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The Command Post:
A Comparison of Tactical Command Post Doctrine
of the US and Soviet Armies

by

James R. Sajo

March 1988

Thesis Advisor:

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**The Command Post:
A Comparison of Tactical Command Post Doctrine
of the
U.S. and Soviet Armies**

by

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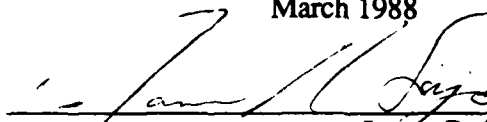
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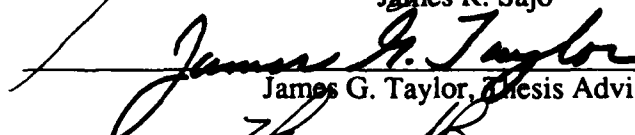
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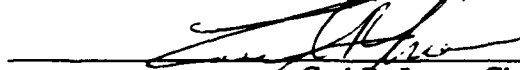
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ABSTRACT

The purpose of this thesis is to compare the employment of tactical Command Posts in the U.S. and Soviet armies. In both the U.S. concept of AirLand Battle and the Soviet doctrine of Offense in Depth, the Command Post is the facility from which command and control is exercised. Therefore, understanding its characteristics, functions, and structure are of great importance. In pursuit of that understanding, this paper provides definitions for the fundamental concepts of command and control, and the Soviet counterpart, troop control. These definitions are then applied to a model for the management of military forces. The warfighting doctrine of each army is then reviewed with special emphasis on how the doctrine impacts on the functions of management. Finally, a detailed examination of Command Posts explores whether they adequately support C2 needs, based on the warfighting doctrine. The principal conclusion is that there exists a dire need for the U.S. to clearly and distinctly define the concept of a C2 process in order to gain an understanding of how CPs fit into the C2 picture.



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TABLE OF CONTENTS

I. INTRODUCTION	1
A. DEFINITIONS	3
1. Command and Control	4
2. Troop Control	4
B. Summary	6
II. MANAGEMENT	7
A. Military Management Model	7
1. Planning	9
2. Organizing	9
3. Directing	10
4. Coordinating	10
5. Controlling	10
B. Summary	10
III. BATTLEFIELD DOCTRINE	12
A. AirLand Battle	12
1. The Implications	14
2. Summary	17
B. Offense in Depth	17
1. The Implications	19
2. Summary	20

IV. THE COMMAND POST	21
A. THE U.S. COMMAND POST	21
1. Main CP	22
2. Tactical CP	24
3. Rear CP	26
4. Summary	27
B. THE SOVIET COMMAND POST	28
1. Principal CPs.....	30
2. Secondary CPs	31
3. Summary	32
V. CONCLUSION	33
APPENDIX A: DEFINITIONS	36
APPENDIX B: U.S. PRINCIPLES OF WAR	38
APPENDIX C: SOVIET PRINCIPLES OF MILITARY ART	39
APPENDIX D: REFERENCE MATERIALS	40
APPENDIX E: CCIR	47
LIST OF REFERENCES	57
BIBLIOGRAPHY	58
INITIAL DISTRIBUTION LIST	61

I. INTRODUCTION

A world is supported by four things....The learning of the wise, the justice of the great, the prayers of the righteous, and the valor of the brave. But all of these are as nothing without a ruler who knows the art of ruling.

Frank Herbert, Dune

The nature of the ground battlefield has changed dramatically in recent years. Advanced weapons systems, characterized by increased range, mobility, and lethality; improved intelligence methods in the form of better sensor devices; faster, more reliable communications; more precise target acquisition methods; and new warfighting doctrines for both the U.S. and Soviet Armies have combined to make today's battlefield both a highly complex and very deadly environment. As a result, the nature of command and control in supporting the ground combat commander must adjust to meet the demands placed on it.

Today's command and control system must facilitate control by providing the commander with the means to seize opportunities to gain and maintain the initiative. It must extend the full depth of the battlefield. It must provide speed and flexibility such that the commander can bring combat power to bear at critical points. Finally, the C2 system must simultaneously support the planning and conduct of actions across the entire depth of battle, as well as support the interoperability requirements needed to ensure coordinated operations of air, ground, and sea forces.

These myriad requirements put a terrible strain on the C2 system. First, by stretching the limits of the maximum ranges of communications equipment. Second, the need for timely and accurate information increases the strain on the C2 system. Third, the

operational area of command post coverage is greatly extended. And finally, the span of control exercised by commanders, staff officers and leaders at all levels increases.

C2 synchronizes and coordinates combat power on the battlefield and provides direction to the forces. The C2 system provides the framework through which the commander communicates his intent to subordinates and supervises the execution of his plan. In order to accomplish this, the command and control system consists of three components:

- * The C2 organization--commander and staff
- * The C2 process--facilitation of the flow of information that effectively supports the control process
- * The C2 facilities--command posts and communication system

This paper will discuss a portion of the C2 facilities: the command post. The purpose of this thesis is to examine, compare, and contrast the doctrine for tactical CPs in both the U.S. and Soviet ground forces. To accomplish this, a general model of military management will be discussed. This is followed by a description of current U.S. and Soviet warfighting doctrine¹, and the implications of this doctrine on the respective force's C2 system. The study concludes with an in-depth description and comparison of the doctrine, structure, and employment of CPs in the two Armies, and an evaluation of how these CPs fit the warfighting doctrine and the military management model.

A close examination of command posts is an important exercise for a number of reasons. The CP is where a force commander exercises command. It is the location from which the leader controls his forces in the accomplishment of the mission. The traditional image of the field marshal standing on a hilltop overlooking the field of battle, monitoring

¹The expression "warfighting doctrine" is U.S. terminology only. It has been used in this context to describe the concept of battle operations for both the U.S. and Soviet forces. This is legitimate for U.S. forces, but "military doctrine" in the Soviet Union has an entirely different meaning than as used here. Use by this author of the expression is for simplicity and convenience.

the progress of his plan, has given way to technology and changes in the size of the battlefield. The "hilltop" of today is the command post. Understanding the structure, organization, and tasks of the CP is a crucial step in defining a command and control process. Only through a clear understanding of the process can truly effective command and control be provided.

A. DEFINITIONS

The comparison between any aspect of Soviet and American society is made difficult by a number of factors, not the least of which is the language difference. English translations of Soviet military writings must be examined with the context of the original writing in mind. In the case of this particular paper, the problem is exacerbated by the fact that English translations are being reinterpreted (by this author) and compared to writings of U.S. doctrine and definitions which are also being interpreted. The result is a third generation understanding of Soviet concepts being compared to (and thought in terms of) a set of second generation understanding of U.S. concepts. Further aggravating this problem, particularly for this subject area, is the irregular use of C2 terminology in the U.S. Terms such as "management," "decision making," and "command and control" are used in many different contexts and are, therefore, difficult to define with precision, and even more difficult to compare to Soviet concepts.

With this in mind, the first step of this paper will be to draw a rough comparison between the definition of a familiar U.S. term and the Soviet concept that can be considered its counterpart. There are more definitions of commonly used terms (both U.S. and Soviet) applicable to the general subject of command and control, and specifically to command posts in Appendix A. However, to study command posts, it is necessary to consider the fundamental framework within which they exist. This framework in the U.S. scheme is Command and Control (C2) and for the Soviets is Troop Control.

1. Command and Control

For years, U.S. military leaders and academics have struggled with understanding and defining the concept of command and control. Presently, the Department of Defense does have a working definition:

...the exercise of authority and direction by an appointed commander over assigned forces in the accomplishment of a mission. Command and control tasks are performed through a collection of personnel, equipment, communications, facilities, and procedures which are employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of that mission. [Ref. 1]

The important principles in this definition are the accomplishment of the mission and the reference to, or implication of, a command and control system or structure (the collection of personnel, equipment, etc.) that the commander uses to accomplish that mission. The reference to specific management functions (planning, directing, coordinating, and controlling) that are performed as a part of the command and control process is also a key point.

It is important to remember that the "...only purpose of command and control is to implement the commanders will in pursuit of the unit's objective." [Ref. 2:p. 7-3] Command and control, then, is a commander using resources in a system to control his subordinates in order to accomplish a mission.

2. Troop Control

The Soviet counterpart to command and control is dependent upon the size and mission of the unit or weapon system that is under consideration. A simplistic view of this dependency is that for large scale actions (at the operational level) and for units equivalent in size to regiment or higher, the Soviets exercise troop control. For smaller actions and headquarters down to the individual weapon system, they think in terms of control of combat means (see Appendix A).

Troop control is defined as:

...the activity of commanders of operational level and tactical level units, chiefs, staffs, political organs, services, and other control elements on maintaining constant combat readiness and the fighting capability of their own troops, preparing operations and tactical actions, and directing troops for the carrying out of assigned missions. It includes:

- (1) continuous receipt, collection, study, representation, and analysis of data concerning the situation
- (2) making a decision about the operation (tactical action)
- (3) disseminating missions to subordinate troops
- (4) planning the operation (tactical action)
- (5) organizing and maintaining mutual support
- (6) preparing troops and staffs for combat operations and guiding them directly
- (7) organizing and carrying out measures dealing with party-political work and all forms of combat support
- (8) organizing the monitoring of and giving assistance to commanders of subordinate operational level units, staffs, and troops. [Ref. 3:p. 111]

The Soviets emphasize the importance of the commander in the troop control process, to the point of saying troop control is an activity of the commander. The mention of the mission to be accomplished in the definition is also a key aspect of the process. Specific activities mentioned in this definition will be further studied in Chapter II, a discussion of military management, and in Chapter IV, an examination of Soviet CP doctrine. The key characteristics of the Soviet definition of the troop control process are its centralized nature, the importance of the plan and goals of the operational commander, and the distinct reference to the need to accomplish certain (specific) management tasks.

The Soviets also include a great deal of emphasis on the role of the staff in this entire process. The staff is the means through which the commander exercises troop control. This is done by the planning, organizing, and regulating actions of the staff. Troop control, then, can be described as a commander exercising control over his subordinates through the actions of his staff toward the accomplishment of a mission.

B. SUMMARY

The similarity between the U.S. concept of command and control and Soviet troop control is clear. The focus is on accomplishing a mission, and the central point of the concept is the unit commander. The management functions of planning, coordinating, organizing, and regulating (directing) are mentioned in both definitions. But there are also differences. The first and most obvious is that the Soviet development of a working definition of the process is more complete in that it is much more detailed and specific than the U.S. definition. (This does not mean they are more effective nor that they are better fighters.) Troop control does not specifically discuss the facilities that go into the command and control process where the U.S. definition does (although the Soviets do so in an indirect fashion for security reasons). Also the Soviet view is actually more concerned with the concept as a process than the U.S. We have a tendency to emphasize the hardware and equipment of the system, rather than the process by which it functions. The Soviets also place much more emphasis on the role of the staff, describing in detail how staff activity supports the commander in the accomplishment of the mission.

II. MANAGEMENT

If words of command are not clear and distinct, if orders are not thoroughly understood, the General is to blame. But if his orders are clear and the soldiers nevertheless disobey, then it is the fault of their officers.

Sun Tzu, The Art of War

The continuing increases in the lethality and complexity of modern ground warfare requires, more than ever, the efficient application of combat forces. In warfare, the effectiveness of available men and equipment must be maximized. In order to maximize the efficient use of these resources, precise, orderly, and well thought out management principles must be applied. Management, therefore, must be an orderly business. In the absence of systematic management means, a leader is lost. With this in mind, this chapter will present a general model for management of military forces.

A. MILITARY MANAGEMENT MODEL

A philosophy of management is a system of general principles that may serve as a basis to solve practical problems. The management process of an Army is how commanders and staffs do their work. Whether the work is administrative, logistical, tactical, or operational; whether it involves a squad leader or a division commander; the efforts of men and organizations and the employment of equipment must be systematically managed. Management applies to all levels of command and leaders at each level must ensure that the basic functions of management are carried out within their organization. There are analogous "functions of control" in the Soviet military. The Soviet word for control (upravleniye) corresponds to this use of management. These management functions are [Ref. 4:p. 69]:

- * Planning--determination of WHO, WHAT, WHERE, WHEN, and HOW
- * Organizing--establishing relationships between functions, men and materials
- * Coordinating--integrating of the details of a plan
- * Directing--communicating to subordinates the leader's intent
- * Controlling--ensuring that directives are properly carried out

Prior to discussing each of these management functions in more detail and subsequently applying the model to the command post doctrine of U.S. and Soviet ground forces, it is necessary to agree that this model is an applicable description of the management process in the two armies.

There are a number of different management paradigms. Each attempts to describe the processes exercised by the manager in accomplishing a task. The specific descriptions naturally differ, but from a broad perspective, the five functions listed above adequately describe the activities of a manager. While the tasks of planning and organizing seem to be virtually universal in management theory, the other terms do not enjoy the same popular acceptance. "Commanding," "regulation of execution," "delegating," "communicating," and "monitoring" are all terms that have been substituted for the last three functions.² It is less the terminology and more the description of the process that is important, however, and the description in most management models is similar to that which follows. Therefore, the reader can accept the assumption that this model is an applicable paradigm of the management process exercised by U.S. and Soviet ground force commanders.

²The references to other terms to describe the management/control process points out a significant weakness in U.S. command and control theory. This weakness is that there is really no clear-cut, definitive description of the command and control process for U.S. forces. There are numerous descriptions of the management process in a general sense (see Bibliography) and some investigation as to how this management is affected by military combat operations, but it is very difficult to find documentation describing what the command and control process really is, how it is accomplished, and the implications of the process on other fields (such as research and development, material acquisitions, automation, and so on).

1. Planning

Planning can be described as the process of selecting the best course of action to complete a task in the least time, and with the least expense. It consists of deciding WHAT must be done, WHERE to do it, WHEN to do it, HOW it will be done, and WHO will do it. Steps in the planning process include gathering information, preparing this information for its use, and developing instructions for action. Planning is always the first step in the management cycle. It will most likely continue throughout the other functions, but it will (hopefully) always precede action. All meaningful activity in a military organization is the result of some sort of plan. Planning is how an organization moves from the present to the future in order to accomplish its mission. The mission is what provides the purpose to the planning process. This process consists of three steps. These are: forecasting, the phase that occurs prior to receipt of a specific mission, and is an evaluation of facts and trends; estimating, which is the logical approach used to solve the specific problem; and the final step, plan preparation. The prepared plan is how a decision gets translated into action, and can take any form from an operations order to a verbal instruction. Regardless of the form of a plan, it must be clear, concise, understandable, and realistic in order to be effective.

2. Organizing

This is the process of uniting work, worker, and workplace in a manner that will get the mission accomplished the most efficiently. Organizing establishes relationships between activities, establishes procedures and policies for accomplishing certain tasks, and allocates resources. Responsibilities are assigned during the organizing phase of the management cycle. Tasks are determined based on the requirements of the plan. Then a structure is established, grouping units and individuals to best accomplish the tasks. Finally, the tasks are assigned to the individuals and units. Equipment, space, time, skills, and other resources are then provided, so the tasks can be carried out.

3. Directing

Directing is the process of getting people to perform their jobs well, willingly, and quickly. It is synonymous with leadership. The most important element to effective direction is clear communications. Characteristics of good directives are clarity, completeness, brevity, simplicity, and timeliness. Direction is the key link in the management chain.

4. Coordinating

The purpose of coordination is to get cooperation between all the participants in an activity. Some degree of coordination is required in all phases of management. Coordination seeks the integration of all details necessary for mission accomplishment. It is effective if all agencies concerned with an operation are brought in with a minimum of effort.

5. Controlling

Controlling is the process of insuring that everything is done according to the plan that has been established, using the procedures and policies that are accepted or agreed upon. Controlling involves both checking actual results against the desires of the manager and taking corrective action when needed. If control is exercised by all levels of a command during all phases of a mission, corrective action can be minimized. Control requires the establishment of standards to which the outcome is compared, as well as a control means, such as reports or inspections. Control is the way a manager is provided feedback, and is the stimulus that causes the next planning phase. Performing the function of control is where the command post plays its role in the tactical scheme of things.

B. SUMMARY

The purpose of this chapter is to present a simple model to describe the activities of a military manager. The five functions of military management are identified as planning,

organizing, coordinating, directing, and controlling. Each of these functions was briefly described. These descriptions are important as they will be used in Chapter IV to discuss activities at command posts, and to evaluate if the command post doctrine adequately matches the C2 (or troop control) process to the operational need.

III. BATTLEFIELD DOCTRINE

A combat leader can be almost assured that, once he has issued a directive for his unit to carry out a mission, something will interfere with that operation--at some time and to some degree.

Col. Samuel H. Hays

In order to understand the command post, it is necessary to be familiar with the context within which the command post exists. In other words, to be able to evaluate if the CP doctrine is designed effectively to support a military operation or action, it is important to understand the operational doctrine that governs the military force. For the U.S., this operational doctrine is the AirLand Battle. The Soviet Army operates under the concept of the Offense in Depth. The purpose of this chapter is to provide a brief review of the salient features of these two warfighting concepts, and to discuss the ramifications each has on the command and control (troop control) system that is designed to support it.

A. AIRLAND BATTLE

In response to the changing nature of combat, the U.S. Army must be prepared to meet a variety of situations and challenges. The modern fighting environment can range from a sophisticated battlefield with well established communications, logistics, air defense, etc., to an unsophisticated battlefield with virtually no infrastructure. The Army could be fighting an enemy of light, well-equipped insurgents, or highly mechanized forces typical of the Warsaw Pact. The next war is likely to be intense, deadly, and costly. To win, U.S. forces must coordinate all available military assets in pursuit of common objectives. We must seize and retain the initiative, and disrupt the enemy in depth with deep attacks, effective firepower, and decisive maneuver. AirLand Battle is the Army

doctrine to meet these challenges [Ref. 2]. This section will briefly review the concepts of AirLand Battle, and its implications on the command and control system.

AirLand Battle attempts to develop the full potential of U.S. forces through operations based on nonlinear battles which attack enemy units throughout their depth with fire and maneuver. These operations require coordination of all available military forces in pursuit of a single objective. Maneuver forces, both air and ground; conventional, unconventional, and nuclear or chemical fires; active reconnaissance, surveillance, and target acquisition; and electronic warfare will be directed against the enemy. U.S. forces must retain the initiative, and with deep attack and decisive maneuver, dominate the battlefield. By extending the battlefield and integrating combat means, enemy vulnerabilities can be exploited anywhere.

At the base of the AirLand Battle operational concept are the principles of war (see Appendix B). The doctrine is based on securing or retaining the initiative and exercising it aggressively to defeat the enemy. Defeat is achieved by throwing the enemy off balance with powerful blows from unexpected directions, and rapid follow up to prevent his recovery. Initial blows are struck against critical units and areas whose loss will degrade the coherence of enemy operations. Army units will attack the enemy in depth, synchronize all efforts, and maintain the agility necessary to shift forces to capitalize on enemy weaknesses. Our operations must be violent, unpredictable, and disorienting to enemy units. Planning must be precise enough to preserve combined arms concepts, yet flexible enough to allow response to opportunity. Success will depend on the basic tenets of AirLand Battle doctrine: initiative, depth, agility, and synchronization (see Appendix A). This requires that the entire force understand the commander's intent, a task for the command and control system.

AirLand Battle emphasizes the dynamics of battle, or the interaction of the factors that decide battle outcome. It is necessary to understand combat power, the combination of maneuver, firepower, and protection by a skillful leader in the context of a sound plan. Applied at the decisive place and time, combat power decides the battle.

Success in battle also depends on application of the factors of mission, enemy, terrain, troops, and time available (METT-T). The effectiveness of combat power depends on how the commander combines operational procedures, battle drills, or other measures to solve a problem. In the AirLand Battle, the commander must understand and apply the seven combat imperatives [Ref. 2:p. 2-6]:

- * Insure unity of effort
- * Direct friendly strength against enemy weakness
- * Designate and sustain the main effort
- * Sustain the fight
- * Move fast, strike hard, and finish rapidly
- * Use terrain and weather
- * Protect the force

In execution, the AirLand Battle may mean using every element of combat power. The battlefield includes every area and every enemy unit that can affect the outcome, and extends into the area of interest where future operations will take place. AirLand Battle doctrine concentrates on indirect approaches, speed and violence, flexibility and reliance on the initiative of junior leaders, rapid decision making, clearly defined objectives and operational concepts, a clearly designated main effort, and the deep attack.

1. The Implications

Command and control refers to the exercise of command, the means of planning and directing battles. Its essence is applying leadership, making decisions, issuing orders,

and supervising operations. The system that does these things in the AirLand Battle must be reliable, secure, fast and durable. It must collect, analyze, and present information rapidly and efficiently. It must communicate orders, coordinate support, and provide direction in spite of electronic interference, destruction of command posts, or loss or replacement of commanders.

Opportunities on the contemporary battlefield will arise and pass quickly. Subordinate leaders must exercise initiative within the context of the commander's concept. Staff coordination and assistance are indispensable.

The key measure of effectiveness for a command and control system is whether it functions more accurately and quickly than the enemy's. The AirLand Battle provides infinite challenges to the C2 system. Effective operations depend on its superiority.

The fast pace of the battlefield and the constant changes to the tactical situation will require a high volume of information flow in order to keep the commander informed. This is necessary in order to take advantage of opportunities as they arise. Information flow will be very time sensitive as a result of the fast pace, requiring a responsive and durable command and control system. Since the entire force must understand the commander's concept (to allow for initiative at lower levels) where the information flows is also a critical factor. The command and control structure must be able to get the right information to the right place at the right time.

As the commander goes through his management process, the command and control system must be able to provide the means to accomplish that process. To plan, he must have information, which is gathered, analyzed and presented by the C2 system. As he decides on an organization, the elements involved in that organization must be made aware of the situation. Coordination and direction are possible only as a result of the

effectiveness of the C2 system. Controlling the force cannot be done if the commander's C2 system does not keep him in contact with the force.

Communications plans must include a contingency to compensate for rapidly changing priorities as battle intensity shifts. The execution of the AirLand Battle doctrine requires skillful use of all assets, meaning extensive cooperation and coordination are necessary. These are the functions of the C2 system. The nonlinear view of battle dictated by AirLand Battle doctrine makes it imperative that communications planners and communicators consider the deep, near, and rear battles as one, requiring a complete unity of effort.

A wide range of surveillance and target acquisition sensors and improved C3 capabilities are required to support AirLand Battle. With the staggering amount of intelligence and targeting information collected, it must be properly focused at the correct echelon. There must be close coordination of all phases of the battle. Commanders and staffs must exchange combat information freely to ensure its timely exploitation. The key to success is the close integration of combat forces involved in the AirLand Battle.

The AirLand Battle has significant impact on the management functions described in Chapter II. Certainly the complexity of the modern battlefield requires detailed, specific planning and a clearly defined organizational breakdown of tasks and responsibilities. Additionally, the rapid tempo and unstable environment make in-depth coordination between staffs and subordinate commanders very difficult. Providing concise and timely direction to subordinates is another task challenged by the nature of the battlefield. Finally, control is critical in the highly elaborate orchestration of combined arms operations.

2. Summary

This section has briefly described the U.S. Army concept of operations on the modern battlefield. The nature of AirLand Battle doctrine has a profound impact on the C2 system. The requirement for a responsive, reliable, secure, timely, accurate command and control system is made more critical by the fact that the characteristics of today's combat make the functions of the C2 system much more difficult to accomplish. Furthermore, the functions of management are integral factors to success in the AirLand Battle, yet this doctrine makes those very tasks extremely difficult.

B. OFFENSE IN DEPTH

In order to evaluate whether the Soviet use of CPs fits into their troop control architecture, a very brief review of their doctrine of military operations is necessary. This doctrine is known (translated) as the Offense in Depth [Ref. 5]. It should be noted that this discussion refers only to Soviet conventional doctrine. While they include the use of nuclear weapons in their warfighting strategy, the control process involved is separate from the tactical level troop control, and is not discussed in this paper.

As the military capabilities (specifically the range and mobility of fire support in the form of artillery and aviation) of the Soviet Union's adversaries increased, the Soviets realized the need to reevaluate their doctrine. Enemy weapons that were located well away from the FEBA were now a significant threat and had to be engaged with the same decisiveness as closer targets. At the same time, Soviet capabilities also improved. Their fire support systems had better range, and armor and infantry forces were much more mobile.

The Soviet conclusion to these new battlefield characteristics was that a combined arms effort is required. Success in combat can be attained through simultaneously attacking the entire depth of the enemy defenses. Artillery bombardment and airstrikes in the rear,

coupled with massive tank and infantry formations along the front will develop breakthroughs that can be rapidly exploited. Enemy command and control facilities, lines of communications, and logistics support can then be disrupted and the remainder of the front isolated, leaving and enemy unit disorganized, demoralized, and defeated.

The separate arms and services must combine their efforts under a single control element in the implementation of a unified plan. To be executed successfully, this combined arms force must maintain a rapid tempo of advance characterized by speed, flexibility, and aggressiveness. Opportunities must be created and advantages built upon. To this end, the Soviets developed the practice of force echelonment.

- * **THE FIRST ECHELON.** Typically, the first (assault) echelon attacks and penetrates enemy forward defenses. This force will attempt to strike weak points in the defense and drive to the enemy's rear whenever possible by bypassing major force concentrations. The first echelon will normally be comprised of combined arms units, typically a motorized rifle division, but a tank division can be used if the situation requires it.
- * **THE SECOND ECHELON.** This element of the Soviet forces will normally consist of up to half of the total force. It will probably be heavily armored (tank units), but the specific size and composition will depend on the tactical situation. This force will have the mission of reduction of bypassed enemy forces, exploitation of the penetration achieved by the first echelon, an attack in a new direction, continuing the first echelon attack deeper into the enemy rear, or replacement or reinforcement of the first echelon if it suffered heavy losses.
- * **THE OPERATIONAL MANEUVER GROUP.** This force is designed to move faster and go deeper. It will be a high speed, predominately tank unit. It will normally provide a supporting attack along a different axis than the main advance. The OMG will probably be used early in an operation, and will have specific objectives in the enemy rear, such as airfields, nuclear weapons reserves, or political or economic centers.

The Soviet principles of military art (see Appendix C) are the fundamental theory that drives the modern doctrine. The characteristics of this new doctrine are [Ref. 5:p. 2-2]:

- * Speed
- * Tempo
- * Mobility

- * Firepower
- * Massed forces at the right place and right time

These characteristics manifest themselves as certain features that are found on the modern battlefield. These features include:

- * The need for decisive action
- * Very high maneuverability
- * Rapid changes in the situation
- * Uneven development across the depth of the battlefield

1. The Implications

All of this results in a critical need for a well coordinated and orchestrated operation. The coordination must be across all arms and services involved in the combat, including tank, artillery, aviation, and infantry forces. The need for thorough and continuous coordination throughout the planning and execution of this type of operation is clear. Reliable troop control is critical as the force commander must be constantly advised and updated on the situation. Staffs must continuously coordinate actions, plan for future events, and advise, direct, and assist subordinate units. This coordination, updating, planning, directing, controlling and staff work is done at the CPs throughout the battlefield.

Referring to the Soviet definition of troop control, it is clear that their Offense in Depth is a doctrine that taxes the troop control system to its very limits. The rapid tempo and high maneuverability of forces on the battlefield result in real difficulties in the receipt and collection of situational information. A staff or commander on the move or under fire is not as effective in analyzing this information. Subsequently, the decision (recall the need for decisive action) will be delayed. Disseminating missions to subordinates is also a task made difficult by the fluid nature and uneven development of the battlefield. Management

tasks, as in the case of the U.S. CP system, are both more important to success and more difficult to accomplish as a result of the operational doctrine.

2. Summary

The existence of echelons in Soviet forces places increased demands on the troop control system. Echeloned forces must be organized, coordinated, and controlled. The doctrine requires that each echelon be internally managed, as well as making it necessary to manage across echelons. Further exacerbating the problem is the fact that each echelon is made up of different kinds of forces, resulting in differing internal troop control requirements.

The battlefield characteristics under the Offense in Depth place tremendous demands on the troop control process. A battlefield that has rapidly moving forces, and intense levels of firepower makes continuous receipt, collection, study, etc. of information both very important and very difficult. Finally, the feature of the need for decisive action certainly impacts on the troop control system, as it is a function of that system to make the decisions, disseminate these decisions to subordinates, and monitor the effect of the decision.

IV. THE COMMAND POST

The command and control system that a division commander develops to meet the requirement of maintaining continuous, reliable control is influenced by the sector in which the division operates, its assigned and on-call missions, and the enemy threat it faces.

Maj. Gen. Robert L. Wetzel

This chapter will discuss the specific characteristics, employment doctrine, activities, and composition of command posts in both the U.S. and Soviet Armies. The tasks performed at each CP will be discussed in terms of how they relate to the appropriate combat doctrine, as well as how they fit into the management model presented in Chapter II.

A. THE U.S. COMMAND POST

For the U.S. Army, a CP is where the tactical commander exercises his command and control. It is at the CP that critical information is collected, consolidated, processed, and evaluated. A CP is the collection of personnel, equipment, communications, and procedures alluded to in the DOD definition of command and control. A CP is where planning, coordinating, directing, and controlling are accomplished, and where orders are issued. The main purpose of a CP is to support the commander by providing a framework to facilitate decision making and management of his forces in battle.

Current Army doctrine calls for the use of three separate CPs. The primary functions of each coincides roughly with the three areas of operation in the AirLand Battle. There are common tasks that must be accomplished at all CPs, but each must have characteristics and capabilities that facilitate freedom of operation, delegation of authority, and the exercise of leadership from any critical point on the battlefield.

A command and control system that is intended to facilitate the flexibility and freedom of operation required in the AirLand Battle must emphasize certain specific techniques and command practices. CPs must optimize the use of time by regular use of standard format warning orders and situation updates. CPs must anticipate plans and the positioning of forces. The staff must minimize the time cycle used by the commander in his decision making process. To this end, standardized training of staff practices and procedures will enhance mutual understanding between leaders and units. Additionally, the CP structure must provide tactical commanders with flexibility and mobility. The leader must be able to command from anywhere on the battlefield without being deprived of access to information or the ability to respond to opportunity. CPs must be able to collect, analyze, and present information rapidly, and communicate orders, coordinate support, and provide direction to the forces. Finally, the CP system must have the characteristics of reliability, security, mobility, speed, and durability.

The three CPs that are required under current Army doctrine are the Main, Rear, and Tactical CP. Each has specific functions and responsibilities, but there are common traits and practices. An examination of each CP and how the three fit together to provide the commander with a command and control system follows.

1. Main CP

- * Primary functions
 - Synchronize the battle
 - Conduct the deep battle
 - Plan future battles
- * Secondary functions
 - Coordinate combat service support
- * Characteristics
 - Functionally organized
 - Located well to rear
 - 60 to 70 percent mobile
 - Operated by Chief of Staff

The primary functions of the Main CP are to synchronize the entire battle, conduct the deep battle, and plan the future battle. A secondary purpose is to coordinate service support for the entire battle. The Main CP is located toward the rear and is functionally organized into cells to enhance and speed coordination (see Figure 1), as well

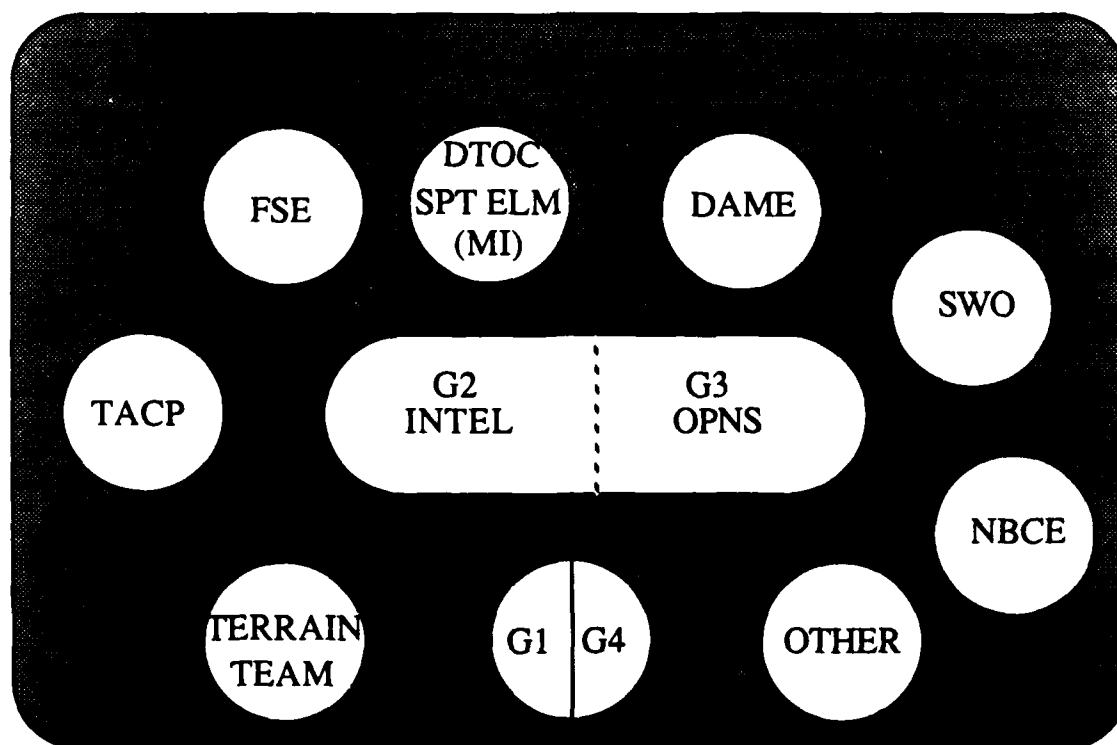


Figure 1. Division Main Command Post^a

as reduce reliance on electrical means for information exchange. Staff cells present include command, current operations, plans, intelligence, fire support, administration and logistics, signal support, and CP support. The personnel and equipment in these cells provide the

^aSOURCE: Headquarters, Department of the Army, Field Manual FM 101-5: Staff Organizations and Operations, (Washington, D.C., 25 May 1984), p. 8-8.

tactical commander with the ability to plan, coordinate, and direct all aspects of the AirLand Battle.

Synchronization of the entire battle means the Main CP directs the command and control system. The orientation of Main is very broad and all of the functions of management are performed here. Recently, attempts have been made to reduce the size of the Main CP, partially to shift more resources to the TAC CP (see below), and partially to enhance the survivability of Main. For a more specific discussion of the size of CPs, refer to Appendix D.

2. Tactical CP

- * Primary Functions
 - Conduct the close-in battle
- * Secondary Functions
 - Monitor deep and rear battle
 - Plan future close-in battle
- * Characteristics
 - Operate continuously
 - Minimum size
 - 100 percent mobile
 - Located well forward

The Tactical CP has the primary mission to conduct the close-in battle. Its secondary missions are to monitor the deep and rear battles, and plan the future close-in battle. A characteristic of the Tactical CP is its ability to operate continuously at the minimum possible size. The Tactical CP features well forward deployment and complete mobility. The significantly reduced size is reflected by the presence of only command, current operations, fire support, and CP support cells (see Figure 2). The focus of the personnel is narrower than at Main, as attention and planning is restricted to the close-in battle.

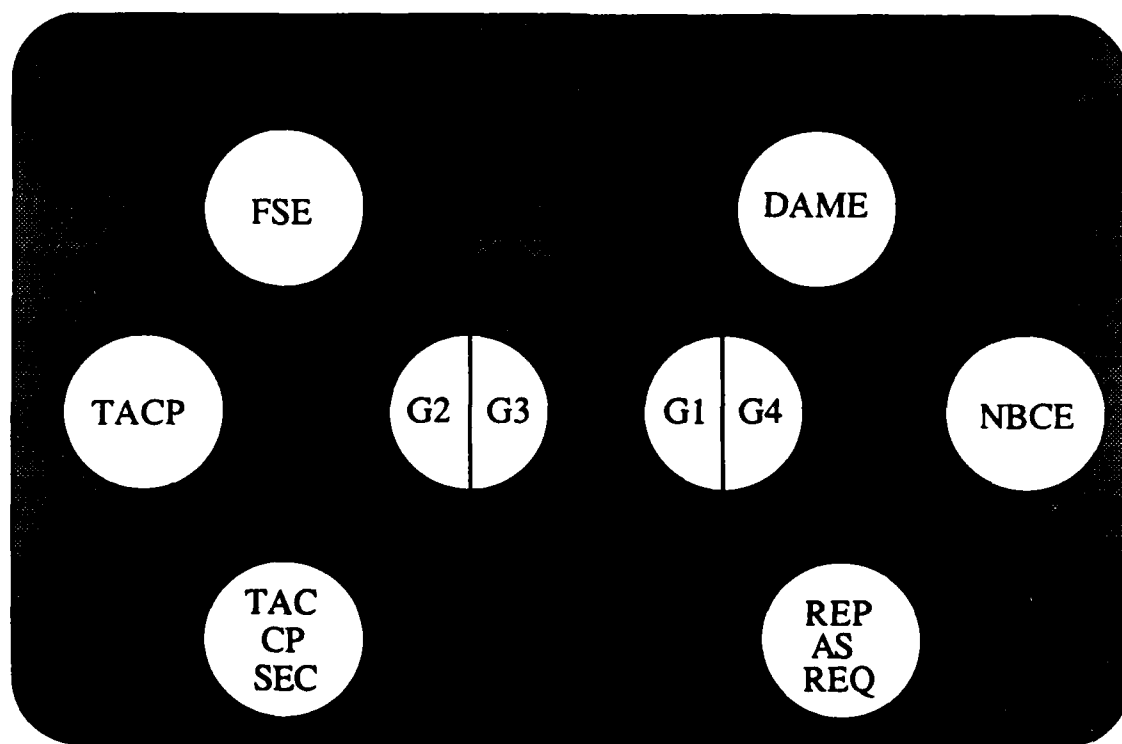


Figure 2. Division Tactical Command Post^b

Again, all management functions--planning, organizing, coordinating, directing, and controlling--are necessary. The more limited scope of activity at the Tactical CP means that these management functions are essentially restricted to the close-in battle. The intensity of these management functions is higher, as the pace of activity here is much faster than at other locations. Additional tasks at the Tactical CP are the development of combat intelligence, control and coordination of fire support and air defense operations, and communication of combat support and combat service support requirements to Main.

^bSOURCE: Headquarters, Department of the Army, Field Manual FM 101-5: Staff Organization and Operations, (Washington, D.C., 25 May 1984), p. 8-8.

3. Rear CP

- * **Primary Functions**
 - Sustain the battle
 - Conduct rear area operations
- * **Secondary Functions**
 - Serve as backup to Main
 - Plan future battle
- * **Characteristics**
 - Well to the rear
 - Not very mobile
 - *Orientation on rear battle*

The Rear CP sustains the battle and conducts the rear battle. Secondary missions are to serve as a backup for Main, and plan the future battle. The characteristics of this CP are that it is deployed well to the rear and is much larger and less mobile than the others. The orientation of Rear is on the rear battle. This CP is functionally designed the same as Main, with additional emphasis on support functions and additional staff for rear area operations.

The responsibility to conduct rear area operations entails execution of management functions for the rear battle, as well as being responsible for the overall command and control of administrative and logistic support for the entire battle. Additionally, Rear must be prepared to function as Main at any time if the Main CP is relocating or disabled.

The effect of having the three CP structure in tactical operations is to give the commander the ability to exercise command and control throughout the entire battlefield. The commander can gather information, assess the situation, make decisions, issue orders, plan future operations, and monitor results of all aspects of the AirLand Battle at any CP. The overlap of responsibilities and the distribution of facilities over the battlefield ensure the timeliness of information and access to the critical point in the battle at all times--essential qualities of a command and control system.

Another key characteristic common to all command posts is survivability. In order to provide the means by which a commander can manage his forces, the CP must be able to survive. To this end, U.S. doctrine calls for numerous deliberate measures to enhance CP chances for survival.

Hardening of facilities, either through the use of Engineer equipment, or by taking advantage of terrain features (hills, caves, etc.), or manmade features such as buildings can significantly increase CP survivability. Dispersion of the personnel and equipment in a CP can also help. By designing CPs to function with staff modules, dispersion can be better achieved.

Duplication is another means to enhance survivability. This refers to both internal and external duplication of work. If specific tasks are performed in more than one place, the command and control of that task will not suffer if a CP is partially destroyed.

A major tradeoff must be decided upon by the commander, as many survivability enhancing measures (dispersion, for example) reduce the effectiveness of a CP. The commander must find the appropriate balance between the factors of survivability and effectiveness.

4. Summary

The doctrinal structure that the Army has established for CPs is sound. The features of redundancy, security, mobility, and durability combine with with functional breakdown of tasks to provide the AirLand Battle commander with the command and control support he needs to affect the outcome of battle. It is important to note that in order to realize the potential offered by the CP structure, the commander must balance CP survivability with CP effectiveness. A CP that provides accurate, timely, and complete information but is destroyed in the opening moments of battle is of no value to a commander. Similarly, a CP that can move rapidly, is well protected, and survives any at-

tack but provides no benefit in terms of the commander's decision making has no value. A commander will generally have his CPs set up in a way that he is comfortable with. A proper balance of survivability and effectiveness characteristics is the key to the successful deployment of the command and control system in the AirLand Battle.

B. THE SOVIET COMMAND POST

To the Soviets, a command post is "...the basic point from which troop control is carried out in the time of preparing and in the course of action." [Ref. 3:p. 93] A CP is where the tactical commander exercises his troop control. It is at the CP that critical information is collected, consolidated, processed, and evaluated. While a CP is the collection of personnel, equipment, communications, and procedures alluded to in the DOD definition of command and control, Ivanov describes the nature of a CP as

...a collective of responsible personnel trained and organized for work and a complex of technical equipment and the personnel to service it deployed at a particular location or on the move and specifically intended for command and control in preparation for and during combat operations. [Ref. 6:p. 96]

A CP is where planning coordinating, and monitoring the execution of missions are accomplished, and where orders are issued. The main purpose of a CP is to support the commander by providing a framework to facilitate decision making and to "...ensure firm, flexible, continuous, and secure command and control (troop control) under any circumstances." [Ref. 6:p. 96] As in the case of the study of U.S. command posts, the doctrine for Soviet deployment will be discussed in terms of the military management model from Chapter II, and the warfighting doctrine of the Soviet Army discussed in Chapter III.

The Soviets feel that in order to be effective, a tactical CP must have the characteristics of survivability, mobility, and reliability. By finding a balance between these sometimes

divergent traits, the system of CPs deployed can achieve the operational commander's troop control goal--firm and continuous control of the force.

Survivability is achieved by the use of a number of different steps. First, the various CPs deployed in a given area will be properly dispersed such that enemy artillery and/or air strikes are unable to attack more than one at a time. Internal dispersion also reduces the likelihood of significant destruction as the result of enemy fire. All CPs are provided with air defense protection as well as an internal security force. Facilities within all CPs will be hardened to every possible extent in order to make each element more durable. In fact, most CP support organizations include Engineer equipment for this purpose. The communications equipment is generally remoted from the active CP facilities in order to separate the control functions from the electronic signature. The duties and tasks that are performed at each CP will be overlapped so that if an officer is killed or is otherwise unavailable, another will be able to continue performing that job. Finally, the mission of all CPs will be overlapped and duplicated, as well. If a CP is destroyed or is in the process of moving, another CP will take over the tasks being performed. It is not just the facility (the CP itself) that must survive; it is the control over the force exercised by the CPs that must survive.

Mobility is another key characteristic. Depending on the battle situation and the size of the force, a CP may move as many as three times a day. The principle reason for this is to keep in as close contact with the pulse of the battle as possible--the commander must be at that point where the fate of the battle is determined. Another reason to continually relocate is to confuse enemy attempts at the destruction of Soviet troop control facilities. In many cases, those vehicles with the best high speed and cross country capabilities will be used at CPs. Since frequent movements degrade the ability to exercise control, additional CPs are required so that a leap-frogging along parallel routes can be done, ensuring continuity of

control over the force. Soviets make extensive use of helicopter support of their CPs, moving personnel and equipment as well as improving information gathering.

Reliability is achieved through the use of extensive backup equipment, particularly communications equipment. Communications into and out of all CPs are protected through redundant access by multiple means (radio, messenger, teletype, facsimile, etc.). Control is reliably maintained through the transfer of responsibility to alternate CPs whenever the situation warrants such action. Soviets plan these hand-offs of control extensively, and through the communications capabilities, alternate CPs are completely and accurately informed of the situation at all times. The internal distribution of responsibilities at each CP are clearly defined and specified, again to ensure continuity and stability of control.

While the actual specific deployment of CPs is determined by the commander, there are seven basic types. These are the forward command post, main command post, alternate command post, rear command post, command/observation post, auxiliary command post, and airborne command post. For purposes of this analysis, the seven CPs have been grouped into two categories, based on their functions. This grouping is not part of Soviet doctrine, but is intended solely for simplicity of presentation.

1. Principal CPs

The Main command post is the primary point of control for the unit. This is usually where the commander is going to be located. The Main CP is augmented by forward and alternate command posts, and will be located near the line of contact. The Forward command post is deployed nearer to the first echelon of troops to enable the commander to more effectively control the unit. The Alternate command post has a somewhat reduced staff from the Main and is used to ensure continuity when the Main is moving or is out of action.

The functions and missions of these three CPs are virtually the same. Their composition will be such that operations, intelligence, communications, and political affairs staff support is available. The commander will always be at one of these three CPs. They will generally be located from two to four kilometers (in a division) from the line of contact.³

2. Secondary CPs

The composition of the following CPs are unique as each has a specialized mission.

The Rear command post (also called the rear service control point) is where the deputy commander for rear services operates. Here, the rear service support for the entire unit is organized and controlled. The command/observation post is typically a vehicle such as a tank. This will be the only form of CP found at units below regiment. The Auxiliary command post is set up when the situation calls for another CP, such as a major movement or operation along a second axis. The Airborne command post is used by commanders to increase their mobility along the line of contact so that operations can be better observed and controlled.

³ The distances/locations of CPs in any operation is a matter of great importance and concern. Research of Soviet thoughts in this matter uncovered a number of different ideas. Ivanov (Ref. 6) cites the need to maintain communications in order to keep troop control intact, so cautions against moving CPs too close (p. 101). The Soviet Encyclopedia (Ref. 3:p. 108) described placement of CPs with consideration for the convenience of organizing and maintaining communications, concealment, and accommodating the forces and means of the staff. The USSR report "Troop Control in an Offensive" (see Bibliography) described locating only one CP in a division, that at a distance of three to five kilometers (km) from the front, at least at the outset of the Great Patriotic War. However, experience soon showed the need to improve the organization of control facilities. The aim became to create opportunity for the commander to have a prompt and effective response for the situation, resulting in the echelonment of CPs and the distribution of their missions across the battlefield. The principle lesson learned was that locations of CPs is situation dependent, such that division Main could be anywhere from less than one to more than eight km from the contact. Finally, the CAS3 curriculum at Ft. Leavenworth (Ref. 4) cites much greater distances for all CPs: Main and Alternate ten to 15 km, Forward two to five km, and Rear services 30km from the front (p. 332).

3. Summary

The activities and number of CPs in any operation is dependent on the mission of the unit, but basic Soviet doctrine calls for the use of seven separate CPs. The functions of each are designed to overlap and interconnect in order to provide the Soviet commander with an accurate picture of the battle, and to ensure firm and continuous control over the force. There are common tasks that must be accomplished at all CPs, but each must have the characteristics and capabilities that reflect its primary purpose. The exercise of leadership from any critical point on the battlefield is a significant feature of Soviet military theory, to the point that the Main is that CP where the commander is located. In turn, where he is located is determined by the situation--he should be at the point where the outcome of the battle will be decided. [Ref. 6:p. 100]

The elaborate design of the Soviet CP system is meant to provide firm and continuous control over their forces. By balancing the characteristics of survivability, mobility, and reliability, they have taken a great step forward in achieving their troop control goals. Through extensive practice and planning of the difficult act of control hand-off (from one CP to another) the Soviets may be able to provide the control that is needed.

Both warfighting doctrines place great demands on the system by which the ground force commander manages and controls his forces. Additionally, both doctrines increase the need for an effective system of management and control. The U.S. and Soviet Armies have attempted to design their respective CP system to provide the appropriate degree of control without obviating the importance of flexibility.

V. CONCLUSION

No element of (the AirLand Battle) concept is more essential to the development of a credible warfighting capability than command and control. Command and control has ever been an essential element in battle. Also, it has always been a very, very difficult problem to master.

Gen. Donn A. Starry

This study has shown that the current CP systems are vital to today's tactical battlefield commanders. Modern weapons and the latest combat doctrine place greater demands on the command posts than ever before. The purpose of this thesis has been to compare the doctrine of tactical command posts and the CP support of operations or tactical actions conducted by the U.S. and Soviet ground forces.

To this end, the first step in the analysis was a definition and description of a basic paradigm of military management. The assumption is that this model accurately reflects the management of military forces and operations in both Armies, meaning that the functions of management (planning, organizing, coordinating, directing, and controlling) are tasks that are executed as part of the command and control/troop control process.

The next step in the analysis was a brief description of the two warfighting doctrines. This discussion included an examination of the implications that these doctrines have on the command and control systems that are designed to support them, including the demands for better C2 support and management, as well as how characteristics of the modern battlefield detract from (sometimes prevent) effective C2.

The final step in this thesis was to discuss the command posts themselves. The structure of, activities at, and individual missions for each of the command posts were examined, as was the question of whether these characteristics satisfied the command and

control/troop control goals in light of the tremendous demands imposed by the AirLand Battle and the Offense in Depth.

There are both distinct differences and wide similarities in the command post doctrine currently employed by the ground forces of the U.S. and USSR. The most obvious difference is in number. While the U.S. plans to use three command posts in support of AirLand Battle, the Soviet Union describes the need for no less than seven separate CPs to provide the commander with the needed degree of firm and continuous troop control.

The functional breakdown of tasks at the CPs are generally similar, in that the farther forward the CP, the narrower its focus and that those CPs deployed farther from the front were larger, less mobile, and more involved with the administration and logistics of the unit. (This is an interesting development since both warfighting doctrines rely heavily on deep attack and strikes against the enemy rear.) Additionally, it was noted that the functions of management defined in our model were performed at all CPs.

The U.S. doctrine demands a balance of factors of survivability with those characteristics that enhance the effectiveness of CPs. The Soviets, on the other hand, try to incorporate survivability, mobility, and reliability to give the CPs the means to achieve their troop control goals. U.S. doctrine places a great deal of importance on mobility, but only as a means to achieve survivability. The Soviet's extensive leap-frogging of control from one CP to another is an aspect not discussed a great deal by the U.S., although in the U.S. scheme of things as one CP moves, the control it exercises will be at least partially handed off to another.

Finally, the Soviets have done a much better job of providing precise definitions of the terms and general concepts that form the basis for command posts. While troop control is very neatly spelled out in the sense of what it entails and who it involves, the definition of command and control is more ambivalent and indistinct. The Soviets have also done a

great deal of work in the study of the process itself, while Americans seem to be enamored with technology and less inclined to describe processes. This imbalance of definition (which may imply an imbalance in understanding) is of great importance. The U.S. must develop a standardized prototype paradigm for the C2 process, with all terms and concepts clearly defined.

In both the U.S. and Soviet Armies, command and control/troop control is a critical factor in the success of operations (or tactical actions). The nature of the modern battlefield requires careful, efficient management of military resources in order to maximize their effectiveness. How tactical command posts operate, or how they provide the means through which a commander manages his forces is of vital importance.

APPENDIX A DEFINITIONS

The following are terms or expressions that relate to the general topic of command and control or to command posts specifically.

- * **Troop Control.** [USSR] The activity of commanders of operational level units, tactical-level units, or chiefs of branches of troops and services, staffs, political organs, services, and other control organs in time of war on maintaining combat readiness and fighting capability on troops, preparing operations and tactical actions, and directing troops for the carrying out of assigned missions. Troop control was carried out in accordance with the orders, directives, instructions, and troop control documents of higher commanders and chiefs.

The commander of the operational level unit carried out troop control personally and through his staff, and also through his deputies and the chiefs of branches of troops, special troops, and services. On the basis of the decision, orders, and instructions of the commander of the operational level unit, and also troop control documents of the higher staff; the staff combined and directed the actions of chiefs that were subordinate to the commander of the operational-level unit for the solution of concrete problems of control. [Ref.3:p. 107]

- * **Control of Combat Means.** [USSR] The process of working out and transmitting influences that control (commands, signals) with the goal of effective use of combat means in accordance with their purpose and assigned mission. [Ref. 3:p. 96]

(Notice that the Soviets do not consider staff action as a part of the process.)

- * **Command Post.** [USSR] The basic point from which troop control is carried out in the time of preparing and in the course of combat action. [Ref. 3:p. 93]
- * **Points of Control.** [USSR] Places that have been specifically equipped and fitted out with technical means, from which an operational-level commander with his staff officers carries out troop control. [Ref. 3:p. 102]
- * **Initiative.** [U.S.] An offensive spirit in the conduct of all operations. Subordinates must act independently within the context of an overall plan. Improvisation and aggressiveness in a subordinate leader. [Ref. 2: p. 2-2]
- * **Depth.** [U.S.] Time, distance, and resources. Knowing the time required to move forces--enemy and friendly. Commanders need to use the entire depth of the battlefield to strike the enemy and prevent him from concentrating his firepower or maneuvering his forces to a point of his choice. Depth of resources refers to number of men, weapon systems, and material that provide the commander with flexibility and extend his influence. [Ref. 2:p 2-2]

- * **Agility.** [U.S.] Flexible organizations and quick-minded leaders who can act faster than the enemy. Unit should have an appropriate mix of soldiers and equipment to complete their tasks. Mental flexibility is the ability to think on one's feet. [Ref. 2:p. 2-2]
- * **Synchronization.** [U.S.] Achievement of maximum combat power. An all-pervading effort throughout the force. Every action of every element must flow from understanding the commander's concept. [Ref. 2:p. 2-3]
- * **Staff.** [USSR] The staff is the basic organ of troop control under combat conditions and of guiding their exercises, indoctrination, and everyday activities. [Ref. 3:p. 104]
- * **Staff.** [U.S.] The organization intended specifically to be a single, cohesive unit to assist the commander in accomplishing the mission. The staff is organized to serve the commander within specific functional areas. [Ref. 7:p. 1-4]

APPENDIX B PRINCIPLES OF WAR

The U.S. Army first established and published a set of principles of war in 1921. These principles were based on the work and ideas of British Major General J.F.C. Fuller. Since that time, the list of principles has undergone extensive review, analysis, and experimentation. To this day, the principles remain essentially the same as the list published some 67 years ago [Ref. 2:p. B-1]:

- * **Objective.** Every military operation should be directed toward a clearly defined, decisive, and attainable objective.
- * **Offensive.** Seize, retain, and exploit the initiative.
- * **Mass.** Concentrate combat power at the decisive place and time.
- * **Economy of Force.** Allocate minimum essential combat power to secondary efforts.
- * **Maneuver.** Place the enemy in a position of disadvantage through the flexible application of combat power.
- * **Unity of Command.** For every objective, there should be a unity of effort under one responsible commander.
- * **Security.** Never permit the enemy to acquire an unexpected advantage.
- * **Surprise.** Strike the enemy at a time and/or place and in a manner for which he is unprepared.
- * **Simplicity.** Prepare clear, uncomplicated plans and clear, concise orders to ensure thorough understanding.

APPENDIX C

SOVIET PRINCIPLES OF MILITARY ART

Soviet military theory is based on what they consider to be the fundamental principles of military art. While these principles do not represent any great revelation or even a significant departure from traditional military ideas, it is useful in attempting to understand the nature of Soviet military thinking.

Soviets believe their armed forces must [Ref. 5:p. 1-3]:

- * Be fully prepared to accomplish the mission regardless of the conditions under which war begins or must be conducted.
- * Achieve surprise whenever possible. Military operations must be characterized by decisiveness and aggressiveness. Forces must strive continuously to seize and hold the initiative.
- * Make full use of all available military assets and capabilities to achieve victory.
- * Ensure that major formations and units of all services, branches, and arms effect thorough and continuous coordination.
- * Select the principal enemy objective to be seized and the best routes for attacking it. Make a decisive concentration of combat power at the correct time.
- * Maintain continuous and reliable command and control.
- * Be determined and decisive in achieving the assigned mission.
- * Maintain complete security of combat operations.
- * Reconstitute reserves and restore combat effectiveness as quickly as possible.

APPENDIX D REFERENCE MATERIAL

The U.S. Army Command and General Staff College, located at Fort Leavenworth, Kansas, has published, in Field Circular 101-55, Corps and Division Command and Control [Ref. 8], an extensive work on command and control.

Appendices A through E of that publication provide examples and recommendations of command post structure for a standard corps, and airborne corps, a heavy division, light division, and an airborne/air assault division.

Each appendix provides the following:

- * General Introduction, a brief description of the operation at the CP,
- * Authorized Personnel, a presentation of the TOE authorization of personnel by rank, MOS, and staff section,
- * Command Post Configurations, a further breakdown of the personnel authorizations, this time presented by CP, including the vehicles in which each person will operate,
- * Command Post Diagrams, a scale-model layout of each staff functional module, and a "site layout" of each of the three CPs

Included in this appendix (as pages 41 through 46) are selected excerpts from FC 101-105. The reader is strongly urged to read this document in its entirety, as it is arguably the most comprehensive publication on the subject of hands-on tactical command and control available.

APPENDIX A	COMMAND POST STRUCTURE - STANDARD CORPS	A-1
APPENDIX B	COMMAND POST STRUCTURE - AIRBORNE CORPS	B-1
APPENDIX C	COMMAND POST STRUCTURE - HEAVY DIVISION	C-1
APPENDIX D	COMMAND POST STRUCTURE - LIGHT DIVISION	D-1
APPENDIX E	COMMAND POST STRUCTURE - AIRBORNE/AIR ASSAULT DIVISIONS	E-1
APPENDIX F	STAFF BATTLE TASKS	F-1
APPENDIX G	COMMANDER'S CRITICAL INFORMATION REQUIREMENTS (CCIR)	G-1
GLOSSARY		Glossary-1
REFERENCES		References-1

<u>TITLE</u>	<u>GRADE</u>	<u>MOS</u>	<u>TCE</u>	<u>TAC</u>	<u>MATN</u>	<u>REAR</u>
<u>COMMAND SECTION (CONT'D)</u>						
CSM	E9	00250	1		1	
EXEC ADMIN ASST	E6	71C30	1		1	
PER CAR DR	E4	19K10	3	1	1	1
EXEC ADMIN ASST	E4	71C10	2	1		1
		TOTAL	13	4	5	4
<u>CHIEF OF STAFF SECTION</u>						
CHIEF OF STAFF	O6	11C00	1		1	
SGS	O4	11C42	1		1	
LNO	O3	11C00	1		1	
LNO	O3	12A00	1		1	
EXEC ADMIN ASST	E5	71C20	1		1	
CLK/TYP	E4	71L10	1		1	
LNO SGT	E6	11M30	1		1	
LNO SGT	E6	19K30	1		1	
		TOTAL	8	0	8	0
<u>G1/AG SECTION</u>						
G1/AG	O5	41A00	1		1	
ASST G1/AG	O4	42200	1	1		
OPS OFFICER	O4	42A00	1		1	
PERSONNEL SGT	E9	75C50	1		1	
ADMIN SPEC	E5	71L20	1		1	
		TOTAL	5	1	4	0
<u>ADMIN SVCS OFFICE</u>						
ADMIN SVCS OFF	O3	42A00	1			1
ADMIN SUFV	E8	71L50	1			1
ADMIN SPEC	E5	71L20	1			1
CLERK TYPIST	E4	71L10	5			5
		TOTAL	8	0	0	8
<u>STR ACCTS AND MGT SEC</u>						
MIL PERS TECH	WO	711A0	1			1
MGMT SUPERVISOR	E7	75Z40	1			1
ASSIGNMENT SUP	E6	75C30	1			1
PERSONNEL MGMT SPEC	E5	75C20	2			2
PERSONNEL MGMT SPEC	E4	75C10	3			3
PERSONNEL MGMT SPEC	E3	75C10	4			4
		TOTAL	12	0	0	12

<u>TITLE</u>	<u>GRADE</u>	<u>MOS</u>	<u>TCE</u>	<u>TAC</u>	<u>MAIN</u>	<u>REAR</u>
<u>PERSONNEL ACCTS SEC</u>						
PERSONNEL ACCT OFF	O3	42A00	1			1
PERSONNEL ACCT SUPV	E7	75240	1			1
CASUALTY RPTING NCO	E6	75E30	1			1
PERS RECORD NCO	E6	75D30	1			1
CASUALTY RPT SPEC	E5	75E20	2			2
PERSONNEL RCDS SPEC	E4	75D20	1			1
CASUALTY RPT SPEC	E4	75E10	2			2
PERSONNEL RCDS SPEC	E4	75D10	2			2
CASUALTY RPT SPEC	E3	75E10	2			2
PERSONNEL RCDS SPEC	E4	75D10	2			2
CASUALTY RPT SPEC	E3	75E10	2			2
PERSONNEL RCDS SPEC	E3	75D10	2			2
TOTAL			19	0	0	19

REPLACEMENT SEC

SECTION SERGEANT	E8	75E50	1			1
PERSONNEL ACTIONS NCO	E7	75240	3			3
UNIT SUPPLY SGT	E5	75X20	1			1
UNIT CLERK	E5	75E20	1			1
UNIT SUPPLY CLERK	E4	75X10	1			1
TOTAL			7	0	0	7

G2 SECTION

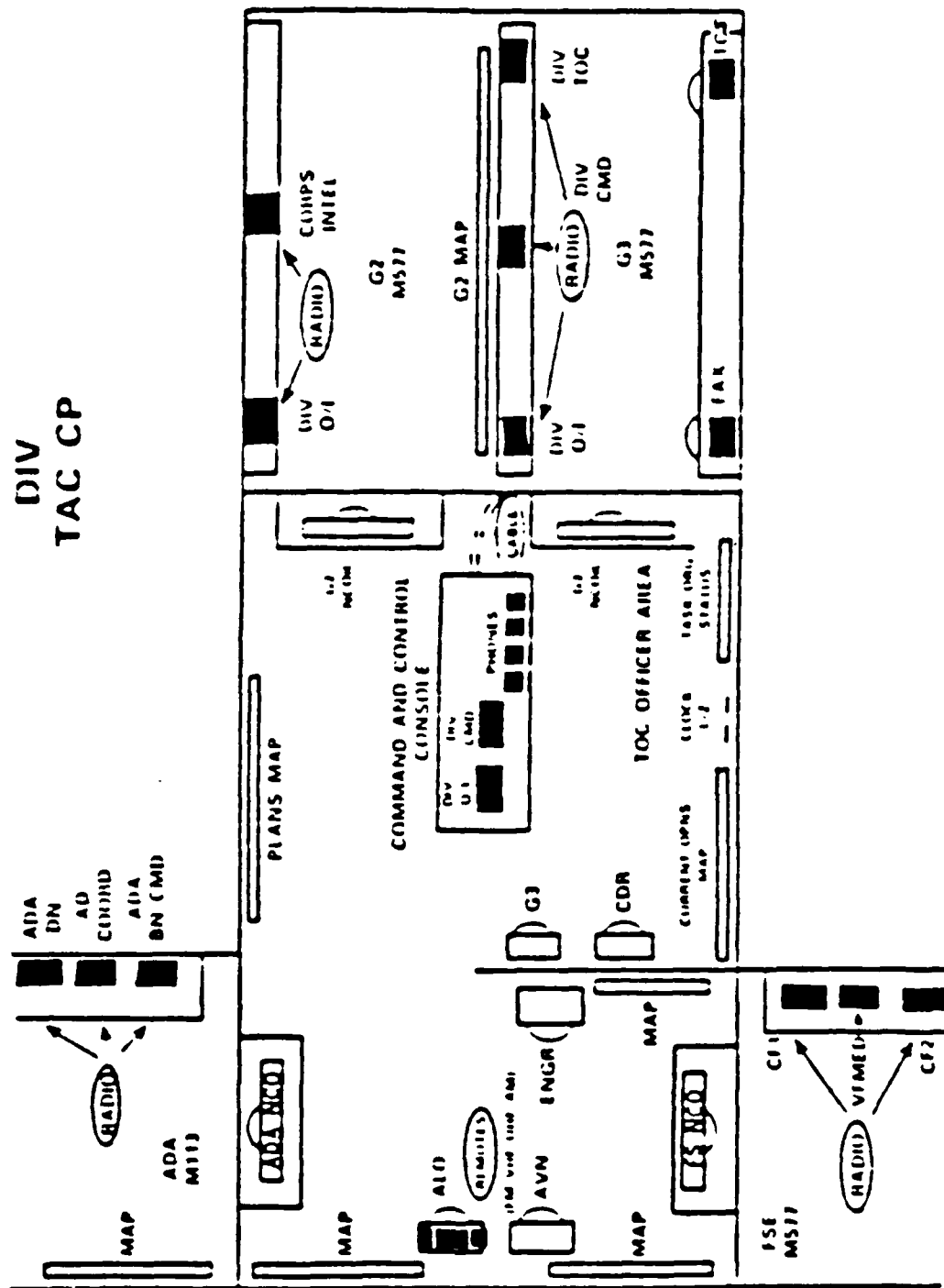
G2	O5	35A00	1		1	
ACCT G2	O4	35A00	1	1		
ACCT G2	O4	35A00	1	1		
ACCT G2 (TSO)	O4	35C00	1		1	
DEP G2	O4	35A00	1			1
SSO	O3	35A00	1		1	
TAC SURVL OFF	O3	35C00	1		1	
INTEL SR SGT	E9	96E50	1		1	
AERIAL INTEL SGT	E8	96D50	1		1	
CI OPNS SGT	E8	97E50	1		1	
SR GRD SURVL SGT	E8	96R50	1		1	
ADMIN SPEC (SSO)	E5	71L20	1		1	
INTEL ANALYST	E5	96B20	2	1		
INTEL ANALYST	E3	96B10	1	1		
TOTAL			15	4	10	1

SECTION III. COMMAND POST CONFIGURATIONS

<u>SECTION</u>	<u>TITLE</u>	<u>SHIFT</u>	<u>GRADE</u>	<u>MOS</u>	<u>NUMBER</u>	<u>VEHICLES</u>	<u>COMM</u>
<u>TACTICAL CP</u>							
COMMAND	ADC-M		07	00800	1	M113/M2	VRC-92(2)
	AIDE		02	11C00	1	3/4T	
	PEPS CAR DR		E4	19K10	1		
	ADMIN ASST		E4	71C10	$\frac{1}{4}$		
				TOTAL	$\frac{4}{4}$		
INTEL	ASST G2	A	04	35A00	1	M577	VRC-90
	ASST G2	B	04	37A00	1		
	INTEL ANAL	A	E5	96B10	1		
	INTEL ANAL	B	E3	96B10	$\frac{1}{4}$		
				TOTAL	$\frac{4}{4}$		
OPERATIONS	DEP G3	A	04	12A00	1	M577	TOT
	ASST G3	B	04	11C00	1		VRC-92(2)
	SR RADIO SGT	A	E5	31C20	1		GRC-106
	OPNS ASST	A	E4	11M10	1		
	PEPS CAR DR	B	E4	11M10	$\frac{1}{5}$		
				TOTAL	$\frac{5}{5}$		
ENGINEER	DIV ENGR LNO		03	21C00	$\frac{1}{1}$	5/4T	VRC-90
				TOTAL	$\frac{1}{1}$		
FIRE SUPPORT ELEMENT	ASST FS COORD	A/B	04	13E00	2	M577	VFMED
	ASST FS SGT	A	E6	13F30	1	3/4T	VRC-90(2)
	RDO TM CH	A	E5	31C20	1	HMMWV	
	FS SPEC	A/B	E4	13F10	2		
	RATT OP	A	E4	31C10	1		
	RATT OP	B	E3	31C10	$\frac{1}{8}$		
				TOTAL	$\frac{8}{8}$		
ADA	OPS OFF	A	03	14B00	1	M113	GRC-193A
	OPS ASST	B	E4	16H10	$\frac{1}{2}$		GRC-213
				TOTAL	$\frac{2}{2}$		VRC-90

<u>SECTION</u>	<u>TITLE</u>	<u>SHIFT</u>	<u>GRADE</u>	<u>MOS</u>	<u>NUMBER</u>	<u>VEHICLES</u>	<u>COMM</u>
CSS	ASST G1/AG	B	04	41A00	1		
	ASST G4	A	03	92A95	1		
	TOTAL				2		
AIR FORCE	TACP						
	TACTICAL ALO (FIGHTER)	A	04	1445J	1	MRC-107/ 108	
	ROMAD	B	E7	275X0	1		
	GROUND RADIO	A	E5	304X4	1		
	COMM RPMN						
	TOTAL				3		
<u>MAIN CP</u>							
COMMAND	CG		08	00B00	1	5T(EXP)	VRC-90(3)
	AIDE		03	11C00	1	3/4T(4)	
	CSM		E9	00Z50	1	M113/M2	
	CH OF STAFF		06	11C00	1		
	SGS		04	11C42	1		
	EXEC ADMIN ASST		E6	71C30	1		
	EXEC ADMIN ASST		E5	71C10	1		
	CLERK/TYPIST		E4	11M10	1		
	PER CAR DR		E4	19K10	1		
	LNO		03	11C00	1		
	LNO		03	12A00	1		
	LNO SGT		E6	11M30	1		
	LNO SGT		E6	19K30	1		
	TOTAL				13		
CURRENT OPERATIONS	G3		05	11C00	1	5T(EXP)	TCS
	G2		05	35A00	1	3/4T(2)	GRC-106
	ASST G3	B	04	12A00	1	5/4T(2)	VRC-92(2)
	ASST G3 AIR	A	04	15A00	1	5/4T(1)	VRC-90
	ASST G2 (TSO)	A	04	35C00	1		
	CH OPNS SGT	A	E9	11B50	1		
	INTEL SR SGT	B	E9	96Z50	1		
	AERIAL INTEL SGT	A	E8	96D50	1		
	SR GSR SGT	B	E8	17K50	1		
	G3 AIR OP SGT	B	E7	11M40	1		
	INTEL ANAL	A	E5	96B20	1		
	RADIO OP	A	E4	05B10	1		
	RADIO OP	B	E3	05B10	1		

SECTION IV. COMMAND POST DIAGRAMS



APPENDIX E

CCIR

A fundamental aspect of command and control of military operations is getting the right information to the commander at the right time. A crucial step in designing a system to achieve this is identifying the information that is critical to the commander in his effort to make effective decisions. An effort is ongoing in the U.S. Army Combined Arms Center, Fort Leavenworth, to identify these information requirements.

Enclosed as pages 48 through 56 is a list of the Commander's Critical Information Requirements (CCIR) for division level to date. These information requirement lists are intended to be guidelines, and expectations are that each division commander will fine tune the list to meet his needs. The important factor is that it is critical for commanders to identify their CCIR or the command and control system will rapidly become choked with unneeded information. [Ref. 8]

The division CCIR that follow are presented in eight categories:

CATEGORY

TOPIC

I	Intelligence
II	Maneuver Units
III	Air Defense Artillery
IV	Fire Support
V	Battlefield Geometry
VI	Combat Support
VII	Combat Service Support
VIII	Command Guidance

CATEGORY I
INTELLIGENCE

- A. Intelligence summary (date/time prepared)
 - 1. PIR responses
 - 2. Unit identification
 - 3. Locations
 - (a) Units
 - (b) Boundaries
 - (c) Special targets
 - (1) High value
 - (2) Atypical
 - (3) Intelligence assets
 - 3. Intentions
 - (a) Concentration of forces
 - (b) Courses of action (attack, defend, etc.)
 - (c) Most probable course of action/avenue of approach
 - (1) Location of main attack
 - (2) Type units and strength
 - (d) Enemy intelligence collection priority
 - 4. Capabilities
 - (a) General
 - (1) Relative combat power
 - (2) Air summary
 - (3) Strengths and weaknesses in logistic/technical capabilities
 - (4) Time/distance factors
 - (5) Capability to hit high value friendly locations
 - (6) Capability to influence friendly scheme of maneuver
 - (b) Special and commander - selected
 - (1) NBC, ADA
 - (2) Airmobile, airborne
 - (3) Engineer
- B. Weather analysis
 - 1. General (river conditions, significant changes)
 - 2. Capability to influence scheme (24, 36 hrs)
- C. Terrain analysis
 - 1. General (water, effects of combat, nature and relief)
 - 2. Trafficability

CATEGORY II
MANEUVER UNITS
(as reported by Bn and separate Co)

- A. Task organization
 - 1. Unit missions
 - 2. Current activity
- B. Unit locations
 - 1. Unit identification
 - 2. Center mass
 - 3. CP location
 - 4. FLOT
 - 5. Commander-selected units/activities (EW, electronic intelligence, attached)
- C. Unit status (current and projected)
 - 1. Commander evaluation (ready? - yes/no-if no, when yes?)
 - 2. Battle resources
 - (a) Pacing (critical items) - predicted change in status
 - (1) Supply (ammo; petroleum, oils, and lubricants; food)
 - (2) EW systems, and other specific to mission
 - (3) Major weapon systems
 - (b) Commander selected
 - 3. Personnel
 - (a) Officer and key MOS commander selected
 - (b) Radiation status
 - 4. Mission-oriented protective posture
 - (a) Current status
 - (b) Time to remain at current status without mission degradation
- D. Other friendly units
 - 1. Reserve
 - (a) Time/distance factors
 - (b) Location
 - (c) Intended use/constraints
 - (d) Commander evaluation of status
 - 2. Adjacent units
 - (a) Location
 - (b) Scheme/intent
 - (c) Task organization
 - (d) Commander evaluation of status
 - 3. Support units
 - (a) Scheme/intent
 - (b) Organization

CATEGORY III
AIR DEFENSE ARTILLERY

- A. Rules of engagement
- B. A2C2
(includes flight corridors, free flight areas)
- C. Coverage (3-dimensional)
 - 1. Friendly external to division (high-to-medium altitude air defense (HIMAD))
 - 2. Non-divisional US (HIMAD)
 - 3. Divisional (short-range air defense)
 - (a) Organic
 - (1) Unit status
 - (2) Weapon status
 - (3) Location of units
 - (4) Priority of support
 - (b) ADA weapon fire status (tight, hold, free)
- D. Enemy air employment technique (number of aircraft by type-capability)
- E. Command - selected capability/availability
 - 1. TSQ-73
 - 2. Airborne warning and control system
 - 3. Apache
 - 4. Sensors

CATEGORY IV
FIRE SUPPORT

- A. Field artillery
 - 1. Organization for combat (DS, GS, GSR)
 - 2. Priority of fire
 - 3. Unit status/capabilities
 - (a) Range fans
 - (b) Tube/launcher status
 - (c) Ammunition available supply rates
 - (d) Commander-selected items/organizations
- B. TACAIR (includes all air assets: USAF, USN, USMC, allied)
 - 1. Availability (30 min, and 1 hr)
 - 2. Number of sorties/day
 - 3. Forward air controller/air liaison officer (ALO) status by unit
- C. Target acquisition
 - 1. Status
 - (a) TPS-58
 - (b) AN/TPQ-36, AN/TPQ-37 (FIREFINDER)
 - (c) Commander-selected (attached and allied)
 - 2. Location
- D. EW schedule
 - 1. Priority
 - 2. Schedule by target/mission
- E. Suppression of enemy air defenses schedule
 - 1. Priority
 - 2. Means available (EW, Jamming, TACAIR, FA)
- F. Nuclear/chemical
 - 1. Availability
 - (a) Nuclear
 - (b) Chemical
 - 2. Release policy

CATEGORY V
BATTLEFIELD GEOMETRY

- A. Control measures
 - 1. Flight corridors
 - (a) Minimum altitude
 - (b) Maximum altitude
 - (c) Routes
 - (d) Effective time
 - 2. Objective, axis of advance, boundaries, phase lines, prepared position
 - 3. Main supply routes (MSRs)/lines of communications
 - 4. Bridging and fording sites
 - 5. Avenues of approach
- B. Key terrain
- C. Barriers/obstacles (NBC areas, minefields, etc.)
 - 1. Friendly
 - 2. Enemy
- D. Communications grid
 - 1. Friendly
 - 2. Allied
 - 3. Indigenous capabilities
 - 4. EW network coverage (locations)
 - (a) Friendly
 - (b) Enemy

CATEGORY VI
COMBAT SUPPORT

- A. Military police
 - 1. Capabilities (commander evaluation)
 - (a) Prisoner of war
 - (b) MSR
 - (c) RAOC
 - (d) TOC security
 - 2. Unit status (commander evaluation)
 - 3. Equipment status (commander evaluation)
- B. Engineer
 - 1. Capabilities (commander evaluation unique to mission type)
 - (a) Attack
 - (1) Bridging
 - (2) Breaching
 - (b) Defend
 - (1) Ditching
 - (2) Wire
 - (3) Mines
 - 2. Personnel status (commander evaluation)
 - 3. Equipment status (commander evaluation)
- C. Signal
 - 1. Capabilities or available uncommitted (divisional)
 - (a) Missile support element nodes
 - (b) Tactical satellite communications terminals
 - (c) Multichannel links
 - 2. Other assets
 - (a) Capability
 - (b) Availability

CATEGORY VII
COMBAT SERVICE SUPPORT

- A. Unit location
- B. Unit status
- C. Supply status
 - 1. Commanders evaluation of status
 - 2. Significant supply shortages
- D. MSR status
- E. Current priority of effort
 - 1. Personnel replacement priority
 - 2. Equipment replacement priority
- F. Functional capability (commander evaluation)
 - 1. Maintenance
 - (a) Ground
 - (b) Aircraft
 - (c) Missile
 - 2. Medical
 - 3. Supply
 - 4. Transportation

CATEGORY VIII
COMMAND GUIDANCE

- A. Mission of higher unit
 - 1. Intent
 - 2. Concept
 - (a) Scheme of maneuver
 - (b) Priority of fire
- B. Unit mission from higher (restated)
 - 1. Intent
 - 2. Concept
 - (a) Scheme of maneuver
 - (b) Priority of fire
- C. Critical situation alert
 - 1. Target criteria
 - (1) Named areas of interest
 - (2) Target areas of interest
 - 2. Commander-selected special events
 - (a) Enemy
 - (1) Indications of hostilities
 - (2) Significant changes
 - (3) Changes of missions and tasks
 - (b) Friendly
 - (1) Host nation support
 - (2) Significant changes
 - 3. Use of nuclear/chemical fire
 - (a) In theater/area of operation
 - (b) Out of theatre

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