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**Tactical Deception in the Corps --
The Design and Employment of the
Corps Deception Battalion**

**A Monograph
by
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ABSTRACT

Tactical Deception in the Corps -- The Design and Employment of the Corps Deception Battalion by MAJ Charles L. Toomey, 59 pages.

This study assumes the need for a dedicated unit organized and trained to support corps-level deception operations in multiple environments. The research question asks "what is the best organization and methods of employment of a unit exclusively committed to executing tactical deception operations in support of the corps?"

This study does not attempt to define deception. Its purpose is to examine the evidence of past uses of dedicated deception organizations, to analyze their successes or failures, and to transfer those lessons to modern application in support of AirLand Battle Doctrine.

The study first analyzes the value of deception through statistical studies and then examines successful applications of deception formations by the Soviets in World War II. An evaluation of the US Army's 23d Special Troops in the ETO brings the study of deception back into the American arena where it is traced through the decades between World War II and the 1980's. The fielding of deception equipment and deception cells in the late 1980's leads to the discussion of the need for a dedicated deception organization on the modern battlefield.

The design of the proposed Corps Deception Battalion is based on several factors. An analysis of the Soviet intelligence system determines the basic requirements; these are supplemented by the desired capabilities of the deception unit. An analysis of the capability requirements is then made through each of the seven battlefield operating systems. Based on these analyses, the criteria are stated for design of the deception battalion. Finally, using the established criteria, a conceptual design of the Corps Deception Battalion will be proposed.

This study concludes that the introduction of a Corps Deception Battalion into the force structure will provide a combat force multiplier of immense value. The fielding of Battlefield Deception Cells in corps and divisions was merely a first step in bringing deception back into Army thought and planning. The Corps Deception Battalion would provide the fundamental resource for all corps deception plans. The value to corps tactical operations would greatly exceed its cost to the Army in terms of manpower and equipment.

The study recommends that Corps Deception Battalions be fielded in all forward deployed and contingency corps and that reserve components man CONUS based corps. The fielding of these organizations would provide a renewed emphasis on tactical deception in the Army that would pervade all training, plans, and operations.

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Section One: Introduction.

Deception in support of tactical operations has approached a "lost art" status in the United States Army since World War II. Only with the recent introduction of specialized equipment and deception planning cells in corps and divisions, and the fielding of the 1988 edition of FM 90-2, *Battlefield Deception*, has deception as a form of combat been seriously addressed and discussed. The publication of this manual, and the integration of deception into AirLand Battle Doctrine, should ease the Army back into the practice of thinking, planning, and executing deception as a matter of standard operating procedure.

Our capstone doctrinal manual, FM 100-5, *Operations*, articulates the requirement for deception. Deception is identified as a major functional area that must be a coordinated combined arms action. FM 100-5 recognizes that an integral part of any plan of campaign or major operation is the deception plan and that deception is also a vital part of tactical planning.¹ The macro-level doctrinal responsibilities of senior tactical commanders (of corps and divisions) are made very clear.

Doctrinal guidance for deception is more specific for division and corps operations. At both echelons the importance for integrating deception into all operations is emphasized. The emphasis is so strong that an analysis of the field manuals for both corps and division operations treatment of deception seems to indicate that each echelon is capable of executing highly successful deception operations without mutual support.

The imperatives for tactical deception operations are best

described in FM 71-100, *Division Operations*. Simply stated, the division conducts deception on the battlefield to mislead or confuse the enemy decision maker and to induce him to take actions that are favorable to and exploitable by division operations. Once the commander decides to commit to deception operations the, G-3 then tasks all the appropriate assets to make the deception plan work.² However, the manual offers no suggestions on how to select the assets needed for deception or how to assess the risks involved in simultaneous, resource intensive combat and deception operations.

Current guidelines for corps deception is similar. The integration of deception into the scheme of maneuver must be one that supports the higher headquarter's deception plan. Should no higher deception plan exist, doctrine states that the corps should develop its own consistent with the higher commander's intent.³ The issue of resources receive cursory mention, but only in that they are but one of several questions that must be answered in the development of a deception plan. Once again, no attention is given to where corps-level deception resources will routinely come from or where risk must be assumed should major corps combat forces be employed to deceive the enemy commander.

A basic assertion to this study is that adequate resources are the key to any deception operation.⁴ To be successful, the deception must be believable to the enemy commander who is the deception target. The deception operation must paint a picture that can be interpreted as doctrinally correct and supported by the proper equipment and the signatures that would normally be expected of that equipment.⁵ Today, we are asking our division and corps commanders to execute a deception doctrine that is planning and resource intensive. These deception

operations will more than likely have to be planned and executed while also engaged in combat. The competing demands for corps units for both deception support and active combat operations may not be met.

While AirLand Battle Doctrine demands that tactical deception be incorporated into all corps operations, the corps commander must create deception resources on an *ad hoc* basis. The introduction of a dedicated unit organized to execute deception operations in support of the corps would provide the corps commander with a resource that would allow him to husband more of his combat power for fighting. Therefore, the basic assumption that guides the thought of this paper is that the formation of a Corps Deception Battalion would be an effective combat multiplier on the AirLand Battlefield.

The purpose of this paper is to present a concept for a modern deception unit. First, I will examine historical precedents of World War II. I will then discuss the requirements for deception as dictated by the modern battlefield. Finally, an organizational structure and will be proposed.

Section Two: The Value of Deception.

The distinction between deception and surprise must first be made clear for one to understand the role of tactical deception as a major functional area. Surprise, one of our *Principles of War*, is a desired state; it is the condition achieved when we strike the enemy when he is unprepared and is the culmination of separate contributing factors. Deception is one, or a series, of planned actions intended to deliberately mislead the enemy as to our true intentions. Deception, therefore, is a means to obtain surprise, not an end.⁶

The use of deception contributes to success in battle. In a study published in 1969, friendly versus enemy casualties were linked to deception and surprise:

	Number of Cases	Friendly Casualties	Enemy Casualties
Surprise with Deception	50	1	100
Surprise without Deception	20	1	10
No Surprise with Deception	5	1	10
No Surprise without Deception	10	1	10

The table above demonstrates that deception is a major factor in achieving surprise: friendly casualties were reduced nearly 300 percent when deception was used to help achieve surprise.⁷ The value of deception is evident if for no other reason but to save American soldiers' lives.

The Soviet Army, our most technologically advanced potential enemy, greatly values deception as a basic component of surprise in tactical operations:

Maskirovka [camouflage] is among the most important forms of combat support. It entails a complex of measures aimed at misleading the enemy concerning the composition, position, and combat readiness of one's own troops, and as to their actions and intentions.

Maskirovka has always affected the success of combat. In modern combat its significance has grown immeasurably in connection with the enemy's use of sophisticated technical reconnaissance resources and qualitatively new, powerful, high precision weapons.⁸

The Soviets use four principle methods to achieve their designs for "camouflage," what we would refer to as deception. *Concealment* focuses as much on operational security as it does the physical hiding of real activity. *Simulation* is used to create false targets, either through the use of dummy material and facilities or through other replicating

measures. *Feints* by combat formations are used to send false signals as to true intentions. *Disinformation* is the production and dissemination of deliberately false information.⁹ These methods of *maskirovka* are based on a multitude of successful Soviet deception operations in support of tactical operations during World War II.

A prime example of Soviet tactical deception can be found in Colonel David M. Glantz's case study of the battle of Demiansk, 10-22 July 1942. The operational-level *maskirovka* decision for this offensive operation consisted of concealing the main strike of the Soviet 11th Army while simulating strikes by the 34th and 27th Armies and concealing the transfer of troops from the front of the 53d Army.¹⁰ The aggregate effects of tactical-level *maskirovka* carried out by the armies of the Soviet *Front* resulted in a successful operational-level deception.

The mission of the commander of the 34th Army (similar in size and function to a US Corps) was to portray a false attack on the German right flank. To accomplish this task, units were employed using expertise provided by the 40th *Maskirovka* Company of the Northwestern *Front*. The tactical deception measures varied. False concentrations of troops were portrayed by infantry battalions supported by engineers; false tank concentrations were simulated by a few tank crews and the use of dummy tanks. The deception was also supported by the preparation of false artillery firing positions and their approach roads, for which 99 dummy guns were installed. False radio networks were established and placed into operation by Army signal troops. Increased ground and aerial reconnaissance was carried out to support the deception plan. Finally, air bombardment of enemy troops opposite

the false concentrations was systematically conducted.¹¹

The deception plan of the 34th Army was successful. As a Soviet general staff member wrote in 1943, "...the enemy reacted rather sensitively to the measures which were carried out."¹² German air reconnaissance missions were increased as well as the intensity of artillery attacks. The tactical deception measures employed by the 34th Army in 1942 contributed to the Soviets' reliance and confidence in *maskirovka* as a way of war and helped them develop the foundation for future deception operations in World War II.

Section Three: US Army Deception Experience in the ETO.

The United States Army was also an active practitioner of deception during World War II. Of particular interest to this study are the operations of the Headquarters, 23d Special Troops in support of the European Theater of Operations (ETO). This unit participated in twenty-one separate deception operations in support of the US 12th Army Group and the British 21st Army Group between July, 1944 and March, 1945.

The concept for the 23d Special Troops was born in North Africa. British deceptive "cover operations" during the Battle of El Alamein in October, 1942 caught the attention of American military observers. Based on the British successes, experiments with deception were soon carried out by the US II Corps during the Battle of Tunisia. Although these trials were generally successful, some observers believed that deception operations would be more effective if carried out by a specially trained, self-contained unit equipped with "tricky devices."¹³ As a result, the ETO requested the War Department to form

such a unit.

The Headquarters, 23d Special Troops was activated by the War Department on 20 January 1944. It assembled at Camp Forrest, Tennessee, trained quickly, and deployed in April to its forward staging area in England. By D-Day, 6 June 1944, the first of its detachments was in action against the enemy.¹⁴

Knowledge of the enemy's intelligence capabilities was evidently a major factor in the organization of the 23d Special Troops. Three major intelligence collection means were identified for deception effort: aerial observation, electronic warfare, and human sources (enemy patrols, agents, and local civilian sympathizers).¹⁵

The organization of the 23d Special Troops was based on five major elements (see Figure 1). The 603d Engineer Camouflage Battalion (Special) was the workhorse of the unit. With its complement of dummy equipment (primarily inflatable tanks, trucks, and artillery) and its large pool of engineer soldiers, the 603d performed the bulk of the physical deception work. Because of its large size, the 603d was often called upon to also man the false positions it had created. The 406th Engineer Combat Company (Special) was manned by combat engineers whose training was to be used for the rough and dirty field engineering tasks required to support the work of the 603d. The 244th Signal Company (Special) was used as a counter-radio intelligence company. The 3132d Signal Service Company was the only unit within the 23d that was specifically organized and trained for deception. This company was the pioneer "sonic deception" unit in the Army.¹⁶ Tying these multi-various units together was the Headquarters, 23d Special Troops.

The staff of the 23d contributed greatly to deception in support of US Army elements in the ETO.¹⁷ Liaison officers were assigned to the S-3 section of the 23d headquarters; their primary role was the coordination of deception operations between the 23d and the major headquarters that was being supported.¹⁸

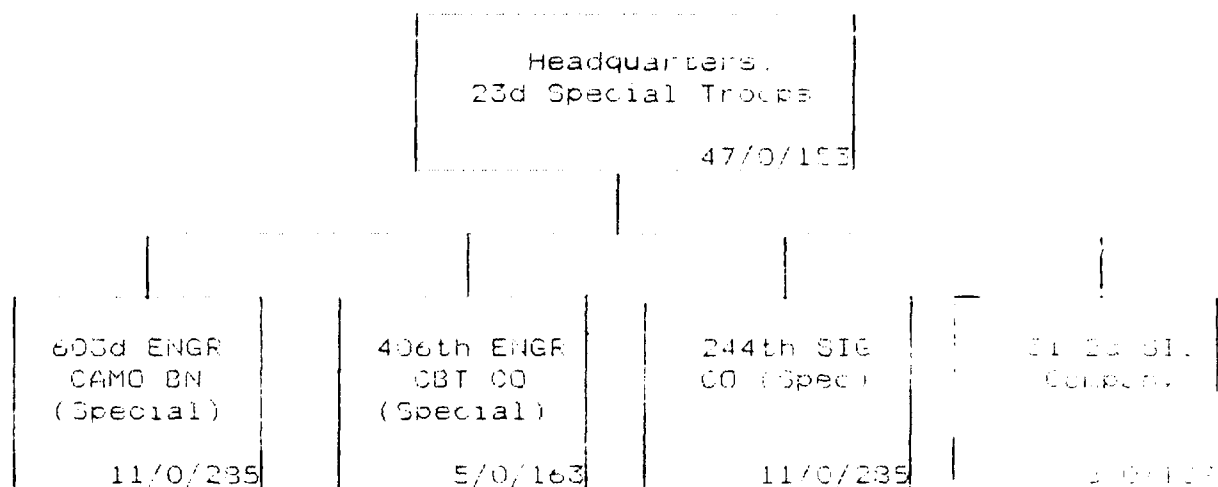


FIGURE 1. 23d Special Troops Organization

As the 23d gained experience in 1944 and 1945, their degree of effectiveness increased.¹⁹ Examination of two major deception operations reveals the increase in the level of skill acquired by the planners and executors of the 23d Special Troops. Operation BRITTANY was the first major operation of the 23d Special Troops in the Theater in August, 1944. By Operation VIERSEN in March, 1945 the 23d had matured into a very effective force.

Operation BRITTANY was the second operation by the 23d on the continent but the first major operation which involved a major tactical role. The 23d's mission was to portray four regimental task forces from each of the 30th, 80th, and 90th Infantry Divisions and the 25th

Armored Division. The movement of these four notional formations westward into the Brittany peninsula toward Brest was intended to make the enemy believe that the German *Seventh Army* units in the vicinity of Mortain were in no immediate danger of envelopment, thereby delaying their withdrawal from the pocket. The deception techniques used involved the placement of rubber vehicle dummies and false radio traffic prior to and during the movements of the false task forces. Special effects were also employed; these centered around the use of false bumper markings, placement of bogus CP signs, and the wearing of false unit shoulder patches by the deception troops. The operation was considered at the time to be marginally successful since the German forces did not withdraw from Mortain and were seriously damaged when the Falaise Pocket was finally closed.

Several significant lessons were learned by the commander of the 23d during Operation BRITTANY. He was impressed by the need for flexibility in deception units and further stated that "there was a lack of clear directive enabling all to understand exactly what was wanted from each unit."²⁰ The 23d, and the formations they supported, were to learn a great deal about deception requirements before the end of the war.

Operation VIERSEN was the last deception operation undertaken by the 23d Special Troops. This operation took place 17-24 March 1945. The task of the 23d was to portray preparations for the Rhine River crossing of the 30th and 79th Infantry Divisions in the XIII Corps zone. The real crossing operation was to be made by these two divisions in the XVI Corps area. This was the first time that the 23d was called upon to portray more than one division; therefore, two

infantry battalions and one anti-aircraft battalion were attached to the 23d for the duration of the operation.

Every technique for deception was employed during Operation VIERSEN. Radios were used notionally to move the 30th and 79th Divisions into their false assembly areas in the rear of the XIII Corps zone; realism was added through the use of a weak cipher system. German aerial reconnaissance was targeted by the 23d's most extensive use of dummy equipment. Finally, the enemy ground agent threat was to be deceived by the use of sonic deception and the usual special effects: MP activity, shoulder patches, bumper markings, false convoys, and increased messenger and telephone wire-laying activity, to name only a few.

The operation was a total success. A captured German overlay of the American order of battle prior to the attack placed the 79th Infantry Division where the 23d portrayed it. The Germans had lost the 30th Infantry Division.²¹

Operation VIERSEN was the culmination of American tactical deception during World War II. Although the 23d was an operational asset, its employment was limited to tactical support of armies, corps, and divisions. Fundamental principles for large scale tactical deception were developed and refined by the 23d Special Troops during their ten months in action. The history of their operations proved the value of a specially trained and equipped unit for the conduct of deception in support of major maneuver formations. However, for the next forty years the lessons learned and the principles forged by the 23d, although not totally forgotten, were to approach doctrinal atrophy.

Section Four: Deception In The Post-War Years.

A review of selected Army documents suggests that tactical deception after World War II was not a major concern. Although operational level deception was employed at Inchon, the attention of the Army leadership was focused on the threat of atomic war and the conflict with the other armed services for dwindling resources. But there did remain a spark of interest in the value of such a unit as the 23d Special Troops.

Deception units were the subject of little discussion and even lesser action in the post-war years. In 1947 General Eisenhower, then the Army Chief of Staff, instructed the War Department's Director of Plans and Operations to maintain a "potential effectiveness" in tactical deception.²² Evidently, not much was done. In 1955 the US Army Aggressor Cadre at Fort Riley recommended to the Commanding General, Continental Army Command, the formation of a group similar in organization and function to the 23d Special Troops. This must have been considered, for in 1958 the TO&E for a special deception unit was an agenda item at a meeting held at the Command and General Staff College.²³

An interest in deception continued into the 1960's. In 1965 the USA Combat Developments Command published a study entitled "Army Requirements for Tactical Deception." This study did pose some valid questions as to utility of deception in future wars. Continuing the evaluation of modern intelligence means and their effects on deception in 1970, a private research group published a report that addressed requirements for deception against hostile satellite platforms and, once again, proposed an organization for a deception unit. Finally, in 1983, the MITRE Corporation conducted a similar study for the Pentagon.

The details of all of these studies remain classified.²⁴

The security classifications given deception matters may have stifled the development of tactical deception. The 1967 edition of FM 31-40, *Tactical Cover and Deception* was classified as Confidential, as was its proposed replacement in 1973. Not until the publication of the How-To-Fight FM 90-2, *Battlefield Deception* in 1978 did deception as a method of war come out of the classified closet.

An interest in tactical deception was renewed in the 1980's. The publication of the current doctrinal deception manual, FM 90-2, in 1988 was preceded by the fielding of the first of the Family of Deception Devices (FDD). Combat arms units in Europe began to receive multi-spectral close combat decoys (MCCD) in 1987. These decoys, the first fielded being of M1 tanks, not only offer a technically correct two-dimensional visual image in daylight, but also can emit a realistic thermal signature. Future plans call for the development of decoys for most Army equipment, from helicopters to generator trailers.²⁵ The major shortfall to this program is that the a decoy will be a basic item of issue for each real piece of equipment; thus a tank battalion could double its perceived size in a battle position but could not easily project itself to a false assembly area any significant distance away from its real position.

Battlefield deception cells may be a solution for the proper employment of decoys and other equipment of FDD. Fielding of deception cells began in 1988 and will be fielded in every active corps and division by 1991. These relatively small cells (12 men per heavy and airborne division, 19 per corps, and 5 per light division) will provide a nucleus for deception planning under the supervision of the G-3.²⁶

The introduction of these cells will no doubt create a greater capability for planning independent tactical deception within the corps.²⁷ However, the basic issue surrounding credible deception has not been solved. Adequate, readily available resources with which to execute large-scale tactical deception plans have not been addressed.

Section Five: The Concept of the Corps Deception Battalion.

Airland Battle Doctrine specifies that deception is a vital part of tactical operations. All corps plans for combat should include a deception plan, either in support of echelons above corps or as an independent operation.²⁸ The corps commander must constantly consider the positive effects of deception on each of a sequence of tactical operations. He must do this with regard to his potential deception target and the resources he has available. A corps in heavy contact with an enemy force may not enjoy the luxury of having sufficient tactical formations with which to execute a corps deception plan for the next tactical phase.

If the corps commander is to conduct tactical deception as a routine way of doing business, he needs a unit that is always committed to deception. The ideal would be a unit that is specially trained and equipped for deception. The proposed Corps Deception Battalion would be the nucleus for corps tactical deception.

The concept for employment is fundamental to the design of the Corps Deception Battalion (CDB). The battalion must be capable of supporting equally both offensive or defensive operations. There are four possible scenarios for its employment:

1. The CDB may independently portray either a division, an armored cavalry regiment, or a single maneuver brigade (or elements of each). It would operate under its own commander in support of a corps deception plan.
2. The CDB may independently portray any of the units described above but it would be augmented with real equipment and personnel from other corps units. It would operate under its own commander; he would have OPCON of the augmenting units.
3. The CDB may be either be attached to or under the operational control (OPCON) of any major subordinate command of the corps for the single purpose of supporting that unit's deception plan.
4. The CDB may be detached from the corps to support either tactical or operational deception plans of a higher echelon.

Keeping these four possible employment schemes in mind, the factors for the conceptual design of the CDB may be considered and evaluated.

Deception is one form of the corps deep battle.²⁹ Therefore, the foremost consideration in the design of the CDB is the selection of the most likely deception target of the corps plan. Effective corps deception will affect the enemy's actions well before his full striking power enters the main battle. To do this we must deceive the enemy *Front* and Army commanders opposing the corps. By deceiving the command at these levels, we can alter the course of their army second-echelon divisions, OMGs, and *Front* reserves. A well-planned deception aimed at these targets will require that we conduct our deception operations throughout the corps sector with multiple and mutually supporting means. We must use the enemy's reconnaissance means to our advantage.

A major factor for consideration is the enemy's capability for intelligence collection, evaluation, and decision. Because the Soviets are our most technologically advanced potential enemy, the CDB unit

must be capable of deceiving his intelligence collection system. Our IEW doctrine recognizes the Soviet's intelligence capabilities as they may be targeted against our formations (see Figure 2).

		Soviet Collection Means		
	Enemy Resource	Collecting Against:		
		Corps	Divisions	Brigades
HUMINT	Agents	X	O	O
	Line Crossers	O	O	O
	Recon Units	X	X	X
	Combat Units		X	
	Patrols			
	EPW	O	O	O
SIGINT/REC	Radio Intcep	X	X	X
	Radar Intcep	O	O	
	DF	O	L	
	Sonic		O	O
IMINT	Photo	X	X	X
	Infrared	X	O	O
	Radar Survl	O	O	X
	Early Warn Radar	X	X	O
	REMS	O	O	
	SLAR	X	X	X

Legend: X - High Threat
O - Moderate Threat
Blank - Limited or No Threat

Figure 2. Soviet Reconnaissance Effectiveness

Evaluation of the Soviet intelligence threat suggests where our tactical deception should focus. The locations and activities of our divisions and brigades can be found by Soviet tactical intelligence means. We must assume that his collection assets at every level within a *Front* can provide a relatively quick report on our own activities throughout the corps area. By creating a false story based on brigade-sized formations, we can reinforce that deception effort to portray division-level activities. Therefore, a key to the design of the CDB

is the capability to convey divisional intent through the portrayal of multiple maneuver brigade-sized units that are "linked" by a false communications network.

What is the best way to portray a false maneuver brigade? Every maneuver brigade has a typical set of signatures: visual, thermal, electronic, audio, and olfactory. A believable portrayal must exploit a combination of these signatures. The portrayal must also be redundant throughout a planned series of battlefield operating systems.

Enemy Collection Resource		Division & Brigade Battlefield Operating System						
		C ²	INT	MAN	FS	CSS	ADA	M/CM
HUMINT	Agents	0	0	X	X	X	X	X
	Line Crossers			0	0	0	0	0
	Recon Units	X		X	X	X	0	
	Combat Units			X	0			X
	Patrols	0		X	0	0		0
	EPW	0		0		0		
SIGINT/ REC	Radio Intop	X	X	X	X	0	0	0
	Radar Intop		X		X		0	
	LF	X	X	X	X	0	0	0
	Sonic	0		0	X			
IMINT	Photo	0		X	X	X	X	X
	Infrared			0	0		0	0
	Radar Surv			0				0
	Early Warn Rdr			0				
	REMS			0	0			0
	NVD			X				0
	Visual	0		X	X	X	X	0
	SLAR			0		0		

X - Good Deception Potential

0 - Marginal Deception Potential

Blank - Little or No Deception Potential

Figure 3. Friendly Deception Potential

The deception story must convince the enemy commander that his preconceived expectations of our actions are true. Not every battlefield operating system (BOS) can be easily and economically simulated. Matching enemy collection resources to our systems may suggest which systems may best be simulated to support deception. Figure 3 provides a concise summary.

Each battlefield operating system, therefore, has some potential for supporting deception. Limitations on manpower and resources will restrict the CDB's capability. What must be shown by each BOS to create a credible deception story? The characteristics of each BOS as defined by the use of modern equipment creates deception imperatives. These deception imperatives must be addressed before a design of the organization of the CDB can be properly suggested and evaluated.

Command and Control

Simulation of our C² systems requires a combination of signatures. Physical CP locations and the presence of command and staff personnel are important to C² confirmation. The most significant requirement, however, is electromagnetic signature.

The vulnerability of our C² systems lies in our reliance on electronic communications. Based on that weakness, the strength to a credible deception plan will be the quality of electronic C² simulation. In order to support deception, a radio-electronic system must accurately replicate the technical characteristics of our various C² systems. These systems must simulate the use patterns and communications procedures of the units being portrayed.³¹

An Army Communications Deception System is currently being

evaluated for fielding in 1992. This system incorporates hardware and software which will allow for selective simulation of secure and non-secure FM voice, AM radio, data burst, or satellite communication. Different systems will replicate the different characteristics of our various radios. They will be both programmable and remote-controlled to provide maximum flexibility across a range of seventeen discrete frequencies.³²

False CP locations are mandatory for plausible C² deception. Any future C² deception effort must include "CP simulators" such as those described. Electromagnetic portrayal of a division would rely heavily on simulators to replicate the numerous nodes of brigades and selected battalions. The simulators should be backed up by non-secure voice transmissions of selected information that, when intercepted, would provide the pieces of a puzzle that would feed the enemy's expectations.

Visual effects would support the C² segment of the deception story. They must be employed with respect to the enemy's capability for human intelligence within the division and corps rear areas. Although not crucial to the success of the C² deception plan, visual effects in selected locations throughout the corps area would enhance the credibility of the C² portrayal.

Therefore, the Corps Deception Battalion must be capable of simulating division and brigade level command posts both electronically and visually. There should also exist a limited capability to simulate selected battalion-level CPs. Simulative electronic deception would be the primary deceptive EW action. EW personnel must be specially trained and skilled to ensure that all electronic signatures are

orchestrated with other deception events.³³ The CDB must also have the capability to visually simulate CPs through the use of decoys which would in turn be supported by special effects. Deceptive command and control will be a major task of the deception battalion.

Intelligence

Intelligence deception focuses on the enemy's intelligence vulnerabilities and the strengths and weaknesses of his intelligence analysis means.³⁴ Our corps and division tactical intelligence systems are designed and employed to do that. However, the limited number of systems found forward in division areas would be difficult for enemy HUMINT collection to detect through routine reconnaissance and patrolling. The greatest potential for portrayal of intelligence systems lies in the use of electromagnetic signatures.

Use of live active systems, such as the MLQ-34 TACJAM or the TLQ-17A TRAFFIC JAM systems, would be cost prohibitive. However, use of the HE/EXJAM (Hand-Emplaced, Expendable Jammer) together with three-dimensional dummies could portray a segment of a divisional collection system.³⁵ The total system must be completed by employing 3-D dummies of passive intercept and DF systems.

Ground and aerial reconnaissance can be employed as deception tools. Maintaining an even degree of reconnaissance across the corps sector may be used to support both offensive and defensive deception. Portrayal of maneuver unit reconnaissance activities could be done through the physical actions of patrols and GSR. However, the manpower costs of this method may prohibit its use by the CDB.

Deceptive intelligence actions should be limited in the corps

deception battalion. Due to the covert nature of intelligence activities, intelligence systems would not be expected to be seen. Of the four major IEW tasks of a corps or divisional CEWI battalion (target development, situation development, electronic warfare, and counterintelligence³⁶), EW is the best task that could be simulated by the CDB. The ability of the CDB to portray division or corps level units would be enhanced if it were to have a limited electronic countermeasures capability.

Maneuver

Maneuver systems offer the greatest potential for deception. Every combat and combat support unit possesses a variety of multi-spectral means with which to form a deception plan. Visual signatures offer the most potentially effective method. Due to their relatively high density on the battlefield, elements of the maneuver system are the most likely to be encountered by enemy reconnaissance.

Maneuver units can be easily portrayed. Combat equipment, such as tanks and infantry vehicles, are usually employed in groupings on the battlefield: they are found together in assembly areas and move together in combined formations. Modern equipment produces distinctive visual signatures, to include damage to terrain and vegetation. Thermal and audible signatures are also unique to specific items of equipment. Three dimensional replicas, supported by indicators of other BOS, could be employed throughout the corps area to portray a variety of deception stories.

Army aviation as a maneuver element should be considered for deception support. Real aviation movement throughout the corps area

could support a variety of ground maneuver portrayals. The introduction of remote-controlled model aircraft with radar reflective enhancement could be used to portray either aviation deep attacks or air assault operations. Deceptive Army aviation could be the key to successful deception built on the enemy's perception of our employment of the deep attack in support of AirLand Battle Doctrine.

Maneuver deception by the Corps Deception Battalion would be a major activity and would be resource intensive. Unit sets of three dimensional, multi-spectral decoys would be maintained and deployed by specially trained and equipped soldiers. The decoy deception would be enhanced by both limited C² electronic emissions and sonic effects. The CDB would have the overall capability to provide multiple brigade-level formations in support of either the corps or subordinate units.

Fire Support

Fire support systems have unique signatures for deception support. The combined signatures of cannon fire, missiles, and fire-finder radars, linked by TACFIRE electro-magnetic emissions, paint a clear picture of our fire support network.

Live artillery would provide the best support for a tactical deception story. Numerous firing tubes could easily be located by the Soviets' fire-finding systems, leading them to believe as true a false massing of fires or series of dummy positions in support of dummy maneuver units. But our unfavorable ratio of artillery delivery systems with those of the Soviets dictates that such a diversion of real artillery from the battle, even if only a few detached pieces, is too costly for deception.

Artillery sound and flash simulation would work against some Soviet collectors. This method would be far less expensive in terms of equipment and manpower.

Simulated TACFIRE emitters would provide the unique signatures needed. TACFIRE simulators, collocated with fire-finding radar frequency simulators and 3D mock-ups of fire control equipment, could replicate division or corps artillery target acquisition batteries.

The CDB would use multiple means for fire support deception. Electromagnetic signatures unique to fire support systems would be generated and would be augmented by three dimensional multi-spectral decoys. Although not a primary system for deceptive effort in the CDB, the fire support deception assets would be a contributing factor to doctrinal portrayal of divisional or corps-level formations.

Combat Service Support

CSS activities throughout the corps sector are collectively the most accurate indicator of corps plans. The requirement for sustainment is never-ending in combat; support units must be positioned throughout the corps area to fix, fuel, arm, man, and move the force. Our CSS doctrine is convenient in that it specifies just-about-where the myriad of CSS activities should go. An in-place corps or division CSS system can easily paint the picture of offense or defense and a main or supporting effort.

A complete CSS system at the division level would be difficult to portray with a deception unit. The resources required would quickly exceed the capability of a battalion-size deception team. Only selected division-level assets could be portrayed, such as a work area

for the Main Support Battalion, a water point, or COSCOM operated ammunition supply or transfer point.

Resources external to a deception support unit would be required to credibly portray combat service support. The key to successful CSS deception lies in joint G3, G4, and support command planning and execution. Real CSS units doing real support missions in less-than-real but doctrinally correct locations will help sell the CSS portion of the deception plan to enemy HUMINT in our rear.

The corps deception battalion could best support CSS deception by augmenting real support units with physical and electronic deception resources. Deception planners in the corps deception cell would have the task to merge real support operations with deception plans.

Air Defense

Our current air defense doctrine states that ADA units can best deceive the enemy and enhance their survivability through effective use of dummy positions and decoys.³⁷ ADA doctrine emphasises protective deception but does not emphasize the cumulative effects of planned, combined arms deceptive measures at either the division or corps level.

Air defense systems, like fire support systems, have unique signatures. Most SHORAD weapons that operate in the corps area are passive in that their fire control is based on visual contact immediately prior to interrogation by IFF systems. ADA radars, however, create signatures that may be used in support of deception.

Forward Area Alerting Radars (FAARs) create the best signatures for deceptive purposes. FAAR positioning and employment is based on the equipment's capabilities and SHORAD doctrine. A system of FAAR

simulators, or actual FAAR equipment, could be used to replicate a division's air defense system.

If ADA deception is to be credible, however, some actual ADA weapons are needed. Engagement of enemy aerial reconnaissance by a unit executing a deception plan would greatly enhance the credibility of the story. Chaparral and Vulcan systems would be ideal due to their distinctive shapes. Stinger or Redeye teams would probably be better due to the lower associated manpower, training, and maintenance costs.

The corps deception battalion should therefore concentrate on two areas for ADA deception. The first is the simulation of forward area alerting radars. The second is the fielding of a small number of Stinger teams; these teams would be an additional operating system that would lend credence to a deception plan. To a deception target, the appearance of a limited asset such as SHORAD weapon may be the convincing factor.

Mobility, Counter-Mobility, and Survivability

Engineer units throughout the width and depth of the battlefield would be difficult to portray. Numerous types of engineer-specific equipment support every combined arms echelon within the corps. Engineer C² is linked to every echelon. Combat engineer units look very much like combat arms units.

Engineer activities, however, would be much easier to portray. Float bridging can be replicated with rubber floating decoys and radar reflectors. Road improvements can be made on false routes. Dummy minefields can be sited and marked. False mine dumps can be installed. Dummy bunkers, fighting positions, and hull-down positions can be

prepared. Engineer activities pervade the corps area.

Every other battlefield operating system must portray its own survivability system in support of deceptive actions. Artillery systems require dug-in firing positions, as do command posts for all C² nodes. Camouflage and concealment is standard operating procedure for all BOS. Smoke generation can be employed in support of a variety of tactical missions. Every activity on the battlefield requires some degree of survivability enhancement.

Tactical engineering assets in the CDB would be a convincing factor in support of deception operations. Earthmoving equipment would be employed to create survivability positions for dummy installations and decoys and to create an emphasis on mobility along false routes. Combat engineer soldiers would be employed to construct dummy fortifications and installations and to install both real and dummy obstacles in support of a deception plan. Engineer soldiers would be a key element of the CDB.

Analysis and Summary of the Battlefield Operating Systems

This overview of the characteristics of the seven BOS suggests several imperatives for the execution of tactical deception:

- Deceptive effort must be doctrinally and procedurally correct with regard to the type of units or activities portrayed. The enemy knows our doctrine and expects to see it on the ground.

- A credible deception must employ multiple BOS and redundant indicators.

- Deceptive actions must be consistent throughout the width and depth of the corps area. Portrayed actions in the rear area must be doctrinally consistent with activities on the flanks and forward.

- Deception works best when deceptive equipment and formations are used in conjunction with real equipment and units.

-- Attention to detail is essential to a deception plan. Trash left in "assembly areas," tags on dummy commo wire, and correct, but false, bumper markings are just a few examples of the level of detail that must be the standard.

Three battlefield operating systems are crucial to the creation of a believable deception plan. *Maneuver* systems provide the greatest potential due to their relative high density in the corps area and their emission of multiple signatures. *Fire Support Systems* are found throughout the battlefield, have significantly unique signatures, and are doctrinally positioned to support maneuver units. *Command and Control* systems are also doctrinally positioned in the field and emit a variety of electro-magnetic signatures. Any additional deceptive actions involving all other BOS would be planned to support the major deception story painted by the three crucial systems.

Offense and defense require different deception means. All deceptive BOS measures are employed in both types of operations but in varying degrees. Offensive deception is employed to help achieve the element of surprise.³⁸ *Command and control*, *maneuver*, and *fire support* deception measures are employed to portray false strength; the use of real units in offensive deception adds to the credibility. Defensive deception is employed to conceal our strength and to cause the enemy to expend resources in the wrong place at the wrong time.³⁹ All BOS contribute to defensive deception; added emphasis is placed on the ADA, M/C-M/S, Intelligence, and CSS systems.

The intricacies of deception will affect the design of the Corps Deception Battalion. The CDB must be capable of both offensive and defensive deception. Its organization must be flexible enough to permit rapid task organization across the corps area. It must be capable of either independent operations or those involving other units

of the corps. It must be robust enough to be believed.

Section Six: The Design of the Corps Deception Battalion.

We should allow the lessons of the past to influence our actions today. The Army's past experience with deception units can be used in the design of a modern deception unit. The organization of the 23d Special Troops proved the value of a special electronic deception unit as well as the importance of engineers in support of deception. In 1955 the US Army Aggressor Cadre recommended a similar organization.⁴⁰ In 1965 the US Army Combat Developments Command developed an organization that was larger in size but similar in mission; it added a unit specifically for "display" purposes (decoy employment).⁴¹ These concepts for a deception organization have remained essentially unchanged.

As a preface to further discussion of the design of the CDB, its command relationship within the corps must first be made clear. It would be a corps asset and afforded the same consideration for maneuver as would be a division or an ACR. While operating independently it would be under the direct command of the corps commander. Only when attached or under the operational control of a division does the CDB break its ties with the corps commander and staff.

There are two conceptual approaches to the basic design of the CDB. The first approach, based on the separate functions of each battlefield operating system, would create a number of subordinate units that would each concentrate its deceptive effort on its specific BOS. The second approach would be to create deception companies that would be capable of portraying up to brigade level formations. The former approach

would create a large number of companies, causing difficulties during task organization for specific deception missions. The latter would create companies that would be large and unwieldy while also decreasing flexibility.

The best approach, therefore, is one of compromise. Companies of the battalion would focus on a specific area but would contain enough deceptive redundancy that flexibility could remain at every level throughout the CDB. The major deception companies of the battalion would be based on the three crucial BOS discussed above. Figure 4 depicts the proposed organization of the Corps Deception Battalion.

Several major constraints should be addressed prior to discussion of the organizations and missions of the companies of the Deception Battalion. The final CDB TO&E should be adaptable to either active or reserve components; active duty battalions would support all forward

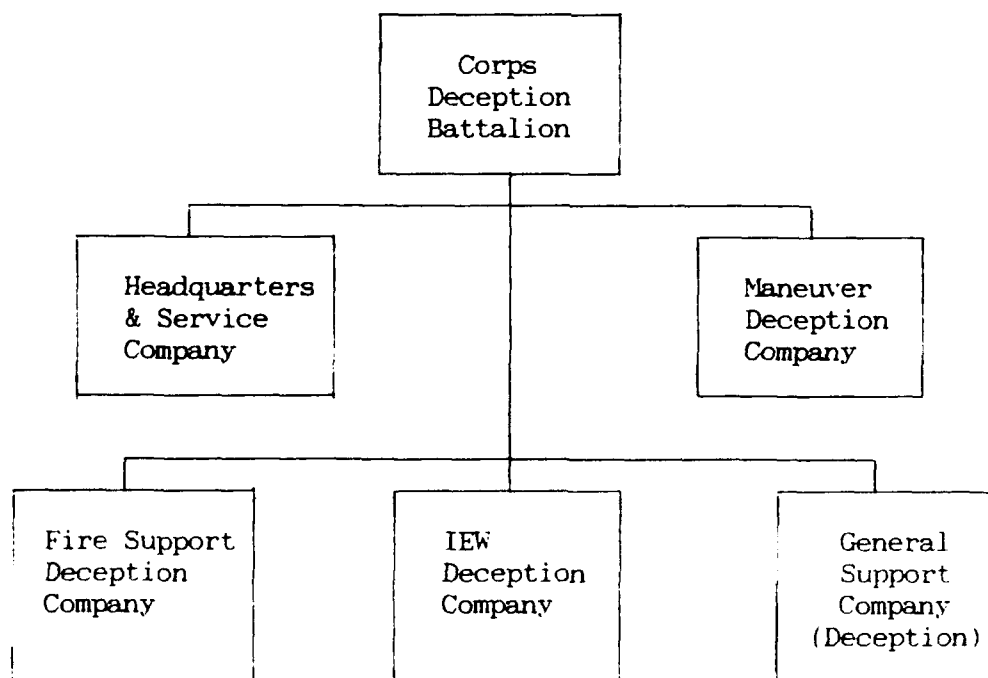


Figure 4. The Corps Deception Battalion

deployed corps, Army Reserve or National Guard battalions would support those based in CONUS. The CDB should be 100% self-mobile and fully air deployable in both theater and strategic airlift aircraft. This would provide a high degree of flexibility for both deployment to and within a theater of operations. Keeping these constraints in mind, discussion of each company of the CDB can be addressed in more detail.

Headquarters and Service Company

The Headquarters and Service Company (HSC) would provide the command, employment planning, and service support for the Corps Deception Battalion. The HSC would be similar in organization and function to those of other battalions.

The Corps Deception Cell as it is currently fielded in corps headquarters would become part of the CDB. Its place of duty would remain with the G-3 section. It would retain its functions of coordinating deception efforts within the corps and with higher echelons.

The SPO (Security, Plans, and Operations) section would be under the control of the CDB S-3. He would be responsible for the training of the CDB during peace and for the planning and synchronization of CDB operations during war. He would also be responsible for all liaison actions required in support of corps deception plans. The battalion S-2 and communications-electronics officer, and their sections, would operate under the supervision of the S-3.

The company headquarters performs the normal functions of administration and supply for the HSC. The HSC commander is directly responsible for Battalion Maintenance Section. This section would provide intermediate direct support maintenance for automotive and

electronic equipment in the battalion. It would also provide direct support repairs to all non-electronic deception equipment.

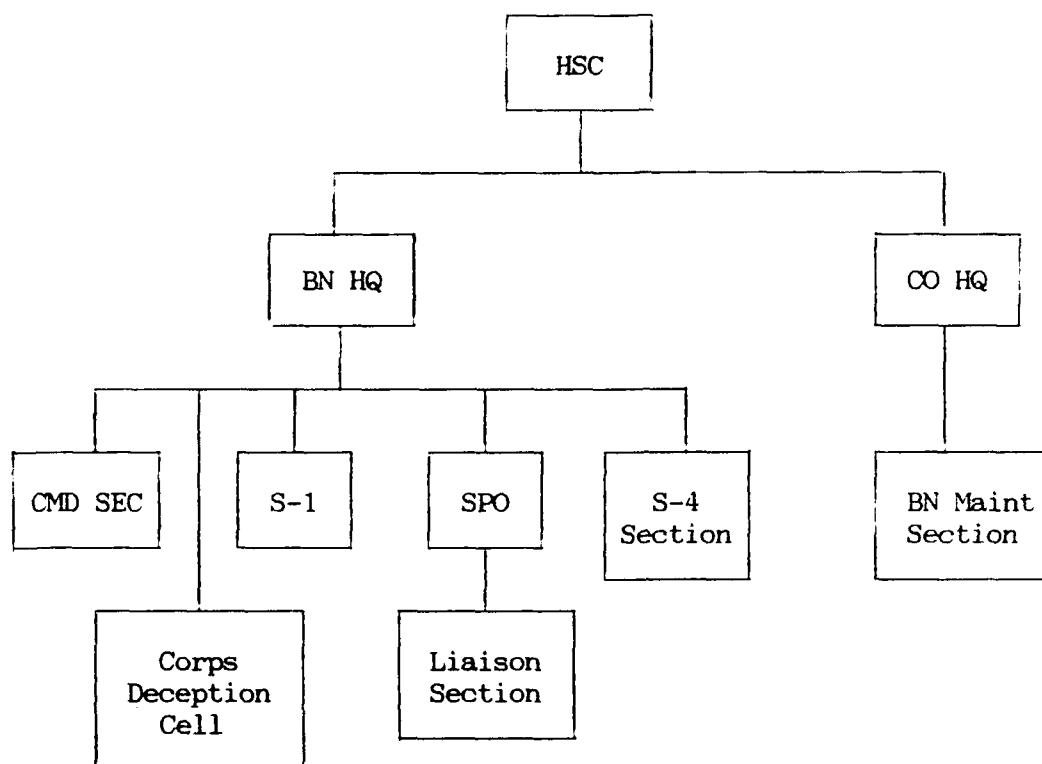


Figure 5. Headquarters and Service Company,
Corps Deception Battalion

Maneuver Deception Company

The Maneuver Deception Company will be the core unit of the CDB. It will have the capability to portray up to three brigade level organizations with three-dimensional multi-spectral decoys. The three brigade capability would provide a viable deception organization that could meet the enemy's intelligence expectations.

The Maneuver Deception Platoon is the basic unit of the deception battalion. Each platoon will be capable of portraying up to one brigade formation of combat vehicles with appropriate C² electromagnetic signatures for a brigade and three task force command posts.

The platoon will consist of one squad each for infantry/cavalry vehicles, tanks, and distinctive support vehicles (ITVs, M577s, and armored recovery vehicles). The C² Decoy Squad will maintain, program

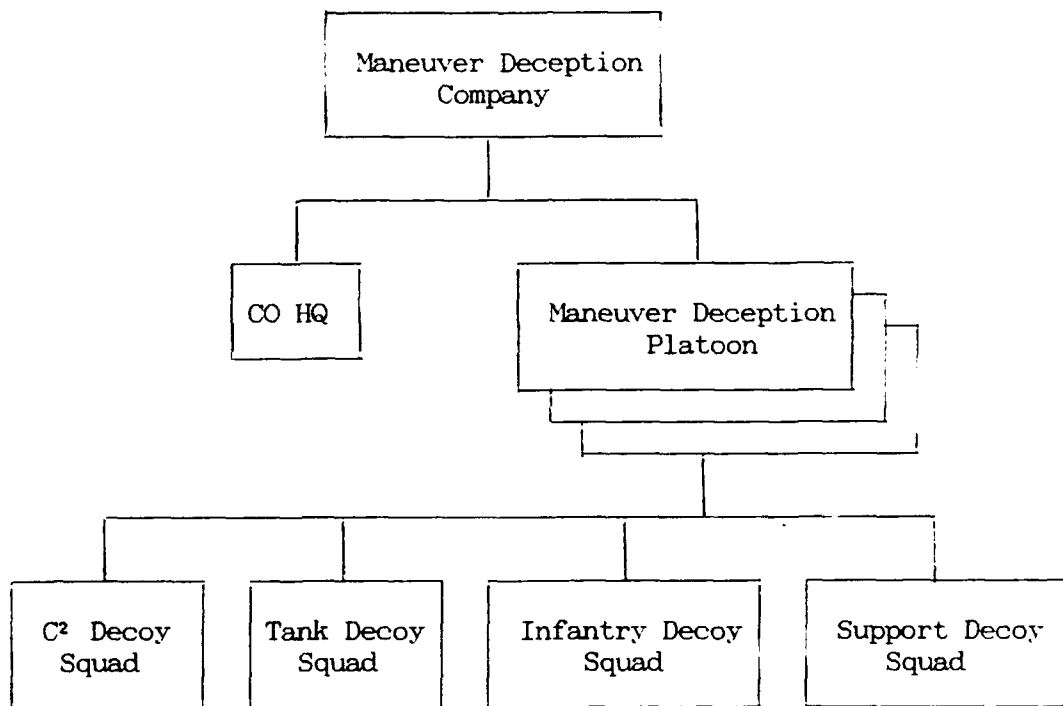


Figure 6. Maneuver Deception Company,
Corps Deception Battalion

and deploy electronic deception devices. Each platoon will also have sonic deception equipment and devices to create vehicle track impressions over ground. The enlisted soldiers of this platoon, and many in the other companies, will be trained deception specialists. This platoon, or selected elements, will be capable of brief independent operations.

The company headquarters will provide basic administration and supply in addition to employment direction. A major function of the company headquarters will be coordination with other companies of the CDB in the depiction of the battalion's deception story.

Fire Support Deception Company

The Fire Support Deception Company will portray indirect fire systems and divisional air defense systems. Deception will be executed by employment of three-dimensional, multi-spectral decoys and electromagnetic emitters.

The Fire Support Deception Platoon will be capable of depicting up to three battalions of direct support artillery and up to one company of MLRS launchers. Each platoon will also have the capability to

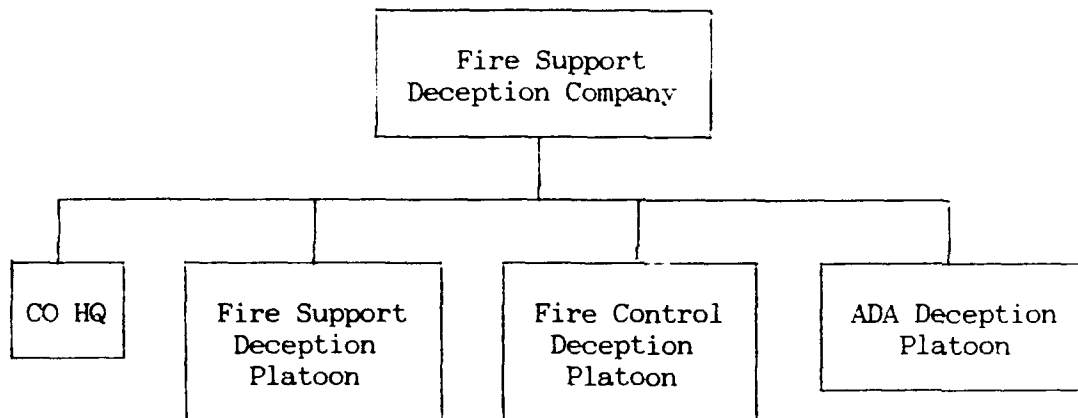


Figure 7. Fire Support Deception Company,
Corps Deception Battalion

simulate the electromagnetic signatures of up to four artillery battalions. It will also be equipped to conduct sonic deception and also sound-and-flash deception.

The Fire Control Deception Platoon will employ electronic emitters to simulate division-level artillery control and fire-finding radars. It will also simulate the C² link found between a division artillery headquarters, division C², and supporting corps artillery.

The ADA deception platoon will have two separate functions. It will simulate division forward area radar with electronic simulators collocated with 3rd decoys. It will also contain a number of Stinger teams that may be deployed throughout the CDB's area of operations. These teams would provide a high degree of credibility to the deception story should they engage enemy aerial reconnaissance.

Intelligence and Electronic Warfare Deception Company

The Intelligence and Electronic Warfare (IEW) Deception Company will portray divisional command posts and provide deception support for all other division-level C² and intelligence systems. The primary methods used by this company will be simulative and imitative electronic deception.

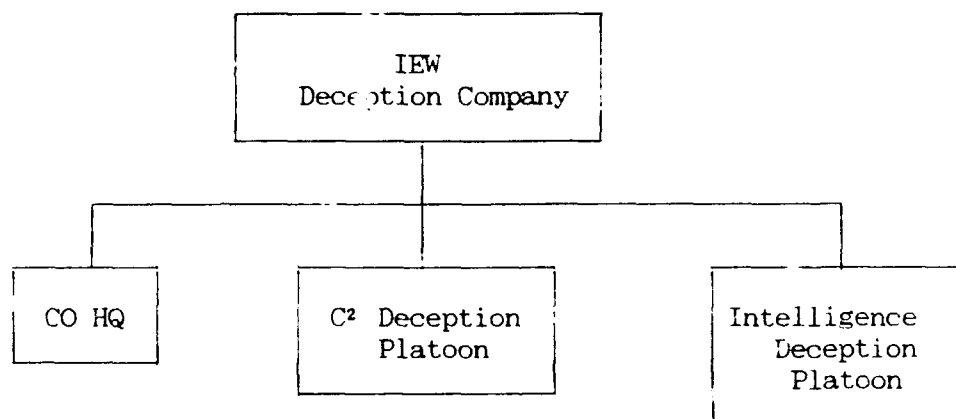


Figure 8. Intelligence and Electronic Warfare Deception Company, Corps Deception Battalion

The C² Deception Platoon will be capable of electronically portraying division forward, main, and rear command posts. It will also possess a limited capability for visual deception of those CPs. Its primary deception tools will be electronic simulators, although it will have a significant number of real C² systems with which to transmit and receive detailed but false messages.

The Intelligence Deception Platoon will simulate actions of the division CEWI battalion. It will use 3D decoys to simulate passive ground collection systems and electronic simulators, co-located with decoys, to simulate active systems. It will also possess an organic capability to simulate electronic intelligence transmissions.

General Support Company (Deception)

The General Support Company will provide support to all other companies of the deception battalion. This company will fill in the details that are needed to create a believable deception story.

The Combat Engineer Platoon will have multiple missions. It will conduct a variety of countermobility and field construction tasks in support of the deception story. This includes the installation of real and false obstacles. It will also deploy and maintain bridge decoys.

The Engineer Equipment Section will construct both deceptive and real survivability positions in support of all other companies of the CDB. Although its primary tasks will be survivability, it may also be employed to execute deceptive and real route improvements.

The Special Effects Platoon will have the most unique task in the battalion. This platoon will maintain stocks of shoulder patches and other distinctive unit identification items. It will also manufacture, employ, and maintain visual C² means such as CP signs, route markings, and vehicle bumper numbers. Another unique task would be the portrayal of special personalities found in and around command posts (senior officers and command sergeants major).

The Smoke Platoon will provide general support to specified deception tasks. Primary employment will be to screen deceptive river crossings and false assembly areas.

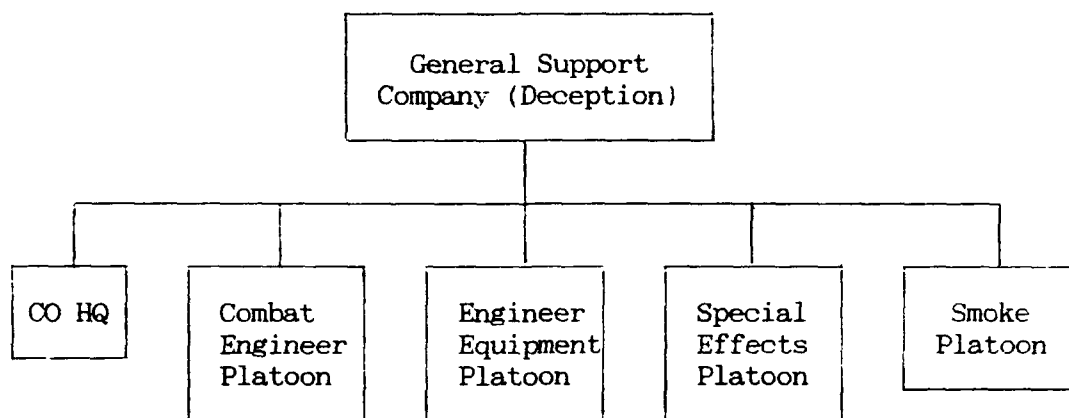


Figure 9. General Support Company (Deception),
Corps Deception Battalion

It can be seen that the CDB would require special equipment and training. Many deception devices needed are currently under design and procurement. These may be adaptable for employment by the CDB. However, for the CDB to be truly effective against the enemy's deep reconnaissance, three-dimensional, multi-spectral decoys are mandatory. They may be either inflatable or similar in design and material to the fielded two-dimensional decoys. Whatever the configuration, they must be multi-spectral and capable of accurate portrayal to high altitude platforms as well as tactical aerial and ground reconnaissance.

Section Seven. Employment Schemes

In Section Five I suggested four employment possibilities for the Corps Deception Battalion. Now that the organization of the CDB has been proposed each type of employment can be examined in more detail.

The CDB may be employed independently under the direct control of the corps commander. During defensive operations the CDB could be used to portray up to a division-size reserve in a false location. On the

offense it could be employed to portray a build-up behind the FLOT in order to deceive the enemy as to the location of the true main effort. The advantages to the CDB's independent deployment are rapid response to corps needs and minimal coordination and liaison with other corps units. A major disadvantage is that an accurate portrayal would be at risk due to a lack of deceptive combat service support equipment; also, large tactical movements would not be credible due to the absence of real, large tracked vehicles.

A second alternative is the independent employment of the CDB but with selected augmentation by real units. The examples mentioned above are still valid in this case. The advantages are increased: rapid response and minimum coordination are supplemented by a greater potential for accurate portrayal. For example, real corps support elements performing their missions under the operational control of the CDB in the CDB operating area would add realism to the deception story.

Attachment or operational control of the CDB, or selected elements, to a subordinate command of the corps is a third employment possibility. The CDB would be task organized to a division for a specified period and for a specified deception task. The CDB would not have to be employed as a unit. For example, a package could be formed to portray elements of an artillery brigade or a separate infantry or armor brigade. This could be done for both offensive and defensive operations. The advantage to this employment option is the high degree of flexibility offered the corps. A significant disadvantage is the loss of integrity and resulting loss of capability of the CDB. In this case the corps deception planners would have to be very specific in their instructions to the CDB and to its supported unit. The sequence

of operations by the CDB would have to be carefully considered prior to commitment.

The fourth employment option is derived from the first three. The major difference is that the Corps Deception Battalion may be detached from the Corps to support a higher echelon's operational-level deception plan. When the CDB departs the corps area of operations it will be in one of the first two configurations discussed above. Optimum employment of the CDB for this option implies its use in the rear of the operational depth of the army, army group, or theater.

Although each employment option is viable and helps to reduce risk to the corps, the second is probably the most effective: independent operation of the CDB with selected augmentation based on a METT-T analysis. Unity of effort and command rests with the CDB commander. Responsiveness to corps requirements is better. Planning for sequenced deception operations would be easier if the CDB were to remain intact.

Section Eight: Conclusions.

Our doctrine specifies the requirement for deception in all operations. The modern systems of the battlefield have not diminished the potential for deception. On the contrary, the proliferation of electronic information gathering systems and the resulting data overload has perhaps made commanders more susceptible to deception than they were during World War II.

Our most dangerous potential adversary, the Soviet Union, values and respects deception as a critical component of surprise. The Soviets have used deception successfully in the past and continue to emphasize its employment. We should expect them to use tactical

deception against us. Conversely, based on the Soviet's value of deception, our employment of a deception organization would give them reason to doubt the validity of their tactical reconnaissance reports without extensive corroboration among all collecting systems.

Deception in modern war will be successful only when multiple operating systems act in concert. The corps deception battalion would collect and operate the necessary deceptive systems under a unified command and control system.

Today's corps commander must have a trained and ready asset to employ for deception. The expected fast tempo of sequential operations on the AirLand Battlefield may deny him the luxury of using maneuver or CSS units as deception means. The corps deception battalion will provide the commander a foundation on which to plan and execute the corps' deception plan.

The corps deception battalion would provide the responsiveness and flexibility needed for the expected high tempo of modern battle. It would be a self-contained, fully mobile organization and would provide the multiple system redundancy and unity of effort required for successful tactical deception.

Section Nine: Recommendations.

The senior leadership of the Army should consider the activation of the deception battalion in the corps structure. Although it would add to Army resource requirements, its benefits as a force multiplier in a mid to high-intensity war would justify its fielding and employment. With respect to probable Army force reductions in the future, it may be prudent to create deception battalions as a risk-reduction measure for

smaller, less stronger corps.

A major question that merits discussion is the sources for both the manpower and equipment required to fill the Corps Deception Battalion. The traditional bill payers, combat support and combat service support, should not be considered; those types of units are already overtasked and undermanned for the duties we expect them to perform on the battlefield.

Contingency and forward deployed corps should have an active-duty deception battalion in support. This would ease deployment requirements while facilitating the employment of the Corps Deception Battalion during training exercises and wartime operations. Deception battalions supporting CONUS-based corps should be from the reserve components.

Finally, no initiatives undertaken in tactical deception will be sustained without a renewed and continued interest in deception training. The US Army Combined Arms Center must seize and maintain proponency in the development of doctrine and training for all levels of deception in the Army. Fielding of the Corps Deception Battalion will provide the impetus and focal point for deception in combined arms training. Training in deception skills will once again be found at every level from the individual enlisted deception specialist to corps and division staffs. The Corps Deception Battalion would become the catalyst for an increase in one aspect of the Army's warfighting capability.

ENDNOTES

- ¹ Field Manual (FM) 100-5, *Operations*: 53.
- ² FM 71-100, *Division Operations*: 3-19.
- ³ FM 100-15, *Corps Operations*: 4-15.
- ⁴ FM 90-2, *Battlefield Deception*, does not address an importance in the commitment of resources to deception operations. Shallow treatment on page 5-9 of that manual states that "resources available for deception operations are limited only by operational need and the imagination of the deception planner."
- ⁵ FM 90-2: 1-31. FM 71-100, *Division Operations*, states on 3-19: "The more realistic and doctrinally consistent combined arms deception operations are, the greater the probability the enemy will perceive the plan as plausible."
- ⁶ Current doctrine in FM 100-5 loosely links deception and surprise in a discussion of deception as a major functional area (see page 53). However, deception and surprise are more closely linked in discussions of the characteristics of both offensive and defensive operations (pages 96 and 132, respectively).
- ⁷ Whaley, Barton, *Strategem: Deception and Surprise in War*: 195. In addition to general readings in history and military theory, Whaley based the results of his statistical study on deception and surprise on specific studies of 168 battles from 16 wars between 1914 and 1968.
- ⁸ Reznichenko, Vasily G., *Taktika* [1987]: 60.
- ⁹ *Ibid.*
- ¹⁰ Glantz, David M., "Soviet War Experience: A Deception Case Study": 3.
- ¹¹ *Ibid*: 4-5.
- ¹² *Ibid*: 5.
- ¹³ Headquarters, 23d Special Troops, *Official History of the 23d Headquarters Special Troops*: 1. Hereafter referred to as 23d History.
- ¹⁴ *Ibid*: 1-2.
- ¹⁵ No specific references to the 23d Special Troops indicates why the 23d was organized the way it was. However, in a proposal for a deception operation (Operation EXPLOIT) in March, 1945, the commander of the 23d outlined the activities he would use against enemy ground agents, enemy air reconnaissance, and enemy radio intelligence.
- ¹⁶ 23d History: 3-4.

¹⁷ Two references are made to 23d command and staff recommendations for deception operations in the 23d History: on 31 August 1944 a proposal was made to the Third Army regarding Operation BETTEMBURG; on 15 November 1944 a proposal was made to the 12th Army Group for deception support in Operation KOBLENZ. Also, in addition to the proposal mentioned above to Operation EXPLOIT, the commander of the 23d submitted a deception proposal to the 12th Army Group on 22 November 1944 referencing that command's Operation TRIER.

¹⁸ War Department T/O&E 60-70-15: 2.

¹⁹ Andrews, William R. From notes prepared while a student at the US Army Command and General Staff College and as part of a report for elective R170, Electronic Warfare. MAJ Andrews' tabulation of all 23d Special Troops operations suggests a steady rise in effectiveness.

²⁰ Headquarters, 23d Special Troops, "Report on Operations Involving Special Troops. BRITTANY Operation 9-12 August 44": 6. The material describing Operation BRITTANY was condensed from this after action report and from the 23d's official history.

²¹ Headquarters, 23d Special Troops, "Report on Operations Involving Special Troops. Operation VIERSEN, 18-24 March 1945". The material describing Operation VIERSEN was condensed from this after action report and the 23d's official history. Also of value was the recommendation for employment of the 23d to the commanding general, XIII Corps, two days prior to the start of the deception mission.

²² Eisenhower, Dwight D., *Papers of Dwight David Eisenhower, The Chief of Staff*, Volume IX: 1763. Extracted from "Tactical Deception: A Lost Art?" by MAJ Thomas A. Savoie: 17.

²³ US Army Command and General Staff College. "Faculty Board Meeting." 12 September 1958

²⁴ The details of each of the studies associated with deception remain classified and are on file in the Combined Arms Research Library, FT Leavenworth. Only the essence of each study has been addressed in an attempt to trace the continuity of thought about deception organizations since World War II.

²⁵ Scheffler, Randall M., "Battlefield Deception," *Armor Magazine*, May-June 88: 26-27.

²⁶ US Army Intelligence Center and School, "Battlefield Deception Program Status Update," (undated).

²⁷ Recent successful deception experience in REFORGER 88 by V Corps and its Battlefield Deception Cell indicates the return of deception to tactical operations. CPT(P) Paul A. Haveles describes the V Corps deception plan in "Deception In Support of REFORGER 88," *Military Review*, forthcoming.

²⁸ FM 100-15: page 4-16.

²⁹ FM 90-2: page 3-3. Current doctrine states that deception should:

- Facilitate exposing enemy rear forces to attack.
- Facilitate enemy rear force commitment irrelevant to the close fight.
- Delay, disrupt, or divert enemy rear forces.

Doctrine for deep operations does not specifically state that deception is a form of deep attack.

³⁰ Adapted from FM 34-1, *Intelligence and Electronic Warfare Operations*,": 4-5.

³¹ US Army Intelligence Center and School, "Requirement for and Status of the Communications Deception System (CDS)." A fact sheet prepared for the author on 30 August 1989 by Mr. Henry Trosper.

³² *Ibid.*

³³ FM 90-2: 5-5.

³⁴ FM 34-1: 4-14.

³⁵ Student Text 101-1: F-7.

³⁶ FM 34-10, *Division and Electronic Warfare Operations*: 1-1 to 1-3.

³⁷ FM 44-1, *US Army Air Defense Artillery Employment*: 9-4 and 9-5.

³⁸ FM 90-2, 6-0.

³⁹ *Ibid*: 6-3.

⁴⁰ US Army Aggressor Cadre, "Combat Deception Units." 28 October 1955.

⁴¹ US Army Combat Developments Command, "Army Requirements for Tactical Deception (U) Project No. USACDCCAG (CARMSA) 64-6." March, 1965
(CONFIDENTIAL)

APPENDIX 1: Manpower Requirements, Corps Deception Battalion (Summary)

	O5	O4	O3	O2	O1	WO	E9	E8	E7	E6	E5	E1-4	TOTAL	
Headquarters and Service Company	/ 1	3	10	4		2	1	4	7	15	18	70	135	
Maneuver Deception Company	/		1	1	3			1	4	16	30	104	160	
Fire Support Deception Company	/		1	1	3			1	3	13	17	54	93	
IEW Deception Company	/		1		2			1	3	9	13	37	66	
General Support/ Company (Deception)	/		1	1	4			1	5	19	28	100	159	
TOTALS	:	1	3	14	7	12	2	1	8	22	72	106	365	613

NOTE: All proposed manpower allocations are based on the personal experience of the author and reflect his opinion only.

TAB A to APPENDIX 1: Manpower Requirements, Headquarters and Service Company, Corps Deception Battalion

Duty	FA/ MOS	O5	O4	O3	O2	WO	E9	E8	E7	E6	E5	E1-4	TOT
Command Group:													
BN Commander	54	1											
BN Exec Off	54		1										
Chaplain	56A			1									
BN Maint Off	54			1									
CSM	00Z						1						
Veh Operator	*											5	
		1	1	2			1					5	10
Corps Deception Cell													
Cell OIC	54		1										
Plans Off	54			2									
Cell NCOIC	*							1					
EW Decep Spec	*								1				
Deception Spec	*											2	
			1	2				1	1			2	7
S-1 Section													
Adjutant	54			1									
Per Svc NCO	75Z								1				
Pers Act Spec	75E										1	2	
Pers Admin Sp	75B									1		2	
Admin Spec	71L										1	3	
				1					1	1	2	7	12
Security, Plans, and Operations Section													
BN S-3	54		1										
BN S-2	35			1									
Plan/Ops Off	54			1									
Com-El Off	25			1									
Liaison Off	**				3								
Section NCOIC	**							1					
Commo Sec Chf	31Z								1				
Intel Analyst	96B								1	1		2	
EW Decept Spec	*								1				
COMSEC Mnt Tec	29B									1		1	
Draftsman	81B											1	
Cbt Signaller	31K											4	
Deception Spec	*										1	2	
Vehicle Op	*											3	
			1	3	3			1	3	2	1	13	27

Duty	MOS	O5	O4	O3	O2	WO	E9	E8	E7	E6	E5	E1-4	
S-4 Section													
BN S-4	54			1									
PBO	920A					1							
Section NCOIC	76Y								1				
Supply Spec	76Y									2	2	6	
Petrl Sup Spec	77F									1	3	10	
				1		1			1	3	5	16	27

Company Headquarters

CO CDR	54			1									
CO XO	54				1								
CO 1SG	**							1					
Commo Spec	31G									1		1	
Food Svc Spec	94B									1		2	
Medic NCOIC	91B								1				
Medic Spec	91A										2	10	
Supply Spec	76Y									1		2	
Chem Ops Spec	54B											1	
				1	1			1	1	3	2	16	25

Maintenance Platoon

Maint Tech	915A					1							
Maint NCOIC	63S							1					
Decep Eq Rpr	*									1	1	2	
Elec Sys Repr	31V									1	1	1	
Engr Eq Repr	62E									1	1	1	
Hv Whl Veh Rep	63S									1	1	2	
Lt Whl Veh Rep	63B									1	1	2	
Small Arms Rep	45B										1		
Gen Eq Rpr	52D										1	1	
Eq Rcds Spec	76C									1	1	2	
						1		1		6	8	11	27

Company Summary : 1 3 10 4 2 1 4 7 15 18 70 135
(By Grade)

- * - New MOS required for deception specialties.
- ** - Combat Arms Branch/MOS.

TAB B to APPENDIX 1: Manpower Requirements, Maneuver Deception Company,
Corps Deception Battalion

Duty	FA/ MOS	O3	O2	O1	E8	E7	E6	E5	E1-4	TOTAL
Company Headquarters										
CO CDR	54	1								
CO XO	54		1							
CO ISG	**				1					
Commo Spec	31G						1		1	
Food Svc Spec	94B						1		2	
Supply Spec	76Y						1		2	
Chem Ops Spec	54B								1	
Elec Sys Repr	31V							1	1	
Hv Whl Veh Rep	63S					1	1	1	2	
Lt Whl Veh Rep	63B							1	2	
Gen Eq Rpr	52D								1	
Eq Rcds Spec	76C								2	
		1	1		1	1	4	3	14	25

Maneuver Deception Platoon (3)

PLT LDR	**			3						
PLT SGT	**					3				
Decep Spec	*						12	27	90	
				3		3	12	27	90	135

Company Summary : 1 1 3 1 4 16 30 104 160
(By Grade)

* - New MOS required for deception specialties.

** - Combat arms branch/MOS.

TAB C to APPENDIX 1: Manpower Requirements, Fire Support Deception
Company, Corps Deception Battalion

Duty	FA/ MOS	O3	O2	O1	E8	E7	E6	E5	E1-4	TOTAL
Company Headquarters										
CO CDR	54	1								
CO XO	**		1							
CO 1SG	13Z				1					
Commo Spec	31G						1		1	
Food Svc Spec	94B						1		2	
Supply Spec	76Y						1		2	
Chem Ops Spec	54B								1	
Elec Sys Repr	31V							1	1	
Hv Whl Veh Rep	63S						1	1	2	
Lt Whl Veh Rep	63B							1	1	
Gen Eq Rpr	52D								1	
Eq Rcds Spec	76C								2	
		1	1		1		4	3	13	23
Fire Support Deception Platoon										
PLT LDR	13			1						
PLT SGT	13B					1				
Decep Spec	*						4	4	16	
				1		1	4	4	16	26
Fire Control Deception Platoon										
PLT LDR	13			1						
PLT SGT	13B					1				
EW Decep Spec	*						3	3	14	
				1		1	3	3	14	22
ADA Deception Platoon										
PLT LDR	14			1						
PLT SGT	16S					1				
EW Decep Spec	*						1	2	5	
Stinger Crew	16S						1	5	6	
				1		1	2	7	11	22
Company Summary : (By Grade)										
		1	1	3	1	3	13	17	54	93

* - New MOS required for deception specialties.

** - Combat arms branch/MOS.

TAB D to APPENDIX 1: Manpower Requirements, IEW Deception Company, Corps
Deception Battalion

Duty	FA/ MOS	O3	O2	O1	E8	E7	E6	E5	E1-4	TOTAL
Company Headquarters										
CO CDR	35	1								
CO 1SG	98Z				1					
Commo Spec	31G						1		1	
Food Svc Spec	94B						1		2	
Supply Spec	76Y						1		2	
Chem Ops Spec	54B								1	
Elec Sys Repr	31V						1	1	1	
Hv Whl Veh Rep	63S							1	1	
Lt Whl Veh Rep	63B					1		1	2	
Gen Eq Rpr	52D								1	
Eq Rcds Spec	76C								2	
		1			1	1	4	3	13	23
Intelligence Deception Platoon										
PLT LDR	35			1						
PLT SGT	05D					1				
EW Spec	05D						1	2	3	
EW Decep Spec	*						1	2	7	
				1		1	2	4	10	18
Division C² Deception Platoon										
PLT LDR	35			1						
PLT SGT	*					1				
EW Decep Spec	*						3	3	8	
Decep Spec	*							3	6	
				1		1	3	6	14	25
Company Summary : (By Grade)										
		1		2	1	3	9	13	37	66

* - New MOS required for deception specialties

TAB E to APPENDIX 1: Manpower Requirements, General Support Company
(Deception), Corps Deception Battalion

Duty	FA/ MOS	O3	O2	O1	E8	E7	E6	E5	E1-4	TOTAL
Company Headquarters										
CO CDR	54	1								
CO XO	**		1							
CO 1SG	**				1					
Commo Spec	31G						1		1	
Food Svc Spec	94B						1		2	
Supply Spec	76Y						1		2	
Chem Ops Spec	54B							1		
Const Eq Rpr	62B						1	1	2	
Hv Whl Veh Rep	63S					1	1	1	2	
Lt Whl Veh Rep	63B						1	1	3	
Gen Eq Rpr	52D								1	
Eq Rcds Spec	76C								2	
		1	1		1	1	6	4	15	29
Combat Engineer Platoon										
PLT LDR	21			1						
PLT SGT	12B					1				
Cbt Engr	12B						3	7	21	
Bridge Crew	12C						1	1		
Decep Spec	*							1	7	
				1		1	4	9	28	43
Engineer Equipment Platoon										
PLT LDR	21			1						
PLT SGT	62N					1				
Const Eq Op	62E						3	6	20	
				1		1	3	6	20	31
Special Effects Platoon										
PLT LDR	**			1						
PLT SGT	**					1				
Decep Spec	*						1	2	8	
Carpenter	51B						1	1	4	
Supply Spec	76Y						1		2	
				1		1	3	3	14	22
Smoke Platoon										
PLT LDR	74			1						
PLT SGT	54B					1				
Chem Ops Spec	54B						3	6	23	
				1		1	3	6	23	34
Company Summary : (By Grade)										
		1	1	4	1	5	19	28	100	159

* - New MOS required for deception specialties.

** - Combat arms branch/MOS.

APPENDIX 2: Major Items of Equipment, Corps Deception Battalion (Summary)

NOTE: Equipment selection and allocation is based solely on the opinion of the author. Line Item Numbers were extracted from FM 101-10-1/1.

DESCRIPTION	LIN	HSC	MDC	FSDC	LEWDC	GSC(D)	TOTAL
Antenna Grp, OE-254	A79381	10	36	14	17	12	89
Camo Screen System	C89145	63	450	101	70	77	701
Camo Scrn Spt Sys	C89213	63	450	101	70	77	701
C/M Set, AN/TLQ-17A	C30607				3		3
Decoy, 3D, M1			198				198
Decoy, 3D, M2/3			225				225
Decoy, 3D, M88			45				45
Decoy, 3D, M109				24			24
Decoy, 3D, M577			60	2	8		70
Decoy, 3D, AN/TPQ-37				6			6
Decoy, 3D, AN/TRQ-32					4		4
Decoy, 3D, AN/TSQ-114					5		5
Decoy, 3D, FAASV				24			24
Decoy, 3D, FAAR				6			6
Decoy, 3D, HUMMV			36				36
Decoy, 3D, ITV			60				60
Decoy, 3D, MLRS				9			9
Decoy, 3D, Trk, Cgo			36				36
Decoy, 3D, Brdg Sect						50	50
Decoy, 3D, 5 Ton Exp					16		16
Field Feeding Kit	Z26873	1	1	1		1	4
Generator, Smoke	J30492					12	12
Gripstock, Stinger				6			6
Interrogator, IFF	J98501			6			6
Launcher, Grn, 40mm	L44595	8	9	9	3	20	49
Loader, Scp, 2 1/2 Y	L76556					3	3
Machine Gun, 7.62mm	L92386	5	17	6	4	11	43
Machine Gun, Cal .50	L91975	4	1	1	1	3	10
MG, Grenade, 40mm	Z40468	3	1		4	1	9
Pistol, 9mm, XM9	Z49140	24	18	7	5	12	66
Pneu Tool/Comp Set	P11868					2	2
Rad Set, GRC122 (V2)	Q90100	1					1
Radio Set, GRC 160	Q34302		27	5		12	44
Radio Set, VRC 44	Q52394	4				1	5
Radio Set, VRC 46	Q53001	7	4	9	8	11	39
Radio Set, VRC 47	Q54174	14	15	9	8	13	60

DESCRIPTION	LIN	HSC	MDC	FSDC	IEWDC	GSC(D)	TOTAL
Radio Set, VRC 48	Q54829		1				1
Radio Set, VRC 49	Q55114		4	3	4		11
Reflector, Rdr, Brdg						20	20
Rifle, 5.56mm, M16A2	R95035	110	142	86	61	147	546
Semi-Trl, Van, PLL	S74832	2				1	3
Simulator, Arty Rada				6			6
Simulator, Elec, FM			24	18	18		60
Simulator, Elec, GSR					20		20
Simulator, Elec, Jam					4		4
Simulator, Elec, M/W			6		6		12
Simulator, FAAR				6			6
Simulator, TACFIRE				18			18
Simulator, Track Veh			6	3			9
Tractor, FT, Lt Doze	W76336					4	4
Tractor, Whl, SEE	W91074					2	2
Trailer, Cgo, 1/4 T				6			6
Trailer, Cgo, 1 1/2	W95811	12	2	2	2	11	29
Trailer, Tank, Water	W98825	1	1	1		1	4
Trailer, Tilt, 15 To	T96975					4	4
Truck, Amb, HMMWV	Z93123	1					1
Truck, Cgo, 2 1/2 T	X40009	2	2	2	2	2	10
Truck, Cgo, 5 Ton	X40794	4	1	1		3	9
Truck, Cgo, HEMMT	T39586		27	4	4		35
Truck, Dump, 5 Ton	X43708					8	8
Truck, Tank, 2500 Ga	T87248	5					5
Truck, Tractor, 5T	X59326	2				1	3
Truck, Util, HMMWV	T61494	24	27	28	12	28	119
Truck, Util, Shltr	T07543	2	1	1	7	1	12
Truck, Van, Exp, 5T	X62237	5				1	6
Truck, Van, Shop	X62340	3			1	2	6
Truck, Wrecker, HEMM	T63093	1	1	1		1	4

TAB 1 to APPENDIX 2: Major Items of Equipment, Headquarters and Service Company

DESCRIPTION	LIN	CMD GRP	CDS	S-1	SPO	S-4	CO HQ	MNT PLT	TOTAL
Antenna Grp, OE-254	A79381			2	4	2	2		10
Camc Screen System	C89145	5	2	3	12	19	9	13	63
Camo Scrn Spt Sys	C89213	5	2	3	12	19	9	13	63
Field Feeding Kit	Z26873						1		1
Launcher, Grn, 40mm	L44595				2	2	2	2	8
Machine Gun, 7.62mm	L92386			1	1	1	1	1	5
Machine Gun, Cal .50	L91975					2	1	1	4
MG, Grenade, 40mm	Z40468			1		1		1	3
Pistol, 9mm, XM9	Z49140	4	2	2	4	3	7	2	24
Rad Set, GRC122 (V2)	Q90100				1				1
Radio Set, AN/VRC-44	Q52394	2			2				4
Radio Set, AN/VRC-46	Q53001	1	1			2	1	1	7
Radio Set, AN/VRC-47	Q54174	2	1	1	5	1	2	2	14
Rifle, 5.56mm, M16A2	R95035	5	5	10	23	24	18	25	110
Semi-Trl, Van, PLL	S74832							2	2
Trailer, Cgo, 1 1/2	W95811		1	2	5	2	1	1	12
Trailer, Tank, Water	W98825						1		1
Truck, Amb, HMMWV	Z93123						1		1
Truck, Cgo, 2 1/2 T	X40009						1	1	2
Truck, Cgo, 5 Ton	X40794					4			4
Truck, Tank, 2500 Ga	T87248					5			5
Truck, Tractor, 5T	X59326							2	
Truck, Util, HMMWV	T61494	5	2	2	7	3	2	3	24
Truck, Util, Shltr	T07543				1		1		2
Truck, Van, Exp, 5T	X62237			1	2	1		1	5
Truck, Van, Shop	X62340							3	3
Truck, Wrecker, HEMM	T63093							1	1

TAB 2 to APPENDIX 2: Major Items of Equipment, Maneuver Deception Company

DESCRIPTION	LIN	HQ PLT	Maneuver Deception PLT (3)	TOTAL	NOTES
Antenna Grp, OE-254	A79381	3	33	36	
Camo Screen System	C89145	12	438	450	1
Camo Scrn Spt Sys	C89213	12	438	450	1
Decoy, 3D, M1			198	198	2
Decoy, 3D, M2/3			225	225	2
Decoy, 3D, M88			45	45	2
Decoy, 3D, M577			60	60	2
Decoy, 3D, HUMMV			36	36	2
Decoy, 3D, ITV			60	60	2
Decoy, 3D, Trk, Cgo			36	36	2
Field Feeding Kit	Z26873	1		1	
Launcher, Grn, 40mm	L44595		9	9	
Machine Gun, 7.62mm	L92386	1	16	17	
Machine Gun, Cal .50	L91975	1		1	
MG, Grenade, 40mm	Z40468	1		1	
Pistol, 9mm, XM9	Z49140	2	16	18	
Radio Set, GRC 160	Q34308		27	27	
Radio Set, VRC 46	Q53001	1	3	4	
Radio Set, VRC 47	Q54174		15	15	
Radio Set, VRC 48	Q54829	1		1	
Radio Set, VRC 49	Q55114	1	3	4	
Rifle, 5.56mm, M16A2	R95035	23	119	142	
Simulator, Elec, FM			24	24	
Simulator, Elec, Mic			6	6	
Simulator, Sonic Decep			3	3	
Simulator, Track Veh			6	6	
Trailer, Cgo, 1 1/2	W95811	2		2	
Trailer, Tank, Water	W98825	1		1	
Truck, Cgo, 2 1/2 T	X40009	2		2	
Truck, Cgo, 5 Ton	X40794	1		1	
Truck, Cgo, HEMMT	T39586		27	27	
Truck, Util, HMMWV	T61494	6	21	27	
Truck, Util, Shelter	T07543	1		1	
Truck, Wrecker, HEMM	T63093	1		1	

NOTES:

1. Camouflage screen and support systems calculated for all tactical vehicles and 60% of 3D decoys.

2. Number of decoys based on a variation of quantities found in the Tables of Organization and Equipment for the heavy division and the armored cavalry regiment. Quantities of decoys per each platoon based on following assumed cubic feet per type decoy:

M1	- 15 cf	M577	- 8 cf	Truck	- 12 cf
M2/M3	- 12 cf	ITV	- 8 cf		
M88	- 12 cf	HUMMV	- 6 cf		

TAB 3 to APPENDIX 2: Major Items of Equipment, Fire Support Deception Company

DESCRIPTION	LIN	HQ PLT	Fire SPT Decept Platoon	Fire C ² Decept Platoon	ADA Decep PLT	TOTAL
Antenna Grp, OE-254	A79381	2	5	5	2	14
Camo Screen System	C89145	12	57	14	18	101
Camo Scrn Spt Sys	C89213	12	57	14	18	101
Decoy, 3D, M109			24			24
Decoy, 3D, M577			2			2
Decoy, 3D, AN/TPQ-37				6		6
Decoy, 3D, FAAR					6	6
Decoy, 3D, FAASV			24			24
Decoy, 3D, MLRS			18			18
Field Feeding Kit	Z26873	1				1
Gripstock, Stinger					6	6
Interrogator, IFF	J98501				6	6
Launcher, Grn, 40mm	L44595		4	4	1	9
Machine Gun, 7.62mm	L92386	1	4		1	6
Machine Gun, Cal .50	L91975	1				1
Pistol, 9mm, XM9	Z49140	2	4		1	7
Radio Set, GRC 160	Q34308				5	5
Radio Set, AN/VRC-46	Q53001	2	4	3		9
Radio Set, AN/VRC-47	Q54174	1	1	4	3	9
Radio Set, AN/VRC-49	Q55114	1		1	1	3
Rifle, 5.56mm, M16A2	R95035	21	22	22	21	86
Simulator, Arty Radr				6		6
Simulator, Elec, FM				18		18
Simulator, FAAR					6	6
Simulator, TACFIRE				18		18
Simulator, Track Ve'			3			3
Trailer, Cgo, 1/4 To	W95400				6	6
Trailer, Cgo, 1 1/2	W95811	2				2
Trailer, Tank, Water	W98825	1				1
Truck, Cgo, 2 1/2 T	X40009	2				2
Truck, Cgo, 5 Ton	X40794	1				1
Truck, Cgo, HEMT	T39586		4			4
Truck, Util, HMMWV	T61494	4	5	8	11	28
Truck, Util, Shltr	T07543	1				1
Truck, Wrecker, HEMM	T63093	1				1

NOTES:

1. Number of decoys based on a variation of quantities found in the tables of organization and equipment for the heavy division and the armored cavalry regiment. Quantities of decoys per each platoon based on following assumed cubic feet per type decoy:

M88 - 12 cf	FAASV - 15 cf
M109 - 20 cf	FAAR - 12 cf
M577 - 8 cf	AN/TPQ-37 - 10 cf

TAB 4 to APPENDIX 2: Major Items of Equipment, IEW Deception Company

DESCRIPTION	LIN	HQ PLT	Intel Decep PLT	C ² Decep PLT	TOTAL
Antenna Grp, OE-254	A79381	2	2	13	17
Camo Screen System	C89145	10	22	38	70
Camo Scrn Spt Sys	C89213	10	22	38	70
Decoy, 3D, M577				8	8
Decoy, 3D, 5T Exp				16	16
Decoy, 3D, AN/MLQ-34			4		4
Decoy, 3D, AN/TRQ-32			4		4
Decoy, 3D, AN/TSQ-114			5		5
Launcher, Grn, 40mm	L44595			3	3
Machine Gun, 7.62mm	L92386	1		3	4
Machine Gun, Cal .50	L91975	1			1
MG, Grenade, 40mm	Z40468	1		3	4
Pistol, 9mm, XM9	Z49140	2		3	5
C/M Set, AN/TLQ-17A	C30607		2		2
Radio Set, VRC 46	Q53001	2	3	3	8
Radio Set, VRC 47	Q54174	1	3	5	9
Radio Set, VRC 49	Q55114	1		3	4
Rifle, 5.56mm, M16A2	R95035	21	18	22	61
Simulator, Elec, FM				18	18
Simulator, Elec, GSR			20		20
Simulator, Elec, Mic				6	6
Simulator, Elec, Jam			4		4
Trailer, Cgo, 1 1/2	W95811	2			2
Truck, Cgo, 2 1/2 T	X40009	2			2
Truck, Cgo, HEMMT	T39586		1	3	4
Truck, Util, HMMWV	T61494	3	4	5	12
Truck, Util, Shltr	T07543	1	3	3	7
Truck, Van, Shop	Y62340	1			1

NOTES:

1. IEW Deception company messes with Headquarters and Service Company.
2. Number of decoys based on a variation of quantities found in the tables of organization and equipment for the heavy division and the armored cavalry regiment. Quantities of decoys per each platoon based on following assumed cubic feet per type decoy:

M577 - 8 cf
 5 Ton Exp - 20 cf
 MLQ-34 - 15 cf
 TRQ-34 - 15 cf
 TSQ-114 - 15 cf

TAB 5 to APPENDIX 2: Major Items of Equipment, General Support Company
(Deception)

DESCRIPTION	LIN	HQ PLT	CBT ENGR PLT	ENGR Equip PLT	SPEC Effect PLT	Smoke PLT	TOTAL
Antenna Grp, OE-254	A79381	3	6	1	1	1	12
Camo Screen System	C89145	14	11	20	13	19	77
Camo Scrn Spt Sys	C89213	14	11	20	13	19	77
Decoy, 3D, Bridge Sec			50				50
Field Feeding Kit	Z26873	1					1
Generator, Smoke	J30492					12	12
Launcher, Grn, 40mm	L44595	3	4	3	2	8	20
Loader, Scoop, 2 1/2	L76556			3			3
Machine Gun, 7.62mm	L92386	2	4	3	2		11
Machine Gun, Cal .50	L91975	1	2				3
MG, Grenade, 40mm	Z40468	1					1
Pistol, 9mm, XM9	Z49140	3	4	3	2		12
Pneu Tool/Comp Set	P11868		2				2
Radio Set, GRC 160	Q34308		3			9	12
Radio Set, AN/VRC 44	R95035	1					1
Radio Set, AN/VRC 46	Q53001	3		3	5		11
Radio Set, AN/VRC 47	Q54174	2	3	1	2	5	13
Reflector, Rdr, Brdg			20				20
Rifle, 5.56mm, M16A2		26	39	28	20	34	147
Semi-Trailer, Van	S74832				1		1
Tractor, FT, Lt Doze	W76336			4			4
Tractor, Whl, SEE	W91074			2			2
Trailer, Cgo, 1 1/2	W95811	2	4		2	3	11
Trailer, Tank, Water	W98825	1					1
Trailer, Tilt, 15Ton	T96975		4				4
Truck, Cgo, 2 1/2 T	X40009	2					2
Truck, Cgo, 5 Ton	X40794	1	2				3
Truck, Dump, 5 Ton	X43708		4	4			8
Truck, Tractor, 5 To	X59326				1		1
Truck, Util, HMMWV	T61494	5	3		6	14	28
Truck, Util, Shltr	T07543	1					1
Truck, Van, Exp, 5T	X62237				1		1
Truck, Van, Shop	X62340	1			1		2
Truck, Wrecker, HEMM	T63093	1					1

BIBLIOGRAPHY

1. BOOKS.

Reznichenko, Vasily Gerasimovich, Ivan Nikolayevich Vorobyev, and Nikolay Fedorovich Miroshnichenko. *Taktika*. Voenizdat, 1987. English translation provided by the Foreign Broadcast Information Service. US Government Printing Office, Washington, 1988

Stanley, Zell. *An Annotated Bibliography of the Open Literature on Deception*. The Rand Corporation, 1985

Whaley, Barton. *Strategem: Deception and Surprise In War*. Cambridge, MA: Center for International Studies, Massachusetts Institute of Technology, 1969.

2. ARTICLES.

Haveles, Paul A. "Deception In Support Of REFORGER 88." Unpublished.

Scheffler, Randall M. "Battlefield Deception." *Armor Magazine*, May-June 1988.

3. U.S. GOVERNMENT DOCUMENTS, MANUALS, PAPERS, AND REPORTS.

Albertini, John A. *Hostile Observation Satellite Study (U), Vol II* (Final Coordinating Draft) (CONFIDENTIAL). Combat Operations Research Group, Alexandria, Virginia, 1970.

Andrews, William R. Unpublished student report on the 23d Special Troops. A requirement for US Army Command and General Staff College elective R170, Electronic Warfare, 24 March 1971.

Field Manual (FM) 34-1, *Intelligence and Electronic Warfare Operations*. US Government Printing Office, Washington, 1987.

Field Manual (FM) 34-10, *Division Intelligence and Electronic Warfare Operations*. US Government Printing Office, Washington, November, 1986.

Field Manual (FM) 44-1, *US Army Air Defense Artillery Employment*. US Government Printing Office, Washington, May 83.

Field Manual (FM) 71-100, *Division Operations* (Approved Final Draft). US Army Command and General Staff College. FT Leavenworth, KS, 1988.

Field Manual (FM) 90-2, *Battlefield Deception*. US Government Printing Office, Washington, October 88.

Field Manual (FM) 100-5, *Operations*. US Government Printing Office, Washington, May 86.

Field Manual (FM) 100-15, *Corps Operations*. US Government Printing Office, Washington, September 89.

- Field Manual (FM) 101-10-1/1, *Staff Officers' Field Manual Organizational, Technical, and Logistical Data (Vol 1)*. US Government Printing Office, Washington, October 87.
- Friedlander, Z.Z. *Initial Observation of Tactical Deception (TAC-D) Options (U) (SECRET)*. The MITRE Corporation, McLean, Virginia, 1983.
- Glantz, David M. *Soviet War Experience: A Deception Case Study*. Soviet Army Studies Office, FT Leavenworth, KS, 1988.
- Headquarters, XIII Corps. "Letter of Instruction No. 43." 14 March 1945.
- Headquarters, 23d Special Troops. "Proposal for TRIER." Memorandum to the Commanding General, 12th Army Group. 22 November 1944.
- _____. "Report of Operations in Brittany Peninsula Period 9-12 August 1944." 16 August 1944.
- _____. "Report on Operations Involving Special Troops (BRITTANY Operation 9-12 August 1944)." 5 September 1944.
- _____. "Recommendations for Employment of 23d Headquarters Special Troops for Operation EXPLOIT. (Phase I)." 16 March 1945.
- _____. "Report on Operation VIERSEN, 17-24 March 1945." 5 April 1945.
- _____. ""Report on Operations Involving Special Troops (Operation VIERSEN, 18-24 March 1945)." 7 May 1945.
- Savoie, Thomas A. "Tactical Deception: A Lost Art." The School of Advanced Military Studies, FT Leavenworth, KS. December, 1985.
- US Army Aggressor Cadre. "Combat Deception Units." 28 October 1955. Letter to CG, Continental Army Command.
- US Army Combat Developments Command. "Army Requirements for Tactical Deception." Project Number USACDCCSG (CARMSA) 64-6 (CONFIDENTIAL). March, 1965. Study report.
- US Army Command and General Staff College. "Faculty Board Meeting." 12 September 1958 (CONFIDENTIAL). Agenda of meeting regarding TO&E of proposed deception organization.
- _____. Student Text (ST) 101-1, *Organizational and Tactical Reference Data for the Army in the Field*. FT Leavenworth, KS. June, 1987.
- US Army Intelligence Center and School. Assorted fact sheets and information papers, 1987-1989.

US Army Security Agency. Verbatim Transcripts from the *Official History of the 23d Headquarters Special Troops*. Arlington Hall Station, Arlington, Virginia. (Date Unknown).

US War Department. Table of Organization and Equipment (T/O&E) 60-70-15, *Headquarters and Headquarters Company, 23d Headquarters, Special Troops*. Washington, DC, 25 April 1944.