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INTELLIGENCE AND THE COMMANDER: DESERT SHIELD/STORM CASE STUDY

by

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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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The case study of intelligence support to Operations Desert Shield/Storm is significant for future operations, as warfighting CINCs will confront all or some of the same issues in future conflicts. Issues of I&W and Response, EDA, JIC architecture, and Interoperability are examined. Problems were encountered because neither the CINC and his staff, nor the intelligence community anticipated or initially understood the problem of supporting a unified commander in a mid to high intensity conflict. CINCs in future conflicts must be prepared to act on uncertain I&W and EDA. Intelligence support can be improved by implementation of doctrine, improved planning, and realistic exercises.

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Abstract of

INTELLIGENCE AND THE COMMANDER: DESERT SHIELD/STORM CASE STUDY

Intelligence support to Operations Desert Shield and Desert Storm is analyzed in this study from the perspective of the operational commander. The lessons of these operations are a model in the arena of intelligence support and the commander, as warfighting CINCs will confront some, or all, of the same issues in future conflicts. Four major issues are identified and analyzed in the study: Indications and Warning (I&W) and Response, Battle Damage Assessment (BDA), Joint Operations Intelligence Doctrine and Joint Intelligence Center (JIC) Organization, and Interoperability. Problems were encountered in these areas because neither the CINC and his staff, nor the intelligence community anticipated or initially understood the problem of supporting a unified commander in a mid to high intensity conflict. The national intelligence community and CENTCOM have recognized the problem areas and taken corrective measures that should ensure better initial support to warfighting CINCs in the future. However, BDA and I&W will continue to confront commanders with ambiguity, requiring "generalship" to overcome. The implementation of joint intelligence doctrine, combined with a baseline review, and realistic exercising of intelligence support "game plans" are recommended for all unified commands as a solution to the organizational and interoperability problems.

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"No combat commander has ever had as full and complete view of his adversary as did our field commander (during Operation Desert Storm). Overall, intelligence support to Operations Desert Storm and Desert Shield was a success." - Department of Defense Interim Report to Congress

"Let me start by saying the intelligence community as a whole did a great job." - General H. Norman Schwarzkopf in testimony to the House Armed Services Committee, 13 June 1991

I. Introduction and Thesis

In the long view, Operation Desert Storm was a confirmation of United States intelligence excellence and superiority in supporting a warfighting commander. Yet, intelligence support to the operational commander General H. Norman Schwarzkopf received more public criticism than any other aspect of the war effort, including well-publicized comments by the commander himself. The reason for this apparent contradiction was, this paper asserts, that the problem of applying the modern, complex national intelligence system to support a unified commander-in-chief (CINC) in a mid to high intensity conflict was not initially understood, or anticipated by the intelligence community or the operational commander and his staff. Thus, though the eventual outcome was

successful, intelligence and the commander walked a rocky road from the inception of the crisis in July 1990 to the conclusion of hostilities on 28 February 1991.

Though Operations Desert Storm and Desert Shield cannot be seen as a paradigm for the conduct of all future military operations, their lessons are a paradigm in the arena of intelligence support and its relationship to the operational commander. CINC's and their staffs will confront some, or all, of the same issues of intelligence support in future conflicts. This paper examines the major intelligence issues raised by the Persian Gulf Conflict from the perspective of the unified commander. Each issue will be analyzed in terms of causation, actions taken, possible alternative responses, post-war corrective actions, and implications for future operations. Conclusions and recommendations will be addressed in the examination of each issue and summarized in the final section of the paper.

A. Definitions

Before proceeding to an examination of the issues, a statement of the terms of the analysis is in order. As the subject of this paper is "intelligence and the operational commander," the focus will center on intelligence support to the unified commander in the practice of "operational art". U.S. Army Field Manual 100-5 defines this term as follows :

> Operational art is the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations.

It follows that the type of intelligence support discussed

will be "operational intelligence". The concept of "operational intelligence" is, in practice, based on function more than echelon of command, and usually encompasses elements of strategic, operational and tactical intelligence. Joint Pub's 2-0 and 1-02 best define these terms and concept:

> (1) Strategic Intelligence is that intelligence required for the formulation of strategy, policy, and military plans and operations (emphasis added) at national and theater levels.
>
> (2) Operational intelligence is that intelligence required for planning and conducting service and joint operations.
>
> (3) Tactical intelligence is that intelligence required for planning and conducting tactical operations.
>
> However, changes in usage and practice have modified some of the level of command distinctions once associated with the terms. For example, strategic intelligence was almost exclusively associated with the DIA, the Joint Chiefs of Staff, the Department of Defense, and the National Command Authorities. Now the combatant command CINCs play a greater role at the strategic level of command and have a greater need for strategic intelligence. Tactical intelligence was considered the province of deployed (or deployable) forces. However, changes in recent years have eroded much of that distinction...and has resulted in an acknowledgement that "tactical intelligence is where you find it."....Operational intelligence applies not to a particular level of command, but rather to the function of supporting operations at any level.[2]

Therefore, in discussing "intelligence and the commander", issues of strategic, operational, and tactical intelligence are all relevant in the context of their effect on the unified commander's conduct of an operation.

B. The Issues

Operations Desert Storm and Desert Shield surfaced four issue

areas where the relationship between intelligence afforded to the commander and the conduct of operations was, or could have been, critical. These areas, as we shall see, encompassed a broad spectrum of problems that challenged the intelligence community across the board and the commander, both individually and jointly. From the intelligence side, the problems were generally of supply and distribution; how to get essential information to the commander in a timely manner and useful form. For the commander, the problem was different, but equally complex; how to effectively translate that information into operations. For both, a link of understanding was also essential in that it was incumbent upon the intelligence community to understand the commander's needs, while the commander, to best use intelligence, had to understand its capabilities and limitations.

The four issue areas are listed in the author's view of decreasing order of importance as follows:

(1) Indications and Warning (I&W) and Response

(2) Battle Damage Assessment (BDA)

(3) Joint Operations Intelligence Doctrine and Joint Intelligence Center (JIC) Organization

(4) Interoperability

II. Indications and Warning (I&W) and Response

A. Issue and Causes - Overlooked in most Department of Defense analyses of the Persian Gulf conflict, but a near cause celebre in the open press is the issue of I&W and Response. Briefly stated,

the argument runs as follows: Given Saddam's increasingly shrill public attacks against the United States and the Arab Gulf States, beginning in February 1990 and culminating with Iraq's movement of some 100,000 troops along Kuwait's border[3], including elements of the Republican Guard and key logistical support, why was there no strong response from the United States? Had the United States strongly signalled its support for Kuwait, to include the immediate movement of forces to the area, the subsequent invasion and resultant war might have been avoided altogether. Critics assert that the intelligence services of the United States, and the West in general, blundered by adherence to a faulty conception: Saddam's behavior had been moderated by the war with Iran, causing him to establish closer ties with the West and the Arab Gulf States.[4] The eight-year war with Iran had also left Iraq and its population war-weary. And although Saddam's intent to eventually control the gulf was understood, he would not have the capability for at least three years, and would not probably risk a war for perhaps a decade. Ergo, CIA, DIA, and the State Department of Intelligence all concluded that Saddam was probably bluffing and so advised the President.[5]

Obviously, this issue involves strategic intelligence and national policy formulation. What then of the United States' Central Command (CENTCOM)? Though policy-making has long been accepted as outside the official domain of the military in the United States, under the Goldwater-Nichols DOD Reorganization Act of 1986, the unified commanders have become warfighting combatant

commanders within their designated geographic area of responsibility (AOR). Primary responsibilities include:

- Maintaining the security of the United States and the command.

- Keeping the Chairman, Joint Chiefs of Staff (CJCS), promptly advised of significant events in the AOR.

- Communicating directly with the Secretary of Defense and CJCS on matters including preparation of strategic plans, strategic and operational direction of forces,...and any other function of command required to accomplish the mission.[6]

Though practice has yet to define with certainty the role of the CINC in regional crises prior to the policy decision committing forces, Goldwater-Nichols clearly establishes the unified commander as an active player with the responsibility to communicate to the National Command Authority (NCA) on events that effect his AOR. In the present case, it seems clear that recommendations and advise concerning the use of military forces prior to Iraq's invasion were within the purview of CENTCOM. Thus, in terms of this study, the first issue boils down to two questions: What actions should the unified commander recommend and prepare for when faced with ambiguous I&W? How can warning intelligence better support the operational commander?

B. Actions Taken - Confronted with the same ambiguous I&W intelligence and faulty analysis, neither national policy-makers or CENTCOM took definitive action to attempt to deter Iraq's invasion of Kuwait. Two tanker aircraft were sent to the United Arab Emirates (UAE) along with a small increase in the number of ships

usually assigned to the Persian Gulf.[7] In addition, a letter was cabled to Saddam from President Bush following Ambassador Glaspie's stormy meeting with a blustering Saddam. The letter stated that the US would "stand by its friends and protect its interests in the region," but called for no demarche explicitly warning Iraq not to attack Kuwait.[8]

Iraq's threat to Kuwait, whether a bluff or not, was accompanied by the military capability to execute the operation. This combination of threat and capability, in and of itself, made the situation a crisis for CENTCOM that demanded a response. However, the ambiguous I&W presented the commander, and national decision-makers, with a dilemma: No definitive action would allow Iraq to invade Kuwait, and by extension, pose a threat to the national interest of Middle East oil. Equally as unpleasant was the proposition that, were Iraq bluffing, a strong, preemptive military response by the United States might be viewed as unwanted, imperialistic meddling in Arab affairs that would erode US influence in an area of vital importance. Perhaps as a result, the actions taken were ineffective measures borne of the confusion of this dilemma.

C. Alternative Responses - Ambiguous warning complicates the formulation of response, but is not an impossible situation with which to deal. In their studies of warning and response, Alexander George and Ariel Levite have identified a number of active responses to deal with inconclusive warning that seem appropriate to the Iraq-Kuwait crisis.

The first is to step up the information search. This, of course, refers to increasing intelligence collection and all source analysis of the problem.[9] For the unified and commander and his J2, this means aggressive tasking of national intelligence assets, primarily human (HUMINT) and signals (SIGINT) intelligence sources. Though the capabilities of national intelligence assets are classified, it is a fair generalization to say that they are fully tasked, and until the Gulf War, were concentrated heavily against the Soviet Union.[10] Substantial tasking of these limited resources is not a trivial task, as many competing interests often vie for priority. If national collection managers and the national intelligence community do not have the same threat perception as the CINC and his J2, it is incumbent upon them to force the issue. The increased emphasis may not provide the needed intelligence, but has often resulted in a qualitatively improved product. Identification of Communist Chinese intentions in Korea in 1950 is one such notable example.[11]

Secondly, George recommends a review of "one's commitment to a weak ally who would become the target should the crisis emerge."[12] Though the brunt of this recommendation falls squarely in the lap of national policy-makers, the unified commander should seek to clarify the nature of the US's commitment, as it is the keystone to his operational planning. Asking for clarification through the channels of communication open to the CINC can help to focus attention to this issue if it is not already the subject of study. In the case of Kuwait, the United State's position was

clouded with ambiguity,[13] complicating the threat response problem for both sides. A corollary to this prescription is the reinforcement of deterrence through the signalling of a more credible commitment.

A final measure is to alert forces to increase one's own readiness level and/or deploy forces both as a signal of commitment and a concrete hedge against the possible threat.[14] The advantages of such a move prior to the onset of hostilities in the gulf were potentially great. Combined with the first two measures discussed above, they form the basis for an excellent strategy that might have been pursued in the face of ambiguous I&W.

D. Post-War Corrective Actions - A number of changes that will impact the problem of warning intelligence have been spurred onward by the experience of Operation Desert Storm. Most of these changes were at least conceptually framed by the intelligence community prior to the Arabian Gulf Conflict. By far, the most significant and sweeping change is the redirection of what had become a disproportionate focus on the former Soviet Union to assessing the capabilities and intentions of smaller, hostile nations who are potential adversaries.[15] More, and presumably better, SIGINT and HUMINT collection emphasis combined with a stronger analytic effort directed toward regional problems will not guarantee perfect warning intelligence, but should significantly improve the intelligence product available to the unified commanders.

A renewed emphasis on HUMINT has received particular momentum from the recent conflict. Good HUMINT offers great potential in

determining an adversaries intent. The inability of technical means to determine a potential adversary's intent has been recognized for a number of years as a weakness of the US intelligence community, along with a lack of emphasis on HUMINT. As we have seen, the gulf war showed how critical the lack of knowledge about intent can be. As a result, expansion of HUMINT capabilities will likely occur, to possibly include assets directly controlled by the unified commanders.[16]

E. Implications for Future Operations - Though warning intelligence provided to the CINCs can be expected to qualitatively and quantitatively improve in the future, the nature of the beast will remain difficult with which to deal. Many scholars suggest that "attack warning will never be clear and unambiguous,"[17] and that barriers to accurate threat perception are historically the rule rather than the exception. Further, they assert that attempts to reform the process have also yielded little success.[18] Ironically, a limited study of mid-level military and civilian officials at the National War College has shown that most assume "timely and unambiguous warning will be available"[19] in the future.

One hopes that the latter perception will prove to be true. However, the CINC facing a future conflict will best serve himself by preparing to confront the dilemmas posed by a high degree of ambiguity. Central to this preparation is an expansion of the unclearly defined, but Congressionally mandated responsibility to

communicate with the SECDEF and CJCS on matters of importance within the commander's AOR, to include the preliminary stages of a potential crisis. Ideally, the CINC's recommendations will provide useful input to the policy debate and, once policy is articulated, allow the CINC to clearly and expeditiously translate policy into an effective strategy.

III. Battle Damage Assessment

A. Issue and Causes - While I&W was the most critical issue facing intelligence and the commander prior to the onset of hostilities, bomb damage assessment (BDA) took center stage upon the start of Operation Desert Storm. From the outset it was the source of acrimonious debate and hard feelings between elements of the intelligence community and combatant commander General Norman Schwarzkopf. Though improvements were made in the process as the war progressed, Schwarzkopf levelled heavy public and private criticism at the national intelligence community for their performance in this area, most notably during his testimony before the Senate and House Armed Services committees on 12-13 June, 1991.[20]

Schwarzkopf's ire was understandable, as not only was BDA critical to the phasing of Desert Storm operations, it was also an area where the system of analysis used by the intelligence community, particularly at the national level, was severely flawed in terms of providing support to a warfighting commander. The crux of the problem was this: Desert Storm was based on a four phased plan, with the 1) Strategic Air Campaign, 2) Attainment of Air

Supremacy in the Kuwait Theater of Operations (KTO), and 3) Battlefield Preparation being executed almost concurrently. The fourth phase, the decisive Ground Offensive, was contingent upon reduction of "Iraqi numerical superiority approximately 50% in tanks and artillery in the KTO."[21] Battle Damage Assessment was, of course, required to make this determination. The national intelligence community, relying primarily on single source imagery intelligence (IMINT) and a rigid methodology, provided Schwarzkopf with BDA which he felt was too overly cautious and conservative to be useful.[22] He further asserted that, because of this approach, if he had waited to launch the Ground Offensive until intelligence agencies concluded that Iraq had been sufficiently weakened, "we'd still be sitting over there waiting."[23]

DOD's interim report to Congress, in less passionate terms, summarizes the issue as follows:

> The battle damage assessment (BDA) necessary to judge the effectiveness of the air campaign was difficult to obtain because of reconnaissance systems limitations and adverse weather. Estimating attrition of Iraqi defensive forces was often more art than science. It was often impossible to confirm destruction of dug-in targets until Coalition forces arrived to see for themselves. Damage to vehicles caused by modern weapons and damage to troops cannot be verified by imagery. General Schwarzkopf has commented that there was a problem of discrepancies between the BDA provided by the national intelligence community and in theater. There were significant differences....
>
> BDA processes clearly need continued improvement, including the development of better procedural doctrine.[24]

B. Actions Taken - Schwarzkopf and his staff countered this problem with brilliant improvisation based upon sound military judgement. A Combat Assessment Center (CAC) containing a BDA cell

was created in CENTCOM's Joint Intelligence Center (JIC). Additionally, a Joint Imagery Production Complex (JIPC) was created in-theater, giving the commander the capability to do first-phase exploitation of imagery, and to distribute hard copy products to forces in the theater. The BDA cell functioned as a fusion center where national intelligence, theater reconnaissance, pilot reports, and other battlefield reports were analyzed to determine BDA and provide targeting recommendations.[25] The cell expanded the concept of BDA, in that it assessed not only damage to specific targets, but also provided detailed assessment of the overall degradation of enemy combat effectiveness. In the final analysis, Schwarzkopf's recommendation to begin the Ground Offensive was based primarily on estimates developed in theater.[26]

Schwarzkopf's handling of this issue, which was so critical to the success of the entire operation, was a Clausewitzian illustration of genius in generalship when faced with uncertainty. Clausewitz believed that "in the absence of sound intelligence most military leaders tend to overestimate the enemy's capabilities and err on the side of caution."[27] This was, he felt, a prescription for disaster as "given the same amount of intelligence, timidity will do a thousand times more damage than audacity."[28] The role of military genius in overcoming this obstacle is described as follows:

> Many intelligence reports in war are contradictory; even more are false, and most are uncertain. What one can reasonably ask of an officer is that he should possess a standard of judgement, which he can gain only from knowledge of men and affairs and from common sense. He should be guided by the laws of probability....The

> commander must trust his judgement and stand like a rock on which the waves break in vain.[29]

In other words, the commander must deal with a lack of good intelligence by relying "on his intuition (coup d'oeil) and his capacity for maintenance of aim."[30]

Schwarzkopf's testimony before the House Armed Forces Committee finalizes this point:

> "(criticism of my judgement came from)...people (in the national intelligence community) who, if they didn't see it (BDA) on an aerial photograph, they gave you no credit for it at all.
> What was happening as my analysts were applying a lot of things (sic). We were looking at the photos and applying sound military judgement, looking at pilot reports.
> I don't buy everything an Air Force pilot tells me 100 percent when he goes on a mission, but if 50 of them come back and say they all hit their target, the chances that 25 of them hit the target is pretty good and you have to use that as the basis of your analysis.
> I was attriting the force and keeping track of those estimates to get to trigger points and the guys in Washington were saying 'Schwarzkopf doesn't know what the hell he is talking about.'"[31]

C. Alternative Responses - The action taken in this case, the creation of a BDA cell within the Combat Assessment Center of the theater JIC, was the best possible response to the intelligence problem. Though not a totally satisfactory fix to the BDA problem, it gave the commander intelligence information that guided his intuition in making the most critical decision of the war - when to begin the ground offensive.

D. Post-War Corrective Actions - General Schwarzkopf has recommended that a standardized methodology be developed within the intelligence community to clarify battle damage assessments and better support the theater commander.[32] The need to do so has

been acknowledged by the intelligence community and, as of the time of this writing, a sweeping review of procedure and methods is underway.

The CENTCOM J2 has institutionalized the Combat Assessment Center, including the BDA cell, into its JIC structure.[33] In-theater intelligence will thus be organized and structured to provide BDA support from the outset of any future conflict. This is a prescription that should be followed by all unified combatant commands. Interestingly, Joint Pub 2-0 Doctrine for Intelligence Support to Joint Operations, makes no specific mention of BDA in discussing intelligence for joint and combined operations.[34]

Technological fixes in a number of areas have also been suggested to improve battle damage assessments. Improved interoperability, better search/surveillance systems on existing platforms, and development of new surveillance systems are all being reviewed.[35] As these fixes represented capabilities that were not available to CENTCOM at the time of Operation Desert Storm, they were not specifically included in this focus on BDA.

E. Implications for Future Operations - Organizational and technological corrective actions discussed above will give the combatant commander a BDA product much improved from that initially encountered by Schwarzkopf. However, the inherent difficulties of resource constraints and evaluation of such things as damage caused by precision guided munitions (where minimal exterior damage is inflicted while the interior of a target is destroyed) are likely to be encountered in the near future. Given this, the lesson of

Schwarzkopf's application of intelligence to operations should be remembered. The combatant commander must not be paralyzed by insufficient or conflicting information. Rather, he must do what he can to improve the assessment process, and then be guided by his intuition and a strong maintenance of the aim. This is perhaps a lofty prescription, but is nonetheless valid, as it embodies the essence of generalship.

IV. Joint Operations Intelligence Doctrine and Joint Intelligence Center (JIC) Organization

A. Issue and Causes -

> Finally, it is very much my belief that intelligence is of vital importance for every nation that has to be ready for a possible war. And from this point of view you must have already during peacetime- and peacetime can be 20, 30, 40 years long without any war in between- the organizational means for the transition of your intelligence from peace to war. If these means are at hand, the transition will go as smoothly as possible. You will not have at the very beginning of war to face a problem of readapting the whole system which was geared to a peacetime problem...and I am afraid to say that in the future this war, which might be very short, or let's say the first phase of which would be very short, can be very, very critical.[36]

Organizationally and doctrinally, neither the national intelligence community or CENTCOM's intelligence directorate was structured to support a conflict on the scale of Desert Storm/Desert Shield. Though ad hoc fixes eventually established a relatively efficient support structure, the process of "readapting the system" was lengthy and complicated, constituting a distinct vulnerability during the early phases of the gulf conflict. This issue is nicely framed by a former Director of the Defense

Intelligence Agency (DIA), Lieutenant General Leonard H. Perroots:

> Putting timely, useful intelligence in the hands of a myriad of consumers where and when they need it is the raison d'etre of military intelligence. The failure to provide that link at the critical moment may mean the difference between success and failure in a future operation.[37]

The shortfalls of the national intelligence community will be illustrated in our discussion of "actions taken" which follows. Suffice it to say for now that their collective transition to warfighting support began on 1 August 1990.[38] CENTCOM's post-war assessment of their pre-conflict organization speaks candidly for itself:

> Was the USCENTCOM Directorate for Intelligence (CCJ2) organized for war? The answer is no....It was not resourced, equipped, manned, trained, or structured to deploy and fight a conflict on the level and scope of Operation Desert Storm.[39]

Doctrinally, the major issue centers on the fact that "joint operations doctrine has outpaced the development of supporting intelligence doctrine."[40] Currently the only such doctrine is in the form of a test pub, Joint Pub 2-0, which is undergoing field evaluation.

B. Actions Taken - National intelligence community mobilization to support Operations Desert Shield/Storm began on 1 August 1991 with the activation of two crisis monitoring cells at DIA, one called the Intelligence Task Force and the other the Operational Intelligence Crisis Center. Shortly thereafter, CIA activated 24-hour task forces in its Operations and Intelligence directorates, while the National Security Agency (NSA) "increased operations to support military commanders."[41] On 2 September 1990, a DOD Joint

Intelligence Center (DOD-JIC) was established to provide an "integrated Defense Intelligence position" to theater users. Concurrently, National Military Intelligence Support Teams (NMIST) from DIA and Joint Intelligence Liaison Elements (JILES) from CIA were deployed to CENTCOM and component commands.[42]

CENTCOM's intelligence directorate's transition to the mode of wartime support was torturous. As no headquarters for intelligence existed in the AOR and CENTCOM had no intelligence production center (such as CINCPAC's JIC) anywhere, the Military Intelligence Board (composed of the DIA, NSA, and senior Service intelligence officers) was required to intervene. Wartime intelligence architecture was designed by the MIB along with the orchestration of a significant personnel augmentation to CENTCOM intelligence.[43] Even so, as late as November 1990, the CENTCOM CCJ2 organization was just beginning to evolve. At this time the CCJ2 had just 43 personnel assigned. This number was to expand to 670 in January 1991.[44]

CENTCOM's self-acknowledged deficiencies in their intelligence support structure forced in-theater intelligence to operate initially upon a "federated concept," which might charitably be described as convoluted, but which nevertheless got the job done. Again, CENTCOM CCJ2 describes the concept with candor:

> The federated concept was a production approach which sought to share responsibilities among the assets of CCJ2, the components, and sub-unified command (SOCCENT). It was driven by several factors: Resource constraints....No headquarters in the AOR from which to build a robust intelligence organization; and, the service components had an impressive intelligence manpower potential. In reality...the federated concept

> was never exercised before Desert Shield/Storm. Intelligence procedures to support warfighting were not defined and actual tasking to components occurred only after arrival in theater.[45]

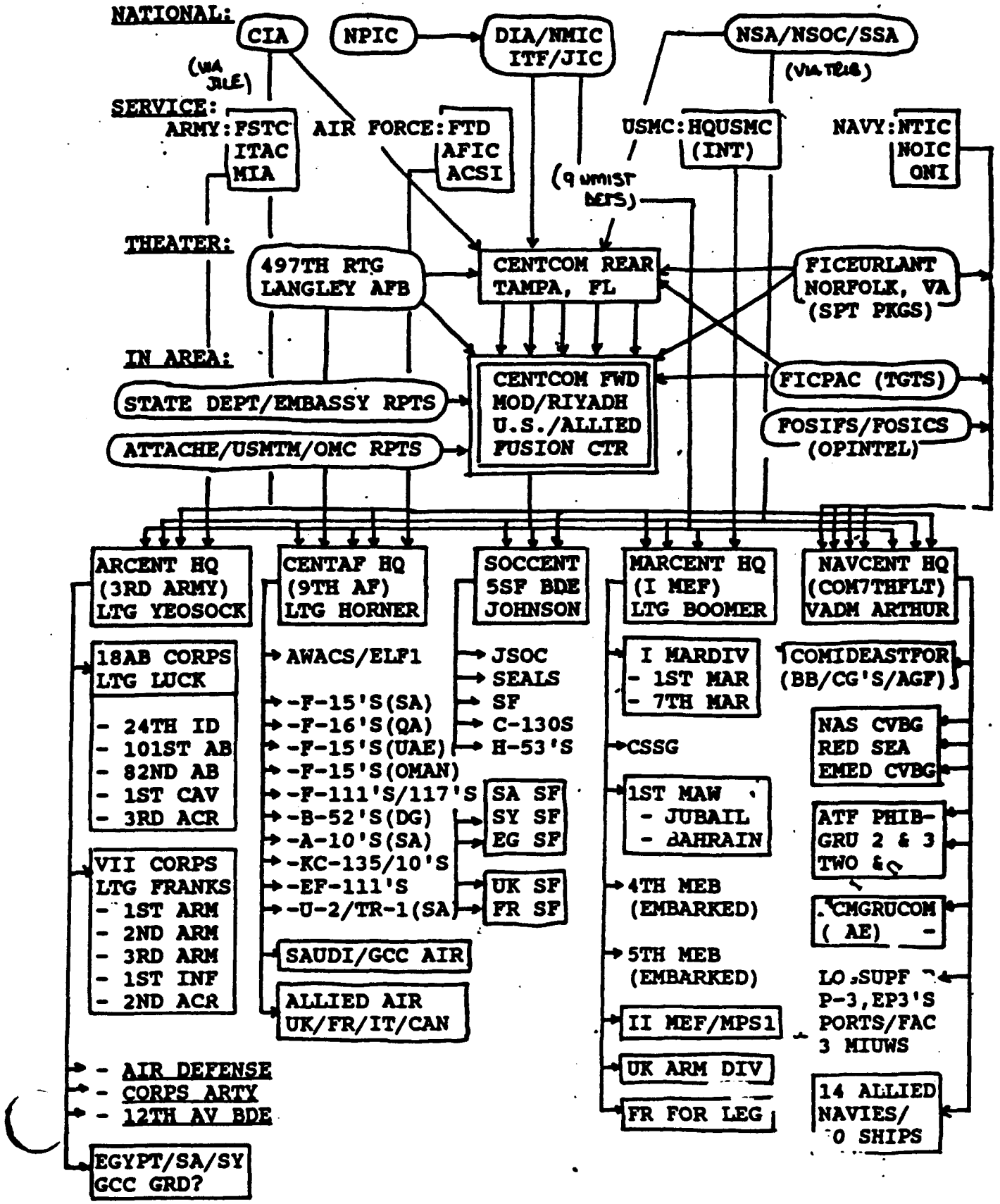
Once CENTCOM CCJ2 was resourced and augmented, an impressive, innovative and capable JIC was established in theater. Innovative firsts included the establishment of a Joint Imagery Production Complex (JIPC), a Joint Reconnaissance Center (JRC) headed by the CCJ2, and a Combat Assessment Center (CAC). The in-theater JIC structure and overall intelligence architecture are depicted in figures 1 and 2.[46]

C. Alternative Responses - As one can readily see from figures 1 and 2, the structural organization of intelligence support to a warfighting commander is complex. Possible permutations on the structure depicted, many of which would no doubt be effective, would require mathematical tables to compute. The best and only alternative response to the issue at hand was to have established a doctrinal and organizational framework for intelligence support to the warfighting commander before the conflict. Desert Shield/Storm are the proof that literally months of work could have been saved by such an approach. More importantly, the success or failure of an operation in its early stages may hinge upon this issue.

D. Post-War Corrective Actions - As with the issues previously discussed, the shortfall has been recognized squarely and intent established to reform. DOD has taken a leading position on this issue of intelligence doctrine and architecture, stating that:

> Because DOD is now organized to fight as joint commands,

FIGURE 1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AIR FORCE: FTD
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NAVY: NTIC
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ONI
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THEATER:
497TH RTG
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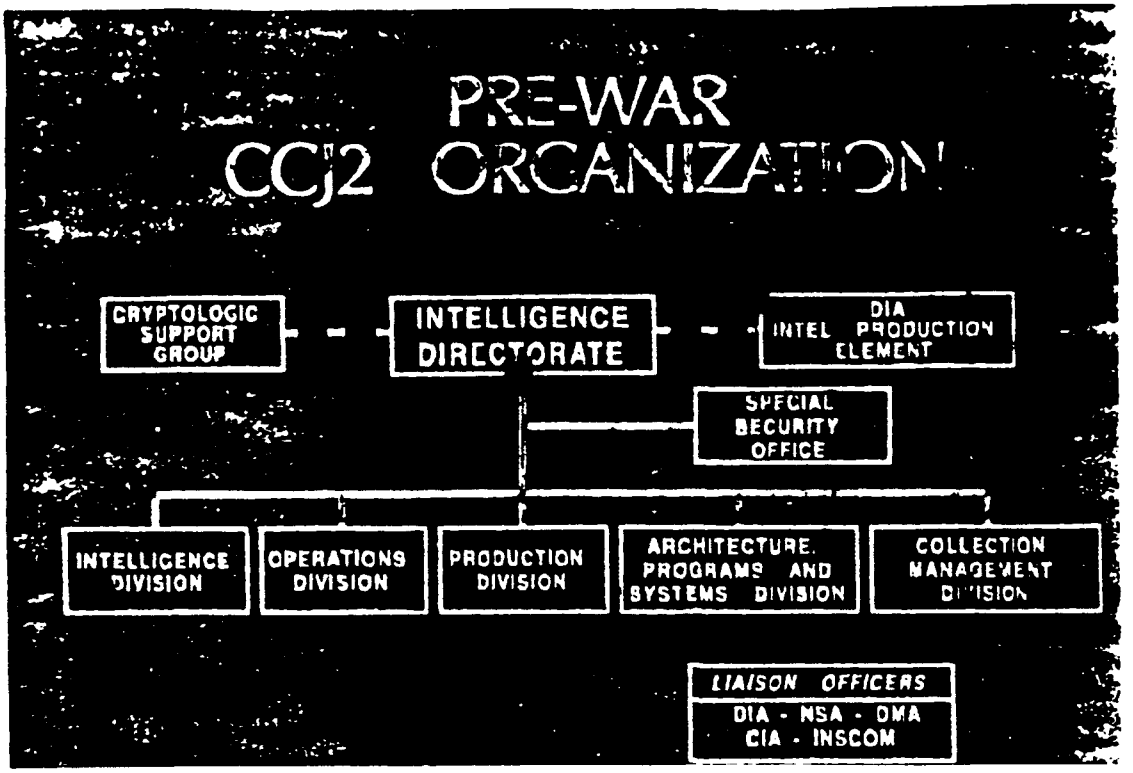
TAMPA, FL
FICEURLANT
NORFOLK, VA
(SPT PKGS)
IN AREA:
CENTCOM FWD
MOD/RIYADH
U.S./ALLIED
FUSION CTR
FICPAC (TGTS)
STATE DEPT/EMBASSY RPTS
ATTACHE/USMTM/OMC RPTS
FOSIFS/FOSICS
(OPINTEL)
ARCENT HQ
(3RD ARMY)
LTG YEOSOCK
CENTAF HQ
(9TH AF)
LTG HORNER
SOCCENT
5SF BDE
JOHNSON
MARCENT HQ
(I MEF)
LTG BOOMER
NAVCENT HQ
(COM7THFLT)
VADM ARTHUR
18AB CORPS
LTG LUCK
- 24TH ID
- 101ST AB
- 82ND AB
- 1ST CAV
- 3RD ACR
VII CORPS
LTG FRANKS
- 1ST ARM
- 2ND ARM
- 3RD ARM
- 1ST INF
- 2ND ACR
AWACS/ELF1
-F-15'S(SA)
-F-16'S(QA)
-F-15'S(UAE)
-F-15'S(OMAN)
-F-111'S/117'S
-B-52'S(DG)
-A-10'S(SA)
-KC-135/10'S
-EF-111'S
-U-2/TR-1(SA)
SAUDI/GCC AIR
ALLIED AIR
UK/FR/IT/CAN
JSOC
SEALS
SF
C-130S
H-53'S
SA SF
SY SF
EG SF
UK SF
FR SF
I MARDIV
- 1ST MAR
- 7TH MAR
CSSG
1ST MAW
- JUBAIL
- BAHRAIN
4TH MEB
(EMBARKED)
5TH MEB
(EMBARKED)
II MEF/MPS1
UK ARM DIV
FR FOR LEG
COMIDEASTFOR
(BB/CG'S/AGF)
NAS CVBG
RED SEA
EMED CVBG
ATF PHIB-
GRU 2 & 3
TWO &
CMGRUCOM
(AE) -
LO, SUPF
P-3, EP3'S
PORTS/FAC
3 MIUWS
14 ALLIED
NAVIES/
0 SHIPS
- AIR DEFENSE
- CORPS ARTY
- 12TH AV BDE
EGYPT/SA/SY
GCC GRD?


PRE-WAR
CCJ2 ORGANIZATION
CRYPTOLOGIC SUPPORT GROUP
INTELLIGENCE DIRECTORATE
DIA INTEL PRODUCTION ELEMENT
SPECIAL SECURITY OFFICE
INTELLIGENCE DIVISION
OPERATIONS DIVISION
PRODUCTION DIVISION
ARCHITECTURE, PROGRAMS AND SYSTEMS DIVISION
COLLECTION MANAGEMENT DIVISION
LIAISON OFFICERS
DIA - NSA - DMA
CIA - INSCOM

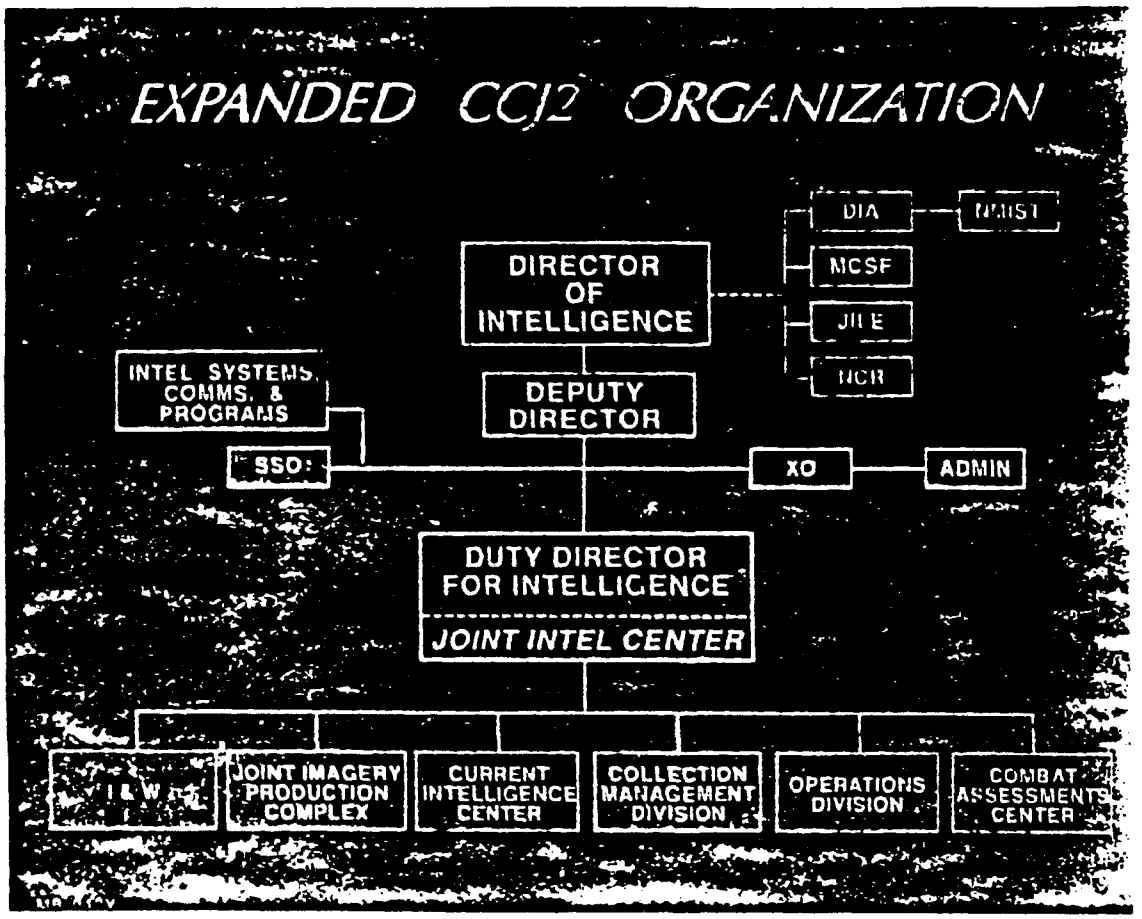

EXPANDED CCJ2 ORGANIZATION
DIA
NMIST
DIRECTOR OF INTELLIGENCE
MCSF
JIIE
NCR
INTEL SYSTEMS, COMMS, & PROGRAMS
DEPUTY DIRECTOR
SSO
XO
ADMIN
DUTY DIRECTOR FOR INTELLIGENCE
JOINT INTEL CENTER
I & W
JOINT IMAGERY PRODUCTION COMPLEX
CURRENT INTELLIGENCE CENTER
COLLECTION MANAGEMENT DIVISION
OPERATIONS DIVISION
COMBAT ASSESSMENTS CENTER

FIGURE 2

> there is a need to further refine the joint intelligence center (JIC) doctrine to provide support to the theater Commander-in-Chief. This doctrine and supporting architecture must be institutionalized and exercised regularly.[47]

DIA, NSA, and CIA are all currently reviewing their capabilities and procedures to more effectively support a theater CINC. The full extent of institutional reforms remains to be seen, but already work is underway in the areas of doctrine for intelligence support, improved liaison and support teams, and specialized support centers to support theater CINCs.[48]

CENTCOM intelligence, chastened by their pre-war lack of capability but emboldened and confident based upon their performance during Desert Storm, has initiated broad institutional reform. Vowing that the:

> J2 must never be place in a position where he has to delegate responsibility, and defacto authority, for critical intelligence analytical needs. The J2 must be resourced to make all final intelligence decisions in the name of the CINC.[49]

Toward this end, CENTCOM has retained a JIC organized similar to that used in Desert Storm. Billets in the CCJ2 are to be increased from the pre-war 168 to 288. Most importantly, they have instituted an emphasis on flexible mission planning to develop deployable JIC packages to support the CINC from MacDill, the ACR, and/or both, depending on the scenario(s).[50]

E. Implications for Future Operations - The process for getting intelligence support "on line" must not be repeated from Operations Desert Shield/Storm. If it is, a disaster will result sooner or

later. Joint intelligence doctrine must be implemented expeditiously and CINCs, along with their J2s, must apply the lessons that CENTCOM learned in the crucible of war.

In this area, the future is now. Though Joint Pub 2-0, Doctrine for Intelligence Support to Joint Operations strangely contains no reference to the concept of the theater JIC, it does provide clear guidance to combatant command J2s for developing an intelligence organization designed to support the CINC which reflects a recognition of CENTCOMs lessons learned. The J2 is directed to "lay out a game plan" that identifies "potentially useful intelligence related systems and personnel, regardless of prior location or subordination." Command relationships, tasking authorities, and reporting responsibilities are to be "spelled out." And, procedures are to be detailed for "obtaining intelligence from national organizations." Perhaps most importantly, this doctrine directs the J2 to devise for each of the CINCs operations and concept plans, "an exercise-gaming, simulation and modelling plan to evaluate readiness and executability under conditions approximating wartime stress."[51]

Any employment concept, unless practiced, will lack efficiency and reliability. It is the author's experience that intelligence support is seldom exercised realistically in war games or CPX's. As joint intelligence doctrine develops and is implemented this must be done to ensure intelligence is "on line" on day one.

V. Interoperability

A. Issue and Causes - In the context of this study,

"interoperability" refers to the ability of intelligence systems to provide and accept services from other intelligence systems to enable them to operate effectively together.[52] Of course, it logically follows that the higher the degree of interoperability, the more effective the level of support. This concept has long been accepted, both implicitly and explicitly, as stated in JCS Pub 0-2: "Intelligence systems must be interoperable to ensure success in joint operations. Intelligence doctrine, such as that for procedures and systems, must provide for interoperability."[53] Unfortunately, the stated ideal has never become reality, and today, the services rely on a "multituce of unique, non-interoperable intelligence systems."[54] As with the lack of coherent doctrine just explored, this deficiency was laid bare by Operations Desert Shield/Storm. Though an exacting, system by system study would by encyclopedic and well beyond the scope of this paper, the general nature of the problem as it relates to operations is not.

The issue of interoperability was, next to BDA, the highest on General Schwarzkopf's hit list in his testimony before the House and Senate Armed Forces Committees.[55] Though the major problems encountered in interoperability were with the sharing of imagery intelligence (IMINT) and basic threat/target data (order of battle information to include air (AOB), missile (MOB), electronic (EOB), etc. enemy assets), traditionally in the realm of tactical intelligence, the effects were felt strongly at the operational level, as Battle Damage Assessment, Strike Planning, and overall

force defense posture was dependent on this information.

In addressing the problem of IMINT interoperability, Schwarzkopf complained of the difficulties of getting reconnaissance photos of potential targets that were less than a day old. Having such information was critical, he asserted, to strike planning against what can be a rapidly changing battlefield.[56] And by extension, this problem is equally significant to BDA and restrike planning. The problems of interoperability in-theater were compounded by the fact that Air Force and Navy imagery support terminals were incompatible, causing a further bottleneck in the process. All told, there were nine different secondary imagery dissemination systems (SIDS) deployed, most of which were not interoperable.[57] Schwarzkopf's recommendation was clear: "the intelligence community should be asked to come up with a system that *will, in fact,* be capable of delivering a real-time product to a theater commander."[58]

Basic threat/target data as described above requires the transmission of large blocks of intelligence data. Interoperability enables joint forces to have a common intelligence data base, providing efficiency and ideally eliminating the confusion posed to operations that would result with multiple data bases. Again, Navy and Air Force incompatibility illustrates the problem:

> CENTAF was appointed to be the ELINT (Surface to air missile and radar) czar for CENTCOM. The intent was to have a theater ELINT analysis center producing a single data base. The Air Force ELINT processor would generate EOB messages that were transmitted to afloat units via TADIXS. Unfortunately, the message format

> generated...was not completely readable by Navy systems....In many cases the data was never recovered.[59]

B. Actions Taken and Alternatives - A tremendous ad hoc effort made the best of a bad situation. National, service, and theater intelligence coordinated to better resource the commander, innovatively create interoperable networks, and where barriers could not be overcome, establish work-around procedures. Most significant to Operation Desert Storm was the coordination of the Military Intelligence Board in achieving consensus on C3I issues and policy direction at all echelons.[60] As with the issue of JIC structure, possible alternative C3I architectures and workarounds to overcome non-interoperable systems were virtually limitless. The key point is the establishment of a game plan before the war starts.

C. Post-War Corrective Actions - Actions thus far focused on the problem of interoperability seem to reflect a pragmatic approach, recognizing the need for reform, but cognizant of the difficulties in achieving pure, across-the-board interoperability in the near future. Thus, the approach combines improvement of systems interoperability with a studied approach to using existing systems in the most effective way. In response to Congressional tasking, DOD has established an Intelligence Communications Architecture (INCA) project office in Washington, DC to address "intelligence communications needs across the military planning spectrum, from peace to limited and large-scale conflict scenarios."[61] INCA has already developed a series of communications handbooks for

intelligence planners, and assisted the unified and specified commands in developing intelligence architectures for their respective theaters.[62] In addition, DIA is considering the establishment of an executive agent to incorporate the lessons learned from Desert Shield in the C3I arena into a program that will ideally coordinate DOD efforts aimed at improvement in this area.[63]

D. Implications for Future Operations - CINCs were confronted with intelligence interoperability problems in Urgent Fury (Grenada), El Dorado Canyon (Libya), Just Cause (Panama)[64], and Operations Desert Storm/Shield. Despite the efforts to improve capabilities in this area, the ideal should not be expected in the near future. To prevent an unexpected and adverse impact on operations, intelligence communications architecture must be preplanned, exercised, and incorporated into all operational plans. In this area, the prescription of Joint Pub 2-0 is right on the mark and must be incorporated by the warfighting CINCs:

> a. The combatant command J-2s should:
> (1) Use the intelligence annex of the CINCs operations and concept plans to identify potentially useful intelligence-related systems...regardless of prior location or subordination....
> (2) Devise exercises and simulations approximating wartime conditions to evaluate the readiness and feasibility...of resources identified in the intelligence annex of the CINC's OPLAN.
> (3) ...Determine the...interoperability needs between and among the new intelligence-related system(s) and existing systems....[65]

VI. Summary of Recommendations and Conclusions

In the realm of "intelligence and the commander," the lessons and

prescriptions of Desert Shield/Storm for the CINC are clear. The warfighting CINC is backed by an intelligence community second to none, capable of providing a more complete picture of the adversary than ever before experienced in the history of warfare. Nevertheless, as we have seen in the discussions of I&W and Response, and BDA, there are inherent difficulties that remain. As Michael Handel succinctly notes:

> The ideal combination of perfect intelligence and superior military strength would make the life of every military commander far easier, reducing the need for intuition and creativity. But in real life, as Churchill once remarked in a different context, "Generals only enjoy such comforts in Heaven. And those who demand them do not always get there".[**]

Present and future CINCs must be prepared to use their intuition, their skills of generalship, and act when confronted with ambiguous I&W and uncertain BDA, as General Schwarzkopf did in the latter case, though not the former.

In a less ethereal vein, there is much that the CINCs can do to enhance their readiness posture and warfighting capability in regard to intelligence support. Joint intelligence doctrine must be implemented. In accordance with this action, intelligence support to operational planning must be reviewed from the ground up, and exercised, in order to ensure that an efficient and effective game plan is in place to support operations on day one.

NOTES

1. Department of the Army, FM 100-5 Operations, (Washington, DC: 5 May 1986), p. 10.

2. Joint Staff, Joint Pub 2-0 (Test Pub), (Washington, DC: 30 June 1991), pp. IV-1 to IV-2. It should be noted that the definitions used were taken from the Department of the Army's dissent located at page B-1.

3. Tom Mathews, "The Road to War," Newsweek, January 28, 1991, p. 57.

4. "Kuwait: How the West Blundered," The Economist, September 29, 1990, pp. 19-22. See also Mathews, pp. 54-57.

5. Mathews, p. 57.

6. Joint Chiefs of Staff, Unified Action Armed Forces (Joint Pub 0-2, (Washington, DC: 1986), pp. 3-22 to 3-23.

7. Clyde R. Mark and Renee Stasio, CRS Report for Congress, Iraq-Kuwait Crisis: A Chronology of Events, July 17, 1990 - May 8, 1991, (Washington, DC: Congressional Research Service, The Library of Congress, 1991), p. CRS-76.

8. Mathews, p. 57.

9. Ariel Levite, Intelligence and Strategic Surprises, (New York: Columbia University Press, 1987), pp. 159-172. See also Alexander George, "Warning and Response: Theory and Practice," in Yair Evron, ed. International Violence: Terrorism, Surprise, and Control, (Jerusalem: Hebrew University, 1979), pp. 12-24.

10. The Center for Strategic and International Studies, The Gulf War: Military Lessons Learned, (Washington, DC: 1991), p. 31.

11. Levite, p. 168. Unfortunately, this intelligence was never translated into action.

12. George, in Levite, p. 163.

13. Mathews, pp. 54-57.

14. George, in Levite, p. 162.

15. Robert H. Williams, "US Intelligence Responds to Changing '90s Missions," Signal, September 1991, p. 67.

16. Interview with Anthony Porcaro, CIA Advisor and Professor of Strategy, U.S. Naval War College, Newport, R.I: January 1992.

17. John Macartney, "Intelligence: What It Is and How to Use It," Naval War College Reference 3182, p. 11.

18. Levite, pp. 18-19. Levite does not necessarily agree with this conclusion, but reviews the conclusions of leading academics in this passage.

19. Macartney, p. 28.

20. For a synopsis of Schwarzkopf's comments see Pat Towell, "Schwarzkopf Points Out Flaws in Wartime Intelligence," Congressional Quarterly, June 15, 1991, p. 1603.

21. U.S. Department of Defense, Conduct of the Persian Gulf Conflict: An Interim Report to Congress, (Washington, DC: 1991), p. 25-1.

22. Towell, p. 1603.

23. Towell, p. 1603.

24. Conduct of the Persian Gulf Conflict, pp. 25-1 and 14-2.

25. CENTCOM CCJ2 Briefing, "Organizations and Functions in Desert Shield/Desert Storm," Unpublished Transcript, CENTCOM: 1991, p. 7.

26. DOD, Conduct of the Persian Gulf Conflict, p. 25-1.

27. Michael I. Handel, "Intelligence and Military Operations," Intelligence and National Security, Vol. 5, No. 2, April 1990, p. 16.

28. Carl Von Clausewitz, On War, (Princeton, NJ: Princeton University Press, 1976), p. 102. Quoted from Handel, p. 16.

29. Clausewitz, p. 117.

30. Handel, p. 15.

31. H. Norman Schwarzkopf, "Statement," U.S. Congress, House, Armed Forces Committee, Conduct of the Persian Gulf War, Hearings (Washington, DC: US Gov't. Print. Off., 1991), pp. 288-290.

32. Schwarzkopf, p. 290.

33. CENTCOM CCJ2, p. 9.

34. Joint Staff, pp. V-1 through VI-4.

35. DOD, Conduct of the Persian Gulf Conflict, pp. 14-1 to 14-3.

36. General Schlomo Glazit, "Discussion," in Ray Godson, ed., Intelligence Requirements for the 1980s: Analysis and Estimates, (Washington, DC: National Strategy Information Center, 1980), pp. 38-39.

37. Leonard H. Perroots, "New Approaches to CI Interoperability in the Intelligence Community," Signal, September 1988, pp. 31-34.

38. DOD, Conduct of the Persian Gulf Conflict, p. 14-1.

39. CENTCOM CCJ2, p. 1.

40. DOD, Conduct of the Persian Gulf Conflict, p. 14-1.

41. DOD, Conduct of the Persian Gulf Conflict, p. 14-1.

42. DOD, Conduct of the Persian Gulf Conflict, p. 14-1.

43. CENTCOM CCJ2, pp. 2-4.

44. CENTCOM CCJ2, p. 4.

45. CENTCOM CCJ2, p. 2.

46. Figure 1 was created by CDR H. Conway Ziegler, Intelligence Division of the Operations Department, Naval War College, Newport, RI. Figure 2 is from CENTCOM CCJ2, no page number.

47. DOD, Conduct of the Persian Gulf Conflict, p. 14-1.

48. See DOD, Joint Pub 2-0, Doctrine for Intelligence Support to Joint Operations. Also NSA Representative, "NSA Operations in Support of Desert Storm," Lecture to Intelligence and the Commander Elective, U.S. Naval War College, Newport, RI: 15 January 1992 and Conversation with Anthony Porcaro, CIA Advisor and Professor of Strategy, U.S. Naval War College, Newport, RI: January 1992.

49. CENTCOM CCJ2, p. 3.

50. CENTCOM CCJ2, p. 9.

51. Joint Staff, pp. III-7 and III-8.

52. Joint Staff, p. GL-7.

53. JCS, Pub 0-2 Unified Action Armed Forces, p. 3-49.

54. Joan G. Bullock, "Intelligence Support of Military Operations: A Perspective," International Journal of Intelligence and Counterintelligence, Summer 1990, Vol. 4, No. 2, p. 195.

55. Molly Moore, "Schwarzkopf: War Intelligence Flawed," Washington Post, 13 June 1991, p. A1.

56. Michael Wines, "Schwarzkopf Assails Data in Gulf War," Baltimore Sun, 13 June 1991, p. 1A.

57. "Moderators Guide for WR-14, Intelligence for the Commander," Unpublished Notes, Naval War College, Newport, RI: 19 November 1991, p. 2.

58. Moore, p. A1.

59. NWC Moderator's Guide, p. 4.

60. DOD, Conduct of the Persian Gulf Conflict, p. 15-1.

61. Harry C. Banford, "Meteoric Changes Forecast in Intelligence Processes," Signal, July 1991, p. 89.

62. Banford, p. 89.

63. Harry E Soyster, "System Extends Real-Time Intelligence to Theater Level," Signal, September, 1991, p. 72.

64. Bullock, pp. 186-191. Bullock provides an excellent historical perspective of these operations and others from the perspective of intelligence support to strike planning.

65. Joint Staff, p. I-5.

66. Handel, p. 15.

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