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Vulnerability Analysis of Soviet Division-Level Troop Control

by

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## ABSTRACT

VULNERABILITY ANALYSIS OF SOVIET DIVISION-LEVEL TROOP CONTROL: An analysis of the evolution of Soviet troop control since the Great Patriotic War of 1941-1945, by Lieutenant Colonel Bruce L. Meisner, USA, 44 pages.

This study describes the Soviet troop control system in the motorized rifle division and analyzes it to determine its potential vulnerabilities. The study begins with a review of the evolution of the Soviet troop control system at the division level during and since World War II, followed by a brief analysis of what the Soviets call their "scientific basis" for tactical planning. Several specific aspects of the current division troop control system are then analyzed: (1) Decisionmaking and Planning Process, (2) Role of the Division Staff, (3) Division C2 Facilities/CPs, and (4) Impact of Cybernetics and Automation. The study concludes with an analysis of the vulnerabilities/means of exploitation of the Soviet division troop control system.

One of the key findings from the historical analysis was that inadequate intelligence was the most frequent cause of disruption to Soviet forces at the division level during World War II. This may well be the main reason why the Soviet division decision cycle is so heavily dependent upon an accurate assessment of the battlefield.

We can expect the Soviets to continue to move toward greater centralization and automation of division troop control. Computer automation will increasingly be applied to Soviet troop control activities and assist in the decisionmaking process. U.S. planners should maximize their efforts to identify those critical events and thus allow commanders to bring to bear the means to disrupt the Soviet troop control process at these critical times.

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## Section I

### Introduction

An accurate understanding of Soviet military doctrine requires that it be viewed from the Soviet perspective. This is especially true of tactical command and control. There are some important similarities and differences between the U.S. and Soviet approaches to tactical command and control. According to FM 100-5 (Draft), Operations, command and control is defined as being, "the exercise of command, the means of planning and directing campaigns and battles. Its essence lies in applying leadership, making decisions, issuing orders, and supervising operations. In practice, it concerns the organizations, procedures, facilities, equipment, and techniques which facilitate the exercise of command."<sup>(1)</sup> The Soviet concept of command and control is "troop control," which encompasses all battle management to include staff organization and procedures, planning, decisionmaking, and computer automation.

Troop control comprises a variety of activities, the most important of which, according to the Soviets, are "uninterrupted search, collection, study and analysis of information on the situation; adoption of decisions; planning of combat operations; and organization and maintenance of coordinated action by subordinate troops."<sup>(2)</sup> One definition of troop control expressed in a recent study, Soviet Division-Level Decisionmaking by the highly respected Foreign Systems Research Center of the Denver-based Science

Applications, Inc., states simply that it is, "the purposeful activity of the commander, staff political organs, and chiefs of the branches of troops and services for maintaining high combat readiness in their subordinate units, for preparing for their combat operations, and for directing efforts toward successful accomplishment of the combat mission by effective employment of the available forces and means."(3)

Soviet troop control has undergone a significant evolution since the Great Patriotic War of 1941-1945. This is particularly evident at the division level, where a great deal of emphasis has been placed upon reducing the time normally required for decisionmaking. In part, this requirement was a natural outgrowth of the Soviet experience against the Germans during World War II. It is also a reflection of the changing conditions of warfare and improvements made possible by technological advances since 1945. A fully modernized Soviet tank or motorized rifle division today, after all, is a vastly different organization from its World War II predecessor, far more complex and powerful.

Since the end of World War II, Soviet divisions of all types have undergone a nearly continuous process of reorganization. At the same time, several new generations of weapons systems have been fielded. The development of the motorized rifle division has been typical of this process. It made its initial appearance in 1957 when the Soviets began converting all of their infantry and mechanized divisions into motorized rifle divisions (MRD's).(4) Soviet equipment development

has reflected a steady effort to make the MRD a balanced, powerful, and mobile organization. Self-propelled artillery has increased the artillery's ability to support fast-moving operations while improvements in river-crossing capabilities for APCs, tanks, and engineer equipment have also enhanced the mobility of the division. Current organizational developments in today's modern Soviet division include the addition of a 122mm howitzer battalion to tank regiments of both tank and motorized rifle divisions, the expansion of the BMP-equipped motorized rifle companies to battalions in tank regiments of tank divisions, and the establishment of helicopter squadrons in both types of divisions.(5) As a result of these organizational and equipment changes, new demands have been placed on the Soviet troop control system.

The purpose of this monograph is to describe the Soviet troop control system in the motorized rifle division and analyze it to determine its potential vulnerabilities. The working hypothesis with which this study was initiated was that an analysis of the Soviet division-level troop control process might enable us to identify potential vulnerabilities suitable for exploitation by U.S. planners and commanders. The methodology used in this monograph begins with a review of the evolution of the Soviet troop control system at the division level during and since World War II. This will be followed by a brief analysis of what the Soviets call their "scientific basis" for tactical planning in order to gain an understanding of their structured thinking and scientific approach toward building a

framework for their troop control process. Specific aspects of the current division troop control system will then be analyzed: (1) Decisionmaking and Planning Process, (2) Role of the Division Staff, (3) Division C2 Facilities/CPs, and (4) Impact of Cybernetics and Automation. Finally, an analysis of the vulnerabilities/means of exploitation of the Soviet division troop control system will be conducted.

## Section II

### Historical Perspective: the Great Patriotic War and its Impact on Division Level Troop Control

The Soviet approach to troop control grew out of the lessons of World War II, "The Great Patriotic War."<sup>(6)</sup> The practical experience gained by the Soviets during the war convinced them that the effectiveness of troop control depended in large measure on the system of control facilities, planning procedures of commanders and staffs, and the level of development and utilization of automation equipment in the control process.

During the first months of the Great Patriotic War, the tactical headquarters of Soviet divisions and their subordinate regiments were frequently colocated. These combined division/regimental headquarters were usually located far to the rear of the committed/front line battalions of the division and would therefore often lose contact with

them. This deficiency was, for the most part, corrected by the beginning of 1942 with the establishment of a system of separate command posts at the regimental and division levels. The principal regiment and division troop control facilities were: the main command post (CP), the observation posts (OP's), and a rear (second echelon) control headquarters. During offensive operations, these control facilities were located as follows from the line of contact: rifle regiment -- OP, .3-.8 km; CP, 1-2 km; second echelon CP, 5-7 km; rifle division -- OP, .8-1.5 km; CP, 2-4 km; and second echelon CP, 8-12 km.(7)

During World War II, the main command post (CP) was the principal control facility of both divisions and regiments and was set up at a location from which troop control could be secured, as well as the establishment of uninterrupted communications with higher headquarters. As a rule, the combat command elements of the division headquarters would be located forward and the other elements located to the rear in the "second echelon" CP. The physical dimensions of a division CP depended upon the combat situation, terrain, communications facilities, and length of time it was likely to remain in one place. If it was expected to stay fixed for a considerable period of time, a rifle division's CP might occupy up to one square kilometer.(8) If a CP was expected to move soon, its components would deploy in a much smaller area and sometimes remain in march column.

The headquarters group of a rifle division consisted of 140 to 160 men and was divided into two echelons. The echelon located at the

forward CP (combat command elements) usually included the division commander, deputies for political affairs and combat training, chief of staff, one or two officers from the political branch, the operations and intelligence sections, the communications and cryptographic sections, the chiefs of services, and a security detachment. The second echelon CP would consist of the political branch, rear services, personnel section, administrative and supply sections, the military prosecutor's office, military court, the staff's transportation section, and security elements.(9) Forward of the first echelon command posts, Soviet division commanders maintained observation posts. These observation posts were an integral part of the divisional control system and were sited at a location from which the division commander could personally observe the course of battle on the main axis and control the combat. Observation posts were established as close as possible to the front line. In the Bobruisk (1944) and Warsaw-Poznan (1945) operations, rifle division OPs were located no more than 1.5 km from the front line and as close as 800 meters at times.(10)

The Soviets attached considerable importance to the organized displacement of these control facilities to ensure uninterrupted troop control. They found that too frequent shifting of the division command and observation posts led to, "instability of the operation of communications equipment, as well as disruption and sometimes loss of control."(11) As a rule, division command and observation posts were moved sequentially based on the availability and preparedness of the



communications equipment at the new site. Under the Soviet centralized control principle, a division command post could not be moved without the permission of its higher headquarters.(12) Complicating these moves was the fact that the control facilities within the Soviet rifle division were still insufficiently mobile. Regular trucks and buses were employed in moving them.

Reliable communications was the principal means of ensuring troop control in combat. Therefore, the establishment of uninterrupted communications with subordinate regiments and rear service units constituted a critical duty of the division commander and his staff. Radio, wire, couriers, visual and light signals, and liaison officers were employed as communications means by division commanders. The Soviets strongly encouraged direct contact between their division and regimental commanders. Personal contact, they believed, not only facilitated prompt assignment of missions and exchange of information, but also provided opportunities to insure that orders were clearly understood and to ascertain that they were being properly executed.(13) The employment of improved communications equipment and vehicles after the war increased the reliability and mobility of the various control facilities.(14)

In order to meet the constantly growing challenge of effective troop control in the highly mobile warfare characteristic of the Eastern Front in World War II, the Soviets also concentrated their efforts on improving the planning procedures of commanders and staffs. A number of command and staff exercises were conducted to improve the

efficiency and quality of control provided by the commander and his staff. In one instance it was discovered that a division commander's reconnaissance, which had been conducted before he made his combat decision, caused an unwarranted delay in decisionmaking and the communication of orders to his subordinate units. As a result, combat missions from the division commander began to be assigned verbally from a map prior to issuing a written order. Details were provided in the field by either the division commander or a member of his staff. As a result of improvements in planning procedures, decisions were made more rapidly and communicated to subordinate unit commanders in a shorter time. This increased the time available to commanders and their staffs for organizing their units for combat, including the time for personal reconnaissance. During WWII, three to five days were usually allocated for organizing for combat at the division level. By improving planning procedures and making more extensive use of some basic technical means of control (calculators, duplicating machines, etc.), the time required to organize for combat was reduced to twenty-four hours.(15)

The advent of nuclear capable artillery and missile systems and extensive adoption of radio direction-finding equipment caused a revolution in military affairs. These new conditions caused a sharp increase in the volume of tasks and missions performed by all division control echelons and a reduction in the time available to perform them, thereby exerting even more pressure on the division troop control system. As a consequence, it was necessary to revise the

composition and structure of the control facilities, their automated decision tools, transportation vehicles, and planning procedures for the commander and his staff in organizing for and directing combat.(16) As a result of the threat to control facilities posed by the possibility of nuclear strikes and the technological developments in communications and electronic equipment, it was necessary and possible for these facilities to be small, highly mobile, and dispersed over a large area.(17)

Continuity of control was also improved since division and subordinate unit commanders could control their troops from command-staff vehicles while on the move. Since the early 1950's command and control vehicles have been provided for the division commander and key members of his staff from the division signal battalion.(18) The BTR-50/60/70 PU (command variant) armored personnel carriers are currently used as the standard Soviet divisional command and control vehicles.(19) Subordinate unit commanders normally use their command tanks,(20) the BMP M1974 command vehicle,(21) or the artillery command and reconnaissance vehicle (ACRV) M1974,(22) but may still have the same series of divisional command vehicles available for use by their respective staffs.

Greater demands were made of commanders and staffs regarding their ability to evaluate the situation, make decisions, assign missions and communicate them rapidly to the troops. New command and staff methods were adopted which ensured improved efficiency and quality of control, particularly in collection and analysis of

situational data, decisionmaking, and communication of missions to the troops. A major role was played by extensive utilization of computers to free commanders from routine decisions and needless expenditure of energy.(23)

### Section III

#### Description of Current Soviet Division

##### Troop Control System

#### The Scientific Basis for Soviet Planning

Central to the Soviet perception of the battlefield is the Marxist-Leninist theorem that war, like other social phenomena, is governed by laws expressing its unique nature. Military success results from the proper application of these laws, and violation of the laws invites military failure. This perception of the "scientific nature" of combat leads to the conclusion that for every combat situation there is a "school solution" that applies one's own forces to best advantage. A result of this scientific perception is that Soviet combat operations tend to be governed by rather specific rules as to frontages, depths, weapons densities, relative firepower, and force ratios to a far greater degree than is true in the U.S. Army.(24)

The Soviets likewise view troop control as being based upon a system of scientific principles which provide the basic ideas of maintaining the troops' combat readiness and efficiency. Although many of these "principles" reflect a good deal of similarity with current U.S. Airland Battle tenets/principles, and as such should be maintained in their proper perspective, they nonetheless offer a "Soviet approach" to the structure of their troop control system. The following are what the Soviet's consider to be the principles of scientific troop control:(25)

1. One-Man Command
2. Collectivism
3. Centralism
4. Objective Appraisal
5. Purposefulness
6. Firmness of Control
7. Flexibility of Control
8. Continuity of Control
9. Security of Control

In that these principles offer little "new" insight into the Soviet division commander's responsibilities pertaining to troop control, only a few will be discussed below. However, even this cursory review will be beneficial in understanding the basic framework of the Soviet troop control system.

The principle of "One-Man Command" presupposes subordination and insures the "top down" flow of orders and the subsequent execution of them. The commander is responsible for everything--militarily and politically--that his command does. It is the strict interpretation of this principle, which has received a great deal of attention in the Soviet press and in Soviet military writing, that leads some Western authors to describe the Soviet commander as an inflexible and unimaginative soldier. However, with the exception of the political responsibility, the military responsibilities of a division commander are no different than those of his U.S. counterpart. Lenin emphasized that, "The lack of real one-man command, irresponsibility, is a most dangerous evil, which in the army, all too often leads to inevitable disaster, chaos, panic, division of authority, and defeat.(26)

To the Soviets, the principle of "Centralism" refers to the direction of the subordinate troops' efforts by the higher echelon to achieve the common goal in accordance with a unified plan. Depending on the situation, the higher command may even dictate the means as well as the missions. "The specific nature of military organization and the tasks of the Soviet armed forces require centralization of control in order to secure discipline and efficiency, flexibility, and prompt response in coordinating combat operations and accomplishment of missions."(27) Some Soviet theorists stress however, that the purpose of centralization is not to perpetuate rigidity in command and control, but to allow adaptive flexibility in the employment of resources. It allows division commanders to make the most efficient

use of available resources and to regroup and redeploy to meet the sudden changes expected in modern war.(28)

The principle of "Flexibility of Control" requires the Soviet commander to maintain an appreciation for changes in the conduct of the operation, and if necessary, to modify his approach to fit the changes. The concept of "flexibility" certainly appears to be a contradiction as a "scientific principle" of Soviet troop control. Nonetheless, it does provide additional support to the growing number of Soviet articles stressing the requirement for flexibility, creativity, and imagination. With the more relaxed political atmosphere of the 1980's, Soviet commanders can be expected to be more flexible than they were under the rigid Stalin regime of World War II. It would be a mistake to put confidence in the probability of Soviet division commanders blindly following prescribed patterns without using imagination and their own initiative.(29) This issue will be dealt with in greater detail in a subsequent portion of the paper. Colonel Lukava, a principal Soviet writer and philosopher on troop control theory stated that, "Operations plans should not be final and rigid laws. A plan is only worth implementing when it corresponds to the rapidly changing situation, that is, when it changes in accordance with the obtaining situation. A plan may even be dropped altogether and replaced by a new one."(30)

The Soviets hope to establish "Continuity of Control" by deploying a system of control entities and equipment, by setting up an alternate control system, by dispersing command posts, and by

providing signal communications systems with direct, alternate, and reserve communication channels. During WWII Soviet division commanders were expected to keep as close to the action as possible in order to be able to exercise close personal control and command.(31) This principle also generates a demand for intense reconnaissance. Ivanov stated that, "Continuity of control is insured primarily by active reconnaissance, stability of communications, high viability and mobility of control points, and implementation of measures to counteract enemy electronic warfare activity."(32)

#### Division-Level Decisionmaking and Planning

The main factor that likely impacts on division level decisionmaking and planning is the planning horizon (area of interest) for the division operations. Within the last few years, division missions were changed from being characterized as "immediate, subsequent, and mission of the day" to "immediate and further."(33) The "further mission" for a division is given for a single day's duration. In addition, more specific goals are given than were previously typical for the "mission of the day." The typical depth for a division's further mission is likely to be greater than that previously assigned in the subsequent mission in that its duration has more than doubled. This increased area of interest for making specific plans at the division level is an indication that the division is likely to be less reliant upon the close control of the Army headquarters, which will in turn place a greater burden upon the



division staff. Nevertheless, the division's missions remain an integral part of the objectives of the Army's operation, and the Army will apparently have to reissue new orders to its divisions two or three times during the course of executing the Army's immediate mission (based upon relative depths and durations of the missions).(34)

While the intent of the Army may have been toward decentralized control and increased flexibility by increasing the division's "area of interest," it may have created an exploitable vulnerability by increasing the number of times it needs to reissue new orders to its divisions. However, the implication of this "re-use" of divisions is that their missions cannot normally be assigned such that their combat capabilities would be necessarily depleted. After a brief period of resupply as a second echelon, the division could be ordered to reenter combat if the Army continued to sustain its combat operations.

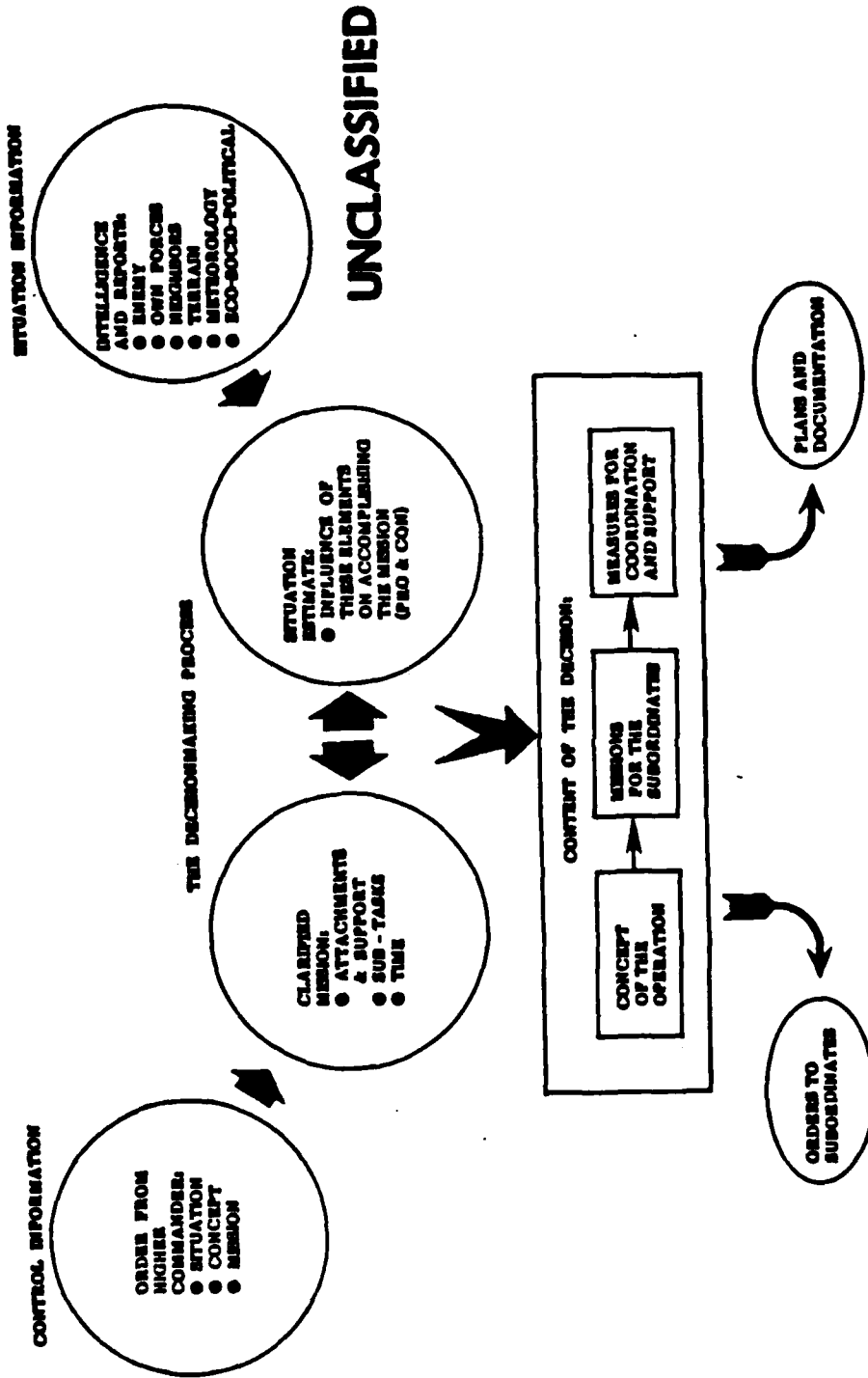
The basic elements that are involved in Soviet tactical decisionmaking are the mission and the situation. The mission is the result of the decisionmaking and planning of the Army commander and of the commanders above him. The situation comprises all of the other aspects of the upcoming battle. Figure 1, which was taken from a study by Applied Science, Inc. on Soviet division-level decisionmaking, shows how the two elements provide the basis of Soviet decisionmaking. The figure depicts the thought process of the commander more than the formal sequence of events that usually is used to describe the troop control process.(35) A third element that

exists at the division is the system of troop control. This system comprises the commander, his staff, their equipment and permanent data bases, procedures used, and their collective training, knowledge, skills, and organizations.(36)

The basic control parameters of the division-level decision are established as a part of the decisionmaking and planning process executed at the Army level. The Army commander's decision results in the identification of the main and supporting axes of the Army, the operational formation for the Army, and the specific missions of the major Army force elements. Thus, the Army plan specifies the missions for the first and second echelons of each first echelon division, and the mission for the first echelon of each second echelon division. The mission that is given to each division includes space-time objectives which must be achieved to support the Army plan, as well as specified minimum loss norms which must be inflicted on enemy forces, and maximum loss norms which can be suffered by the Army forces.

The Army plan also specifies which elements of the organic or attached Army forces will be assigned to each division in order to support the execution of its missions. For example, the plan will specify the Army's artillery which will be assigned to support specific divisions, the amount of Frontal aviation supporting in that division's sector, and the augmentation by any air defense forces. The Soviet division commander relies heavily upon these supporting assets (both attached and organic) during the planning and execution of his combat operations. A disruption or delay in employing these

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Adapted from Ivanov (77).

Figure 1

DIAGRAM OF THE TACTICAL COMMANDER'S THOUGHT PROCESS (U)

extracted from the Applied Science, Inc. study, Soviet division-level decisionmaking.

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assets could cause a significant change to the division commander's plan. The Army plan also includes information on the missions, targets, and method of employment of nuclear weapons according to the directives issued by the Front.

Given the missions for his operations, and the support and attachment of Army forces to execute those missions, the division commander and his staff must then work out the basic elements of the decision as to how best to execute those missions. Several methods are typically used by the commander and his staff systematically to portray the tactical situation. The primary method used is the "correlation of forces" which is frequently a measure of the ratio of forces. The measurement of the correlation of forces is intended to reflect the true relative combat strength of opposing forces, which is a complex problem subjected to extensive Soviet study and research. This measure serves a variety of purposes during the processes of decisionmaking and planning and then monitoring the execution of the plan.

In summary, the functions of the Soviet division staff during the correlation of forces process can include:

1. Initial assessment of the relative strength of the enemy to be encountered during execution of the missions.
2. Establishment of the strength and composition of forces needed to perform specific types of operations, set according to established norms which reasonably assure success.

3. Description of the forecast dynamics of the battle as losses are incurred and new forces are committed according to the commander's concept and assumed intent of the enemy. The effectiveness of a concept can be considered to reflect how well it sustains favorable correlations of forces.

4. Provision of monitoring indicies based on the forecast for comparison with actual conditions at various stages and locations in the battle.

5. Provision of immediately comprehensible input to various models of combat used to forecast the course and outcomes of battles waged by subordinates.

6. Provision of an unambiguous and immediately usable medium rapidly to transmit synthesized situation data between echelons.(37)

#### The Role of the Division Staff

The division commander is responsible for the combat readiness of his division. Under the provisions of the one-man command concept, he is answerable for the combat training, political education, and military discipline of his troops; the condition of the division's equipment; and the logistical and medical support of the unit. He is the central figure in the troop control process, responsible for all troop control measures during the preparation, organization, and conduct of combat operations.(38) Two groups of personnel are

associated with the troop control process within the division: the command group and the division staff. The command group includes the division commander and those officers who work for him in a direct command relationship while the staff includes those officers who assist him in planning and supervision.(39) The division staff consists of four coordinating staff sections and four special staff sections which function under the control and supervision of the division chief of staff.(40) Figure 2 depicts the functional command group and "staff" relationships for the Soviet division.(41) U.S. terminology ("coordinating and special staffs") is used to clarify the functional relationships of the Soviet division staff. The chief of staff is the only officer authorized to issue orders in the name of the commander. He is both a staff officer and a deputy commander and is the primary assistant to the division commander.

To successfully control subordinate units' actions in battle, the division staff must constantly keep abreast of the situation. Therefore, one of the staff's most important missions is to continuously collect and analyze data on the situation, and submit to the commander the calculations necessary for making a decision. When studying the data on the enemy, the staff analyzes the situation, the composition of the opposing forces, and the likely intentions of the enemy. The staff defines the weak and strong points of the enemy's battle formation so as to employ their own forces and weapons most effectively.(42)

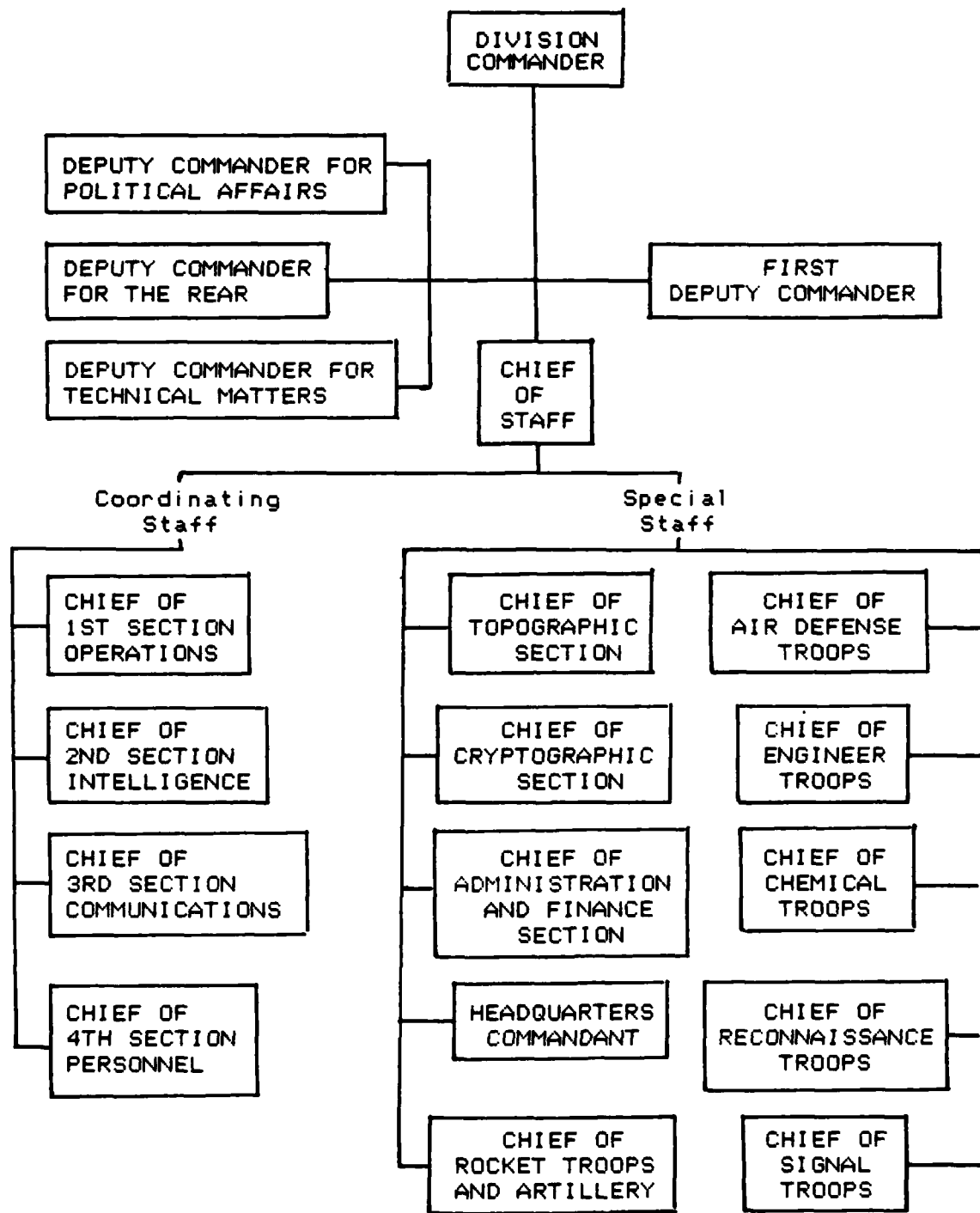


Figure 2. The Soviet Division Staff Depicted in U.S. Army Terms

A major effort is being made to improve the quality and the speed of staff work within the division. The Soviets recognize that without progress in this area, doctrinal and organizational developments and the flexibility inherent in new equipments will count for little. They recognize that the flow of information has increased dramatically since the end of World War II, while the time available for making and communicating decisions has been foreshortened. Considerable attention is thus currently being devoted to streamlining division staff procedures.(43)

For instance, sequential planning, with each level awaiting the completion of planning by higher headquarters before commencing its own work, has been largely superseded. Parallel planning, made possible by the timely issue of warning orders, a preliminary decision outlining the broad concept of operations, and the acceptance of low level initiative, is now the normal method. In this method, decisionmaking and planning focus on two echelons at a time -- the echelon that is working out the decision and planning the operation, and the subordinate echelon that is receiving the results of that process. The basic approach is sequentially to develop partial results of the decisionmaking and planning process and to transmit those results as they become available to the subordinate echelon. At that point, the subordinate echelon starts his decisionmaking and planning process without waiting for complete orders. Both echelons are then working in parallel to refine their decisions and work out the plans. This method leads to a lower quality decision, but is much



faster. The Soviets calculate this as a twenty to thirty percent time savings.(44)

The Soviet division troop control process has defined very specific elements of decisionmaking and planning and very specific types of communications associated with the parallel planning process, which takes place between a commander and his subordinate units. Those terms are defined in Soviet literature as follows:

1. "Initial data" is the term used to define new incoming data on the situation, especially the composition, location, preparations, intent, and operating methods of the enemy, and the terrain and radiation situation. It is not mission specific.

2. "Preliminary Instructions" is the term used to describe the document which advises subordinates of the nature of upcoming operations to aid them in their preparations. It does not include any results from the working out of the decision by the commander. It gives specific information about the overall mission of the division. Chronologically, it is delivered after the division commander completes the step of mission clarification.

3. "Preliminary Combat Instructions" is the term used to describe the document which contains the results of the working out of the decision. It contains the division commander's concept of the operation, and the approximate missions for the subordinate units. It does not contain all of the details of the subordinate units' mission, but does include a statement of the mission itself, higher echelon

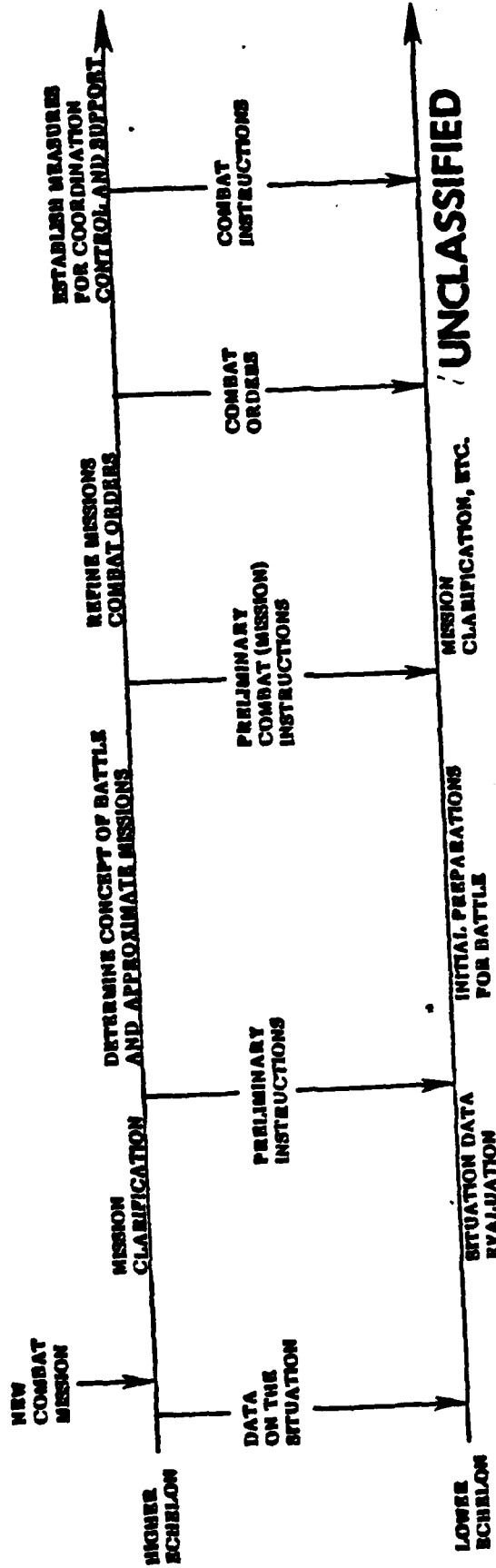
forces to be attached, data on adjacent units, and the time at which the subordinate unit must be ready to execute the mission.

4. "Combat Orders" is the term used to define the plan which contains all the details of the operation. It is the result of the planning of the operation which takes place after working out the decision. The combat orders comprise the formal and legal orders of the division commander to his subordinates.(45)

Using parallel planning, the flow of planning between an echelon and its subordinate units is illustrated by Figure 3.(46)

The third style of planning is termed command, or executive planning. In this process, the burden of decisionmaking and planning is on the commander himself. The commander monitors the situation, makes his decision, and issues orders immediately as their need is determined and their content is formulated in the mind of the commander. This is done with minimal time spent for separate staff actions. The quality of this method is primarily a function of the individual skill and experience of the specific commander. As a general rule, the decisions and plans produced by this style are of substantially lower quality than either the sequential or parallel methods. However, the decision cycle is much faster. Soviet literature argues that this method is most applicable at battalion and regimental level, and is required when available time for decisionmaking is too short for the other methods.(47)

UNCLASSIFIED



Based on Ivanov (77:229-234)  
Altukhov (84:86)  
Edited for Clarity

Extracted from the applied Science, Inc.  
study, Soviet Division-Level Decisionmaking.

Figure 3  
THE SOVIET METHOD OF CONCURRENT PLANNING (U)  
(ONE POSSIBLE VARIANT)

UNCLASSIFIED

## Division Command and Control Facilities/CPs

Soviet division commanders are most concerned that their decisions be based on the most up-to-date, accurate evaluation of the situation. At the division level, the Soviets form a small, mobile forward command post comprised of the commander, his operations officer, the chief of rocket troops and artillery, and selected advisors dictated by the tactical situation.(48) In the advance this command post moves with the first echelon on the main axis approximately two to five kilometers behind the line of contact. The division commander is thus able to acquaint himself with the situation, including nuances that are filtered out in second hand reports. Often he will form a command and observation post to gain personal observation of key terrain. He is also able to react immediately to developments, to issue orders in person, to ensure that they are understood, and to monitor progress.(49)

While the forward command post is the focus of command, the main command post, moving behind the first echelon on the main axis, is the focus of control. This command post usually moves ten to fifteen kilometers behind the line of contact. Here the division chief of staff supervises the detailed planning, coordinates the movement and deployment of all subordinate units, and monitors their progress and combat effectiveness. Frequently, selected staff officers, who are thoroughly conversant with the division commander's concept, are dispatched to subordinate units to ensure that they understand and

implement its spirit. The main axis also keeps the rear control point moving with the logistical tail, fully informed of operational requirements. The rear control point, which is expected to move two or three times a day, is usually located not more than thirty kilometers from the line of contact.(50) Close liaison is essential if the chief of the rear is to organize the necessary logistics support in adequate time. The rear control point also monitors the logistics state of subordinate units and keeps the division main axis informed.(51)

On the march and during the attack, the division commander controls the action by radio and messengers. When the division main command post moves, it either remains in control or the small forward command post assumes the full burden. Inevitably, the continuity and efficiency of control must suffer during moves (and a division main may displace two or even three times in a day, depending on the tempo of the operations). The problem can be minimized by transporting key personnel by helicopter once basic facilities are ready for them in their new location. Alternatively, control can be exercised from an airborne command post (a HIP-6 at division level).(52) In a static situation, or in the defense, wire communications will be installed. Command posts on the ground can be expected to be well dispersed and camouflaged. Additionally, in a static situation, an alternate command post probably will be established to assume command if the main command post is destroyed.(53)

## Cybernetics and Automation

After the "Great Patriotic War," Soviet military theoreticians recognized that fundamental changes in the nature of future warfare would result from modern technological developments. The changes which the Soviets believed constituted a revolution in military affairs, resulted from technological progress in three different areas: the development of nuclear weapons; the development of ballistic missiles; and the development of cybernetics, the branch of science dealing with the laws of control, including the mechanisms for communications and information processing within a control system.(54)

In the early 1960's, the Soviets initiated basic research in military cybernetics, which deals with the basic principles governing the control of forces and weapons in combat through the synthesis of the findings of general cybernetics and military science. The purpose of military cybernetics is to, "devise a single theory for the control of armed forces by the use of automated control systems, which includes the transmission, storage, reprocessing and utilization of situational data for its evaluation and decisionmaking statements of problems..., reception of reports on the accomplishment of missions and on the status, position and nature of friendly and enemy forces."(55)

Some of the conclusions that the Soviets made as a result of studying the troop control process as a complex cybernetic system were:

1. In contemporary combat, the complexity and expanse of operations, coupled with the tempo, will limit the capability of the division commander to personally observe the situation and the evolution of the operation. Therefore, he would have to have efficient, indirect means for obtaining status information and disseminating command information.

2. Because changes can occur very rapidly, time is of the essence at all levels in the troop control process.

3. Division commanders and their staffs must be able to rapidly deal with an enormous amount of information.

4. Problems of coordination in high speed operations by several different kinds of forces are extremely complex.

5. Finally, the expansion of the staff to accommodate the increased difficulty of the task was regarded as an unacceptable approach.<sup>56</sup>

Thus the Soviets believed that the problems of troop control for the division in modern combat were both very complex and very important. They feel that the efficient organization of the detailed actions of the commanders, and staffs, selectively supported by appropriate automation, is critical to their ability to operate in a future war. To facilitate utilization of computer systems, Soviet educational and doctrinal systems prepare leaders for interaction with the system. Thought processes are reduced to three possibilities:

empirical, axiomatic, and dialectic. Empirical thought deals with simple recall; axiomatic thought deals with the application of rules to solve a problem in which all the variables are known; and dialectic thought deals with problem solution in which parts of the problem are unknown. (57)

Further insight is gained by examination of the realm of decisions that are classified and computerized:

1. Informational. Answers the question -- What is the truth? Examples are information regarding friendly and enemy forces, adjacent units, conditions of combat operations, and estimates of forecasts.

2. Organizational. Given the goal, limitations, and measure of success, it answers the question -- What is to be? Examples are task organization according to troop structure, subordination relationships, distribution of functions and personnel distribution.

3. Operational. Answers the question -- How to act? Examples are determining the purpose of the operation, establishing the level of combat readiness, identifying the direction of the main attack, and assigning missions to the various troop units.(58)

Each of these decisions reflects the commander's personality and his acceptance of risk. The Soviet idea of risk has been classified into three "problems of strategy." Characterized as probability statements, these problems of strategy reflect the decision that will, on the average, be the best one statistically.



1. Minimax strategy -- This strategy is enemy oriented. It is a guaranteed strategy that we often refer to as worst case. It commits sufficient assets to an operation for success regardless of the characteristics of the enemy's force. The results may turn out better for the Soviet division commander but not worse. The division commander however, pays a significant price for this guarantee.

2. Minimum mean risk strategy -- This is the standard Soviet strategy. Its advantage is its high average effectiveness. This strategy minimizes initiative and is not a bold and aggressive approach to operations. As the term implies, it analyzes all aspects of the engagement and applies the most predictable requirements for success given an understanding of enemy disposition, intention, ect..

3. Tolerable risk strategy -- This strategy accepts greater than average risk in the hopes that the result of the engagement will yield greater than average payoff. The risk however is such that failure will not jeopardize the attainment of a long-term goal. This is the boldest approach, but it too has a disadvantage, which is the difficulty in determining the amount of tolerable risk.(59)

Through a system of heuristic programs, Soviet engineers continue to perfect the use of computer terminals available to their division commanders for decision resolution. Automation of the division troop control process is a natural extension of the scientific principles of Marx-Lenin as well as of the technological demands for time sensitive

responses. It provides for the man-machine interface necessary on the modern battlefield.(60)

#### Section IV

##### Analysis of Soviet Division Troop Control

At least in theory, the Soviets' style and organization of troop control is well suited to fluid, fast developing and changing combat situations, especially when they are on the offensive. Division commanders well forward on the main axis are optimally placed to make first hand assessments, issue timely decisions, and personally influence the conduct of battle. Meanwhile, all principal subordinates and staffs are familiar with their commander's intent and can act in his spirit even when communications fail or the situation is obscure. Moreover, the Soviets see their reliance at battalion level and below on simple, stereotyped battle drills as being a source of strength. Such drills enable regiments to cut reaction times and commit their subordinate units to act quickly with minimal reliance on radio communications. In a battalion-level meeting engagement, this may enable the Soviets to operate inside the U.S. decision cycle.

On the other hand, the Soviets are aware that they still have many problems. It is questionable whether the improvements currently being implemented in staff procedures, including the more extensive use of automation and computers, are sufficient to meet the demands

placed on the division staff by modern battle. Moreover, if the collection, reporting, processing, and dissemination of intelligence lags behind the pace of combat, Soviet tactics are likely to prove both costly and ineffective, especially in the event of command posts being overtaken. Finally, the concept of decentralized battle management is proving relatively difficult to implement. Commanders, particularly at division and regiment, still tend to overload themselves with unnecessary and counterproductive work and to interfere with the handling of their subordinates' tactical operations. For their part, subordinate commanders are still often inclined to play it safe by obeying orders to the letter, even when developments have made little or no sense to them, and passing problems upward rather than dealing with them.

The Soviet division decision cycle is heavily dependent upon an accurate assessment of the battlefield. The tempo of modern warfare has placed an increasing strain on the commander's ability (in terms of time) to conduct a personal reconnaissance of the terrain.

U.S. planners and commanders should make every effort to deny Soviet intelligence collection means and reconnaissance units from obtaining information on friendly units and activities. A recent study completed by Applied Science, Inc. concluded that inadequate intelligence was the most frequent cause of disruption to Soviet forces at the division level, mainly from misjudging enemy strengths, and that the next most frequent disruption was the same result of enemy actions, principally through maneuver. At the battalion and

regimental level, research of combat operations during the Great Patriotic War again indicated that the most frequent cause of disruption was poor intelligence resulting in an enemy attack in unexpected strength and/or direction. This finding adds importance to our deception plans and OPSEC techniques to ensure maximum surprise. U.S. actions should be keyed to maintaining the initiative and striking from unexpected directions with decisive maneuvers.

With the Soviets continued emphasis on "scientific principles" and automation within the troop control process and their dependence upon norms and the finite aspects of decisionmaking, some Western writers have portrayed the Soviet tactical commander as a predictable and unimaginative enemy. Soviet writers on the other hand and recently, a number of Western writers have stressed the role of initiative, flexibility, and creativity among the Soviet tactical commanders. Despite the preponderance of Soviet articles on this subject, there is still sufficient evidence to suggest that a certain degree of rigidity exists in the Soviet decisionmaking process and in the execution of combat operations at the battalion, regiment, and division levels.

We can expect to see little if any initiative displayed on the modern battlefield on the part of Soviet maneuver battalion commanders. Rote battle drills at battalion level and below should be predictive, vulnerable, and therefore exploitable. The Soviets however, as previously mentioned, view their battle drills as a strength in their troop control process, in that they provide a stable

means of control during times of great confusion on the battlefield. At the battalion level we may well find that the Soviet battalion commander can easily operate within the decision cycle of his U.S. counterpart.

The Soviet regiment, which is the first level where we find an organic combined arms capability, is also the first level at which we would expect to see any initiative displayed by the commander. However, this initiative is tempered somewhat by the mission of the division and the resources allocated to the regiment in support of that mission. Any "initiatives" taken by a regimental commander must be part of the overall plan so as not to conflict with the plans of the division.

At the division level we can expect to see even more initiative. Although previously a Soviet division commander may have escaped censure by strict adherence to rules, he is now personally accountable for mission execution.(61) Unlike the World War II experience, a division commander need not defer to the political officer. There is no longer any insurance in inflexible adherence to orders and rules. This is a potent incentive to division commanders to be self-reliant and to exercise imagination and initiative. One Western writer believes that, "the principle of endinonachalie (one-man command) has been adopted by the Soviets as a means of preparing unit commanders to cope successfully with the greater dispersion, independent operation of small units, and mobility to be expected on the modern battlefield.(62) However, division commanders are still required to

obtain approval from their higher headquarters before moving their command posts.

U.S. forces need to retain the initiative using speed and surprise to disrupt the Soviet decision cycle. Radical changes to Soviet combat operations at the battalion and regimental level will cause confusion and disruption until approval from higher headquarters is obtained to revise their course of action in conformity with their superior's mission and concept of the operation as well as the new conditions.

The Soviets rely heavily upon their supporting elements (artillery, engineer, reconnaissance, chemical, etc.) in correlation-of-force planning and in execution of combat operations. The loss of these special troops or their inability to assist the combat forces in a timely manner is of particular concern to the Soviets. A disruption or delay in utilizing these assets will cause the Soviet commander to assess its impact on both immediate and future actions of his forces and may cause him to significantly alter his plan. A concentrated effort against Soviet supporting elements (bridging, reconnaissance, chemical, etc.) in concert with the U.S. concept of operation should not be discounted as a viable means to disrupt the Soviet decisionmaking process.

#### Section V

## Conclusions

The purpose of this monograph has been to describe the Soviet troop control system in the Soviet motorized rifle division and analyze it to determine its potential vulnerabilities, the hypothesis being that such an analysis would enable us to identify vulnerabilities that may be suitable for exploitation by U.S. Army planners and tactical commanders.

The historical review of the Soviet rifle division during the Great Patriotic War, at least during the initial phases, revealed that the tactical headquarters of divisions and their subordinate regiments were frequently colocated and greatly separated from front line units, often losing contact with them. This deficiency was for the most part corrected by the beginning of 1942 with the establishment of a system of separate command posts and observation posts much like we see today. The Soviets discovered, however, that too frequent shifting of these division CPs and OPs led to instability of the communications equipment, disruption, and sometimes loss of control. Reliable communications was determined to be the principal means of ensuring troop control in combat.

With the current Soviet commitment to automation and computer support systems to assist the division commander in the complex decisionmaking and planning process, the value of targetting and destroying a division command post takes on added significance. Doctrinally we know that the division commander will usually be

located well forward, with the first echelon forces, in a small mobile CP, on the division's main axis of advance. With the Soviet emphasis on "one-man command" as one of their "scientific principles" of troop control and their emphasis on the principle of centralization, the division commander and his staff become a high value target for disrupting a division and potentially an Army operations plan. Little if any initiative will be seen at the Soviet battalion and regimental level. The predictability of their efforts should be exploited as they pertain to the success of the friendly course of action. However, the focus of our effort should be at disrupting or destroying the division level decisionmaking process where the first real threat of any initiative exists. The increased area of interest (horizon) for making specific plans at the division level is an indication that the division is likely to be less reliant upon the close control of the Army headquarters, thereby giving the division another aspect of flexibility and initiative that it previously did not possess.

Another key finding from the historical analysis was that inadequate intelligence was the most frequent cause of disruption to Soviet forces at the division level during World War II. This may well be the main reason why the Soviet division decision cycle is so heavily dependent upon an accurate assessment of the battlefield. U.S. commanders should make every effort to prevent enemy reconnaissance assets from collecting valuable information on friendly unit strengths and dispositions.



The Soviets feel that effective troop control at every level is an important ingredient to ensure successful battlefield execution. We can expect the Soviets to continue to move toward greater centralization and automation of division troop control. Computer automation will increasingly be applied to Soviet troop control activities and assist in the decisionmaking process. U.S. planners should maximize their efforts to identify those critical events and thus allow commanders to bring to bear the means to disrupt the Soviet troop control process at these critical times.

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