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Information Operations Primer



Fundamentals of Information Operations

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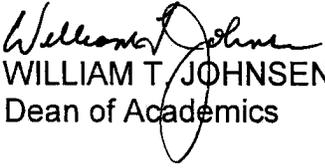
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Dean of Academics

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Forward

This document provides an overview of Department of Defense (DoD) Information Operations (IO) doctrine and organizations at the joint and individual service levels. It is intended to serve students and staff of the US Army War College as a ready reference for IO information extracted and summarized from a variety of sources. Wherever possible, Internet web sites have been given to provide access to additional and more up-to-date information. The booklet is intentionally UNCLASSIFIED so that the material can be easily referenced during course work, while engaged in exercises, and later in subsequent assignments.

This booklet begins with an overview of Information Operations and Strategic Communication. Current IO doctrine at the joint and service levels are then summarized. Relevant organizations dedicated to IO are identified along with their respective missions and capabilities. Finally, the document concludes with an overview of Information Operations Condition (INFOCON) and an IO specific glossary.

Readers will note that many of the concepts, documents, and organizations are “works in progress” as DoD and the services strive to address the challenges of a rapidly changing IO environment. Thus, this summarization effort is on-going and continuous. Please address any suggested additions, revisions and/or corrections to the primary point of contact below for inclusion in subsequent editions.

Special thanks and recognition is given to the Information in Warfare Group, USAWC Center for Strategic Leadership, and to the following individuals throughout the Department of Defense whose help and assistance have made this revision of the Primer possible: Ms. Chris Adams, (Joint Warfare Analysis Center); Mr. Michael Bee (67th Network Warfare Wing, USAF); COL Steve Campbell, USA (JPASE); COL Mike Carroll, USA (Joint Staff DDGO); Maj David Clapp, USMC, (Marine Corps Combat Development Command); Mr. Ric Coronado (JIOWC); Maj Steven Dennis, USAF (Air Force Information Operations Command); Mr. Brian Fredericks, (OUSD-Policy); Maj Margie L. Gabriel, USAF (Air Intelligence Agency); LCDR Charles A. Gramaglia, USN (OUSD-Intelligence); Capt Stephanie Helm, USN and CDR Layne Araki, USN (both of the Naval War College); MAJ Joel P. Humphries, USA (USSTRATCOM); Mr. Steve Iatrou (Naval Postgraduate School); LTC Greg Julian, USA (OSD- Public Affairs); Mr. Don Jones and Mr. Tom Lopez (both of OASD- NII); LtCol Brian Kennedy, USMC and Mr. Jerry Luss (both of JTF-GNO); Mr. William D. Malone, (Naval Information Operations Command-Norfolk); Col Robert Morris, USAF and Mr. Brian Gouker (both of NSA); CDR Ray Moses, USN (Joint Forces Staff College); Capt Blaine Noel, USAF (8th AF); Ms. Tara Shea, (Information Assurance Technology Analysis Center); Mr. Steven Shires (1st Information Operations Command); Col James E. Smith, USAF (Air War College); COL Jack Summe, USA and LTC Frederic Rohm, USA, (both of JPSE); Mr. Paul Tiberi and LTC Hugh Rogers, USA (Army Combined Arms Center); LtCol John A. Warden, USAF, Maj William Marshall, USAF and Maj Alberto Samonte, USAF (all of the Air Force Doctrine Center); Mr. James F. White (CSL-IWG), and Mr Robert Williams (JSC).

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Summary of Changes to the AY07 Edition

The following changes have been made in this edition of the IO Primer:

Additions

- Description of the Department of State's Under Secretary of State for Public Diplomacy and Public Affairs DOS (U.S. (PD/PA)).
- Description of USJFCOM Joint Public Affairs Support Element (JPASE) and the USSOCOM Joint PSYOP Support Element.
- Outlines of academic programs at Naval Postgraduate School and the Armed Forces Staff College that support Information Operations.
- The U.S. Army Information Operations Proponent (USAIOP), and U.S. Army Electronic Warfare Proponent (USAEWP), together with the School for the Advancement of Information Operations Studies (SAIOS) have been established at the Combined Arms Center, Fort Leavenworth KS.
- Describes the newly chartered DoD Strategic Communication Integration Group (SCIG).

Changes:

- The "Introduction" and "Strategic Communication" sections have been updated.
- The IO Roadmap section points to the redacted On-line version of the original document.
- Joint Vision 2020 has been modified to reflect its continued pertinence, six years after its publication.
- DoDD O-3600.01 replaces former, classified DoDD S-3600.1.
- DoD offices and agency sections have been updated where appropriate.
- The Army, Navy and Air Force serve doctrine sections have been updated (the previous Marine Corps section remains current).
- The USSTRATCOM and USSOCOM sections have been updated.
- U.S. Navy IO organization descriptions have been consolidated into a single entry.
- The Joint Information Operations Center (JIOC) is now the Joint Information Operations Warfare Command (JIOWC), and the Air Force Information Warfare Center is now the Air Force Information Operations Center.
- Description of the Air Intelligence Agency, 8th Air Force, and the Air Force Information Operations Center, and have been updated to reflect organizational changes.
- The INFOCON section has been updated (with assistance of JTF-GNO) and Glossary definitions have been updated to reflect the most current edition of JP 1-02, "The Dictionary of Military and Associated Terms" (amendments of 16 Oct 2006).

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TABLE OF CONTENTS

Forward	iii
Summary of Changes to the AY07 Edition	v
TABLE OF CONTENTS	vii
Introduction	1
Strategic Communication	9
Joint and Service Doctrine	15
Joint Vision 2020 and Information Superiority	17
Department of Defense Directive (DoDD) O-3600.01 Information Operations	19
The Information Operations (IO) Roadmap, 2003	23
Joint Information Operations Doctrine	27
Army Information Operations Doctrine	35
Marine Corps Information Operations Doctrine	47
Navy Information Operations Doctrine	53
Air Force Information Operations Doctrine	61
DoD and Joint Information Operations Organizations	71
Under Secretary Of Defense – Policy (USD(P))	73
Under Secretary Of Defense –Intelligence (USD(I))	75
Assistant Secretary Of Defense – Networks And Information Integration (ASD(NII))	77
Undersecretary for Public Diplomacy and Public Affairs, U.S. Department of State	79
DoD Strategic Communication Integration Group (SCIG)	81
Defense Information Systems Agency (DISA)	83
National Security Agency (NSA)	87
Joint Staff, Deputy Director of Global Operations (DDGO)	91
Joint Spectrum Center (JSC)	93
Joint Warfare Analysis Center (JWAC)	97

Information Assurance Technology Analysis Center (IATAC)	99
U. S. Strategic Command (USSTRATCOM).....	101
Joint Task Force – Global Network Operations (JTF - GNO)	105
Joint Information Operations Warfare Command (JIOWC)	109
U. S. Special Operations Command (USSOCOM)	111
Joint PSYOP Support Element (JPSE).....	115
Joint Public Affairs Support Element (JPASE).....	117
Joint Forces Staff College Information Operations Program	119
Information Operations Center of Excellence, Naval Postgraduate School.....	121
Service Component Information Operations Organizations.....	123
Army – 1st Information Operations Command (1st IO Cmd).....	125
Army- U.S. Army Information Operations Proponent (USAIOP), U.S. Army Electronic Warfare Proponent (USAEWP)	127
Air Force - Air Intelligence Agency	131
Air Force Information Operations Center (AFIOC)	133
Air Force - Eighth Air Force	137
Navy – U.S. Navy Information Operations Organizations.....	139
Information Operations Conditions (INFOCONs).....	141
Glossary	151

Introduction



Introduction to Information Operations

Few topics seem to have as much controversy or discussion as, “What constitutes Information Operations (IO)?” The emergence of the term Strategic Communication (SC) has added to the potential confusion as both are applications of the information element of national power. This introduction and the following essay attempt to answer that question by examining both IO and SC conceptually and doctrinally. They are intended as a guide to these topics to facilitate academic discussion and are not authoritative. Throughout this discussion, various terms may be defined informally to facilitate understanding and comprehension. The reader is directed to Joint Publication 1-02, as required, for the approved formal definitions.

Information Operations is an evolving construct with historical roots back to antiquity. Thus it is both an old and a new concept. The late 1970’s saw the emergence of Information Warfare (IW) and Command and Control Warfare (C2W) as war-fighting constructs integrating several diverse capabilities. IW and C2W, in turn, evolved into Information Operations recognizing the critical role of information as an element of national power through the full spectrum of peace, conflict, and war.

So what is Information Operations?

1. **IO as an Integrating Function. Information Operations is essentially the *integration of specified capabilities involving information and information systems.*** This concept is similar to Joint Operations which is the integration of service capabilities or Combined Operations which is the integration of two or more forces or agencies of two or more allies. The integration envisioned as not mere deconfliction, but the synchronization and harmonization of activities whose resulting effect is significantly greater than the sum of the individual components. While this writes well and briefs well, it is the foundation for successful employment of IO.

IO is normally performed by military forces at both the operational and tactical levels. IO at the strategic level is a critical component of strategic communication.

Several questions logically follow:

- a. What capabilities are integrated?
- b. How are they integrated?
- c. Towards what end?

Following the concept of “begin with the end in mind,” the last question will be considered first.

2. **Purpose of IO. Information Operations seeks to influence the *behavior* of target decision-makers or audiences through the use of information and information systems. Conversely, Information Operations also seeks to shield or defend friendly decision-makers or audiences from being unduly influenced by a target’s use of information or information systems.** This is no different from the

exercise of the other forms of national power, be they diplomatic, military, or economic. In this instance the means is information, but the resulting outcome is the same.

a. This use of information is frequently referred to as “soft-power” or “non-kinetic” as contrasted with the military use of kinetic (both lethal and nonlethal) means to physically attack a target.

b. However, IO also encompasses activities to disrupt, degrade, or destroy adversary information systems. This includes physical destruction. Isolating an enemy decision-maker by eliminating his ability to command and control his forces is certainly a means of influencing his behavior.

c. Note the focus of IO is on “adversary decision-makers” or “adversary decision-making processes.” Efforts to influence a wider range of potential audiences would more appropriately be termed Strategic Communication. The use of IO to influence domestic audiences is strictly prohibited to prevent abuse of this capability.

d. Often times affecting the target’s decision cycle (sometimes referred to as his “OODA-loop” (observe, orient, decide, act - loop)) is a means of influencing target behavior. Obviously, reducing an adversary’s ability to make timely and effective decisions will degrade his exercise of initiative or his response to friendly military action.

e. Action must also be taken to shield or protect friendly information and information systems from compromise or disruption. As a network-enable force, the United States is particularly reliant on these systems to maintain situational awareness and to command and control friendly forces.

f. These protective actions are not intended to prevent the unrestricted flow of information vital to a free society. They are intended to prevent a target’s manipulation or distortion of information or attacks on information systems from being effective.

3. **An IO Conceptual Model.** At this point, a model would be helpful to conceptualize the kind of activities which would be effective in achieving the desired result (influence target behavior, protect friendly behavior from being influenced).

a. All Information Operations activities occur within the broader context of an *information environment*. This environment recognizes the critical role that information and information systems play in today’s advanced societies as they progressed along a continuum from agrarian, to industrial, to the information age. This environment pervades and transcends the boundaries of land, sea, air, and space.

b. Within this environment exist three conceptual dimensions: physical, information, and cognitive as depicted in Figure 1, representing a target’s decision cycle.

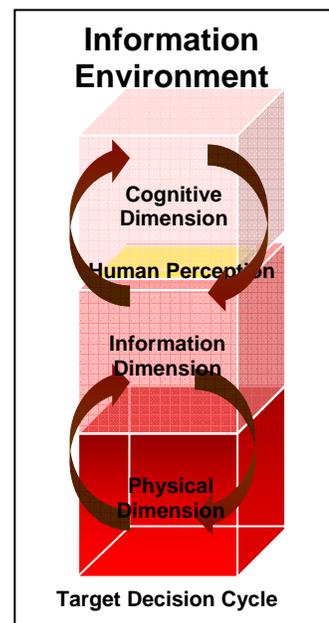


Figure 1. Information Environment

(1) The physical dimension is the tangible real world. It is the dimension where military operations take place within the land, sea, air, and space environments. Information and communications systems (infra-structure) exist within this dimension to enable these operations to take place.

(2) The information dimension is where information is created, manipulated, shared, and stored. This dimension links the physical real world with the human consciousness of the cognitive dimension both as a source of input (stimulus, senses, etc.) and to convey output (intent, direction, decisions, etc.). These linkages are shown as arrows in the figure.

(3) The cognitive dimension exists in the mind. Here is where the individual processes the received information according to a unique set of norms, morals, beliefs, culture, and values. These attributes act as a human perception “window” to filter the information and provide a sense of meaning and context. The information is evaluated and processed (via an O-O-D-A loop or other model) to form decisions which are communicated back through the information dimension to the physical world. It should be noted that the cognitive dimension can not be directly attacked (short of mind-altering drugs, etc.) but must be influenced indirectly through the physical and information dimensions.

(4) Not shown in the figure is an additional “social” dimension which links the individual to others forming a greater social network. This social network plays a critical role in the human decision-making process as well.

c. In a similar manner, the friendly decision cycle can be represented in relationship to the target as shown in Figure 2. This allows several terms to be defined conceptually.

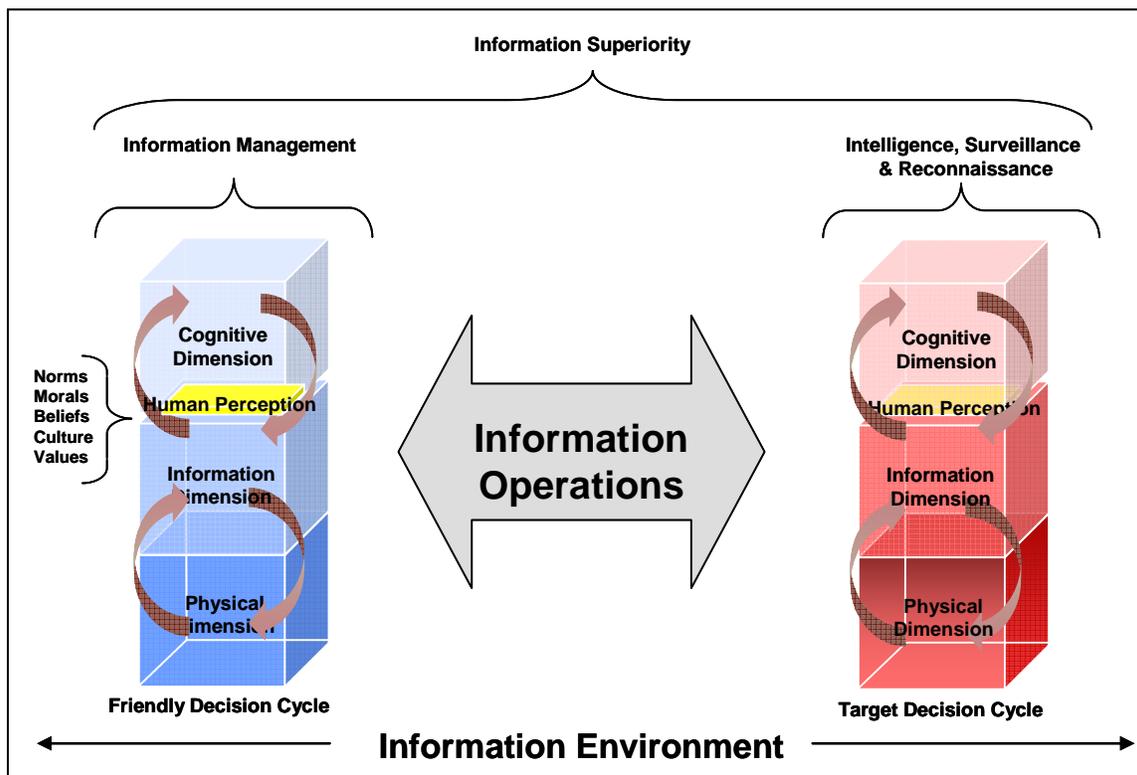


Figure 2. A Notional Information Operations Model

(1) **Intelligence, Surveillance, and Reconnaissance (ISR)** are those activities which synchronize and integrate the planning and operation of sensors, assets, and processing, exploitation, and dissemination systems to gain information and knowledge concerning a target (adversary). The focus is strictly on target information and information systems.

(2) Correspondingly, **Information Management (IM)** activities seek to provide the right information to the right individual at the right time in a usable form to facilitate situational understanding and decision-making. The focus is on friendly information and information systems.

(3) The third type of activity relates to both friendly and target decision cycles. These activities are **Information Operations (IO)** as indicated in Figure 2.

(4) Considering these three sets of activities as a whole yields **Information Superiority** which, when achieved, results in a degree of dominance in the information domain (environment) permitting the

conduct of operations without effective opposition. Information Superiority is a key enabler of Joint Vision 2020 and Network-centric Operations.

d. Information Operations can now be depicted as attempting to influence, disrupt, corrupt, or usurp adversarial human or automated decision-making while protecting friendly decision-making as shown in Figure 3.

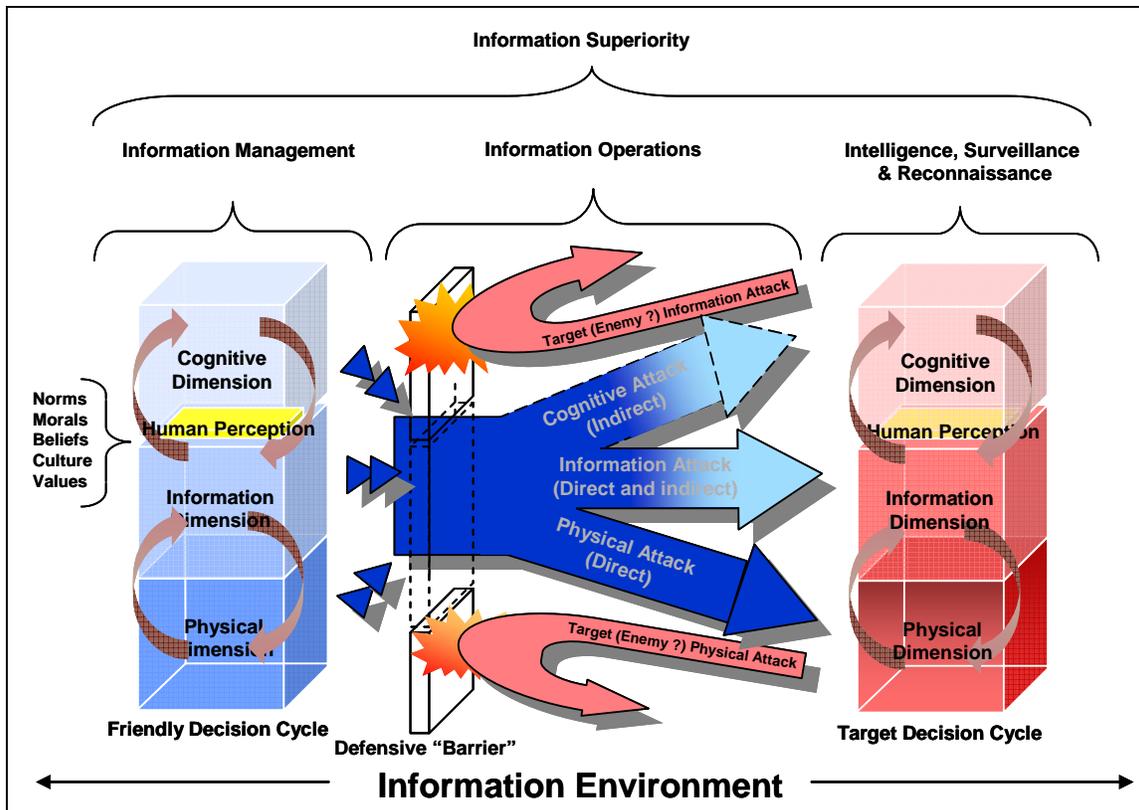


Figure 3. Information Operations Conceptual Framework

4. IO Capabilities. Using this framework, it is now possible to address the question of what capabilities are integrated by IO. These capabilities will be further categorized as either core, supporting, or related.

a. **Core Capabilities** are those which are essential to the conduct of IO by providing critical operational effects or preventing the adversary from doing so. The five core capabilities of Psychological Operations (PSYOP), Military Deception (MILDEC), Operations Security (OPSEC), Electronic Warfare (EW), and Computer Network Operations (CNO) form the foundation for IO. While not every activity conducted within these capabilities is IO, they all contribute to the achievement of IO objectives.

(1) **Psychological Operations (PSYOP)** are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives.

(2) **Military Deception (MILDEC)** consists of actions executed to deliberately mislead adversary military decision makers as to friendly military capabilities, intentions, and operations, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission.

(3) **Operations Security (OPSEC)** is a process of identifying critical information and subsequently analyzing friendly actions attendant to military operations and other activities to: a. identify those actions that can be observed by adversary intelligence systems; b. determine indicators that adversary intelligence systems might obtain that could be interpreted or pieced together to derive critical information in time to be useful to adversaries; and c. select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation.

(4) **Electronic Warfare (EW)** is any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. The three major subdivisions within electronic warfare are as follows:

(a) **Electronic Attack (EA)**. That division of electronic warfare involving the use of electromagnetic energy, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability and is considered a form of fires. EA includes: 1) actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, such as jamming and electromagnetic deception, and 2) employment of weapons that use either electromagnetic or directed energy as their primary destructive mechanism (lasers, radio frequency weapons, particle beams).

(b) **Electronic Protection (EP)**. That division of electronic warfare involving passive and active means taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability.

(c) **Electronic Warfare Support (ES)**. That division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition, targeting, planning and conduct of future operations. Thus, electronic warfare support provides information required for decisions involving electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Electronic warfare support data can be used to produce signals intelligence, provide targeting for electronic or destructive attack, and produce measurement and signature intelligence.

(5) **Computer Network Operations (CNO)** Actions taken through the use of computer networks to disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computers and networks themselves.

(a) **Computer Network Attack (CNA)**. Actions taken through the use of computer networks to disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computers and networks themselves.

(b) **Computer Network Defense (CND)**. Actions taken through the use of computer networks to protect, monitor, analyze, detect and respond to unauthorized activity within Department of Defense information systems and computer networks.

(c) **Computer Network Exploitation (CNE)**. Enabling operations and intelligence collection to gather data from target or adversary automated information systems or networks.

b. These five core capabilities are supported by five additional, or **Supporting Capabilities** which provide additional, though less critical, operational effects. Counterintelligence (CI), Combat Camera (COMCAM), Physical Attack, Physical Security, and Information Assurance (IA).

(1) **Counterintelligence (CI)** consists of the information gathered and activities conducted to protect against espionage, other intelligence activities, sabotage, or assassination conducted by or on behalf of foreign governments or elements thereof, foreign organizations, or foreign persons, or international terrorist activities.

(2) **Combat Camera (COMCAM)** consists of the acquisition and utilization of still and motion imagery in support of combat, information, humanitarian, special force, intelligence, reconnaissance, engineering, legal, public affairs, and other operations involving the Military Services.

(3) **Physical Attack** is those actions taken to employ kinetic fires (to include kinetic, non-lethal fires) against physical information targets.

(4) **Physical Security** is that part of security concerned with physical measures designed to safeguard personnel; to prevent unauthorized access to equipment, installations, material, and documents; and to safeguard them against espionage, sabotage, damage, and theft. In DoD communications security, the component that results from all physical measures necessary to safeguard classified equipment, material, and documents from access thereto or observation thereof by unauthorized persons.

(5) **Information Assurance (IA)** consists of measures that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities.

c. Finally, three additional *Related Capabilities* of Public Affairs (PA), Civil-Military Operations (CMO), and Defense Support to Public Diplomacy (DSPD) contribute to the accomplishment of the IO mission. These activities often have regulatory, statutory, or policy restrictions and limitations regarding their employment which must be observed.

(1) **Public Affairs (PA)** are those public information, command information, and community relations activities directed towards both the external and internal publics with interest in the Department of Defense.

(2) **Civil-Military Operations (CMO)** are the activities of a commander that establish, maintain, influence, or exploit relations between military forces, governmental and nongovernmental civilian organizations and authorities, and the civilian populace in a friendly, neutral, or hostile operational area in order to facilitate military operations, to consolidate and achieve operational US objectives. Civil-military operations may include performance by military forces of activities and functions normally the responsibility of the local, regional, or national government. These activities may occur prior to, during, or subsequent to other military actions. They may also occur, if directed, in the absence of other military operations. Civil-military operations may be performed by designated civil affairs, by other military forces, or by a combination of civil affairs and other forces.

(3) **Defense Support to Public Diplomacy (DSPD)** are those activities and measures taken by the Department of Defense components to support and facilitate public diplomacy efforts of the United States Government (previously referred to as Military Support to Public Diplomacy).

d. These capabilities can be summarized as shown in the following table.

<u>CORE CAPABILITIES</u>	
Electronic Warfare	Military Deception
Computer Network Operations	Psychological Operations
Operations Security	
<u>SUPPORTING CAPABILITIES</u>	<u>RELATED CAPABILITIES</u>
Information Assurance	Public Affairs
Physical Security	Civil-Military Operations
Counterintelligence	Defense Support to Public Diplomacy
Physical Attack	
Combat Camera	
<u>DoD Information Operations:</u> “The integrated employment of the core capabilities of electronic warfare, computer network operations, psychological operations, military deception, and operations security, in concert with specified supporting and related capabilities, to influence, disrupt, corrupt or usurp adversarial human and automated decision-making, while protecting our own.”	

Table 1. Joint IO Definition

e. These activities can be related to the IO Conceptual Framework previously described in terms of offensive and defensive actions as well as in terms of their orientation with respect to the cognitive, information, and physical dimensions. An additional distinction which may be helpful is to further categorize the activities into those which are primarily “influential” in nature (MILDEP, PSYOP, PA, etc.) and those which are more “technical (or electronic)” in nature (EW and CNO, etc.).

5. **IO Planning and Execution.** Having identified the purpose of IO and the activities associated with it, the third question will now be addressed concerning how IO capabilities are integrated.

a. Information Operations are planned by the IO section of a joint or service staff under the direction and supervision of a designed IO officer or cell chief. Normally this section resides within the operations division (J-3) of the staff. Current Army IO doctrine directs the creation of a separate primary staff section (G-7) responsible for IO planning and execution.

b. To further integrate and synchronize IO activities, an “IO Cell” is established under the leadership of the IO cell chief. Representatives from the core, supporting, and related capabilities as well as the special staff, service/functional components, and appropriate national agencies serve as members.

c. IO planning should be fully integrated into the overall joint planning process, be it contingency or crisis action. There should not be a separate “IO campaign plan” just there is not a separate “maneuver campaign plan.”

d. Products from the IO planning process are incorporated into the Commander’s Estimate, Commander’s Concept, and the OPLAN/OPORD as documented in the Joint Operation Planning and Execution System (JOPES).

e. Additionally, IO planners and operators must be represented within the Effects and Effects Coordination Cell where operational fires (both kinetic and non-kinetic) are integrated and synchronized.

f. Execution of the IO portion of the joint plan is done by both dedicated IO forces (PSYOP, EW, CNO, etc.) and general purpose forces tasked for that purpose (MILDEP, OPSEC, etc.).

g. Evaluation of the success of the execution of the plan is done through identified measures of effectiveness (how well the plan achieved the desired result) as well as through measures of performance (how well the plan was executed).

6. **Additional Considerations.**

a. IO effects typically take longer to achieve and are more difficult to measure than conventional operations. Therefore, a long term commitment to effectively employ information to affect target behavior is critical. Theater Security Cooperation Plans are a vital part of this effort. Waiting until a crisis occurs and then “throwing info ops at it” is an exercise in futility. Likewise, the idea of employing decisive combat operations in one area while employing information operations in other as a kind of economy of force measure is a misapplication of IO.

b. An appropriate understanding of the target’s culture and norms is also critical. The tendency to “mirror” friendly cultural values and perspectives must be avoided at all costs. The preparation of IO products and an evaluation of their potential effectiveness must be done from the perspective of the recipient (target audience) through their cultural lens. This is especially true during the “product review and approval” process when what may appear to be an unsophisticated and even amateurish looking product (leaflet, flyer, handbill, etc.) may, in fact, be exactly the proper vehicle for conveying the desired message.

Effective IO leverages the power of information to compliment the other instruments of national power resulting in the achievement of national objectives with less expenditure of blood and treasure.

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Strategic Communication



Strategic Communication. This section addresses some considerations of the information element of power at the strategic level.

a. Information and National Power. Interestingly, one needs to go back to the Reagan administration to find the most succinct and pointed mention of information as an element of power in formal government documents.¹ Subsequent national security documents allude to different aspects of information but without a specific strategy or definition. Still, it is generally accepted in the United States government today that information is an element of national power along with diplomatic, military and economic power...and that information is woven through the other elements since their activities will have an informational impact.² Given this dearth of official documentation, Drs. Dan Kuehl and Bob Nielson proffered the following definition of the information element: “use of information content and technology as strategic instruments to shape fundamental political, economic, military and cultural forces on a long-term basis to affect the global behavior of governments, supra-governmental organizations, and societies to support national security.”³ Information as power is wielded in an increasingly complex environment consisting of the physical, information, and cognitive domains as previously defined.

b. Strategic Communication Overview. The executive branch of the US government has the responsibility to develop and sustain an information strategy that ensures that themes and messages are promulgated consistent with policy. This strategy should guide and direct communications activities across the information environment. Effective Strategic Communication is the desired “way” (given the “ends, ways, means” model) that information is wielded in accordance with that strategy. **Strategic Communication** can be described as the proactive and continuous process that supports the national security strategy by identifying and responding to strategic threats and opportunities with information related activities. It is “focused United States Government processes and efforts to understand and engage key audiences in order to create, strengthen, or preserve conditions favorable to advance national interests and objectives through the use of coordinated information, themes, plans, programs, and actions synchronized with other elements of national power” whose primary supporting capabilities are Public Affairs; military IO and Public Diplomacy.⁴

(1) Public affairs and military IO have been defined in the context of their use within the Department of Defense (DOD) in the previous section.

(2) Public diplomacy is primarily practiced by the Department of State (DOS). It is defined as “those overt international public information activities of the United States Government designed to promote United States foreign policy objectives by seeking to understand, inform, and influence foreign audiences and opinion makers, and by broadening the dialogue between American citizens and institutions and their counterparts abroad.”⁵

(3) International broadcasting services are cited as a strategic communication means in some definitions. Under the supervision of the [Broadcasting Board of Governors \(BBG\)](#), the International Broadcasting Bureau (IBB) provides the administrative and engineering support for U.S. government-funded non-military international broadcast services. Broadcast elements are the Voice of America (VOA) and Radio and TV Martí (Office of Cuba Broadcasting). In addition, the IBB provides engineering and program support to Radio Free Europe/Radio Liberty, Radio Free Asia, the Middle East Broadcasting

Networks (Radio Sawa and Alhurra Television), and Radio Farda, a joint Persian-language project between VOA and Radio Free Europe.⁶

Strategic communication has generally been considered a national strategic concept, however, it is increasingly addressed at the theater strategic level as well.

c. History of Strategic Communication. While “strategic communication” is a fairly new term in the U.S. government lexicon, the concept, theory, and practice behind it is not. Winfield Scott recognized the importance of strategic communication at the theater level in Veracruz in 1847. Realizing the influence of the Catholic Church on Mexican society, Scott attended Mass with his staff at the Veracruz Cathedral to display the respect of U.S. forces. He further ordered U.S. soldiers to salute Mexican priests in the streets. Each of these measures was “part of a calculated campaign to win the friendship of the Mexicans.”⁷

The recent history of national strategic communication shows concerted efforts to positively portray the U.S. story in order to persuade and influence.

(1) The Committee on Public Information (1917), also known as the Creel Committee after its chief newspaperman George Creel, sought to rally U.S. public opinion behind WW I on behalf of the Wilson administration. Its focus was the domestic audience and it used public speakers, advertising, pamphlets, periodicals, and the burgeoning American motion picture industry.

(2) The Office of War Information (1942) focused both domestically and overseas, with broadcasts sent in German to Nazi Germany. The Voice of America (VOA) began its first broadcast with the statement, "Here speaks a voice from America. Everyday at this time we will bring you the news of the war. The news may be good. The news may be bad. We shall tell you the truth".

(3) The Smith-Mundt Act (1948) (actually, “The U.S. Information and Educational Exchange Act (Public Law 402; 80th Congress)”), established a statutory information agency for the first time in a period of peace with a mission to "promote a better understanding of the United States in other countries, and to increase mutual understanding" between Americans and foreigners. The act also forbade the Voice of America to transmit to an American audience.⁸

(4) The United States Information Agency (USIA) (1953) was established by President Eisenhower as authorized by the Smith-Mundt Act. It encompassed all the information programs, including VOA (its largest element), that were previously in the Department of State, except for the educational exchange programs, which remained at State. The USIA Director reported to the President through the National Security Council and received complete, day-to-day guidance on U.S. foreign policy from the Secretary of State.

(5) A 1998 State Department reorganization occurred in response to calls by some to reduce the size of the U.S. foreign affairs establishment. (This is considered the State Department’s “peace dividend” following the Cold War). The act folded the USIA into the Department of State. It pulled the Broadcasting Board of Governors out of USIA and made it a separate organization. The USIA slots were distributed throughout the State Department and its mission was given to the Bureau of International Information Programs.

d. National Strategic Communication: Current Models and Processes. The demise of USIA is generally regarded (in retrospect) as diluting the ability of the United States to effectively promulgate a national communication strategy, coordinate and integrate strategic themes and messages and support public diplomacy efforts worldwide.⁹ Additionally organizations and processes have experienced great flux in recent years. The current administration retained Presidential Decision Directive (PDD) 68 that was enacted in 1999 by the Clinton administration. PDD 68 addressed those problems when no single U.S. agency was empowered to coordinate US efforts to sell its policies and counteract bad press abroad.

It directed top officials from the Defense, State, Justice, Commerce and Treasury departments as well as those from the Central Intelligence Agency and FBI to establish an International Public Information (IPI) Core Group chaired by the Under Secretary for Public Diplomacy and Public Affairs at the Department of State.¹⁰ It is evident, however that this core group is currently inactive. Other recent initiatives to coordinate and integrate national strategic communication efforts have also faltered. The White House Office of Global Communication was disbanded in 2003. A Strategic Communication Policy Coordinating Committee (PCC) met on several occasions, but then went dormant. A Muslim Outreach Policy Coordinating Committee was more active and in fact, developed a draft national communication strategy that did not make it out of the White House.¹¹ On the other hand, an Interagency Strategic Communication Fusion Team is an active, albeit informal, coordinating body at the action officer level. Team members share information about their respective plans and activities in order to leverage each other's communication with international publics. The team coordinates and de-conflicts the production and the dissemination of information products but does not task. Instead, team members reach across office, bureau and agency boundaries to offer or to seek support for their strategic communication plans and activities.¹²

Despite the failures in the recent past, currently ongoing actions at the national level are cautiously encouraging. Ambassador Karen Hughes assumed duties as the Under Secretary of State for Public Diplomacy and Public Affairs in the early fall of 2005. The [Under Secretary](#) helps ensure that public diplomacy (which she describes as engaging, informing, and influencing key international audiences) is practiced in harmony with public affairs (outreach to Americans) and traditional diplomacy to advance U.S. interests and security and to provide the moral basis for U.S. leadership in the world.¹³ Ambassador Hughes has taken positive steps in the year that she has been in her job. A National Strategy for Public Diplomacy and Strategic Communication has been drafted and is being coordinated within the beltway for potential implementation. She has provided specific guidance to Public Affairs officers at embassies throughout the world that shortcuts (and eliminates in many cases) bureaucratic clearances to speak to the international press. She has established a rapid response unit within the State Department to monitor and respond to world and domestic events. And she has established processes to disseminate coordinated U.S. themes and messages laterally and horizontally within the government.

The Defense Department recognizes the problems as well. The Quadrennial Defense Review (QDR) conducted a spin off study on Strategic Communication that resulted in a roadmap addressing planning, resources and coordination. Perhaps the most important aspect of the roadmap is the stated objective of developing of strategic communication plans in conjunction with policy development, thus fulfilling Edward R. Murrow's desire to be brought in on the takeoff, not the crash landing.¹⁴

Despite these recent positive initiatives, it remains to be seen whether Ambassador Hughes' efforts or those of DOD will result in processes and organizations that endure beyond this administration.

e. Theater Strategic Communication. Theater strategic communication is an emergent concept with only brief discussion in Joint Publication 3-13. However, because of the capacity gaps at the national level (as described above), and the importance of the information element of power in the current Global War on Terrorism (GWOT), most Combatant Commanders have established processes and organizations to address the need. An unclassified draft annex on strategic communication in the National Military Strategic Plan for the War on Terrorism¹⁵ directs Combatant Commanders to develop internal processes and, where appropriate, organizations for integrating strategic communication within Combatant Command plans and operations. This annex further indicates that Combatant Commanders, when appropriate, may identify a strategic communication director. The principal responsibility of this position is to communicate and plan communications. CENTCOM has established a robust strategic communication directorate; other combatant commands have not, but instead have used other models for this purpose. While national strategic communication consists of PA, PD and IO, DOD strategic communication (and thus combatant command) strategic communication includes military PA, defense support to public diplomacy (alternately referred to as military support to public diplomacy), aspects of IO (principally PSYOP), Military Diplomacy (MD) and Visual Information (VI).¹⁶ The concept of

defense support to public diplomacy is still vaguely defined with examples ranging from theater web initiatives aimed at certain regions and demographics within those regions to theater logistical support to embassies and diplomatic staffs. Military Diplomacy includes traditional interactions between U.S. senior military leaders and foreign military leaders. Beyond the importance of theater strategic communications in the current phase of the GWOT, emergent doctrine is correct to point out the importance of strategic communication activities in implementing theater security cooperation plans (TSCPs).¹⁷

f. Strategic Communication and IO: A Side by Side Comparison. The current definitions of IO (Joint Publication 3-13) and Strategic Communication (QDR Strategic Communication Roadmap) are clear and fairly distinct to the fully engaged information practitioner, but there are nuances that make those distinctions difficult to grasp for others (to include operational commanders) and so clarifying these concepts is well worth considering. Strategic communication is the more broadly overarching concept targeting *key audiences* and focusing on the cognitive dimension of the information environment. IO as an integrating function, on the other hand, more specifically targets an *adversary's decision making capability* which may be in the cognitive, informational and/or physical dimensions of the information environment.”

	Target	Effect	Dimension	Primary Capabilities
SC	Key audiences (friendly, neutral, adversarial)	Understand and engage	Cognitive (people)	PA, PSYOP, MD, DSPD, VI
IO	Adversarial human and automated decision-making	Influence, disrupt, corrupt, or usurp	Cognitive, information, physical (people, processes, systems)	EW, CNO, OPSEC, MILDEC, PSYOP

Considering the targets and effects described above, it should be clear that both strategic communication and IO can be employed at all levels of warfare (tactical, operational, theater strategic and national strategic). Tactical commanders routinely employ strategic communication in Iraq today based on their interactions with key audiences in their area of responsibility to a potential strategic end. On the other end of the scale, IO could certainly be employed strategically as part of a shaping Phase 0 operation or a deterrent Phase 1 operation against a potential adversary's decision-making capability.

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Updated: November 2006

¹ Reagan, Ronald. National Security Decision Directive 130. Washington, D.C.: The White House, 6 March 1984. Available from <http://www.fas.org/irp/offdocs/nsdd/nsdd-130.htm>. Internet. Accessed 15 November 2006.

² Emergent NATO doctrine on Information Operations cites Diplomatic, Military and Economic activities as “Instruments of Power.” It further states that Information, while not an instrument of power, forms a foundation as all activity has an informational backdrop.

³ Neilson, Robert E. and Daniel T. Kuehl, “Evolutionary Change in Revolutionary Times: A Case for a New National Security Education Program. National Security Strategy Quarterly (Autumn 1999): 40.

⁴ Various definitions of strategic communication exist. The one shown here is taken from Department of Defense, QDR Execution Roadmap for Strategic Communication, (Washington, DC: U.S. Department of Defense, 25 September 2006), 3.

⁵ U.S. Department of Defense. DOD Dictionary. Available from <http://www.dtic.mil/doctrine/jel/doddict/data/p/04338.html>. Internet. Accessed 16 November 2006.

⁶ The United States Government’s International Broadcasting Bureau. Available from: <http://www.ibb.gov>. Internet. Accessed 16 November 2006.

⁷ Eisenhower, John S.D. Agent of Destiny: The Life and Times of General Winfield Scott. New York: The Free Press, 1997, 245-6.

⁸ The Smith-Mundt Act is still in effect to include the requirement not to “target” U.S. audiences. The current information environment with ubiquitous, world-wide media outlets, satellite communications and real-time reporting makes it difficult to target foreign audiences without exposing U.S. audiences to the message, however...a fact not envisioned in 1948 when the act became effective and one that continues to cause friction between the military and media.

⁹ Kaplan, David E. “Hearts, Minds, and Dollars.” *U.S. News and World Report*, 25 April 05, 25, 27.

¹⁰ Federation of American Scientists. Intelligence Resource Program. *U.S. International Public Information (IPI)*. Presidential Decision Directive PDD 68, 30 April 1999. Available from <http://www.fas.org/irp/offdocs/pdd/pdd-68.htm>. Internet. Accessed 16 November 2006.

¹¹ U.S. General Accounting Office. U.S. Public Diplomacy. Washington, D.C.: U.S. General Accounting Office, April 2005. 10-13.

¹² Interagency Strategic Communication Fusion Team. Meeting summary, 27 October 2006, 4.

¹³ U.S. Department of State. Senior Officials: Under Secretary for Public Diplomacy and Public Affairs -- Karen Hughes. Available from <http://www.state.gov/misc/19232.htm>. Internet. Accessed 16 November 2006.

¹⁴ QDR Execution Roadmap for Strategic Communication, 3.

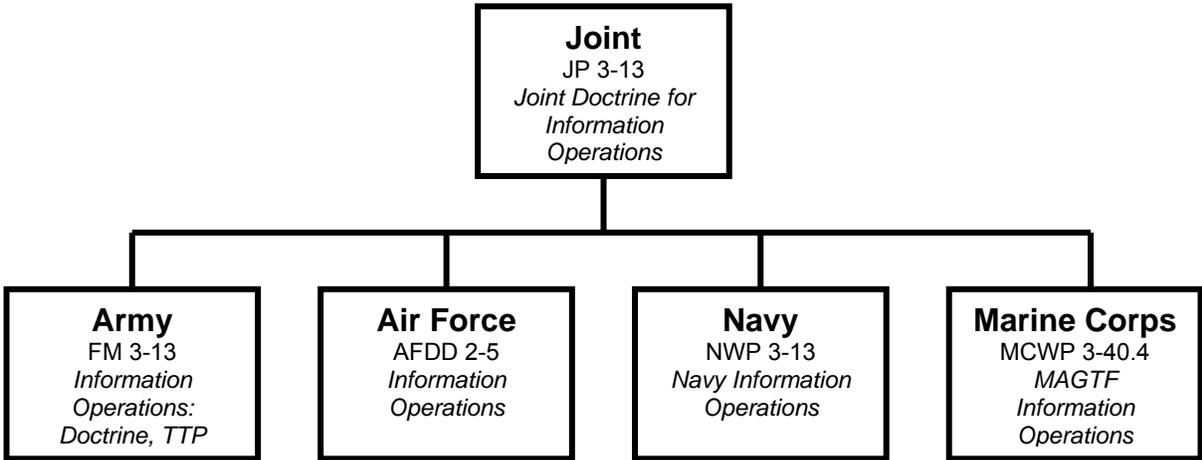
¹⁵ U.S. Department of Defense. National Military Strategic Plan for the War on Terrorism, Strategic Communication (DRAFT): Annex H. Washington, D.C.: U.S. Department of Defense, 18 April 2005.

¹⁶ QDR Execution Roadmap for Strategic Communication, 2.

¹⁷ Joint Publication 3-13, I-13.

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Joint and Service Doctrine



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Joint Vision 2020 and Information Superiority



Purpose. The Department of Defense issued “Joint Vision 2020” (JV2020) in May, 2000 to update the conceptual “template” that guides the transformation of the U.S. Armed Forces into a 21st Century force. The document replaced the July 1996 “Joint Vision 2010”.

Although JV2020 is, at this printing of the Primer, six years old, it still sets out the broad goals and the context for the on-going DoD force transformation process at large. It must be admitted that there is now debate as to whether Defense Secretary Rumsfeld’s transformation objectives will survive his departure.

Goal. JV2020 depicted a “transformed” Force that would be, “dominant across the full spectrum of military operations – persuasive in peace, decisive in war, preeminent in any form of conflict”. Transformation efforts must go beyond technology and embrace doctrine, training, organization, education and leadership.

The document outlined what it anticipated would be the future security environment, described “full spectrum dominance”, and then discussed the key importance of information and technical innovation. Efforts to transform the force, it stated, depended upon, “realizing the potential of the information revolution”, which would change the very way that military operations take place. This revolution is creating both a quantitative as well as a qualitative change in the nature of information. Further, the pace of that change continues to accelerate.

The Strategic Context. JV2020 outlined three aspects of the global security environment confronting the U.S. and its friends in the 21st Century.

- First, the U.S. would continue to become more involved in an increasingly global economy, leading to greater interaction with a variety of regional entities.
- Second, potential adversaries will be able to access much of the technology and commercial commodities available to U.S. forces, to include information.
- Third, potential adversaries will adapt “niche” capabilities in the face of U.S. technological advantages that will enable them to target American capabilities where the disparity of strength is not as great, or adopt “asymmetric approaches”.

Information. The nature of information, its processing and its sharing is fundamental to all military operations and the information revolution presents the Force challenges and opportunities. Information and information technology are key to successful transformation efforts.

“Information superiority provides the joint force a competitive advantage only when it is effectively translated into superior knowledge and decisions. The joint force must be able to take advantage of superior information converted to superior knowledge to achieve “decision superiority” – better decisions arrived at and implemented faster than an opponent can react, or in a non-combat situation, at a tempo that allows the force to shape the situation or react to changes and accomplish its mission. Decision superiority does not automatically result from information superiority. Organizational and doctrinal adaptation, relevant training and experience, and the proper command and control mechanisms and tools are equally necessary.

“The evolution of information technology will increasingly permit us to integrate the traditional forms of information operations with sophisticated all-source intelligence, surveillance, and reconnaissance in a fully synchronized information campaign. The development of a concept labeled the global information grid will provide the network-centric environment required to achieve this goal. The grid will be the globally interconnected, end-to-end set of information capabilities, associated processes, and people to manage and provide information on demand to warfighters, policy makers, and support personnel. It will enhance combat power and contribute to the success of noncombat military operations as well. Realization of the full potential of these changes requires not only technological improvements, but the continued evolution of organizations and doctrine and the development of relevant training to sustain a comparative advantage in the information environment.”

In a concluding section JV2020 looks at the nature of technological innovation and also describes the increasing need for joint and combined operations capabilities, to include interagency cooperation. It broadly discusses precision engagement, focused logistics, joint command and control, and the role of information operations in achieving “full spectrum dominance”.

Complete JV2020 (Jun 2000) is available at: <http://www.dtic.mil/jointvision/jvpub2.htm>

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Department of Defense Directive (DoDD) O-3600.01 Information Operations



This section presents a synopsis of non-restricted information from the current Department of Defense Directive.

Purpose. Department of Defense Directive (DoDD) 3600.1, “Information Operations” (FOUO) is the *fundamental* document for both understanding and employing Information Operations (IO). As such it should be the starting point for all study of Information Operations as undertaken by U.S. practitioners. It gives policy guidance to the Department of Defense for the management and implementation of IO throughout DoD, sets out responsibilities for the key offices at OSD and joint command levels and gives definitions to key terms.

Scope. As policy guidance, it defines terms; assigns responsibilities to officials, services, unified commands, and agencies; and provides the basis for the development of joint and service doctrine for IO. The term, “doctrine”, as defined by Joint Publication 1-02, “DoD Dictionary of Military and Associated Terms” (October, 2004) means: “*Fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application*”.

Information Operations (IO) Defined. IO is “The integrated employment of the core capabilities of Electronic Warfare (EW), Computer Network Operations (CNO), Psychological Operations (PSYOP), Military Deception (MILDEC), and Operations Security (OPSEC), in concert with specified supporting and related capabilities, to influence, disrupt, corrupt, or usurp adversarial human and automated decision-making while protecting our own”.

Use of IO. IO is to be employed to support full spectrum dominance by taking advantage of information technology, maintaining U.S. strategic dominance in network technologies, and capitalizing upon near real-time global dissemination of information, to affect adversary decision cycles with the goal of achieving information superiority for the United States.

Core IO Capabilities.

IO employs five core capabilities to achieve desired Combatant Commander effects or prevent the enemy from achieving his desired effects: ***EW, CNO, PSYOP, MILDEC, and OPSEC***. They are operational in a direct and immediate sense; they either achieve critical operational effects or prevent the adversary from doing so. They are interdependent and increasingly need to be integrated to achieve desired effects.

Supporting Capabilities (See Glossary for definitions):

- Counterintelligence
- Physical (kinetic) attack
- Physical Security
- Information Assurance (IA)
- Combat Camera.

Related Capabilities. (See Glossary for definitions):

- Public Affairs (PA)
- Civil-Military Operations (CMO)
- Defense Support to Public Diplomacy (DSPD)

Intelligence Support. Intelligence will be developed, consistent with the National Intelligence Priorities Framework, to provide data about adversary information systems or networks; produce political-military assessments; conduct human factors analysis; and provide indications and warning of adversary IO, including threat assessments.

RESPONSIBILITIES. The following officials, commands, and agencies are tasked with the specific responsibilities indicated:

Under Secretary of Defense for Intelligence (USD(I)) :

- Serve as the Principal Staff Assistant to the Secretary of Defense for IO.
- Develop and oversee DoD IO policy and integration activities.
- Assess performance/responsiveness of DoD and Military Intelligence activities to support IO.
- Coordinate, oversee, and assess the efforts of the DoD Components to plan, program, develop, and execute capabilities in support of IO requirements.
- Establish specific policies for the development and integration of CNO, MILDEC and OPSEC as core IO capabilities.

Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) :

- Establish specific policies for the development and integration of EW as a core IO capability.
- Develop and maintain a technology investment strategy for development, acquisition, and integration of EW capabilities.
- Invest in and develop the science and technologies needed to support IO capabilities.

The Under Secretary of Defense for Policy (USD(P)):

- Provide DoD oversight of IO planning, execution, and related policy guidance including the establishment of an OSD review process to assess IO plans and programs
- Lead interagency coordination, exclusive of the IC, and international cooperation involving planning and employment of IO capabilities.
- Establish specific policy and oversight for development and integration of PSYOP as a core IO capability and DSPD as a related capability.

The Under Secretary of Defense for Personnel and Readiness (USD(P&R)) :

- Develop policy and procedures on matters pertaining to the establishment and management of an IO career force in coordination with the Secretaries of the Military Departments, the Chairman of the Joint Chiefs of Staff, the USD(P), the USD(I), and others, as appropriate.

- Provide training policy and oversight as it pertains to the integration of all IO capabilities into joint exercises and joint training regimes.

The Assistant Secretary of Defense for Networks and Information Integration/ DoD Chief Information Officer (ASD(NII)/DoD CIO) will:

- Establish specific policy for the development and integration of IA and Computer Network Defense (CND) as related to CNO as a core IO capability.
- Oversee and assess the efforts of the Heads of the DoD Components to plan, program, develop, and field IA and CND capabilities in support of CNO.

Assistant Secretary of Defense for Public Affairs will:

- Establish specific policy for the relationship of PA to IO.
- Oversee PA planning and coordination efforts as related to IO within DoD
- Oversee the development and conduct of appropriate training and education that defines PA's relationship to IO for public affairs and visual information personnel at the Defense Information School.

Commander, U.S. Strategic Command (CDRUSSTRATCOM): Integrate and coordinate DoD IO core capabilities that cross geographic areas of responsibility or core IO areas.

Commander, U.S. Special Operations Command (CDRUSSOCOM)

- Integrate and coordinate DoD PSYOP capabilities to enhance interoperability and support USSTRATCOM's information operations responsibilities and other combatant commanders' PSYOP planning and execution.
- Support the other Combatant Commanders through joint employment of PSYOP and other special operations force IO capabilities.
- Employ other special operations force IO capabilities as directed.

The Secretaries of the Military Departments and CDRUSSOCOM

Develop IO doctrine and tactics, and organize, train, and equip for IO for their Title 10 (U.S. Code) and Major Force Program responsibilities.

Definitions. See Glossary for definitions of the following terms: Computer Network Attack, Computer Network Defense, Computer Network Exploitation, Computer Network Operations, Defense Support to Public Diplomacy, Electronic Warfare, Human Factors, Information, Information Assurance, Information Operations Specialists and Planners, Information Superiority, Information System, Military deception, Operations Security, Psychological Operations, Public Affairs, and Public Diplomacy.

Final Department of Defense Directives (DoDD) on line:

DoDD 1000.1 thru 4999.99 -- <http://www.dtic.mil/whs/directives/corres/dir1.html>

DoDD 5000.1 thru 8999.99 -- <http://www.dtic.mil/whs/directives/corres/dir2.html>

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The Information Operations (IO) Roadmap, 2003



This section provides an UNCLASSIFIED synopsis of those unclassified elements of the Road Map.

Persons who are, or will become Information Operations (IO) practitioners, should read this fundamentally important document in its entirety, and become familiar with its critiques and its proposals for improvement. A redacted version of the document, removing those items still classified, can be accessed at the following George Washington University website:

www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB177/info_ops_roadmap.pdf

The classified, 74-page, "IO Roadmap" discusses specific issues and deficiencies related to the five core IO capabilities (*PSYOP*, *Computer Network Operations*, *Military Deception*, *OPSEC*, and *Electronic Warfare*), the related DoD capabilities (Public Affairs and Civil Military Operations), and the several supporting capabilities. It addresses shortcomings in doctrine, organizational structure, and practice, it gives twelve general recommendations for improvement (see below), and it also states more than forty specific recommendations for further action.

Purpose. The Secretary of Defense, in his introduction to the Roadmap states that it seeks to advance the goal of Information Operations becoming a core military capability of U.S. forces. The current Roadmap edition (30 October 2003) aims to provide a framework for understanding Information Operations and to present a critique of the current state of IO. The Roadmap calls for a dedicated workforce, as well as development of new organizational structures that will enhance IO, and also support Defense Transformation efforts

Three IO Functional Areas. The Roadmap broadly defines three integrated functional areas that include the five IO core capabilities, as follows:

1. Those activities aimed at deterring, discouraging, dissuading, and directing an adversary, thereby disrupting his unity of command and purpose while preserving our own (*PSYOP*).
2. Protecting our plans while misdirecting theirs, thereby allowing our forces to mass their effects to maximum advantage while the adversary expends his resources to little effect (*OPSEC* and *Military Deception*).
3. Control adversarial communications networks while protecting ours (*Electronic Warfare* and *Computer Network Operations*).

The plan calls for extensive IO preparations in peacetime using the full range of intelligence, surveillance, and reconnaissance capabilities to accurately map the computer networks and electronic signatures of

potential adversaries. It calls for large efforts to characterize adversarial audiences as well as the adversarial decision makers themselves, in order to better target and exploit these using IO capabilities.

The Roadmap identifies the following benefits that will be accrued if its recommendations are achieved:

- Development of a common IO lexicon.
- More execution authority delegated to combatant commanders.
- Development of a trained and educated professional career force for IO.
- Centralized IO planning, integration, and analysis support from STRATCOM.
- Enhanced IO capabilities for the warfighter, to include:
 - Improved ability to disseminate powerful messages in support of adversary behavior modification.
 - Protection of networks with a real defense in depth strategy.
 - A robust offensive suite of capabilities to include full range electronic and computer network attack, with increased reliability through improved command and control, assurance testing, and refined tactics and procedures.

Critiques of Current State of Information Operations. The discussion of challenges and shortcomings in the Information Operations area include the following:

- No consensus on the definition of Information Operations or its contribution to overall mission accomplishment.
- Electronic Warfare policy and plant investment are outdated.
- OPSEC planning process is not widely applied and OPSEC, itself, is largely an “afterthought”. Military Deception staff are not adequately trained prior to their assignments.
- Relationship of Public Affairs, Public Diplomacy, and PSYOP must be studied and clarified. PA must become more proactive. PSYOP authorities must be further decentralized.
- Information Operations career force and education require better planning and coordination for development.

Roadmap General Recommendations: The Roadmap’s twelve recommendations are as follows:

1. Approve a common understanding of Information Operations.
2. Consolidate oversight and advocacy for Information Operations.
3. Delegate capabilities to combatant commanders.
4. Create a well trained and educated career work force.
5. Provide consolidated and comprehensive analytical support.
6. Correct immediate shortfalls and develop a long term defense in depth strategy for CND.
7. Mature CNA into a reliable warfighting capability.
8. Develop an electronic warfare investment strategy.
9. Increase psychological operations capabilities.
10. Clarify lanes in the road for PSYOP, Public Affairs, and Public Diplomacy.
11. Assign advocacy for operations security and military deception.

12. Improve transparency of Information Operations planning, programming, and budgeting, and execution system.

Policy Actions to Implement the Roadmap to Date:

- IO Advocacy. DoDI 5143.01, “Undersecretary of Defense for Intelligence”, issued 23 November 2005, designates the USD(I) as the principal staff assistant to the Secretary of Defense for Information Operations policy and integration activities.
- IO Career Force. DoDI 3608.11, “Information Operations Career Force” issued 4 November 2005 implemented the following:
 - Designated the Undersecretary of Defense for Intelligence (USD (I)) as the functional proponent for the IO career force
 - Specified that an interim IO career force of active and reserve military personnel be established, consisting of two categories of position: IO Planners and IO Capability Specialists (see glossary for definitions).
 - Allow for creation of guidance for enlisted and civilian IO career force in the future.
 - Required the USD (I) to monitor the accession, retention, and promotion rates for the IO career force.
- IO Education. DoDI 3608.12, “Joint Information Operations Education”, (4 November 2005):
 - Specified that Joint IO education programs support the transformation of IO into a core military capability
 - Joint IO planners courses and graduate education programs expand the IO knowledge base in the services.
 - Designates USSTRATCOM as the operational advocate for joint IO education.
 - Requires National Defense University to have the Joint Forces Staff College (Norfolk, VA) develop and conduct a Joint IO Planner’s Course.
 - Requires the Naval Postgraduate School (Monterey, CA) to establish an IO Center of Excellence and establish a graduate level joint IO education program.

DoD directives (DoDD) and instructions (DoDI) are available on line at:

www.dtic.mil/whs/directives/

Chairman of the Joint Chiefs of Staff instructions (CJCSI) and directives (CJCSD) are on line at:

www.dtic.mil/cjcs_directives/index.htm

Last Updated: October 2006

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Joint Information Operations Doctrine



Key doctrinal documents:

Joint Pub 3-13, *Information Operations*, 13 February 2006
Joint Pub 3-13.3, *Joint Doctrine for Operations Security*, 29 June 2006
Joint Pub 3-13.4, *Military Deception*, 13 July 2006
Joint Pub 3-51, *Joint Doctrine for Electronic Warfare*, 7 April 2000 (*Currently being revised*)
Joint Pub 3-53, *Doctrine for Joint Psychological Operations*, 5 September 2003
Joint Pub 3-57, *Joint Doctrine for Civil-Military Operations*, 8 February 2001
Joint Pub 3-61, *Public Affairs*, 9 May 2005

Joint Pubs available at: http://www.dtic.mil/doctrine/s_index.html

Joint Information Operations doctrine is set down in Joint Publication 3-13. This section extracts the publication's executive summary, below.

EXECUTIVE SUMMARY, JOINT PUBLICATION 3-13

- **Discusses the Information Environment and Its Relationship to Military Operations**
- **Discusses the Information Operations (IO) Core Capabilities Necessary to Successfully Plan and Execute IO to include Supporting and Related Capabilities in a Joint/Multinational Environment**
- **Aligns Joint IO Doctrine with the Transformational Planning Guidance as Specified by the Department of Defense IO Roadmap for Achieving Information Superiority on the Battlefield**
- **Provides an Organizational Framework for Integrating, Deconflicting, and Synchronizing IO Planning and Execution Activities for Supporting and Supported Combatant Command Staffs, National Intelligence Agencies, and Other Federal Agencies as Applicable**
- **Outlines Planning Considerations for Developing an IO Career Force through Joint Education, Training, Exercises, and Experimentation**

Military Operations and the Information Environment

To succeed, it is necessary for US forces to gain and maintain information superiority.

Information is a strategic resource, vital to national security, and military operations depend on information and information systems for many simultaneous and integrated activities.

Information operations (IO) are described as the integrated employment of electronic warfare (EW), computer network operations (CNO), psychological operations (PSYOP), military deception (MILDEC), and operations security (OPSEC), in concert with specified supporting and related capabilities, to influence, disrupt, corrupt, or usurp adversarial human and automated decision making while protecting our own.

The purpose of this doctrine is to provide joint force commanders (JFCs) and their staffs guidance to help prepare, plan, execute, and assess IO in support of joint operations. The principal goal is to achieve and maintain information superiority for the US and its allies.

The information environment is the aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information. The information environment is made up of three interrelated dimensions: physical, informational, and cognitive.

Core, Supporting, and Related Information Operations Capabilities

Core capabilities.

IO consists of five core capabilities which are: PSYOP, MILDEC, OPSEC, EW, and CNO. Of the five, PSYOP, OPSEC, and MILDEC have played a major part in military operations for many centuries. In this modern age, they have been joined first by EW and most recently by CNO. Together these five capabilities, used in conjunction with supporting and related capabilities, provide the JFC with the principal means of influencing an adversary and other target audiences (TAs) by enabling the joint forces freedom of operation in the information environment.

Supporting capabilities.

Capabilities supporting IO include information assurance (IA), physical security, physical attack, counterintelligence, and combat camera. These are either directly or indirectly involved in the information environment and contribute to effective IO. They should be integrated and coordinated with the core capabilities, but can also serve other wider purposes.

Related capabilities.

There are three military functions, public affairs (PA), civil military operations (CMO), and defense support to public diplomacy, specified as **related capabilities for IO**. These capabilities make significant contributions to IO and must always be coordinated and integrated with the core and supporting Information Operations capabilities. However, their primary purpose and rules under which they operate must not be compromised by IO. This requires additional care and consideration in the planning and conduct of IO. For this reason, the PA and CMO staffs particularly must work in close coordination with the IO planning staff.

Intelligence and Communications System Support to Information Operations

Successful planning, preparation, execution, and assessment of information operations (IO) demand detailed and timely intelligence.

Before military activities in the information environment can be planned, the current “state” of the dynamic information environment must be collected, analyzed, and provided to commanders and their staffs. This requires intelligence on relevant portions of the physical, informational, and cognitive properties of the information environment, which necessitates collection and analysis of a wide variety of information and the production of a wide variety of intelligence products.

Nature of IO intelligence requirements.

In order to understand the adversary or other TA decision-making process and determine the appropriate capabilities necessary to achieve operational objectives, commanders and their staffs must have current data. This includes relevant physical, informational, and cognitive properties of the information environment as well as assessment of ongoing IO activities.

Intelligence considerations in planning IO.

Intelligence Resources are Limited. Commanders and their intelligence and operations directorates must work together to identify IO intelligence requirements and ensure that they are given high enough priority in the commander’s requests to the intelligence community (IC).

Collection Activities are Legally Constrained. The IC must implement technical and procedural methods to ensure compliance with the law. Additionally, intelligence may be supplemented with information legally provided by law enforcement or other sources.

Intelligence Support to IO Often Requires Long Lead Times. The intelligence necessary to affect adversary or other TA decisions often requires that specific sources and methods be positioned and employed over time to collect the necessary information and conduct the required analyses.

Information Environment is Dynamic. Commanders and their staffs must understand both the timeliness of the intelligence they receive and the differing potentials for change in the dimensions of the information environment.

Properties of the Information Environment Affect Intelligence. Collection of physical and electronic information is objectively measurable by location and quantity. Commanders and their staffs must have an appreciation for the subjective nature of psychological profiles and human nature.

Responsibilities and Command Relationships

Joint Staff.

The Chairman’s responsibilities for IO are both general (such as those to establish doctrine, provide advice, and make recommendations) and specific (such as those assigned in DOD IO policy). The Operations Directorate of the Joint Staff (J-3) serves as the Chairman’s focal point for IO and coordinates with the other organizations within the Joint Staff that have direct or supporting IO responsibilities. The IO divisions of the Joint Staff J-3 provide IO specific advice and advocate Joint Staff and combatant commands’ IO interests and concerns within DOD and interact with other organizations and individuals on behalf of the Chairman.

Combatant commands. Commander, United States Strategic Command's (USSTRATCOM's) specific authority and responsibility to coordinate IO across area of responsibility (AOR) and functional boundaries does not diminish **the imperative for other combatant commanders to employ IO**. These efforts may be directed at achieving national or military objectives incorporated in theater security cooperation plans, shaping the operational environment for potential employment during periods of heightened tensions, or in support of specific military operations. It is entirely possible that in a given theater, the combatant commander will be supported for select IO while concurrently supporting USSTRATCOM IO activities across multiple theater boundaries.

Components. **Components** are normally responsible for detailed planning and execution of IO. IO planned and conducted by functional components must be conducted within the parameters established by the JFC. At the same time, component commanders and their subordinates must be provided sufficient flexibility and authority to respond to local variations in the information environment. Component commanders determine how their staffs are organized for IO, and normally designate personnel to liaise between the JFC's headquarters and component headquarter staffs.

Subordinate joint force commanders. Subordinate JFCs plan and execute IO as an integrated part of joint operations. Subordinate staffs normally share the same type of relationship with the parent joint force IO staff as the Service and functional components. **Subordinate JFC staffs may become involved in IO planning and execution to a significant degree**, to include making recommendations for employment of specific capabilities, particularly if most of the capability needed for a certain operation resides in that subordinate joint task force.

Organizing for joint IO. Combatant commanders normally **assign responsibility for Information Operations** to the J-3. When authorized, the director of the J-3 has primary staff responsibility for planning, coordinating, integrating, and assessing joint force IO. **The J-3 normally designates an Information Operations cell chief** to assist in executing joint IO responsibilities. The primary function of the IO cell chief is to ensure that IO are integrated and synchronized in all planning processes of the combatant command staff and that IO aspects of such processes are coordinated with higher, adjacent, subordinate, and multinational staffs. To integrate and synchronize the core capabilities of IO with IO-supporting and related capabilities and appropriate staff functions, the IO cell chief normally leads an "IO cell" or similarly named group as an integrated part of the staff's operational planning group or equivalent. The organizational relationships between the joint IO cell and the organizations that support the IO cell are per JFC guidance.

Planning and Coordination

IO planning follows the same principles and processes established for joint operation planning.

The IO staff coordinates and synchronizes capabilities to accomplish JFC objectives. Uncoordinated IO can compromise, complicate, negate, or harm other JFC military operations, as well as other USG information activities. JFCs must ensure Information Operations planners are fully integrated into the planning and targeting process, assigning them to the joint targeting coordination board in order to ensure full integration with all other planning and execution efforts. Other USG and/or coalition/allied information activities, when uncoordinated, may complicate, defeat, or render DOD IO

ineffective. Successful execution of an information strategy also requires early detailed JFC IO staff planning, coordination, and deconfliction with USG interagency efforts in the AOR to effectively synergize and integrate IO capabilities.

Planning considerations. IO planning must begin at the **earliest stage** of a JFC's campaign or operations planning and must be an integral part of, not an addition to, the overall planning effort. IO are used in all phases of a campaign or operation. The use of IO during early phases can significantly influence the amount of effort required for the remaining phases.

The use of IO in peacetime to achieve JFC objectives and to preclude other conflicts, requires an ability to integrate Information Operations capabilities into a comprehensive and coherent strategy through the establishment of information objectives that in turn are integrated into and support the JFC's overall mission objectives. The combatant commander's theater security cooperation plan serves as an excellent platform to embed specific long-term information objectives

IO planning requires early and detailed preparation. Many Information Operations capabilities require long lead-time intelligence preparation of the battlespace (IPB). IO support for IPB development differs from traditional requirements in that it may require greater lead time and may have expanded collection, production, and dissemination requirements. Consequently, combatant commanders must ensure that IO objectives are appropriately prioritized in their priority intelligence requirements (PIRs) and requests for information (RFIs).

As part of the planning process, designation of release and execution authority is required. Release authority provides the approval for IO employment and normally specifies the allocation of specific offensive means and capabilities provided to the execution authority. Execution authority is described as the authority to employ IO capabilities at a designated time and/or place. Normally, the JFC is the one execution authority designated in the execute order for an operation.

IO may involve complex legal and policy issues requiring careful review and national-level coordination and approval.

Commander's intent and information operations. The commander's vision of IO's role in an operation should begin before the specific planning is initiated. A commander that expects to rely on IO capabilities must ensure that IO related PIRs and RFIs are given high enough priority prior to a crisis, in order for the intelligence products to be ready in time to support operations. At a minimum, the commander's vision for IO should be included in the initial guidance. Ideally, commanders give guidance on Information Operations as part of their overall concept, but may elect to provide it separately.

Measures of performance and measures of effectiveness. **Measures of performance (MOPs)** gauge accomplishment of Information Operations tasks and actions. **Measures of effectiveness (MOEs)** determine whether IO actions being executed are having the desired effect toward mission accomplishment: the attainment of end states and objectives. MOPs measure friendly IO effort and MOEs measure battlespace results. IO MOPs and MOEs are crafted and refined throughout the planning process.

Multinational Considerations in Information Operations

Every ally/coalition member can contribute to IO by providing regional expertise to assist in planning and conducting IO.

Allies and coalition partners recognize various IO concepts and some have thorough and sophisticated doctrine, procedures, and capabilities for planning and conducting IO. **The multinational force commander is responsible to resolve potential conflicts** between each nation's IO programs and the IO objectives and programs of the coalition. It is vital to integrate allies and coalition partners into IO planning as early as possible so that an integrated and achievable IO strategy can be developed early in the planning process.

Information Operations in Joint Education, Training, Exercises, and Experiments

A solid foundation of education and training is essential to the development of IO core competencies.

Integration requirements include clarification of allied and coalition partner's IO objectives; understanding of other nations' information operations and how they intend to conduct IO; establishment of liaison/deconfliction procedures to ensure coherence; and early identification of multinational force vulnerabilities and possible countermeasures to adversary attempts to exploit them.

Information Operations in Joint Education, Training, Exercises, and Experiments

A solid foundation of education and training is essential to the development of IO core competencies.

The development of IO as a core military competency and critical component to joint operations requires specific expertise and capabilities at all levels of DOD. At the highest professional levels, senior leaders develop joint warfighting core competencies that are the capstone to American military power. The Services, United States Special Operations Command, and other agencies develop capabilities oriented on their core competencies embodied in law, policy, and lessons learned. At each level of command, a solid foundation of education and training is essential to the development of a core competency. Professional education and training, in turn, are dependent on the accumulation, documentation, and validation of experience gained in operations, exercises, and experimentation.

IO education considerations.

The IO career force should consist of both capability specialists (EW, PSYOP, CNO, MILDEC, and OPSEC) and IO planners. Both groups require an understanding of the information environment, the role of IO in military affairs, how IO differs from other information functions that contribute to information superiority, and specific knowledge of each of the core capabilities to ensure integration of IO into joint operations.

IO planners are required at both the component and the joint level.

Senior military and civilian DOD leaders require an executive level knowledge of the information environment and the role of IO in supporting DOD missions.

IO training considerations.

Joint military training is based on joint policies and doctrine to prepare joint forces and/or joint staffs to respond to strategic and operational requirements deemed necessary by combatant commanders to execute their assigned missions.

IO training must support the IO career force and be consistent with the joint assignment process. Joint IO training focuses on joint planning-specific skills, methodologies and tools, and assumes a solid foundation of Service-level IO training.

The Services determine applicable career training requirements for both their IO career personnel and general military populations, based on identified joint force mission requirements.

CONCLUSION

This document [JP 3-13] provides the doctrinal principles for DOD employment of IO. It has been designed to provide overarching guidance in the planning and execution of IO in today's joint/ multinational security environment. Its primary purpose is to ensure all of the capabilities comprising IO are effectively coordinated and integrated into our nation's warfighting capability against current and future threats.

Updated: October 2006

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Army Information Operations Doctrine



U.S. Army Information Operations doctrine is under review and a new edition of FM 3-13 is being drafted. This section reflects the currently published doctrine.

Key doctrinal documents: FM 3-13, Information Operations: Doctrine, Tactics, Techniques, and Procedures, 28 November 2003

Excerpts of Army Doctrine - FM 3-13

Introduction

Information operations (IO) encompass attacking adversary command and control (C2) systems (offensive IO) while protecting friendly C2 systems from adversary disruption (defensive IO). Effective IO combines the effects of offensive and defensive IO to produce information superiority at decisive points.

IO brings together several previously separate functions as IO elements and related activities. IO elements include the IO core capabilities, specified supporting capabilities, and related activities discussed in chapter 1. It also allows commanders to use all of them both offensively and defensively, as they deem appropriate. The assistant chief of staff (ACOS) G-7 has the coordinating staff responsibility for coordinating IO elements and related activities. This enables the G-7 to shape the information environment to friendly advantage and protect commanders and friendly C2 systems from adversary IO.

Offensive IO destroy, degrade, disrupt, deny, deceive, exploit, and influence adversary decision-makers and others who can affect the success of friendly operations. Offensive IO also target the information and information systems (INFOSYS) used in adversary decision-making processes.

Defensive IO protect and defend friendly information, C2 systems, and INFOSYS. Effective defensive IO assure friendly commanders an accurate common operational picture (COP) based not only on a military perspective, but also on nonmilitary factors that may affect the situation. An accurate COP is essential to achieving situational understanding. (See FM 6-0.) Most IO elements may be used either offensively or defensively. Effective IO requires integrating IO related activities—such as, public affairs and civil military operations—into IO as well.

Information Operations Doctrine

Commanders conduct (plan, prepare, execute, and assess) information operations (IO) to apply the information element of combat power. Combined with information management and intelligence, surveillance, and reconnaissance operations, effective IO results in gaining and maintaining information

superiority. Information superiority creates conditions that allow commanders to shape the operational environment and enhance the effects of all elements of combat power. IO has two categories, offensive IO and defensive IO. Commanders conduct IO by synchronizing IO elements and related activities, each of which may be used either offensively or defensively. Army IO doctrine supports joint IO doctrine, supplementing it where necessary to meet the conditions of land operations.

Design of Army Information Operations

Information operations (IO) bring together several previously separate functions as IO elements and related activities. To provide unity of effort, IO is placed under a special staff officer, the assistant chief of staff G-7. ... The G-7 has coordinating staff responsibility for IO. He does this by means of the G-7 section and IO cell. Placing responsibility for synchronizing the activities of the IO elements and related activities on one special staff officer helps commanders mass their effects to gain and maintain information superiority.

- **Information Environment**

The *information environment* is the aggregate of individuals, organizations, or systems that collect, process, or disseminate information; also included is the information itself (JP 3-13). It includes —

- The worldwide interconnection of communications networks.
- Command and control (C2) systems of friendly and adversary forces and other organizations.
- Friendly, adversary, and other personnel who make decisions and handle information.

Climate, terrain, and weapons effects (such as electromagnetic pulse or blackout) affect the information environment but are not part of it.

Threat sources [include:] hackers, insiders, activist nonstate actors, terrorists, foreign IO activities, and information fratricide.

Methods of attack include: unauthorized access, malicious software, electromagnetic deception, electronic attack, physical destruction, and perception management.

- **Information Superiority**

The Army defines *information superiority* as the operational advantage derived from the ability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same (FM 3-0). This definition differs slightly from the joint definition. While joint doctrine considers information superiority a capability, Army doctrine establishes it as an operational advantage. For Army forces, information superiority describes the degree of dominance that commanders have over the part of the information environment that affects their operations, and over the adversary. Commanders measure it in terms of information-based activities. Gaining and maintaining information superiority creates conditions that allow commanders to shape the information environment and enhance the effects of other elements of combat power. Commanders direct three interdependent contributors to achieve this goal:

- Information management.
- Intelligence, surveillance, and reconnaissance.
- Information operations (including related activities).

Information management is the provision of relevant information to the right person at the right time in a usable form to facilitate situational understanding and decision-making. It uses procedures and information systems to collect, process, store, display, and disseminate information (FM 3-0). Information management (IM) consists of INFOSYS (see paragraph 1-6) and relevant information (RI).

Intelligence, Surveillance, and Reconnaissance (ISR) an enabling operation; integrates and synchronizes all battlefield operating systems to collect RI to facilitate commander’s decision-making.

Information Operations Contributions. IM, IO, and ISR each have a different focus. ISR collects data and produces intelligence. IM disseminates and uses RI throughout the C2 system. IO applies that RI to protect the friendly C2 system, attack the adversary C2 system, and shape the information environment. All are essential to achieving and maintaining information superiority.

Aspects of Information Operations

Information operations is the employment of the core capabilities of electronic warfare, computer network operations, psychological operations, military deception, and operations security, in concert with specified supporting and related capabilities, to affect or defend information and information systems, and to influence decision-making. (This definition supersedes the definition of IO in FM 3-0. It is consistent with joint initiatives.) [Editor’s Note: It is also different from the current Joint definition.]

• **Elements of Information Operations**

IO are enabling operations that create and present opportunities for decisive operations. Commanders use both offensive IO and defensive IO simultaneously to accomplish the mission, increase their force effectiveness, and protect their organizations and systems. IO elements include core capabilities and supporting capabilities [see table below]. Commanders conduct IO through a combination of these elements and related activities.

The elements of IO are not organizations. They are independent activities that, when taken together and synchronized, constitute IO. Commanders decide which IO elements are appropriate to accomplish the mission. All elements may not be required for each operation.

With the possible exceptions of computer network operations (CNO), CNA, computer network defense (CND) and computer network exploitation (CNE), no IO element is new. What is new is bringing these elements/related activities together as components of the information element of combat power. IO focuses efforts that before were diffuse. A single staff officer—the G-7—is assigned authority and responsibility for these previously separate activities. This allows commanders to mass the effects of the information element of combat power.

IO related activities include but are not limited to public affairs (PA) and CMO. Although FM 3-13 discusses only these two, any activity that contributes to gaining and maintaining information superiority (for example, an operation in support of diplomatic efforts conducted by special operations forces) may be considered an IO related activity.

Core	Supporting
<ul style="list-style-type: none"> • Electronic warfare • Computer network operations <ul style="list-style-type: none"> ○ Computer network attack ○ Computer network defense ○ Computer network exploitation • Psychological operations • Operations security • Military deception 	<ul style="list-style-type: none"> • Physical destruction • Information assurance • Physical security • Counterintelligence • Counterdeception • Counterpropaganda <p style="font-size: small; margin-top: 10px;">Editor’s Note: Subordinate elements of CNO are indented in the table for clarity.</p>

Information Operations Elements

- **Army-Joint Information Operations Relationships**

IO, by their nature, are joint operations. Each Service component contributes to an integrated whole synchronized by the joint force headquarters. The IO cell at joint force headquarters deconflicts and synchronizes joint force IO. All Service components are represented. The joint force IO cell synchronizes all the Service-specific IO elements/related activities to achieve unity of effort supporting the joint force. Army forces submit requests for IO support from joint force or higher echelons through the senior Army headquarters to the joint force IO cell.

- **Offensive Information Operations**

The Army defines *offensive information operations* as the integrated use of assigned and supporting capabilities and activities, mutually supported by intelligence, to affect enemy decision-makers or to influence others to achieve or promote specific objectives (FM 3-0). The Army definition deletes a sentence in the joint definition that lists IO elements associated with offensive IO. Army doctrine allows commanders to use all IO elements offensively.

Offensive IO facilitates seizing and retaining the initiative by creating a disparity between the quality of information available to friendly forces and that available to adversaries. The following effects create this information advantage:

- **Destroy.** *Destroy* is to damage a combat system so badly that it cannot perform any function or be restored to a usable condition without being entirely rebuilt (FM 3-90). Destruction is most often the use of lethal and nonlethal means to physically render adversary information useless or INFOSYS ineffective unless reconstituted.
- **Disrupt.** *Disrupt* is a tactical mission task in which a commander integrates direct and indirect fires, terrain, and obstacles to upset an enemy's formation or tempo, interrupt his timetable, or cause his forces to commit prematurely or attack in a piecemeal fashion (FM 3-90). *Disrupt*, in information operations, means breaking or interrupting the flow of information between selected C2 nodes.
- **Degrade.** *Degrade*, in information operations, is using nonlethal or temporary means to reduce the effectiveness or efficiency of adversary command and control systems, and information collection efforts or means. Offensive IO can also degrade the morale of a unit, reduce the target's worth or value, or reduce the quality of adversary decisions and actions.
- **Deny.** *Deny*, in information operations, entails withholding information about Army force capabilities and intentions that adversaries need for effective and timely decision-making. Effective denial leaves opponents vulnerable to offensive capabilities. OPSEC is the primary nonlethal means of denial. It applies throughout the spectrum of conflict.
- **Deceive.** *Deceive* is to cause a person to believe what is not true. Military deception (MD) seeks to mislead adversary decision-makers by manipulating their understanding of reality. Successful deception causes them to believe what is not true.
- **Exploit.** *Exploit*, in information operations, is to gain access to adversary command and control systems to collect information or to plant false or misleading information.
- **Influence.** *Influence* is to cause adversaries or others to behave in a manner favorable to Army forces. It results from applying perception management to affect the target's emotions, motives, and reasoning. Perception management also seeks to influence the target's perceptions, plans, actions, and will to oppose friendly forces.

- **Defensive Information Operations**

The Army defines *defensive information operations* as the integration and coordination of policies and procedures, operations, personnel, and technology to protect and defend friendly information and information systems. Defensive information operations ensure timely, accurate, and relevant information access while denying adversaries the opportunity to exploit friendly information and information systems for their own purposes (FM 3-0). The Army definition deletes a sentence in the joint definition that lists IO elements associated with defensive IO. Army doctrine allows commanders to use all IO elements defensively.

Defensive IO seeks to limit the vulnerability of C2 systems to adversary action and to prevent enemy interference with friendly information and INFOSYS. Defensive IO effects include: **protection, detection, restoration, and response.**

- **Protection.** *Protection* is all actions taken to guard against espionage or capture of sensitive equipment and information. In IO, protection occurs at the digital perimeter to control access to or mitigate the effects of adversary access to friendly decision-makers and INFOSYS.
- **Detection.** *Detection* is to discover or discern the existence, presence, or fact of an intrusion into information systems. Detection is the identification of adversary attempts to gain access to friendly information and INFOSYS.
- **Restoration.** *Restoration* is to bring information systems back to their original state. Restoration is reestablishment of essential capabilities of INFOSYS damaged by enemy offensive IO.
- **Response.** *Response* in information operations is to react quickly to an adversary's information operations attack or intrusion. Timely identification of adversaries, their intent and capabilities, is the cornerstone of effective response to adversary offensive IO.

- **Relationship of Offensive and Defensive Information Operations**

Commanders synchronize offensive and defensive IO to produce complementary and reinforcing effects (see FM 3-0). Offensive IO supports the decisive operation, while defensive IO protects friendly force critical assets and centers of gravity. Conducting offensive and defensive IO independently detracts from the efficient employment of IO elements.

- **Information Operations Across the Spectrum of Conflict**

The national security and national military strategies establish an imperative for engagement (see FM 1). Engagement involves the nation exercising the instruments of national power—diplomatic, informational, military, and economic—to shape the security environment. ... Throughout the spectrum of conflict, commanders conduct IO to apply the information element of combat power. In all situations, Army forces do not act in isolation. Almost all operations are joint; most are interagency as well.

- **Peace.** During peace, commanders conduct IO to shape the strategic environment or to prepare for operations during crisis and war. Normally IO are part of a combatant commander's theater engagement plan. The majority of peacetime preparation is done at home station or during training exercises.
- **Crisis.** During crises, Army forces conduct IO based on existing contingency plans or a crisis action plan (see JP 5-0). A potential or actual contingency requires commanders at all echelons to gather additional information and refine their contingency plans based on a specific AO or target set. Geographic combatant commanders may use the relationships and conditions in the

information environment created during peace to influence potential adversary decision-makers to act in ways that will resolve the crisis peacefully.

- **War.** During war, commanders conduct IO to synchronize the information element of combat power with the other elements of combat power. Well-synchronized offensive IO can cripple not only adversary military power but also adversary civilian decision-making capability. Commanders and staffs follow the military decision-making process to plan IO that accomplishes the commander's intent and concept of operations.
- **The G-7 Section and the Information Operations Cell**

The G-7 has coordinating staff responsibility for IO. He does this by means of the G-7 section and IO cell. The G-7 section has assigned officers and NCOs responsible for IO current operations, IO planning and IO targeting... The G-7 coordinates IO related activities of other staff officers through the IO cell.

The IO cell, located in the main command post, brings together representatives of organizations responsible for all IO elements and related activities. Related activities include any organizations able to contribute to achieving IO objectives. PA and CMO are always related activities; commanders may designate others. The IO cell also includes representatives of special and coordinating staff sections, as the mission requires. All battlefield operating systems are represented. The primary function of an IO cell is to synchronize IO throughout the operations process. In corps and divisions, the G-7 section forms its nucleus. In Army service component commands (ASCCs), the plans, current operations, and effects control divisions—under the deputy chief of staff for operations—coordinate IO. The ASCC ensures Army IO supports the theater IO campaign plan. If another headquarters is designated as the ARFOR, that headquarters assumes this responsibility

Information Operations Elements and Related Activities

The core and supporting IO elements are similar to the battlefield operating systems. They are independent activities that, when taken together and synchronized, constitute IO.

Core Elements

Core IO elements are operations security (OPSEC), psychological operations (PSYOP), military deception (MD), electronic warfare (EW) and computer network operations (CNO). ***Computer network operations comprise computer network attack (CNA), computer network defense (CND), and related computer network exploitation (CNE) enabling operations.***

PSYOP, MD and OPSEC are employed to influence adversary decision-makers or groups while protecting friendly decision-making. EW and CNO are employed to affect or defend the electromagnetic spectrum, information systems (INFOSYS), and information that support decision-makers, weapon systems, command and control (C2), and automated responses.

- **Operations Security**

The Army defines *operations security* as a process of identifying essential elements of friendly information and subsequently analyzing friendly actions attendant to military operations and other activities to --

- Identify those actions that can be observed by adversary intelligence systems.

- Determine indicators hostile intelligence systems might obtain that could be interpreted or pieced together to derive essential elements of friendly information time to be useful to adversaries.
- Select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation.

- **Psychological Operations**

Psychological operations are planned operations that convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately to influence the behavior of foreign governments, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives (JP 3-53).

- **Military Deception**

Military deception comprises actions executed to deliberately mislead adversary military decision-makers as to friendly military capabilities, intentions, and operations, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission (JP 3-58). It is used to make an adversary more vulnerable to the effects of friendly force weapons, maneuver, and operations.

- **Electronic Warfare**

Electronic warfare is any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy (JP 3-51). ... The three major components of EW are electronic protection (EP), electronic warfare support (ES), and electronic attack (EA).

- **Electronic Protection.** *Electronic protection* is that division of electronic warfare involving passive and active means taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability (JP 3-51).
- **Electronic Warfare Support.** *Electronic warfare support* is that division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition, targeting, planning and conduct of future operations.
- **Electronic Attack.** *Electronic attack* is that division of electronic warfare involving the use of electromagnetic energy, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability and is considered a form of fires.

- **Computer Network Operations**

Computer network operations comprise computer network attack, computer network defense, and related computer network exploitation enabling operations. CNO is not totally applicable at the tactical level. CNO is applicable at echelons above corps.

- 2-31. *Computer network attack* is operations to disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computers and networks themselves (JP 3-13).
- *Computer network defense* consists of defensive measures to protect and defend information, computers, and networks from disruption, denial, degradation, or destruction (JP 3-51). It includes all measures to detect unauthorized network activity and adversary CNA and defend computers and networks against it.
- *Computer network exploitation* consists of enabling operations and intelligence collection to gather data from target or adversary automated information systems or networks.

Supporting Elements

The supporting IO elements are physical destruction, IA, physical security, counterintelligence, counterdeception, and counterpropaganda.

- **Physical Destruction**

Physical destruction is the application of combat power to destroy or degrade adversary forces, sources of information, command and control systems, and installations. It includes direct and indirect fires from ground, sea, and air forces. Also included are direct actions by special operations forces.

- **Information Assurance**

Information assurance comprises information operations that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and nonrepudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities (JP 3-13).

- *Availability* means timely, reliable access to data and services by authorized users. Available INFOSYS operate when needed.
- *Integrity* means protection from unauthorized change, including destruction. INFOSYS with integrity operate correctly, consistently, and accurately.
- *Authentication* means certainty of user or receiver identification and authorization to receive specific categories of information.
- *Confidentiality* means protection from unauthorized disclosure.
- *Nonrepudiation* means proof of message receipt and sender identification, so neither can deny having processed the data.

- **Physical Security**

Physical security is that part of security concerned with physical measures designed to safeguard personnel; to prevent unauthorized access to equipment, installations, material, and documents; and to safeguard them against espionage, sabotage, damage, and theft (JP 3-13). Effective physical security ensures the availability of INFOSYS used to conduct operations.

- **Counterintelligence**

Counterintelligence is information gathered and activities conducted to protect against espionage, other intelligence activities, sabotage, or assassinations conducted by or on behalf of foreign governments or elements thereof, foreign organizations, or foreign persons, or international terrorist activities. (JP 3-13). The CI mission is to detect, identify, assess, counter, neutralize, or exploit hostile intelligence collection.

- **Counterdeception**

Counterdeception consists of efforts to negate, neutralize, diminish the effects of, or gain the advantage from a foreign deception operation. Counterdeception does not include the intelligence function of identifying foreign deception operations (JP 3-13). Counterdeception contributes to situational understanding and defensive IO by protecting friendly C2 systems and decision-makers from adversary deception. Its goal is to make friendly decision-makers aware of adversary deception activities so they can formulate informed and coordinated responses.

- **Counterpropaganda**

Counterpropaganda consists of programs of products and actions designed to nullify propaganda or mitigate its effects (FM 3-05.30). It is directed toward the target of adversary propaganda. Counterpropaganda degrades the harmful influence of adversary PSYOP on friendly forces and other audiences (see JP 3-53; FM 3-05.30; FM 33-1-1). ... Counterpropaganda includes countering adversary misinformation, disinformation, and opposing information.

Related Activities

Related activities include, but are not limited to, [Public Affairs] PA and [Civil Military Operations] CMO.

- **Public Affairs**

Public affairs are those public information, command information, and community relations' activities directed toward both the external and internal publics with interest in the Department of Defense (JP 3-61). (Army doctrine uses the term *internal information* in place of *command information*.) PA information is credible. It makes available timely and accurate information so that the public, Congress, and the news media may assess and understand the facts about national security and defense strategy.

- **Civil Military Operations**

Civil military operations are activities of a commander that establish, maintain, influence, or exploit relations between military forces, governmental and nongovernmental civilian organizations and authorities, and the civilian populace in a friendly, neutral, or hostile operational area in order to facilitate military operations, to consolidate and achieve operational United States objectives. Civil-military operations may include performance by military forces of activities and functions normally the responsibility of the local, regional, or national government.

Tactics, Techniques, and Procedures

Like all military operations, information operations follow the operations process: planning, preparation, execution, and continuous assessment.

Planning Information Operations

- **Information Operations Planning Concepts**

Planning is the means by which the commander envisions a desired outcome, lays out effective ways of achieving it, and communicates to his subordinates his vision, intent, and decisions, focusing on the results he expects to achieve. ... Commanders use the IO mission statement, IO concept of support, IO objectives, and IO tasks to describe and direct IO.

- The *information operations mission statement* is a short paragraph or sentence describing what the commander wants IO to accomplish and the purpose for accomplishing it.
- The *information operations concept of support* is a clear, concise statement of where, when, and how the commander intends to focus the information element of combat power to accomplish the mission.
- *Information operations objectives* are clearly defined, obtainable aims that the commander intends to achieve using IO elements/related activities.
- *Information operations tasks* are tasks developed to support accomplishment of one or more information operations objectives. An IO task addresses only one IO element/related activity.

The most important IO planning product is the IO subparagraph or IO annex of the operation plan (OPLAN) or operation order (OPORD) (see appendix D). The IO annex usually includes an IO execution matrix and IO assessment matrix as appendixes.

- **Receipt of Mission**

Upon receipt of a mission, either from higher headquarters or from the commander, the commander and staff perform an initial assessment. Based on this assessment, the commander issues initial guidance and the staff prepares and issues a WARNO. During the time between receiving the commander's initial guidance and issuing the WARNO, the staff performs [the following] receipt of mission actions:

- Participates in the commander's initial assessment.
- Receives the commander's initial guidance.
- Reviews the IO estimate.
- Prepares for future planning.

- **Mission Analysis**

During mission analysis, the staff defines the tactical problem and begins to determine feasible solutions. Mission analysis consists of 17 tasks. Many of them are performed concurrently. The mission analysis products are the restated mission, initial commander's intent, commander's guidance, and at least one WARNO. ... The staff performs the following tasks during mission analysis:

- Analyze the higher headquarters order.
- Conduct IPB.
- Determine specified, implied, and essential tasks.

- Review available assets.
- Determine constraints.
- Identify critical facts and assumptions.
- Conduct risk assessment.
- Determine initial commander's critical information requirements.
- Determine the initial ISR annex.
- Plan use of available time.
- Write the restated mission.
- Conduct a mission analysis briefing.
- Approve the restated mission.
- Develop the initial commander's intent.
- Issue the commander's guidance.
- Issue a WARNO.
- Review facts and assumptions.
- **Course of Action Development**

After the mission analysis briefing, the staff begins developing COAs for analysis and comparison based on the restated mission, commander's intent, and planning guidance. During COA development, the staff prepares feasible COAs that integrate the effects of all combat power elements to accomplish the mission. Based on the initial IO mission statement, the G-7 develops a distinct IO concept of support, IO objectives, and IO tasks for each COA [while performing the following actions].

- Analyze relative combat power
- Generate options
- Array initial forces
- Develop the concept of operations
- Recommend headquarters [for command and control]
- Prepare COA statements and sketches
- **Course of Action Analysis (War-gaming)**

COA analysis (war-gaming) identifies which COA accomplishes the mission with minimum casualties while best positioning the force to retain the initiative. War-gaming is a disciplined process that staffs use to envision the flow of battle. Its purpose is to stimulate ideas and provide insights that might not otherwise be discovered. Effective war-gaming allows the staff to test each COA, identify its strengths and weaknesses, and alter it if necessary.

- **Course of Action Comparison**

During COA comparison, the staff compares feasible courses of action to identify the one with the highest probability of success against the most likely adversary COA and the most dangerous adversary COA. Each staff section evaluates the advantages and disadvantages of each COA from the staff section's perspective, and presents its findings to the staff. The staff outlines each COA in terms

of the evaluation criteria established before the war game and identifies the advantages and disadvantages of each with respect to the others.

- **Course of Action Approval**

After completing the COA comparison, the staff identifies its preferred COA and recommends it to the commander—in a COA decision briefing, if time permits. The concept of operations for the approved COA becomes the concept of operations for the operation itself. The IO concept of support for the approved COA becomes the IO concept of support for the operation. Once a COA is approved, the commander refines the commander's intent and issues additional planning guidance.

- **Orders Production**

Based on the commander's decision and final guidance, the staff refines the approved COA and completes and issues the OPLAN/OPORD. Time permitting, the staff begins planning branches and sequels.

Preparing for Information Operations

Preparation for information operations (IO) includes actions performed before execution to improve the ability to conduct both offensive and defensive IO. It includes revising and refining plans and orders, assessment, force protection, coordination and liaison, rehearsals, task organization and movements, preoperation checks and inspections, logistic preparations, and integration of new soldiers and IO-capable units. When a unit executing one mission receives a warning order for a follow-on mission, it begins preparing for that mission while executing its current mission.

Executing Information Operations

The complexity of information operations (IO) execution stems from IO's multiple elements with their diverse operational capabilities and requirements. The wide variance in the time IO elements need to achieve effects and the coordination required between echelons add complexity. Well-executed IO results in confused and demoralized adversary leaders and soldiers. It produces psychologically and electronically isolated adversary units incapable of mounting coordinated efforts. Often, adversary commanders are severed from their subordinates and powerless to counter Army force actions at the decisive point. ... [Effective] IO execution {includes}: staff coordination, assessing IO, decision-making, and other IO-related considerations.

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The current version of FM 3-13, Information Operations (28 Nov 2003), is available on line from the General Dennis J. Reimer Training and Doctrine Digital Library at:

atiam.train.army.mil/soldierPortal/atia/adlsc/view/public/7422-1/fm/3-13/toc.htm

Last Updated: October 2006.

Marine Corps Information Operations Doctrine



Key doctrinal documents:

- Marine Corps Order 3430.8, *Policy for Information Operations*, 19 May 1997 (Under revision)
- MCWP 3-40.4, *MAGTF Information Operations*, 9 Jul 2003.
- MCWP 3-40.2, *Information Management*, 24 Jan 2002. (Focuses on defensive measures).
- MCWP 3-40.5, *Electronic Warfare*, 10 Sep 2002.
- MCWP 3-40.6 Psychological Operations (Dual Designated w/ Army)
- MCRP 3-40.6A PSYOP tactics, techniques, and procedures (Dual Designated)
- MCRP 3-40.6B Tactical PSYOP TTP's (Dual Designated w/ Army)

Excerpts from the forthcoming “Small Wars/21st Century” (MCRP 3-33.3B)

“The focus of IO is on the individual decision makers and the decision making process. IO is the ability to adversely influence enemy decision making processes while enhancing and protecting their own. Therefore, for IO to be successful, it demands an ability to understand people, cultures, and motivations. In the context of maneuver warfare, IO attempts to disrupt the observe, orient, decision, action (OODA) loop of the enemy affecting his ability to act by causing the enemy to receive information that is inaccurate, incomplete, or received at an inopportune time.”

“IO covers the entire spectrum of warfare and is a key capability in small wars. Peacetime IO can be used to influence our adversaries through regional engagement and influence operations to help shape the strategic environment. Additionally, it can be used to impart a clearer understanding and perception of our mission and its purpose. In the pre-crisis stage, IO can help deter adversaries from initiating actions detrimental to the interests of the United States or its allies. Carefully conceived, coordinated, and executed, IO can make an important contribution to defusing crises; reducing the period of confrontation; and enhancing diplomatic, economic, military, and social activities, thereby forestalling and possibly eliminating the need to employ physical force. In the crisis stage, IO can be a force multiplier. During combat operations, IO can help shape the battlespace and prepare the way for future combat actions to accomplish the MAGTF's (Marine Air Ground Task Force) objectives. Once the crisis is contained, IO may help restore peace and order, and allow the successful termination of military operations.”

“The MAGTF may target hostile forces and their supporters in a given area with one message, and a different message in another area. It may also be necessary to influence the neutral component of the population to influence them in a positive way to support our allies and coalition partners. Obviously, the impact of each message is dependent upon a very nuanced understanding of current perceptions.”

“By operationalizing IO, and expertly employing defensive and offensive IO tactics, techniques and procedures, we can gain the initiative and achieve an informational advantage over our opponents. IO is

the cumulative effect of distinct functions integrated in order to create synergistic effects and act as a force multiplier. These functions, when combined with accurate and timely intelligence, form the basis of IO.”

Excerpts of Marine Corps Doctrine - MCWP 3-40.4 (9 Jul 2003)

Information Operations in Support of Expeditionary Warfare

“Marine Corps information operations (IO) support maneuver warfare through actions that use information to deny, degrade, disrupt, destroy or influence an adversary commander’s methods, means or ability to C2 his forces and to inform target audiences through informational activities. IO enhance the ability of the MAGTF to project power during peace and war. They complement and facilitate the traditional use of military force but in some instances may stand alone as a deterrent option. IO support the integration of situational awareness, operational tempo, influence, and power projection to achieve advantage.”

IO is an integrating concept that facilitates the warfighting functions of C2 (command and control), fires, maneuver, logistics, intelligence, and force protection. IO is not simply another “arrow” in the MAGTF commander’s quiver. IO is a broad-based capability that “makes the bow stronger.”

IO is multi-disciplined. Capabilities relevant to IO include, but are not limited to, the five core capabilities of IO, -- psychological operations (PSYOP), military deception (MILDEC), operations security (OPSEC), electronic warfare (EW), computer network operations (CNO), as well as the supporting and related capabilities. These include public affairs (PA), civil-military operations (CMO), and combat camera (COMCAM). IO conducted by MAGTFs support battlespace shaping, force enhancement, and force protection activities. IO will enhance the ability of the MAGTF to project power during peace and war, complementing and facilitating the traditional use of military force.

MAGTFs will execute IO to enable and enhance their ability to conduct military operations consistent with the Marine Corps’ capstone concept, *Expeditionary Maneuver Warfare (EMW)*. The MAGTF can support joint and multinational enabling by serving as an adaptive cornerstone force-bringing flexible command, control, communications, computers, and intelligence (C4I) systems that allow a joint or coalition force to be assembled in an expeditionary environment. Marines also bring unique capabilities, such as the electronic attack (EA)-6B Prowler aircraft and the Mobile Electronic Warfare Support System, adding to the combat power of the joint force. The Communications Emitter Sensing and Attack System (CESAS) is taking over some of the EA mission for the Radio Battalions. The MAGTF will frequently rely on national level agencies and other service components for certain offensive and defensive IO related capabilities.

IO can increase strategic agility by utilizing the reach back capability of MAGTF command, control, communications, and computers (C4) systems thus allowing the MAGTF to draw upon information sources outside its area of operations. IO can extend operational reach through informational and media activities that unify power projection with influence projection. IO can increase tactical flexibility by providing the MAGTF commander with a range of both lethal and nonlethal options. Finally, IO can enhance support and sustainment by enabling power projection against distant targets without increasing the MAGTF’s footprint ashore.

Principles

- *IO is an integral function of the MAGTF.*
- *MAGTF IO is focused on the objective.*
- *The MAGTF commander’s intent and concept of operations determine IO targets and objectives.*

- *MAGTF IO must be synchronized and integrated with those of the higher and adjacent commands*
- *MAGTF IO is supported by the total force.*
- *Many different capabilities and activities must be integrated to achieve a coherent IO strategy.*
- *Intelligence support is critical to the planning, execution, and assessment of IO.*

Offensive and Defensive Operations

- **Offensive IO** objectives must be clearly established. They must support overall national and military objectives and include identifiable indicators of success. Selection and employment of specific offensive capabilities against an enemy must be appropriate to the situation. Offensive IO may be the main effort, a supporting effort or a phase in the MAGTF operation. Offensive IO objectives include the following:
 - Influence the adversary commander's estimate of the situation.
 - Slow the adversary's tempo of operations.
 - Degrade the adversary commander's decision cycle for planning and executing operations.
 - Disrupt the adversary commander's ability to generate and focus combat power.
- **Defensive IO** ensure timely, accurate, and relevant information access while denying the enemy the opportunity to exploit friendly information and information systems for its own purposes. Since it is a practical impossibility to defend every aspect of the infrastructure and every information process, defensive IO provide the essential and necessary protection and defense of information and information systems upon which the MAGTF depends to conduct operations and achieve objectives.

The basis for defensive IO planning is the conduct of OPSEC, C4 vulnerability analysis, identification and protection of essential elements of friendly information, and the generation of the restricted frequency list.

The objectives of defensive IO include the following:

- Sustain the MAGTF commander's freedom of action.
- Reduce the adversary's ability to affect friendly C2.
- Minimize friendly C2 system vulnerabilities to adversary C2 attack through the employment of adequate physical, electronic, information, and OPSEC measures.
- Minimize friendly mutual interference on friendly C2 and unintended third parties throughout the electromagnetic spectrum.
- Minimize the effects of adversary perception management activities.

Operational Focus. The primary focus of MAGTF IO activities will be at the operational and tactical levels of war.

Staff Responsibilities

- The G-3/S-3 is responsible for IO. The future operations section is responsible for overseeing the planning and coordination of the IO effort. The MAGTF IO officer, within G-3/S-3 future operations, is responsible for:
 - The broad integration and synchronization of IO efforts.
 - Responding directly to the G-3/S-3 for MAGTF IO.

- Ensuring that the IO cell provides input to the operational planning team (OPT) during planning to ensure coordinated operations.
 - Preparing the IO appendix to the operation order (OPORD).
 - Overseeing the core personnel within the IO cell as well as augmentees from external agencies.
 - Ensuring that all IO matters are coordinated within the MAGTF staff, higher headquarters, and external agencies.
- The electronic warfare officer (EWO) integrates EW operations through the EW coordination center or the IO cell when established.

Information Operations Cell

The IO cell is a task-organized group that is established within a MAGTF and/or higher headquarters to integrate a variety of separate disciplines and functions pertaining to IO for the command. A fully functioning IO cell integrates a broad range of potential IO actions and related activities that contribute to accomplishing the mission. IO integration requires extensive planning and coordination among all the elements of the staff. The IO cell, when established, is a mechanism for achieving that coordination.

Information Operations Capabilities

- **Overview.** IO include all action taken to affect enemy information and information systems while defending friendly information and information systems. IO are focused on the adversary's key decision-makers. IO are conducted during all phases of an operation, across the range of military operations, and at every level of war.

Note: The following *descriptions* are presented vice the *definitions* which in most cases are the respective Joint definitions found in JP 1-02.

- **Deception.** Military deception targets enemy decision makers by targeting their intelligence collection, analysis, and dissemination systems. Deception requires a thorough knowledge of adversaries and their decision making processes. Military deception is focused on achieving a desired behavior, not simply to mislead. The purpose is to cause adversaries to form inaccurate impressions about friendly force capabilities or intentions by feeding inaccurate information through their intelligence collection or information assets. The goal is to cause the adversary to fail to employ combat or support units to their best advantage.
- **Electronic warfare** is any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or the attack the enemy. The three major subdivisions within EW are: electronic attack (EA), electronic protection (EP), and electronic warfare support (ES). (JP 1-02)
- **Operational Security.** OPSEC is the key to information denial. It gives the commander the capability to identify indicators that can be observed by adversary intelligence systems. These indicators could be interpreted or pieced together to derive critical information regarding friendly force dispositions, intent, and/or COAs that must be protected. The goal of OPSEC is to identify, select, and execute measures that eliminate or reduce indications and other sources of information, which may be exploited by an adversary, to an acceptable level.
- **Psychological Operations** (PSYOP) are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. (JP 1-02). See also MCWP 3-40.6 (formerly FMFM 3-53), *Psychological Operations*....Note: The Marine Corps is standing up a Tactical PSYOP Team (TPT) that will be attached to each Marine Expeditionary Unit

(MEU). It will consist of one officer and three enlisted, and concerned solely with tactical PSYOP. If requested, external PSYOP support at echelons higher than the MEU may be provided by the US Army's 4th Psychological Operations Group (POG).

- **Computer Network Operations.** CNO support C2 by facilitating the decision making process by providing communication and information systems that are reliable, secure, timely, and flexible. CNO protect information and information processes through computer network defense and IA activities. CNO may also be used to attack or exploit an adversary's information systems through computer network attack or exploitation. The Marine cryptologic support battalion or the RadBn may be tasked to support CNO activities. While the MAGTF does not have a computer network attack (CNA) force, it must be aware of available joint capabilities. Additionally, the MAGTF must be prepared to defend against the CNA threat posed by the adversary.
- **Physical Attack** applies friendly combat power against the enemy. It reduces enemy combat power by destroying enemy forces, equipment, installations, and networks. Within IO, physical destruction is the tailored application of combat power to achieve desired operational effects.
- **Information Assurance.** IA is information operations that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. (JP-02). IA capabilities include information security.
- **Physical Security** contributes directly to information protection. Information, information-based processes, and information systems—such as C4 systems, weapon systems, and information infrastructures— are protected relative to the value of the information they contain and the risks associated the compromise or loss of information.
- **Counterintelligence.** The principal objective of CI is to assist with protecting friendly forces. CI is the intelligence function concerned with identifying and counteracting the threat posed by hostile intelligence capabilities and by organizations or individuals engaged in espionage, sabotage, subversion or terrorism. CI enhances command security by denying adversaries information that might be used against friendly forces and to provide protection by identifying and neutralizing espionage, sabotage, subversion or terrorism efforts. CI provides critical intelligence support to command
- **Public Affairs.** The PA mission is to provide timely, accurate information to Marines and the general public and to initiate and support activities contributing to good relations between the Marine Corps and the public. PA expedites the flow of accurate and timely information to internal and external audiences. In peacetime, PA provides Marine and the general public with information that increases public understanding of the Marine Corps' roles and missions. PA efforts can have positive as well as negative impacts within the battlespace and the consequences of its use can have a strategic effect on the mission.
- **Civil-Military Operations.** Each military operation has a civil dimension. The civil dimension requires that commanders consider how their actions affect, and are affected by, the presence of noncombatants. Accordingly, CMO have become an integral element of military operations. Through careful planning, coordination, and execution, CMO can help the MAGTF win by shaping the battlespace, enhancing freedom of action, isolating the enemy, meeting legal and moral obligations to civilians, and providing access to additional capabilities.

Intelligence Support to Planning. Intelligence provides the essential basis for planning IO through the following considerations:

- The adversary commander's freedom of action and the freedom of action allowed to subordinates including adversary perceptions of the situation and developments.
- Adversary IO capability, intent, morale, and vulnerability to offensive IO.
- C2 aspects such as key personnel, target audiences, headquarters, communications nodes, databases or intelligence collection systems. C2 nodes that appear in more than one adversary COA should be highlighted for targeting.
- Assessments of friendly vulnerability to adversary IO.

Similar intelligence products support each of the various IO capabilities; for example, OPSEC, PSYOP, deception, EW, CNO, CI, physical attack, physical security, IA. The intelligence requirements for each capability are interrelated.

Updated: September 2006.

Navy Information Operations Doctrine



Key doctrine and tactics, techniques, and procedures

- NWP 3-13, *Navy Information Operations*, June 2003
- NTTP 3-13.1, *Theater and Campaign Information Operations*, January 2002
- NTTP 3-13.2, *Navy IO Warfare Commander's Manual*, June 2001 (updated December 2003)
- Core Capabilities:
 - NTTP 3-51.1, *Navy Electronic Warfare (draft)*
 - TACMEMO 3-13.2-03, *Psychological Operations for Navy Planners*, October 2003
 - NTTP 3-54.3, *Navy Operations Security*, July 2005
 - NTTP 3-58.1, *Multi-Service Military Deception (draft)*
 - NTTP 3-58.2, *Navy Military Deception*, August 2003 (updated December 2005)
 - NTTP 3-13.1.15, *Multi-Service Reprogramming*, January 2003
 - TACMEMO 3-13.1-03, *Computer Network Defense for Strike Groups*, October 2003
- **NWPs, NTTPs, and TACMEMOs are available at:** <http://www.nwdc.navy.smil.mil> under the Navy Warfare Library link.

Summary of Navy IO Doctrine and Concepts

Introduction

The United States (U.S.) has experienced a shift from strictly symmetric, or force-on-force, warfare to more asymmetric warfare and military operations other than war (MOOTW). Today's adversaries rely on asymmetric operations such as terrorism, disinformation, and propaganda campaigns to circumvent or undermine U.S. and allied strengths and exploit friendly vulnerabilities. IO has evolved from command and control warfare (C2W) as new capabilities and vulnerabilities for affecting the adversary and protecting friendly decision makers emerge. Concepts and methods of organizing, planning, and conducting IO are refined on a routine basis during exercises and daily operations. Rapid advances in information technology provide today's military with unparalleled abilities to collect, process, and disseminate information. Technological advances have also increased the commander's vulnerability as a target for adversary information collection, shaping, and attack. IO is increasingly important for managing vulnerabilities and countering emergent threats.

Information Operations Fundamentals

Maritime Power Projection

No one can predict with certainty the future security environment, but emerging trends require that the Navy focus on the littorals and the land beyond. The Navy must remain expeditionary in nature, controlling the sea and moving around the globe to support U.S. national interests. The vision for the future is a Navy and Marine Corps team that will maintain a robust and credible forward presence. These forces provide a framework that

complements other instruments of national power to build stability and favorably shape areas overseas. Forward presence, combined with knowledge superiority within the environment, will achieve the ultimate objective—maritime power projection (see figure below)—projecting U.S. power and influence from the sea, directly and decisively influencing events ashore.

Environment control and attack are two ways, both enabled by IO, to attain forward presence and knowledge superiority. Environment control encompasses the range of actions required to assure U.S. access and shape the environment to support the commander. Future Navy forces will continue to face adversaries outside the generally accepted force-on-force environment of the past, as adversaries strive to circumvent or undermine U.S. military strengths and exploit friendly vulnerabilities. Naval forces are challenged by asymmetric operations in all domains —surface, subsurface, air, and cyberspace—and must therefore defend against, defeat, deny, or negate the capabilities that will be used to prevent U.S. freedom of access. Attack exploits the advantages of maneuver and firepower from the sea. The speed of employment afforded by information superiority and networked forces will permit U.S. forces to project power deep inland. Network-centric operations link shooters, sensors, and commanders and permit effects-based planning in order to provide the knowledge required to rapidly attack an adversary’s critical vulnerabilities, avoid its strengths, and destroy or shape its center of gravity. Improving the speed and reliability of the information in the local and global information grids ensures that the commander can deliver attacks for desired effects.

Information Superiority

Information superiority, a relative quality not readily measured, embodies the ability to collect, process, and disseminate the correct information to the right person, at the right place and time, in the right form, while denying an adversary the ability to do the same. Adoption of network-centric operations can foster information superiority, but only with high-value information shared in the network. There are five dimensions of information that determine whether or not information is of value to the commander. These are:

- Accuracy - the degree to which the information reflects the actual situation.
- Relevance - the degree to which the information is applicable to the situation.
- Timeliness - the degree to which the information is available in time to affect the decision.
- Usability - the degree to which the information is in a format easily understood by the decision maker.
- Completeness - the degree to which all the information required by the decision maker is available.

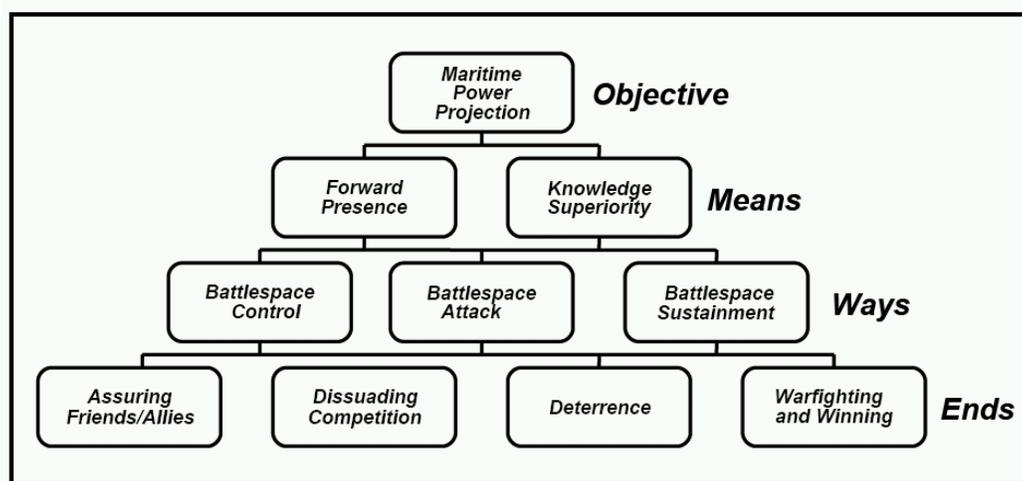


Figure 1. Supporting Maritime Power Projection

IO achieves information superiority by corrupting, deceiving, delaying, denying, disrupting, degrading, or destroying one of the dimensions of information before it is presented to the adversary's commander, while protecting the same friendly information dimensions. This superiority contributes to the ability to project maritime power forward from the sea, and ultimately to have full-spectrum dominance. All echelons strive for and plan to achieve and maintain information superiority. This temporary state may exist in some areas of the environment and not others. It requires a coordinated effort among the operations, intelligence, and command, control, communications, and computers (C4) staffs to achieve information superiority.

Core Capabilities of Information Operations

IO includes actions taken to influence, affect, or defend information, information systems, and decision making. The Chief of Naval Operations (CNO) has established IO as a warfare area within the Navy aimed at protecting and defending our decision-making processes and attacking adversaries decision-making processes by affecting or protecting the accuracy, usability, timeliness, completeness, or relevance of information used by the decision maker in selecting a COA. IO includes EW, Computer Network Operations (CNO), PSYOP, MILDEC, and OPSEC. Supporting capabilities of IO include physical attack, physical security, information assurance, PA, civil-military operations, legal affairs, meteorology, intelligence, cryptology, and oceanography.

IO is an integral part of the Navy planning and targeting process. From guiding effects-based planning in the earliest stages to the weaponeering assessment phase of the targeting cycle, IO planners can assist in determining the right mix of maneuver, and kinetic/nonkinetic weapons that will produce the commander's desired effect. In addition to offering non-kinetic options to traditional strike warfare, IO plans often require the use of strike group maneuver (concentration of forces and presence), kinetic strikes, and special operations warfare to deny, disrupt, destroy, or degrade information systems to attain overall campaign objectives. While each capability of IO includes a specialized planning process and can be applied to military operations individually, their coordinated application maximizes friendly advantages.

Target Set

Warfighters win engagements and wars when the adversary makes a decision—based on knowledge derived from true or perceived information—to surrender, due to an inability to obtain desired objectives. Friendly forces design all campaign plans to influence the adversary to make such a decision. The people and systems that comprise the information grids filter and process the information upon which the commander bases decisions, and therefore require defending as part of IO planning. IO influences the information in the grids to achieve the ultimate goal of influencing the decision maker to behave in a manner that supports the commander's campaign plan. IO plans affect the accuracy, timeliness, relevance, usability, or completeness of information entering the adversary information grids so that the adversary decision maker makes decisions based on information favorable to U.S. desires. Identifying the adversary decision maker through the efforts of the command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) and operations communities requires a detailed understanding of adversary strengths and weaknesses, organization, doctrine, and decision-making processes.

Environment Awareness and Shaping

EAS describes the functions performed by the IO organization to ensure that, despite the wide range of non-lethal and lethal means at the disposal of adversaries or potential adversaries, friendly forces are consistently capable of conducting decisive operations and achieving desired results at minimal loss to friendly forces. The commander uses EAS to identify, protect, and leverage critical information systems, emissions, transmissions, and operational indicators, to achieve and maintain information superiority.

Environment Awareness

U.S. presence throughout the world makes it imperative that the military, especially forward deployed forces,

be keenly aware of the operating environment and IO capabilities of allies and potential adversaries. Today's information-rich and technologically advanced environment has broadened the commander's environment as more information has been made available through the information grids.

Environment awareness results from the continuous process of monitoring IO within an AOR; conducting capability versus vulnerability studies with regard to the operational environment; and reporting on significant events or changes. Environment awareness equates to knowledge of the operational environment. This knowledge, resulting from the fusion of key elements of information, allows the commander and staff to correctly anticipate future conditions, assess changing conditions, establish requirements and priorities, and exploit emerging opportunities, while mitigating the impact of unexpected adversary actions.

Network centric operations (NCO) will increase the Navy's overall environment awareness by overcoming the limitations of stand-alone sensors. NCO, enabled through IO, will create a Navy capable of maritime power projection, ensuring access to the littoral areas and deterring conflict through the employment of a network of sensors and communication devices that provide the Navy with real-time, shared awareness in support of operational objectives. NCO enables the force by applying speed in information gathering and sharing, and converting information into knowledge, command, and timely application of effects.

Each echelon of command is responsible for maintaining environment awareness and providing input into ongoing environment-shaping efforts. The higher the echelon of command, the broader the scope of data needed to maintain environment awareness.

Environment Shaping

Environment shaping is the conscious action of molding the environment to prevent conflicts or placing U.S. interests in a favorable position. It provides the foundation of the force commander's message. From a posture of forward presence, the Navy advances national security policy by applying sea power through the fleet or Navy component commander to help shape the international environment via deterrence, peacetime engagement activities, and active participation and leadership in alliances. Environment shaping is the continual process of developing, evaluating, and revising the force operational profile within the environment, providing all warfare commanders with critical planning and execution support to ensure that missions are conducted with the least risk to friendly assets. Environment shaping encompasses all actions taken, including those by PA and CA in both the electronic and physical domains to convey, deny, or protect selected information and images.

Navy Information Operations Employment Concept

Sea Power 21 describes future naval operations that will use information superiority and dispersed, networked force capabilities to deliver effective offensive power, defensive assurance, and operational independence to joint force commanders. To support Sea Power 21, the Navy's focus is to integrate and align IO to support all levels of operations:

- At the strategic level, national leadership and regional commanders will use IO to achieve national/theater shaping and influencing objectives. Regional commanders will integrate Navy IO capabilities with other Services, other U.S. government departments and agencies, and partner nations as part of their Theater Security Cooperation Plans (TSCP). At this level, IO is a key element of effects-based operations.
- At the operational level, IO supports campaign/major operational objectives by providing information superiority through shaping and controlling the information environment. At this level, the focus of IO is control of adversary lines of communication (logistics information, command and control, and related capabilities and activities) while protecting the friendly information environment.

- At the tactical level, Navy IO will make full use of the core capabilities to dominate the information environment for the commander. At this level, IO will be used to tactically influence adversaries; or deny, destroy, or degrade systems critical to the adversary's conduct of operations.

Operational Level	IO is...	IO Objectives	Navy Role	Impact
Strategic (National and Theater)	Key element of national and theater shaping operations	Influence nations/potential adversaries/decision makers globally or in a specific region(s). Support diplomacy, stabilize regions, and assure allies. Deter war. Support intelligence preparation of the environment, and shape environment to U.S. advantage.	Support TSCPs through presence, public affairs, port calls, multinational exercises, peace operations, Navy IO support to strategic communications Guided by the regional combatant commander (RCC) and Navy component commander (NCC).	Demonstrate that the U.S. is engaged in the region and can project power. Demonstrate that the U.S. military can project power anywhere in region. Prepare intelligence baseline for future ops.
Operational	Operations to decisively defeat adversary ability to control forces.	Shape and control information environment. Use spectrum of IO core capabilities to conduct (or support) force application, deny adversary intelligence, surveillance, reconnaissance (ISR) and command, control, communications, computers (C4). Support information superiority. Protect friendly information environment.	Continuing strategic roles plus applying Navy IO capabilities and weapons (OPSEC, CNO, MILDEC, EW) to attack adversary C4 and ISR and PSYOP to influence adversary forces/populations. Directly support conduct of joint or maritime operations/force projection. Guided by NCC or joint force maritime component commander (JFMCC) if a joint task force is established.	Support information superiority for the joint force commander. Control information environment by influencing, disrupting, or corrupting adversarial human and automated decision-making.
Tactical	Navy warfare area - IO warfare commander controlling EW, PSYOP, MILDEC, CNO, OPSEC capabilities embedded in Navy forces.	Control tactical information environment. Disrupt adversary operations. Undermine adversary ability and will to fight. Disrupt adversary C4, ISR and defensive systems. Protect the naval/joint battle force.	During initial phases of a campaign, Navy forces may have the preponderance of tactical IO assets. These capabilities are applied to support commander's objectives, and tactical operations. Guided by strike group commander.	Achieve/maintain decision superiority, control environment, achieves operational objectives of the JFMCC and tactical objectives of the strike group commander.

The following key organizational concepts are being implemented to affect the operational model summarized above:

Joint Force Maritime Component Commander Level – IO Cell [extract from TACMEMO 3-32-03 (JFMCC)]

The JFMCC IO Cell contributes to the shaping of the environment to enable tactical units to successfully execute assigned tasks. To have greatest effect, IO should be initiated well before the start of other operations and continue after decisive operations are concluded. IO actions occur at all levels of government (political strategic, military strategic, operational and tactical) and are a continuous effort. It is vital to the success of IO that JFMCC coordinate planning and execution with other military and government agencies.

The IO cell plans IO actions to achieve JFMCC objectives. JFMCC IO supports JFC and other component efforts with the aid of interoperable collaborative planning tools. One planning tool suite is the Information Warfare Planning Capability (IWPC), which will evolve into IO Planning Capability Joint (IOPC-J).

During mission analysis the status of ongoing IO actions to shape the environment should be briefed to determine if such actions should be intensified or otherwise modified. The inclusion of IO considerations at the start of planning and task development will also influence the targeting process. The IO cell representative should ensure that the objectives are written so as not to specify the method to be used to achieve an objective.

The skill sets required to plan IO are unique and need to be present in the IO cell. As such, the IO cell consists of IO planners, subject matter experts/planners for each IO capability, Special Information Operations planners and intelligence support to include targeteers specific to IO.

The IO Cell coordinates with the other JFMCC staff cells (i.e. horizontally) and with the IO cells of the other components and other government agencies through the JFC IO staff (i.e. vertically). The IO cell works with elements of both the common operational picture (COP) cell and the Future Operations (FUOPS) cell.

The IO cell provides planners to participate in operational planning teams (OPTs) established in the FUOPS cell. They will ensure the IO plan that incorporates the salient details for each applicable IO capability, and is integrated and deconflicted with the overall JFMCC plan. The IO planner will provide guidance to the subject matter experts for each IO capability in the IO cell to develop appropriate actions. The IO planner will integrate these actions into a composite plan and with IO cell director approval represent the IO contribution to the FUOPS OPT as they are formed. Multiple planning efforts/OPTs may occur at the same time in the FUOPS. The IO planner must ensure IO as a contributing part to one planning effort does not conflict with IO portion of another due to the long-term nature of some of the IO actions.

- **Strike Group Level - The IO Warfare Commander (IWC)**

The IWC is responsible to the force commander for protection of the force against hostile information, information systems, and electronic attacks, as well as hostile propaganda and deceptive techniques. The IWC is also responsible to the force commander for using IO to support all force plans and evolutions; coordinating this effort with theater and joint task force (JTF) IO and IO planners; and disseminating IO surveillance data to the force to ensure an information advantage at critical times in the battle. The IWC establishes and maintains the tactical IO picture through environment awareness and shaping, mission-oriented planning, and execution and monitoring of plans.

Specific areas of responsibility:

- The IWC controls force emitters for the OTC/CWC, releasing control of applicable systems through emissions control (EMCON). Additionally, the IWC controls all information and information systems for the force commander, releasing them through information conditions (INFOCON). Therefore, radars, acoustic emitters, information, information systems, and communications are within the IWC's sphere of responsibility. The IWC is responsible for maintaining a favorable tactical situation (TACSIT), and protecting and crafting the desired force operational profile and signature.
- The IWC directs the employment of numerous SG IO capabilities for the force commander. These capabilities include deception, electronic attack, communications, sensors, combat systems and applications, PSYOP broadcasts, and product dissemination.

- The IWC is responsible for the core IO staff and the efforts of IO personnel throughout the force who contribute to IO planning and execution.
- **Shore Support - Network Operations, Information Operations, and Space Center**

COMNAVNETWARCOM has established the Network Operations (NETOPS), IO, and Space Center (NIOSC) as the focal point for providing comprehensive IO support to joint force maritime component commanders (JFMCCs) and strike groups engaged in deliberate/crisis planning and targeting. Watch personnel assigned to the Navy Global Network Operations And Security Center (NAVGNOSEC), Navy Computer Incident Response Team (NAVCIRT), Navy Space Operations Command (NAVSOC) and Navy Information Operations Command-Norfolk Maritime Integration Center (MIC) report to the NIOSC to ensure IO is coordinated and integrated across NETWARCOM mission areas.

Supporting Activities

- **Public Affairs**

PA plays a large role in supporting IO in all operations. A commander can utilize PA to expedite the flow of accurate and timely information to a real or potential adversary. IO coordination with PA may include ensuring critical information protection for a certain period of time in order to minimize the risk to friendly forces, or countering adversary propaganda. PA, CA, and PSYOP may use the same media to communicate similar or, in some cases, identical messages to different audiences. While CA and PSYOP address local populations and adversary forces, PA operations are directed toward U.S. forces, and U.S. and international media. Care must be taken to avoid disseminating contradictory information via the CA, PSYOP, and PA channels.

- **Civil Affairs and Civil Military Operations**

CA encompasses activities that the military commander employs to establish and maintain relationships with civil authorities, general populations, resources, and institutions in friendly, neutral, or hostile areas. They support the commander's regional strategy and long-term goals by strengthening the capabilities of a host nation (HN) to effectively apply its indigenous resources to mitigate or resolve instability, privation, or unrest. CA and PSYOP are mutually supportive within civil-military operations (CMO). During MOOTW, PSYOP supports various CA activities (e.g., establishes population control measures) to gain support for the HN government in the international community and to reduce support or resources for those destabilizing forces threatening legitimate processes of the HN government. CA personnel and forces can advise commanders on the most effective military efforts to support friendly or HN civilian welfare, security, and developmental programs; PSYOP maximizes these efforts through information products and programs. PSYOP publicizes the existence or successes of these CMO activities to generate target population confidence in, and positive perception of, U.S. and HN actions.

Integrating Information Operations

Escalating to conflict requires rapid transition from daily EAS to detailed, integrated planning with other staff codes, commands, services, and agencies. The IO cell (at JFMCC and strike group levels) needs to quickly define the support available to ensure that the commander can attain the campaign objectives, capitalizing on experience and ongoing shaping efforts. The primary focus of Navy IO planning occurs at the operational level on the JFMCC staff. The primary force for executing the IO plan in daily shaping operations or in conflict occurs at the tactical level under the direction of the Carrier and Expeditionary strike group commanders.

Forward-deployed fleet, and strike group commanders rely on small cadres of IO professionals on their staffs to conduct EAS on a daily basis. IO staffs are augmented with IO planners and operators, provided by the NIOCs. The IO staff operates closely with the operations department for IO execution and consists of the IO officer, and personnel with expertise in the areas of EW, OPSEC, computer network operations, MILDEC planning, PSYOP, targeting, and ELINT analysis.

The IO planning cell at any level — made up of the IO staff, select command representatives, and liaison officers from other commands and agencies—integrates capabilities and related activities within staff sections to ensure that the IO plan supports the commander’s overall campaign plan. Effective IO planning, execution, and monitoring require dedicated coordination with PA, CA, intelligence and cryptology, meteorology, oceanography, Judge Advocate General Corps, communications, and combat systems experts. Personnel in these areas provide crucial information to support the development of IO plans and measures of effectiveness.

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Last Updated: September 2006.

Air Force Information Operations Doctrine



Key doctrinal documents:

AFDD 2–5, *Information Operations*, 11 January 2005

AFDD 2–5.1, *Electronic Warfare Operations*, 5 November 2002

AFDD 2–5.3, *Public Affairs Operations*, 24 June 2005

AFDDs are available at: <https://www.doctrine.af.mil/> and <http://afpubs.hq.af.mil>.

Excerpts of Air Force Doctrine - AFDD 2-5

Forward

The Air Force recognizes the importance of gaining a superior information advantage—an advantage obtained through information operations (IO) fully integrated with air and space operations. Today, gaining and maintaining information superiority are critical tasks for commanders and vital elements of fully integrated kinetic and nonkinetic effects-based operations. Information operations are conducted across the range of military operations, from peace to war to reconstitution. To achieve information superiority, our understanding and practice of information operations have undergone a doctrinal evolution that streamlines the focus of IO to improve the focus on warfighting.

The new framework of information operations groups the capabilities of influence operations, electronic warfare operations, and network warfare operations according to effects achieved at the operational level. Each of these capabilities consists of separate and distinct subcapabilities that, when combined and integrated, can achieve effects greater than any single capability. Integrated Control Enablers (ICE) is a new term used to define what was formerly expressed as information-in-warfare, or IIW. As our understanding of IO has advanced we have come see that ICE are not IO, but rather the “gain and exploit” capabilities that are critical to all air, space, and information operations. This new framework reflects the interactive relationship found between the defend/attack and the gain/exploit capabilities in today’s Air Force.

Foundational Doctrine Statements

Foundational doctrine statements are the basic principles and beliefs upon which AFDDs are built.

- Information operations (IO) are integral to all Air Force operations and may support, or be supported by, air and space operations.
- The thorough integration of kinetic and nonkinetic air, space, and information capabilities provides the Air Force with a comprehensive set of tools to meet military threats.
- The Air Force defines information superiority as the degree of dominance in the information domain which allows friendly forces the ability to collect, control, exploit, and defend information without effective opposition.

- Decision superiority is about improving our capability to observe, orient, decide, and act (OODA loop) faster and more effectively than the adversary. Decision superiority is a relationship between adversary and friendly OODA loop processes.
- The three IO capabilities—influence operations, electronic warfare operations, and network warfare operations—while separate and distinct, when linked, can achieve operationally important IO effects. Effective IO depends on current, accurate, and specialized integrated control enablers (ICE) to provide information from all available sources.
- Information operations conducted at the operational and tactical levels may be capable of creating effects at the strategic level and may require coordination with other national agencies.
- IO should be seamlessly integrated with the normal campaign planning and execution process. There may be campaign plans that rely primarily on the capabilities and effects an IO strategy can provide, but there should not be a separate IO campaign plan.
- IO applications span the spectrum of warfare with many of the IO capabilities applied outside of traditional conflict. IO may offer the greatest leverage in peace, pre-conflict, transition-to-conflict, and reconstitution.
- Air Force IO may be employed in non-crisis support or military operations other than war (MOOTW) such as humanitarian relief operations (HUMRO), noncombatant evacuation operations (NEO), or counterdrug support missions where Air Force elements are subject to asymmetric threats that could hinder operations or place forces at risk.
- IO presents additional challenges in effects-based planning as there are many variables. Many of these variables have human dimensions that are difficult to measure, may not be directly observable, and may also be difficult to acquire feedback.

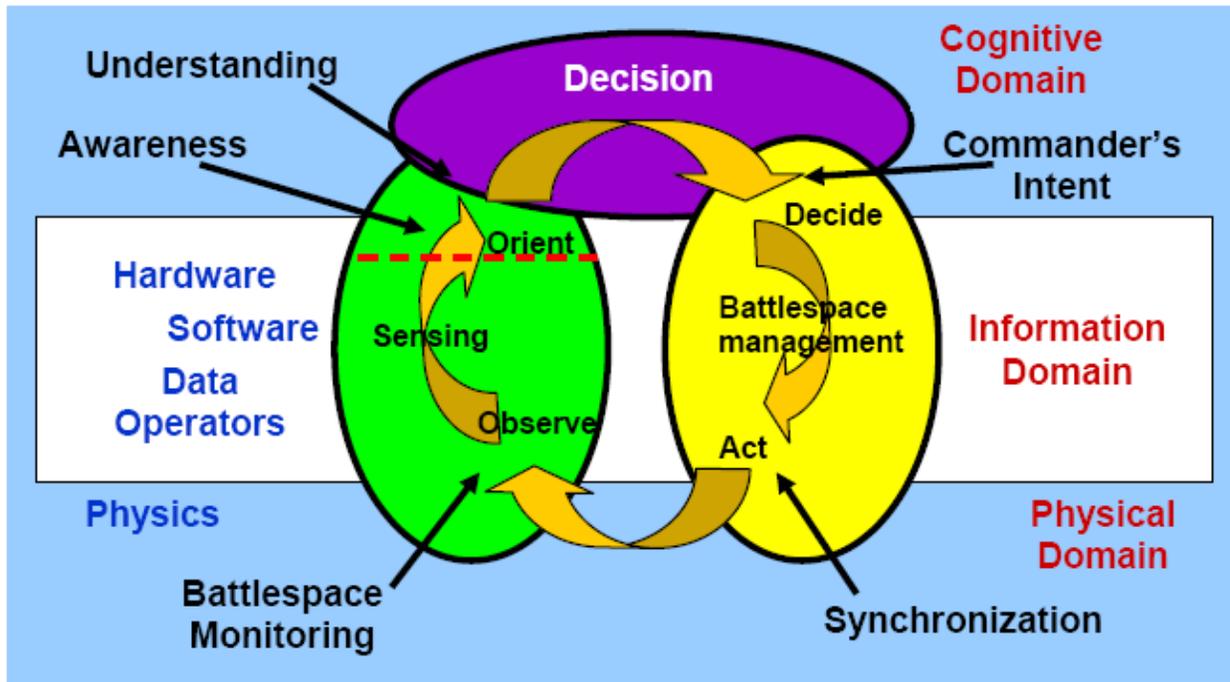
1. The Nature of Information Operations

General Information operations (IO) are the integrated employment of the capabilities of influence operations, electronic warfare operations, and network warfare operations, in concert with specified integrated control enablers, to influence, disrupt, corrupt, or usurp adversarial human and automated decision making while protecting our own. Information operations provide predominantly nonkinetic capabilities to the warfighter. These capabilities can create effects across the entire battlespace and are conducted across the spectrum of conflict from peace to war and back to peace. Information superiority is a degree of dominance in the information domain which allows friendly forces the ability to collect, control, exploit, and defend information without effective opposition. Information superiority is a critical part of air and space superiority, which gives the commander freedom from attack, freedom to maneuver, and freedom to attack. Information operations (IO) are integral to all Air Force operations and may support, or be supported by, air and space operations. IO, therefore, must be integrated into air and space component operations in the same manner as traditional air and space capabilities.

Warfare in the Information Age Warfare in the information age has placed greater emphasis on influencing political and military leaders, as well as populations, to resolve conflict. Information technology (IT) has increased access to the means to directly influence the populations and its leaders. IT has distributed the process of collection, storage, dissemination, and processing of information. The Air Force goal is to leverage this technology to achieve air, space, and information superiority and to be able to operate in a faster decision cycle (decision superiority) than the adversary. Decision superiority is a competitive advantage, enabled by an ongoing situational awareness, that allows commanders and their forces to make better-informed decisions and implement them faster than their adversaries can react. Decision superiority is about improving our ability to observe, orient, decide, and act (OODA loop) faster and more effectively than the adversary. *Joint Vision 2020* describes it as “better decisions arrived at and implemented faster than an opponent can react, or in a non-combat situation, at a tempo that allows the force to shape the situation or react to changes and accomplish its mission.” Decision superiority is a relationship between adversary and friendly OODA loop processes. Decision superiority is more likely to

be achieved if we plan and protect our OODA loop processes in conjunction with analyzing, influencing, and attacking the adversary's.

The Information Environment [The information environment can be modeled as the interaction of the physical, information, and cognitive domains as shown below.]



This model provides a means to understand the IO environment. It also provides a logical foundation for the IO capabilities of influence operations, network warfare operations, and electronic warfare operations. All activities in the physical environment have effects in the cognitive environment. Electronic warfare operates in the electromagnetic spectrum, although it creates effects across the range of the IO operating environment. Network warfare operations are focused on the information domain, which is composed of a dynamic combination of hardware, software, data, and human components. Influence operations are focused on affecting the perceptions and behaviors of leaders, groups, or entire populations. The means of influencing can be physical, informational, or both. The cognitive domain is composed of separate minds and personalities and is influenced by societal norms, thus the cognitive domain is neither homogeneous nor continuous.

Societies and militaries are striving to network this “information domain” with the objective of shortening the time it takes for this distributed observe, orient, decide, and act process to occur. It also allows us to automate certain decision processes and to build multiple decision models operating simultaneously. In essence, the information domain continues to expand. New technology increases our society’s ability to transfer information as well as an adversary’s opportunity to affect that information. Information operations are not focused on making decision loops work; IO focuses on defending our decision loops and influencing or affecting the adversary’s decisions loops. This integration of influence, network warfare, and electronic warfare operations to create effects on OODA loops is the unifying theme of IO. Whether the target is national leadership, military C2, or an automated industrial process, how the OODA process is implemented provides both opportunities and vulnerabilities.

The three IO capabilities—influence operations, electronic warfare operations, and network warfare operations—while separate and distinct, when linked, can achieve operationally important IO effects. In addition, effective IO depends on current, accurate, and specialized integrated control enablers (ICE) to provide information from all available sources. The thorough integration of kinetic and nonkinetic air,

space, and information capabilities provides the Air Force with a comprehensive set of tools to meet military threats.

Influence Operations Influence operations are focused on affecting the perceptions and behaviors of leaders, groups, or entire populations. Influence operations employ capabilities to affect behaviors, protect operations, communicate commander's intent, and project accurate information to achieve desired effects across the cognitive domain. These effects should result in differing behavior or a change in the adversary's decision cycle, which aligns with the commander's objectives. The military capabilities of influence operations are psychological operations (PSYOP), military deception (MILDEC), operations security (OPSEC), counterintelligence (CI) operations, counterpropaganda operations and public affairs (PA) operations. Public affairs, while a component of influence operations, is predicated on its ability to project truthful information to a variety of audiences.

Network Warfare Operations Network warfare operations are the integrated planning, employment, and assessment of military capabilities to achieve desired effects across the interconnected analog and digital network portion of the battlespace. Network warfare operations are conducted in the information domain through the combination of hardware, software, data, and human interaction. Networks in this context are defined as any collection of systems transmitting information. Examples include, but are not limited to, radio nets, satellite links, tactical digital information links (TADIL), telemetry, digital track files, telecommunications, and wireless communications networks and systems. The operational activities of network warfare operations are network attack (NetA), network defense (NetD) and network warfare support (NS).

Electronic Warfare Operations Electronic warfare operations are the integrated planning, employment, and assessment of military capabilities to achieve desired effects across the electromagnetic domain in support of operational objectives. Electronic warfare operates across the electromagnetic spectrum, including radio, visible, infrared, microwave, directed energy, and all other frequencies. It is responsible for coordination and deconfliction of all friendly uses of the spectrum (air, land, sea, and space) as well as attacking and denying enemy uses. For this reason it is a historically important coordinating element in all operations, especially as current and future friendly uses of the electromagnetic spectrum multiply. The military capabilities of electronic warfare operations are electronic attack, electronic protection, and electronic warfare support.

Integrated Control Enablers Information operations, like air and space operations, are reliant on the integrated control enablers (ICE). ICE includes intelligence, surveillance, and reconnaissance (ISR), network operations (NetOps), predictive battlespace awareness (PBA), and precision navigation and timing (PNT). Information operations are highly dynamic and maneuverable. The transition between the find, fix, track, target, engage, and assess (F2T2EA) phases can be nearly instantaneous. The ICE components support this interactive relationship and strive to provide commanders continuous decision-quality information to successfully employ information operations.

2 – Influence Operations

General Influence operations are employment of capabilities to affect behaviors, protect operations, communicate commander's intent, and project accurate information to achieve desired effects across the cognitive domain. These effects should result in differing behavior or a change in the adversary decision cycle, which aligns with the commander's objectives. They should influence adversary decision-making, communicate the military perspective, manage perceptions, and promote behaviors conducive to friendly objectives. Counterpropaganda operations, psychological operations (PSYOP), military deception (MILDEC), operations security (OPSEC), counterintelligence (CI) operations, and public affairs (PA) operations are the military capabilities of influence operations. They support the commander's objectives and support the Air Force in achieving air, space, and information superiority. This is accomplished by conveying selected information and indicators to target audiences; shaping the perceptions of target decision-makers; securing critical friendly information; protecting against espionage, sabotage, and other

intelligence gathering activities; and communicating unclassified information about friendly activities to the global audience.

Psychological Operations Focused on the cognitive domain of the battlespace, PSYOP targets the mind of the adversary. In general, PSYOP seeks to induce, influence, or reinforce the perceptions, attitudes, reasoning, and behavior of foreign leaders, groups, and organizations in a manner favorable to friendly national and military objectives. PSYOP supports these objectives through the calculated use of air, space, and IO with special emphasis on psychological effects-based targeting.

Military Deception Military deception (MILDEC) capabilities are a powerful tool in military operations and should be considered throughout the operational planning process. Military deception misleads or manages the perception of adversaries, causing them to act in accordance with friendly objectives.

Operations Security Operations security (OPSEC) is an activity that helps prevent our adversaries from gaining and exploiting critical information. OPSEC is not a collection of specific rules and instructions that can be applied to every operation, it is a methodology that can be applied to any operation or activity for the purpose of denying critical information to the adversary. Critical information consists of information and indicators that are sensitive, but unclassified. OPSEC aims to identify any unclassified activity or information that, when analyzed with other activities and information, can reveal protected and important friendly operations, information, or activities.

Counterintelligence The Air Force Office of Special Investigations (AFOSI) initiates, conducts, and/or oversees all Air Force counterintelligence (CI) investigations, activities, operations, collections, and other related CI capabilities. Counterintelligence is defined as information gathered and activities conducted to protect against espionage, other intelligence activities, sabotage, or assassinations conducted by or on behalf of foreign governments or elements thereof, foreign organizations, or foreign persons, or international terrorist activities. AFOSI supports influence operations through CI operations designed to detect, destroy, neutralize, exploit, or prevent espionage activities through identification, manipulation, deception, or repression of the adversary.

Public Affairs Operations Commanders conduct PA operations to assess the information environment in areas such as public opinion and to recognize political, social, and cultural shifts. Public affairs operations are a key component of informational flexible deterrent options and build commanders' predictive awareness of the international public information environment and the means to use information to take offensive and preemptive defensive actions in Air Force operations. Public affairs operations are the lead activity and the first line of defense against adversary propaganda and disinformation. Falsehoods are easily identified when the truth is well known. [Public affairs operations are accomplished through] four core tasks: media operations, internal information, community relations, and strategic communication planning.

Counterpropaganda Operations The Air Force defines counterpropaganda operations as activities to identify and counter adversary propaganda and expose adversary attempts to influence friendly populations and military forces situational understanding. They involve those efforts to negate, neutralize, diminish the effects of, or gain an advantage from foreign psychological operations or propaganda efforts.

Supporting Activities Influence operations are most successful through the seamless integration of kinetic and nonkinetic capabilities. Influence operations may be supported and enhanced by physical attack to create or alter adversary perceptions. Influence operations require support from many Air Force capabilities to include tailored ISR, combat camera operations, and cultural expertise.

3 – Network Warfare Operations

Network warfare operations (NW Ops) are the integration of the military capabilities of network attack (NetA), network defense (NetD), and network warfare support (NS). The integrated planning and

employment of network warfare operations along with electronic warfare operations (EW Ops), influence operations, and other military capabilities are conducted to achieve desired effects across the information domain.

Network Attack Network attack (NetA) is employment of network-based capabilities to destroy, disrupt, corrupt, or usurp information resident in or transiting through networks. Networks include telephony and data services networks. Additionally, NetA can be used to deny, delay, or degrade information resident in networks, processes dependent on those networks, or the networks themselves. A primary effect is to influence the adversary commander's decisions.

Network Defense Network defense (NetD) is employment of network-based capabilities to defend friendly information resident in or transiting through networks against adversary efforts to destroy, disrupt, corrupt, or usurp it. NetD can be viewed as planning, directing, and executing actions to prevent unauthorized activity in defense of Air Force information systems and networks and for planning, directing, and executing responses to recover from unauthorized activity should it occur.

Network Warfare Support Network warfare support (NS) is the collection and production of network related data for immediate decisions involving NW Ops. NS is critical to NetA and NetD actions to find, fix, track, and assess both adversaries and friendly sources of access and vulnerability for the purpose of immediate defense, threat prediction and recognition, targeting, access and technique development, planning, and execution in NW Ops.

4 – Electronic Warfare Operations

General Electronic warfare (EW) is any military action involving the use of electromagnetic or directed energy to manipulate the electromagnetic spectrum or to attack an adversary. The Air Force describes electronic warfare operations (EW Ops) as the integrated planning, employment, and assessment of military capabilities to achieve desired effects across the electromagnetic domain in support of operational objectives. The EW spectrum is not merely limited to radio frequencies but also includes optical and infrared regions as well. EW assists air and space forces to gain access and operate without prohibitive interference from adversary systems, and actively destroys, degrades, or denies opponents' capabilities, which would otherwise grant them operational benefits from the use of the electromagnetic spectrum.

Electronic Warfare Operations EW is a key contributor to air superiority, space superiority, and information superiority. The most important aspect of the relationship of EW to air, space, and information operations is that EW enhances and supports all operations throughout the full spectrum of conflict. Air Force EW resources and assets may take on new roles in support of operations as the electronic warfare operation mission evolves. The three military capabilities of EW operations are electronic attack (EA), electronic protection (EP), and electronic warfare support (ES). All three contribute to air and space operations, including the integrated IO effort. Control of the electromagnetic spectrum is gained by protecting friendly systems and countering adversary systems.

Electronic attack (EA) is the division involving the use of electromagnetic, directed energy (DE), or anti-radiation weapons to attack personnel, facilities, or equipment with the intent of deceiving, disrupting, denying, and/or destroying adversary combat capability. It also deceives and disrupts the enemy integrated air defense system (IADS) and communications, as well as enables the destruction of these adversary capabilities via lethal strike assets.

Electronic protection (EP) enhances the use of the electronic spectrum for friendly forces. Electronic protection is primarily the defensive aspect of EW that is focused on protecting personnel, facilities, and equipment from any effects of friendly or adversary employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability.

Electronic warfare support (ES), the collection of electromagnetic data for immediate tactical applications (e.g., threat avoidance, route selection, targeting, or homing) provides information required for timely decisions involving electronic warfare operations.

5 – Information Operations Planning and Execution

Information operations are integral to military operations and are a prerequisite for information superiority. IO supports, and may also be supported by, air and space operations and needs to be planned and executed just like air operations. IO should be seamlessly integrated with the normal campaign planning and execution process. There may be campaign plans that rely primarily on the capabilities and effects an IO strategy can provide, but there should not be a separate IO campaign plan.

One of the commander's priorities is to achieve decision superiority over an adversary by gaining information superiority and controlling the information environment. This goal does not in any way diminish the commander's need to achieve air and space superiority but rather facilitates efforts in those areas and vice versa. The aim of information superiority is to have greater situational awareness and control than the adversary. Effective use of IO leads to information superiority. The effort to achieve information superiority depends upon two fundamental components: an effects-based approach, and well-integrated IO planning and execution accomplished by IO organizations.

Effects-Based Approach The ability to create the effects necessary to achieve campaign objectives, whether at the strategic, operational, or tactical levels, is fundamental to the success of the Air Force. An effect is the anticipated outcome or consequence that results from a particular military operation. The emphasis on effects is as crucial for successful IO as for any other air and space power function. Commanders should clearly articulate the objectives or goals of a given military operation. Effects should then flow from objectives as a product of the military operations designed to help achieve those objectives. Based on clear objectives, planners should design specific operations to achieve a desired outcome, and then identify the optimum capability for achieving that outcome. It is important to realize that operational assessment may be more challenging in IO because the effects are often difficult to measure. IO may also be based upon common sense, a rule of thumb, simplification, or an educated guess that reduces or limits the search for solutions in domains that are difficult or poorly understood. For example, psychological effects are not only difficult to measure; they may also not manifest themselves until later in time. There are also second-order and third-order effects that should be taken into consideration, and again, these may not manifest themselves until much later. IO presents additional challenges in effects-based planning as there are many variables. Many of these variables also have human dimensions that are difficult to measure, may not be directly observable, and may also be difficult to acquire feedback. At all times, objectives must be set and effects must be analyzed from the point of view of the culture where operations are being conducted.

Information Operations Organizations A number of Air Force organizations contribute to effective IO. The following discuss several of the key organizations employed in information operations.

Information Warfare Flight (IWF) IO can be conducted throughout the spectrum of peace and conflict. In peacetime, the major command/ numbered air force (MAJCOM/NAF) IWF is the operational planning element for IO and may coordinate IO actions when an air and space operations center (AOC) has not been activated. When the AOC is activated, a portion of the IWF is established as an IO team and integrates into the warfighting divisions within the AOC (Strategy, Plans, ISR, Combat Operations, etc.). The IO team provides the IO expertise to plan, employ, and assess IO capabilities prior to the initiation of hostilities, transition to conflict, and reconstitution.

EW Ops Organizations Electronic warfare is conducted by units with capabilities ranging across the electronic attack, protect, and support functions. EW operations require attention before, during, and after military operations. A joint EW coordination cell (EWCC) is the necessary planning and execution organization to orchestrate the activities of units to achieve EW objectives of the campaign plan.

Network Defense and Network Operations Organizations NetD and NetOps organizations provide the JFC with critical capabilities to realize the effects of information and decision superiority. Collectively, these organizations provide varying degrees of NetD and NetOps support. They provide commanders with real-time intrusion detection and perimeter defense capabilities, network management and fault resolution activities, data fusion, assessment, and decisions support. During employment, the organizations are arranged into a three-tiered operational hierarchy, which facilitates synchronized application of their collective capabilities in support of the DOD's defense-in-depth security strategy.

6 – Integrated Control Enablers

Information operations are dependent on [integrated control enablers] (ICE). The integrated control enablers are critical capabilities required to execute successful air, space, and information operations and produce integrated effects for the joint fight. These include intelligence, surveillance, and reconnaissance (ISR), network operations (NetOps), predictive battlespace awareness (PBA), and precision navigation and timing (PNT).

Network Operations and Information Assurance NetOps encompasses information assurance (IA), system and network management, and information dissemination management. The Air Force and joint community have come to recognize these pillars as information assurance and network defense, enterprise service management/network management, and content staging/information dissemination management respectively. NetOps consists of organizations, procedures, and functionalities required to plan, administer, and monitor Air Force networks in support of operations and also to respond to threats, outages, and other operational impacts.

Information assurance (IA) comprises those measures taken to protect and defend information and information systems by ensuring their availability, integrity, authenticity, confidentiality, and non-repudiation (ability to prove sender's identity and prove delivery to recipient). IA spans the full lifecycle of information and information systems. IA depends on the continuous integration of trained personnel, operational and technical capabilities, and necessary policies and procedures to guarantee continuous and dependable information, while providing the means to efficiently reconstitute these vital services following disruptions of any kind, whether from an attack, natural disaster, equipment failure, or operator error. In an assured information environment, warfighters can leverage the power of the information age.

Intelligence, Surveillance, and Reconnaissance ISR is the integrated capabilities to task, collect, process, exploit, and disseminate accurate and timely intelligence information. ISR is a critical function that helps provide the commander the situational and battlespace awareness necessary to successfully plan and conduct operations. Commanders use the intelligence information derived from ISR assets to maximize their own forces' effectiveness by optimizing friendly force strengths, exploiting adversary weaknesses, and countering adversary strengths.

Predictive Battlespace Awareness Effective IO depends upon a successful PBA. As a maturing concept, PBA is "knowledge of the operational environment that allows the commander and staff to correctly anticipate future conditions, assess changing conditions, establish priorities, and exploit emerging opportunities while mitigating the impact of unexpected adversary actions" (Air Force Pamphlet 14-118). In order to accomplish this, PBA lays out a methodology that enables integration of all intelligence, surveillance, and reconnaissance assets available to commanders, in order to maximize their ability to predict enemy courses of action and decide friendly courses of action. One of the first steps in PBA is assessing friendly vulnerabilities and adversary strengths and weaknesses in order to predict enemy courses of action through IPB. This level of awareness requires development and integration of

five key activities: IPB, target development, ISR strategy and planning, ISR employment, and assessment. These activities are continuously refined in parallel to provide a seamless understanding of the battlespace.

Precision Navigation and Timing Precision navigation and timing (PNT) provided by space-based systems are essential to IO by providing the ability to integrate and coordinate IO force application to create effects across the battlespace.

7 – Education and Training

Education and training provide the foundation for conducting effective information operations. All Airmen should have a general understanding of information operations capabilities. As in other specialties, IO personnel should be thoroughly trained in the specific IO processes that relate to their particular field of expertise. IO personnel should recognize the contribution their functional specialty makes to the warfighter to help achieve the goal of information superiority. The intent of IO education and training is to ensure Air Force IO operators clearly understand the principles, concepts, and characteristics of information operations. Finally, while not every Airman needs a comprehensive course in information operations, every Airman should understand that IO is a key function of the Air Force distinctive capabilities of information superiority and air and space superiority.

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Last Updated: September 2006

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DoD and Joint Information Operations Organizations



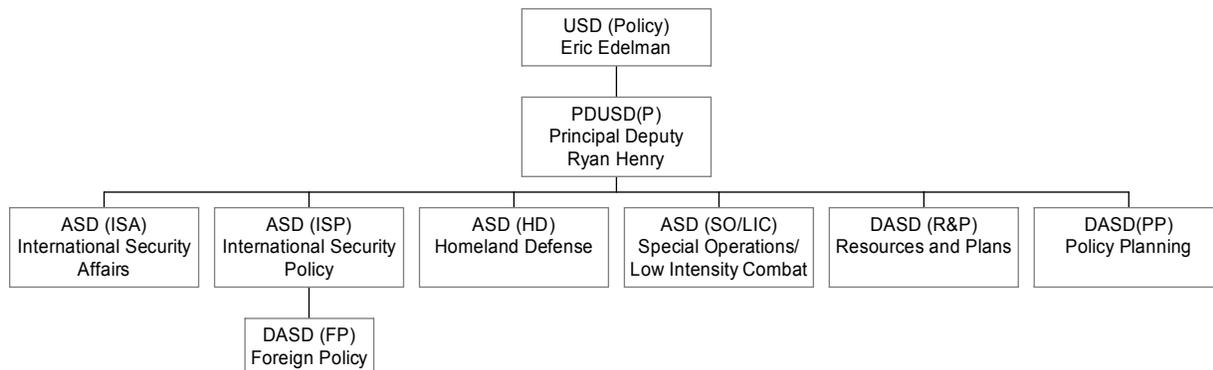
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Under Secretary Of Defense – Policy (USD(P))



Mission

The USD(P) is the principal staff assistant and advisor to the SecDef for all matters concerning the formation of national security and defense policy and the integration and oversight of DoD policy and plans to achieve national security objectives. The USD(P) oversight and policy responsibilities include the IO core capability of PSYOP, and the related capability of Civil Military Affairs, both of which fall within the oversight responsibilities of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict (ASD(SO/LIC)). The Office of the USD(P) is organized as follows:



The directed responsibilities of the USD(P) include the following:

- Represent the Department of Defense, as directed, in matters involving the National Security Council (NSC); the Department of State; and the other Federal Departments, Agencies, and inter-Agency groups with responsibility for national security policy.
- Serve as a member of the NSC Deputies Committee; serve as a member of the Deputies Committee for Crisis Management; and advise the Secretary of Defense on crisis prevention and management, including contingency planning for major areas of concern.
- Develop DoD policy guidance, provide overall supervision, and provide oversight of planning, programming, budgeting, and execution of special operations activities, including civil affairs and psychological operations, and of low-intensity conflict activities, including counter-terrorism, support to insurgency, and contingency operations.
- Develop DoD policy and provide oversight for emergency planning and preparedness, crisis management, defense mobilization in emergency situations, military support to civil authorities, civil defense, and continuity of operations and government.

- Develop policy, coordinate and oversee DoD participation in, and provide staff supervision over special and sensitive activities including the Operations and Support Special Access Program Central Office, and support to the Special Access Program Oversight Committee structure and arms control countermeasures for non-proliferation initiatives; and oversight of the Defense Sensitive Support program.

The Assistant Secretary of Defense for International Security Policy – ASD(ISP). Is the lead within the OUSD-Policy for IO issues. The DASD (Foreign Policy, a subordinate, executes this function and liaises closely with USSTRATCOM.

The Assistant Secretary of Defense for Special Operations/Low Intensity Conflict – ASD(SO/LIC). This office has overall responsibility for the supervision of Special Operations (SO) and Low-intensity Conflict (LIC) activities of DoD - including oversight of policy and resources. The Cohen-Nunn Amendment to the DoD Authorization Act of 1987, established ASD(SO/LIC) and the United States Special Operations Command (USSOCOM). ASD(SO/LIC) is the principal civilian advisor to SECDEF on SO/LIC matters. Its responsibilities include:

The objectives of this amendment were:

- Provide close civilian oversight for special operations and low-intensity conflict activities.
- Ensure that genuine expertise and a diversity of views are available to the President and Secretary of Defense regarding possible responses to special operations requirements and low-intensity conflict threats.
- Is DoD lead for psychological operations (PSYOP) and coordination with USSOCOM.
- Improve interagency planning and coordination for special operations and low-intensity conflict.
- Bolster U.S. special operations capabilities in a number of areas to include joint doctrine and training, intelligence support, command and control, budgetary authority, personnel management, and mission planning.

Assistant Secretary of Defense for Homeland Defense – ASD(HD). Authorized by Congress as part of the FY 2003 Defense Authorization Act, the ASD(HD) has overall supervision of the homeland defense activities of the Department. On September 3 2003, DoD realigned Critical Infrastructure Protection oversight from the Undersecretary of Defense (Intelligence) to ASD (HD). CIP is important because so much of DoD's national security effort depends on national infrastructure, to include the movement of DoD assets via transportation, the movement of DoD communications via commercial satellite and networks, and more.

- Supervise the Homeland Defense activities of DOD; principal point of contact for Department of Homeland Security.
- Develop Homeland Defense force employment policy and guidance.
- Is DoD lead for national critical infrastructure protection (CIP).
- Develop plans and policy to fulfill DOD's role in Homeland Security.
- Assist in building and improving Federal, State and local homeland security response capabilities.
- Supervise DoD preparedness activities for, and support to, civil authorities.
- Plan, train and perform DoD domestic incident management.
- Advocate Homeland Defense requirements within the Department's resource allocation process.

Website: <http://www.defenselink.mil/policy/>

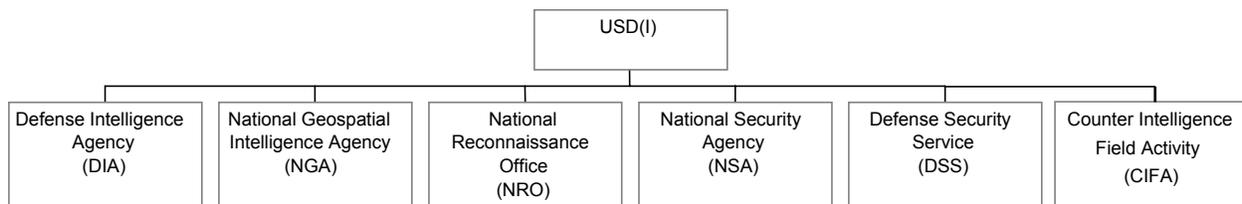
Last Updated: September 2006.

Under Secretary Of Defense –Intelligence (USD(I))



Mission

The Under Secretary of Defense for Intelligence (USD(I)) serves as the Principal Staff Assistant (PSA) and advisor to the Secretary and Deputy Secretary of Defense on all intelligence, counterintelligence, security, sensitive activities, and other intelligence-related matters. The USD(I) also serves as the PSA to the Secretary of Defense on development and oversight of DoD IO policy and integration activities, and serves as the DoD lead with the Intelligence Community on DoD IO issues.



Responsibilities:

Information Operations Responsibilities (extracted from DoDD 5143.01, 23 Nov 05):

- Serve as the Principal Staff Assistant to the Secretary of Defense for IO.
- Develop and oversee DoD IO policy and integration activities.
- Assess performance/responsiveness of DoD and Military Intelligence activities to support IO.
- Coordinate, oversee, and assess the efforts of the DoD Components to plan, program, develop, and execute capabilities in support of IO requirements.
- Establish specific policies for the development and integration of CNO, MILDEC and OPSEC as core IO capabilities.

Other Responsibilities:

- Service as the OSD proponent for the Information Operations Career Force (See DoDD 3608.11, “Information Operations Career Force”, 4 Nov 05).
- Providing oversight and policy guidance for all DoD intelligence activities and establishing priorities to ensure conformance with Secretary and, as appropriate, Director of National Intelligence (DNI) policy guidance.

- Exercise authority, direction, and control over the Defense Intelligence Agency (DIA), the National Geospatial Intelligence Agency (NGA), the National Reconnaissance Organization (NRO), the National Security Agency (NSA), the Defense Security Service (DSS), and the Counter Intelligence Field Activity (CIFA).
- Provide assessments of and advising the Secretary and the CJCS on the adequacy of military intelligence performance.
- Advise the Secretary concerning the Department's responsibilities regarding the national intelligence community and supporting the Secretary's role in the Intelligence Community Executive Committee.
- Exercise management and oversight of all DoD counterintelligence and security activities, including personnel security and industrial security.
- Oversee intelligence support to critical infrastructure protection, departmental information assurance programs and homeland defense.
- Coordinating DoD intelligence and intelligence-related policy, plans, programs, requirements and resource allocations. This includes responsibility for the DoD components within the National Foreign Intelligence Program, the Joint Military Intelligence Program, the Foreign Counterintelligence Program, and the Tactical Intelligence and Related Activities account.
- Ensuring the execution of DoD intelligence policy and resource decisions are fully responsive and complimentary to the direction of the DNI.
- Exercising overall supervision and policy oversight of the DoD intelligence infrastructure and civilian intelligence personnel management systems. This will include policy regarding the Defense Civilian Intelligence Personnel Systems (DCIPS).

Maintain close coordination with the DNI and consult with the DNI on the development, design, acquisition and operation of intelligence programs and systems of the DOD.

Last Updated: September 2006.

Assistant Secretary Of Defense – Networks And Information Integration (ASD(NII))



Mission and Goals.

The missions and responsibilities of the ASD(NII) are specified in Department of Defense Directive (DoDD) 5144.1, “Assistant Secretary of Defense for Networks and Information Integration/ DoD Chief Information Officer (ASD(NII)/DoD CIO)” dated 2 May 2005.

The ASD(NII)/DoD CIO is the principal staff assistant and advisor to the Secretary of Defense and Deputy Secretary of Defense on networks and network-centric policies and concepts; command and control (C2); communications; non-intelligence space matters; enterprise-wide integration of DoD information matters; Information Technology (IT), including National Security Systems (NSS); information resources management (IRM); spectrum management; network operations; information systems; information assurance (IA); positioning, navigation, and timing (PNT) policy, including airspace and military-air-traffic control activities; sensitive information integration; contingency support and migration planning; and related matters.

ASD(NII)/DoD CIO has responsibilities for integrating information and related activities and services across the Department. The ASD(NII)/DoD CIO also serves as the DoD Enterprise-level strategist and business advisor from the information, IT, and IRM perspective.

The goals of ASD(NII) are to:

- Make information available on a network that people depend on and trust
- Populate the network with new, dynamic sources of information to defeat the enemy
- Deny the enemy information advantages and exploit weakness to support network centric warfare and the transformation of DoD business processes

Responsibilities of the ASD(NII)/DoD CIO include the following:

- Information Operations: Provide NII and CIO support to the mission of Information Operations IAW DoD Directive S-3600.1.
- Information Assurance: Develop and maintain the DoD Information Assurance (IA) program and associated policies, procedures, and standards required by DoD Directive S-3600.1, “Information Operations”.
- Transformation: Develop and implement network-centric policies, architectures, practices, and processes with emphasis on communications and information networks to enable Defense transformation; however, these do not include content-based communications functions such as those associated with public affairs and public diplomacy.

- Global Information Grid: Facilitate and resolve interoperability, performance, and other issues related to interfaces, security, standards, and protocols critical to the end-to-end operation of the Global Information Grid (GIG).
- IT Opportunities: Identify opportunities presented by communication and information technologies as well as risks and costs, and make recommendations on the initiation of communication and information plans, programs, policies, and procedures accordingly.
- Electromagnetic Spectrum: Provide policy, oversight, and guidance for all DoD matters related to the electromagnetic spectrum, including the management and use of the electromagnetic spectrum (MUES) and the Electromagnetic Environmental Effects (E3) Program.
- Command and Control: Develop and integrate the Department's overall C2 strategy, approach, structure, and policies and ensure the C2 structure and architecture are compliant with DoD network-centric precepts, information strategy, and joint needs.
- Space: Oversee DoD non-intelligence related space matters, including space-based communications programs, space-based information integration activities, space control activities, operationally responsive space programs, space access, satellite control, space-based position, navigation, and timing programs, environmental sensing, and space launch ranges.

Headquarters: The headquarters for the ASD(NII) organization is in the Pentagon, with staff elements both in the Pentagon and in nearby office buildings in Arlington, Virginia.

Website: <http://www.defenselink.mil/nii/>

Last Updated: September 2006

Undersecretary for Public Diplomacy and Public Affairs, U.S. Department of State



The Under Secretary of State for Public Diplomacy and Public Affairs (USS(PD/PA)), Ambassador Karen Hughes, is responsible for U.S. engagement in the world and the Department of State's engagement of the American public. These functions are indispensable to the conduct of foreign policy. USS(PD/PA) pursues three strategic objectives:

- Offer people world-wide a positive vision of hope and opportunity that is rooted in America's belief in freedom, justice, opportunity and respect for all;
- Isolate and marginalize violent extremists; confront their ideology, and undermine their efforts to portray the west as in conflict with Islam by empowering mainstream voices and demonstrating respect for Muslim cultures and contributions and;
- Foster a sense of common interests and common values between Americans and people of different countries, cultures and faiths throughout the world.

The Undersecretariat comprises three bureaus (Public Affairs, Educational and Cultural Affairs, International and Information Programs) and the recently created (2004) Office of Policy, Planning and Resources.

1. Office of Policy, Planning and Resources for Public Diplomacy and Public Affairs (R/PPR). Created in September 2004 to provide long-term strategic planning and performance measurement capability for public diplomacy and public affairs programs, it assists USS (PD/PA) to advise on allocation of public diplomacy and public affairs resources, to focus these on the priority national security objectives, and to gauge PD/PA 's effectiveness. It coordinates the Department's public diplomacy presence in the interagency, in consultation with other bureaus.

2. The Bureau of Educational and Cultural Affairs (ECA) fosters mutual understanding between the people of the United States and other countries. It does this in close cooperation with State Department posts through cultural and professional exchanges and presenting U.S. history, society, art, and culture in all of its diversity to overseas audiences.

3. Bureau of International Information Programs (IIP) The principal international strategic communications entity for the foreign affairs community it informs, engages, and influences international audiences (and not U.S. domestic audiences) about U.S. policy and society to advance America's interests. IIP develops and implements public diplomacy strategies to influence international audiences through programs and technologies. It is prohibited from disseminating its product to the domestic audience by the Smith-Mundt Act, and amendments.

IIP Mission Statement: Inform, engage, and influence international audiences about U.S. policy and society to advance America's interests.

IIP delivers America's message to the world through a number of key products and services. The outreach is created for international media, government officials, opinion leaders, and the public in more than 140 countries around the world. IIP:

- Delivers America's message to the world, counteracting negative preconceptions, maintaining an open dialogue, and building bridges of understanding to help build a network of communication, promote American voices, and forge lasting relationships in international communities;
- Delivers clear and meaningful U.S. policy information and articles about U.S. society in the languages that attract the largest number of viewers -- English, Arabic, Chinese, French, Persian, Russian, and Spanish;
- Produces news articles, electronic and print publications, which provides context to U.S. policies, as well as products on U.S. values, culture, and daily life that serves as a window on positive American values;
- Engages audiences through lectures, workshops, and seminars to promote understanding of U.S. policies and;
- Provides current and authoritative information on U.S. policy issues, legislation, business and trade issues, and U.S. political and social processes to local decision makers and opinion leaders.

4, Bureau of Public Affairs. This office helps Americans understand U.S. foreign policy and the importance of foreign affairs by holding press briefings; hosting "town meetings" and other conferences around the U.S. and arranging local, regional, and national radio and television interviews with key Department officials; and providing audio-visual products and services. The bureau provides additional information and services by maintaining the State Department website at <http://state.gov> and a telephone information line (202-647-6575) for public inquiries. In addition, the Office of the Historian provides historical research and advice for the Department of State and publishes the official documentary history of U.S. foreign policy. The Bureau is led an Assistant Secretary, who also serves as Department spokesman.

Website: www.state.gov/r/
Last Updated: July 2006

DoD Strategic Communication Integration Group (SCIG)



DOD published the “Quadrennial Defense Review (QDR) Execution Roadmap for Strategic Communication” in September 2006. The Roadmap outlined an action plan, setting responsibilities and milestones to improve DoD’s capability to support Strategic Communication (SC). A main objective is to institutionalize a DoD process to incorporate SC into strategy development, policy formulation, planning and execution. The DoD Strategic Communication Integration Group (SCIG)

DoD Strategic Communication Integration Group Charter

Objectives

The DoD Strategic Communication Integration Group (SCIG) is the principal advisor to the Secretary of Defense, the Deputy Secretary of Defense and the Chairman of the Joint Chiefs of Staff for strategic communications-related matters. The DoD SCIG will ensure that DoD’s strategic communications strategies, plans, and programs are supportive of the President’s national security and foreign policy goals.

Definition of Strategic Communication: *Focused U.S. Government (USG) processes and efforts to understand and engage key audiences to create, strengthen, or preserve conditions favorable to advance national interests and objectives through the use of coordinated information, themes, plans, programs, and actions synchronized with other elements of national power.*

SCIG will play a central role in facilitating coordination within and among DoD organizations and USG agencies to integrate strategic communications into U.S. national security policy, planning, and execution. It will address two categories of issues: long-range trends and objectives of broad scope and importance; and emergent issues of interest and immediate significance that need coordination across several agencies.

The DoD core capabilities that support the strategic communication process are public affairs (PA), defense support to public diplomacy (DSPD), and military information operations (IO). The SCIG will work to ensure synchronization and horizontal integration of plans and efforts among these communication disciplines and across the department.

SCIG Functions

- Advise the Secretary and Deputy Secretary of Defense and the Chairman of the Joint Chiefs of Staff in setting strategic communication goals and priorities and on issuing guidance to appropriate DoD and interagency audiences;
- Integrate DoD and USG strategic communications strategies, plans, and programs within and among appropriate DoD and interagency organizations;
- Identify policies, issues, programs, and operations that may have strategic communication implications and advise the Secretary of Defense, the Deputy Secretary of Defense, and the Chairman of the Joint Chiefs of Staff on how to address them;

- Review and generate recommendations on strategic-level proposals developed by DoD or other USG organizations for the Secretary and Deputy Secretary of Defense and Chairman of the Joint Chiefs of Staff; and
- Inform the Secretary, the Deputy Secretary of Defense and the Chairman of the Joint Chiefs of Staff on the impact of DoD and U.S. Government strategic communication efforts.

Membership

Primary members and co-chairs are USD(P), ASD(PA), Director, Joint Staff, and the Joint Staff Director of Strategic Communication. The SCIG will convene every week or more frequently as needed.

Associate members will be provided topics and briefings proposed for the SCIG and will be invited to attend meetings at the SCIG’s discretion. Associate members include:

USD(I)	Director, Joint Staff J5
USD(AT&L)	OCJCS Public Affairs
USD(P&R)	OCJCS Legislative Affairs
USD(C)	OCJCS Legal Counsel
ASD(LA)	US Army
ASD(NII)	US Navy
OGC	US Air Force
Director, PA&E	US Marine Corps
ACJCS	SOCOM
Director, Joint Staff J2	STRATCOM
Director, Joint Staff J3	JFCOM

Other DoD or interagency organizations may be invited to participate in briefings when the particular topic is appropriate to their area of responsibility.

DoD SCIG Secretariat

To support the DoD SCIG, the Secretariat will identify issues, develop agendas, and conduct coordination across DoD components and with the interagency, as appropriate. Secretariat members shall represent DoD on strategic communications-related interagency working groups.

The Director of the SCIG Secretariat will be approved by the SCIG. The Director will routinely inform and advise SCIG Principals on the work of the Secretariat.

The DoD SCIG Secretariat consists of full-time representatives from OSD and the Joint Staff. The members will be O-5/O-6 level or civilian equivalent. Their principal task will be to serve in the DoD SCIG Secretariat, and should not be assumed to be available for further assignments within the originating component. Members will stay engaged at the senior levels with appropriate organizations, for example attending senior staff meetings and briefings of strategic-level issues.

SCIG Secretariat Members will be provided from the following components:

USD(P)	ASD(LA)
USD(I)	ASD(P)
USD(P&R)	Joint Staff
USD(AT&L)	SOCOM

Last Updated: November 2006.

Defense Information Systems Agency (DISA)



Mission:

DISA is the premier provider of current and future command and control (C2) and combat support capabilities that support the joint warfighter with planning and executing joint military and coalition operations. The director of DISA also serves as the commander, Joint Task Force-Global Network Operations (JTF-GNO), a subordinate organization to USSTRATCOM.

History of DISA

The Defense Information Systems Agency (DISA) was established as the Defense Communications Agency (DCA) in 1960. Its mission was to manage the Defense Communications System (DCS), a consolidation of the independent long-haul communications functions of the Army, Navy, and Air Force. Later, took on several major organizations, to include the White House Signal Agency (now the White House Communications Agency). DCA also established six regional communications control centers and two area centers for operational control of the DCS. DCA later became responsible for engineering and operating the Worldwide Military Command and Control System.

In the 1980s, DCA absorbed the Joint Tactical Command, Control, and Communications Agency and was renamed DISA in 1991. DCA implemented creation of the Defense Information Infrastructure, now known as the Global Information Grid (GIG). DISA consolidated several information processing centers into five mainframe-processing centers. The Joint Spectrum Center and the Defense Technical Information Center also became part of DISA. Approximately 7,000 military and civilian employees work in DISA.

Operations and Activities:

DISA's current C2 programs include the Global Command and Control System – Joint (GCCS-J), Global Combat Support System for the Combatant Command and Joint Task Force (GCSS CC/JTF), and the future C2 system of record, the Net-Enabled Command Capability (NECC), formerly known as the Joint Command and Control (JC2) Capability. Through NECC, DISA will direct the evolution of the current C2 programs to deliver a truly integrated, joint, net-centric C2 capability for the warfighter. DISA also has various Advanced Concept Technology Demonstrations (ACTDs) and Joint Capability Technology Demonstrations (JCTDs) that facilitate rapid development of advanced capabilities.

Through GCCS-J, DISA enables Joint operations planning and execution, global access to mandated readiness data, situational awareness via a common operational picture, Commander's understanding of the battlespace through imbedded/integrated intelligence and imagery products, and collaboration and decision support capabilities for Combatant Commanders and Joint Force Commanders. Deployed worldwide, GCCS-J components form the critical C2 backbone of Joint operations. Lighter, configurable deployments of GCCS-J support selected Joint Task Forces and Coalition operations. GCCS-J

intelligence products and training are currently being used in direct support of OEF, OIF, and NATO/ISAF Afghanistan Operations. In addition, GCCS-J has successfully supported such non-traditional missions as investigation as a capability that could be used to deal with a potential Avian Flu pandemic. GCCS-J is in the midst of its Block V development and fielding phase, which will provide even more substantial C2 capabilities to the Warfighter, including many technological solutions that exploit the emerging availability of the Service Oriented Architecture.

DISA provides the logistics C2 system of record through GCSS CC/JTF. GCSS CC/JTF is an integration and interoperability initiative to better meet the operational needs of the warfighter for combat support. As part of its mission, GCSS CC/JTF enhances combat support effectiveness through system interoperability across combat support and combat service support functions, and between combat support and command and control functions. GCSS CC/JTF expands the availability, accuracy, and timeliness of information to the combatant commanders and the joint task force commanders and their staffs through information fusion. End-users have the ability to create a user defined operational picture through dynamic access to disparate data sources and enhanced by a tool kit of capabilities such as knowledge management, business intelligence, watchboard, electronic battlebook, functional applications and access to other SIPRNet sites via one GCSS gateway.

As the ASD(NII) designated NECC Lead Component, DISA, in concert with the joint community, will revolutionize DoD C2. NECC will become DoD's principal command and control capability that will be accessible in a net-centric environment. It will be founded on a single, net-centric, services-based C2 architecture and will provide the decision support infrastructure that will enable the warfighter to access, display, and understand the information necessary to make efficient, timely, and effective decisions. Today's C2 capabilities that support the warfighter are aligned with functions, resulting in separate stovepipes. This limits flexibility needed across the C2 environment, and places the burden on the warfighter to pull and gather the disparate information required to perform C2 functions. The warfighter is forced to serve as the C2 Information Integrator. NECC will replace the current C2 stovepiped capabilities by creating C2 capabilities that provide access to information from a multitude of sources. This will allow the ability to merge all types of information to develop pictures, ideas, and understandings the warfighter has never had before. NECC will also provide a dynamic C2 capabilities construct where the user can define the functions or C2 capabilities needed and clearly define the mission threads. Warfighters will be able to rapidly adapt to changing mission needs by defining and tailoring their information environment and drawing on capabilities that enable the efficient, timely, and effective command of forces and control of engagements. By changing the focus from stovepiped capabilities to data, the warfighter gains an extremely dynamic and integrated information environment.

DISA is deeply involved in ACTDs, working with the Combatant Commanders to pilot key capabilities essential to the Department's ongoing transformation. ACTDs respond to high-priority capability shortfalls involving complex conceptual or technical issues appropriately addressed early in a technology lifecycle. ACTDs are typically three to five years in duration and usually transition into a Program of Record upon successful completion. While that is fairly rapid in terms of capability deployment, it isn't fast enough in today's world. Our ops tempo requires even more rapid deployment. JCTDs are typically 18 months to three years in duration and are funded with a higher percentage of OSD AS&C money. JCTDs, like ACTDs, usually transition upon successful completion into a Program of Record. This gives Combatant Commanders yet another means of rapidly addressing immediate operational needs.

As of 29 Aug 06, DISA's active ACTD and JCTDs include:

- Agile Transportation 21st Century including Turbo Planner – AT21
- Event Management Framework - EMF
- Coalition Secure Management and Operations Systems - COSMOS
- Joint Coordinated Real-time Engagement - JCRE
- Coalition Theater Logistics - CTL

- Joint Force Projection – JFP
- GRIDLOCK
- Theater Effects Based Operations - TEBO
- Homeland Security C2 – HLS C2
- Large Data JCTD
- Actionable Situational Awareness Picture - ASAP
- Medical Situational Awareness In-Theater – MSAT

Website: <http://www.disa.mil>

Last Updated: September 2006

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National Security Agency (NSA)



Mission.

The National Security Agency/Central Security Service (NSA/CSS) is a Combat Support Agency of the Department of Defense (DOD). It implements the SecDef's responsibility as executive agent for United States Government signals intelligence and communications security, and it conducts related activities as assigned. The Director of the NSA also serves as the Chief of the Central Security Service (CSS), which provides the Military Services a unified cryptologic organization within the Department of Defense designated to assure proper control of the planning, programming, budgeting, and expenditure of resources for cryptologic activities. NSA is the Nation's key cryptologic organization. It provides and protects vital information from the battlefield to the White House. It assures the security of U.S. signals and information systems and provides intelligence derived from those of the Nation's adversaries. NSA is headquartered at Fort Meade, MD.

The resources of NSA are organized for the accomplishment of two Principal missions:

- The **Information Assurance** mission provides the solutions, products, and services, and conducts defensive information operations, to achieve information assurance for information infrastructures critical to U.S. national security interests.
- The **Foreign Signals Intelligence** or SIGINT mission allows for an effective, unified organization and control of all the foreign signals collection and processing activities of the United States. NSA is authorized to produce SIGINT in accordance with objectives, requirements, and priorities established by the Director of Central Intelligence with the advice of the National Foreign Intelligence Board.

History.

NSA was created in November 1952. Its immediate predecessor, the Armed Forces Security Agency (AFSA), was established under the Joint Chiefs of Staff, in 1949 and was to be responsible for directing the communications and electronic intelligence activities of the military intelligence units - the Army Security Agency, Naval Security Group and the Air Force Security Service. However, the agency had little power and lacked a centralized coordination mechanism. NSA's authority and organizational structure remedied AFSA's deficiencies. NSA coordinates, directs, and performs highly specialized activities to protect U.S. information systems and produce foreign intelligence information. NSA is also one of the most important centers of foreign language analysis and research within the government.

NSA Information Operations Specific Activities and Organizations.

Threat Operations Center

The NSA/CSS Threat Operations Center operates to establish real-time global network awareness. The Center is an organizational framework for integrating and strengthening elements of its mission areas. Its specific goals include:

- Providing a common operating picture of the global network;
- Developing the net-centric infrastructure and culture of innovation needed for mission success.

Office of Information Operations

The Office of Information Operations (OIO) is the primary Information Operations Analysis and Production element of NSA. Its responsibilities include:

- Production to support the five IO core capabilities through two primary missions:

(1) SIGINT analysis and reporting in response to documented IO requirements.

(2) Identification of opportunities in SIGINT that will assist customers in achieving a desired IO effect or outcome. The division is capable of hosting IO analysts from external organizations for short-term analytic projects, as well as forward deploying to external locations for direct IO support.

- Integration of analytic efforts by IO planners and senior reporters for:

(1) IO support to the Combatant Commands.

(2) IO advocacy, coordination, and facilitation among agencies of the Intelligence Community. Members of this division liaise with their respective Combatant Command counterparts, and serve as the NSA lead analysis and production advocate on behalf of their customer's IO SIGINT requirements.

- Special Studies on topics of special DOD or Intelligence Community interest to support non-kinetic planning and targeting initiatives, including uniquely SIGINT targets in a holistic IO perspective. The focuses of this division are underground facilities and satellite programs.

The Joint Information Operations Program Office (JIOPO)

The primary advocacy arm to foster and facilitate Intelligence Community cooperation, collaboration and information sharing regarding IO and IO-related activities. It is comprised of representatives from CIA, DIA & NSA. The NSA arm of JIOPO performs its mission through joint ventures, seeding innovative initiatives that advance IO capabilities, conducts studies and assessments to identify and bridge gaps in IO-related areas, hosts quarterly digital forensics fora, develops IO-related seminars and sponsor participation in IO-related training and conferences.

Tailored Access Operations (TAO)

- Provides, as authorized, unique tools and services to related IC or DOD efforts,
- Helps information assurance authorities identify, assess and address cyber threats.

Remote Operations Center

- Plans, coordinates, executes and evaluates mission operations.
- Manages the use of mission infrastructure, including providing requirements and feedback to infrastructure planners.
- Interfaces with the Cryptologic Mission Management activity in support of mission operations.
- Ensures satisfactory delivery of data to customers inside and outside of the Data Acquisition enterprise.
- Applies the offices unique tools and expertise, as authorized, to support other Agency or external programs.

Information Assurance Directorate (IAD).

IAD's mission includes:

- Detecting, reporting, and responding to cyber threats.
- Providing OPSEC assistance and training, both inside and outside DoD through the Interagency OPSEC Support Staff.
- Making encryption codes to securely pass information between systems.
- Embedding IA measures directly into the emerging Global Information Grid.
- Building secure audio and video communications equipment, making tamper protection products, and providing trusted microelectronics solutions.
- Testing the security of customers' systems.
- Evaluating commercial software and hardware against nationally set standards.

The information assurance component of Information Operations assures DOD's operational readiness by providing for the continuous availability and reliability of information systems and networks. IA protects the Defense Information Infrastructure against exploitation, degradation, and denial of service, while providing the means to efficiently reconstitute and reestablish vital capabilities following an attack.

Interagency OPSEC Support Staff (IOSS)

The Interagency OPSEC Support Staff (IOSS) provides operations security (OPSEC) training, program development assistance, and awareness materials in support of the National OPSEC Program. OPSEC is a systematic, proven process used to identify, control and protect generally unclassified information about an operation in order to deny an adversary's ability to exploit it. The OPSEC process comprises five steps:

- Identification of critical information;
- Analysis of threats;
- Analysis of vulnerabilities;
- Assessment of risks; and,
- Application of appropriate countermeasures

The IOSS' mission is to promote OPSEC principals and help members of the DoD and the National Security Community to develop their own self-sufficient OPSEC programs.

Training – A specialized curriculum features platform and computer-based training to fulfill a range of needs in the OPSEC discipline. Courses are accredited by the National Cryptologic School and taught at the IOSS; training center in Greenbelt, Maryland. With prior coordination, courses can be tailored to customer's needs and presented on location at their facilities.

Program Development- Consultations, tailored IOSS Associates Programs, and assistance with OPSEC assessments and surveys are provided as requested.

Awareness – A wealth of information and an on-line catalog of OPSEC awareness products (e.g, DVDs, publications and posters) are available through the IOSS' website at www.ioiss.gov. Products are free of charge to the U.S. Government and its associated contractors. An annual conference and regional forums take OPSEC to customers across the country.

Contact Information:

- NSA Information Assurance Service Center (NIASC): (800) 688-6115
- NSA Interagency OPSEC Support Staff: (443) 479-4677

Website: <http://www.nsa.gov/>

Updated: November 2006

Joint Staff, Deputy Director of Global Operations (DDGO)



Staff Mission: The Deputy Director for Global Operations (DDGO) is tasked to provide the Director of Operations and the Chairman of the Joint Chiefs of Staff the expertise and advice in coordinating joint global operations to include information operations. Within the DDGO, the Assistant Deputy Director for Information Operations is responsible for IO activities, developing joint doctrine for IO, and coordinating with the Office of the Secretary of Defense, combatant commands, Services, other staff directorates and across the Intelligence Community and Inter-Agency on IO issues/actions. In addition, the ADDIO is the focal point for all special technical operations.

Organization: The Directorate For Global Operations contains the following four IO divisions:

- Information Operations
- Psychological Operations
- Program Support
- Special Actions.

The Information Operations Division consists of the following branches: Combatant Command Special Technical Operations (STO) Support, Plans Support, Computer Network Computer Network Operations (CNA, CND, CNE, IA and CND-RA) , Electronic Warfare, Intelligence Community Liaisons , and Science and Technology.

The Psychological Operations Division consists of the Programs and Doctrine and the Combatant Command Support branches.

The Program Support Division consists of the following branches: Policy/Doctrine, and Special Technical Operations (STO) Procedures, Automated Information Systems/Budget, and Network Support.

The Special Actions Division consists of Support Activities Branch, and Tactical Security Branch.

Location: The DDGO is located within the Pentagon.

Website: <http://www.jcs.mil/j3/index.html>

Last Updated: November 20065.

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Joint Spectrum Center (JSC)



Mission: To enable effective and efficient use of the electromagnetic spectrum and control of electromagnetic effects in support of national security and military objectives.

Major Responsibilities

- Provides operational spectrum management support to the Joint Staff and COCOMs for contingency operations, exercises, and otherwise as requested.
- Conducts research and development (R&D) into spectrum efficient technologies to improve the Department's use of spectrum.
- Facilitates global spectrum information exchange by developing protocols, standards, applications, and information systems.
- Implements the DoD Joint Electromagnetic Environmental Effects (E3) Program.
- Develops, maintains, and distributes spectrum engineering and E3 analysis models, simulations, software, and data.
- Develops, distributes, and conducts E3 and spectrum management training courses for DoD Components.
- Provides technical E3 and spectrum engineering support, on a customer funded basis, to DoD, Federal Government organizations, the private sector when it is in the interest of national defense, and to foreign entities when authorized.

The major functional components of JSC include the following:

J3 Operations Division. -- provides Communications-Electronics (C-E)/Electromagnetic Battlespace (EMB) support and Joint Spectrum Interference Resolution (JSIR) support to the Joint Staff, Unified Combatant Commands, and warfighting commanders. This support is available for both contingencies and joint training exercises and can be provided from the JSC or on-site.

J5 Research Development and Acquisition Division. -- manages the Joint DoD E3 Program. The primary goal of this program is to ensure that weapon systems and other equipment provided to our Warfighters are electromagnetically compatible with the battlefield electromagnetic EM environment and are supportable in the Electromagnetic Spectrum (EMS). The major divisions of the E3 program are: Milestone Decision Authority (MDA) Acquisition Support, EMCS Lead Standardization activity, E3 Awareness and Training, Joint Service Ordnance E3 program. Researches emerging spectrum technologies and develops analysis and simulation capabilities to assess spectrum supportability, manage spectrum use and promote effective spectrum operations.

J6 Spectrum Management Information Technology Division. -- supports the warfighter by providing and maintaining Spectrum Planning Services, E3 Models and Simulations, and Information Systems.

J7 Business Operations Division. -- manages all the personnel, financial, security and business planning requirements for the Joint Spectrum Center.

J8 Applied Engineering Division. -- provides technical (E3) and spectrum engineering analysis and test support on a customer-funded basis. This includes support to DoD and other Federal Government organizations; to the private sector when it is in the interest of national defense per 10 U.S.C 2539b; and to foreign entities when authorized by the Foreign Military Sales Process through the Defense Security Cooperation Agency.

JSC Tasks and Products: These include the following, JSC Liaison and Coordination Support to Information Operations and Electronic Warfare -- provides direct support to Unified Combatant Commands, Joint Task Forces, and Joint Staff Information Operations/Electronic Warfare (IO/EW) cells, and indirect support for operational military IO/EW planning provided through the Joint Information Operations Center (JIOC), Service IO activities, and IO/EW elements of the Intelligence Community. This effort is conducted under the mission area of "supporting electronic protect missions of information warfare as they relate to spectrum supremacy". The support provided ranges from EW de-confliction analyses to supporting IO red team efforts as they relate to spectrum dependent matters.

Support to the Warfighting Unified Combatant Commands and JTF Commanders -- includes:

- Support to the Electronic Warfare officer and the information operations (IO) cell JSC liaison and coordination support to IO cell, Joint Information Operations Center (JIOC), and Intelligence organizations as required
- Automated frequency management support and training, electromagnetic environmental database support, electromagnetic compatibility (EMC) analysis support
- Generation of the Joint Communications Electronics Operation Instruction (JCEOI)
- Development of the Joint Restricted Frequency List (JRFL)
- Joint Spectrum Interference Resolution (JSIR) support through analysis and deployment teams as necessary
- Area Studies in support of Unified Combatant Command requirements (see below)
- Review of operations plans (OPLANS) for spectrum supportability, upon request.

Area Studies in Support of Unified Combatant Command Requirements. Each year, the Joint Spectrum Center (JSC) produces area studies for various countries, on CD-ROM, that provide information on the physical and cultural characteristics and the civil telecommunications sector. Specific items addressed include: frequency management; broadcasting; telephone, telegraph, and telex; data communications; aeronautical communications; maritime communications; and transmission systems. Frequency allocations, assignments, histograms, and site location maps are also included. Frequency assignment data is also provided on the CDROM in a spreadsheet.

Electromagnetic Battlespace and Communications-Electronics Planning Support: supports achieving information superiority and full spectrum dominance by providing services and products to Assistant Secretary of Defense for Networks and Information Integration (NII), Joint Staff, Unified Commands, Joint Task Forces, Military departments, and Defense Agencies to enable the DoD's effective use of the electromagnetic spectrum.

Providing electronic battlespace and C-E planning support directly to the warfighter, the JSC Operations Division offers these typical services:

- SPECTRUM XXI Frequency Nomination/Assignment/Allotment
- Electronic Warfare De-confliction
- Joint Restricted Frequency List (JRFL) Assistance/Preparation
- Interference Analysis
- Propagation Predictions (MF-EHF)
- C-E System Performance Prediction
- Radar Target Acquisition Coverage Prediction
- EMC Analyses in Support of Frequency Planning
- Topographical Analyses
- JCEOI Planning/Preparation
- Electromagnetic Environment (EME) Definition
- Geophysical Environment Definition.

Joint Spectrum Interference Resolution (JSIR): Established by DoD in October 1992 as a replacement for the electromagnetic interference portion of the former DoD Meaconing*, Intrusion, Jamming, and Interference (MIJI) program. MIJI's focus was on the reporting of potentially hostile electronic warfare attacks against U.S. military systems. The JSIR program is structured to have interference incidents resolved at the lowest possible level of the component chain of command, using component organic resources to resolve interference incidents where possible. Those incidents that cannot be resolved locally are referred up the chain of command, with resolution attempted at each level. If the interference incident cannot be resolved by the affected DoD Component or the service engineering agency responsible for spectrum interference resolution, then it is referred to the JSC JSIR office for resolution.

C2-Protect Support: The JSC Operations Division supports C2-Protect operations through each of the following activities:

- Provision of databases on friendly force C2 system location and technical characteristics data for use in planning C2-protect. The databases cover DoD, US government, and civilian communications, as well as radar NAVAIDS, broadcast, identifications, and electronic warfare (EW) systems. The databases are available on a quick reaction basis in a variety of formats and media to meet the needs of IO planners and spectrum managers.
- Assistance to the EW officer or IO cell in the development of the JRFL. The JSC provides an automated tool, SPECTRUM XXI, to assist in the development and management of the JRFL. The JSC has Unified Combatant Command support teams that deploy to the combatant command or JTF. The teams are available to prepare the JRFL or provide training and assistance in JRFL preparation. These teams are also available to provide assistance in spectrum management matters.
- Assistance in the resolution of operational interference and jamming incidents through the auspices of the JSIR Program
- Provision of databases on foreign C3 frequency and location data. This data is developed primarily from open sources

- Provision of unclassified C3 area studies. The studies are unclassified, developed entirely from open source material, and address the C3 infrastructure of over 100 countries. The studies provide information on the physical and cultural characteristics (geography, climate, and population), overview of telecommunications systems, and the frequencies used by each country. Data is provided on civilian, military, radio/TV broadcast and navigational systems. The frequency data is provided in automated form and can be used directly by spectrum management tools such as the widely used SPECTRUM XXI.

Spectrum Regulatory Support. The growth of commercial wireless services, such as Personal Communications Services, has greatly increased the demand for spectrum, and increased pressure for the government to relinquish portions of the spectrum to commercial interests. Continuing pressure to reallocate portions of the spectrum requires that the DoD have the ability to quickly assess the operational and economic impact of proposed reallocation legislation in order to defend critical DoD spectrum. JSC draws upon a collection of databases and experience with spectrum management to respond to ad hoc inquiries. In addition, the JSC is positioned to develop in-depth assessments of various reallocation proposals that will provide all levels of government with the information needed to make responsible reallocation decisions.

Leadership: The command billet of the center (O-6) rotates between the Army, Air Force and Navy. The Commander, JSC reports to the Director, Defense Spectrum Organization who in turn reports to the DISA Vice Director.

Location: David Taylor Research Center, 2004 Turbot Landing, Annapolis, Maryland.

Phone: (410) 293-2456, DSN 281-2456

Website: <http://www.jsc.mil/>

Last updated: August 2006

Joint Warfare Analysis Center (JWAC)



Mission: provides combatant commands, Joint Staff, and other customers with precise technical solutions in order to carry out the national security and military strategies of the United States. JWAC maintains and enhances its ability to conduct comprehensive technical analysis. Over the subsequent quarter of a century, JWAC has evolved from a small program office into a joint command of more than 600 personnel. As it grew, it became part of the Joint Chiefs of Staff in 1994 and then was spun-off as an independent joint command subordinate to Joint Forces Command (formerly Atlantic Command) in 1998.

Tasks:

- Provides Combatant Commander planners with full-spectrum analytical products in support of their objectives and guidance.
- Interfaces with the Joint Staff, national intelligence agencies, military commands, and governmental agencies to acquire necessary intelligence.
- Develops and adapts modeling and simulation technologies for analysis, computation, and the presentation of options to combatant commands, the Joint Staff, and other customers through partnership with DoD and Industry technology centers of excellence.
- Assesses strategic and operational planning processes including non-traditional methods for achieving national security objectives.
- Conducts combat assessment through the National Military Joint Intelligence Center Federated BDA Architecture.

Capabilities:

- Maintains direct liaison staffs with Combatant Commanders, Joint Staff, DoD and non-DoD agencies. Liaison deploys in theater during crises and exercises.
- Develops mathematical models, system simulation studies, and data-gathering methods and techniques to support analysis of system and component (subsystem) performance characteristics and interdependencies among different system types.
- Researches political and socioeconomic conditions in countries of interest.
- Develops data-gathering and analysis methods and techniques to assess military, political, and socioeconomic impacts of U.S. military action and mathematical model and system simulation to support this analysis.
- Participates in development of new methodologies and technologies in support of joint experimentation, wargaming, and precision engagement.

Subordination: JWAC reports to the U.S. Joint Forces Command, Norfolk VA.

Leadership: Command of JWAC rotates between a Navy and Air Force O-6.

Personnel: The JWAC workforce is comprised of over 600 employees; approximately 500 are civilian and contractor positions, including multidisciplinary scientists, engineers, and analysts and the Command is authorized 62 military billets.

Location: JWAC is located at the Naval Support Facility, Dahlgren VA.

Note: The unclassified information above was obtained and approved by the JWAC for inclusion in this publication. Additional information may be obtained at:

Website: <http://www.jwac.mil/>

Last Updated: January 2005.

Information Assurance Technology Analysis Center (IATAC)



The Information Assurance Technology Analysis Center (IATAC) is a U.S. Department of Defense Information Analysis Center (IAC) sponsored by the Defense Technical Information Center (DTIC), which is a DoD Field Activity under the Under Secretary of Defense for Acquisition, Technology and Logistics, reporting to the Director, Defense Research & Engineering (DDR&E) [see internet site: <http://www.dod.mil/ddre/>.}

Mission :

Provide the DoD a central point of access for information on Information Assurance (IA) emerging technologies in system vulnerabilities, research and development, models, and analysis to support the development and implementation of effective defense against Information Warfare attacks.

Management and Direction of IATAC Operations:

IATAC operates under the direction of our Government Steering Committee. The committee is made up of individuals from various government organizations, the Department of Defense, and the research and development (R&D) and science and technology (S&T) , operational, and governance communities; this includes representation from the Defense-Wide Information Assurance Program (DIAP), Joint Task Force - Global Network Operations (JTF-GNO), National Security Agency (NSA), Naval Postgraduate School (NPS), Office of the Secretary of Defense (OSD), and the Naval Information Warfare Center – Norfolk (NIOC-Norfolk). The steering committee meets at least once a year and provides input and feedback on IATAC's operations, particularly our information collection and information dissemination efforts. Additionally, the committee reviews topics for proposed technical reports.

History:

The United States is vulnerable to Information Warfare attacks because our economic, social, military, and commercial infrastructures demand timely and accurate as well as reliable information services. This vulnerability is complicated by the dependence of our DoD information systems on commercial or proprietary networks which are readily accessed by both users and adversaries. The identification of the critical paths and key vulnerabilities within the information infrastructure is an enormous task. Recent advances in information technology have made information systems easier to use, less expensive, and more available to a wide spectrum of potential adversaries.

Our nation's information infrastructure depends on the survivability, authenticity, and continuity of DoD information systems. These systems are vulnerable to external attacks, due in part to the necessary dependence on commercial systems and the increased use of the Internet. The survivability, authenticity, and continuity of DoD information systems is of supreme importance to the Warfighter. With the increasing amount of concern and Information Warfare activities requiring rapid responses, it is difficult to ensure that all appropriate agencies and organizations are given the knowledge and tools to protect from, react to, and defend against Information Warfare attacks. IATAC was established under the direction of DTIC and the integrated sponsorship of the Defense Information Systems Agency (DISA); the Office of the Assistant Secretary of Defense for Networks and Information Integration (ASD-NII)); the Joint Staff (J6); and DDR&E, whose missions direct the DoD's responses, developments, and operations regarding IA.

IATAC provides a central authoritative source for IA vulnerability data, information, methodologies, models, and analyses of emerging technologies relating to the survivability, authenticity, and continuity of operation of information systems critical to the nation's defense in support of the Warfighter's front line missions. IATAC's support extends across the spectrum from policy, doctrine, and strategy development, to R&D, S&T, engineering, and architecture, to operations and training. This spectrum of activities ensures the collection, analysis, and dissemination of a broad and growing library of scientific technical information (STI) related to IA. IATAC serves to help synchronize DoD's IA efforts across that entire spectrum of activities as well as into the civil/federal government.

IATAC operates as a specialized subject focal point, supplementing DTIC services within DoD Directive 3200.12, DoD Scientific and Technical Information Program (STIP), dated 15 February 1983.

Location and Contact Information:

IATAC
13200 Woodland Park Road
Herndon, VA 20171
Phone: (703) 984.0775
Fax: (703) 984.0773
E-mail: iatac@dtic.mil

Website: iac.dtic.mil/iatac/

Last Updated: October 2006

U. S. Strategic Command (USSTRATCOM)



U.S. Strategic Command (USSTRATCOM) is one of nine unified commands in the Department of Defense. It is located at Offutt Air Force Base near Omaha, Neb.. General James E. Cartwright commands USSTRATCOM, and serves as the senior commander of unified military forces from all four branches of the military assigned to the command. USSTRATCOM integrates and coordinates the necessary command and control capability to provide support with the most accurate and timely information for the President, the Secretary of Defense, other National Leadership and regional combatant commanders, and serves as steward and advocate of the nation's strategic capabilities.

USSTRATCOM is a global integrator charged with the missions of full-spectrum global strike, space operations, computer network operations, Department of Defense information operations, strategic warning, integrated missile defense, global C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance), combating weapons of mass destruction, and specialized expertise to the joint warfighter.

A command headquarters of more than 960 people, representing all four services, including Department of Defense civilians and contractors, oversees the command's operationally focused global strategic mission. The command is organized under a modified J-code structure as follows:

- **J0 The office of the Commander and the staff support agencies** - responsible for establishing the goals, mission, vision and leadership of the command. To help the commander, the immediate staff also includes the deputy commander in chief and a group of special advisors.
- **J1 (Manpower and Personnel)** - develops and administers USSTRATCOM command manpower and personnel policies, human resources, and personnel assignment programs.
- **J3 (Global Operations)** - coordinates the planning, employment and operation of DoD strategic assets and combines all current operations, global command and control and intelligence operations.
- **J2 (Intelligence)** - appries the commander of foreign situations and intelligence issues relevant to current operational interests and potential national security policies, objectives and strategy. This includes providing indications, warning and crisis intelligence support, supporting unified command intelligence requirements, developing doctrine, developing joint architecture, coordinating support requirements and providing targeting support.
- **J3B (Current Operations)** - operates the Global Operations Center to provide the commander and the J3 with situational awareness, command and control, and integration across all mission areas. Conducts mission analysis, leads course of action development, and performs contingency and crisis action planning. Executes missions as directed by the Secretary of Defense and the President.

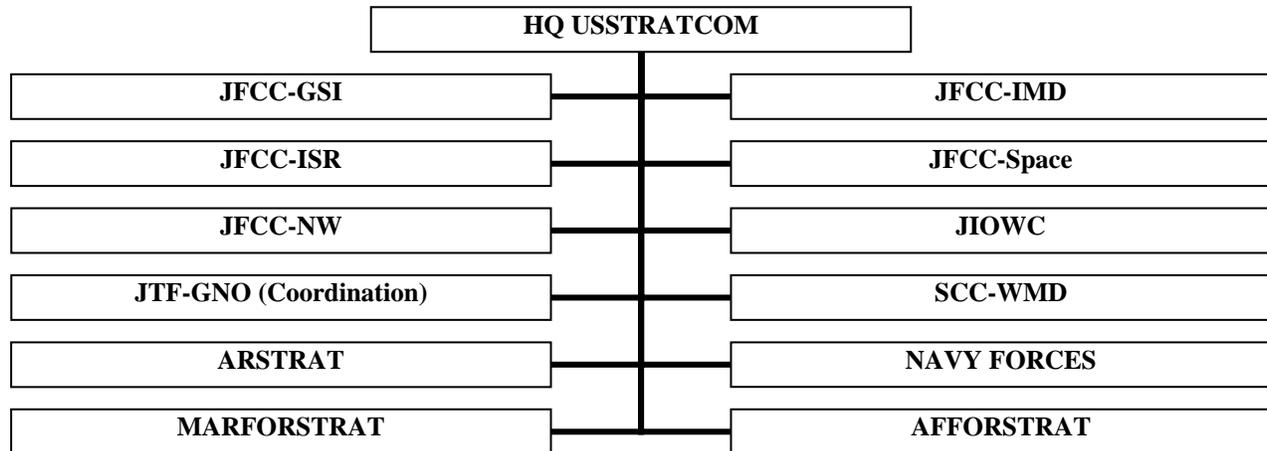
- **J4 (Logistics)** - Plans, coordinates and executes logistics functions for mobility, maintenance, engineering, readiness and sustainment and munitions management in support of command missions.
- **J6 (C4 Systems)** - coordinates, facilitates, monitors and assesses systems, networks and communications requirements.
- **J7 (Joint Exercises and Training)** - Manages USSTRATCOM Commander's Joint Training Program and Exercise Program in order to ensure readiness to perform the Command's Missions
- **J5 (Plans and Policy)** - responsible for coordinating the development and implementation of national security policy as it applies to the command and the execution of its mission. Develops future concepts and policy formulation for military space operations; global strike; information operations; global missile defense; and command and control, communications, computers, intelligence, surveillance and reconnaissance as outlined in the most recent Unified Command Plan. Integrates and synchronizes deliberate planning efforts across all USSTRATCOM missions. Prepares and maintains the nation's strategic nuclear war plan, and provides integrated global strike planning to deliver rapid, extended range, precision kinetic (nuclear and conventional) and non-kinetic (elements of space and information operations) effects in support of theater and national objectives. Performs day-to-day activities required for crisis-action and deliberate planning and execution, with updates to plans as necessary.
- **J8 (Capability and Resource Integration)** - conducts force management and analysis to include integrating, coordinating, prioritizing, and advocating USSTRATCOM future concepts, mission capability needs, weapons system development, support for emerging technologies, and command and control architecture across the mission areas. Responsible for the articulation and development of all command requirement processes to ensure that USSTRATCOM has the tools to accomplish its mission, and ensures appropriate decision support tools and assessment processes are in place to enhance operational capabilities. The directorate includes comptroller support, concepts and experimentation, and force assessments.

Global Innovation and Strategy Center (GISC) - The GISC mission is to produce knowledge discovery and shared understanding of strategic, operational and tactical perspectives to provide solutions to USSTRATCOM's toughest problems. The GISC is an academic facility that will bring together, in a cooperative effort, members of the public and private sector (military, political, academia, private sector, and media experts) and formalizes a process established soon after Sept. 11, 2001, with a focus on analyzing national and international security issues by leveraging expertise from the aforementioned elements of national power. This stimulates the development of innovative courses of action and comprehensive strategies to respond global threats against the United States.

USSTRATCOM exercises command authority over various task forces and service components in support of the command's mission. During day-to-day operations, service component commanders retain primary responsibility for maintaining the readiness of USSTRATCOM forces and performing their assigned functions. Their primary function is to provide organized, trained, and equipped forces for employment when called upon to support USSTRATCOM's global mission.

As the Department of Defense's key advocate for global capabilities, the command has extensive ties with defense agencies, the Department of Energy's national laboratories, and other sources of support. Through its many contacts and interagency relationships, the command facilitates planning, enhances information sharing between the military and other government agencies and streamlines decision making.

USSTRATCOM Functional Components, Service Components and Task Forces:



USSTRATCOM exercises command authority over five joint functional component commands (JFCCs) responsible for day-to-day planning and execution of primary mission areas: space and global strike; intelligence, surveillance and reconnaissance; network warfare; information operations; integrated missile defense; and combating weapons of mass destruction.

JFCC-Global Strike and Integration (GSI) -- optimizes planning, integration, execution and force management of assigned missions of deterring attacks against the U.S., its territories, possessions and bases, and should deterrence fail, by employing appropriate forces.

JFCC-Integrated Missile Defense (IMD) -- develops desired characteristics and capabilities for global missile defense operations and support for missile defense. Plans, integrates and coordinates global missile defense operations and support (sea, land, air and space-based) for missile defense.

JFCC-Intelligence, Surveillance and Reconnaissance (ISR) -- plans, integrates and coordinates intelligence, surveillance and reconnaissance in support of strategic and global operations and strategic deterrence. Tasks and coordinates ISR capabilities in support of global strike, missile defense and associated planning.

JFCC-Space (SPACE) -- optimizes planning, execution, and force management, as directed by the commander of USSTRATCOM, of the assigned missions of coordinating, planning, and conducting space operations.

JFCC-Network Warfare (NW) -- facilitates cooperative engagement with other national entities in computer network defense and network warfare as part of global information operations.

Joint Information Operations Warfare Command (JIOWC) -- plans, integrates, and synchronizes Information Operations (IO) in direct support of Joint Force Commanders and serves as the USSTRATCOM lead for enhancing IO across DoD.

Joint Task Force-Global Network Operations (JTF-GNO) -- directs the operation and defense of the Global Information Grid to assure timely and secure net-centric capabilities across strategic, operational, and tactical boundaries in support of DoD's full spectrum of warfighting, intelligence, and business missions.

USSTRATCOM Center for Combating Weapons of Mass Destruction (SCC-WMD) -- plans, advocates and advises the commander, USSTRATCOM on WMD-related matters. Provides recommendations to dissuade deter and prevent the acquisition, development or use of WMD.

For More information please visit www.stratcom.mil

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Joint Task Force – Global Network Operations (JTF - GNO)



MISSION: A component of U.S. Strategic Command (USSTRATCOM), the Joint Task Force - Global Network Operations (JTF-GNO), is located in Arlington, VA. Under the authority of USSTRATCOM, JTF-GNO has the mission of directing the operation and defense of the DoD's Global Information Grid (GIG) to assure timely and secure Net-Centric capabilities across strategic, operational, and tactical boundaries in support of DoD's full spectrum of warfighting, intelligence, and business missions.

HISTORY: By the mid to late 1990's, it became increasingly apparent that the Global Information Grid, also known as the GIG, and the DoD computer networks that control and operate within it were becoming increasingly vulnerable to attacks. The so-called "information superhighway" was rapidly becoming a "cyber battlefield" where the protection previously afforded by traditional geographical boundaries was diminished, and a threat to a single DoD computer system was now potentially a threat to all DoD computer systems.

The DoD recognized this growing cyber threat and in response created the Joint Task Force for Computer Network Defense (JTF-CND). JTF-CND achieved initial operational capability (IOC) on 30 December 1998 and full operational capability (FOC) in June 1999.

In October 1999, United States Space Command (USSPACECOM) assumed the CND Mission and JTF-CND was subordinated to it. In the fall of 2000, with the new Unified Command Plan (UCP) and the addition of an emerging Computer Network Attack (CNA) mission, JTF-CND began transforming into the Joint Task Force for Computer Network Operations (JTF-CNO).

JTF-CNO achieved IOC on 2 April 2001 and progressed towards achieving FOC on 1 October 2003. In October 2002, JTF-CNO was re-aligned under the United States Strategic Command (USSTRATCOM) under the new UCP, Change 2. JTF-CNO established itself as the premier DoD organization for intelligence analysis, planning, and operations of computer network warfare.

During its short history, JTF-CNO evolved from a handful of people to over 130 active duty military, civil service, and contracted employees. The JTF-CNO was instrumental in operationalizing computer network operations and defense for all of DoD. It also championed the CNA mission, working tirelessly to make this immature warfare area a viable part of our nation's ability to wage war.

In August 2003, JTF-CNO transformed its mission again with the transfer of the CNA mission to USSTRATCOM's Network Attack Support Staff (NASS). In January 2005, the mission to plan, integrate, coordinate and conduct CNA/CND, and integrate with CNE was given to Joint Functional Component Command – Network Warfare.

In 2004, the JTF-CNO began its largest and most comprehensive transformation. On 18 June, the Secretary of Defense signed a delegation of authority letter designating the Director, Defense Information Systems Agency (DISA) as the new Commander of Joint Task Force-Global Network Operations (JTF-

GNO) and Deputy Commander for Global Network Operations and Defense, USSTRATCOM. With this designation, the new command assumed responsibility for directing the operation and defense of the GIG.

In July, the JTF-GNO formed the Global NetOps Center (GNC) through the functional merger of elements from the JTF-CNO's Operations Directorate, DISA's Global Network Operations and Security Center (GNOSC), the DoD Computer Emergency Response Team (DoD-CERT), and the Global SATCOM Support Center (GSSC).

In 2006 the UCP formally assigned CDRUSSTRATCOM the mission of directing GIG operations and defense; a mission subsequently assigned to the CDR JTF-GNO.

CURRENT OPERATIONS: The JTF-GNO performs its mission of directing the operations and defense of the GIG by using the NetOps construct that is outlined in its Joint Concept for GIG NetOps, Version 3, 4 Aug 06. NetOps is defined as the operational framework consisting of the essential tasks, Situational Awareness (SA), and Command and Control (C2) that CDRUSSTRATCOM, using its JTF-GNO component, in coordination with the NetOps Community, will accomplish his assigned UCP (2006) mission of directing the operations and defense of the GIG. The essential tasks are GIG Enterprise Management (GEM), GIG Network Defense (GND), and GIG Content Management (GCM). Adhering to the responsibilities of the essential tasks (GEM, GND, and GCM) produces NetOps' desired effects of: Assured System and Network Availability, Assured Information Protection, and Assured Information Delivery in support of the overall goal of NetOps which is to provide the right information to the edge. NetOps and its essential tasks (GEM, GND, and GCM) include Information Assurance (IA) as defined and outlined in DODD 8500.1, Information Assurance, and CJCSI 6510.01D, Information Assurance and Computer Network Defense.

To execute these fundamental NetOps responsibilities, the CDR, JTF-GNO coordinates with Combatant Commands/Services/Agencies (CC/S/As). JTF-GNO has Operational Control (OPCON) over Service NetOps Components as provided in Forces For Memo, Feb 06, page IV-33, footnote 9 and stated in the Joint Concept of Operations for GIG NetOps, Version 3, 4 Aug 06. CDR, JTF-GNO also exercises Tactical Control (TACON) over the Service Computer Emergency / Incident Response Teams (CERTs/CIRTs) as provided in the Forces For Memo, Feb 06, page IV-33, footnote 9 and stated in the Joint Concept of Operation for GIG NetOps, Version 3, 4 Aug 06. To effectively operate the GIG as a global enterprise while realizing the Geographic Combatant Command (GCC) requirements to direct GIG operations in their theaters, CDRUSSTRATCOM developed an event-based C2 structure. C2 of GIG operations is based on the situation at the time. The three possible circumstances that determine the C2 of NetOps are known as global, theater, and non-global NetOps events. The preponderance of NetOps events are theater and are under the control of the GCC and their Service Components. Global and non-global NetOps events occur less frequently, but when they do occur, USSTRATCOM, using its JTF-GNO component, will direct the global response and respective CC/S/As will direct their non-global responses.

The Global NetOps Center (GNC) is the JTF-GNO Command Center responsible for executing the daily operation and defense of the GIG. The GNC provides the overall management, control, and technical direction for GIG NetOps and oversees a collaborative coordination process involving all Combatant Commands, Services, and Agencies, supporting the needs of the President, SECDEF, NetOps Community, and the warfighting, business, and intelligence domains.

Within each theater of operation, the JTF-GNO operates through Theater NetOps Centers (TNCs). The TNC is OPCON to JTF-GNO and offers onsite, theater support. Each TNC can issue technical directives to Service Theater Network Operations and Security Centers (STNOSCs)/Agency Theater Network Operations and Security Centers (ATNOSCs). The TNC develops, monitors and maintains a GIG SA view for the theater. The theater GIG SA view is aggregated and segmented based on requirements provided by the Theater NetOps Control Center (TNCC) as derived from the GIG common SA standards. The GIG SA view will include pertinent theater, operational, and tactical-level system and network, GND, and GCM status.

The Service NetOps Component Commanders are the Commander, SMDC/ARSTRAT, the US Air Force Commander for USAF NetOps (USAF NetOps / CC), Commander, US Navy Network Warfare Command (USN NAVNETWARCOM) and Commander, US Marine Corps Network Operations and Security Command (MCNOSC). Each of these Service Component Commanders exercises C2 over their Service Global Network Operations and Security Centers (SGNOSC) .

The SGNOSCs and CERTs/ CIRTs serve as a part of the Service Component support to JTF-GNO. The SGNOSC and CERT/CIRT mission is to provide the Service-specific NetOps reporting and SA for the Service's portions of the GIG. The SGNOSC and CERT/CIRT provide worldwide operational and technical support to the Service's portions of the GIG across the strategic, operational, and tactical levels leveraging collaboration of the STNOSCs if established. The SGNOSC, in concert with the CERT/CIRT, are responsible for executing GND within their portion of the GIG, ensuring the Service's portions of GIG are secure and executing Service Title 10 enterprise responsibilities.

The Defense Agencies provide, operate, and maintain a large portion of the equipment, personnel, and other resources that make up the GIG. Execution of these functions requires the Agencies to be actively engaged in NetOps. To execute these functions, most Agencies have established NOSCs, which maintain SA of their portions of the GIG. The DoD Agencies that are not part of the Intelligence Community operate enterprise-wide systems as part of the GIG. These systems provide critical support to the DoD, COCOMs, and Military Services via their Agency Global NOSCs (AGNOSC). These AGNOSCs serve as a central point of contact for matters concerning the resources they provide to the GIG. DoD Agencies will align their AGNOSCs to provide USSTRATCOM visibility and insight of their GIG status and will follow the orders and directives issued by JTF-GNO per the 18 June 04 SECDEF Memo (modified by 17 Nov 05 DEPSECDEF Memo).

PERSONNEL: The JTF-GNO is currently authorized more than 300 positions.

Website: <https://www.jtfgno.mil> (PKI enabled website)

Website: www.stratcom.mil/fact_sheets/ (information only)

Last Updated: September 2006

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Joint Information Operations Warfare Command (JIOWC)



Mission: Plans, integrates, and synchronizes information operations in direct support of Joint Force commanders and serves as the USSTRATCOM lead for enhancing information operations across the Department of Defense.

Tasks:

- Provide continuous and integrated IO planning and execution support to JFCs, including COCOMs, JTFs, JFCCs, the JS, and the OSD. JIOWC will provide IO support to national agencies and organizations, allied nations or international organizations as directed.
- Conduct operational analysis which provides the foundation for IO planning within and across geographic regions.
- Assist in the integration of IO into joint exercises.
- Provide IO expertise to assist USSTRATCOM in IO force and capability development.
- Provide EW, PSYOP, MILDEC, and OPSEC expertise to COCOMs through Combatant Command Support Teams (CCSTs). JIOWC will train and field IO support teams capable of supporting the COCOMs IO staff with integrated IO planning during peacetime operations, contingencies, and exercises. JIOWC members will be deployment capable within 72 hours of formal notification.
- Provide OPSEC program development and training, assessment support, and plans and exercise support via the Joint OPSEC Support Center (JOSC) in coordination with the CCSTs.
- Provide MILDEC and long-range operational Mission Analysis via the Joint Mission Support Center (JMSC) in coordination with the CCSTs.
- Provide EW planning and execution support to JFCs via the Joint Electronic Warfare Center (JEWEC) in coordination with the CCSTs.
- Provide operational level strategic communication planning support to COCOMs, JFCs, and USSTRATCOM components via the Joint Strategic Communication Support Cell (JSSC) in coordination with the CCSTs.
- Serve as the USSTRATCOM lead for RC IO Integration across DoD.
- Serve as USSTRATCOM J8's lead agent for assisting the COCOMs in identifying and addressing their near term IO capability gaps.

- Act as the USSTRATCOM representative to and Co-Chair of the Joint IO Education Board of Advisors.
- Collaborate on course and curriculum development, and other key aspects of IO education and training with the Naval Postgraduate School and the Joint Forces Staff College (JFSC).

Capabilities:

- Deployable Combatant Commander support teams – tailored to augment J3 IO Cells
- Reachback – to satisfy Combatant Commander IO requirements with a small forward footprint
- Surge capability – to meet the demands of real world contingencies and exercises
- Visibility across commands – to share lessons learned, and to help synchronize teams regional effects.
- IO simulation and planning tools - IOPCJ, JDSF, ION, RFMP, ARC-GIS and JIAPC

Subordination: The Joint Electronic Warfare Center (JEWEC) was established by the Secretary of Defense in October 1980 and reported to the Joint Staff. In September 1994, the mission was expanded and the organization was renamed the Joint Command and Control Warfare Center (JC2WC). In 1998, as a result of the Defense Reform Initiative (DRI), the JC2WC was realigned from the Joint Staff to US Atlantic Command. The JC2WC mission was further expanded and resulted in re-designation as the Joint Information Operations Center (JIOC). In October 1999, the JIOC was realigned as a subordinate command of USSPACECOM. On 1 October 2002, the JIOC was realigned as a subordinate command to USSTRATCOM. In July 2006 Commander USSTRATCOM approved the transformation of the Joint Information Operations Center to the Joint Information Operations Warfare Command (JIOWC). Commander JIOWC, reports to the Combatant Commander, USSTRATCOM.

Leadership: The Commander of the JIOWC is a nominative position that has always been filled by an USAF General, who is tri-hatted as the Deputy Commander for Information Operations, 8th Air Force and Commander, Air Intelligence Agency.

Personnel: The JIOWC is currently authorized 210 positions. Three Allied officers and 160 contractors are fully integrated into the command.

Location: The JIOWC is co-located with the Air Intelligence Agency and the Air Force Information Warfare Center (AFIWC) at Lackland AFB, TX.

Website: <http://www.jioc.smil.mil>

Last updated: September 2006

U. S. Special Operations Command (USSOCOM)



USSOCOM is one of the nine U.S. unified commands under DOD. It organizes, trains, and equips special operations forces provided to Geographic Combatant Commanders, American Ambassadors and their country teams. USSOCOM manages and oversees all CONUS-based SOF from all four services. It also develops SOF-specific tactics, techniques, procedures, and doctrine, and conducts research, development, and acquisition of SOF-peculiar equipment. USSOCOM ensures its forces are trained and "joint-ready" to respond to the call from the President, Secretary of Defense and the other eight combatant commanders as necessary.

Mission. USSOCOM leads, plans, synchronizes, and as directed, executes global operations against terrorist networks. USSOCOM trains, organizes, equips and deploys combat ready special operations forces to combatant commands.

Special operations are operations conducted in hostile, denied, or politically sensitive environments to achieve military, diplomatic, informational, and/or economic objectives employing military capabilities for which there is no broad conventional force requirement. These operations often require covert, clandestine, or discreet capabilities. Special operations are applicable across the range of military operations. They can be conducted independently or in conjunction with operations of conventional forces or other government agencies and may include operations by, with, or through indigenous or surrogate forces.

Special Operations Forces Core Tasks

- (Counterterrorism (CT)) Counter Proliferation of WMD
- (Counter Proliferation (CP)) Counterterrorism (CT)
- Special Reconnaissance (SR)
- Direct Action (DA)
- Unconventional Warfare (UW)
- Foreign Internal Defense (FID) (Information Operations (IO))
- Civil Affairs Operations (CAO) (Psychological Operations (PSYOP))
- Information and Psychological Operations (Foreign Internal Defense (FID))
- Synchronize DOD efforts in the GWOT (Civil Affairs Operations (CAO))

IO Core and Related Capabilities within USSOCOM Purview:

Psychological Operations (PSYOP). A vital part of the broad range of U.S. political, military, economic, and ideological activities used by the U.S. government to secure national objectives, PSYOP disseminate truthful information to foreign audiences in support of U.S. policy and national objectives. Used during peacetime, contingency operations, and declared war, these activities are not a form of force, but are force multipliers that use nonviolent means in often violent environments. Persuading rather than compelling physically, they rely on logic, fear, desire or other mental factors to promote specific emotions, attitudes or behaviors. The ultimate objective of U.S. military psychological operations is to convince target audiences to take action favorable to the United States and its allies. The importance and effectiveness of psychological operations has been underscored during OPERATIONS ENDURING FREEDOM and IRAQI FREEDOM.

Civil Affairs (CA). CA units support military commanders by working to minimize the effect of civilians in the battle space and by coordinating with civil authorities and civilian populations in the commander's area of operations to lessen the impact of military operations on them during peace, contingency operations, and declared war. Civil Affairs forces support activities of both conventional and SOF, and are capable of assisting and supporting the civil administration in their area of operations. Long after the guns have fallen silent, the men and women of Civil Affairs continue to provide assistance to foreign governments, and to stabilize regions in turmoil.

Components. USSOCOM has four component commands and one sub-unified command:

1. U.S. Army Special Operations Command (USASOC). Located at Ft. Bragg, North Carolina. USASOC's mission is to organize, train, man, equip, educate, maintain combat readiness, and deploy assigned active duty and Reserve Components of the Army Special Operations Force. Their mission is to accomplish special operations, psychological operations, and civil affairs operations. Their forces include:

- U.S. Army Civil Affairs and Psychological Operations Command (Airborne).
 - 4th PSYOP Group (4th POG)
 - 96th Civil Affairs Battalion
- United States Special Forces Command (Airborne).
- John F. Kennedy Special Warfare Center and School.

NOTE: Effective 1 Oct 06 the following units were reassigned from U.S. Special Operations Command (USSOCOM) to U.S. Joint Forces Command (USJFCOM):

- 350th, 351st, 352, and 353 Civil Affairs Commands (U.S. Army Reserve)
- 2nd POG and 7th POG (U.S. Army Reserve)

2. Naval Special Warfare Command (NAVSPECWARCOM) Located at Naval Amphibious Base, Coronado, CA. The mission of NAVSPECWARCOM is to organize, train, man, equip, educate, maintain combat readiness, and deploy assigned forces in support of joint and fleet operations worldwide. SEAL Teams are maritime, multipurpose combat forces organized, trained and equipped to conduct a variety of special missions in all operational environments and threat conditions. SEAL special mission areas include unconventional warfare, direct action, counter-terrorism, special reconnaissance, foreign internal defense, information warfare, security assistance, counter-drug operations, personnel recovery, and hydrographic reconnaissance.

3. Air Force Special Operations Command (AFSOC). Located at Hurlburt Field, Florida. It provides Air Force Special Operations Forces for worldwide deployed and assigned to geographic unified commands, conducting the full spectrum of special operations core tasks. AFSOC's contribution to Information Operations is specifically in the form of the 193^d Special Operations Wing, Air National Guard. The wing operates the EC 130 "Commando Solo" which can broadcast television and radio programs directly to foreign audiences.

4. Marine Special Operations Command (MARSOC). Located at Camp Lejuene, NC. Activated February 2006, its primary mission is to organize, man, train and equip Marine Special Operations Forces. The MARSOC subordinate elements will provide training to foreign militaries, conduct specified special operations missions like special reconnaissance, engage in direct action, provide intelligence support, coordinate supporting fires and provide logistical support to special operations task forces.

5. Joint Special Operations Command (JSOC). A sub-unified command of USSOCOM. JSOC provides a joint headquarters to study special operations requirements, ensures interoperability and equipment standardization, develops joint special operations plans and tactics, and conducts joint special operations exercises and training.

Location Address and Contact Information: Headquarters, United States Special Operations Command (HQ, USSOCOM)

- Headquarters, USSOCOM, 7701 Tampa Point Boulevard, MacDill Air Force Base, Florida 33621
- Public Affairs Office: (813) 828-4600

Website: <http://www.socom.mil/>

Last Updated: October 2006

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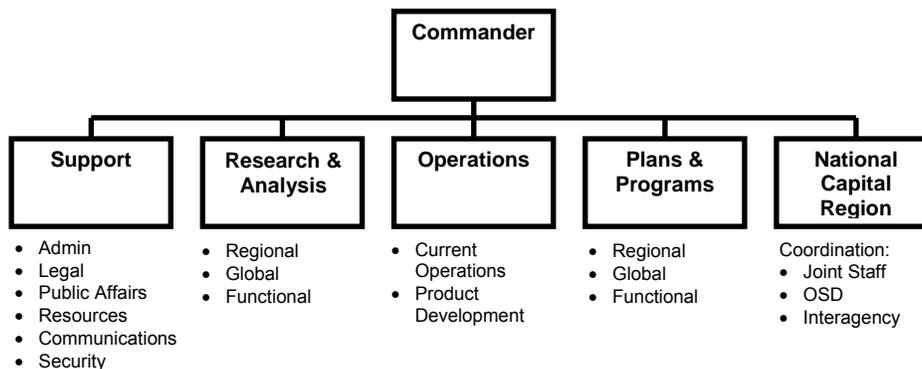
Joint PSYOP Support Element (JPSE)



Mission: The Joint PSYOP Support Element (JPSE) plans, coordinates, integrates and, on order, executes trans-regional psychological operations to promote U.S. goals and objectives.

History: The JPSE was established in 2003 and formally activated in 2006 at U.S. Special Operations Command (USSOCOM), Tampa, Florida. Shortly after 11 September 2001, the Office of the Secretary of Defense (OSD) articulated a need for a strategic PSYOP capability within the Department of Defense (DoD). The Defense Planning Guidance (FY 2004-2009) tasked Commander, USSOCOM to create a “Strategic PSYOP Force.” The 2003 DOD Information Operations Roadmap directed the creation of “a Joint PSYOP Support element.”

Organization: The JPSE organization is depicted in the following wire diagram.



Commander's Intent:

- Deny safe-haven to terrorists abroad.
- Counter or defeat global terrorist ideology and influence.
- Plan, develop, coordinate, synchronize, and on order execute PSYOP at the global and trans-regional level.
- Support the Global War on Terrorism (GWOT) mission of: USSOCOM, USSTRATCOM, Geographic Combatant Commanders (GCCs), Joint Staff, OSD, and the Interagency.
- Provide sophisticated, commercial quality PSYOP support.

Characteristics:

- One of two brigade-level PSYOP units assigned to USSOCOM.
- Comprised largely of senior military and civilian PSYOP personnel.
- Provides professional analysis and planning.
- Provides commercial-quality PSYOP prototype development.
- Develops DoD trans-regional PSYOP plans and can assist in developing COCOM/JTF Strategic Communication, Information Operations, and PSYOP plans.
- Coordinates trans-regional dissemination, ensuring integration with deployed PSYOP units.

Source: JPSE Command Brief, 813-828-6410

Last Updated: October 2006

Joint Public Affairs Support Element (JPASE)



Mission: The Joint Public Affairs Support Element (JPASE) trains and maintains a public affairs professional capability to rapidly deploy as a team to assist the combatant commanders. The operational teams help to properly disseminate information to the public. JPASE seeks to enhance overall joint public affairs capabilities through not only training but also doctrine development, and the establishment of joint standards and requirements to ensure the joint force commander has an organization of equipped, trained and ready public affairs professionals. The goal is for these professionals to provide counsel, operational planning and tactical execution of communication strategies as a function of joint military operations in support of national objectives. JPASE is located in U.S. Joint Forces Command's (USJFCOM) Joint Warfighting Center (JWFC) in Suffolk, Va.

JPASE Mission Statement: To provide for an operationally-focused, trained, expeditionary capable force of regionally and culturally aware professional communicators, synchronized and integrated into joint, interagency and multinational environments, able to proactively advise the joint force commander on communication strategies in support of current and future military operations and activities.

JPASE is organized to provide direct support to specific combatant command requirements. It replaces the former, *ad hoc* method of assembling teams to provide support. This new organization facilitates concentration on the particular aspects of geography, culture and organization of a specific command, while gaining proficiency and understanding of the common operating tools and practices each command employs. On order, JPASE deploys to the regional Combatant Commands in support of emergent joint operations as a trained, equipped and ready joint public affairs force. Its first deployment was during Hurricane Katrina in 2005. All of JPASE's 48 military and civilian personnel, drawn from all services, are designated to support expeditionary operations.

Organization: JPASE is organized around three objective areas:

1. **Proponency Division:** The Proponency Division is responsible for developing and sustaining capability improvements across the areas of doctrine, organization, training, materiel, leadership, personnel, and facilities, and is divided into seven functional areas:

- Concept development and experimentation
- Visual information development
- Public affairs collaborative information environment/Web portal management
- Lessons learned
- Education development

- Doctrine and Policy
- Capabilities

2. **Training Division:** The training division is responsible for training public affairs and operational staffs includes four operational teams, each aligned with two of the unified commands, providing public affairs training, media simulation, staff assistance and exercise support to those commands.

3. **Expeditionary Capability:** The JPASE operational teams provide a standing, rapidly-deployable, turn-key joint public affairs capability to support a variety of operational requirements. Each of the training teams form the core of a Scalable Public Affairs Response Capability (SPARC) – a ready, mission tailored force package, to support exercises and to deploy in support of the combatant commands for operations and contingencies. COCOMs must provide logistics and life-support to each SPARC. At full operational capability (FOC) JPASE can deploy up to 24 persons for 90 days or 12 for 179 days and still maintain its ability perform all its mission essential tasks.

Reserve Components Capability: USJFCOM established a reserve joint public affairs unit (JPASE-R), in October 2004 to mirror the active duty JPASE organization. It is trained and equipped to provide training and support when the active JPASE force is deployed in support of contingency operations. It will be certified to deploy in support of operations, in whole, in part, or as individual augmenters.

Website: JFCOM Joint Warfighting Training Center: http://www.jfcom.mil/about/abt_j7.htm

Last Updated: September 2006

Joint Forces Staff College Information Operations Program



The Joint Forces Staff College (JFSC) was established in 1946 to better equip personnel from all of the services to function in the modern joint and combined warfare environment. It pre-dates the creation of the unified Department of Defense, and is the successor of the Army and Navy Staff College, established in 1943 for the same purpose. The college is located at the U.S. Naval Base, Norfolk, Virginia.

IO Education at JFSC. Department of Defense Instruction (DODI) 3608.12, “ Joint Information Operations (IO) Education”, (4 Nov 05) specifies that, “Joint Forces Staff College [will] develop and conduct a Joint IO planners course to prepare students to integrate IO into plans and orders on joint warfighting staffs”. The College also offers an orientation course. Both are conducted by the Information Operations Division of the Joint Command, Control & Information Operations School (JC2IOS), and are outlined below.

1. Joint IO Orientation Course (JIOOC)

A one week course with the objective to educate and train U.S. Government (USG) personnel in the military grades of Lieutenant/Captain (O-3) to Captain/Colonel (O-6) and civilian equivalents in the basics of joint Information Operations (IO). Primary emphasis is at the Combatant Command level. The course focuses on teaching joint IO doctrine and DoD IO policy guidance as they apply to the operational level of joint warfare. It is particularly relevant to those serving in support of IO cells and other staff positions that require a basic knowledge of Joint IO. If IO planning skills are desired, then the student should take the JIOPC.

It gives students a common baseline of IO knowledge upon which to build practical skills and abilities to employ IO tools and techniques. In this one-week course, students are exposed to four blocks of instruction: Strategy; Intelligence support; IO Capabilities (Core, Supporting and Related); and Organization, Training, and Equipping. Each block of instruction includes a combination of instructor lecture, guest speaker presentations, guided discussions and/or panel discussions.

2. Joint Information Operations Planning Course (JIOPC)

A four week course for the purpose of establishing a common level of understanding for IO planners and IO capability specialists, between the ranks of O-4 through O-6, and DoD Civilian equivalents, who will serve in joint operational-level IO billets. *This course is a prerequisite for personnel assigned to the Joint IO career force* (See DODI 3608.11, Information Operations Career Force , 4 Nov 05).

The objective of the JIOPC is to educate and train military students between the ranks of O-4 through O-6, and DoD Civilian equivalents, to plan, integrate, and synchronize full spectrum IO into joint operational-level plans and orders. The school accomplishes this through class presentations, guest lectures, case studies, and practical exercises in a joint seminar environment. Students will be assigned to a working group consisting of approximately eight to ten individuals led by a faculty mentor. The course focuses on the following six (6) learning areas:

- Joint Operations Planning and Execution System (JOPES)
- Joint Intelligence Preparation of the Environment
- IO Planning

- Interagency Planning & Coordination
- Military Deception (MILDEC)
- Operations Security (OPSEC)

Throughout the course the students use traditional planning methodologies within the joint planning community. The course is based upon joint doctrine that is reinforced, when necessary, by a compilation of various tactics, techniques, and procedures from throughout the department of defense.

The JIOPC is only taught in residence at the Joint Forces Staff College, but is also offered 1-2 times per year at the Joint Information Operations Center in San Antonio, TX. JIOC staff and Combatant Command IO planning teams have priority for available seats.

For information regarding the JFSC Information Operations Division, contact JC2IOS-IO@jfsc.ndu.edu or at 757-443-6339 (DSN: 646)

Web Site: www.jfsc.ndu.edu/schools_programs/jc2ios/io/default.asp

Last Updated: September 2006

Information Operations Center of Excellence, Naval Postgraduate School



Mission. The President, Naval Postgraduate School (NPS) was tasked by Department of Defense Instruction (DoDI) 3608.12, (“Joint Information Operations (IO) Education” - 4 Nov 05) with establishing a DoD “Center of Excellence” (CoE) for Information Operations.

The IO CoE functions under the sponsorship of Commander, US Strategic Command (USSTRATCOM) to inform and support the development of innovations in Information Operations related policy, doctrine, technology and education.

History of NPS. NPS is located in Monterey, CA and is the successor to the Postgraduate Department of the U.S. Naval Academy, established at Annapolis, MD prior to World War One. Congress established the school as a full degree-granting institution in 1945, and it moved to its present location in 1951. The present student body numbers approximately 1,800, with representatives from all service branches, and the services of more than 25 allied nations. It grants degrees at the masters and doctorate levels.

Information Operations Education at NPS

1. ISO Fundamentals Certificate Program. NPS offers this certificate program on line, which is Phase 1 of its Master of Science (MS) degree in Information Systems and Operations (ISO). The certificate program consists of four-courses given via Distributed Learning (DL). These four courses are:

SS3011 - Space Technology and Applications

IO3100 - Information Operations

IS3502 - Computer Networks: Wide Area/Local Area (Intro to Information Systems Networks)

CC3000 - Intro to Command , Control, Communication, Computer and Intelligence Systems in DoD

IO3100 - Information Operations provides a survey of Information Operations (IO) along the time line of peace, to conflict, and back to cessation of hostilities. Students study the methods and elements which contribute to successful Information Operations including: Psychological operations and deception, Operational security, information assurance, and infrastructure protection, Electronic attack/protect/support, Physical attack/destruction in support of IO, Military-civilian relationship, Human cognition and decision making, Command and control structures, Legal issues, Computer and network attack, Systems engineering concepts (including modeling and simulation), Sensor and signals intelligence support to IO.

2. Master of Science in Information Systems and Operations (Curriculum 356). This is a war-fighter oriented, MS degree, in-residence program that will provide fundamental graduate education to integrate information technologies, command and control processes, and IO methods and elements into innovative operational concepts for Information Operations in the context of Network Centric Warfare.

The Information Systems & Operations graduate will be able to:

- Innovatively create IO strategies and policies.
- Establish agile organizational structures and decision processes responsive to real time mission and situation requirements.
- Understand information technology and systems as enabling the acquisition of information and knowledge superiority leading to effective development and performance of information operations.
- Integrate technology, organization, policy and strategy into an Information Operations framework useful in both deliberate and crisis planning across the range of military operations;
- Identify and solve significant information operations problems and communicate the results in written reports and command briefings.

Website: Information on Naval Postgraduate School's ISO program can be obtained at the following site:
http://www.nps.edu/DL/NPSO/cert_progs/iso.html

Last Updated: September 2006

Service Component Information Operations Organizations



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Army – 1st Information Operations Command (1st IO Cmd)



Mission: 1st Information Operations Command (Land) deploys IO support teams in order to provide IO planning support and vulnerability assessments in support of military forces and provides an IO reach-back capability to operational and tactical IO staffs as directed. Concurrently, the command conducts continuous Computer Network Defense (CND) operations and CND-Response Actions in coordination with computer network service providers and executes the Threat Analysis (ARAT-TA) program.

Tasks:

1. Organize, train, equip and deploy IO Support Teams to provide IO planning, targeting and execution support and vulnerability assessments as directed.
2. Provide IO “reach-back” support to include; intelligence, planning, and analysis support to deployed Field Support Teams and operational and tactical IO staffs as directed.
3. Provide IO Training Support to LCCs, Army commands, other Service commands, Joint Forces, Agencies, and Activities in support of CAC and as directed by DA G3.
4. Execute the Army Reprogramming Analysis Team-Threat Analysis (ARAT-TA) program.
5. Develop and promote IO interoperability with Joint Forces, other Services, Inter-agencies and Allies as appropriate and as directed.
6. Provide IO support for the assessment of force readiness and capabilities of land component forces to accomplish their assigned missions as directed.
7. As directed, Plan, coordinate and integrate Army Computer Network Operations (CNO), Special Information Operations (SIO), and Special Purpose Electronic Attack (SPEA) capabilities in support of Combatant Commands and land forces on behalf of the Army to accomplish their assigned missions.
8. Conduct continuous Computer Network Defense (CND) operations and CND-Response Actions in coordination with computer network service providers.
9. Establish and maintain the Army’s Operations Security (OPSEC) Support Element.
10. Act as the Functional Proponent for Military Deception.
11. Coordinate with and assist TRADOC/CAC in the development and integration of Army IO DOTMLPF requirements, including the development, evaluation, and implementation of IO systems and TTP in combat operations, exercises, and tests and experiments.

1st IO Cmd personnel deploy worldwide, exporting their expertise to commanders through multifaceted Field Support Teams, Vulnerability Assessment Red and Blue Teams, subject matter experts in advanced systems, and all-source databases as well as provide the Army's OPSEC Support Element. Additionally 1st IO Cmd assists in the defense of Army networks, by conducting continuous Computer Network Defense (CND) operations and CND-Response Actions in coordination with computer network service providers. These skilled professionals offer commanders nontraditional options for today's technologically advanced battlespace.

Subordination: 1st IO Cmd is ADCON (under administrative control of) to the U.S. Army Intelligence and Security Command (INSCOM) and is considered a major subordinate command (MSU). 1st IO Cmd receives operational taskings from the Army G-3 (Director of Operations, Readiness and Mobilization).

Leadership: The Commander of 1st IO Cmd is an Army Colonel (O-6).

Location: The 1st IO Cmd is located at Ft. Belvoir, VA within the INSCOM HQs building.

https://www.1stiocmd.army.mil/io_portal/Public/Pages/Public_Main.cfm

Last Updated: January 2006.

Army- U.S. Army Information Operations Proponent (USAIOP), U.S. Army Electronic Warfare Proponent (USAEWP)

~
Combined Arms Center, Fort Leavenworth, KS



I. The U.S. Army Information Operations Proponent (USAIOP) is **charged with institutionalizing Information Operations (IO) across Army Doctrine, Operations, Training, Manpower, Logistics, Personnel, and Facilities (DOTMLPF); managing the eight personnel lifecycles for officers in the IO Functional Area; coordinates and teaches, at Fort Leavenworth, the qualification course for Information Operations Officers; and supports electronic warfare proponent activities.**

As the Army Proponent for Information Operations (IO) and Electronic Warfare (EW), CG, CAC established the USAIOP as a separate major subordinate organization (MSO) in December 2005. The major responsibilities of USAIOP are derived from CG, CAC's IO intent, which includes, among other things, the desired end state and eight essential tasks.

- a. End State: IO capabilities, capacity, expertise, and Army culture that allow commanders to influence the information environment in support of full spectrum operations.
- b. Key Tasks:
 - (1) Provide institutional support to commanders
 - (2) Develop IO subject matter experts
 - (3) Develop IO competency in the Army
 - (4) Man the IO force
 - (5) Build IO force structure, capability, and capacity to meet Army IO requirements
 - (6) Develop IO concepts, doctrine, tactics, techniques, procedures, and vignettes
 - (7) Inform and influence Army, Sister Services, Joint, and Interagency leaders

USAIOP is organized to accomplish these through its four divisions as follows:

- **Concepts, Initiatives, and Experimentation Division (CIE)**
- **Doctrine and Integration Division (DI)**
- **Personnel Division (PERS)**

III. School for the Advancement of Information Operations Studies (SAIOS). The SAIOS is charged to educate, train, and develop commanders and staff officers with the abilities to leverage the information dimension of the operational environment in full spectrum operations.

Organization. The SAIOS consists of an administrative section and two programs: the FA30 Program and the EW Program. Each of the two programs develops and instructs their respective ILE credentialing course, the FA30 Qualification Course (FA30 QC) and the EW Qualification Course (EW QC); oversees and validates all other IO and EW courses in the Army; establishes faculty development and certification standards and programs; and, supports the development of IO competency in the Army, including IO concepts development and experimentation, IO doctrine development, and integration of IO into OES, WOES, NCOES, and CES . The Director, SAIOS, also serves as the Chief, LDE&T Division, USAIOP. The Director, FA30 QC also serves as the Chief, FA30 Branch, LDE&T Division, USAIOP. The Director, EW QC also serves as the Chief, EW Branch, LDE&T Division, USAEWP. The USAIOP and USAEWP Education Branches and IMO's provide direct support to their respective courses

Websites (USAIOP): <http://usacac.army.mil/CAC/usaiop.asp>

(USAEWP): <http://usacac.army.mil/CAC/functions/electronic.asp>

Last Updated: October 2006

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Air Force - Air Intelligence Agency



The Air Intelligence Agency (AIA), headquartered at Lackland Air Force Base, Texas, was activated 1 October 1993, and was realigned 1 February 2001 under Air Combat Command (ACC) as a primary subordinate unit. AIA serves as its primary information operations force provider normalizing and synchronizing IO capabilities into the warfighter's arsenal.

Mission

The agency's mission is to deliver multi-source intelligence products, applications, services, and resources. It also provides IO forces and expertise in the areas of information warfare, command and control warfare, security, acquisition, foreign weapons systems and technology, and treaty monitoring, to support Air Force major commands, Air Force components, and joint and national decision makers. With the realignment under Air Combat Command, the AIA commander serves as the Eighth Air Force deputy commander for information operations. The Eighth Air Force with its bomber and IO capabilities is the Air Force's first operational force designed to achieve and maintain information superiority.

Personnel: The agency's 12,000 people serve at approximately 70 locations worldwide.

Organization

The National Air and Space Intelligence Center and Air Force Information Warfare Center are aligned under AIA. The agency is also responsible for mission management and support of signals intelligence operations for the 67th Information Operations Wing, 70th Intelligence Wing, 55th Wing and the 480th Intelligence Wing, all four of which are subordinate to Eighth Air Force. Mission support includes organizing, training and equipping the cryptologic elements of all four wings.

- **National Air and Space Intelligence Center:** The National Air and Space Intelligence Center, with headquarters at Wright-Patterson AFB, Ohio, is the primary Department of Defense producer of foreign aerospace intelligence. NASIC develops its products by analyzing all available data on foreign aerospace forces and weapons systems to determine performance characteristics, capabilities, vulnerabilities, and intentions. Center assessments are also an important factor in shaping national security and defense policies. As the DoD experts on foreign aerospace system capabilities, the center historically has also been involved in supporting American weapons treaty negotiations and verification. Since the start of its organizational lineage in 1961, the center's mission and resources have expanded to meet the challenge of worldwide technological developments and the accompanying national need for aerospace intelligence. In recent years, the emphasis has increasingly shifted toward evaluation of worldwide aerospace systems and the production of tailored, customer-specific products.
- **Air Force Information Operations Center:** AFIOC is collocated with HQ Air Intelligence Agency at Lackland Air Force Base in San Antonio, Texas. AFIOC is the Air Force information operations center of excellence dedicated with innovation to integration of information operations. The Air Force Information Operations Center is responsible for creating information operations capabilities to meet requirements for air, space and cyberspace missions. AFIOC produces IO analyses for combat operations, targeting, and acquisition programs. AFIOC explores, demonstrates, and exercises IO

capabilities, tests weapons, develops tactics, trains forces, and assesses IO vulnerabilities of units and systems for offensive and defensive counter information missions.

- **67th Network Warfare Wing:** The 67th Network Warfare Wing, headquartered at Lackland Air Force Base and subordinate to Air Combat Command's Eighth Air Force, provides network operations and network warfare capabilities to Air Force, joint task force, and combatant commanders. The Wing is charged with operating, protecting, and defending AF networks. In addition to network operations and defense, the Wing provides offensive capabilities of exploitation and attack, as well as communications monitoring. The unique authorities vested in the 67 NWW Commander enable the 67 NWW to provide cryptologic and mission support to AIA and the AFNetOps Command. [See further discussion of the Wing in 8th Air Force section].
- **70th Intelligence Wing:** The 70th Intelligence Wing, with headquarters at Fort Meade, Md., gains and exploits information as a major component of Eighth Air Force's global information operations mission. It provides national decision makers, tactical theater commanders, and warfighters of all services with tailored, timely and actionable information - anywhere, anytime. The wing plans and directs the integration of its components into theater and local exercises, ensuring wartime capabilities are tested and validated, and it assists component commanders with refining their requirements for products and services. Subordinate to the wing are three intelligence groups located in the continental U.S. and in the Pacific and European theaters. The wing was activated on Aug. 16, 2000.
- **55th Wing:** The 55th Wing, with headquarters at Offutt AFB, Neb., conducts worldwide reconnaissance; command, control and communications; Presidential support and international treaty verification as directed by the President, Secretary of Defense, Joint Chiefs of Staff, theater combatant commanders, commanders of major Air Force commands and national intelligence agencies.
- **480th Intelligence Wing:** The 480th Intelligence Wing, with headquarters at Langley AFB, Va., produces and provides timely, tailored intelligence data and capabilities to meet Air Force needs. As a dynamic, worldwide force multiplier, it delivers valuable information to combatants. The wing conducts intelligence, surveillance and reconnaissance tasking processing, exploitation and dissemination processing in support of national interests. It also performs imagery intelligence, cryptologic and measurement and signatures intelligence activities, as well as targeting and general intelligence production, intelligence data handling system network operations, and data/product dissemination. Subordinate to the wing are three intelligence groups located in the continental U.S. The wing was activated Dec. 1, 2003.

Point of Contact

Air Intelligence Agency, Public Affairs Office; 102 Hall Blvd, Ste 234; San Antonio, TX 78243-7036; DSN 969-2166 or (210) 972-2166.

Web site: <http://aia.lackland.af.mil/>

Last Updated: October 2006.

Air Force Information Operations Center (AFIOC)



AFIOC is collocated with HQ Air Intelligence Agency (AIA) at Lackland Air Force Base in San Antonio, Texas. AFIOC is the Air Force information operations center of excellence dedicated with innovation to integration of information operations. AFIOC originally activated as the 6901st Special Communication Center in July 1953, and became the Air Force Electronic Warfare Center in 1975. Air Force successes in exploiting enemy information systems during Operation Desert Storm led to the realization that the strategies and tactics of command and control warfare could be expanded to the entire information spectrum and be implemented as information warfare. In response, the AFIOC activated Sept. 10, 1993, combining technical skill sets from the former AFEWC with the Air Force Cryptologic Support Center's Securities Directorate and intelligence capabilities from the former Air Force Intelligence Command as the Air Force Information Warfare Center on October 1, 2006 to better define the work in all IO mission areas the center became the Air Force Information Operations Center (AFIOC).

The AFIOC team of more than 1100 military and civilian members is skilled in the areas of operations, engineering, operations research, intelligence, radar technology, communications and computer applications. The members provide information operations capabilities to the warfighting U.S. Air Force major commands.

Mission: The Air Force Information Operations Center is responsible for creating information operations (IO) capabilities to meet requirements for air, space and cyberspace missions. AFIOC produces IO analyses for combat operations, targeting, and acquisition programs. AFIOC explores, demonstrates, and exercises IO capabilities, tests weapons, develops tactics, trains forces, and assesses IO vulnerabilities of units and systems for offensive and defensive counter information missions.

Areas of Expertise

Technology Exploration Demonstration: AFIOC conducts plans and development of Air Force IO programs to satisfy validated warfighter requirements. The center delivers information operations capabilities such as the Automated Security Incident Measurement System and the Common Intrusion Detection Director System from a suite of more than 90 technology projects. These programs quickly turn around concepts that provide information operations capability to Air Force units.

Computer & Telecommunication Protection Tools: The Automated Security Incident Measurement System (ASIM) detects and identifies intrusive activities against United States Air Force computer networks. In place at more than 100 Air Force locations, the ASIM feeds network information to the Air Force Network Operations Center which assesses Air Force information protection status and takes appropriate actions to protect United States Air Force computer networks and operations. AFIOC executes a comprehensive program to protect U.S. Air Force telecommunication switch systems and services. An important component of this program is a capability to monitor transmissions in order to identify unauthorized dial-up modems, suspect telephone call patterns and other unusual activities. This program will complement ASIMs by protecting installation telecommunication infrastructures.

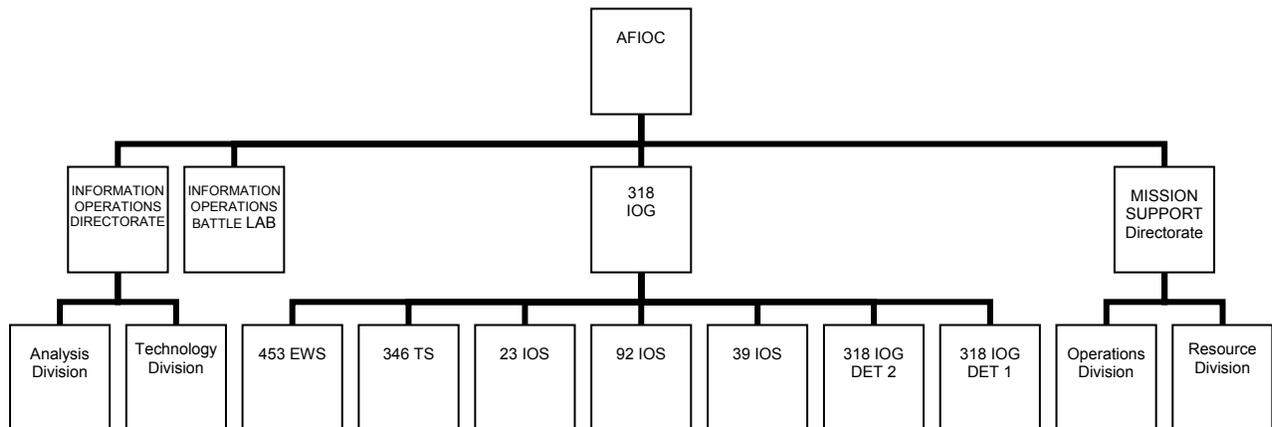
Threat Analysis & Adversary Profiling: AFIOC analyzes threats to various USAF operations and networked systems. The center documents these threats for customers across the Department of Defense to identify U.S. vulnerabilities and maintain threat awareness. AFIOC conceived a computer threat incident database, currently populated with more than 13,000 entries, adopted for use throughout DOD. AFIOC also developed a computer threat analysis tool allowing for profile development of hackers whether operating individually or as part of a larger effort. AFIOC is a producer of the DOD's Modernized Integrated Database and the Command and Control Warfare Operational Support Database which provide combat forces with crucial information on adversary military command, control, and communications. AFIOC conducts integrated analysis studies on designated adversaries providing planners with military options beyond the traditional methods of warfare.

IW Tactics, Techniques & Procedures: AFIOC provides "how to" guidance for Air Force warfighters to ensure proper employment of information warfare capabilities. These tactics, techniques and procedures enable information warriors to plan and execute information warfare as part of an overall aerospace campaign.

Force Training & Assessment: AFIOC is responsible for training Air Force information operations warriors. In that capacity the center maintains a federal library; serves as registrar and manager of AFIOC University and develops cooperative research and development agreements with industry and academia. Through courses such as the Information Operations Integration Course, AFIOC teaches Air Force members how to integrate information warfare as part of traditional air power employment, thus enhancing combat power. AFIOC is also the focal point for Air Force military deception and counter-deception training and is the executive agent for Air Force operations security training. AFIOC conducts network integrity assessments by employing Independent assessment of network vulnerabilities and security posture.

Modeling & Analysis: The center provides quantitative analysis through modeling and simulation of information warfare activities in Air Force operations. Tailored analytical products are developed in three primary areas: information warfare modeling and simulation, studies of operational systems and support to information warfare acquisition programs.

ORGANIZATION:



Information Operations Directorate: Analyzes US and adversary information operations vulnerabilities, explores leading-edge technologies, prototypes solutions, develops concepts and data applications, and migrates information superiority capabilities to the warfighter. The Information Operations Directorate provides the foundation for Center operations.

Mission Support Directorate: Conducts AFIOC plans and develops Air Force IO programs to satisfy warfighter requirements. It provides planning, programming, and budgeting system actions for AFIOC-executed IO programs. In addition, the directorate manages commander programs to include contracting, deployment, exercise, facility, finance, manpower, security, supply, training, vehicle control, and war plans. It also supplies, operates, and maintains operational communications-computer, test, and special use systems.

Air Force Information Operations Battlelab (AFIOB), Lackland AFB, Texas: Rapidly identify innovative and superior material or non-material ways to plan and employ information operations capabilities, to organize and train forces for information operations, and to influence IO doctrine and tactics in order to meet current and emerging missions. The Battlelab accomplishes this by conducting operational demonstrations of IO initiatives, evaluating their military worth, and passing the most promising concepts to transition partners to be fielded for operational use. These demonstrations are initiated from concept proposals submitted by individuals and organizations within the military, academia, and industry. All submissions are evaluated for their operational value, technical risk, breadth of application, time for completion, and match to requirements.

318th Information Operations Group (318 IOG) Lackland AFB, Texas: Air Force lead for advancing operational capabilities and effectiveness of information operations. The 318 IOG develops and validates capabilities, tactics, techniques and procedures. Trains IO tacticians and melds IO planning and execution into joint training exercises. The 318 IOG also assesses effectiveness of network defense posture through network integrity assessments and provides electronic warfare focused IO to support combatant forces.

23rd Information Operations Squadron (23IOS), Lackland AFB, Texas: Provides tactics training, green teaming, and black cell support to worldwide Air Force and Joint level exercises. Provide advanced IO tactics training throughout DOD through the AFNOC Tactician course.

39th Information Operations Squadron (39IOS), Hurlburt Field, Florida: Trains and educates Air Force personnel in the art and science of planning, executing, and assessing Air Force and joint information operations; and maintains technically and operationally proficient instructors to provide classroom instruction, mobile training teams, and advanced distributed learning technologies at Hurlburt Field, Florida and Air Force locations world wide.

92nd Information Operations Squadron (92IOS), Lackland AFB, Texas: Air Forces lead unit for executing cyberspace vulnerability assessments for critical AF and DoD systems in order to enable information superiority in the face of adversary efforts to exploit and disrupt these systems. The 92 IOS performs Information Assurance (IA) system vulnerability assessments and advanced weapon systems support. Emulates hostile IO activities to assess protective measures and evaluate defensive responses in AF and joint exercises.

346th Test Squadron (346TS), Lackland AFB, Texas: Air Combat Command's (ACC) principal IO test unit provides test, evaluation and assessment of operational and emerging IO capabilities for operational forces, national agencies, the acquisition community and DoD customers. The 346 TS provides the Air Force's only emissions security testing of critical command and control systems. The 346 TS maintains ACC's operational ranges for IO test and training exercises and as well integrates with the DoD test community in IO testing and training.

453rd Electronic Warfare Squadron (453EWS), Lackland AFB, Texas: Develops, maintains, and deploys electronic warfare capabilities to Air Force, Army, Navy and other DoD customers as well as to Coalition partners, in direct support of campaign planning, operations, acquisition and testing. Provides responsive, realistic training simulations and conducts EW capability and vulnerability analyses. Provides threat change analysis, parametric data and is a major contributor to the DoD Electronic Warfare Reprogramming process.

318 Information Operations Group, Detachment 1: Conducts integrated planning, employment, and assessment of network warfare operations for the National Security Agency (NSA) and the US Strategic Command (STRATCOM) Joint Functional Component Command for Network Warfare (JFCC-NW). Det 1 is “AFIOC Forward” in the national capital region (NCR). The Detachment was established to facilitate cooperation between AFIOC and national entities in computer network defense and offensive IO to support the global IO mission.

318 Information Operations Group, Detachment 2: Air Force lead for integrating information operations into the Combat Air Forces' training at the operational and tactical levels. Det 2 ensures IO integration into the Combined Air Operations Center-Nellis (CAOC-N), the USAF Weapons School and Flag exercises to train air, space and IO professionals. Advances operational test and evaluation of IO weapon systems and develops, tests and documents IO tactics, techniques and procedures.

Last Updated: October 2006

Air Force - Eighth Air Force



Mission:

Headquartered at Barksdale Air Force Base, LA, Eighth Air Force provides integrated long-range global strike, network warfare, battle management, surveillance and reconnaissance, intelligence, tactical air control, and expeditionary heavy construction capabilities to theater combatant commanders. The "Mighty Eighth" also conducts computer network operations as the Air Force component to the Joint Task Force - Global Network Operations, maintains an Air and Space Operations Center supporting USSTRATCOM's Global Strike mission, and trains personnel for worldwide deployment.

Organization

Eighth Air Force was reorganized into a general purpose Numbered Air Force under Air Combat Command with a warfighting mission to support the U.S. Joint Forces and U.S. Strategic Commands in 1992. Eighth Air Force controls assets throughout the United States and at overseas locations worldwide.

In 2001, Headquarters Air Intelligence Agency realigned under ACC as a primary subordinate unit. The agency's two wings realigned under Eighth Air Force. The movement of the 67th Information Operations Wing (Lackland AFB, TX) brought information operations capabilities into a structure similar to those of other Air Force weapons systems provided to commanders.

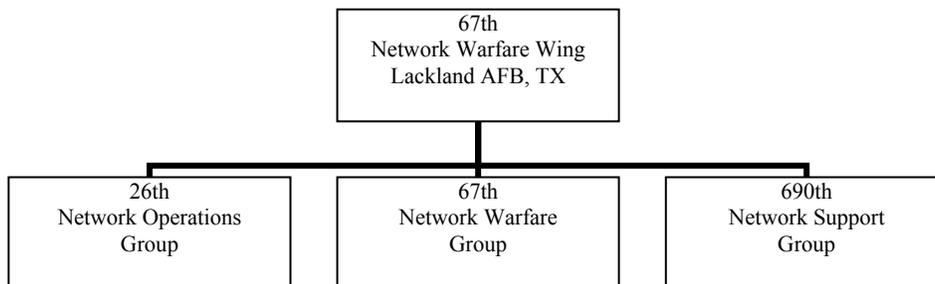
The Eighth received four additional operational wings as the Air Force moved into the second step of integrating Information Operations into its combat forces in 2002. Eighth Air Force assigned units provide bomber forces, tactical air, electronic warfare, manned and unmanned aerial reconnaissance, intelligence, airborne battle management and command and control, and other capabilities.

The Air Force Network Operations and Security Center (AFNOSC) began operations under Eighth Air Force in 2004 and provided around-the-clock centralized command and control of U.S. Air Force-wide networks. In 2006, the Air Force stood up the Air Force Network Operations Command under Eighth Air Force, re-designating the AFNOSC as the Air Force Network Operations Center (AFNOC), consolidated 10 major command NOSCs into two Integrated NOSCs, and re-designated the 67th as a Network Warfare Wing, to streamline command and control and standardize Air Force network operations in a structure similar to other Air Force weapons systems.. The AFNOC enables the Air Force to maintain its information superiority by providing a single organization to execute both service-specific and joint component responsibilities.

This reorganization takes place as the Air Force continues to blend high-tech information systems with high-tech combat capability. Recent operations demonstrate the need for the fully integrated kinetic and non-kinetic effects-based operations Eighth Air Force continues to pioneer.

67th Network Warfare Wing: Headquartered at Lackland Air Force Base and subordinate to Air Combat Command's Eighth Air Force, provides network operations and network warfare capabilities to Air Force, joint task force, and combatant commanders. The Wing is charged with operating, protecting, and defending AF networks. In addition to network operations and defense, the Wing provides offensive

capabilities of exploitation and attack, as well as communications monitoring. The unique authorities vested in the 67 NWW Commander enable the 67 NWW to provide cryptologic and mission support to AIA and the AFNetOps Command. The Wing has three subordinate groups: the 26th Network Operations Group (NOG), the 67th Network Warfare Group (NWG), and the 690th Network Support Group (NSG), all collocated at Lackland Air Force Base. The Wing was activated on 1 October 1993 and transitioned to the 67 NWW on 5 July 2006.



Website: <http://www.8af.acc.af.mil/>

Last Updated: September 2006

Navy – U.S. Navy Information Operations Organizations



This section presents brief descriptions of selected U.S. Navy Information Operations organizations.

- **Naval Network Warfare Command**

Naval Network Warfare Command (NAVNETWARCOM) provides the Navy's central operational authority and type commander for IO in support of naval forces afloat and ashore. NAVNETWARCOM maintains responsibility for identifying, coordinating, and assessing the Navy's IO requirements and also serves as the operational forces' advocate in the development of IO. As the functional component for IO under USSTRATCOM, NETWARCOM is responsible for the Navy's strategic IO planning and operational support. (Note: Commander Naval Security Group has been formally disestablished as a separate command and now operates as NETWARCOM IO Directorate (IOD)).

- **Navy Information Operations Command – Suitland (formerly Naval Information Warfare Activity)**

The Navy Information Operations Command (NIOC) - Suitland is the Navy's principal technical agent for research and development of prototype IO capabilities. NIOC Suitland supports the development capabilities encompassing all aspects of IO attack, protect, and exploit; maintaining an aggressive program to acquire and analyze state-of-the-art technologies (software and hardware), evaluate fleet applicability, and prototype developmental capabilities. NIOC Suitland is the Navy's interface with other service and national IO organizations that develop IO capabilities. Its activities are closely coordinated with NIOC Norfolk (below) to develop IO technical capabilities for naval and joint operations. NIOC Suitland also supports development coordination between NAVNETWARCOM, OPNAV, Systems Commands, IO Technology Center, and industry.

- **Navy Computer Incident Response Team**

The Navy Computer Incident Response Team (NAVCIRT) coordinates the defense of the Navy computer networks from attack, and accomplishes other CND missions as directed by the Commander JTF-GNO and the United States Strategic Command (USSTRATCOM). Naval Network and Space Operations Command (NNSOC) and NIOC Norfolk provide operational support to NAVCIRT, in areas such as the Navy's Computer Network Operations red team

- **Navy Information Operations Command – Norfolk (formally Fleet Information Warfare Center – FIWC)**

NIOC Norfolk, the Navy's center of excellence for IO, is responsible for providing operationally focused training; planning support and augmentation from the tactical to the strategic level; developing IO doctrine, tactics, techniques, and procedures; advocating requirements in support of future effects-based warfare; and providing and managing IO data for Fleet Operations. ., NIOC

operates under the operational and administrative control of COMNAVNETWARCOM, and has two subordinate commands: NIOC San Diego (formerly FIWC Detachment San Diego and NSGA San Diego) and NIOC Whidbey Island (formerly NSGA Whidbey Island).

Updated: November 2006

Information Operations Conditions (INFOCONs)

1. Introduction. The United States Department of Defense Information Operations Condition (INFOCON) system is a commander's alert system that establishes a uniform process for posturing and defending against malicious activity targeted against U.S. DoD information systems and networks. The INFOCON system was developed for U.S. DoD information systems and networks. However, it is acknowledged that U.S. involvement in future conflicts will likely be within a Combined operations environment. This implies that the success of the Warfighting operations will depend greatly on the ability of the U.S. and allied/coalition partners to ensure continued availability and access to critical mission and support information systems and information networks.

2. Description. The INFOCON system is a commander's alert system, characterized by five progressive levels of threats to information networks, and a series of increasing defensive measures that apply to information systems and, to a lesser extent, users of these systems. Specific features assist the commander in using the INFOCON system. A risk mitigation tool aids the commander in proactively declaring postures and directing defensive actions based on advanced indications and warning of hostile activity. The INFOCON system also guides the commander in identifying the INFOCON posture in the event predictive intelligence is not possible. The uniform application of defensive measures promotes predictable responses to crises and provides timely, accurate, and clear direction to commanders. Flexibility is built into the INFOCON system to allow additional specific actions to be mandated, based on the threat. Thus, the INFOCON system provides a range of defensive measures that support operations at all levels of conflict, peacetime operations through combat operations, and back to restoration of peace. The INFOCON system pertains to all information systems and networks, including interconnections between public and coalition networks.

3. Strategy. The INFOCON strategy has shifted from a "threat-based," reactive system to a "readiness-based," proactive approach. This paradigm shift represents a significant change in how commanders at all levels ensure the security and operational readiness of their information networks. While CDRUSSTRATCOM will continue to direct changes in the global INFOCON status, changes in local or regional INFOCON status will now be more actively managed by commanders at all levels (e.g., base, post, camp, station, major command) using a framework of standardized measures. The INFOCONs mirror the Alert System of the Chairman of the Joint Chiefs of Staff, Defense Conditions (CJCS Manual 3402.1B, *ALERT SYSTEM OF THE CHAIRMAN OF THE JOINT CHIEFS OF STAFF (U)*) and are a uniform system of 5 progressive readiness conditions — INFOCON 5, INFOCON 4, INFOCON 3, INFOCON 2, and INFOCON 1. INFOCON 5 is normal readiness and INFOCON 1 is maximum readiness. Each level represents an increasing level of network readiness based on tradeoffs in resource balancing that every commander must make. The INFOCON are supplemented by Tailored Readiness Options (TROs), which are applied in order to respond to specific intrusion characteristics or activities, directed by CDRUSSTRATCOM or commanders.

The DOD INFOCON system is predicated on the fact that a determined intruder will always compromise a networked system. Returning the system to a pristine, baseline state restores confidence in the system. Any system changes, while not always easily detectable in isolation, are almost always detectable by comparing the current status to a previous known baseline. However, maintaining a baseline snapshot across an enterprise and running the appropriate comparisons are non-trivial tasks for network and system administrators. As such, the readiness posture becomes a resource balance of how often commanders want to ensure their networks (or portions thereof) are free of malicious activity in relation to their own Operational Tempo (OPTEMPO). The readiness postures are designed to provide commanders at all levels the flexibility to set the readiness level they deem most appropriate for their OPTEMPO and available resources.

4. Posture Levels.

a. INFOCON 5. INFOCON 5 is characterized by routine NetOps normal readiness of information systems and networks that can be sustained indefinitely. Information networks are fully operational in a known baseline condition with standard information assurance policies in place and enforced.

b. INFOCON 4. INFOCON 4 increases NetOps readiness, in preparation for operations or exercises, with a limited impact to the end user. System and network administrators will establish an operational rhythm to validate the known good image of an information network against the current state and identify unauthorized changes. By increasing the frequency of this validation process, the state of an information network is confirmed as unaltered (i.e., good) or determined to be compromised.

c. INFOCON 3. INFOCON 3 further increases NetOps readiness by increasing the frequency of validation of the information network and its corresponding configuration. Impact to end-users is minor.

d. INFOCON 2. INFOCON 2 is a readiness condition requiring a further increase in frequency of validation of the information network and its corresponding configuration. The impact on system administrators will increase in comparison to INFOCON 3 and will require an increase in preplanning, personnel training, and the exercising and pre-positioning of system rebuilding utilities. Impact to end-users could be significant for short periods, which can be mitigated through training and scheduling.

e. INFOCON 1. INFOCON 1 is the highest readiness condition and addresses intrusion techniques that cannot be identified or defeated at lower readiness levels (e.g., kernel root kit). It should be implemented only in those limited cases where INFOCON 2 measures repeatedly indicate anomalous activities that cannot be explained except by the presence of these intrusion techniques. Currently, the most effective method for ensuring the system has not been compromised in this manner is to reload operating system software on key infrastructure servers (e.g., domain controllers, Exchange servers, etc.) from an accurate baseline. The impact on system administrators will be significant and will require an increase in preplanning, personnel training, and the exercising and pre-positioning of system rebuilding utilities. Impact to end-users could be significant for short periods, which can be mitigated through training and scheduling.

5. Authority. The INFOCON system is established by the Secretary of Defense (SecDef), and administered by the Commander, United States Strategic Command (CDRUSSTRATCOM). The INFOCON system will be administered through the Commander, Joint Task Force - Global Network Operations (JTF-GNO). All combatant commands, services, directors of Defense and combat support agencies will develop supplemental INFOCON procedures as required, specific to their command and in consonance with Strategic Command Directive (SD) 527-1, *DEPARTMENT OF DEFENSE (DOD) INFORMATION OPERATIONS CONDITION (INFOCON) SYSTEM PROCEDURES (U/FOUO)*. SD 527-1 can be found on the JTF-GNO SIPRNet webpage:

<http://www.jtfgno.smil.mil/site/index.cfm?Page=INFOCON>

Subordinate and operational unit commanders will use the INFOCON procedures developed by their higher headquarters (e.g., combatant commands or Services). Existing policy and procedures on communications security (COMSEC) may be integrated into local INFOCON procedures at the commander's discretion.

6. Applicability. The established INFOCON procedures (SD 527-1) applies to the Office of the Secretary of Defense, the Services, the Joint Staff, the Combatant Commands, the Defense Agencies, the DOD Field Activities, and all other organizational entities within the DOD (hereafter referred to collectively as "the DOD Components) and any non-DOD Network Operations (NetOps) community of interest (COI) members who are connected to the DOD-wide Global Information Grid (GIG).

7. Assumptions. Several critical assumptions were made about the nature of networks and networking in developing the DoD INFOCON system. Understanding these assumptions is essential to effectively implement this system.

a. Self-imposed Denial of Service. INFOCON measures should not result in a self-imposed denial of service, either to specific users or to entire networks.

b. Operational Synchronization. As military operations continue to rely more and more on net-centric operations, INFOCON measures must be tied directly to the operational activities of the corresponding commands.

c. Implementation Burden. The burden of meeting INFOCON requirements should be placed on network and system administrators rather than on the network's users. This implies that INFOCON measures should, to the extent possible, be transparent to the users.

d. Shared Risk. Due to the interconnectivity of all DOD networks, shared risk is a fact of life. The significance of a clear chain of command within the DOD Components allows for evaluation of the risk associated with any given vulnerability or intrusion. Shared risk is mitigated by the thoughtful and synchronized accomplishment of the systematic measures within a directed readiness level.

e. Insider Threat. Insider threat represents a significant challenge for NetOps and in turn the GIG. The threat is not only from insider personnel but also from outsiders who, because of network trust relationships, are effectively insiders to multiple networks based on compromise of a single network.

f. Incident Response. In most cases, network intrusions detected by analysis or intrusion detection systems are treated as law enforcement events and handled accordingly with respect to conducting the investigation, preserving evidence, and restoring the network. However, under the INFOCON process where a commander desires an increased level of readiness to support on-going or anticipated operations, commanders may decide to forego a law enforcement response to more quickly return the compromised asset to operational status after coordinating with the servicing network defense team.

g. Operational Rhythm. Most information system management activities have a rhythm or cycle of repetition. Increased INFOCON levels may require increased workload and/or decreased cycle time that must be maintained as long as that readiness level is in effect.

h. Information Assurance. The INFOCON measures are not a substitute for operating networks using appropriate IA principles and procedures.

8. Structure. This paragraph explains the INFOCON structure, including level and recommended actions.

a. INFOCON 5, NORMAL READINESS.

INFOCON 5 Procedures

5-1: Re-establish 'secure baseline' in conjunction with a check for unauthorized changes on a semi-annual (180-day) cycle. This should involve mirroring the drives for subsequent examination, prior to re-loading the secure configuration. If examination of the drives indicates unauthorized changes, first determine if the changes were actually authorized, yet improperly recorded. This may reveal the need for a review of the procedures for updating the database of authorized changes. Unauthorized changes may indicate the need to temporarily increase to a higher INFOCON level, depending on what unauthorized changes are discovered. Without a provision such as this, you may be unaware that your network has been compromised.

5-2. Ensure all DOD Information Systems are compliant with guidance and responsibilities outlined within IAW DODI O-8530.2, *Support to Computer Network Defense* and CJCS Manual 6510.01, *Defense-in-Depth: Information Assurance (IA) and Computer Network Defense (CND)*.

5-2.1. Update and maintain Anti-Virus, firewall, Information Assurance Vulnerability Alerts (IAVA), and Access Control Lists (ACL) configurations.

5-2.2. Ensure complexity and periodicity of passwords.

5-3. When moving into/from a higher INFOCON level, acknowledge receipt, report entry into INFOCON Level activities via operational channels to the declaring command. Chapter 5 provides sample reporting formats.

5-4. Through automated and procedural means, update and maintain a current database of the following characteristics of all critical network infrastructure equipment used to maintain the network (i.e., routers, firewalls, servers, etc) and a representative sampling of workstations (hereafter called "critical equipment.") Institute appropriate procedures to ensure baseline is continuously updated to reflect authorized modifications.

5-4.1. User Accounts

5-4.2. Groups

5-4.3. Users in Groups

5-4.4. User/Admin/Group Permissions

5-4.5. Executable files (.exe .com .cmd .vbs .vbe .js .jse .wsf .wsh .dll)

5-4.6. Running Services / Open Ports

5-4.7. Registry keys

5-5. Ensure auditing/logging to record, at a minimum: successful and unsuccessful login attempts; file system modifications; and privilege changes. Ensure weekly log review for evidence of abnormal or malicious activity.

5-6. Establish procedures, training, equipment and administrator certification for the rapid and consistent reestablishment of software baselines for critical equipment.

5-7. Perform operational impact assessment on all mission critical, mission support, and administrative information systems and networks. (Assessing the impact of CNA on our ability to conduct military operations is key to conducting damage assessment, prioritizing response actions, and assisting in identifying possible adversaries. Identify all critical information systems.)

5-8. Conduct routine vulnerability assessments.

b. INFOCON 4, INCREASED MILITARY VIGILANCE.

INFOCON 4 Procedures

- 4-1. Acknowledge receipt/entry into INFOCON 4 and report again upon completion of the first INFOCON 4 cycle.
- 4-2. Confirm completion of directive measures at previous INFOCON levels.
- 4-3. Establish exit criteria. (Declaring Command)
- 4-4. Implement TROs as specified in the implementing message or by regional/local commanders.
- 4-5. On a 90 day cycle: Upon notification immediately complete the following activities and then every 90 days thereafter. Using manual methods or available automated tools, identify and verify all changes to the system parameters tracked using the database created at INFOCON 5 (step 5-4.) Investigate all unauthorized changes and remove or terminate as appropriate. If this is being conducted automatically, apply the comparison to all servers and workstations. If manual, apply the comparison to critical equipment and a representative sample of workstations.
- 4-6. If explicit permissions are used on folders or files also check to ensure permissions have not been modified.
- 4-7. Verify service accounts that have administrative privileges on critical equipment and ensure that they cannot log on remotely.
- 4-8. Disable LanMan Hash from all critical equipment if technically feasible.
- 4-9. Conduct offline rehearsals for the rapid and consistent reestablishment of baselines for SIPRNET and NIPRNET critical equipment as called for in INFOCON 3 Procedures.

c. INFOCON 3, ENHANCED READINESS.

INFOCON 3 Procedures

- 3-1. Acknowledge receipt and entry into INFOCON 3 and report again upon completion of the first INFOCON 3 cycle
- 3-2. Confirm completion of directive measures at previous INFOCON levels to the declaring Command.
- 3-3. Establish exit criteria for current INFOCON level (Declaring Command)
- 3-4. Implement TROs as specified by implementing message or regional/local commanders.
- 3-5. Re-establish a secure baseline on a 60-day cycle.
- 3-6. Conduct offline rehearsals for the rapid and consistent reestablishment of baselines for SIPRNET and NIPRNET critical equipment as called for in INFOCON 2 Procedures.

d. INFOCON 2, GREATER READINESS.

INFOCON 2 Procedures

- 2-1.** Acknowledge receipt and entry into INFOCON 2 and report again upon completion of the first INFOCON 2 cycle.
- 2-2.** Confirm completion of directive measures at previous INFOCON levels to the declaring Command.
- 2-3.** Establish exit criteria for current INFOCON level. (Declaring Command)
- 2-4.** Implement TROs as specified by implementing message or regional/local commanders.
- 2-5.** Re-establish a secure baseline on a 30-day cycle.
- 2-6.** Reestablish known good software baselines on the following servers, PDC/BDC//DNS/Web server. As stated above, this step is intended to address the intrusion techniques that cannot be identified or defeated by other means. These modifications to the servers may be accomplished anywhere within the established operational rhythm period, at the local commander's discretion to reduce impact on operations or resources.
- 2-7.** Conduct offline rehearsals for the rapid and consistent reestablishment of baselines for SIPRNET and NIPRNET critical equipment as called for in INFOCON 1 Procedures.

e. INFOCON 1, MAXIMUM READINESS.

INFOCON 1 Procedures

- 1-1.** Acknowledge receipt and entry into INFOCON 1 and report again upon completion of the first INFOCON 1 cycle.
- 1-2.** Confirm completion of directive measures at previous INFOCON levels to the declaring Command.
- 1-3.** Establish exit criteria for current INFOCON level. (Declaring Command)
- 1-4.** Implement TROs as specified by implementing message or regional/local commanders.
- 1-5.** Re-establish a secure baseline on a 15-day cycle.

9. Procedures.

a. Determining the INFOCON. The foremost determining criteria for changing an INFOCON level is the anticipated operational activity and the degree to which those activities are reliant on networked resources. INFOCON levels should be raised prior to the activity to ensure the network is as ready as possible when the operation or exercise begins. Because system and network administrators implement many of the INFOCON measures over a period of time in a pre-determined operational rhythm, commanders should raise INFOCON levels early enough to ensure completion of at least one cycle before the operational activity begins. Recommendations for possible INFOCON changes should be written into OPLANs and CONPLANs.

(1) Commanders should consider OPSEC when determining INFOCON levels to ensure OPSEC and INFOCON processes are coordinated to protect operations. Regional and local commanders should consider whether INFOCON changes provide an indicator(s) to an adversary and increase INFOCON levels on a random basis to ensure the establishment of INFOCON levels does not become an indicator of planned activity.

(2) Regional or local commanders who are operating in support of other commands shall consider raising the INFOCON levels of all or key portions of their assets to match the level of the supported commander.

(3) The INFOCON system focuses on readiness but threats to the network should still be a consideration for changing INFOCON levels. Indications and Warning or the detection of new network activity from open sources or network sensors represent threats to network readiness.

b. Declaring INFOCONs. The Commander, Joint Task Force - Global Network Operations (CDR JTF-GNO) will recommend changes in DOD INFOCON to CDRUSSTRATCOM. Prior to this recommendation, JTF-GNO will coordinate with the DOD Components to determine the operational impact of changing the DOD INFOCON level. This operational assessment is a critical element in building CDR JTF-GNO's INFOCON change recommendation to CDRUSSTRATCOM. Upon receiving the recommendation from CDR JTF-GNO, CDRUSSTRATCOM will assess, and if necessary, direct a DOD-level INFOCON change. USSTRATCOM will notify DOD Components of a DOD-level INFOCON change via a CNEC and/or a DOD INFOCON Alert message. Regional combatant commanders who independently raise INFOCON levels will notify USSTRATCOM (cc JTF-GNO), other combatant commanders, and the services to provide situational awareness and allow them to consider matching the regional level to better support operations.

c. Response Measures.

(1) Common Directive Measures. Actions common to all DOD Components have been identified for each INFOCON level. The directive measures provide a common readiness posture across DOD information systems and networks.

(2) Order of Implementation. When a non-sequential increase in INFOCONs occurs (e.g. from 5 to 3), the directive measures from the skipped INFOCON level(s) will be accomplished. Once the higher INFOCON level has been achieved the lower (skipped) INFOCON level will complete by default.

(3) Directive Measure Exemptions. DOD Components will normally accomplish all actions for the INFOCON level declared. However, local operational realities may require that a commander delay, or even omit implementation of specific INFOCON directive measures. The commander declaring the INFOCON will be informed by subordinate commands of any deviations and/or exemptions from directive measures or any additional actions directed by CDRUSSTRATCOM in the DOD INFOCON Change Alert Message.

(4) Tailored Readiness Options (TROs). In addition to the directive measures the declaring commander may direct the implementation of TROs to counter a specific threat, by region or globally. TROs are supplemental measures to respond to specific intrusion characteristics directed either by CDRUSSTRATCOM or the responsible regional/local commander. They are narrowly focused and meant to supplement the current INFOCON readiness level either globally, regionally or at bases/camps/posts/ stations. Normally, TROs supplement a lower INFOCON level.

(5) Pre-coordination of Directive Measures. To expedite INFOCON change actions, all supporting combatant commanders, service and/or agency units will establish a Memorandum of Agreement or directive to pre-coordinate INFOCON procedures and directive measures with the unified commander(s) they support. The coordination should include a determination of which actions may be

implemented immediately, and which actions require combatant commander notification prior to implementation. This same process applies to all activities under Host/Tenant agreements, as well as organizations employing cross-domain solutions to connect between different security domains or other trust relationships.

d. Reporting. Technical reporting will be accomplished IAW SD 527-1, Chapter 5, Sample Reporting Templates. INFOCONs assess potential and/or actual impact to DoD operations and must be reported through operational channels. Additional guidance on INFOCON reporting follows.

(1) Reporting Channels. Combatant commands, Services, and DoD agencies will report INFOCON changes and SITREPs to the CDR, USSTRATCOM: USSTRATCOM OFFUTT AFB NE//CC//.

(2) Reporting Frequency. Services, combatant commands, and Defense agencies will report acknowledgement of INFOCON change alert upon receipt of INFOCON Alert Message using the DoD INFOCON Change Acknowledgement SITREP. Services, combatant commands, and Defense agencies will report INFOCON status changes using the INFOCON Status SITREP.

(3) Report Formats. Examples of report formats can be found in SD 527-1, Chapter 5, Sample Reporting Templates.

(4) Dissemination of DoD INFOCON. USSTRATCOM will notify DOD Components of a DOD-level INFOCON change via a CNEC and/or a DOD INFOCON Alert message. Commands, Services, and agencies are responsible for notifying units assigned to them.

10. Security. Classification guidance and disclosure policy concerning IO is addressed in DoDI 3600.2, *Classification Guidance for Information Operations*. Specific guidance related to INFOCON follows.

a. INFOCON labels and descriptions are unclassified.

b. Generic defensive measures, when not tied to a specific INFOCON, are unclassified. Specific measures may be published in a classified appendix, if required.

c. Measures to be taken by all personnel, regardless of INFOCON, are unclassified.

d. General criteria to declare an INFOCON are FOR OFFICIAL USE ONLY (FOUO). Specific criteria may be published in a classified appendix, if required.

e. Classification of the measures associated with a particular INFOCON is the responsibility of the originator and will be classified according to content. However, the measures associated with a particular INFOCON, in aggregate, may require a higher classification than the individual measures. The measures associated with a particular INFOCON, in aggregate, will be FOUO at a minimum.

f. The operational impact of a successful information attack is classified SECRET or higher.

g. CNA intelligence assessments are classified SECRET or higher.

h. Information associated with an ongoing criminal investigation of a CNA may be considered law-enforcement sensitive.

i. A combatant command, Service, or agency may authorize release of its INFOCON system and procedures to allies or coalition partners as necessary to ensure effective protection of its information systems. Locally developed INFOCON procedures should use DoDI 3600.2 and the guidance above when considering release to allies or coalition partners.

j. Changes in INFOCON are operational security (OPSEC) indicators and must be protected accordingly. The criteria and response measures are also of value to foreign intelligence Services in assessing the effectiveness of a CNA and in analyzing DoD's response. Do not post INFOCON procedures in publicly accessible locations such as unit web pages on unclassified networks and bulletin boards accessible to outsiders.

11. Relationship of INFOCON to Other Alert Systems. The INFOCON, THREATCON, DEFCON, CNA-WATCHCON, and conventional WATCHCON all interact with each other when the situation warrants it. The INFOCON may be changed based on the world situation (THREATCON, DEFCON), the intelligence community's level of concern (CNA-WATCHCON, conventional WATCHCON), or other factors. Likewise, a change in INFOCON may prompt a corresponding change in other alert systems.

a. The defense condition (DEFCON) is a uniform system of progressive conditions describing the types of actions required to bring a command's readiness to the level required by the situation.

b. The threat condition (THREATCON) is a process that sets the level for a terrorist threat condition at a given location, based on existing intelligence and other information.

c. A watch condition (WATCHCON) is part of the defense warning system indicating the degree of intelligence concern with a particular warning problem.

d. A CNA-WATCHCON is an intelligence assessment that takes into account CNA threat levels, as well as the overall political situation (reference CJCSM 3402.01A, "Alert System of the Chairman of the Joint Chiefs of Staff").

e. The INFOCON addresses risk of attack and protective measures for information and information systems.

Last Updated: September 2006

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Glossary

Area of influence	A geographical area wherein a commander is directly capable of influencing operations by maneuver or fire support systems normally under the commander's command or control. (JP 1-02)
Area of interest	That area of concern to the commander, including the area of influence, areas adjacent thereto, and extending into enemy territory to the objectives of current or planned operations. This area also includes areas occupied by enemy forces who could jeopardize the accomplishment of the mission. Also called AOI. See also area of influence. (JP 1-02)
Civil affairs (CA)	Designated Active and Reserve component forces and units organized, trained, and equipped specifically to conduct civil affairs activities and to support civil-military operations. Also called CA . (JP 1-02)
Civil military operations (CMO)	The activities of a commander that establish, maintain, influence, or exploit relations between military forces, governmental and nongovernmental civilian organizations and authorities, and the civilian populace in a friendly, neutral, or hostile operational area in order to facilitate military operations, to consolidate and achieve operational US objectives. Civil-military operations may include performance by military forces of activities and functions normally the responsibility of the local, regional, or national government. These activities may occur prior to, during, or subsequent to other military actions. They may also occur, if directed, in the absence of other military operations. Civil-military operations may be performed by designated civil affairs, by other military forces, or by a combination of civil affairs and other forces. Also called CMO . (JP 1-02)
Combat Camera (COMCAM)	The acquisition and utilization of still and motion imagery in support of combat, information, humanitarian, special force, intelligence, reconnaissance, engineering, legal, public affairs, and other operations involving the Military Services. Also called COMCAM. (JP 3-13)
Command and control (C2)	The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. (JP1- 02)
Command and control system (C2)	The facilities, equipment, communications, procedures, and personnel essential for planning, directing, and controlling operations of assigned forces pursuant to the missions assigned. (JP 1-02)
Computer network attack (CNA)	Actions taken through the use of computer networks to disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computers and networks themselves. Also called CNA . (JP 1-02)
Computer network defense (CND)	Actions taken through the use of computer networks to protect, monitor, analyze, detect and respond to unauthorized activity within Department of Defense information systems and computer networks. Also called CND . See also computer network attack; computer network exploitation; computer network operations . (JP 1-02)
Computer network exploitation (CNE)	Enabling operations and intelligence collection to gather data from target or adversary automated information systems or networks. (JP 1-02)

Computer network operations (CNO)	Comprised of computer network attack, computer network defense, and related computer network exploitation enabling operations. (JP 1-02)
Computer security (COMPUSEC)	The protection resulting from all measures to deny unauthorized access and exploitation of friendly computer systems. (JP 1-02)
Counterdeception	Efforts to negate, neutralize, diminish the effects of, or gain advantage from a foreign deception operation. Counterdeception does not include the intelligence function of identifying foreign deception operations. (JP 1-02)
Counterintelligence	The information gathered and activities conducted to protect against espionage, other intelligence activities, sabotage, or assassination conducted by or on behalf of foreign governments or elements thereof, foreign organizations, or foreign persons, or international terrorist activities. (JP 1-02)
Counterpropaganda operations	Those psychological operations activities that identify adversary propaganda, contribute to situational awareness, and serve to expose adversary attempts to influence friendly populations and military forces. (JP 1-02)
Cyber counterintelligence	Measures to identify, penetrate, or neutralize foreign operations that use cyber means as the primary tradecraft methodology, as well as foreign intelligences service collection efforts that use traditional methods to gauge cyber capabilities and intentions. (JP1-02)
Cyberspace	The notional environment in which digitized information is communicated over computer networks. (JP 1-02)
Deception action	A collection of related deception events that form a major component of a deception operation. (JP 1-02)
Deception concept	The deception course of action forwarded to the Chairman of the Joint Chiefs of Staff for review as part of the combatant commander's strategic concept. (JP 1-02)
Deception course of action	A deception scheme developed during the estimate process in sufficient detail to permit decision-making. At a minimum, a deception course of action will identify the deception objective, the deception target, the desired perception, the deception story, and tentative deception means. (JP 1-02)
Deception event	A deception means executed at a specific time and location in support of a deception operation. (JP 1-02)
Deception means	Methods, resources, and techniques that can be used to convey information to the deception target. There are three categories of deception means: a. physical means Activities and resources used to convey or deny selected information to a foreign power. b. technical means Military materiel resources and their associated operating techniques used to convey or deny selected information to a foreign power. c. administrative means Resources, methods, and techniques to convey or deny oral, pictorial, documentary, or other physical evidence to a foreign power. (JP 1-02)
Deception objective	The desired result of a deception operation expressed in terms of what the adversary is to do or not to do at the critical time and/or location. (JP 1-02)
Deception story	A scenario that outlines the friendly actions that will be portrayed to cause the deception target to adopt the desired perception. (JP 1-02)
Deception target	The adversary decision maker with the authority to make the decision that will achieve the deception objective. (JP 1-02)
Defense support to public diplomacy (DSPD)	Those activities and measures taken by the Department of Defense components to support and facilitate public diplomacy efforts of the United States Government. (JP 1-02)
Desired Effects	The damage or casualties to the enemy or materiel that a commander desires to achieve from a nuclear weapon detonation. Damage effects on materiel are

	classified as light, moderate, or severe. Casualty effects on personnel may be immediate, prompt, or delayed.
Desired perceptions	In military deception, what the deception target must believe for it to make the decision that will achieve the deception objectives. (JP 1-02)
Disinformation	(Army) Disinformation is information disseminated primarily by intelligence organizations or other covert agencies designed to distort information, or deceive or influence US decision makers, US forces, coalition allies, key actors or individuals via indirect or unconventional means. (FM 3-13)
DoDD	Department of Defense Directive.
Electromagnetic pulse (EMP)	The electromagnetic radiation from a strong electronic pulse, most commonly caused by a nuclear explosion that may couple with electrical or electronic systems to produce damaging current and voltage surges. (JP 1-02)
Electromagnetic spectrum	The range of frequencies of electromagnetic radiation from zero to infinity. It is divided into 26 alphabetically designated bands. (JP 1-02)
Electronics security	The protection resulting from all measures designed to deny unauthorized persons information of value that might be derived from their interception and study of non communications electromagnetic radiation, e.g., radar (JP 1-02)
Electronic warfare (EW)	Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. Also called EW . The three major subdivisions within electronic warfare are: electronic attack, electronic protection, and electronic warfare support. a. electronic attack . That division of electronic warfare involving the use of electromagnetic energy, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability and is considered a form of fires. Also called EA . EA includes: 1) actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, such as jamming and electromagnetic deception, and 2) employment of weapons that use either electromagnetic or directed energy as their primary destructive mechanism (lasers, radio frequency weapons, particle beams). b. electronic protection . That division of electronic warfare involving passive and active means taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability. Also called EP . c. electronic warfare support . That division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition, targeting, planning and conduct of future operations. Thus, electronic warfare support provides information required for decisions involving electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Also called ES . Electronic warfare support data can be used to produce signals intelligence, provide targeting for electronic or destructive attack, and produce measurement and signature intelligence. (JP 1-02)
Global information grid (GIG)	The globally interconnected, end-to-end set of information capabilities, associated processes and personnel for collecting, processing, storing, disseminating, and managing information on demand to warfighters, policy makers, and support personnel. The Global Information Grid includes owned and leased communications and computing systems and services, software (including applications), data, security services, other associated services and National Security Systems. (JP 1-02)

Global information infrastructure	The worldwide interconnection of communications networks, computers, databases, and consumer electronics that make vast amounts of information available to users. The global information infrastructure encompasses a wide range of equipment, including cameras, scanners, keyboards, facsimile machines, computers, switches, compact disks, video and audio tape, cable, wire, satellites, fiber-optic transmission lines, networks of all types, televisions, monitors, printers, and much more. The friendly and adversary personnel who make decisions and handle the transmitted information constitute a critical component of the global information infrastructure. (JP 1-02)
High-payoff target	A target whose loss to the enemy will significantly contribute to the success of the friendly course of action. High-payoff targets are those high-value targets, identified through war-gaming, that must be acquired and successfully attacked for the success of the friendly commander's mission. (JP 1-02)
High-value target	A target the enemy commander requires for the successful completion of the mission. The loss of high-value targets would be expected to seriously degrade important enemy functions throughout the friendly commander's area of interest. (JP 1-02)
Human factors	In Information Operations, the psychological, cultural, behavioral, and other human attributes that influence decision-making, the flow of information, and the interpretation of information by individuals or groups at any level in a state or organization (JP 1-02)
Influence operations	(Air Force) Employment of capabilities to affect behaviors, protect operations, communicate commander's intent, and project accurate information to achieve desired effects across the cognitive domain. These effects should result in differing behavior or a change in the adversary decision cycle, which aligns with the commander's objectives (AFDD 2-5)
Information	1. Facts, data, or instructions in any medium or form. 2. The meaning that a human assigns to data by means of the known conventions used in their representation. (JP 1-02)
Information assurance (IA)	Measures that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. Also called IA . (JP1-02)
Information environment	The aggregate of individuals, organizations or systems that collect, process, or disseminate information; also included is the information itself (JP 1-02)
Information management (IM)	The function of managing an organization's information resources by the handling of knowledge acquired by one or many different individuals and organizations in a way that optimizes access by all who have a share in that knowledge or a right to that knowledge. (JP 1-02)
Information operations (IO)	The integrated employment of the core capabilities of Electronic Warfare (EW), Computer Network Operations (CNO), Psychological Operations (PSYOP), Military Deception (MILDEC), and Operations Security (OPSEC), in concert with specified supporting and related capabilities, to influence, disrupt, corrupt, or usurp adversarial human and automated decision-making while protecting our own. (DoDD 3600.1/JP 3-13)
Information operations cell	(Army definition, but also functionally described within JP 3-13) A grouping of staff officers to plan, prepare and execute information operations formed around the information operations section. The output of the IO cell is input to the targeting cell. (FM 3-13)

IO capability specialist	A functional expert in one or more of the IO core capabilities (see IO Career Force, below next). They serve primarily in their specialty areas but may also serve as IO planners after receiving IO planner training. (DoDD 3608.11)
IO career force	The military professionals that perform and integrate the core IO capabilities of EW, CNO, PSYOP, MILDEC, and OPSEC. The IO Career Force consists of IO Capability Specialists and IO Planners. (DoDD 3608.11)
IO planner	A functional expert trained and qualified to execute full spectrum IO. They usually serve one or more tours as an IO capability specialist prior to assignment as an IO planner and may hold non-IO positions throughout their careers. (DoDD 3608.11)
INFOCON	Information Operations Condition
Information security (INFOSEC)	The protection of information and information systems against unauthorized access or modification of information, whether in storage, processing, or transit, and against denial of service to authorized users. (JP 1-02)
Information superiority	The operational advantage derived from the ability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same. (JP 1-02)
Information systems (INFOSYS)	The entire infrastructure, organization, personnel, and components that collect, process, store, transmit, display, disseminate, and act on information. (JP 1-02)
Intelligence	1. The product resulting from the collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign countries or areas. 2. Information and knowledge about an adversary obtained through observation, investigation, analysis, or understanding.
Interagency coordination	Within the context of Department of Defense involvement, the coordination that occurs between elements of Department of Defense, and engaged US Government agencies, nongovernmental organizations, and regional and international organizations for the purpose of accomplishing an objective. [JP 1-02]
Joint intelligence preparation of the battlespace (JIPB)	The analytical process used by joint intelligence organizations to produce intelligence assessments, estimates, and other intelligence products in support of the joint force commander's decision-making process. It is a continuous process that includes defining the total battlespace environment; describing the battlespace's effects; evaluating the adversary; and determining and describing adversary potential courses of action. The process is used to analyze the air, land, sea, space, electromagnetic, cyberspace, and human dimensions of the environment and to determine an opponent's capabilities to operate in each. Joint intelligence preparation of the battlespace products are used by the joint force and component command staffs in preparing their estimates and are also applied during the analysis and selection of friendly courses of action. (JP 1-02)
Joint restricted frequency list (JRFL)	A time and geographically-oriented listing of TABOO, PROTECTED, and GUARDED functions, nets, and frequencies. It should be limited to the minimum number of frequencies necessary for friendly forces to accomplish objectives. TABOO frequencies - Any friendly frequency of such importance that it must never be deliberately jammed or interfered with by friendly forces. Normally, these frequencies include international distress, CEASE BUZZER, safety, and controller frequencies. These frequencies are generally long standing. However, they may be time-oriented in that, as the combat or exercise situation changes, the restrictions may be removed. (JP 1-02)

Joint targeting coordination board (JTCB)	A group formed by the joint force commander to accomplish broad targeting oversight functions that may include but are not limited to coordinating targeting information, providing targeting guidance and priorities, and refining the joint integrated prioritized target list. The board is normally comprised of representatives from the joint force staff, all components and, if required, component subordinate units. (JP 1-02)
Measure of effectiveness (MOE)	A criterion used to assess changes in system behavior, capability, or operational environment that is tied to measuring the attainment of an end state, achievement of an objective, or creation of an effect.. (JP 1-02)
Military deception (MILDEC)	Actions executed to deliberately mislead adversary military decision makers as to friendly military capabilities, intentions, and operations, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission. (JP 1-02)
Network-centric warfare	An information superiority-enabled concept of operations that generates increased combat power by networking sensors, decision makers, and shooters to achieve shared awareness, increased speed of command, higher tempo of operations, greater lethality, increased survivability, and a degree of self-synchronization. (Network Centric Warfare: CCRP Publication)
Nongovernmental organization (NGO)	A private, self-governing, not-for-profit organization dedicated to alleviating human suffering; and/or promoting education, health care, economic development, environmental protection, human rights, and conflict resolution; and/or encouraging the establishment of democratic institutions and civil society. (JP 1-02)
Operations security (OPSEC)	A process of identifying critical information and subsequently analyzing friendly actions attendant to military operations and other activities to: a. identify those actions that can be observed by adversary intelligence systems; b. determine indicators that adversary intelligence systems might obtain that could be interpreted or pieced together to derive critical information in time to be useful to adversaries; and c. select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation. (JP 1-02)
Perception management	(Army) Actions to convey and/or deny selected information and indicators to foreign audiences to influence their emotions, motives, and objective reasoning as well as to intelligence systems and leaders at all levels to influence official estimates, ultimately resulting in foreign behaviors and official actions favorable to the originator's objectives. In various ways, perception management combines truth projection, operations security, cover and deception, and psychological operations. (FM 3-13)
Physical destruction	(Army) The application of combat power to destroy or neutralize adversary forces and installations. It includes direct and indirect forces from ground, sea, and air forces. Also included are direct actions by special operations forces. (FM 3-13)
Physical security	1. That part of security concerned with physical measures designed to safeguard personnel; to prevent unauthorized access to equipment, installations, material, and documents; and to safeguard them against espionage, sabotage, damage, and theft. 2. (DOD only) In communications security, the component that results from all physical measures necessary to safeguard classified equipment, material, and documents from access thereto or observation thereof by unauthorized persons. See also communications security; security. (JP1-02)
Priority national intelligence objectives	A guide for the coordination of intelligence collection and production in response to requirements relating to the formulation and execution of national security policy. They are compiled annually by the Washington Intelligence Community and flow directly from the intelligence mission as

	set forth by the National Security Council. They are specific enough to provide a basis for planning the allocation of collection and research resources, but not so specific as to constitute in themselves research and collection requirements.(JP 1-02)
Propaganda	Any form of communication in support of national objectives designed to influence the opinions, emotions, attitudes, or behavior of any group in order to benefit the sponsor, either directly or indirectly. See also black propaganda; grey propaganda; white propaganda. (JP 1-02)
Psychological operations (PSYOP)	Planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives. (JP1-02)
Psychological operations assessment team (POAT)	A small, tailored team (approximately 4-12 personnel) that consists of psychological operations planners and product distribution/ dissemination and logistic specialists. The team is deployed to theater at the request of the combatant commander to assess the situation, develop psychological operations objectives, and recommend the appropriate level of support to accomplish the mission. (JP 1-02)
Psychological operations impact indicators	An observable event or a discernible subjectively determined behavioral change that represents an effect of a psychological operations activity on the intended foreign target audience at a particular point in time. It is measured evidence, ascertained during the analytical phase of the psychological operations development process, to evaluate the degree to which the psychological operations objective is achieved. (JP 1-02)
Psychological operations support element (JPSE)	A tailored element that can provide limited psychological operations support. Psychological operations support elements do not contain organic command and control capability; therefore, command relationships must be clearly defined. The size, composition and capability of the psychological operations support element are determined by the requirements of the supported commander. A psychological operations support element is not designed to provide full-spectrum psychological operations capability; reach-back is critical for its mission success. (JP 1-02)
Public affairs (PA)	Those public information, command information, and community relations activities directed toward both the external and internal public with interest in the DOD. (JP 1-02)
Public diplomacy (PD)	Those overt international public information activities of the United States Government designed to promote United States foreign policy objectives by seeking to understand, inform, and influence foreign audiences and opinion makers, and by broadening the dialogue between American citizens and institutions and their counterparts abroad. (JP 1-02)
Public information	Information of a military nature, the dissemination of which through public news media is not inconsistent with security, and the release of which is considered desirable or non-objectionable to the responsible releasing agency. (JP 1-02)
Reachback	The process of obtaining products, services, and applications, or forces, or equipment, or material from organizations that are not forward deployed. (JP 1-02)
Strategic communication	Focused United States Government (USG) efforts to understand and engage key audiences in order to create, strengthen or preserve conditions favorable for the advancement of USG interests, policies, and objectives through the

use of coordinated programs, plans, themes, messages, and products synchronized with the actions of all elements of national power. (JP 1-02)

Target audience (TA)

An individual or group selected for influence. (JP 1-02.)

The DoD Dictionary of Military and Associated Terms is available on line at:

<http://www.dtic.mil/doctrine/jpreferencepubs.htm>

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* [NOTE: Meaconing is defined (per FM 24-33, “Communications Techniques: Electronic Counter-Countermeasures”, July 1990) as the transmission or retransmission of actual or simulated navigation signals to confuse navigation. Meaconing stations cause inaccurate bearings to be obtained by aircraft or ground stations].