UNITED STATES CENTRAL COMMAND

OPERATION DESERT SHIELD/DESERT STORM

11 July 1991

Executive Summary

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OPERATION DESERT SHIELD/DESERT STORM

Executive Summary
Introduction

(U) This summary focuses on events leading to the execution of combat operations and key assessments made during the crisis — although it discusses some shortfalls and deficiencies, the tremendous success of our operations cannot be overshadowed by these problem areas. The magnificent performance of the entire coalition and the totality of the victory clearly establishes the tenor of after action discussions as absolute success. We planned, mobilized, deployed and executed this operation farther from the shores of the continental United States than ever before. We demonstrated a level of military proficiency and technological capability beyond what our coalition partners – and indeed many Americans – could have imagined.

(U) Logistics requirements were extraordinary. The in-country transportation infrastructure consisted of 30 main supply routes, totalling over 3000 miles, sustaining a daily delivery rate of 62,500 cases of MRE’s, 9 million gallons of water, 4,800 fuel tankers (5000 gallon capacity) and 450 tractor trailer loads of other supplies. By the end of Operation Desert Storm, US forces alone numbered approximately 540,000 personnel and had consumed almost 95,000 tons of ammunition and 1.7 billion gallons of fuel.

(U) In the final analysis, 42 Iraqi divisions were either destroyed or rendered combat ineffective, their entire navy was sunk, an estimated 50% of their combat aircraft were destroyed or fled to Iran, more than 82,000 enemy soldiers were captured, and most importantly, Kuwait was reestablished as an independent Arab state—all in 43 days of offensive operations and with minimal coalition casualties.
Part I - The Road To War

Pre-Conflict Events

Although the actual conflict was relatively brief, preparation for war began almost two years ago when USCENTCOM determined the Iran/Iraq conflict had altered the balance of power in Southwest Asia. As a result of that conflict, Iraq emerged the victor with the 4th largest military in the world and the most threatening and powerful force in the region.

While USCENTCOM acknowledged the Soviet Union would remain a long term geopolitical threat, he directed USCENTCOM’s planning and programming efforts to focus on the more realistic regional scenario of Iraq attacking Kuwait and Saudi Arabia. In November 1989, based primarily on revised regional threat assessments, USCENTCOM directed that be the top planning priority of USCENTCOM - he further directed the revised plan be completed as soon as possible.

In coordination with component/supporting commands and agencies, full scale plan development began and the was scheduled for publication in July 1990. As an adjunct to the plan development process, a command post exercise (INTERNAL LOOK 90) was also scheduled for 23-28 July 1990 to examine OPLAN related issues and validate operational and logistical support concepts.

Proceeding through the plan development process, the Iraqi threat continued to grow. By the Spring of 1990, the rate of Iraqi military expansion, the potential for Iraq to threaten US interests and the possibility of Iraq displacing US influence in the region was causing renewed concern. In mid April, USCENTCOM directed his J2 to coordinate the systematic monitoring of Iraq in an effort to determine the nature of Iraq’s military growth and its potential threat to the region. On 25 April, USCENTCOM activated the Iraq regional warning problem, thereby increasing the intelligence collection priority against Iraq. In early July 1990, as the was being distributed and personnel were deploying in support of Exercise INTERNAL LOOK 90, Iraq began to openly threaten war in the region.

By mid July, Iraqi rhetoric became vociferous and hostile -- Saddam Hussein launched a fully propagandized diplomatic campaign against Kuwait, the United Arab Emirates and the United States. In response, Kuwait put its armed forces on full alert and deployed forces in preparation for defending Kuwait City; and UAE requested US aerial refueling support which would enable them to fly extended combat
air patrols over critical facilities. The US responded, under the auspices of Exercise IVORY JUSTICE, by deploying a support package to [redacted] a communications element and an intelligence team. On 21 July [redacted] confirmed an Iraqi armor division had moved immediately north of the Kuwait border and [redacted] confirmed almost 3000 military vehicles on the road from Baghdad to deployment areas north of Kuwait - USCENTCOM went to WATCHCON Level III.

Over the next week, Iraq upgraded air defense capabilities at selected bases and along the Kuwaiti border and also began an unusual pattern of flight activity. On 24 July, USCENTCOM assessed Iraqi forces deployed along the Kuwaiti border were poised and capable of attacking Kuwait. By the end of July, USCENTCOM reported that Iraqi Republican Guards and Regular Army troops within 20 nautical miles of the Kuwait/Iraq border had grown to 80,000 combat troops and 20,000 additional support troops. In essence, the Iraqi threat was materializing almost as assessed in [redacted] was that Iraq had the capability to attack through Kuwait and into Saudi Arabia with 20 division equivalents (60 Brigades), 640 fighter/gun attack aircraft, and a minimum of 3200 tanks. Iraq’s operational objectives were expected to be control of oil fields and export terminals in Kuwait, the former neutral zone between Iraq and Saudi Arabia, northeaster Saudi Arabia, and neutralization of the government and forces of Kuwait and Saudi Arabia. Upon commencement of hostilities, it was expected Iraq would require about one day to defeat Kuwait and three additional days to secure Kuwait. If the attack continued, Iraq was expected to leave 11 of the 60 brigades behind to secure Kuwait and their LOCS into Saudi Arabia and reach the critical port and oil facilities in the vicinity of Al Jubayl, Saudi Arabia within five days. At the time of the actual attack, Iraq had almost 20 division equivalents in what would later be known as the Kuwait Theater of Operations - five of these divisions, augmented by special forces units, conducted the initial invasion of Kuwait.

On 31 July 1990, the USCENTCOM J2 informed USCENTCOM that movement of Iraqi Republican Guard heavy units from tactical assembly areas to attack positions within four nautical miles of Kuwait. With Iraq’s termination of diplomatic talks on 1 August and the continuation of unit movements, it was apparent that an Iraqi invasion of Kuwait was imminent -- at 1800Z, USCENTCOM went to WATCHCON I. At 2200Z, USCENTCOM issued a warning report indicating Iraq could invade Kuwait with little additional preparation - five and a half hours later Iraq invaded.

The Invasion

On 2 August 1990, Iraq invaded Kuwait. The United Nations Security Council immediately passed UNSC Resolution 660 condemning Iraq’s invasion and demanding the immediate and unconditional withdrawal of Iraqi forces from Kuwait; at USCENTCOM, a Crisis Action Team was activated to develop courses of action and examine alternative force levels for responding to the crisis. In general, response options ranged from


(2.M), (2.L.1+2)

execution of [REDACTED] to execution of the final draft of [REDACTED]. On 4 August, USCENTCOM briefed his recommendation to the President and the National Security Council at Camp David; the resulting decision was to execute [REDACTED] pending host nation request for assistance. The intent was to deploy US forces as quickly as possible to deter further Iraqi aggression, establish initial defenses in Saudi Arabia and build-up sufficient combat power to retake critical facilities. Although not briefed at Camp David, we initially expected to be prepared to conduct offensive operations after 6 January 1991, if our threat assessments were correct.

(U) On 6 August, the Secretary of Defense, USCENTCOM, the USCENTCOM J4 and J5, and the USARCENT and USCENTAF commanders travelled to Jeddah, Saudi Arabia to seek King Fahd's agreement on the deployment of US forces to defend Saudi Arabia. Once permission had been secured to deploy forces to Saudi Arabia, the stage was set to broaden the scope of regional involvement. The SECDEF returned to Washington D.C. and USCENTCOM returned to Tampa, Florida where he could best influence the prioritization and deployment of forces - he would return to Saudi Arabia on 26 August. COMUSCENTAF was designated Commander, USCENTCOM Forward and remained in Saudi Arabia with the other general officers to coordinate additional regional access and monitor the reception of US forces. UNSC Resolution 661 was also issued on 6 August ordering a trade and financial embargo, but provided no implementing instructions.

(U) On 7 August, JCS published the execute order designating 7 August as C-Day - US forces began deploying immediately and two days later, UNSC Resolution 662 declared to the world that Iraq's annexation of Kuwait was null and void. By 9 August 1990, all Gulf Cooperation Council states, except Qatar, agreed to permit access to US forces and the first increment of the USCENTCOM Forward Headquarters Element (FHE) arrived in Saudi Arabia - Qatar agreed to permit access about a week later. In the meantime, Iraqi soldiers committed crimes against civilians and personal property in Kuwait, and forbade many foreigners to leave Iraq and Kuwait. On 18 August 1990, UNSC Resolution 664 demanded that Iraq free all detained foreigners; however, the situation only worsened. In fact, almost a month later, the United Nations Security Council issued UNSC Resolution 667 condemning Iraq for acts of violence against foreign embassies and their personnel in occupied Kuwait.

(U) By mid-August, the USCENTCOM FHE was well established in the basement of the Saudi Arabia Ministry of Defense and Aviation (MODA) building in Riyadh. Their initial focus was to provide communications between components and USCENTCOM Rear, monitor and coordinate maritime intercept operations (MIO), track deployment of US and friendly forces and assist in coordinating aircraft beddowns. Other immediate tasks included defining command relationships, establishing rules of engagement, initiating combined
planning, and integrating third country participation into Operation Desert Shield to defend Saudi Arabia. The accomplishments of the FHE during the early days of the crisis were critical to the eventual success of the coalition.

(U) Although regional access agreements were among the most important first steps in achieving coalition solidarity, maritime intercept operations quickly became the most visible sign of international unity against Iraq. Maritime intercept operations began on 17 August 1990 as a US only initiative; however, with the passage of UNSC Resolution 665 on 25 August, the international community was given authority to enforce the economic embargo against Iraq by halting shipping to and from that country. In response to UNSC 665, the United States sponsored an international Naval Planning Conference in Bahrain on 9-10 September. As a result of that conference, fourteen of the twenty attending nations were participating in intercept operations by the end of October — before the conflict was over, 19 nations took part. In September, the United Nations Security Council passed three additional resolutions associated with the embargo; on 13 September, UNSC Resolution 666 agreed to establish strict procedures for medical and humanitarian food supplies sent to Iraq and occupied Kuwait; on 24 September, UNSC Resolution 669 entrusted a Sanctions Committee to review requests for assistance from those countries economically hard hit by the embargo against Iraq; and on 25 September, UNSC Resolution 670 imposed an air transportation embargo against Iraq.

Building A Coalition

(U) By mid August, the US/Saudi Joint Directorate of Planning (JDOP) was briefed on the US unilateral plan [REDACTED] to defend Saudi Arabia. As the pre-conflict forum for bilateral military planning, the JDOP was comprised of the USCENTCOM J5, the MODA J3, general officers from the various Saudi Arabian armed forces and a working group of US and Saudi field grade officers. Although the JDOP was a viable
peacetime planning organization, the reality of an imminent Iraqi attack against Saudi Arabia required JDOP representatives to focus on issues of their respective Service - it quickly became apparent that the JDOP would not be sufficiently responsive to develop combined plans or resolve multinational issues in a crisis situation. As a result, the USCENTCOM J5 and MODA J3 agreed to share responsibility for development of a combined[Redacted].

(U) As the combined planning process continued, measures were concurrently initiated to improve the day-to-day integration of coalition operations. The immediate requirement was for the USCENTCOM Forward Headquarters Element to assist the Saudis in establishing a combined operations center, COMUSARCENT, with extensive experience working with the Saudi Arabia National Guard, eventually assumed the lead in this effort and quickly established the Coalition, Coordination, Communication and Integration Center — or C3IC. Although the C3IC eventually became the cornerstone of combined operations, its effectiveness was initially hampered by a shortage of experienced personnel, lack of mutual operating procedures and inadequate communications interoperability. As the C3IC refined internal operating procedures and established communications capabilities, nations from around the world continued to deploy forces to Saudi Arabia. As new forces arrived and the Saudis became more capable of conducting operations, defense concepts and command and control relationships continued to change.

(U) Although four major combined OPLANs were eventually developed, the most valuable aspect of the combined planning process was that it forced the Saudis to plan for the reception, sustainment and integration of coalition forces and it provided the only forum to identify and resolve combined issues across all functional areas. Moreover, it provided a mechanism for rapid access to US and Saudi decision makers and institutionalized the plan development process for the Saudis.

Operation Desert Shield

(U) The initial Operation Desert Shield was a unilateral plan published as[Redacted] but modified to include a more robust US force structure. The concept of operations was to establish initial defenses with[Redacted] and employ a significant tactical fighter capability to attrit enemy forces as they attacked over the 100 miles from the Kuwait border to US defensive positions. Concurrently, [Redacted] When the Saudis were briefed on the concept, they wanted US forces to enter Saudi Arabia through ports much farther north (Ras Al Mishab and Ras Al Khafji).
and establish defenses along the northern Saudi Arabia border -- thereby obviating the concept of trading space for time. This initial disconnect was the result of divergent military objectives; the US focused on critical ports and oil facilities and the Saudis wanted to protect all territory and population centers in the Kingdom. The next several weeks were spent explaining the concept of trading space for time and avoiding decisive engagement until force ratios favored the coalition. USCINCCENT met with Saudi military leaders on several occasions to ensure coalition decision makers understood that the risk of a stationary defense along the border was unnecessary and unacceptable, particularly at a time when force ratios so dramatically favored Iraq.

On 20 August, USCINCCENT published [Redacted]. Although [Redacted] was disseminated to US forces only, it was developed by the US/Saudi combined planning team and represented the first combined planning product of the crisis.

As additional coalition forces arrived in Saudi Arabia, command relationships continued to evolve and defense concepts constantly changed. Command and control of coalition forces was eventually established with separate, but parallel lines of authority with US and Saudi Arabian forces remaining under their respective national command authorities. Lieutenant General Khalid bin Sultan bin Abdul Aziz (the Saudi Arabian Operational Theater Commander) commanded Arab/Islamic forces. French land forces remained under French command, but assigned to the operational control of Lt Gen Khalid. British forces stayed under British command, but operational control of air and ground forces was given to USCINCCENT; tactical control of British air and ground forces was passed to COMUSCENTAF and COMUSMARCENT respectively. USCINCCENT retained command of all US forces. The nature of the parallel command relationships required close coordination between USCINCCENT and Lt Gen Khalid in all planning, operational and logistics matters.

On 13 September, the combined planning team briefed a new concept of operations to USCINCCENT and Lt Gen Khalid -- the commanders approved continued development of a combined defense plan and provided specific planning guidance. In October 1990, Lt Gen Khalid was designated Commander, Joint Force/Theater of Operations (later, Joint Forces Command) and the MODA J3 was dual hatted as the JF/Theater of Operations J5. The net result of this reorganization was that major planning decisions no longer required approval of the MODA Chief of Staff. Lt Gen Khalid's new position increased his decision making authority and improved our access to top Saudi officials -- these changes significantly improved the combined planning process.

On the operational side, improvements were slow. [Redacted] was published, almost three weeks after
the invasion, the Saudis had no command, control or communication mechanism in place to distribute an Arabic version of the same order. It was not until 12 October, almost nine weeks into the crisis, that the Saudi’s published a FRAGO to begin repositioning Saudi-controlled forces.

(U) In the meantime, Iraq displayed no intention of withdrawing from Kuwait and reports indicated atrocities against civilians in Iraq and Kuwait were increasing and population records on Kuwaiti citizens were being systematically destroyed. On 29 October, UNSC Resolution 674 demanded Iraq cease taking hostages and treat third country nationals and diplomats more humanely; permit the departure of all third country nationals who desired to leave; and be responsible for damages caused by the invasion. The resolution also stated the Security Council would take further measures under the UN charter if Iraq did not comply with the resolutions. On 28 November, the UNSC issued Resolution 677 condemning Iraq’s attempts to alter demographic records on Kuwaiti citizens and destroy civil records maintained by the legitimate Government of Kuwait. The resolution also mandated the United Nations to take custody of the Kuwaiti population register as of 1 August 1990, the day before the invasion of Kuwait.

(U) Deployment of US forces began on 7 August 1990 with the first brigade of the 82nd Airborne Division closing on 14 August, establishing an enclave around the critical port of Al Jubayl. By mid-October, the 82nd Airborne Division, the 24th Infantry Division (MECH), the 101st Air Assault Division, the 3rd Armored Cavalry Regiment, and a Marine Division had closed. With the closure of these forces, the enclave defense was expanded outward to the west encompassing the critical ports and oil facilities of Al Damman, Al Jubayl, and Abqaiq.

(U) (2.1.3)

(8) As additional countries continued to provide forces for the defense of Saudi Arabia and the combat capability of the coalition increased, the concept for defending Saudi Arabia with an internal defense was no longer valid. The initial combined defense concept relied on an economy of force in the Northern Area Command (NAC) and in the sector between NAC and the Eastern Area Command (EAC). As other nations offered additional combat units, an opportunity availed to establish significantly stronger defenses and reduce the risk to coalition forces. By 15 October, Syria agreed to provide one combat division and the Egyptians were already defending north of Hafir Al Batin with one mechanized division and offering to provide another division if requested by Saudi Arabia.

(U) Initially, the Saudis were reluctant to accept Egypt's offer of another division. Extensive combat analysis and course of action comparisons ultimately served to change the Saudi position – they eventually acknowledged the need for additional combat power in the Northern Area Command and accepted the Egyptian offer. By 8 January 1991, one Syrian and two
Egyptian divisions were in Saudi Arabia and being integrated into the defense.

(U) The final combined defense plan for Operation Desert Shield[16] was signed on 29 November and published in Arabic and English versions. Although supporting plans were not required from component commanders and the OPLAN was never officially executed, coalition forces were generally employed in the defense in accordance with the plan. USCINCENT's intent was to wait until all forces arrived in theater and issue an execute order. However, the need to publish that order was obviated by the decision to deploy additional forces and begin repositioning coalition units in preparation for offensive operations.

**Operation Desert Storm**

Although Operation Desert Storm did not begin until almost five and a half months after C-Day, planning and preparation for offensive operations began in the earliest days of the crisis. On 3 August 1990, as the crisis was unfolding, USCINCENT estimated US forces would be ready to conduct offensive operations approximately 120 days after C-Day. Under the supervision of COMUSCENTAF, a separate planning cell was activated at HQ USCINCENTCOM in Tampa, Florida to conduct planning for a possible offensive air campaign—Instant Thunder. Consideration for a ground attack plan also began and subsequently transitioned to Saudi Arabia with the forward displacement of the CINC.

(U) By 17 September 1990, four graduates from the US Army School of Advanced Military Studies (SAMS), Ft. Leavenworth
Kansas had been assigned to augment the Plans and Policy Directorate of USCENTCOM. USCINCCENT assigned the SAMS team primary responsibility for developing and analyzing courses of action for the ground offensive; COMUSCENTAF retained primary responsibility for planning the offensive air campaign; the JSF was tasked as the focal point for combined planning and integration of US and coalition planning efforts; and the CINC would remain the hub of all planning activity. USCINCCENT shaped the theater campaign plan through constant interface with his commanders, directors and planners. The process was also supported extensively by representatives from the Air Staff, Naval Strike Warfare Center, DIA, 513th Military Intelligence Brigade, USCENTCOM Combat Analysis Group and numerous other commands and agencies. In early November, USCINCCENT briefed the Desert Storm concept to his directors.

The concept for Operation Desert Storm was based on a four phased operation aimed at the destruction of Iraq's centers of gravity: leadership and C2; chemical, biological, and nuclear capability; ballistic missiles; and the Republican Guards.

Phase I would include extensive air attacks against Iraq from coalition forces on the Arabian Peninsula, aloft in the Arabian Gulf, and US forces out of the United States, United Kingdom, Spain, Turkey, Diego Garcia and Guam. The objective of Phase I was to destroy Iraq's ability to command and control, eliminate Iraq's chemical and biological capability, and neutralize other strategic targets that would contribute to Iraq's overall ability to wage war. In Phase II, the air campaign would progressively shift into the KTO to establish air supremacy in the KTO and isolate the battlefield by cutting supply lines and blocking escape routes. In Phase III, the battlefield would be prepared by air and artillery attacks focused on reducing the effectiveness of Iraqi defenses in the KTO. When the situation favored coalition forces, Phase IV would be initiated with a multi-axis ground, naval, and air attack.

The main effort, however, would be with two US corps and a British division attacking through the western KTO into the flank of the Republican Guards.

(U) By mid-October, USCINCCENT was confident that the size, capability and employment posture of coalition forces was sufficient to defend; however, additional forces were required to execute Desert Storm. On 8 November, the President ordered a second deployment of US forces, thereby initiating preparations for possible offensive operations. As offensive preparations proceeded, USCINCCENT met continuously with his commanders, logisticians and planners to identify problem areas, resolve issues, apportion resources, war game concepts and refine battle plans. USCINCCENT also hosted two major warfighting conferences at Dhahran. The first conference was the CINC's MAPEX (4 October) and included commanders and staff -- although it focused primarily on defensive operations, the MAPEX was the first open forum in which the CINC discussed
(U) Operation Desert Storm. The second conference (14 November) was for commanders only – it was at this conference that the CINC first laid out the strategy and details of the attack plan to his commanders. As a result of that conference, intensive offensive planning began at all levels of command. Although the plan had been distributed, USCENTCOM continued to meet with his commanders to exchange ideas, resolve issues and give guidance – component commanders played a major role in refining the CINC’s concept of operations.

On 17 January in Saudi Arabia, two days after the UNSC Resolution 678 deadline for Iraq to withdraw forces from Kuwait, was published – that same day, coalition forces attacked Iraqi units in Iraq and Kuwait by executing the air campaign of Operation Desert Storm. On 24 February 1991, after 39 days of the most lethal and intensive air attack in the history of warfare, the ground offensive campaign was initiated. On 28 February, only 100 hours after the ground campaign began, the NCA and USCENTCOM determined Operation Desert Storm objectives had been met and ordered a temporary cessation of offensive operations. Approximately one week later, strategic and tactical activities were terminated. On 10 March, US forces began redeploying and on 11 April, the UN Security Council agreed that Iraq’s acceptance of the cease fire satisfied UNSC requirements – Operation Desert Storm was over.

(U) Operation Desert Storm delivered a decisive victory – one achieved only through detailed planning and bold, precise and aggressive execution. The plan was designed to exploit coalition force strengths and Iraq’s weaknesses. We built a cohesive coalition and took advantage of surprise, deception, mass, speed, momentum, superior intelligence and reconnaissance, and
solid command and control arrangements — and when the plan was executed, most
operational objectives were achieved ahead of schedule.

Part II - Functional Area Assessments

Operations and Training

Component Headquarters: Deploying component headquarters should not be burdened with the details of deploying forces when their primary task is to prepare arriving forces for combat. While recognizing there are some deployment functions best accomplished in-theater, overall management of the deployment effort should reside in a headquarters which is not preoccupied with preparation for combat. Force deployment responsibilities need to be reevaluated.

Psychological Operations: The land campaign was fought on a battlefield and against an enemy which had been attacked physically and psychologically. Many enemy soldiers defected, deserted or surrendered as a direct result of the physical impact of our offensive operations—many others did so in response to PSYOP messages disseminated by leaflets, radio broadcasts and tactical level loudspeakers. Others were demoralized by the PSYOP campaign to the point of being ready to surrender at the first shots of the ground battle. While ultimately successful, implementation of our PSYOP plans was delayed by a cumbersome OSD approval process. The process needs to be fixed. It is critical that CINCs have authority to approve and execute psychological operations in support of contingency operations prior to the outbreak of hostilities.
equipment satisfied the immediate countermeasure requirements, more effective countermeasures capabilities must be developed and included in unit tables of equipment.

I) Declassify

Special Operations Forces (SOF): Special operations forces were critical to the success of combined training and operations throughout Desert Shield and Desert Storm. In addition to the tremendous success of US special operations missions, US special operations teams were assigned to Arab-Islamic combat forces to provide a mechanism for fire support coordination with US forces and to effect a direct communications link with US forces in the event of operational emergency. The results of SOF operations, planning and training assistance to Arab-Islamic forces validated the role of SOF in Foreign Internal Defense operations. Special Operations Forces also made a significant contribution by conducting unconventional warfare, assisting Kuwaiti resistance forces, executing direct action missions, and performing combat search and rescue operations.
(U) Air Campaign Tactics Validation: The success of the air campaign validated the effectiveness of tactics used by coalition air crews. Large strike package management, high altitude bombing, employment of "killer-scouts," use of precision guided munitions against armor, bridges and hardened aircraft shelters, and the ability to retarget aircraft on short notice were all effectively demonstrated in Desert Storm.

(U) Air Crew Training: Familiarization training was conducted by all US air crews immediately upon arrival. Joint tactics training missions were flown with large aircraft packages focusing on the integration of air defense, ground attack and support aircraft. Search and rescue operations and air-to-air refueling training which provided initial qualification of coalition air crews on KC-10/135 tankers. Beginning in November 1990, coalition air forces devoted one day each week exclusively to air defense and air tactics training against...

In December 1990, Exercise NIGHT CAMEL was conducted, marking the shift in training emphasis to night ground attack operations. Although Marine air conducted some close air support training prior to Operation Desert Storm, CAS training for most forces did not receive major emphasis until the few weeks immediately preceding the ground attack.

(U) Liaison Teams: US commanders provided extensive liaison team assistance to all major forces of the coalition. These teams played a critical role in the tremendous success of the coalition effort.
The teams were generally equipped with significant communications capability which ensured reliable and redundant C³, provided US commanders rapid access to information on operations and planning activities throughout the battlefield ("ground truth"), and provided Arab/Islamic commanders with invaluable expertise in integrating fire and maneuver plans and obtaining current battlefield intelligence. Additionally, these teams went far beyond their normal liaison functions and often, out of necessity, performed the duties of their coalition counterparts. They were the cornerstone to the success of the coalition forces.

(U) Planning Process: The joint planning process is sound, but coalition partners had difficulty keeping pace with the crisis action or time sensitive mode -- the learning curve for our planning partners was steep. It became immediately apparent a combined planning process was essential to begin melding divergent capabilities of multiple nations into a single useable military force. The combined planning process was the focal point for coalition coordination and was essential to developing the close ties and mutual trust which ensured the success of coalition efforts. The process of developing combined operations plans was at least as important as the actual plans produced. Any coalition planning process must include representatives from all key nations, start early, and be used as a tool to build and strengthen the coalition.

(U) Combat Analysis: The availability of a combat analysis capability was invaluable. As a special staff section reporting to the Chief of Staff, the Combat Analysis Group provided an operations research capability to

(U) Ground Training: Individual training for US forces focused on improving chemical defense skills and weapons qualification. Combined training was generally conducted at the crew and unit level. USMARCENT and USARCENT went to extraordinary lengths to assist coalition forces with training for breaching operations. USMARCENT constructed a full scale replica of an Iraqi defensive position, including mine fields, fortifications, trenches and strong points -- the model was used not only by the Marines, but also by US Army and coalition forces. In addition, USARCENT conducted extensive breaching exercises.

(U) Amphibious Training: Continuous air, naval and ground amphibious training was conducted by USNAVCENT and USMARCENT. Three major amphibious exercises were conducted in Oman and the UAE in October and November 1990 leading to Exercise IMMINENT THUNDER in Saudi Arabia, 18-20 November. IMMINENT THUNDER involved forces from USNAVCENT, the 1st Marine Division, 4th Marine Expeditionary Brigade, SOCCENT, Royal Saudi Marines and the 2d Saudi Arabian National Guard Brigade. Although hampered by high winds and rough seas, US Marine helicopters put almost 2000 Marines ashore by the end of the three day exercise.
objectively evaluate military courses of action and conducted sensitivity analysis in support of all planning efforts. Using war gaming and simulation models, the Combat Analysis Group performed rapid theater campaign analysis without imparting an organizational bias — this perception was extremely useful in resolving major differences of opinion among coalition planners. Combat analysis capability is a must for planning operations of this nature—the importance of objective analytical support cannot be overstated. The combat analysis element must deploy early and be located in close proximity to the planning team.
(U) Command Relationships: Establishing and implementing coalition command relationships were difficult. We learned that national pride, politics and public perception play as large a role in determining relationships as military requirements. These factors resulted in formal command relationship structures which, with all their attending bureaucratic problems, complicated rather than simplified the command’s ability to execute the mission. In a perfect world, military operations would have unity of command. In coalition warfare, however, complex and sometimes amorphous command arrangements become the solution as multiple nations with varied agendas unite against a common enemy. We must remain innovative and flexible in establishing coalition command relationships. Of particular note was the successful implementation of the Joint Force Air Component Commander (JFACC) concept. The size and complexity of the coalition air campaign, with over 3000 sorties daily from four Services and eight other countries, required the centralized coordination and control provided by a JFACC.

(U) War Termination: The rapid success of the ground campaign and our subsequent lengthy occupation of Iraq were not fully anticipated. Many of the necessary follow-on actions were not ready for implementation. The prolonged occupation of Iraqi territory, necessitated by the absence of a formal cease fire agreement, was further complicated by the unforeseen civil unrest which occurred throughout Iraq upon the cessation of hostilities. Planning and policy documents for war termination must be drafted and coordinated at all levels as early as possible. Clear policy guidance for war termination will expedite cease fire proceedings and minimize our obligation to take post-war EPWs and care for displaced civilians. Early and continuous coordination between the military and international relief agencies is critical to the smooth handoff of refugees and displaced civilians. Transition problems encountered during post-conflict operations highlight the need to review procedures which govern employment and responsibilities of agencies such as the International Committee for the Red Cross, International Organization for Migration and the United Nations High Commissioner for Refugees. Additionally, when a United Nations observer force is contemplated as a means of providing security for relief agencies, there must again be early coordination, development and approval of plans which will facilitate rapid withdrawal of the occupying force. At the writing of this summary, the role of the UN in its peace keeping mission and refugee assistance operations is still emerging — much remains to be learned on how to better prepare for dealing with the full spectrum of political, military and humanitarian aspects of war termination. We must do much better in the future.

Intelligence

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Intelligence Overview: Tactically, no commander in the history of warfare has had a more comprehensive infusion of intelligence or better picture of the enemy he faced. The theater Joint Intelligence Center concept worked. The unprecedented
Airborne reconnaissance proved invaluable. More than 80 million maps were provided for coalition combat operations. The challenge was considerable and the intelligence community met it head-on.

Initially, components were responsible for following and providing ground, air and naval order of battle. As the crisis evolved, we put together a fully operational Joint Intelligence Center (JIC). Other unique organizational changes included establishment of a Requirements For Information Office, a Bomb Damage Assessment Cell and the unprecedented Joint Imagery Production Complex (JIPC) formed to provide imagery support to combat units. Unified command intelligence directorates
must be structured to support large scale conflicts.

National Intelligence Analysis: The national intelligence community combined to provide USCENTCOM excellent support with personnel, equipment and various types of raw and finished intelligence products. The community needs a methodology to resolve divergent views, opinions and estimates from various intelligence organizations. In addition, this is an area which must be improved.

Communications

Scope of Communications Operations: The communications network established to support Desert Shield and Desert Storm was the largest in history. A flexible and responsive command and control system was installed in record time -- moreover, it maintained a phenomenal 98% readiness rate. The extraordinary efforts and "can do" attitude of the entire communications community ensured the establishment of a truly joint theater communications system. At the height of the operation, this system supported over 700,000 telephone calls per day and 152,000 messages per day. Additionally, more than 30,000 frequencies were managed and monitored daily to ensure minimum radio interference.

JCSE Communications Support: Operation Desert Shield and Desert Storm validated the requirement for a dedicated, rapidly deployable Joint Communications Support Element (JCSE) to provide critical inter and intratheater communications during major contingency operations. The JCSE paid enormous dividends and must continue to be staffed with the best people and best equipment available.
(U) Centralized Control of Communications Resources, Procedures and Policy: Early in the operation, USCENTCOM assumed control of the validation process for long haul strategic communications. Without this control, early deploying forces would have consumed all available resources in the initial stages of the crisis. Centralized management of long haul strategic communications, satellite capacity and frequency spectrum was vital to subsequent force deployments. Allocation of communications circuits on established networks was also centrally managed, resulting in significant equipment savings. At the height of operations, over 2500 "joint circuits" shared transmission and switching capacity of two or more services. Centralized control of procedures and policy (e.g. switch network routing tables and precedence assignments) was also exercised. Although we experienced problems monitoring compliance, the advantage of establishing theater policy and procedures was proven.

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Communications Interoperability: The immense network supporting this operation used Service unique, joint and national systems inter-operating to provide a single command and control system. The first large scale, fully interoperable tactical message and voice switching system was established in early August, providing secure and reliable communications from the foxhole to the NCA. Linked headquarters and component forces in eight countries throughout Southwest Asia with worldwide communications systems, providing telephone, message and data connectivity. Joint development of communications equipment, technical standards and operating procedures is vital to ensuring interoperability in joint and combined operations.

Security Assistance

(U) Foundation of Regional Strategy: Desert Shield/Storm demonstrated the value of Security Assistance to USCENTCOM's regional strategy and US security interests. Security Assistance sales enabled regional countries to contribute to their own self defense and provide arms and personnel to coalition forces. More important for US interests was the contribution to our ability to deploy into this region, rapidly achieve operational status and prepare to conduct combined operations. Interoperability, achieved through common weapon and support systems, infrastructure and training provided by security assistance programs, gave us this ability. System sales also provided in-place support equipment, spares and munitions. Construction programs provided facilities designed and built to US standards to support US-origin equipment.
Training, conducted in the US and via teams working in-country, created host nation military establishments that had been increasingly influenced by exposure to American values, doctrine and procedures. However, Desert Shield/Storm pointed out that refinements are needed to streamline the processing of Foreign Military Sales (FMS) requests and institutionalize procedures to transfer in theater US materiel to coalition partners and US-origin materiel to third countries. From a broader perspective, continued trends to reduce Foreign Military Financing (FMF) funding and congressional reluctance to support cash FMS sales to GCC countries challenge our credibility as a security assistance partner and threaten regional access and military-to-military relationships. Nevertheless, Security Assistance will remain an essential component of the command’s strategy.

Logistics

(U) Theater Construction: During Desert Shield/Desert Storm, satisfying facility needs and developing theater infrastructure required a major construction effort. Overall, more than $600 million dollars in critical construction projects were accomplished. While US funding was available, the approval and funding process was not responsive to immediate operational requirements. In particular, the $200,000 limit on use of Service O&M funds for construction (10 USC Section 2805) needs to be amended to allow unlimited use during contingencies. Without construction funds provided by Saudi Arabia and Japan, completion of critical construction projects would have been delayed at the expense of operational readiness.
reimbursement via the US Treasury to appropriate Services. This additional
latitude allows the Services to proceed quickly to meet requirements.

Combat Systems Material Readiness:
Operational readiness rates met or exceeded
Service standards for tracked by USCINCENT. High
readiness rates are attributed to the Desert
Express air line of communication, supply
and support agreements with USEUCOM
components, equipment reliability and an
exceptional level of effort from maintenance
units.

US versus Host Nation Contracting:
The host nation support agreement with
Saudi Arabia required the Saudis to assume
pertinent existing US contracts and to
establish new contracts to provide free food,
fuel, water, transportation, facilities and
accommodations, as required — this
especially changed the way commanders
were accustomed to providing support to
their units. In spite of their best intentions
and efforts, the Saudis did not have an
administrative infrastructure capable of
supporting the rapid influx of units in the
initial stages of the crisis. A more flexible
solution to provide host nation support of
US contracting is required. Host nation
contracting of US requirements was
cumbersome and slow to respond to
requirements. In lieu of host nation
contracting, the preferred method is
Strategic Airlift: Augmentation of USTRANSCOM's organic lift capability by Civil Reserve Air Fleet was critical of our deployment air flow missions. Our ability to support missions would have been greatly improved if we had increased the current military air fleet decreases due to age, support of C-17 procurement is needed to increase capability and flexibility.

Army Field Feeding: The Army's field feeding plan is based on two T-Ration hot meals and one MRE meal daily; however, the Army was unable to implement this plan because there were never enough T-Rations procured for the force and contractors could not surge to meet total monthly requirements. Although the Army reduced the requirement through a daily feeding cycle of two MRE's and one T-Ration, contractors were still unable to satisfy T-Ration requirements. It eventually became necessary to use a combination of B-Rations and MORE’s (a commercial product from Hormel). Troops were dissatisfied with two MRE’s each day and complained about quality and variety. In an environment where morale is so critical to the success of operations, we must do better — the current system does not work.
Medical

(U) Scope of Medical Operations: Medical support for Desert Shield/Desert Storm involved the largest deployment and employment of a medical support network since World War II. During Desert Storm over 16,000 beds were set up on land and sea in 64 major hospital facilities located in five countries; over 41,000 medical support personnel were distributed from the forward edge of the battlefield to the rear of the AOR; and the largest ground, air and sea theater medical evacuation system in history was established using a new computerized patient regulation system. In support of all Services, the US Army established the first-ever Single Item Manager of Class VIII Supply and Material. In addition, it was the first time the new Deployable Medical Systems (DEPMEDS) hospital sets were employed in support of a fast moving mechanized ground war. In short, many first and system stressing events took place which provided valuable lessons learned.
began, priority was given to MIA's. As a result of constant requests for detailed information on other than MIA's, USCENTCOM had to refocus the reporting effort giving particular emphasis to fratricide related casualties. In general, only component/Service headquarters had the ability to obtain, analyze and prepare accurate data. Requirements for detailed responses generally exceeded the capability of the unified command headquarters - such questions had to be redirected to the Services or components where accurate and detailed information was most readily available.

(U) Reserve Augmentation: The magnitude of planned military operations demanded the immediate activation of Individual Mobilization Augmentees and unit augmentation. Although the 200K presidential call-up authority provided for rapid mobilization of personnel and resources, this authority was not granted until three weeks after some units had deployed to the AOR. As a result, some units were forced to deploy with personnel strengths below required levels. The system to activate reservists must be more responsive to the immediate demands imposed by major contingencies.

(U) Mail: Mail volume during Desert Shield/Storm surpassed system capabilities. Although few APO's existed in the theater of operations prior to the crisis, there were 194 APO's by the time the cease fire was imposed. While mail was sometimes delayed, delivery was generally satisfactory in view of unique operational constraints. Most delays were caused by frequent personnel reassigments, major shifts in unit
locations, and competition for scarce transportation resources. In future conflicts, unified commanders must be authorized to designate MAC aircraft to carry mail during early stages of deployment. Postal units must deploy early to handle the anticipated influx in postal requirements.

(U) Morale, Welfare and Recreation (MWR): Harsh desert conditions, a dramatically different culture and the duration of unit deployments all combined to make MWR activities vital to operations. Unified commands are not staffed to execute theater programs and component commands varied in their ability to satisfy unit needs. USMARCENT and USCENTAF had qualified MWR personnel and supplies early in the deployment. Many of the Army’s MWR positions had been civilianized prior to the crisis creating additional delays for USARCENT in obtaining trained military personnel early in the deployment process. Better planning for the assignment of civilians in a combat area needs to be addressed. MWR civilians must be accessed and trained as deployable to perform their duties during wartime. On a theater level, the designation of executive agents will simplify and enhance program execution.

(U) Transition to War: Some statutes affecting DoD operations limit the authority of a CINC during the transition from peace to war. Generally, the laws affecting DoD operations apply either to peacetime or to wartime operations. However, a critical phase of military operations is the buildup/transition to war phase. During this phase, the “war or national emergency” threshold has not been breached, but at this crucial juncture between peace and war CINCs require more flexibility than is generally permitted under peacetime rules. Examples of such laws are limits on acquisition authority under the NATO Mutual Support Act to $10 Million per country and the application of cumbersome contracting rules under federal acquisition regulations during a rapid buildup of forces abroad. The DoD legal community should reexamine the complete body of law affecting DoD operations to identify and seek amendment of those provisions which unreasonably restrict the authority of CINCs during the transition to war.
Public Affairs

(U) Public Affairs Staff Augmentation: Obtaining personnel and equipment augmentation for the USCENTCOM PA staff was extremely difficult. "There was no "system" from which this command could draw PA resources in a direct and timely manner -- requests had to be processed on a case-by-case basis through the Services or components. Quality of support and lead time was highly variable. The small number of active duty PAO's from all Services and the limited availability of PA support equipment suggest that OASD(PA) and the Joint Staff should develop and implement a standard, modular approach to augmenting unified commands during contingency operations.

(U) Media Pools: Not only do large media organizations have the ability and desire to deploy sizable media teams to cover military operations, but the advent of inexpensive communications technology makes it increasingly possible for smaller organizations to send journalists to the field. Over 1,600 journalists from around the world covered Operation Desert Shield/Storm. Without some form of control over the number of journalists in the field, operational commanders would be faced with untenable safety and physical security problems. Media pool operations proved an effective means to communicate the war effort to the American public despite criticism and editorial comment of the media. The number of media personnel covering Desert Storm clearly demonstrated the need to continue pool operations for coverage of front line combat units. JCS should establish a standard for the number of pool journalists that will be supported at each level of the chain of command (in general, the distribution of journalists among front line ground combat units was 1 per 3,000 personnel). Unit commanders could then anticipate hosting journalists and prepare to provide protective equipment, local transportation, berthing, and meal support. When units deploy in response to crisis, media positions should be filled as early as possible. To reduce disruptive journalist "swapping," assigned journalists should remain with the unit for the duration of the deployment. Early deployment of assigned journalists will allow commanders to correct "system" problems (i.e., security review procedures, transport of product to filing sites, etc.) and familiarize journalists with the mission, operating procedures and capabilities of the unit.

(U) News Release Operational Security (OPSEC) Violations: The "ground rules system" established by the Assistant Secretary of Defense for Public Affairs relied on the cooperation and willingness of the news media to police themselves. The military had no censorship program or authority to enforce the ground rules. As a consequence, the review process allowed OPSEC violations to occur. Security breaches often included information on unit locations, readiness posture and combat capabilities. The instantaneous transmission capability of modern satellite systems increases the frequency of significant OPSEC violations and highlights the urgent need for a viable review process in future conflicts. OASD(PA) must establish OPSEC oriented release procedures acceptable to the news media and the military.
Financial Management

(U) Military Pay Systems/Entitlements: The Service's military pay systems are designed for peacetime, fixed installation operations and do not provide responsive and flexible pay support for large contingency operations. Policy and procedural guidance in implementing combat related military pay entitlements was not timely in support of deployed service members. Military pay systems, procedures, and policies must be designed to operate in an austere environment with limited communications/ADP and maximum use of multi-Service support. Combat entitlements (essentially founded during the Vietnam War) must be kept current and updated with procedures and implementing instructions already in place. Morale problems associated with erroneous, inaccurate, and untimely pay can be significant. Deployed service members deserve no less than 100% accurate pay each pay period.

(U) Funding for Contingency Operations: Problems existed with funding responsibilities within multi-Service, common use support functions and facilities. Executive agency responsibilities and associated funding were not always clearly defined. Sub-unified command funding, as well as, one service component's requirement to coordinate with over five separate major claimants created a cumbersome and unnecessary financial burden in-theater. In a joint service environment, funding must be centralized to the CINC for in-theater, multi-Service, common use support functions.

Part III - Conclusions

(U) In large measure, the success of Operation Desert Shield and Desert Storm was a reflection of lessons learned from many other crises, conflicts and wars in the past. Our ability to examine, criticize and correct operational deficiencies paid off. The performance of our people and equipment was spectacular.

(U) Our technology gave us a decisive edge. Standout performances by the F-117 Stealth fighter, precision guided munitions, Tomahawk Land Attack Missile (TLAM), Patriot missile system, M-1 Abrams tank, AH-64 Apache helicopter, RPV, vertical take-off AV-8B, and JSTARS highlighted for the American public that US defense dollars have been well invested and our fighting men and women were superbly trained in peacetime to prepare them for war.

(U) The quality of personnel deployed in theater set new standards of excellence -- people performance was outstanding. The speed of their advance on the battlefield, expert employment of weapons, exceptionally low UCMJ violation rate, and strong positive showing on media events, all support the Service's quality force.
programs. Even the anticipated turmoil of having female soldiers in Saudi Arabia and issues of religious differences never materialized. The all volunteer force is a winner.

(U) In addition to a military team that was the best trained, best equipped and most combat ready force in the world, we had superb leadership from the President all the way through the chain of command.

Moreover, we had unprecedented public support. Although the impact of public support is difficult to quantify, it was clearly a major factor in boosting the morale of our fighting men and women at a time when it was so important. In the final analysis, our personnel overcame every obstacle, validated the air-land battle concept, and reaffirmed the unique position of each Service within our defense establishment.