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14. ABSTRACT

Information Operations (IO) has been a topic of great debate. Much of the discussion has stemmed from the fact no individual commander owns or controls the entire discipline. There have been several reasons for the lack of ownership such as IO supports all warfare areas, its application is an all-hands effort and there have been too few capabilities to command. Over the years, models have been proposed on how to command and control the discipline. Current joint doctrine provides a framework that has IO embedded in the J-3 organization. The doctrine offers a representative IO cell that is led by a J-39 cell chief who resides below the directorate level of authority. Unfortunately current doctrine does not provide adequate guidance for commanding and controlling this discipline. As the demand for IO increases and new capabilities come online, IO needs to be commanded vice coordinated. The traditional component commanders-by-physical domain (e.g., air, land, sea) breaks down in the information age and a new construct to deal with IO and information as weapons should be considered. This paper suggests the responsibility for IO during normal operations should be assigned to a Theater Information Operations Command (TIOC) who is OPCON to the combatant commander. Once a requirement for a Joint Task Force (JTF) has been established, the TIOC is OPCON as the Joint Force Information Operations Component Commander (JFIOCC) to the Commander, JTF.

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OPERATIONAL COMMAND AND CONTROL FOR INFORMATION OPERATIONS

by

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

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

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17 May 2006

Abstract

Information Operations (IO) has been a topic of great debate. Much of the discussion has stemmed from the fact no individual commander owns or controls the entire discipline. There have been several reasons for the lack of ownership such as IO supports all warfare areas, its application is an all-hands effort and there have been too few capabilities to command. Over the years, models have been proposed on how to command and control the discipline. Current joint doctrine provides a framework that has IO embedded in the J-3 organization. The doctrine offers a representative IO cell that is led by a J-39 cell chief who resides below the directorate level of authority. Unfortunately current doctrine does not provide adequate guidance for commanding and controlling this discipline. As the demand for IO increases and new capabilities come online, IO needs to be commanded vice coordinated. The traditional component commanders-by-physical domain (e.g., air, land, sea) breaks down in the information age and a new construct to deal with IO and information as weapons should be considered. This paper suggests the responsibility for IO during normal operations should be assigned to a Theater Information Operations Command (TIOC) who is OPCON to the combatant commander. Once a requirement for a Joint Task Force (JTF) has been established, the TIOC is OPCON as the Joint Force Information Operations Component Commander (JFIOCC) to the Commander, JTF.

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INTRODUCTION

"Generally, in battle, use the normal force [direct approach] to engage; use the extraordinary [indirect approach] to win."

Sun Tzu, The Art of War

Information Operations (IO) continues to be a topic of serious discussion and intense debate. The interest is partly derived from the fact that joint doctrine has not established guidance that assigns responsibility of the entire discipline to a specific component commander.[1] Joint doctrine does, however, recommend that IO planning begin at the earliest stages of a Joint Force Commander's (JFC) campaign. Additionally, the doctrine advocates that long-term information objectives be embedded into the combatant commander's theater security cooperation plan.[2] For these reasons, it can be assumed that effective IO is a fulltime responsibility and is critical throughout all phases of an operation across the spectrum of war.[3] Unfortunately current doctrine does not adequately compensate for the increased demand, workload and addition of new IO capabilities. Therefore, this paper suggests that IO should be assigned to a permanent organization through the creation of a Theater Information Operations Command (TIOC). During normal operations, the TIOC would be OPCON to the combatant commander. Once a requirement for a joint task force (JTF) has been established, the TIOC would be OPCON as the Joint Force Information Operations Component Commander (JFIOCC) to the Commander, Joint Task Force (CJTF). Preferably, the JFIOCC would be on par with traditional component commanders and has the

[1] Official U.S. Navy message traffic: Personal For Message from the Commander, SEVENTH Fleet to Commanders of FIFTH, SIXTH, SECOND and THIRD Fleets, DTG 160515Z May 2001.
[2] Joint Chiefs of Staff, Joint Doctrine for Information Operations, Joint Publication 3-13 (Washington, DC: 13 February 2006), xiii – xiv.
[3] Joint Force Staff College, Joint Information Operations Handbook (Norfolk, VA: July 2003), I-1.

capacity to make resource allocation decisions when insufficient assets are desired across multiple mission areas. A robust structure would allow a TIOC / JFIOCC to scale its operations (e.g., deploying as a component commander or sending a smaller joint IO task force), conduct full-spectrum IO and improve integration and coordination across all component commanders and agencies. A core responsibility of the TIOC would be to develop the necessary Phase 0 linkages to enable the success of follow-on phases (i.e., Phases 1 / 2 / 3) of an OPLAN / CONPLAN. These linkages are necessary to condition the operational environment and its adversaries for potential follow-on actions.[4] With a peacetime focus on theater engagement planning and war plan development, the TIOC / JFIOCC is the logical focal point for strategic communication and influence planning.

The responsibility for IO has been difficult to assign for several reasons. First, unlike traditional component commanders, IO integrates with and supports all mission areas. Second, the application of IO has been considered, to some degree, a responsibility of each component commander. Third, the nature of IO focused more on coordination among commanders and less on the actual control because of the paucity of IO forces capable of producing operational effects. Given these facts, recent conflicts involving U.S. military forces have demonstrated relevant and timely IO applied directly or indirectly, enhanced the JFC's objectives. Conversely, poorly integrated or coordinated IO may produce debilitating effects that compromise, negate, or harm other JFC military operations, as well as other U.S. government information activities.[5] These same conflicts displayed the services' growth in

[4] The Phase 0 activities to enable follow-on actions of an OPLAN / CONPLAN include target development, pre-conditioning an enemy to expect certain U.S. responses, developing a theater network of cultural and capability experts and identifying the optimal employment of IO warfighting capabilities (e.g., computer network attack and electronic attack).
[5] Joint Publication 3-13, xiii.

IO capabilities such as computer network operations and psychological operations forces capable of producing operational effects.

IO has been applied throughout military history and its present application continues to grow as the U.S. increases its reliance on information as a weapon and commodity as well as technologies in general. The demand is further exacerbated by military commanders who desire the non-kinetic effects in lieu of the difficulties associated with physical destruction (e.g., fratricide, collateral damage, rules of engagement, etc.). As the demand for IO increases and more robust capabilities come online, active management to synergistically mass effects becomes increasingly important and exceedingly complex. Recognizing that IO should be embedded into all operations, an integral part of the joint fight and that current doctrine is not conducive to active management, this paper explores how best to command and control (C2) IO effects at the operational level of war. Specifically, this paper addresses the organizational IO C2 structure to support the CJTF throughout all phases of operations.

To answer the question of commanding and controlling IO effects, the following tasks will be accomplished. First, define the scope, responsibility and organizational composition as discussed in current doctrine. Second, define the desired IO effects characteristics necessary for effective and efficient employment of capabilities. Third, identify existing IO infrastructure seams as they relate to the elements of sound command organizational structure. Fourth, compare and contrast the various IO C2 models with respect to the desired characteristics, factor space / force / time continuum and infrastructure seams. Finally, the paper will recommend a C2 model through the creation of the non-doctrinal TIOC / JFIOCC.

SCOPE AND RESPONSIBILTY

The recently published *Joint Publication 3-13, Joint Doctrine for IO* defines the discipline as follows:

> "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. 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 by enabling the joint forces freedom of operation in the information environment."[6]

Further elaboration on supporting IO capabilities includes activities such as information assurance (IA), physical security, physical attack, counterintelligence, and Combat Camera. These activities, either directly or indirectly, contribute to effective IO and should be integrated and coordinated with the core capabilities, but can also serve other wider purposes.[7]

The related capabilities for IO are coordinated and integrated with the core and supporting IO capabilities. However, their primary purpose and rules under which they operate must not be compromised by IO. These capabilities include public affairs (PA), civil-military operations (CMO), and defense support to public diplomacy.[8] One area directly linked to related capabilities is strategic communication. Strategic communication is a focused effort to understand, engage and favorably influence key target audiences to U.S. policy and intent.[9] The effects of strategic communication are achieved through the combined actions of PA, public diplomacy (PD) and IO. Combatant commanders are

[6] Joint Publication 3-13, ix - x. Author's comment: EW consists of electronic attack / protect / surveillance.
[7] Ibid, x.
[8] Ibid, x.
[9] Ibid, I-10.

responsible for ensuring all planning and actions via PA, PD and IO are consistent with the overall U.S. government strategic communication objectives and are approved by the Office of the Secretary of Defense (OSD).[10]

A review of the scope and responsibility of IO reveals detailed and involved planning considerations. The *Joint Publication 3-13* provides specific planning guidance as it applies across all operations and at every level of war.

> "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."[11]

To accomplish the plethora of tasks and planning considerations requires a robust staff capable of cross-component coordination and inter-agency reach back support. Typically the J-3 will be assigned responsibility for IO and, more than likely, further delegates responsibility to the J-39 IO cell chief (frequently an O6 pay grade). When authorized, the J-3 / J-39 have primary staff responsibility for planning, coordinating, integrating and assessing joint force IO.[12] The J-3 / J-39 maintain a relationship more akin to coordination within the IO cell, components and inter-agencies supporting the task force. The coordination authority is a consultation relationship between commanders and not an authority by which command may be exercised.[13]

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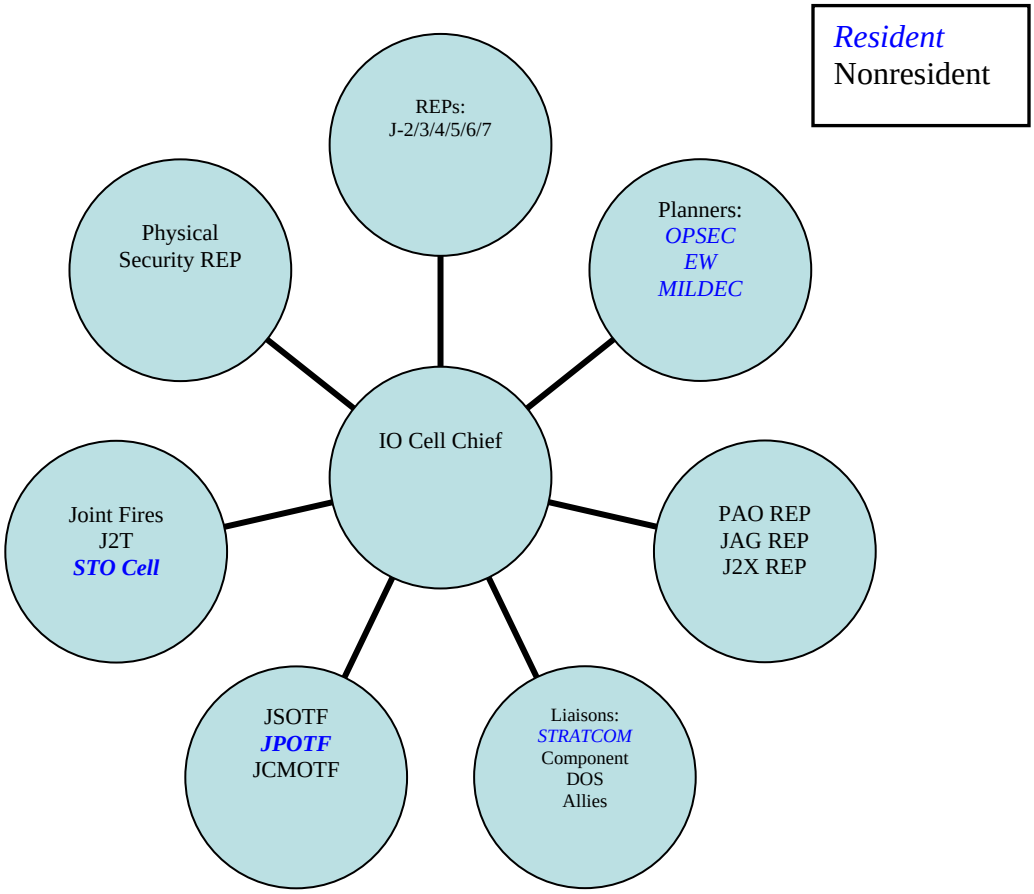
[10] Ibid, I-10.
[11] Ibid, xiii – xiv.
[12] Ibid., xiii. The emphasis is the author's and is based on his military experience.
[13] Joint Chiefs of Staff, Unified Action Armed Forces (UNAAF), Joint Publication 0-2 (Washington, DC: 10 July 2001), III-11.

The manning for a joint IO cell is comprised of at least 23 functional areas of which six participants are resident cell members. A representative IO cell is depicted in the Figure (1) below.



J2X	Counterintelligence
USSTRATCOM	CNO, Space Control and Global Strike
DOS	Department of State
JSOTF	Joint Special Operations Task Force
JPOTF	Joint Psychological Operations Task Force
JCMOTF	Joint Civil-Military Operations Task Force
J2T	Targeting Cell

Figure 1. Representative Information Operations Cell[14]

[14] Joint Publication 3-13, IV-5.

DESIRED EFFECTS CHARACTERISTICS

An effective IO command structure should be flexible and responsive to create the requisite characteristics to achieve the desired IO effects. By creating these characteristics, the CJTF can be assured his IO forces have been employed in the most effective and efficient manner. These characteristics include the following: relevant, specified, measurable, achievable and timely. All effects have to be relevant and supporting of the Commander's intent because his intent drives the IO actions. All IO options, courses of actions and target selections should be linked directly to the Commander's objectives that are communicated to the JTF and components. The linkages should be apparent both up and down echelon. Any IO planned and employed via processes such as the Joint Targeting Cycle should be driven by Commander's objectives and intent, and not be driven by desire to employ a capability. The effects have to be specified so that they are reasonably defined in scope and specificity of purpose. The effects should be designed to achieve measurable impact on an adversary's behavior or capability. The effects should be achievable, tangible and realistic given the operational capabilities and constraints. Finally, execution and assessment of effects should be timely and within the arc of the warfighter's battle rhythm or operational tempo.[15]

INFRASTRUCTURE SEAMS

As described in the *Joint Task Force Planning and Guidance Procedures* (JP 5-00.2), the elements of sound organizational structure consist of unity of command, unity of effort, centralized planning, common doctrine and decentralized execution.[16] Alas the traditional J-

[15] LCDR John Myers and CTIC (AW/NAC) Gene Ahn, IO Strategy-to-Task Discussion brief (Presented to the Joint Task Force 519 J39: April 2005)
[16] Joint Chiefs of Staff, Joint Task Force Planning Guidance and Procedures, Joint Publication 5-00.2 (Washington, DC: 13 January 1999), II-1.

3 / J-39 organizational structure as a whole does not compensate for the coordination / recommendation requirements, the multitude of tasks associated with this warfare area and the addition of new IO capabilities. The desire and need for IO missions and its associated capabilities have outpaced doctrine making organizational seams readily apparent. A comparison of the organizational elements (less the element of decentralized execution) to the representative IO cell in Figure (1) highlights the obscurity within the existing structure.

Unity of command requires all forces operate under a single commander with the authority to direct those forces employed in pursuit of a common purpose. Unity of command requires clear delineation of responsibility among commanders up, down and laterally.[17] If one believes each pillar of IO should fall under the umbrella of a single commander, then unity of command has been violated. This is evidenced by the fact that PSYOP is recognized as a traditional pillar of IO but often operates independently as a Joint Psychological Operations Task Force (JPOTF). Under the current doctrine for JTF command relationships, the JPOTF does not work directly for the staff directorates (e.g., the J-3 / J-39) or the functional commands. Instead, the JPOTF works directly for the Joint Force Commander.[18] This type of command structure lends itself to capabilities not properly integrated or synchronized with the pillars of IO or other component commanders. General Anthony Zinni illustrated the point when he was the Assistant to the U.S. Special Envoy to Somalia in 1993. Addressing a CIA audience in 1996, he discussed the challenges of stove-piped operations while negotiating the release of prisoners with the Somali warlord, General Aideed. Prior to the negotiations, Aideed had declared a ceasefire to facilitate the talks. Regrettably during the negotiation process, PSYOP forces operating disjointedly dropped

[17] Joint Chiefs of Staff, Unified Action Armed Forces (UNAAF), Joint Pub 0-2 (Washington, DC: 10 July 2001), III-1.
[18] Joint Chiefs of Staff, Joint Psychological Operations, Joint Pub 3-53 (Washington, DC: 10 July 1996), III-5.

leaflets from U.S. helicopters that contained disparaging remarks about Aideed.[19] Unity of command is stretched beyond its usefulness because of composition limitations to the IO cell. The only core members of the cell are the J-3 / J-39 while representatives from USSTRATCOM (CNO reps), EW, OPSEC, MILDEC and PSYOP are resident members. The overwhelming majority of the more than 23 functional areas consist of nonresident representation from the various staff directorates, component commanders and the inter-agency. A closer examination of coordination reveals the IO coordinator has the authority to require consultation between agencies involved but does not have the authority to compel agreement.[20] With an IO cell comprised mostly of nonresident participation, unity of command relies solely on mutual coordination when often times a more direct line, such as OPCON or TACON, would ensure timely and deliberate mission success.

Unity of effort, necessary for effectiveness and efficiency, requires coordination between the highest levels of government, non-governmental organizations, coalitions and military forces.[21] The Office of Global Communications (OGC) was formed in 2002 to coordinate strategic communication that integrates the President's themes while truthfully projecting American and the administration's policies.[22] As previously discussed, CMO and PA do not align under IO but are considered related capabilities. These areas play a critical role in strategic communication by conveying themes and messages as well as helping to improve relations with foreign and civilian populations. Along these same lines, IO requires commonality and consistency of a message or theme to be threaded throughout the strategic,

[19] General Anthony Zinni, USMC, Military Interaction with Non-Military Agencies and Non-Governmental Organizations: Examples from Somalia and Elsewhere (6 March 1996 address to a CIA audience).
[20] Joint Chiefs of Staff, *Unified Action Armed Forces* (UNAAF), Joint Pub 0-2 (Washington, DC: 10 July 2001), III-1.
[21] Joint Chiefs of Staff, *Unified Action Armed Forces* (UNAAF), Joint Pub 0-2 (Washington, DC: 10 July 2001), I-3.
[22] White House Office of Global Communications web page; available at http://www.whitehouse.gov/ogc/aboutogc.html; Internet; accessed 15 April 2006.

operational and tactical levels. Current doctrine creates seams by inviting confusion as to who has the operational and tactical lead to ensure actions; themes and messages are in consonance with the OGC. Lost opportunities for public affairs and influence operations were never more apparent than that displayed in the Balkans during Operation NOBLE ANVIL. Admiral James Ellis, Commander, Joint Task Force NOBLE ANVIL, commented on this particular topic:

> "The enemy was much better at this [public affairs] than we were…and far more nimble. The enemy deliberately and criminally killed innocents by the thousands, but no one saw it…we accidentally killed innocents, sometimes by the dozens, and the world watched on the evening news. We were continuously reacting, investigating, and trying to answer 'how could this happen?"[23]

Unity of effort is further diluted at the operational level in the areas presumed to be strengths of IO warfighting: EW and computer network attack (CNA). One of the major difficulties with a JTF is integrating and synchronizing actions across component commanders. For instance, both the air and maritime component commanders conduct EW and CNA. However, there is no IO commander to force the components to work together in the most efficient manner.[24]

The existing IO C2 structure provides for centralized planning but does not compensate for an increased operational tempo or the multitude of required tasks. If IO is to be integrated into all operations, coordinated across components and with each warfare area, a limited J-39 staff quickly becomes overwhelmed. Absent of any real authority to direct, the J-39 centralized planning process invites initiatives that may never see the light of execution. For example, a J-39 tasked with developing a MILDEC plan has to rely on representatives

[23] Zachary P. Hubbard, "IO in the Information Age," Journal of Electronic Defense 27 (April 2004): 54.
[24] CAPT James S. Newman, USN (ret). Mr. Newman was the J39 for Joint Task Force 519 (An interview was conducted on 16 May 2006).

from the other components and the inter-agency for support. If the MILDEC solution involves Air Force and Navy assets, the optimal solution will only be realized and implemented if the components are in compliance and participate in the planning process. In another instance, some relevant IO forces such as CNA, may not be OPCON to the combatant commander but controlled by another combatant commander or agency making planning efforts more difficult.

The newly released joint IO doctrine is an improvement from the previous version but seams still exist. First, if strategic communication is to be emphasized and coordinated both up and down echelon, where are the regional, country and cultural experts in the IO cell? A PSYOP planner brings regional expertise but may not have the required country specific, diplomatic or economic knowledge. The expertise does not appear to reside with the Department of State representative who is responsible to coordinate with international organizations that could be affected by IO activities and maintain cognizance of the PD capabilities available to achieve U.S. objectives.[25] Second, the doctrine mentions Combat Camera as a supporting capability but does not include this key enabler for strategic communication in its IO cell. Third, a blurring of job responsibilities is evident throughout the doctrine, especially with respect to computer network defense (CND) and the J-6. To illustrate, the role of the CNO representative is to integrate and synchronize CNO with other IO capabilities and deconflict CNO with other staff directorates and organizations. The J-6 Communications Systems and Information Assurance representative is tasked to facilitate IA and coordinate between information system planners, managers and members of the IO cell. By comparing both job descriptions, one is hard pressed to identify which member has the

[25] Joint Publication 3-13, IV-8.

lead for network defense. An ambiguous understanding for who has the CND lead is tantamount to failure – the process has to be seamless. For example, CNO consists of computer network attack / exploit / defend. If the exploit element provides indications and warning of an impending enemy computer attack, it would be critical for the attack and defend elements to be alerted and take pre-cautionary actions.

PROPOSED COMMAND AND CONTROL MODELS

The IO C2 models for review include the traditional J-39, the non-doctrinal J-9 and the non-doctrinal JFIOCC. The analysis begins by framing the model's parameters, how each relates to the desired effects characteristics, the factor space / time / force continuum and the elements of sound organizational structure. The results from the analysis are captured in the tables below. A grade of high, medium or low was assigned based on the author's observations and experience of the model's ability to satisfy the requirement.

The *Joint Pub 3-13* articulates the role, function and organizational structure of the traditional J-39 model. This model assigns the responsibility of IO to the J-3 directorate who further delegates to a J-39 as the chief of the IO cell. The J-39's IO cell is formed once the requirement for a JTF has been established. As depicted in Figure (1), the IO cell is comprised of numerous functional areas with various resident and nonresident memberships. Team training for the IO cell is realized once the organization gets tasked to participate in a theater or operational exercise. As an element embedded in the J-3 organization, the J-39 does not have the authority to compel agreement amongst the component commanders and various staff codes but operates in a coordination / recommendation role.

The J-9 model is very similar to the previous model. The primary difference is the seniority of the J-9 officer. The J-39 is typically an O6 pay grade while the J-9 model warrants a flag / general officer. Although the J-9, as an IO directorate, does not exist in joint doctrine, flag representation raises the level of IO awareness to a directorate level. This particular model has been demonstrated with some degree of success during U.S. Pacific Command's annual TERMINAL FURY exercise.[26]

Ideally, the TIOC / JFIOCC would be led by a flag / general officer on par with the traditional component commanders. The desired structure is a permanent organization that maintains constant theater situational awareness and owns each pillar of IO. The command would be the theater focal point for full-spectrum IO, influence planning and strategic communication. The TIOC is OPCON to the combatant commander during normal operations and OPCON as the JFIOCC to a CJTF when required. As a permanent organization, the members focus on target development and employment of EW and CNO capabilities. These same members would have unlimited opportunities to cultivate regional contacts, train and gain valuable experience with effects based operations (EBO), crisis action planning (CAP) and contingency planning. To accomplish the mission, a fully staffed JFIOCC requires its own civil affairs (CA) officers, PA officers, civilian media billets (e.g., CNN / FOX), Combat Camera team, intelligence cell, joint inter-agency coordination team and operational planners savvy in IO capabilities. The model does not presuppose that entire disciplines like CA / PA become subordinated to IO in general. However, the proposal includes those officers with the requisite skill sets to be subordinated to the TIOC / JFIOCC chain of command. The logic for this resides with the fact that many individuals confuse traditional IO with what the author of this paper calls influence operations. Influence

[26] The author of this paper was a member of the IO cell participating in three TERMINAL FURY exercises.

operations are much broader in scope than IO and rely heavily upon CA / PA to package and market themes central to a CJTF's campaign plan. A permanent TIOC / JFIOCC containing its own CA / PA elements provides many advantages such as ensuring all actions, themes and messages are in consonance with guidance from higher authority.

	Relevant	**Specified**	**Measurable**	**Achievable**	**Timely**
J-39	*medium-high*	*medium-high*	*medium-high*	*medium-high*	*medium-high*
J-9	*medium-high*	*medium-high*	*medium-high*	*medium-high*	*medium-high*
JFIOCC	*high*	*medium-high*	*high*	*medium-high*	*high*

Table 1. Desired IO Effects Characteristics

As depicted in Table (1), the J-39 / J-9 models compared favorably to one another by receiving *medium-high* marks for supporting the desired effects characteristics. Fully integrated and properly staffed J-39 / J-9 directorates that are aware of their capabilities and limitations would be expected to produce relevant, specified, measurable, achievable and timely effects. The TIOC / JFIOCC model received similar marks for specified and achievable effects. The model earned *high* marks for relevant, measurable and timely effects because of the natural advantages derived from its permanent theater presence, peacetime mission focus and organizational structure. When the TIOC is OPCON to the theater commander, its members maintain situational awareness, support war plan development, conduct target development and cultivate a regional network of cultural and capability experts. Because of these advantages the personnel are uniquely positioned to provide more relevant courses of actions and options to the CJTF. The JFIOCC has the luxury of capability SMEs and operational planners trained in EBO, CAP and contingency planning with a unique understanding of how best to employ capabilities to achieve measurable

effects. A model that allows for continuous training should not be taken for granted. The corporate world has provided many lessons about how to adapt organizational structures to new capabilities, processes and information technologies. Applying these lessons to a military organization provides interesting insight. To take full advantage of information technology, the military organization will need to institutionalize an environment of constant learning and one that includes the freedom to fail without serious consequences.[27] Depending on the CJTF's mission, the JFIOCC can scale its operations by rapidly deploying either as a component commander or a smaller task force. The flexibility allows the model to execute its tasks in a timely manner and assess the results within the operational battle rhythm.

	Space	**Force**	**Time**
J-39	*medium*	*medium*	*medium*
J-9	*medium*	*medium*	*medium*
JFIOCC	*high*	*high*	*high*

Table 2. Factor Space / Force / Time Continuum

The art of warfare at all levels is to obtain and maintain freedom of action – the ability to carry out critically important, multiple, and diverse decisions to accomplish assigned military objectives. Freedom of action is achieved by balancing the factors of space, time and forces.[28] Against the factors listed in Table (2), the J-39 / J-9 models earned marks of *medium* for the space / force / time continuum. Higher marks are not achieved for multiple reasons. First, the space and time variables are affected adversely because a

[27] Zalmay M. Khalilzad and John P. White, The Changing Role of Information in Warfare (Published by RAND, Santa Monica, CA: 1999), 13 – 14.
[28] Professor Milan N. Vego, Operational Warfare, (Unpublished Text, U.S. Naval War College, Newport, RI: 2000), 29.

significant portion of the IO cell would have to be drawn from disparate locations to support the CJTF. Second, the force variable is affected unfavorably because theater expertise as it relates to situational awareness, specific target knowledge, cultural awareness and tailored capabilities employment would be lacking from individuals residing outside of the theater. In contrast to the JFIOCC model, *high* marks are scored across the board due to its in-theater location and focus during normal operations. Both factor space / time are minimized because of the model's permanent location. This arrangement allows for more time to be devoted to activities such as war plan development. Generally speaking, the more time that is allowed for preparation, the higher the probability of success.[29] Unit cohesion, the human element of the factor space, is capitalized because normal TIOC operations allow for professional development and the pursuit of common goals. An atmosphere conducive to cohesion provides a bonding of members of an organization or unit to sustain their will, commitment to each other, and their mission.[30] As the TIOC / JFIOCC optimizes capabilities to better support war plans, constantly trains, conducts target development and cultivates cultural experts, each aspect of the factor space / force / time continuum is enhanced.

	Unity of Command	**Unity of Effort**	**Centralized Planning**	**Common Doctrine**
J-39	*low*	*low*	*medium-high*	*low-medium*
J-9	*low*	*low*	*medium-high*	*low-medium*
JFIOCC	*high*	*medium*	*high*	*medium-high*

Table 3. Elements of Sound Command Organizational Structure

[29] Ibid, 49.
[30] John J. Johns, Cohesion in the U.S. Military, Defense Management Study Group On Military Cohesion (Fort Lesley J. McNair, Washington, DC: National University Press: 1984), 4.

The J-39 / J-9 models recorded identical marks for organizational structure in Table (3). Both earned marks of *low* for unity of command and unity of effort. These marks are justified because neither model subordinates each pillar of IO under a single commander, relies too heavily on nonresident membership (success is dependent solely on mutual coordination) and creates ambiguity with respect to coordinating strategic communication throughout all levels of operations. The JFIOCC earned a *high* mark for unity of command because it consolidates the pillars of IO under a single commander. The model scored *medium* for unity of effort because the cell composition is comprised of a core of truly joint members that constantly train and work together. This is not a trivial point since the outstanding characteristic of all joint operations is their relative complexity when compared to single service operations.[31] The model did not score higher because many of the IO capabilities to be implemented are already embedded inside the traditional component organizations. By the nature of their organizational structures, all models scored well in centralized planning. However, only the JFIOCC model is resourced with the correct skill sets and manpower to ensure the overwhelming majority of tasks resulting from centralized planning and routine battle rhythm deliverables may actually be achieved. The J-39 / J-9 models established *low-medium* marks for common joint doctrine given they do not suitably compensate for the existing infrastructure seams. For instance, both models do not provide a clear structure of who is the lead element to ensure strategic communication themes are properly embedded at the strategic, operational and tactical levels. In contrast, a JFIOCC earned a *medium-high* mark because it is the theater nexus for strategic communication and has the expertise to insure that appropriate themes are developed and threaded accurately throughout each level of command.

[31] Joint Chiefs of Staff, Joint Military Operations Historical Collection (Washington, DC: 15 July 1997), xi.

RECOMMENDATION

The ideal C2 IO effects model should provide a structure that adequately accomplishes the multitude of tasks, allows effective and efficient employment of capabilities, permits freedom of action and compensates for infrastructure seams. The Joint Forces Command (JFCOM) provides further guidance. The JFCOM hosted the Millennium Challenge 2002 exercise that focused on integrating IO in rapid-decisive and effects-based operations to gain and maintain information superiority. The exercise highlighted two important points consistent with a JTF and IO:

> First, combatant commanders must have a strategy in place, clarify the JTF in achieving the strategy, and accept the strategy as critical to objectives. Second, the role of IO can not be simply an afterthought addressed immediately before a conflict. Shaping and influencing activities must occur continuously throughout peace, crisis, and combat. It is almost impossible to change a popular negative view of JTF efforts once shots are fired.[32]

With each of the above factors considered, the analysis results indicated the optimum template to C2 effects is the JFIOCC model. The model is clearly able to accommodate the multitude of tasks and is structured in such a way to favorably achieve the desired IO effects characteristics. Because the JFIOCC maintains permanent theater presence and continuously trains, the model permits the most freedom of action by maximizing the factor space / force / time continuum. In the area of minimizing the infrastructure seams, the JFIOCC model scored the highest marks primarily because of the importance it places on unity of command. The JFCOM's consideration about shaping and influencing activities is a topic of great concern and has the interest of U.S. Secretary of Defense Donald Rumsfeld. In his February 2006 address on public affairs, Rumsfeld made the following comments:

[32] Mark W. Maiers, Timohty L. Rahn, "IO and Millennium Challenge," Joint Force Quarterly: JFQ (2004) Iss. 35, p. 87.

> "Our federal government is only beginning to adapt our [communications] operations for the 21st Century. For the most part, the U.S. Government still functions as a five and dime store in an E-Bay world…government at all levels will need to make communications planning a central component of every aspect of this struggle [The Long War]. We must get a great deal better at:
> - Engaging experts from both within and outside of government to help to communicate;
> - Rapidly deploying the best military communications capabilities to new theaters of operation; and
> - Developing and executing multifaceted media campaigns – print, radio, television and Internet"[33]

Only the JFIOCC model is aligned to engage in timely and meaningful media wars. Traditional PA is designed to respond to individual requests for information. A JFIOCC is structured to provide an aggressive communication posture because it is resourced to link themes with actions. By assuming the responsibility for strategic communication, influence operations and harnessing each pillar of IO, this model provides an environment that is capable of successfully weaving OGC themes and actions into all current and future operations and at each level of warfare.

CONCLUSION

As the command and control debate continues, the importance and complexity of IO can not be denied. IO is conducted at all levels of conflict. If carefully conceived, coordinated, and executed, IO can make an important contribution to defusing crises, enhancing the impact of diplomatic, informational, military and economic efforts.[34]

Active management is required for this intricate discipline especially as the military services develop new capabilities to help gain and maintain information superiority.

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[33] U.S. Department of Defense, Office of the Assistant Secretary of Defense (Public Affairs) Speech; Council on Foreign Relations as prepared for delivery by SECDEF Donald H. Rumsfeld, Harold Pratt House, New York, Friday 17, 2006.
[34] Joint Publication 3-13, I-4.

Information superiority can not be over emphasized as it is a critical concept that's value is clearly derived from the military outcomes it can enable. In this sense, it is analogous to air superiority or sea control.[35] Simultaneously, IO has to be optimally organized and resourced to respond in a judicious and decisive manner to be effective. In order to accomplish this goal, the services have to recognize their limitations (e.g., the Navy does not have PSYOP forces) and understand the joint fight is the best fight. The JFIOCC model positions the CJTF in the most opportunistic manner to decisively mass IO effects to achieve his desired end state.

[35] Vice Admiral Arthur K. Cebrowski, USN, "Network Centric Warfare: An Emerging Military Response to the Information Age," (Presentation to the 1999 Command Control Research and Technology Symposium, Naval War College, Newport, RI: 29 June 1999)

Bibliography

Alberts, David S., Garstka, John J., Stein, Fredrick P. "Network Centric Warfare: Developing and Leveraging Information Superiority." DoD C4ISR Cooperative Research Program, 2nd Edition (August 1999).

Allard, Kenneth. "Command, Control, and the Common Defense," revised edition (Washington, DC: National Defense University Press: 1996).

Allard, Kenneth. "Somalia Operations: Lessons Learned," (Washington, DC: National Defense University Press: 1995).

Cebrowski, Arthur K. "Network Centric Warfare: An Emerging Military Response to the Information Age." (Presentation, Naval War College, Newport, RI: 29 June 1999).

Cebrowski, Arthur K. and Garstka, John J. "Network Centric Warfare: Its Origin and Future," Proceedings of the Naval Institute, 124:1 (January 1998).

Commander SEVENTH Fleet. Personal For Message to Commanders of FIFTH, SIXTH, SECOND and THIRD Fleets (DTG 160515Z May 2001).

Executive Summary of Global '98 Wargame (Naval War College, Newport, RI: 13-31 July 1998).

Hubbard, Zachary P. "IO in the Information Age," Journal of Electronic Defense, 27 (April 2004): 51.

Johns, John J. "Cohesion in the U.S. Military, Defense Management Study Group On Military Cohesion," (Fort Lesley J. McNair, Washington, DC: National University Press: 1984).

Johnson, Stuart E. and Libicki, Martin C. "DBK and Its Consequences," Dominant Battlespace Knowledge (Washington, DC: National Defense University Press: 1995).

Joint Force Staff College. Joint Information Operations Handbook. Norfolk, VA: July 2003.

Maiers, Mark W. and Rahn, Timothy L. "Information Operations at Millennium Challenge," Joint Force Quarterly, Issue 35 (2004): 83-87.

Myers, John and Ahn, Gene. "IO Strategy-to-Task Discussion brief (Presented to the Joint Task Force 519 J39: April 2005).

Newman, James S. CAPT Newman, USN (ret) was the J39 for the U.S. PACOM's Joint Task Force 519 (Conducted an interview on 16 May 2006).

RAND Corporation. (Edited by Zalmay M. Khalilzad and John P. White).RAND Project Air Force: The Changing Role of Information in Warfare. Santa Monica, CA: 1999

U.S. Department of Defense. Office of the Assistant Secretary of Defense (Public Affairs) speech. Council on Foreign Relations as prepared for delivery by SECDEF Donald H. Rumsfeld (Harold Pratt House, New York).

U.S. General Accounting Office. Information Security: Computer Attacks at the Department of Defense Pose Increasing Risks (Washington, DC GAO/AIMD-96-84: May 1996).

U.S. Joint Chiefs of Staff. Joint Doctrine for Information Operations. Joint Pub 3-13. Washington, DC: 13 February 2006.

U.S. Joint Chiefs of Staff. Joint Doctrine for Psychological Operations. Joint Pub 3-53. Washington, DC: 10 July 1996.

U.S. Joint Chiefs of Staff. Joint Task Force Planning Guidance and Procedures. Joint Pub 5-00.2. Washington, DC: 13 January 1999.

U.S. Joint Chiefs of Staff. Unified Action Armed Forces. Joint Pub 0-2. Washington, DC: 10 July 2001.

Vego, Milan N. Operational Warfare. Unpublished Text, U.S. Naval War College, Newport, RI: 2000.

White House, Office of Global Communications Web Page, available at http://www.whitehouse.gov/ogc/aboutogc.html

Zinni, Anthony. Military Interaction with Non-Military Agencies and Non-Governmental Organizations: Examples from Somalia and Elsewhere (Presented to a CIA audience on 6 March 1996).