EAC Doctrine vs. EAC Deployment for Desert Storm

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by CPT Mark Remington

The Operation Desert Shield/Storm experience helped surface a dichotomy between established doctrine for Echelons Above Corps (EAC) Signal units and actual employment.

Current EAC Signal doctrine has been developed for signal support requirements in a European scenario. As defined by doctrine, an EAC Signal battalion's main purpose is to effectively establish reliable communications for essential major command headquarters and staff and also service support units in the rear area of the battlefield. Often when installation time and assets are limited, variation from doctrine is necessary to provide effective communications to as many subscribers as possible. As a general rule, doctrine should be used as a guide to develop training and establish techniques and procedures to be used in a wartime environment. Actual employment and utilization of assets will be determined by the commander based upon mission, enemy, terrain, troops and time available (METT-T). The question posed here is whether the lessons learned from Operation Desert Shield/Storm indicate a need to revise doctrine and training for EAC Signal units.

Current doctrine states that an EAC Signal Company (FIG 1) takes advantage of available terrain by employing a Top-of-the-Hill (TOH) and Bottom-of-the-Hill (BOH) Systems configuration. This technique allows for a reduction in the radio signature of a major headquarters by placing it on low ground and relying primarily on the High Speed Cable System to carry traffic to the Top-of-the-Hill where connectivity into the area network is established. This enhances the survivability of personnel and assets located at the major headquarters by reducing the enemy's chances of finding key targets based on

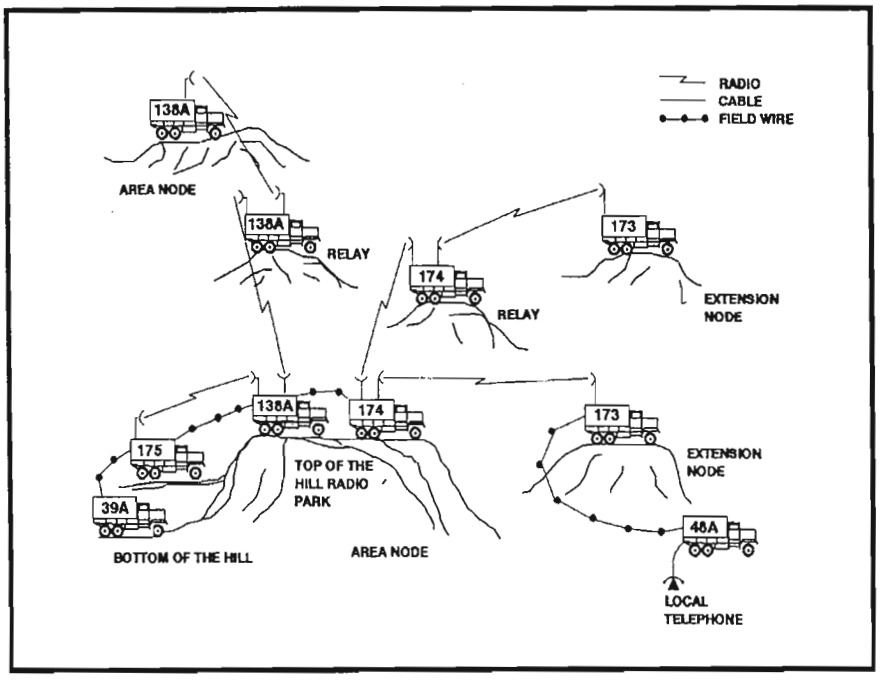

Figure 1. DOCTRINAL EAC DEPLOYMENT

electronic emissions. From the Top-of-the-Hill radio park, connectivity is established to other area nodes and extension nodes. As a rule, the extension nodes provide signal support to smaller headquarters using the newly fielded Mobile Subscriber Equipment (MSE), Small Extension Node Switch, the AN/TTC-48. The doctrinal deployment concept for an EAC Signal Battalion supports rear area operations in a field environment characterized by heavily wooded and hilly terrain which helps make site detection difficult.

A typical signal company deployment during Operation Desert Shield/Storm (FIG 2) showed that the Top-of-the-Hill and Bottom-of-the-Hill system configuration was not used. Echelon Above Corps Signal operations in Saudi Arabia were performed mostly in urban areas, or on the flat open desert along lines of communication. Signal operations in urban areas required the employment of tactical equipments into the existing host nation infrastructure such as shipping ports, airports and buildings, and required the use of commercial power. The "normal" question of which geographical area a support center might be located in became instead a question of what building or warehouse they occupied. Reducing site detection became a product of how well a unit could blend into its urban environment and not how well the camouflage net was set up.

Installation of communications in an urban environment introduced new challenges for which the TRITAC/DGM battalions were not well prepared. Commercial power became the norm for operations. Team chiefs learned how to tie into existing commercial power systems and used tactical power only as a back-up. Antennas could not be hidden among trees nor masked by the crest of hills. Instead, the multichannel radio antennas were erected on the top of buildings and secured to the roof to achieve the necessary line-of-sight path which had been raised by the city's buildings. Communications assemblages weren't camouflaged by

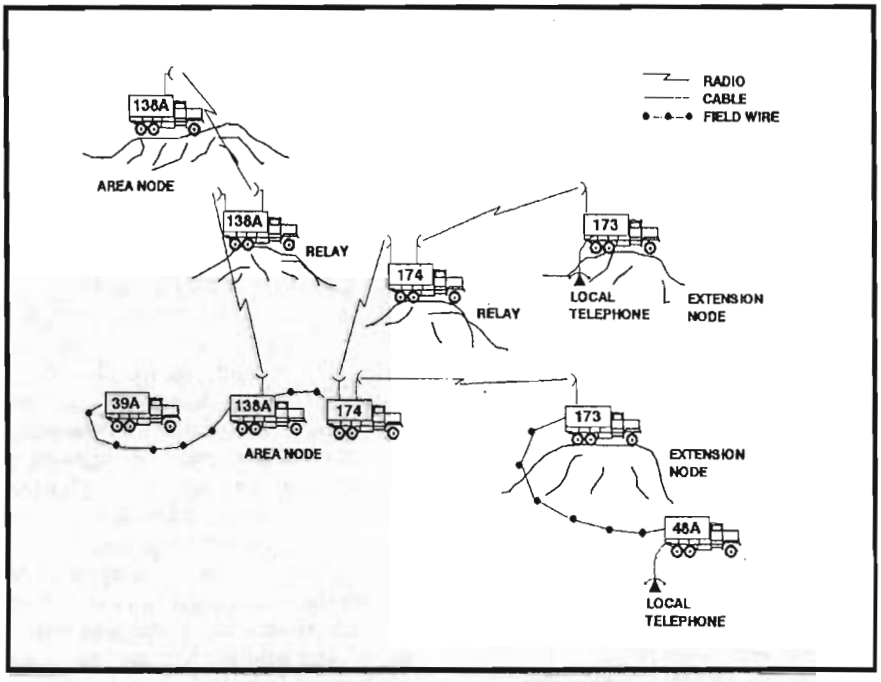

Figure 2. DESERT STORM EAC DEPLOYMENT

trees but were placed in parking lots and alleyways. Wire and cable were not buried and did not run to tents. They were run along telephone poles or placed in sewer lines and connected rooms and offices in high rise apartment buildings. In short, at EAC, the tactical (and still valid) communications requirements moved from the doctrinal woodland to the big city, and signaleers found themselves neither trained nor equipped to deal with the challenges of an urban environment.

In an era of world-wide growth and urbanization, there is a high likelihood that the type of situations faced in Operation Desert Shield/ Storm by Echelons Above Corps Signal units will become more commonplace. Increased training emphasis must be placed on operations in an urban environment and the particular problems associated with it. Soldiers must be able to effectively use existing power, communications and wiring systems found in built up areas. As data communications and information systems traffic continues to increase daily, soldiers must be trained to deal with the new systems and devices. Little training is available today on interface problems associated with the onslaught of automation.

Another difference between doctrine and practice was also identified during Operation Desert Shield/Storm. By doctrine, the Army is moving to a user owned and operated system for authorization and issue of terminal devices such as telephones, computers, and facsimiles. At a Corps level and below, this system should work well and relieve many of the problems with hand receipts and change of accountability. At an Echelon Above Corps level, there is no habitual relationship between the signal unit and the supported unit. On the contrary, since a great portion of the units to be supported at EAC come from the Reserve and National Guard components, there is no liaison of any kind between service provider and receiver prior to deployment. EAC units receive communications support based upon geographic location and area coverage. Often, the first time a Signal battalion sees the unit they are supporting is when installation of the communications terminal devices takes place. This practice has the potential to cause an incompatibility between requirements and resources, and a short fall in assets available to support the user. This problem is best exemplified in telephone distribution. User owned means that the user brings his "authorized and on-hand" telephone to the field with him which is then connected to the communication network. At ECB, this seems to be a workable plan. At EAC, there seems to be a disconnect. In pursuit of the user-owned concept, the authorization of instruments which would normally be provided by the EAC Signal unit to its customers has been eliminated from authorization documents. However, MTOEs of both active and reserve component EAC units have not been coded to include the authorization of digital telephone instruments. EAC units arrived in Saudi with nothing more than their requirements--no instruments. EAC signal units arrived with their authorized complement of equipment--which did not include many user instruments. The ensuing scramble to find digital phones was a frantic one which should not be repeated or copied. EAC user instruments should either be provided by the communications units, or should be authorized, procured, and issued for every EAC user: Active, Reserve, and National Guard.

The doctrine for training and operating in a field environment is sound but should be updated to adapt to our changing world. The probability of units deploying to and operating in an urban environment should be considered. Changes to our training requirements both at the Signal School and at the unit level should be seriously reevaluated. Doctrine should be updated to reflect the changing situation. Most of the fundamental principles are sound and soldiers knowledge on the equipment is superb, but the tools necessary to train for and operate in an urban environment are not available. The key to success in any situation is the soldier's ability to adapt to change and apply existing techniques to new applications to overcome many problems.