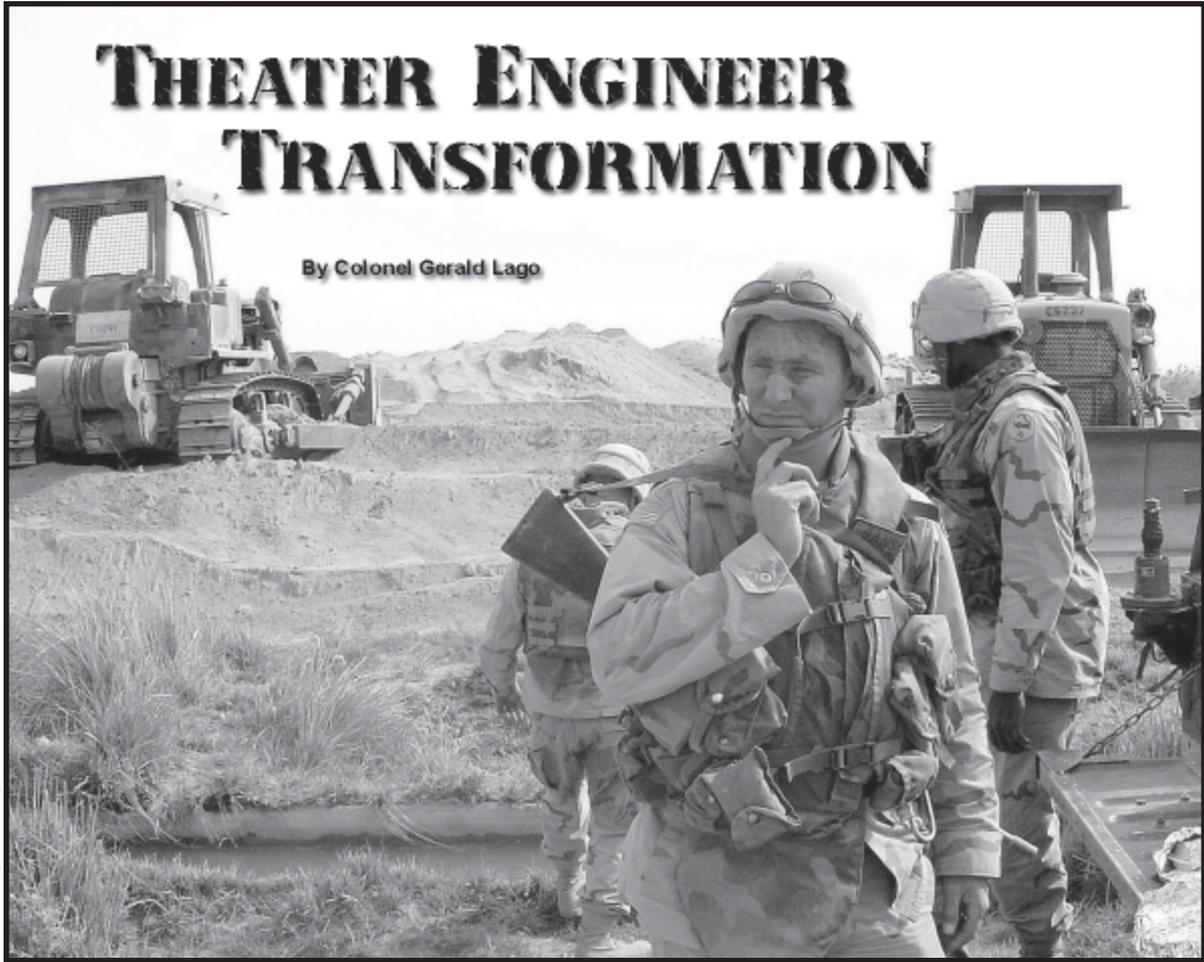


THEATER ENGINEER TRANSFORMATION

By Colonel Gerald Lago

Photo courtesy of US Army



The Future Force is quickly transforming into the Current Force. Throughout this transformation, engineer support has not been a primary consideration for Army modularity. Over the past year, new Army concepts and organizations have regarded engineer requirements as little more than an afterthought. From the brigade combat teams through the unit of employment-operational (UEy), the Army has been left with stripped-down organic engineer units and minimal engineer staffing. Fortunately, the Engineer Regiment has been successful in complementing the Army modularity efforts with its own modular-designed engineer units and command and control (C2) structure (also known as the Future Engineer Force) and addressing these underresourced requirements in support of the warfight. The Engineer Regiment has successfully integrated the vast array of engineer disciplines throughout the battlespace, except in one key area—the theater.

There are still wide engineer staff, C2, and technical gaps at the UEy and the Regional Combatant Command (RCC) that need to be satisfied. The US Army Corps of Engineers® (USACE) and the existing Engineer Commands (ENCOMs) can possibly fill these gaps. However, they need to be organized in such a way that they are not only responsive to the commander's changing needs, but also so they can add value

effectively and efficiently. This author proposes that a new organization be designed to leverage the existing capabilities and provide the much-needed synergy to the theater-level engineer support effort.

Future Force Environment

Based on the concepts under development, the UEy has an assigned sustainment, network, intelligence, and civil affairs headquarters. But that is it! All additional requirements are drawn from available units out of a force pool. Within the UEy organization, 37 of the 50 engineer staff members reside in its sustainment directorate. With the scope and volume of engineer-related responsibilities assigned to the UEy, these engineer staffs are too severely undermanned to handle such a diverse load.

In the joint environment, we continue to experience a lack of synergy in planning, prioritizing, managing, and executing the joint commander's operational and strategic missions. No joint functional engineer headquarters exists for orchestrating theater-assigned units and activities throughout the region. Given the wide spectrum of tasks required, joint doctrine does not adequately assign responsibility to engineer theater-level operations. Not unlike the UEy, many of the theater-level

engineer missions become the responsibility of the logistics staff section (J4), which is fundamentally different and impractical from what is demanded of engineer support through the various phases of contingency operations.

In both of these cases, there is also a significant shortfall in the technical capability to conduct ongoing, constantly changing, and sometimes unique theater missions, particularly in the areas of major construction, infrastructure revitalization, real estate activities, and environmental support. Such expertise is usually brought from various sources, creating ad hoc entities and theater-wide gaps and redundancies with no central control or interface.

Alternatives

The following paragraphs offer several alternatives to the problem:

Engineer Brigade

A simple fix would be to augment the UEy and the joint headquarters with an engineer brigade to take care of this shortfall. However, the engineer brigade is an entity with a tactical, rather than an operational and strategic, focus. Nor is it designed with the technical capacity (breadth and depth) to plan and execute the disparate UEy infrastructure-enabling missions, whether in battle or in peacekeeping. There is also the issue of understanding and executing missions involving multiple services, contractors, other agencies, and the host nation. Clearly, we are talking about a totally different operating environment.

Engineer Command

Although originally designed as a C2 headquarters in support of a full-scale major contingency operation (MCO), ENCOMs, over the years, have developed unique and essential capabilities that have ensured theater-level success to ongoing operations. During both Operations Desert Storm and Iraqi Freedom, the 416th ENCOM led theater-level engineer efforts and is continuing the reconstruction support today. Based on the ENCOMs' long-standing planning efforts and habitual relationships with the unified commands, their unique ability to leverage and apply high-demand civilian/commercial engineering skill sets to military situations, and their senior-level breadth and experiences, they have emerged as invaluable force providers of specialized skills to support the operational commander in war or peace.

The ENCOM table(s) of organization and equipment (TOE) already charters them as the headquarters that commands and controls all Army engineer assets (to include other services and allied/coalition and contract construction) and provides engineer operational-level planning, supervision, coordination, and technical services supporting Army Service Component Command (ASCC) or joint task force (JTF) headquarters requirements. However, as has been seen elsewhere, missions and capabilities do not always match.

First, the ENCOM currently is an Army-only organization. Second, not all of the stated missions are covered with enough depth to successfully execute (for example, contract construction and topographic support). Third, it is organized and deployed based on a conventional war scenario, starting with a cross-disciplined early-deployment cell that later becomes overlaid with more of the same, but expanded, capabilities as the conflict escalates. In each phase, the ENCOM maintains its one-location, jack-of-all-trades posture. Any deviations on the employment requirements necessitates ad hoc task organizing: stripping out disciplines from existing teams. This organizational-employment pattern is not conducive to modularity and getting the right capabilities to the right place at the right time.

Field Force Engineering

On the other side of the coin are the USACE field force engineer (FFE) teams, who through recent events have brought invaluable technical engineering expertise into numerous situations, solving local- and national-level contingency problems. During both Operations Enduring Freedom and Iraqi Freedom, their forward engineer support teams (FESTs) have been materially involved supporting stability operations and support operations, as well as making significant contributions to combat operations. Through their experiences and expertise in national infrastructure engineer planning, design, and management, FESTs were responsible for the assessment, design, and planning of numerous base camps, logistics-base facilities, and transportation nodes and networks. They have the unique ability not only to work with outside agencies and other governments to accomplish their mission but also to reach back and tap into an immense pool of engineering experts throughout our nation to produce engineering solutions to any problem, no matter how obscure.

Although the USACE FFE teams have been working side by side with the military at numerous levels, they have not been a formal component of a unified effort. Technically, they are not a military organization. Many of the FFE teams are made up primarily of USACE volunteers who are assembled, as required, for deployment. There are no preestablished tables of distribution and allowances (TDAs) or TOE FFE organizations. The FFE support structure is basically taken out of hide to meet contingency requirements.

Solution

Together, the ENCOMs and the USACE FFE teams have much of the capability needed to fill the wide-and-deep capability gap requirements that are necessary to run theater-level operations. They complement each other in the capabilities and skills required to achieve the engineer support aspect of the joint commander's overarching objectives.

This author proposes creating a theater-level engineer organization that not only merges the unique existing capabilities of the ENCOM and USACE FFE organizations but also enhances the structural mix with joint-capable staffing

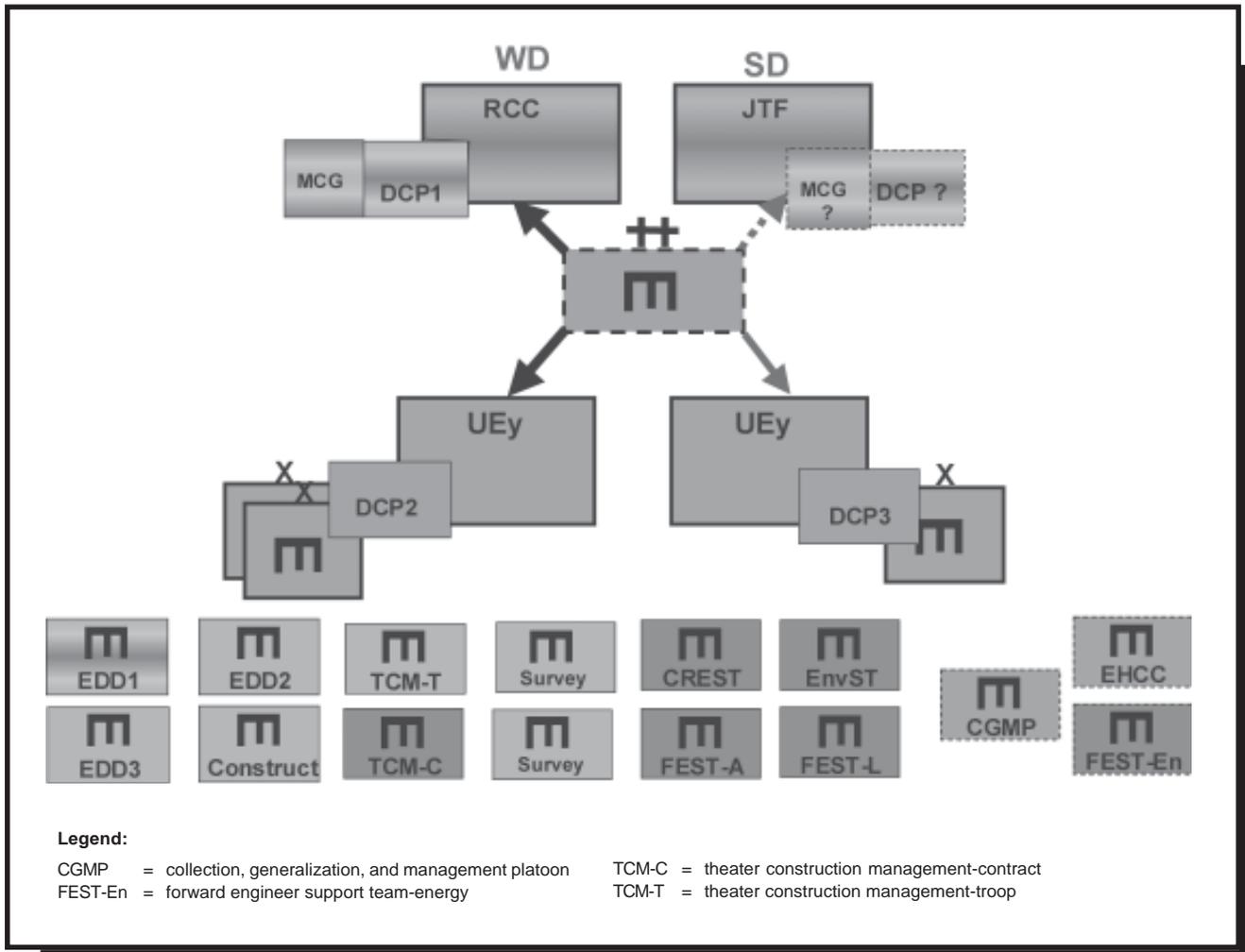


Figure 1. A Concept of Theater Engineer Contingency Support

and a modularized organization. This organization would be capable of supporting both a joint and an Army headquarters simultaneously, and perhaps independently, while providing the right technical expertise as the situation dictates. A single military organization, integrated with other services and organized in a modular fashion, could provide a powerful engineer multiplier to the theater commander.

Organization

Rather than combine the two entities and then tweak the results, a deliberate bottom-up approach needs to be taken to build a new organization. This consists of articulating the gaps, applying required capabilities to fill these gaps, and organizing these capabilities to ensure that the right amount of ordnance is delivered with a fair amount of precision.

Much of this work has already started. Gaps and capabilities have been documented. The personnel resources have also been broadly identified. However, what joint assets are needed to round out this new organization and to ensure that decision superiority that positively impacts all services can be achieved? How will they be integrated? And most importantly,

how does this new theater-level organization employ during contingencies to meet the changing requirements of a joint operation and an Army UEy operation at the same time or more than one operation, if required?

Having a working knowledge of the capabilities of engineers of the other services is paramount. Also, understanding how the other services operate is vital to orchestrating theater-level missions. Making decisions and planning the design of an air base, executing a logistics-over-the-shore operation, or effectively repairing a port requires firsthand experience that can only be achieved by embedding the right service skill sets into the organization—not as augmentation upon deployment, but as an ongoing practice. In other words, the organization needs to be joint from the start. Joint staffing of this organization must also be robust enough to cover any situation.

In order to provide the right engineer support at both the RCC and the UEy, while ensuring response to a second contingency, this author believes that this new engineer headquarters could be organized around three modules. These modules would consist of a joint mobile command group (MCG)

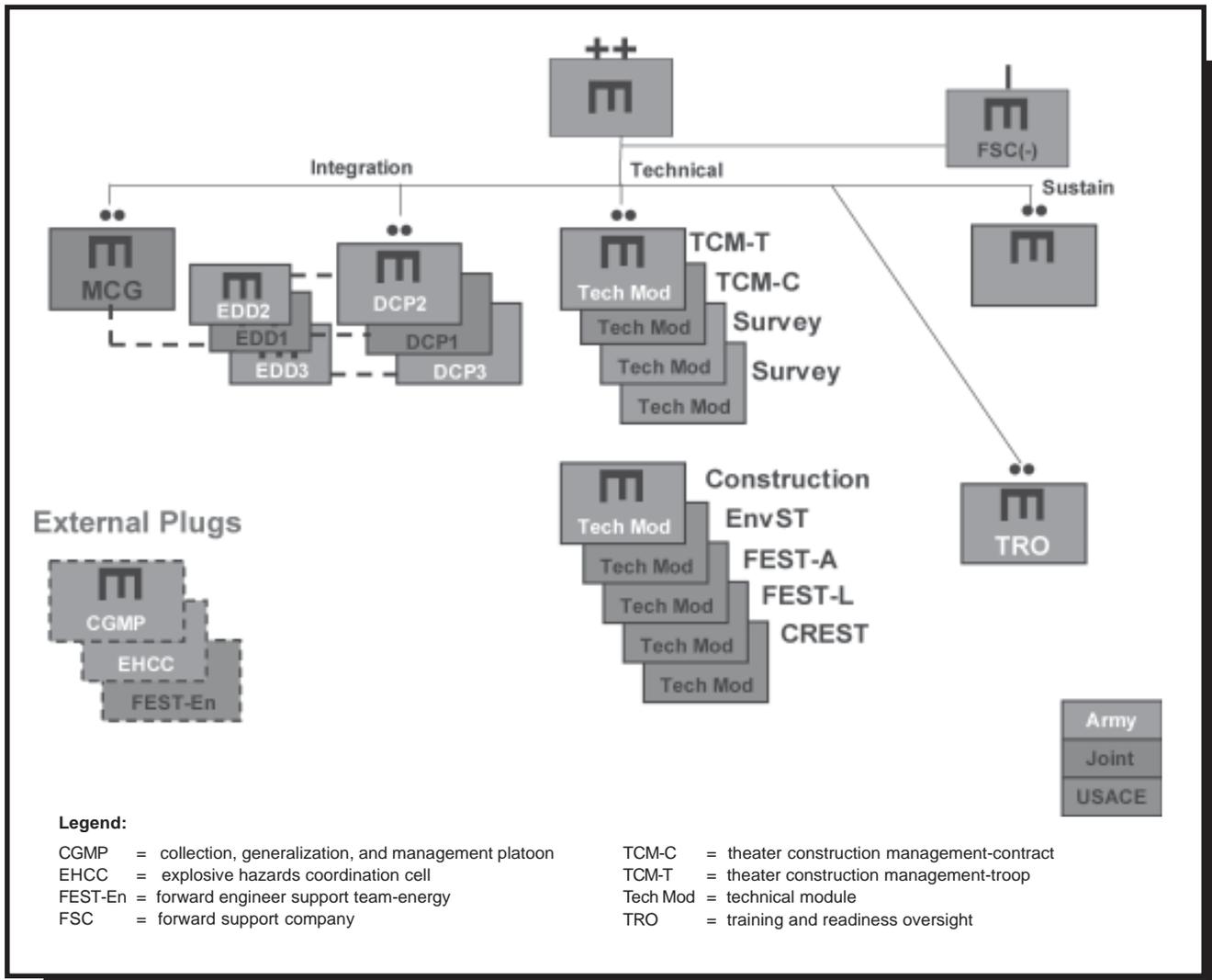


Figure 2. A Modularized Headquarters Organized for Support

and a joint deployable command post (DCP) for RCC support and two ASCC-/UEy-oriented DCPs. One DCP would support a win-decisively (WD) campaign, and the other would be used for a swiftly defeat (SD) campaign (or as a rotational asset). Technical modules from this organization would also be employed and moved to whatever level necessary to deliver engineering capabilities. In addition, already-established military, USACE, and civil organizations could be plugged in for augmentation on a temporary basis, if required (see Figure 1, page 57).

Within this organizational structure would be embedded technical USACE FFE modules as stand-alone entities, performing specific functions. Examples include contingency real estate teams (CRESTs), forward engineer support teams-advance (FEST-A), and environmental-support teams (EnvSTs). Other FFE capabilities and personnel would be absorbed into various staff elements throughout the organization, such as the forward engineer support teams-light (FEST-L) personnel becoming part of the early-deployment detachment (EDD) of the DCPs. Members from

other services would be incorporated into key and working-level staff positions throughout the organization. They would be heavily assigned in the MCP and RCC DCP and have a lighter presence throughout the rest of the organization, depending on the function (see Figure 2). For those organizations where augmentation is likely, training associations would be encouraged.

Conclusion

This author suggests this proposal as a starting point for further evaluation and analysis. All of the components that are discussed are necessary to solve the theater-level engineer capability gap. Is there a better solution? Probably. For the sake of the future, is this worth pursuing? Definitely!

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