>
<td>JOA</td>
<td>Joint operations area</td>
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<tr>
<td>LEO</td>
<td>Low Earth orbit</td>
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<tr>
<td>RADC</td>
<td>Regional air defense center</td>
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<tr>
<td>SBIRS</td>
<td>Space-based infrared system</td>
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<tr>
<td>SEAD</td>
<td>Suppression of enemy air defenses</td>
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<td>SLOC</td>
<td>Sea lines of communication</td>
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<td>TSO</td>
<td>Theater security operations</td>
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<tr>
<td>TTPs</td>
<td>Tactics, techniques, and procedures</td>
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<tr>
<td>UAV</td>
<td>Unmanned aerial vehicle</td>
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<tr>
<td>UUV</td>
<td>Unmanned undersea vehicle</td>
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<tr>
<td>WPTO</td>
<td>Western Pacific theater of operations</td>
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BIBLIOGRAPHY


