STRATEGY RESEARCH PROJECT

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THEATER COMMAND AND CONTROL: THE JOINT FORCE LAND COMPONENT COMMANDER

BY

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ABSTRACT

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ABSTRACT: The Department of Defense Reorganization Act of 1986 (Goldwater-Nichols Act) and the significant employment of military land power since the end of the Cold War has increased focus on the use of joint forces. One of the most critical aspects of joint operations is command and control. A decrease in the U.S. military and an increase in missions mean that joint operations will be the norm and mandate that command and control structures be properly designated and organized to control these multi-service missions. The challenge for the theater commander in chief (CINC) is how to organize the chain of command to effectively meet requirements, specifically land warfare. This research project seeks to answer one aspect of the problem: to identify the considerations for establishing a joint force land component commander (JFLCC). The paper will use analyses of theory, history and doctrine to assist in determining the factors planners should consider when recommending the JFLCC option. In addition, the paper will suggest potential changes in doctrine to better support the CINC and joint force commander's decision to establish a joint force land component command.

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THEATER COMMAND AND CONTROL: THE JOINT FORCE LAND COMPONENT COMMANDER

> Command and control is, perhaps, the single most important function in war. Command and control is the means by which the commander synchronizes joint activities in time, space and purpose in order to achieve . . . unity of effort toward strategic objectives.[1]

> You may fly over a land forever; you may bomb it, you may atomize and wipe it clean of life – but if you desire to . . . keep it for civilization you must do this on the ground . . . by putting your young men into the mud.[2]

Land warfare has played a significant role in the solution of conflicts throughout history. Before the invention of the airplane and subsequently the aircraft carrier, land combat was the primary means for waging war. In the twentieth century the combination of air, sea and land capabilities in joint operations became the way to wage war. But as T.R. Fehrenbach indicates, the ends in war were not achieved until one force conducted decisive land operations with the other services.

The advent of improved airpower, sea power, "smart" munitions and the ability to communicate over large distances has made landpower more complicated. Consequently, the commander is tremendously taxed to synchronize even more complex land forces with other joint forces. As a result, land combat requires an effective and efficient command and control (C2) structure to achieve success.

Joint doctrine provides the combatant commander in chief (CINC)/joint force commander (JFC) six options for organizing his theater. He may designate a subunified command, a joint task force, service component commands, single service command, functional component commands, or specific operational forces.[3] Since Operation Desert Storm the idea of functional command and control has acquired significant interest. The reduction in U.S. Army force structure and the significant capabilities retained by the U.S.

Marine Corps mean an increased potential to employ a joint land command, more specifically a joint force land component command or JFLCC. In fact, during Desert Storm the Army and Marines conducted extensive land operations under respective service headquarters.[4]

Current doctrine as well as joint tactics, techniques and procedures provide very little guidance or recommendations as to the employment of a JFLCC. In contrast there are extensive resources for the employment of the air component counterpart, the joint force air component commander (JFACC). A recent study conducted by U.S. Army Central Command (ARCENT) revealed the following; " unlike for the JFACC the roles and responsibilities of the JFLCC are not well documented. Doctrine searches mentioned JFLCC only 29 times. There are no CENTCOM, JCS, TRADOC or MCCDC white papers on the topic."[5]

The purpose of this paper is to identify the considerations used to determine if the CINC should establish a JFLCC and propose changes in doctrine to better support employment of the JFLCC. Establishing the proper command and control structure is particularly important to the joint commander as illustrated by the following quote:

> Key to successful joint operations is the arrangement for command and control. Often this poses one of the most difficult areas confronted by joint planners. Divergent interests, backgrounds, viewpoints and service considerations must merge to develop the command and control arena.[6]

Challenges for the joint force commander continue to increase. In addition to the downsizing of the armed forces, the U.S. provides ground forces to a variety of United Nations (UN) and North Atlantic Treaty Organization (NATO) military operations. The probability that the JFC will require a joint and possibly combined land force is more likely than ever. In the future, though, it is unlikely that an adversary will provide a coalition six months to build a combat structure as happened in Saudi Arabia in 1990-1991. The time to wrestle with theater C2 challenges is now, in order to be ready if a conflict occurs.

The methodology for analyzing the problem focuses on theory, history, doctrine and an analysis of theater C2 in Desert Shield/Desert Storm. First, organizational theory will be used to identify the fundamentals of organizational structure and the considerations commanders and planners should use when the organization expands or changes its structure. Second, history will be used to determine the factors and type of headquarters used by theater commanders to establish joint land component commands during World War II. Third, doctrine will be analyzed to identify current guidance on theater land command and control. Finally, a detailed review of Desert Shield/Desert Storm will be conducted to determine why CINC CENTCOM organized the theater as he did to command and control land forces during that conflict. The conclusion will synthesize the results of the respective analyses and will identify implications for future theater land C2 in the areas of doctrine and organization.

THEORETICAL PERSPECTIVE

> War is a matter of vital importance to the state . . . . It is mandatory that it thoroughly be studied.[7]
>
> Generally the management of many is the same as management of few. It is a matter of organization. And to control many is the same as to control few. This is a matter of formations and signals.[8]
>
> Sun Tzu

As the ancient philosopher Sun Tzu stated many years ago, warfare requires thorough study. The analysis of command and control, therefore, should include theories relevant to organization, structure and "formations." Theory is useful because it provides a basis for action. Moreover, it can assist in developing rules for action.[9] As such it can form a foundation for research, analysis and development of supporting doctrine. The review of organization theory should assist in understanding military C2 structure. It should identify

factors used to establish specific chains of command and factors used in determining changes as the organization evolves during its life cycle.

For a thorough look at theory it is helpful to have both a military and business perspective on the definition of organization. Sir Ian Hamilton, a 1920's British Military Theorist, once said, "Organization is the body and soul of an army."[10] The military is a lethal weapon forged by the government for the hand of the commander[11] In order for the military to operate in complex combat operations it must have a well defined organization. The purpose of that organization is to maintain troop control and facilitate employment of fire and maneuver against an enemy force.[12] According to modern business theorists William Scott and Terence Mitchell, an organization is designed to employ resources in order to achieve an objective, produce a product or provide a service.[13] As organizations develop or evolve the structure is generally based on the purpose, mission or tasks, unity of effort and span of control.[14]

Following World War I, Hamilton built his theory from a close review of different control structures used by the British Army during the conflict, especially the higher structures, which the army had rarely used. The most critical factor, Hamilton found was purpose. "I say it is folly to raise an organization before it is known exactly what place it is to take . . . and for some definite purpose."[15] Hamilton saw that a large army organization (as yet joint operations were not widely practiced) must have a specific purpose or the headquarters will not add to success and may in fact degrade execution by being unwieldy.

Span of control was the next major principle Hamilton identified with respect to command and control. His analyses surmised that the optimum control span for an individual was three to five subordinates. Moreover, for an executive or general with a staff the span

could stretch to four to six subordinates. In his book, Organization, Ernest Dale lists span of control as one of the primary considerations saying that the span should be determined not as an arbitrary number but by the mission, support staff and capability of the leader or manager.[16] Furthermore, Dale discovered complex organizations are typically broken into major components based on the mission, product developed or service provided. The most basic method of dividing work is by function. Although "function" often conveys a single activity, in modern organizations it commonly means a group of related activities that are placed together under a single department.[17]

When an enterprise begins operations the structure is often based on the answer to the following question, "what major function will have to be performed to meet objectives?"[18] Similarly, in military organizations such as a combatant command, the CINC reviews his mission and objectives and determines what major air, sea and land tasks must be performed to accomplish the theater or strategic aim. In a simple operation the tasks may be assigned a specific JTF or one of the services. However, as the complexity of the theater increases, the CINC may have to combine services with similar functions under a single joint force commander. As the requirements grow and the mission changes the theater may be required to adjust its structure to meet the new demands.

Change is often related to the life cycle of an organization. The cycle describes the stages of an organization's existence. Most companies being operations or business, at some point "expand," then "stabilize" then "close" or reorganize and begin again.[19]

The life cycle is very similar to the evolution of a theater of war or theater of operations. During a crisis the theater is activated and deployment begins. This is followed by an "expansion" phase as additional troops or humanitarian assistance assets arrive. The

expansion may be followed by a period of "stability" as all forces and assets are present and executing full-scale operations. Once objectives are attained "redeployment" begins and eventually the theater is reduced to post conflict operations.[20]

Theorists Scott and Mitchell explain that organizational change generally occur through internal or external influences.[21] Moreover, these influences often reflect factors to consider when developing command structures. Internal factors may include: personnel gain or losses, management dissatisfaction, and organization inefficiency. External factors may consist of changes in the operational environment, mission and essential tasks.[22] In addition, changes such as expansion often require adjustments in the division of labor and in the structure.[23] Consequently, the organization must adjust the chain of command to support the new requirements.

There are two methods for expanding the organizational structure, vertically and horizontally. The "scalar" principle refers to the growth of the chain of command which occurs by adding levels or layers to the chain of command.[24] The advantage of this option is usually a narrower span of control, while the disadvantage is a longer chain of command. The "functional" principle is the method by which the organization grows horizontally. This occurs by adding departments to an existing level within the structure and dividing the organization's tasks among them.[25] The advantage of this method is more centralized control, while the disadvantage is a wider span of control.

Theorists warn, however, the decision to expand must weigh an additional criterion, cost - - the expense in resources compared to the benefits derived from expansion. The company must weigh the advantages and disadvantages of expansion as they plan for growth. Although

span of control may be enhanced, the length of the chain of command may reduce overall efficiency and effectiveness.[26]

In his book, On War, Carl von Clausewitz discusses the merits of expanding the command structure. The principal benefit of increasing layers is that the commander at each level will have fewer subordinates to control. With fewer subordinates, the commander should have the capability to pass orders faster and maneuver large formations more rapidly. However, Clausewitz also recognized the problems that could arise for the commander in chief, "If the total number of subordinates is too large, the commander's personal authority will be diminshed."[27] Moreover, "the whole army will be unwieldy if it has too many parts."[28] Finally, Clausewitz warns that an extended chain of command may reduce the efficiency of the command and control process. More layers of command influence reaction time, communications and timeliness of orders. As Clausewitz stated:

> Every additional link in the chain of command reduces the effect of an order in two ways: by the process of being transferred and by the additional time needed to pass it on.[29]

Modern author and military theorist Martin van Creveld discusses expansion challenges in his book, Command in War. The advantage lay in the speed of orders and the simplicity derived from a centralized control system. Centralized C2 will require the commander to control a greater number of subordinates thereby reducing his ability to control the organization.[30] However, he feels the use of modern communication systems will assist the commander in overcoming problems associated with a wide span of control.

In summary, organization theory provides several factors that the CINC and theater planners should consider in developing command and control structures. Mission, purpose and unity of effort are fundamentals that must be considered. However they are not absolute,

as many manuals today would have us believe. A theater of operations often operates like a commercial organization in that it has a life cycle - - deployment, employment, post conflict operations and redeployment. As the theater changes other factors should be evaluated, the nature of the environment - - internal and external - - span of control and the theater situation. Moreover, as the commander weighs the decision to adjust the organization structure, he must compare cost of expansion with the benefits of a refined command and control system. Given the enormity of theater operations, it is important for joint planners of today to understand all factors affecting C2 decisions. The lessons discussed above are not readily available to joint planners except through experience and the lessons of combat as joint forces demonstrated during World War II.

COMMAND AND CONTROL IN WORLD WAR II

> To understand the future, study the past.[31]
>
> van Creveld
>
> Everything in war is very simple, but the simplest thing is difficult. The difficulties accumulate and end by producing a kind of friction that is inconceivable unless one has experienced war.[32]
>
> Clausewitz

Major conflicts have always caused changes in organization, tactics and doctrine. As illustrated by Clausewitz' quote, these changes are generally accompanied by an increase in complexity creating more friction and therefore making command and control more difficult. Consequently, we must study combat lessons and history to clearly understand the complexity and how others managed to develop command and control structures to deal with those challenges.

Wars in the eighteenth and nineteenth centuries were followed by incremental changes in organization, most often caused by technology. For example, improvements such as the Minie' ball, smokeless powder and the rifled weapon caused the battlefield to expand - - in time and space - - as formations dispersed to counter the resulting affects of increased lethality. [33] However, in the twentieth century, advances in technology were dramatic and significantly changed the dimension of warfare more so than the previous 100 years.

World War I exposed armies to a series of technological changes in the nature of the battlefield. The airplane, tank, machine gun and improved communications changed the size and scope of land warfare. Although armies adjusted tactics and doctrine, one principle continued to guide their reorganization, "No greater lesson can be drawn from the World War than that unity of command is absolutely vital to the success of military operations."[34]

The World War I experience caused a concentrated look at land command and control. During the interwar period changes occurred in training, doctrine and organization. In 1922, the Army's Command and General Staff College initiated a course titled, "Tactics and Strategy of Corps, Armies and Army Groups."[35] In 1930, the U.S. Army published The Manual for Commanders of Larger Units (Provisional); the first attempt to provide doctrine for higher level operations. [36] The Army continued its study of higher level command and by the end of the decade had established four field armies for the conduct of training and operations. During World War II the field army would serve as the primary theater/operational land command and control headquarters. It would be during the war that every aspect of land warfare would be exercised, succinctly summarized by this quote from an Army War College study conducted after the war.

> World War II embraced every field of military endeavor and every type of military operation - - ground, sea, and air. Operations were conducted simultaneously in every geographic part of the world and present a complex, and intricate pattern . . . of relations.[37]

Mediterranean Theater

Although the Army had been studying higher command and control, as the U.S. entered the War in Europe there was no single joint command structure. In the event of a joint operation, "the services were expected to cooperate."[38] The decision to conduct a combined landing in North Africa in November 1942 quickly brought the issues of joint and combined command to the table. Unfortunately they were not solved quite so rapidly.

The decision to invade North Africa was made in July 1942 with then Lieutenant General (LTG) Dwight Eisenhower being officially designated as Commander in Chief, Allied Expeditionary Force on 13 August. Over the next 30 days, Eisenhower, with assistance from the Combined Chiefs of Staff set out to establish the command structure for Operation TORCH. The two primary criteria used by Eisenhower to develop the organization were experience and national interests. Given U.S.-British cooperation and TORCH being the first major operation in Europe by Allied forces, national interests became a major factor. Consequently, completion of a chain of command took several weeks.[39] The three task force commanders were all senior officers with experience dating back to World War I. Major General George S. Patton, Jr. would command the Western Task Force, Sir Harold Alexander (later replaced by Lieutenant General Kenneth Anderson) would command the Eastern Task Force, and Major General Lloyd Fredendall would command the Center Task Force.[40]

General Eisenhower did not initially designate a land component commander (See Figure 1). Given the lack of experience in combined operations, the widely dispersed

landings and the ability for Allied Force Headquarters (AFHQ) to focus only on TORCH (as yet AFHQ did not have authority over British Forces in Egypt under LTG Montgomery) Eisenhower felt he and his staff could control operations in North Africa.

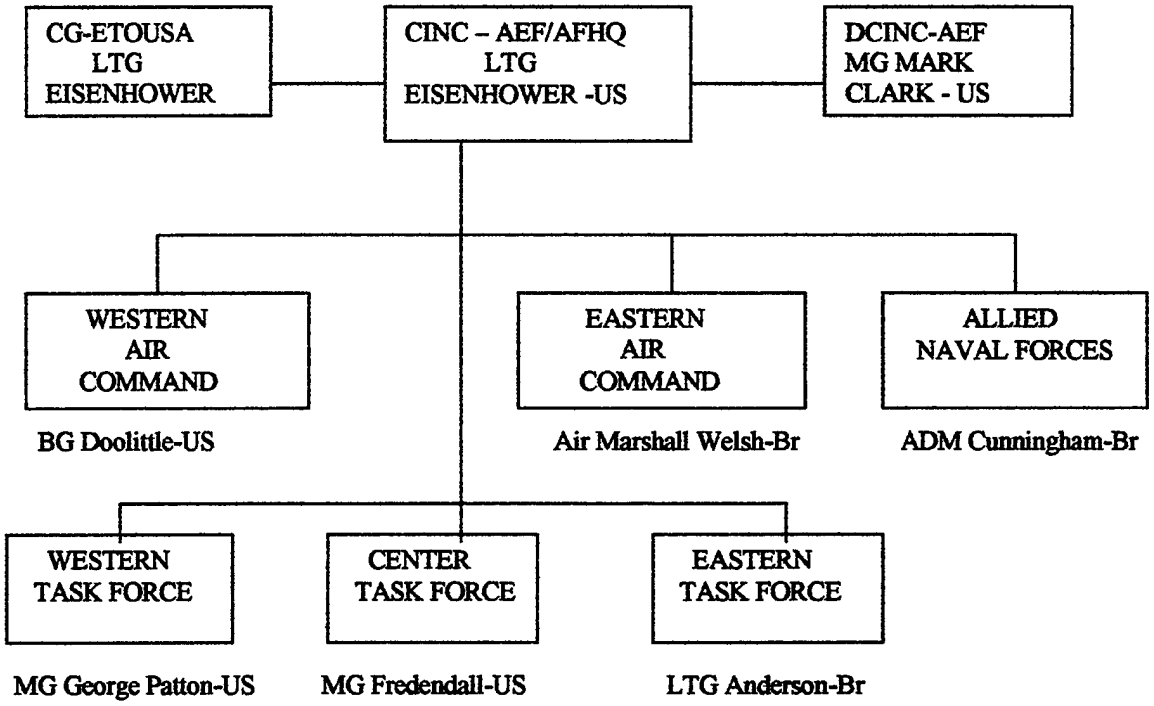


Figure 1. Command and Control Structure, Mediterranean Theater, November 1942.
Source: George F. Howe, Northwest Africa: Seizing the Initiative,44. U.S. Army War College Lesson 4-03 Briefing Slides, "North African Case Study."

Following the landings, Eisenhower reorganized his land forces along national lines with American, British and French commanders reporting directly to AFHQ.[41] As the campaign continued toward Tunis and the Combined Chiefs of Staff already planning for the invasion of Sicily, Eisenhower was unable to effectively command and control the operation.

In the early months of 1943 Operation TORCH stalled in the attack on Tunis and Eisenhower realized the Allied structure was becoming unwieldy. His requirements as the theater commander in chief to report to Washington and London as well as keep the force of three nations coordinated was becoming overwhelming. Moreover, the land campaign was becoming more complex. The two major forces were converging on Tunisia from opposite directions - - British First Army and U.S. II Corps attacking from Algeria while British Eighth Army attacked from Libya - - and they needed a single commander to provide unity of effort.[42]

In March 1943, Eisenhower reorganized his command. General Sir Harold Alexander was designated commander of 18th Army Group and assumed command of all land forces in North Africa. Moreover, Eisenhower consolidated all air and naval elements under respective commanders. This was the first structure of its kind in modern combat operations. Figure 2 reflects how Eisenhower established a combined command and control structure, organized along functional lines. The structure proved both feasible and suitable for the final phases of the campaign. It was such an improvement that Eisenhower maintained a similar C2 chain for Operation HUSKY, the invasion of Sicily in July 1943.

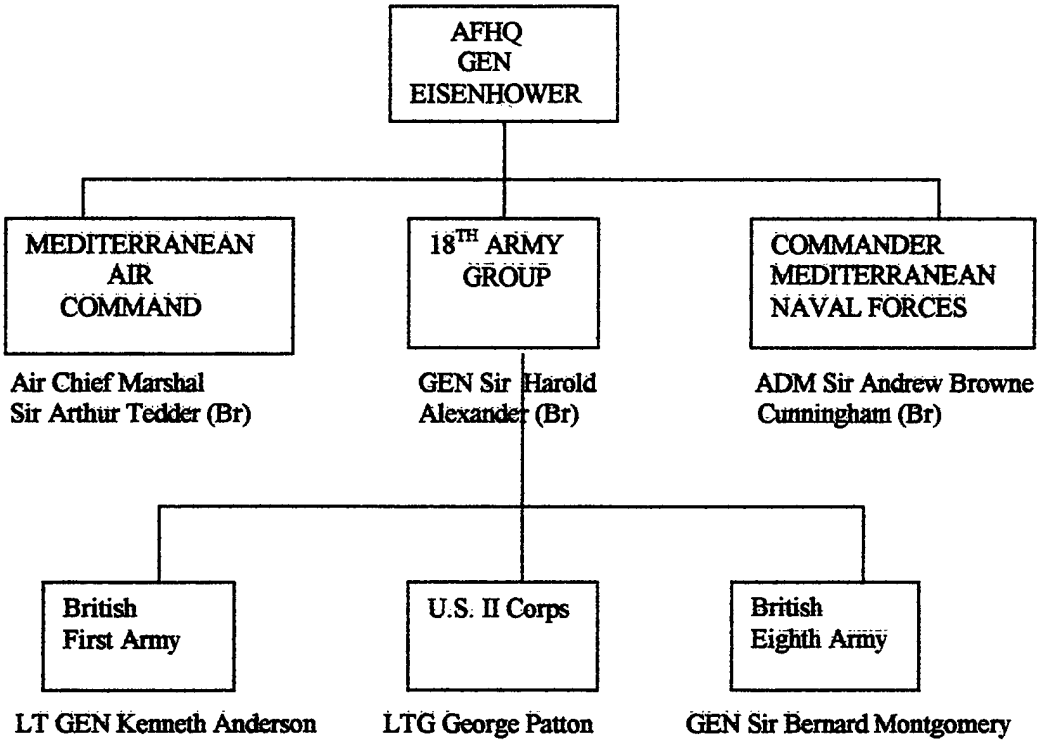


Figure 2. Command and Control Structure, Mediterranean Theater, March 1943
Source: U.S. Army War College, Department of Military Strategy, Planning and Operations, "Joint Forces Land Component Commander Primer," 3.

European Theater

The theater command structure developed in a similar manner to the life cycle in a theoretical organization. The chain of command in England was initially very small as forces

began to flow into the theater with the focus of combat operations being in the Mediterranean. The theater began to expand slowly in late 1943 as planning and preparation increased for the cross channel invasion of Europe. In September, the British created an army level headquarters to begin coordination for invasion planning with the chief of staff, Supreme Allied Command.[43] General Marshall recognized that without an army level headquarters in England - -V Corps being the major land command in theater at the time - - U.S. interests would not be on an equal footing with the British. Consequently, U.S. First Army was activated in England in October 1943.[44]

During the months preceding the invasion, the theater structure continued to expand. In January 1944, to command and control new divisions arriving in England and to allow First Army to prepare for the invasion, the theater commander established another U.S. field army. Third Army headquarters deployed from Texas where it had served as a training army.[45] The activation of armies in the U.S. prior to deployment was common throughout the war because all army headquarters were supplied by the Army Ground Forces (AGF) which was responsible for organizing, training, and deploying units from the U.S.[46]

For the conduct of the invasion, General Eisenhower used a structure similar to the one employed in North Africa, Sicily and Italy. He organized the command with three functional component commanders to support the invasion phase of Operation OVERLORD (See Figure 3). General Montgomery would serve as the land component commander, Air Marshall Leigh Mallory, air component and the naval component would be under Admiral Ramsey.[47] Eisenhower felt the small objective - - 50 miles across for the five beaches - - unity of effort and the success of a land component commander in the Mediterranean mandated a single land commander. Moreover, as the Supreme Commander Allied Expeditionary Forces (SHAEF)

his span of control not only covered the Normandy beaches but a significant air and naval campaign and he still had to maintain coordination for the ongoing operations by 5th Army in Italy. Eisenhower maintained this chain of command until late July 1944, when the build up in Normandy mandated an expansion of the theater structure.

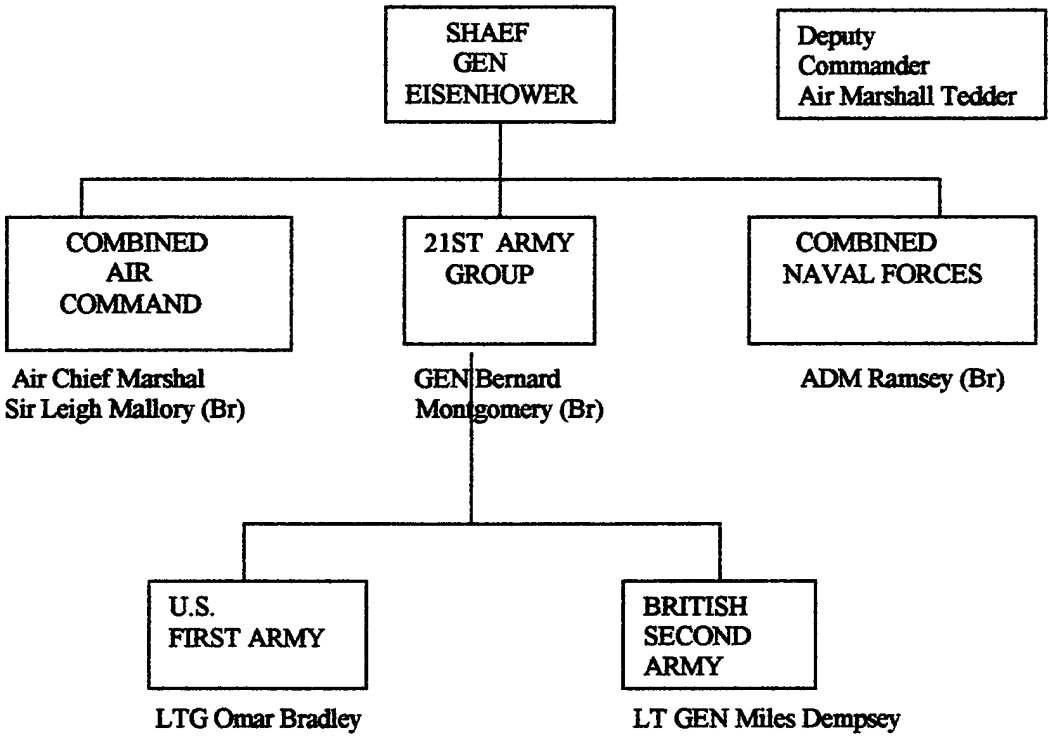


Figure 3. Command and Control Structure, Operation OVERLORD May-July 1944
Source: Forest Pogue, Supreme Command, 159.

As Operation OVERLORD moved toward the breakout phase more divisions and corps were brought ashore, increasing the span of control of the respective army commanders. General Eisenhower became concerned that the troop commitment, especially in the U.S. zone, would soon exceed the army's control capability.[48] He and his staff were now faced with the challenge of when and how to adjust the chain of command in France.

Theater expansion would require careful analysis by Eisenhower; mission, doctrine, span of control, experience and national interests would all factor into his decision. The immediate mission of SHAEF was to continue the attack to defeat Germany. However, with the impending breakout the front would quickly expand from 50 miles to 150 miles - - the distance from Nantes to Caen. Moreover, as the offensive continued east, the front would double in size as allied forces would attack north across almost 200 miles - - from Caen to Lille - - to the Belgian border. Finally, Eisenhower had to factor in the planned expansion to the south as the invasion of southern France led by the U.S. Seventh Army was planned in August.

Doctrinal assistance would be limited for the SHAEF staff. Military manuals did not specify when to expand the number of headquarters it merely provided the span of control guide of one army headquarters to control three corps.[49] Therefore, as additional corps deployed to the continent an army headquarters would be required in order to provide operational control and logistical support for these units.[50] In addition Eisenhower had to weigh the decision to expand against the experience of potential army commanders. Although some generals had experience at corps level, few had any army level experience other than being present for the Louisiana Maneuvers.[51]

Further complicating the decision making process was the necessity for another army group. If SHAEF activated additional armies, another group would be required and who would command the new group headquarters? Moreover, Eisenhower and his planners had to contend with the political side of the decision. The activation of a U.S. army group would put the U.S. command on an equal footing with the British and require yet another decision, who would serve as land component commander?

On 14 July, as planning continued for the breakout from the Normandy beachhead, Eisenhower informed General Bradley to activate a second field army and to reorganize U.S. ground forces as 12th Army Group.[52] On 1 August, Third Army was activated in France, command of First Army passed to Lieutenant General Courteney Hodges and General Bradley assumed command of 12th Army Group (See Figure 4).[53]

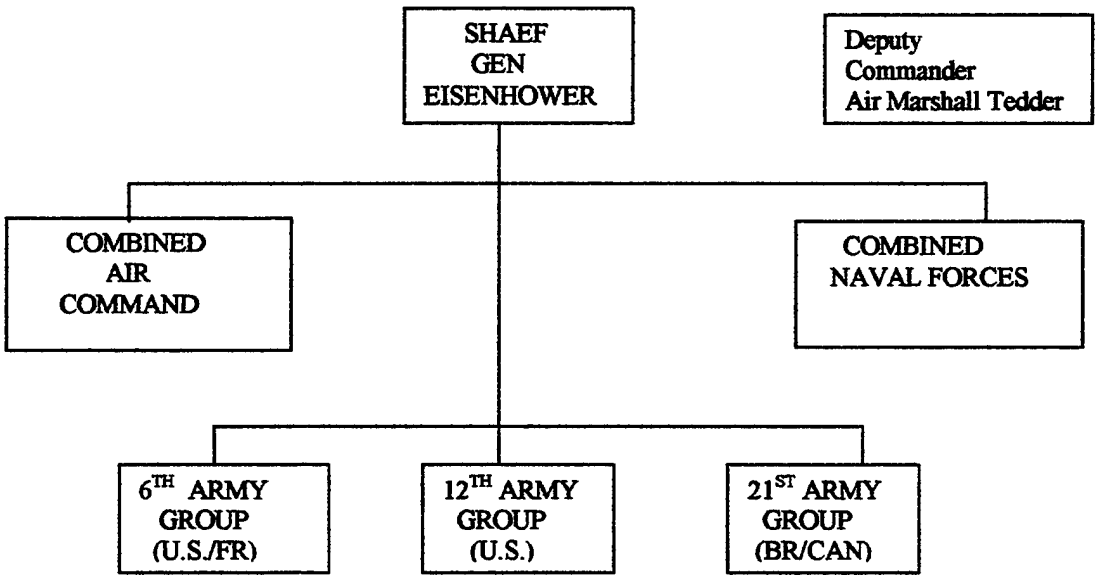


Figure 4. Theater Command and Control Structure, January 1945
Source: Pogue, Supreme Command, 455.

The final decision remained. Who would serve as land component commander? Montgomery had argued for unity of effort and unity of command, a single thrust toward Germany. Eisenhower's plan for a broad front strategy further complicated the issue. Given the broad operations of three army groups (Sixth Army Group was activated in southern France in September 1944), the vast chain of command and the need to appease political/national interests Eisenhower decided to retain the responsibility of land component command.[54] Moreover, with the main effort now in France, Eisenhower felt he and his staff could perform both theater and ground force HQ duties. Although challenged several times during the remaining campaign - - especially by Montgomery during the "Battle of the Bulge" - - the Allied command structure with Eisenhower as the land component commander and theater commander remained until the successful conclusion of the war in Europe.[55]

Pacific Theater

On the other side of the globe, the Pacific Theater provided the most notable examples of joint command and control during World War II. Numerous joint land operations were conducted by Army and Marine Forces during the "Island Campaigns" from Guadalcanal to Okinawa. The U.S. assumed primary responsibility over the Pacific Theater in 1942. Unable to settle on a unified command system for the entire theater, the Joint Chiefs of Staff (JCS) decided to establish two theaters of operations, the Southwest Pacific Area (SWPA) and the Pacific Ocean Area (POA).[56] Although both areas had joint commands, most land force were assigned to SWPA.[57] Between 1942 and 1945 the respective theater structures would expand with a total of three field armies being activated to provide land command and control in the Pacific.[58]

The driving factors in the organization of land forces were terrain and strategy.[59] Operations began in late 1942 as General MacArthur initiated his "island hopping" campaigns. Island assaults were conducted by small often joint Army-Marine units supported by naval and air power. The technique required some form of reorganization for each operation to account for the size of the island and the force necessary to secure it.[60]

The most notable example of a joint land campaign was the battle for Okinawa. The plan for the invasion of Okinawa began in late 1944 when Admirals Raymond Spruance and Chester Nimitz met with Admiral Ernest King, Chief of Naval Operations (CNO) to discuss pacific strategy. [61] Although King preferred the plan for Formosa, Spruance and Nimitz convinced him that Okinawa offered a better staging area for invading Japan.[62] The plan for Okinawa was eventually approved and Operation ICEBERG - - the last major campaign of the war - - was scheduled for April, 1945.

Operation ICEBERG would be the largest joint campaign of the war. Admiral Spruance, Commander of the Fifth Fleet, would command the ICEBERG Forces and the overall Okinawa campaign. The Joint Expeditionary Force consisting of eight task groups to support the campaign would be under the command of Vice Admiral Richard Turner. The land forces - - named Task Force 56 within Admiral Turner's structure - - would be under the control of the U.S. Tenth Army commanded by Lieutenant General Simon Buckner.

Tenth Army was one of three army level headquarters activated to support land operations in the Pacific. Sixth Army, activated in 1943 and Eighth Army, activated in September 1944 provided command control of land operations for General MacArthur.[63] Although the Pacific Ocean Area (POA) under Nimitz was primarily a naval theater, the roles and missions for ground forces were increasing, mandating the use of a theater land

command.[64] In June 1944, the AGF activated Tenth Army in the United States under Lieutenant General Buckner who deployed it to the POA theater.[65]

The operational planning for ICEBERG determined there were not enough Army or Marine Forces in theater for a single service to invade and secure Okinawa. Admiral's Nimitz and Spruance decided on a joint Army-Marine expeditionary force with Tenth Army as the controlling headquarters. The decision on the command and control organization was based on mission, experience and structure capability. The amphibious assault followed by a ground campaign would be against a series of small objectives necessitating unity of effort among Army and Marine forces. Tenth Army and General Buckner had been in the Pacific since late 1944 and were extremely familiar Nimitz' planning and operations. Finally, Tenth Army had the requisite doctrine, equipment and staff to control multiple corps operations.

Detailed planning for ICEBERG began in January 1945 following approval of Nimitz' concept. Tenth Army would truly be a joint command (See Figure 5). General Buckner and his headquarters would serve as the joint land component command.[66] Ground elements would consist of Army Major General John Hodge's XXIV Corps and Marine Corps Major General Roy Geiger's III Amphibious Corps. Air support would be under the control of Major General Francis Mulcahy, U.S. Marine Corps, while naval support was provided by Rear Admiral C.H. Cobb.[67] General Buckner also recognized the need for a joint staff to support proper planning. Consequently, he requested and received the augmentation of 30 Navy and Marine personnel each.[68]

Although not necessarily perfect, the land command and control structures used in the Europe and the Pacific proved feasible, suitable and ultimately successful. In the Mediterranean, General Eisenhower looked at the mission, experience, objectives and national

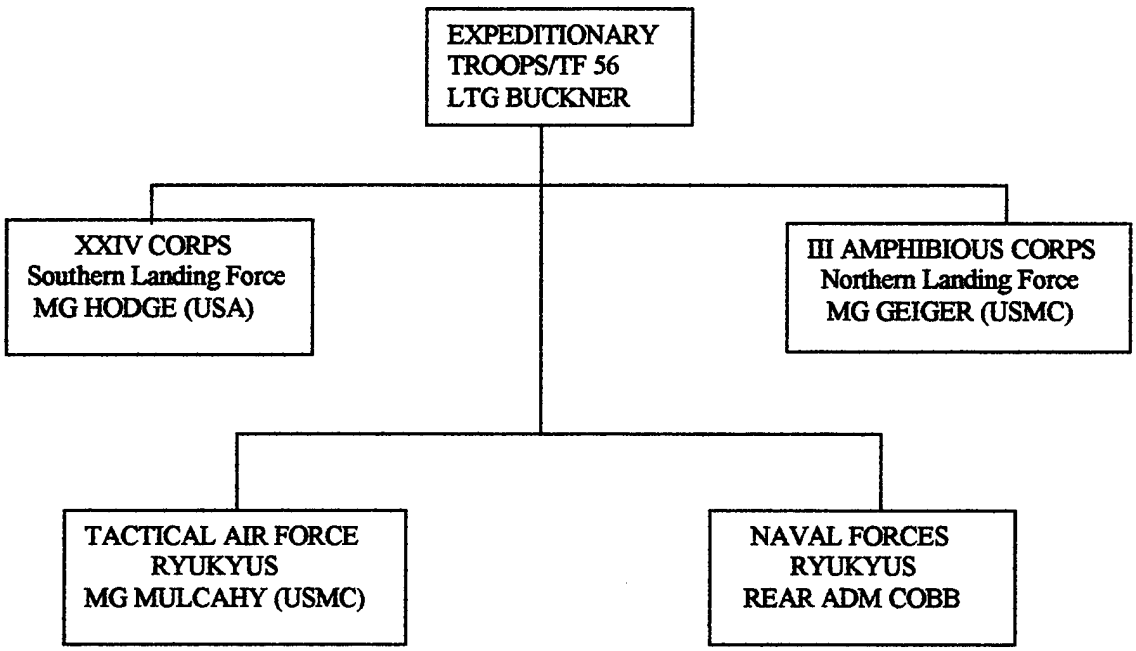


Figure 5. Command and Control Structure, Operation ICEBERG, 1945
Source: U.S. Army War College, "Okinawa, The Final Campaign" A Case Study, 34.

interests to drive his initial decision to serve as theater CINC and land component commander. He also recognized, probably too late, when it was time to establish a combined land component commander. The requirement to focus on planning for Sicily, the need for unity of command in the west (of North Africa) and the need for unity of effort as General Montgomery's forces approached from the east were all factors that pointed toward the establishment of a combined land component commander.

A year later in England, Eisenhower would recognize the benefits of land component commander. His requirements as Supreme Commander for the Normandy operation with air,

land and sea phases occurring near simultaneously would prevent him from effectively commanding the invasion force. Moreover, the mission of the large combined force to seize a small objective dictated a single land commander to effectively coordinate the operation. Two months later Eisenhower would identify new challenges as one of the largest land forces in history began to mass on the coast of France.

The broad front strategy and the political concerns over which country would provide the senior ground commander led Eisenhower to assume land component command when 12th Army Group was activated in France in August 1944. Although questioned during the Battle of the Bulge in late 1944, Eisenhower's decision proved effective and efficient as the allied force grew to three army groups during the final attack to defeat Germany.

In the Pacific, unity of command, unity of effort, simplicity and terrain were the major C2 considerations. The use of joint Army-Marine ground forces to assault small island objectives necessitated a land component commander. Operation ICEBERG serves as a clear example of both the cost and the benefits of a joint land component command.

COMMAND AND CONTROL IN OPERATION DESERT SHIELD/DESERT STORM

> The Gulf War presented unique challenges in developing coalition C2 relationships and assigning missions. Faced with the diversity of forces from more than 23 nations often with unique doctrine, language . . . , CINCENT was aware of the operational contradictions that threatened the coalition's vitality.[69]

In February 1991, military forces from vastly different countries conducted one of the largest land campaigns since World War II. In 100 hours coalition forces defeated a large and previously formidable Iraqi Army and liberated the country of Kuwait. The joint and combined force was one of the most unique in history and was assembled in slightly more

than six months. The command and control organization, although successful, required months to build and refine. The system reflected not only the fundamentals of unity of command and unity of effort but recognized that political considerations, national pride and public perception often guide military planning.[70]

The U.S. presence in the Gulf Theater began slowly after General Norman Schwartzkopf, Commander in Chief, U.S. Central Command (CINCENT) was ordered to deploy forces to the region. The land force began to assemble on 6 August 1990 as Lieutenant General John Yeosock, Commander of Third Army and Brigadier General William G. "Gus" Padgonis, Forces Command (FORSCOM) J-4, arrived in Saudi Arabia with the CINC and Secretary of Defense (SECDEF).[71] After they departed, Lieutenant General Yeosock contacted Major General J.B. Taylor, Chief of the Program Modernization for the Saudi Arabian (PM SANG) and told him, "you are now my chief of staff . . . now there are four people in this great big army."[72]

The land power build-up continued through August as forces began to arrive from the different countries. As U.S. units continued to deploy, Arab League nations also deployed to Saudi Arabia.[73] Egyptian and Syria forces were among the first to arrive, augmenting Saudi and Gulf Cooperation Council (GCC) forces. The First Marine Expeditionary Force (I MEF) soon deployed a mechanized, air-ground task force providing a strong mechanized capability for the defense of Saudi Arabia.[74] Operational command and control took shape as CENTCOM established its forward headquarters in Riyadh.

During the initial deployment CENTCOM planners identified two C2 issues. The participation of Arab League members would require a well thought out, acceptable command structure compatible with Saudi Arabian Armed forces and western allies. Moreover, many

Arab League countries possessed equipment similar to the Iraqi's predominantly Soviet made equipment. The chance of fratricide would be extensive given equipment deployed by Egypt and Syria. C2 structure would have to support Arab force operations as well as provide for their positioning to minimize the chance of friendly fire losses. Figure 6 reflects the initial theater structure.

Theater expansion continued through December. The theater structure experienced two major changes prior to the ground campaign in 1991. The initial build-up occurred as U.S.

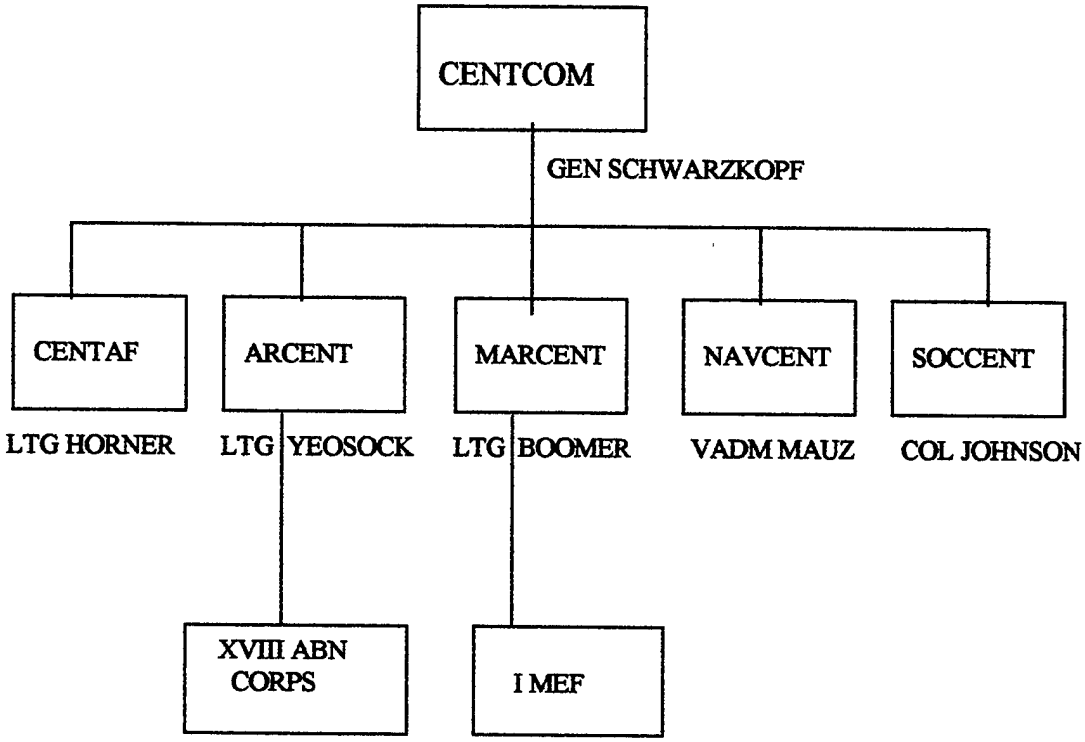


Figure 6. Command and Control Structure, Operation Desert Shield, October 1990.
Source: Department of Defense, Conduct of the Persian Gulf War, 44.

Army, Marine and Coalition forces deployed to defend Saudi Arabia from August through September. The second phase began in October as British and French forces deployed to reinforce the Coalition. The build-up for an offensive option caused the theater to expand in November and December as the President of the United States committed the VII US Corps and additional Marine forces to support an offensive capability.[75] Operational command and control also adjusted to meet theater requirements.

Initially the CINC chose to organize the command by service component.[76] CENTCOM was a relatively new Unified Command, being established in 1987.[77] Moreover, General Schwarzkopf felt he and his staff, having recently completed a contingency exercise, could best control the land forces.[78] In August and September the force was a manageable size of four corps equivalents; XVIII Airborne Corps, I MEF and two Arab Corps. The Arab Coalition forces organized as corps' to better support the ground mission and make them more compatible with U.S. forces.[79]

The deployment of forces from so many countries, both Arab and European, required a well thought out command structure. As noted in the Department of Defense report to Congress, Conduct of the Persian Gulf War, " The scope of the operation, movement of forces across great distances and the forces political, cultural complexion demanded innovative techniques . . . to ensure battlefield success."[80] One innovation was the Coalition Coordination Communication Integration Center (C3IC). The C3IC processed orders to Arab Coalition forces and ensured reporting across the entire coalition force was coordinated almost simultaneously. The Integration Center enabled CENTCOM to coordinate efforts up and down the command structure and execute near simultaneous orders and instructions

across the entire theater. The center was one of the key successes of the coalition command organization.

As forces in theater grew in November and December planners were faced with another challenge, how to adjust the C2 structure to support offensive operations. The two most likely options were by service component (as they were for the defensive phase) or by function[81] The service component approach would keep services relatively pure, delegate operations to well defined command organizations and enable the structure to easily integrate the Arab ground contingent.[82] The functional option would allow the CINC to combine like forces and systems under a single command (air, land and sea) with the Arab units having a parallel chain of command through the Saudi leadership.[83]

General Schwarzkopf decided on a combination of service and functional components at the theater level.[84] Air elements would be combined under LTG Horner, the Central Command Air Component Commander, who would serve as the Joint Force Air Component Commander or JFACC. The remaining CENTCOM elements would retain service component structure.

The decision however, did not easily resolve all the C2 issues. The land force command arrangements were a matter of concern to all nations. Several options were reviewed by CINCENT but unity of command and simplicity were GEN Schwarzkopf's underlying considerations.[85] As planning for the ground offensive continued, it became clear that, " an acceptable command structure must be reflect the participating nations national and ethnic pride."[86]

The decision on a land component command had a number of options. The U.S. Army had an operational headquarters in theater (Third Army) designed to control from three to five

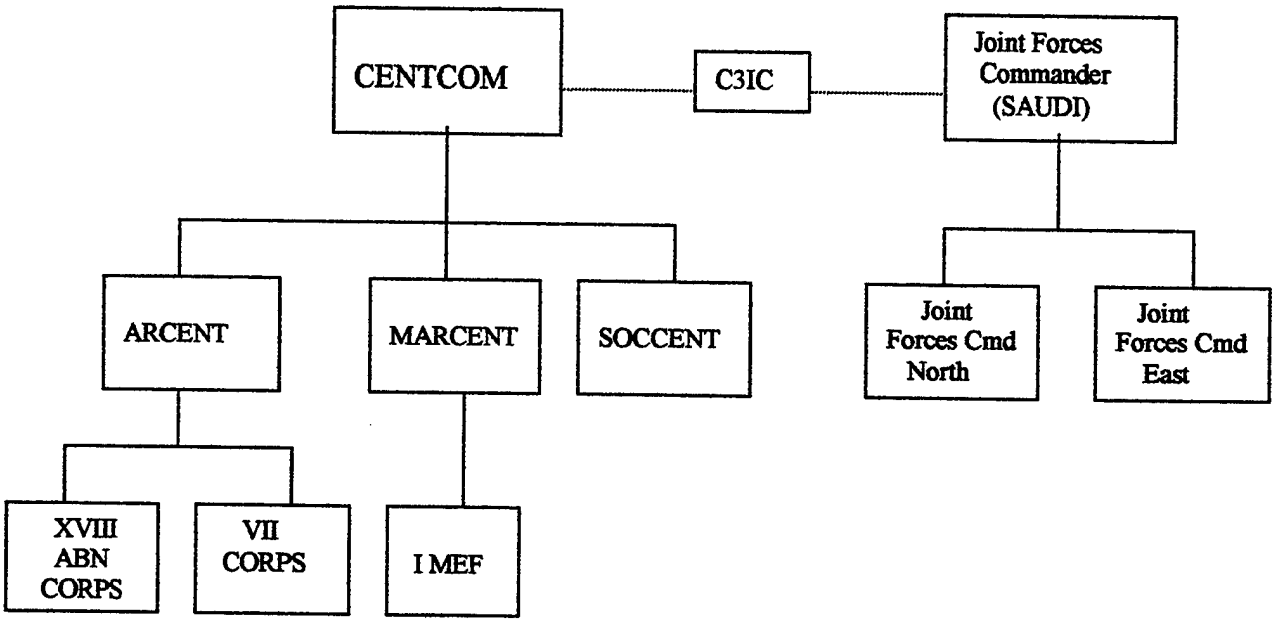
corps. Moreover, the U.S. Marines with a sizeable force ashore also had a 3-star (lieutenant general) ground commander with I MEF. However, the MEF already had a broad requirement, controlling multiple Marine divisions for the first time since Korea. Terrain objectives for the ground campaign were spread over vast distances and did not lend themselves to a single concentrated force. Finally, the land commander would require a staff capable enough to control multiple large units and simultaneously maintain parallel command with the Arab Coalition Commander.

CINCENT ultimately focused on three critical factors. He strove to achieve unity of purpose, unity of effort and simplicity.[87] GEN Schwarzkopf decided to retain land command responsibility and establish a hybrid command relationship that was functional, service component, parallel and lead nation.[88] Although complex, the land C2 structure successfully balanced many considerations to provide an efficient and effective system for fighting the land campaign. Figure 7 reflects the ground command and control structure for Operation Desert Storm.

The land command and control structure in Operation Desert Shield/Desert Storm proved to be acceptable and feasible for CENTCOM and the Arab Coalition.
The mission, numbers of subordinate corps and divisions, and coalition coordination requirements would have supported the designation of a land component commander subordinate to the CINC. However, offensive concept of the operation, the experience of the subordinate commands, the diverse ground objectives, integration of vastly different U.S. and Allied forces, the CINC's personality and the military and political sensitivities led to the CINC retaining the role of joint force land component commander.[89] Moreover, the CINC

understood an additional link in the chain of command given all the above considerations may have degraded command and control.

The ground command and control structure maintained continuity, ensured unit commanders were focused on service missions and capabilities and ensured that the chain was short enough to rapidly pass intent and orders.[90]



NOTES:
XVIII ABN Corps: 82 Airborne Div (Div), 24th Infantry Div, 101st Air Assault Div, 6th LT Armor Div (Fr)
VII Corps: 1st Armor Div, 3d Armor Div, 1st Infantry Div, 1st Cavalry Div, 1st Armor Div (UK)
I MEF: 1st Marine Div, 2d Marine Div, 3d Marine Air Wing
JFC North: 4th Armor Div (EG), 3d Mechanized (Mech) Div (EG), 9th Armor Div (Syria), 15th Brigade (Bde) (Kuwait), 20 Bde (Royal Saudi Land Force, RSLF). 4th Armor Bde (RSLF)

JFC East: 8th Mech Bde (RSLF), 10th Mech Bde (RSLF), Mech Bn (Qatar), 2d Mech Bde (SANG)

Figure 7. Ground Forces Command Structure, G-Day, Operation Desert Storm
Source: Department of Defense, Conduct of the Persian Gulf War, 232,234.

DOCTRINE REVIEW

> An army's fundamental doctrine is the condensed expression of its approach to fighting campaigns, battles and engagements. Tactics, techniques, . . . organization, equipment and training all derive from it. [91]

The basis of doctrine comes from the careful application of theory and history. Furthermore, doctrine, through the synthesis of history and combat experience, defines broad methods for our organizations. Given the military's experiences from World War II, Korea, Panama and the Gulf War, it would seem that doctrine for joint command and control organization and operations would be well established. However, a review of joint manuals found a lack of information on the joint force land component commander (JFLCC).

In conducting research on the JFLCC, joint publications often provided references for the JFACC while providing little more than concepts for the JFLCC. A review of Joint Publication 0-2, Unified Action Armed Forces found that it is designed to, "provide the doctrine and policy governing the unified direction of forces. It serves as the policy document for all command relationships and other authorities directed by law."[92] Further analysis of the UNAAF found only broad guidance for the CINC or joint force commander for theater or joint task force organization. The focus of the UNAAF is on the six different options the CINC or JFC may use in organizing the theater. However, the publication provides few considerations other than the fundamentals of unity of effort, unity of command and simplicity.

Joint Publication 3-0, Doctrine for Joint Operations, is considered the "keystone document for joint operations."[93] The current manual, published in 1995, provides principles and doctrine for joint operations and is one of the first and only manuals to discuss both joint and multinational operations. [94] Joint Pub 3-0, provides more specifics to assist joint

commanders but does not include many of the considerations needed to develop complex C2 structures. The manual states, " the manner in which JFC's organize their forces directly effects the responsiveness and versatility of joint operations. JFCs should organize based on vision and concept of the operation. Organization of forces also needs to account for interoperability with joint forces."[95]

The most notable guidance in Joint Pub 3-0 is the concept of flexibility. The manual stresses to JFC planners that flexibility must accompany simplicity for successful command and control. Moreover, the manual illustrates that the JFC must have the capability to build or adjust his C2 structure as needed to meet the unique requirements of the theater.

> Unity of effort is enhanced through the application of the flexible range of command relationships in the UNAAF. Joint force command relationships are an array of options JFCs can use to adapt the organization of assigned forces to situational requirements.[96]

As the analysis of previous operations in World War II and Operation DESERT SHIELD/DESERT STORM indicated, the final and generally successful structure was one that the Supreme Commander or CINC adapted based on the considerations in theater. Unfortunately, those factors are not present to compliment the discussion in Joint Pub 3-0.

The specific planning manuals also do not provide sufficient considerations for establishing a particular joint C2 structure. Joint Publication 5-0, Doctrine for Planning Joint Operations is considered the "keystone document of the joint planning series."[97] The manual provides detailed information on planning major operations and campaigns, and like Joint Pub 3-0, takes time to discuss both multinational and interagency operations. However, it does not provide much assistance for establishing the control of these operations. That information is found in later manuals of the planning series.

The most notable joint manual on command and control is Joint Publication 3-56 (DRAFT), Command and Control Doctrine for Joint Operations. It is the manual specifically written to assist the CINC or JFC in establishing or changing C2 structure and relationships. It describes broad command and control guidelines and typical joint staff organization and functions. Moreover, it is designed to provide procedures to consider while "organizing, planning, coordinating and conducting joint operations."[98]

Joint Pub 3-56 (DRAFT) provides a very close look at joint command and control. The manual discusses the six theater C2 options in detail and provides options on when each might be employed. Moreover, the manual is the first to provide C2 organizing criteria other than the basic of unity of command, unity of effort and simplicity. The manual however, falls short in providing many of the criteria found in the history of joint operations. Moreover, the manual does not provide a discussion of coalition or combined command considerations in any detail. Given our propensity to conduct combined operations it seems these considerations should be discussed along side joint command and control factors.

CONCLUSION and RECOMMENDATIONS

> The only way to prevent ossification of the mind it to accept nothing as fixed, to realize that the circumstances of war are ever changing, and that consequently, organization, administration, strategy and tactics must change also. . . .[99]

The quote from British theorist J.F.C. Fuller reminds us that war and conflict are always changing and therefore we must be prepared to change our strategy, tactics and organization in order to meet the requirements of future conflicts. Although technology significantly improved the capability and lethality of air power, experiences from World War II and the Gulf War illustrate that organized land power will be required to resolve conflicts for the

foreseeable future. In view of recent military force cuts and the outburst of regional and ethnic conflicts, it is clear that future land operations will require a flexible, innovative command structure to control joint and coalition forces.

Given the facts above and current doctrine, which provides the CINC six options for organizing his forces, the purpose of this paper was to determine the considerations for employing one of those options, the joint force land component commander. As illustrated by a recent joint study on the JFLCC, "the toughest decision for a CINC or JFC is how to organize for combat; establishing the chain of command and responsibility."[100] Likewise Joint Publication 3-0 addresses the importance of the topic by stating that, "the manner in which JFCs organize their forces directly affects the responsiveness and versatility of joint operations."[101] Therefore resolution of this issue required an analysis of theory, history and doctrine.

Theory illustrated that theaters, like business institutions, usually have a life cycle. As they go through the life cycle, the command structure normally changes to meet the new requirements of the organization. Theory identified four fundamental considerations for command structure: unity of command, unity of effort, span of control and simplicity. Moreover, the commander or leader must apply balance when establishing and changing command structure. He must balance the improvements in efficiency with the costs of making the change. Although another layer of command may be indicated by doctrine, the commander must balance that against having a chain of command that is too long. As Clausewitz warned, " every additional link in the chain of command reduces the affect of an order in two ways: by the process of being transferred and the time needed to pass it on."[102]

The analysis of history indicates that a theater of war or operations exists much like a theoretical organization. Moreover, theaters of war possess many of the same factors for changing the command structure such as mission, battlefield conditions (in terms of objectives and their location), span of control, experience, and national/political sensitivities. The lessons of World War II identified situations when it was appropriate for a JFLCC and situations when the CINC's retention of land command was also suitable. The Pacific Theater showed that a large joint land command was feasible, but must have a truly joint staff.

Additional lessons of history come from Operation Desert Shield/Desert Storm. Many of the same command and control considerations found during World War II were used by General Schwarzkopf in deciding his command structure. In addition to unity of command and span of control other factors were considered such as service and coalition rank structure, political/cultural sensitivity and the CINC's personality. Moreover, Desert Shield/Desert Storm again demonstrated that the CINC's retention of land command might in fact be the simplest way to achieve unity effort and effective command and control.

Several recommendations evolved from analyzing the JFLCC. First, joint land component command is a valid C2 option for the CINC or JFC. The U.S. experiences from previous conflicts reflect the value of the JFLCC. Moreover, lessons learned demonstrate that the CINC's retention of JFLCC responsibilities is also a valid course of action. Therefore, the CINC and JFCs should consider both options when establishing theater land command structure.

Second, joint doctrine should be updated to reflect the additional considerations identified in determining the land command structure. Current manuals focus on the fundamentals of unity of command, unity of effort, span of control and simplicity but other

factors such as national sensitivity, cultural situation and commander's experience should also be addressed to help planners make more effective recommendations for land C2. In addition, Joint Publication 3-56, Command and Control of Joint Operations should be updated with the considerations identified in this paper. Moreover, the Joint Staff should revise Joint Publication 3-56 to reflect considerations for combined and coalition command along side the discussion of joint land command. Currently, multinational operations are predominantly discussed in separate manuals. In the future, as demonstrated by past and ongoing operations, the United States is most likely going to fight as part of a coalition. Therefore doctrine should not separate discussions of joint and coalition command.

Finally, joint doctrine and manuals on techniques and procedures should be updated to reflect ongoing methods from the respective CINCs. The current use of a deployable joint task force augmentation cell (DJTFAC) by U.S. Pacific Command is one example of how CINC's are trying to provide the joint force commander an integrated, fully capable joint staff. The DJTFAC deploys with elements from throughout the CINC's staff to enable the JTF headquarters to become a joint staff. Techniques such as the DJTFAC would allow a service headquarters such as an Army corps or Marine MEF to quickly become a joint force land command.

As the U.S. military looks forward the only thing certain about the future is its uncertainty. This was reaffirmed by our recent participation in operations in the Middle East and the Balkans. In each situation, land combat power was analyzed as one of the possible solutions to the conflict. As stated in Joint Publication 3-56, "future military operations will continue to be characterized by challenges to U.S. National Security. U.S. forces will likely perform a variety of missions across the range of military operations and predominantly with

coalition partners."[103] Therefore, as we look to future operations, joint doctrine must provide the CINC and joint force commander easily understood considerations for establishing a joint and combined land component command.

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