STRATEGY RESEARCH PROJECT

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# ENHANCING ENGINEER JOINTNESS AND FUTURE JOINT ENGINEER C2 FOR GLOBAL ENGAGEMENT

BY

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# ENHANCING ENGINEER JOINTNESS AND FUTURE JOINT ENGINEER C2 FOR GLOBAL ENGAGEMENT

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## ABSTRACT

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President Clinton clearly outlines his priorities in our National Security Strategy that America must continue to be an unrelenting force for peace throughout the world. This project analyzes the Global Engagement Strategy through a jointness review of the Goldwater-Nichols Act of 1986 to highlight Peace Operations and MTW Readiness. The results of the analysis with historical examples outline command and control of joint engineers as an issue. This project recommends a follow-on Goldwater-Nichols Act to improve joint engineering through the functional alignment of engineers by establishing a Unified Engineer Command (USENCOM). Additional recommended improvements for enhancing engineer jointness are: (1) Update the current joint doctrine on command and control of engineers; (2) Establish a strategic theater-level engineer Joint Mission Essential Task List (JMETL); and (3) Keep the heavy division Engineer Brigade in the Force XXI design for 2010 and beyond.

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## PREFACE

I participated in Operation Joint Endeavor (IFOR) while assigned to 1st Armored Division in Germany. My observations on MTW readiness, joint engineering, and critical engineer mission support are based on that mission and several other OCONUS deployments. During the IFOR mission in Bosnia, I became convinced that Department of Defense engineer jointness needed improvement beyond the normal interoperability requirements. Additionally, the decline of MTW readiness since 1990 has impacted our military capability, especially for engineers. The challenge of providing seamless joint engineering support (C2 and capabilities) to the warfighting CINCs throughout the entire spectrum of war is a key to battlefield success in the future. We need defense reform in many areas to improve our overall readiness, however there are certain efficiencies, changes, and procedures the military can take now in order to improve readiness. As part of that reform to improve readiness, I argue strongly throughout this paper for enhancing engineer jointness and streamlining joint engineer command and control.

## ACKNOWLEDGEMENTS

I want to acknowledge the loving support of my wife (Lana), and my two children (C.J. and Nicolette). They make our Army lifestyle enjoyable and worthwhile. Despite all of the long nights away from home on deployments, FTXs, and TDY trips, they provide the stability and love for a great family environment. This project is dedicated to them, as they are truly honorary engineers of the regiment.

*"The mere absence of war is not peace."*

John F. Kennedy[1]

## INTRODUCTION

Defense reform remains a primary catalyst for shaping future military operations in 2010 and beyond. The scope and level of reform to which they are enacted are the key issues for analysis of our future nation security mission. Effective reform must extend to all functional areas of the military in order to ensure dominance of the future battlefield. Joint engineering is a tremendous combat multiplier that currently needs reform in order to provide better mission support to the strategic combatant commander.

Engineer support to the warfighting CINCs has been stretched due to the high pace of operational deployments since 1990 and the increased number of individual Service missions to their engineers. The CINC's strategic theater-level engineer tasks often compete for engineer assets with the traditional Service-oriented requirements. This dilemma of authority and prioritization can be reversed by simultaneously increasing engineer jointness and improving command and control organizational structures. These recommended improvements will make engineer support seamless to the warfighter throughout the entire spectrum of mission support.

How did we get to this point? The overall strategic picture must be understood to find realistic solutions for simultaneously improving joint engineering and major theater war (MTW) readiness. An analysis of the National Security Strategy in relation to the Goldwater-Nichols Act of 1986 and current pace of Peace Operations must be accomplished to identify the issues. The results clearly point to the functional alignment of joint engineers to solve the strategic theater-level engineer mission support problems for the warfighting CINCs. As a result, this proposed reform will contribute to improving our overall MTW readiness and infrastructure posture.

## GLOBAL ENGAGEMENT STRATEGY AND CURRENT ISSUES

President Clinton clearly outlines in our National Security Strategy (1998 and 1997) that America must continue to be an unrelenting force for peace throughout the world[2]. His strategy of Global Engagement is one of his major tenets for accomplishing this goal. This strategy is based on the concept that a peaceful international environment is shaped through deterrence, peacetime engagement activities, and active participation with our alliances[3]. Additionally, Global Engagement promotes stability, the peaceful resolution of problems, and assists to prevent conflict. The Armed Forces of the United States are key players in keeping America strong, secure, and prosperous for accomplishing our National Security objectives. The US Armed

Forces must respond to the full range of military operations other than war (MOOTW) from humanitarian assistance to major theater war (MTW) while simultaneously conducting smaller-scale contingencies[4]. As part of the President's Security Strategy, the US military conducts various activities under the peacetime engagement umbrella. Peacetime engagement is officially defined as deterring and containing threats through cooperative security arrangements and activities around the world to enhance US security[5]. Peace Operations are the main component of the peacetime engagement strategy. Peace Operations are normally divided into three general areas: (1) diplomatic actions (peacemaking); (2) Traditional Peacekeeping (non-combat operations); and (3) Forceful Military Actions (peace enforcement)[6]. The objective of a peace operation is to achieve a peaceful settlement among the belligerent parties, primarily through diplomatic action with follow-on military actions if the diplomatic actions are insufficient or inappropriate[7].

This overall strategy has impacted negatively on our Cold War structured force, especially engineers. There are two main issues that should be analyzed in accordance with the President's current Global Engagement strategy. These issues are MTW Readiness and Peace Operation operational tempo (OPTEMPO). The first issue for discussion is MTW Readiness. The following statement by General Marshall reflects the philosophy of several

administrations through the peacetime transition period following World War II:

***"We are now concerned with the peace of the entire world. And peace can only be maintained by the strong."***
Gen. George Marshall[8]

The challenge to the military was to stop the rise of communism and be prepared for a regional conflict. Today's military mission is not as clear. The traditional role and current stated mission of being prepared to conduct two near simultaneous MTW conflicts does not mutually support the President's Global Engagement strategy. Military readiness for a two MTW scenario is suffering due to the duration of support and the simultaneity of Peace Operations.

The seriousness of the effects on MTW readiness are seen by the extraordinary measures the Armed Forces are taking in order to support the growing number of peace operation commitments and their duration. Examples of these efforts are:

1. Deferring maintenance services on planes, ships, and forward deployed/prepositioned equipment to keep assets on station longer or to save maintenance dollars to cover budgetary shortfalls.

2. Increasing OPTEMPO of reserve component soldiers.

3. Rotating CONUS-based units into the European Command (USEUCOM) area of responsibility (AOR) for duty in Bosnia and other North Atlantic Treaty Organization (NATO) mission areas.

4. Canceling deployment rotations to a Combat Training Center (CTC) such as NTC, CMTC, or JRTC for MTW scenario training due to units being deployed elsewhere or to use the saved training dollars to cover other budgetary shortfalls.

5. Requesting additional funds from Congress to reverse the growing downward trend of low material MTW readiness posture on the monthly unit status reports.

6. Lowering recruitment and reenlistment standards to reverse the growing trend of enlisted soldiers leaving the Army due to Peace Operations OPTEMPO and loss of benefits.

7. Using current year defense appropriations to fund peace operation deployments at the expense of infrastructure maintenance and force modernization.

The impact of these overall readiness problems directly affects all levels of joint engineering. In addition to the common issues listed above, joint engineers are experiencing the following additional mission-related problems:

1. Force Beddown is not treated as a strategic theater-level or as a joint engineering mission, which directly affects force protection and initial entry operations into a theater.

2. Mission creep during Peace Operations increases the engineer workload beyond the planned timelines for deployment established by the separate Service Chiefs.

3. More DOD civilian engineers are being deployed on Peace Operations, which takes them away from their normal infrastructure sustainment mission.

4. Reduced MILCON funding projections diminishes badly needed infrastructure repairs and replacement.

5. Joint engineering doctrine for interservice support is very limited, which confuses authority and prioritization of mission taskings.

6. The military drawdown of the early 1990s deactivated a disproportional high number of construction units, which causes a higher OPTEMPO on our current engineer units.

7. The development and procurement of engineer systems traditionally suffer from a lower priority among other combat systems. Reallocation of force modernization funds exacerbates this problem for updating engineer equipment.

These problems impact immensely on our military forces and joint engineers, as units try to sustain their conventional warfighting skills and the military infrastructure. In addition to our traditional MTW role, the Army is now used as the primary strategic force during Peace (and MOOTW) Operations. As a result, our military MTW readiness and joint engineering support continue to decline due to the heavy workload of our current National Security Strategy.

The second issue for discussion is the current high pace (OPTEMPO) and duration of Peace Operation deployments. The civilian leadership of the country must temper their desire to intervene globally with caution before entering into long-term commitments of US military resources into a specific region of the world. US military resources currently remain in Bosnia, Macedonia, Syria, and Korea. The current pace (OPTEMPO) of Peace Operations adversely affects the military's ability to accomplish its primary mission of MTW conflict preparedness, as reflected in the downward trend in all areas of readiness measures. The extensive utilization of military forces is explained below:

1. The US military deployed 32 times for real-world operations from 1990 to 1998 as compared to only ten times from 1945 to 1989[9].

2. Joint task forces have been committed to Operations Provide Comfort and Southern Watch since the early 1990's. Additionally, US military forces remain in Bosnia since 1995, in Honduras since 1982, and in the Sinai since the early 1970's.

3. In 1998, we had the equivalent of four divisions supporting missions (Bosnia, Kuwait, Haiti, Honduras, Sinai, and Macedonia) under the global engagement strategy[10].

This massive increase in Peace Operation OPTEMPO (deployment and duration of support) is sending shock waves throughout the entire total Army. Common unit level problems are:

1. Lower retention rates, especially for first term soldiers, mid-grade NCOs, and junior officers.

2. Less "muddy boot" leadership time in tactical units due to increased demands for mid-grade leader qualified personnel serving in non-tactical (TDA) positions.

3. Drastic unit budget reductions for maintenance and sustaining MTW readiness posture requirements.

4. Consecutive overseas deployments within short time periods for junior personnel despite being assigned in CONUS.

5. Little or no recovery/retraining time following a peace operation due to OPTEMPO.

6. Poor unit performances at our combat training centers due to lack of MTW scenario home station training, personnel turbulence, and unpredictable deployments.

The military can not protect vital national interests or win a two MTW scenario under the current readiness posture. The real issue centers on the balance of force utilization. The traditional role of the military is full-spectrum conflict deterrence and to be trained to fight and win our nation's wars if that deterrence fails. This directly contradicts the current pace of Peace Operations that are unrelenting (high OPTEMPO), ambiguous (a vital national interest or simple humanitarian assistance), and possess unclear end state exit strategies for military forces (the faulty one year Bosnia exit strategy). As a result of our current MTW readiness status, defense reformers look for efficiencies by changing our Cold War structured

organizations and procedures to prepare for the future. Our jointness in Peace Operations, especially for engineer support needs improvement in those areas previously discussed in order to assist in solving our current MTW readiness problems. The downward readiness trends are reversible, but action must be taken now to save American lives in future conflicts and to sustain our national power abroad.

## GOLDWATER-NICHOLS ACT OF 1986 VERSUS PEACE OPERATIONS

***"The world is not static, and the status quo is not sacred."***
Harry Truman[11]

The Goldwater-Nichols Department of Defense Reorganization Act (GNA) was passed in 1986, however the dramatic increase of MOOTW missions occurred four years later. This allowed enough time for the Department of Defense to implement changes mandated by this congressional act during the full spectrum deployment for Operation Desert Storm (Kuwait). GNA had fifteen specific purposes for reorganizing the Department of Defense[12]. There are three specific components of the 1986 congressional act that impact Peace Operations:

1. Enhance the warfighting capabilities of US military forces by strengthening the authority of the unified and specified combatant commanders.

2. Clarify the operational chain of command.

3. Provide for more efficient use of resources.

Although jointness was successful during MTW operations, it was questionable during MOOTW missions. The strategic deployment and initial entry operations are joint in nature, but the actual Peace Operation mission rapidly becomes a single-Service operation (excluding strategic movement of logistics). My assessment is that Peace Operations are not meeting the intent of the GNA based on those three components. The first component of GNA to analyze is strengthening the authority of the combatant commander. The January 1998 Unified Command Plan (UCP) clearly outlines that the warfighting CINC's do not command any UN or multinational forces performing Peace Operations in their AOR. This Peace Operation stipulation does not reinforce the command responsibility of the CINC and definitely does not achieve strategic success for global engagement in his AOR. Another form of this questionable command authority issue occurred during Operation Joint Endeavor (Bosnia). The Implementation Force (IFOR) reported to two Corps-level headquarters and USEUCOM. The duplication of effort and micromanagement of overall operations in Bosnia became stifling for the Task Force Eagle (TFE) staff, which was the US force assigned to IFOR, to synchronize coordination on strategic theater-level requirements and daily operational support. Additionally, there was no Joint Task Force established in this NATO operation, as normally done during US joint operations. In particular for engineers, the normal joint engineering boards for synchronizing strategic theater-level

requirements was missing. As a result, the Allied Rapid Reaction Corps (ARRC) staff became ineffective for synchronizing and supporting the operations of Task Force Eagle in Bosnia.

The second component of GNA to analyze is clarifying the operational chain of command. Since there was no JTF headquarters, US Military Service components controlled the utilization and length of service in country for critical assets such as engineers. Force beddown became a major issue after the historical crossing of the Sava River during the initial entry operation. The construction of base camps, force protection facilities/ obstacles, and counter-mine operations in the zone of separation (ZOS) were the main engineer missions for the first three months in Bosnia. Three major command and control (C2) constraints directly affected the strategic theater-level joint execution of the base camp construction mission:

1. The Air Force Red Horse Squadron (construction) accepted no missions outside the Tuzla Air Base perimeter.

2. The Navy's limited timeline (approximately 60 days) controlled the base camp construction capability of the Seabee Battalion in the 1st US Brigade (TFE) sector.

3. The tactical situation was not secure for the Logistics Civilian Augmentation Program (LOGCAP) contractor to use local construction labor.

The resulting effect was a huge workload on the already over committed Army Combat Heavy Battalion (construction) and limited construction capabilities of the Army Combat Engineer (Sapper) Battalions. Therefore, the initial entry risk factor remained extremely high due to the longer construction times for erecting

force protection facilities and base camp security requirements. The "jointness" (versus interoperability) of engineer operations did not effectively accomplish the mission as intended by GNA.

The third component of GNA to analyze is the efficient use of resources. Normal reporting and logistical support is severed under a complicated command and control relationship due to bureaucratic coalition logistical systems. Therefore, normal efficiencies achieved through US military joint operations are lost to the coalition style of Peace Operation support systems that lack renovation from current technology and updated operational procedures. This clearly does not meet the intent of the GNA for more efficient use of resources.

The probability remains high that NATO and other coalition alliance type of Peace Operations will increase in the future. Therefore, the US military must implement normal joint procedures within each theater of operations. One of the major success stories from Operation Desert Storm (Kuwait) was the joint warfighting capability provided to USCENTCOM (Central Command). GNA clearly accomplished its purpose during this full spectrum war example. However, the US military needs to make more improvements in joint, combined Peace Operations.

## JOINTNESS: GOLDWATER-NICHOLS ACT II AND USENCOM

The nature of modern warfare demands that US forces fight as a joint team. We must be fully joint, which is a concept

requiring more than interoperability. Jointness is a concept used frequently among the Services, but does not officially appear as a defined term in any joint publication. However, jointness is defined in this paper as the art of combining capabilities from the different military Services to create an effect that is greater than the sum of the parts.[13] Enhancing jointness requires wholesale system changes institutionally, organizationally, intellectually, and technically. Therefore, recommended wholesale changes to our current Cold-War engineer force structure include a streamlined unified engineer command, joint mission training, joint officer/NCO education, establishing strategic theater-level engineer tasks, and cross service assignments. They are efficient ways to improve joint engineering for the future. However, another form of the GNA will be required to implement the required changes due to Title-X responsibilities, individual Service self-interests, and prioritization of limited engineer assets. No CINC or Service Chief will ever volunteer the release of engineer assets due to their heavy AOR and Service Component construction and mission support requirements.

As done in 1986, Congress will have to mandate these new initiatives to enhance jointness among the four Services. The first objective of the follow-on GNA is to align the State Department regional jurisdictions of the world with the Unified Command Plan. This will increase efficiency of economic and political efforts (with military support) in an AOR. The second

objective for the follow-on GNA is to create a Unified Engineer Command (similar to USTRANSCOM: Transportation Command) for synchronized utilization of all engineers among the specified commands and for worldwide prioritization of DOD construction and infrastructure funding. The proposed ENCOM organization would have three major components:(1) District (civil and military construction); (2) Base Operations (Maintenance and Housing); (3) Field Forces (DOD units). These three components provide strategic national and strategic theater level engineer planning and force provider support to the CJCS and the warfighting CINCs. Additionally, the new organization still supports the Title-X requirements of the four Service Chiefs. Installation work requests for maintenance and new work funding remains the same, as these requests currently flow from the installation to the Major Command (MACOM),and then to the Service-level Headquarters. The only change for this flow is the new requirement for the Service-level staffs to pass their consolidated construction requirements to ENCOM for DOD-wide prioritization and approval by the CJCS. Therefore, the CJCS only has to coordinate with one CINC (USENCOM) instead of the four Service Chiefs. The resulting effect provides the capability for the Armed Services to approach Congress with "one voice" for the funding of total US military construction requirements.

Warfighting CINCs retain their current engineer staff sections under the ENCOM concept. However, the force provider

role of engineer units switches from Atlantic Command (USACOM) to ENCOM. This new concept enlarges the geographical availability of current engineer forces from CONUS to DOD-wide. A key to success will be the use of liaison officers at critical time periods. ENCOM liaison cells would augment the warfighting CINC's staffs during crisis action planning and certain phases of deliberate campaign planning. This linkage ensures requirements are fully understood and synchronization for available engineer forces is done DOD wide instead of within a single AOR.

Where does ENCOM fall in the coarse of action development process for campaign planning? It lies in the same coordination step as ACOM and TRANSCOM. A warfighting CINC develops a concept of operation and sends it to his Service Components for developing a list of required capabilities and a generic force list. The CINC then sends the detailed requirements to JCS, ACOM, ENCOM, and TRANSCOM, while the Service Components send a info copy to the Service Components supporting ACOM, ENCOM, and TRANSCOM. This new configuration begs the question of why should joint engineering support be pulled from the ACOM force provider role. Engineer assets are critical at all three levels of war due to their mission and the limited number of available units that survived the disproportionate downsizing following the Cold War. Therefore, the CJCS needs the capability to shift assets across the full spectrum of DOD requirements. For example, there were several engineer (construction) assets available in the Pacific

Command (PACOM) available to temporarily assist TFE as the main effort of DOD during the initial Force Beddown phase of the IFOR campaign in Bosnia. However, engineer support planning was stretched in Bosnia due to the self limiting factor of using only EUCOM assets for IFOR and the lack of ACOM capability to coordinate for outside AOR engineer units and district engineer support to IFOR. This example makes a clear reason for separating the engineer force provider role from ACOM to ENCOM. Additionally, ACOM has no current role in planning or execution of DOD construction for infrastructure support or base operations. Therefore, the consolidation of the engineer force provider role with the infrastructure and base operations construction (civil and military) role will improve joint engineering across the entire spectrum of DOD requirements. In summary, ENCOM is not a command and control headquarters with all DOD engineers assigned to it. However, it is the engineer force provider to all of the warfighting CINCs and funding coordinator for all DOD construction and infrastructure maintenance to support the four Service Chiefs.

A critical step for implementing this new organization is how to create it without adding personnel spaces to the current force manning caps. An expanded Army Corps of Engineers structure could form the basic organization to create USENCOM. Since the Army Corps of Engineers already handles all Air Force and Army military and civil construction, the Navy MILCON program and

engineer system could be easily wrapped into the Army Corps of Engineers umbrella of control. The original intent of the separate programs was directly due to geographical location of forces. This is not a factor under USENCOM, as all of DOD is supported by USENCOM. A joint military engineer staff would be formed with augmentation from DOD civilians currently assigned among the four Services. The cost savings from duplicate Service support staffs, administration requirements, and building leases would provide additional funds and manning positions for each Service to put back into their readiness accounts for supporting future Global Engagement deployments. Some limited cost savings could be obtained from consolidating civilian administrative positions currently authorized on the four Service-level engineer staffs. Depending on the final geographical (civil and military construction) boundaries of the USENCOM (expanded previous Corps of Engineers) AOR, the number of engineer districts would increase from the current Army Corps of Engineers organization. USENCOM manning policies should include opening District command billets to all engineer officers from all four Services. This concept includes inter-service assignments of Base Civil Engineer and Director of Public Works positions. Since all procedures for work requests, funding, and planning are standardized under USENCOM, any engineer officer can fill these critical civil engineering positions. Additionally, the total number of engineer Flag Officer positions could be reduced by one or two per Service

due to the consolidation of all four Services into USENCOM. This would cover the bill for creating a new four-star engineer billet as CINC USENCOM.

Second and third order effects of the new unified Engineer Command (USENCOM) concept include three specific areas: Equipment Modernization; Personnel Assignments; and Deployments. The purchase of common engineer equipment among the Services will decrease initial purchase costs and increase interoperability. Overall equipment maintenance costs will decrease due to common repair part capabilities and transportation cost reductions. Engineer officers (branch qualified company grade and field grade) from all of the services could be assigned throughout the entire US military, which would increase engineer "jointness" and facilitate training and interoperability to support the warfighting CINCs. Duplication of interservice roles can be streamlined for additional cost savings on deployments, while still providing strategic engineer capabilities in a timely manner to enhance mission accomplishment. The functional alignment of all joint engineers into USENCOM provides the CJCS a more efficient method for supporting all three levels of engineer requirements: Strategic, Operational, and Tactical. Additionally, this reform efficiency improves engineer MTW readiness despite limited engineer resources and dwindling construction funding in the future. Also, the new Unified Engineer Command (USENCOM) concept meets six of the seven elements outlined in Joint Vision

2010 for Full Spectrum Dominance capabilities: High quality people, innovative leaders, joint doctrine, joint training and education, new agile organizations, and coalition/ interagency operations. Therefore, establishing USENCOM will improve joint engineering by enhancing utilization of engineer capabilities for supporting the warfighting CINCs and the Title-X responsibilities of the four Service Chiefs.

## THE FUTURE: 2010 AND BEYOND, FORCE XXI, AND JMETL

***"We will never be able to contribute to building a stable and creative world order until we first form some conception of it."*** Henry Kissinger[14]

As outlined by Dr Kissinger, we need to understand the future to properly prepare for it now. Our military future is outlined in the full spectrum dominance of Joint Vision 2010, where the three future roles for the military are[15]:

(1) Peacetime engagement

(2) Deterrence and conflict prevention

(3) Fight and Win

It is interesting to note the subtle emphasis towards moving the US military into more non-traditional roles in operations other than war. This concept supports two of the three national interests outlined in the current National Security Strategy: important national interests and humanitarian interests. Although the survival of our nation was not at stake, the President has

increased the deployment of the US military by 300% since 1990 to sustain world order, stop violation of human rights, and relief of natural and man-made disasters[16]. This becomes important to military leaders as we try to "shape the force" for the future. The military must continue to explore new ways to make jointness more effective and produce more cost savings due to the reduced defense budget projections in the future. Future operations will be joint, in fact most will be combined as coalition alliances continue to increase. Real joint vision that drives future programmatic requirements is new and signals the potential erosion of prerogatives of the separate military services to train, organize, and equip their forces[17]. Incorporating this new vision with the President's Global Engagement Strategy, requires continued landpower presence for accomplishing the nation's political aims. Therefore, the US military must sustain our war fighting capabilities in order to prevent challenges from third world aggressors and near-peer nations. In contrast, the constant review of the national "Guns versus Butter" economic concept (defense versus domestic spending) negatively impacts our role in the President's security strategy. Congress must stop downsizing the Armed Forces to prevent higher risk levels in the year 2010. It is cheaper to pay now with more funding for defense readiness instead of later with blood from our fallen military sons and daughters.

The Army conducted several large-scale experiments (Army Warfighting Experiment: Force XXI) during the past two years to define our future division level force structure and capabilities. Unfortunately, the new Army heavy Division Force XXI model does not enhance future engineer mission support and discounts lessons learned from past full spectrum wars and Peace Operation deployments. It appears that the third Combat Engineer (Sapper) battalion has returned to the new organizational structure. However, the elimination of the Division Engineer Brigade (DIVENG) headquarters is a poor decision and returns the force back to post World War II and Vietnam time periods of dysfunctional engineer command and control within the heavy divisions. The main reasons are:

1. Corps slices of engineer units with specific capabilities will continue to augment the division mission within sector.

2. Establishing priorities of work within the division and assignment of missions to the Corps slice elements are confused and inefficient without an engineer Colonel (dual hatted) as the Division Engineer and Engineer Brigade Commander.

3. Keeping the three Combat Engineer (Sapper) battalions in direct support (DS) to the three maneuver brigades allows the division commander the flexibility to shift engineer assets throughout the entire division area as the tactical situation changes.

4. The Engineer Brigade brings an operational level viewpoint and mission focus to the entire division area similar to the Division Artillery and Aviation Brigades.

The Brigade Combat Team (maneuver) concept is not broken, so why change the organization to an organic command structure and lose the division-level mission support of the Engineer Brigade?

The new Force XXI model attempts to disguise the downsizing by increasing the Assistant Division Engineer Staff to a 28-soldier cell while eliminating the 55 soldier Engineer Brigade Headquarters. Is the cost savings of 27 soldiers worth the cost of losing a division level mission focused brigade commander specifically in charge of the total engineer mission support strategy and all joint engineering assets deployed into the division sector? This is a bad mistake for the future, as we witnessed the rapid expansion of the 1st Armored Division Engineer Brigade (IFOR) increase from two battalions to five (+) battalions for Operation Joint Endeavor (Bosnia). The Engineer Brigade Commander provided daily prioritization of work effort throughout the entire division area, implemented strategic theater-level planning for end state accomplishment, and kept sustainment of five engineer battalions at effective operational readiness levels in the harsh conditions of Bosnia. This same type of expanded role was experienced by Corps-level Engineer Brigades and Group Headquarters during Operation Desert Storm (Kuwait). The number of engineer units operating in a division sector always increases for missions across the entire spectrum of war. Therefore, a division commander needs the dual-hatted DIVENG Commander to provide the required engineer C2 because the division operational level engineer mission includes more than the Sapper Battalion support to the three maneuver brigades. Another key C2 consideration id that DIVENG headquarters are

currently used as separate C2 cells for different roles during MTW and MOOTW missions. Examples of DIVENG C2 missions include the TFE river-crossing mission for IFOR into Bosnia and the deliberate breach operation plan for 3rd Infantry Division during Operation Desert Thunder. The current skeleton DIVENG organization structure barely meets the overall mission requirements today. Eliminating the DIVENG will cause a division commander to create a self-supporting C2 task force headquarters each time he needed a separate engineer C2 cell under the new Force XXI design. Therefore, the Army of 2010 (and beyond) needs the Engineer Brigade in the heavy divisional structure. The elimination of 27 Engineer Brigade headquarters soldiers is not an effective cost saving to the heavy division fight of the future. In summary, the current 55-soldier DIVENG is a force structure bargain for the amount of capability it delivers to the division commander's operational-level mission.

Another method for increasing future engineer jointness is to establish an engineer Joint Mission Essential Task List (JMETL). The term JMETL is defined as a joint force commander's list of priority joint tasks that constitute his essential warfighting requirements.[18] Reviewing plans and orders identifies the essential tasks, which establishes conditions and measurable standards for training. Unfortunately, limited strategic theater-level engineer tasks exist on the Universal Joint Task List (SEP96) or in any of our joint publications. In fact, current

joint engineer doctrine merely outlines unit capabilities of the four Services for performing twenty-two civil engineering support tasks.[19] Additionally, the draft edition of Joint Publication 3-34: Engineer Doctrine for Joint Operations does not attempt to outline any strategic theater-level engineer tasks either. Therefore, we need to identify those strategic theater-level engineer tasks required by most warfighting CINCs in order to shape the capabilities of joint engineer units in the future. This JMETL proposal would work well under the current UCP and the proposed USENCOM concept since normal Service support at the tactical level remains the same. Therefore, tactical level unit organizational structures and traditional service-oriented missions basically remain as currently organized. The engineer JMETL outlines essential strategic theater-level engineer support missions that major joint engineer units should have the capability to perform. An engineer JMETL will enhance engineer jointness among all DOD engineers in order to maximize interoperability and improve engineer MTW readiness. Based on that premise, an analysis of recent deployments across the full spectrum of war has identified the following requirements for joint engineer capabilities at the strategic theater-level:

1. Basic Theater of Operation Construction
2. Expedient Rapid Runway Repair
3. Minefield Detection/ Marking
4. Basic Demolitions

Most maneuver commanders view all engineers as the same, despite different unit type mission capabilities. Therefore, major engineer units within each Service should provide this basic package of strategic theater-level engineer capability (JMETL driven). Force Beddown and Rear Area Security support drive the identification of these four strategic theater-level engineer mission capabilities. An explanation of each mission requirement is outlined below:

1. The construction of base camps and force protection facilities impact initial entry operations immensely. More robust engineer capabilities allow all major joint engineer units to accomplish the CINC's priorities of engineer work.

2. Airfields become high value targets for enemy forces during the deployment phase of a campaign, therefore rapid runway repair capabilities are essential to resume airflow of troops and logistics.

3. Delivery of mines (and UXOs) from aircraft, missiles, and special force troops makes our Rear Area vulnerable to these area denial munitions. All engineer units do not need the capability to clear or reduce a minefield, however they do need the capability to detect and mark a minefield for follow-on units to remove.

4. Basic demolition requirements exist throughout the entire theater of war.

Therefore, all major joint engineer units need these four strategic theater-level engineer capabilities. Reliance on special capability units to accomplish these requirements causes operational pauses for tasking and movement to the mission site. As a result of this additional strategic theater-level engineer capability, a warfighting CINC can deploy his engineer forces in

a more effective manner to meet the heavy workload during the initial phases of a campaign plan. However, we should never expect an Air Force Red Horse Squadron to be the Breach Force during a Deliberate Attack, or expect an Army Combat Heavy Engineer Battalion to be the Amphibious Landing Engineer Force. In contrast, the strategic theater-level engineer missions supporting a CINC's AOR missions are very similar in most campaign plans. Therefore, these tasks can be easily incorporated into all engineer unit METLs instead of attempting to justify additional engineer units to gain the capability under the current force structure personnel ceiling figures. A large question remains on how to implement an engineer JMETL? The normal military method is to publish doctrinal manuals to outline specific missions, procedures, and capabilities. The current draft of Joint Publication 3-34: Engineer Doctrine for Joint Operations has taken the first step to creating engineer jointness. However, the joint engineer capability matrix (Appendix-A) does not outline any potential JMETL engineer missions for joint operations. Therefore, the CJCS needs to approve specified strategic theater-level engineer tasks in order for the Services to fix current training and capability limitations. The enhanced strategic theater-level engineer capability is well worth the cost in current resources for better support to the warfighting CINCs in the future.

## CONCLUSIONS AND RECOMMENDATIONS

***"Again and again we have owed peace to the fact that we were prepared for war."***

Theodore Roosevelt[20]

History continues to show that the United States needs to sustain a strong defense during peacetime transition periods in order to facilitate world peace and deterrence of aggression. Our National Security Strategy policy of Global Engagement continues to be a current reality for the US military and has taken on more importance as the United States remains the only superpower nation in the world at this time. Our role as the "world's policeman" is upon us in this current global environment of growing economic instability, non-state unrest, third world tension, and proliferation of weapons of mass destruction. The impact of reduced budget constraints and increasing Peace Operation missions can be mitigated in the year 2010 if the following recommendations are implemented:

**1. Pass a follow-on congressional mandate to the Goldwater-Nichols Act of 1986.** The primary objectives of the act are:

a. Align geographical boundaries between the State Department and the UCP. The regional jurisdictions should be aligned in accordance with the geographical boundaries of the New World order (ex-USEUCOM AOR versus Europe/ Russia/ Africa divisions).

b. Establish a Unified Engineer Command (USENCOM).

Responsibility must be fixed, in order to achieve proper accountability for the total "jointness" to enhance DOD, NGO, and

State Department support to Peace Operations and post conflict activities following a full spectrum war in a region. The new Unified Engineer Command (USENCOM) improves joint engineering support during peacetime, peace operations, and full spectrum war to the warfighting CINCs. The current Army Corps of Engineers structure easily facilitates the base organizational structure and mission for the new Unified Engineer Command (USENCOM). Engineer support throughout the full spectrum of war and service specific infrastructure sustainment improves with this mandate.

**2. Update the Joint Doctrine on Command & Control of Engineers.**

Provide more details on engineer support to the warfighting CINC than the skeleton information outlined in Joint Pub 4-04: Joint Doctrine for Civil Engineering Support. There is a draft publication currently under review titled Joint Pub: 3-34: Engineer Doctrine for Joint Operations. The final version needs to outline more details on the following concepts:

a. Establish engineer JMETL tasks that outline specific strategic theater-level capabilities at all three levels of war for all major types of joint engineer units.

b. Implement the doctrinal move of the total engineering mission from the J-4 to the J-3.

c. Establishing a Joint Forces Engineer Command (JFEC), which consolidates all engineer forces and assets under one engineer commander for providing total engineering support to the Joint Task Force Commander.

These are positive steps for improving interoperability and joint engineering support to the warfighting CINCs. Joint engineering tasks cover the entire spectrum of mission support in a joint, combined operation. We need updated joint doctrine to effectively use engineers more effectively.

**3. Place the Engineer Brigade Headquarters back into the Force XXI Heavy Division Structure for 2010 and beyond.** The loss of the command and control capability to the division mission for a mere cost savings of 27 soldiers is not worth the price to a Division Commander. The immense amount of Corps level engineer unit slices normally assigned to enter the division sector is too overwhelming for a non-command designated engineer staff officer. The Engineer Brigade Commander provides the Division Commander a total division area of responsibility focus and emphasis similar to the Division Artillery and Aviation Brigade Commanders. The Brigade Combat Team (BCT) concept is not broken, so there is no need to make slice units organic to the heavy brigade under a reduced manning and revolutionary logistical support concept for the future in 2010.

**4. Implement new measures to reduce the impact of increased Peace Operation deployments.**

a. Increase all Force XXI manning numbers, as the current strength figures impact negatively on our units to successfully execute future Peace Operations (and MOOTW). The current practice of task organizing the deployment force from other units to

increase the number of soldiers on the ground will continue, which does not reduce OPTEMPO on the overall force. High level technology does not deter aggressors in third world nations during Peace Operations. It requires soldiers on the ground fully equipped and fully trained for a full spectrum war that deters a former warring faction belligerent or terrorist.

b. Assign more Reserve Component units to Peace Operation deployments. Current procedures are heading in this direction (ex- Bosnia and Macedonia), but a higher percentage of the Peace Operation workload needs to be assigned to the National Guard and Reserves.

c. American diplomats must force the United Nations to lead all peacekeeping missions instead of having various alliance coalitions performing these additional Peace Operations. It causes US military forces to deploy more to show resolve and support of our allies. Congress should pay the overdue bill to the United Nations to prevent further erosion of our diplomatic capability and superpower reputation on the Security Council. Overall, we must get the OPTEMPO of the total Army reduced as retention, readiness, and morale are hurting due to the 300% increase in operational deployments since 1990.

Why do we need to implement these recommendations? Our National Security Strategy of Global Engagement remains in effect for at least two to six more years. Army soldiers will continue to fight as a member of the joint team, as landpower provides the

nation a full range of options for shaping the world. Peace Operations will expand in size and numbers due to the unstable world environment and our current reliance on coalition and military alliances. This causes US military forces to deploy more from our CONUS-based power projection platform. Engineer OPTEMPO remains high in support of maneuver forces conducting peace operations to full spectrum war. Additionally, the workload for engineers is increased by immature infrastructure for military operations located in over 70% of the world. Therefore, we need properly synchronized utilization of all Armed Force engineer assets during all phases of a campaign plan. Historical examples have shown that our engineer "jointness" needs improvement to insure success in 2010 and beyond. Transparent engineer support from each Service is essential for supporting regional stability in a warfighting CINC's AOR. As a result of these proposed engineer reform efficiencies, MTW readiness and infrastructure status will improve on order to provide better support for the National Security Strategy and the warfighting CINCs. Global Engagement is a feasible strategic policy for overwatching our national interests. However, we must balance our strategic use of the Armed Forces between traditional warfighting roles and the newly acquired tasks of promoting peace and regional stability.

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## ENDNOTES

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[4] DOD: NMS...A Military Strategy for a New Era, 12.

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[13] The ideas in this paragraph are based on remarks made by a speaker participating in the US Army War College Commandant's Lecture Series.

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[15] Department of Defense, Joint Vision 2010- America's Military: Preparing for Tomorrow, (Washington, DC, The Department of Defense, 1996), 26.

[16] Clinton, 9.

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