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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

1 October 1976

MEMORANDUM FOR: The Director of Central Intelligence
FROM : William W. Wells
Deputy Director for Operations
SUBJECT : MILITARY THOUGHT (USSR): Methodology
For Conducting Operational Command-Staff
War Games on Maps

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article is a review of the experience of the Baltic Military District in using war games to train generals and command level officers. A war game requires a theme encompassing problems related to the operational assignment of the troops, and the game itself should be two-sided to create a more realistic situation. The author discusses methods of playing out the combat actions of a game, combining operational and sidereal time, developing a game situation based on trainee decisions without director intervention, using communications equipment, and comparing trainee decisions with the results of control exercises. He also relates district experience in using computers and discusses the monitoring of trainee progress. This article appeared in Issue No. 3 (85) for 1968. The Russian-language version was disseminated as [redacted]

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned [redacted]

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Intelligence Information Special Report

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COUNTRY USSR

DATE OF INFO. Late 1968

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1 October 1976

SUBJECT

MILITARY THOUGHT (USSR): Methodology for Conducting Operational Command-Staff War Games on Maps

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (85) for 1968 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is General-Leytenant M. Ivanov. This article is a review of the experience of the Baltic Military District in using war games to train generals and command level officers. A war game requires a theme encompassing problems, such as antilanding defense, related to the operational assignment of the troops, and the game itself should be two-sided to create a more realistic problem-solving situation in which to achieve training objectives. The author discusses methods of playing out the combat actions of a game, combining operational and sidereal time, developing a game situation based on trainee decisions without director intervention, using communications equipment, and comparing trainee decisions with the results of control exercises. He also relates district experience in using computers for troop control and to solve other problems, and discusses the monitoring of trainee progress through assistants and umpires.

End of Summary

Comment:

The author was identified as Chief of Staff of the Baltic Military District between 1966 and 1972. He also wrote "Ways of Reducing the Times for Bringing Troops to Full Combat Readiness" in Issue No. 3 (79) for 1966. The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970.

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Methodology for Conducting Operational
Command-Staff War Games on Maps

by
General-Leytenant M. Ivanov

The organization and conduct of modern operations levy high requirements on the operational-tactical and technical training of commanders and staffs. The military knowledge of generals and senior officers is improved by various forms of training. Operational command-staff war games occupy an important place among them, as is known. They are conducive to the development of operational thinking and volitional qualities in generals and officers, as well as the skills for rapid and comprehensive appraisal of a situation and the making of appropriate decisions, and make it possible to achieve teamwork and mutual understanding in the work of the command and all the principal levels of control.

In this article we would like to share the experience accumulated in the Baltic Military District.

First of all we think we must emphasize that when organizing a command-staff war game one should determine its theme. In resolving this question, the military district commander is guided primarily by the tasks allocated by the Ministry of Defense for the academic year, and by the operational assignment of whatever formations and large units he has in the district. The need for more thorough study of those matters which, according to the experience of previous operational training measures, were not adequately worked out, is taken into consideration in the process. Then the content of the theme is determined. It usually is stated as a compound theme including a number of subthemes.

In the command-staff war games we conduct the main problems of the theme usually are: mobilizing the troops and bringing them to combat readiness in a short time; delivering the initial nuclear strike in cooperation with the strategic rocket forces; conducting a meeting engagement with large enemy operational reserves; eliminating the aftereffects of an enemy nuclear attack, restoring the combat effectiveness of the large units and units, and operating with the limited forces (composite detachments) surviving an enemy nuclear strike.

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Special attention is devoted to studying the problems connected with conducting joint operations using front, naval and airborne landing forces along the seacoast, and also with organizing and conducting the assault crossing of large water obstacles from the march and in cooperation with airborne landing and fleet forces.

Organizing an antilanding defense of the seacoast with limited forces, routing enemy landing forces at ports and embarkation points, during the sea transit and while landing, carrying out a counterattack on shore to destroy the amphibious and airborne landing forces which have already landed, and restoring the position, are considered the main defense subjects.

All this allows us to more purposefully resolve the problems in keeping with the assignment of the district troops.

Task directives specifying the operational tasks are developed for the operational staffs participating in the command-staff war game. They are sent to the staffs in advance in a sealed packet, and opened upon the established signal of the game director.

During the game the trainees operate on the basis of existing tables of organization and actual troop status, and the availability of materiel reserves, weapons and combat equipment. Such an approach makes it possible to study the actual capabilities of one's own troops more thoroughly, and considerably reduce the volume of tasks and time required to compile data on the status and level of manning and equipping of the troops.

As a rule a command-staff war game begins with bringing the troops to combat readiness and their mobilization expansion. All the main problems of the theme are resolved in combination with the operational tasks. Besides the staffs of the military district formations, operations groups from the branch arms and branches of the armed forces, and sometimes the military commissariats and certain civil defense staffs are allocated to a command-staff war game. Thus in 1967 at the front two-sided, two-stage command-staff war game, the republic and oblast military commissariats, operations groups from the large units of the Air Defense of the Country and of the Twice Red Banner Baltic Fleet, the republic Civil Defense staffs and the border guard district staff participated in working out mobilization problems. This permitted working out during the game a number of problems concerning the mobilization expansion of the military district troops and cooperation with Civil Defense.

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Resolving the question of whether to conduct command-staff war games as two-sided or one-sided games is of great importance to competent development of its theme. We, for example, are convinced of the advantage of the former, although other opinions have been expressed here recently. Certain comrades have insisted that some of the trainees acting according to foreign army organization and tactics in a game do not acquire working skills corresponding to their functional responsibilities, and the director is unable to direct the course of the game in the necessary channel to accomplish the established training objectives.

We think that a two-sided war game considerably complicates the situation, making it more realistic, increases the responsibility of the directors and executors and, most important -- involves a larger number of trainees. It is easier for the director and staff to avoid subjectivism in setting up an operational situation during a two-sided game. True, the role of the director in this case is complicated by the need to make a thorough analysis of the decisions of both sides when developing the next move.

Usually in a command-staff war game the headquarters of the military district and armies, headed by the first deputy commander, participate on one side, and a small group composed of the deputy chiefs of the branch arms and services of the district, tasked with learning foreign army organization, armament and tactics, on the opposite side. The group is commanded by the deputy district commander for combat training or the first deputy chief of the district staff. While the command-staff war game is in progress the officers of this group (usually no more than 12 to 15 men) confine themselves to working out maps on the decision for the operation, and the working maps of the chiefs of the branch arms and services for support of the operation.

The allocation of operations groups from the headquarters of certain divisions to a command-staff war game in the capacity of an army organization has proved itself to a significant extent. This makes it possible to train staffs for the next higher level, and to train the front staff to carry out troop control tasks to the full extent, with a view toward maintaining continuity of control.

It is especially important to organize the playing out of the combat actions properly. In so doing we proceed from the fact that the more complex the operational situation set up by the director, and the more sudden its changes in terms of time, the more intensively and close to actual conditions the trainees must act. Thus, in working out the problems

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of regrouping troops over long distances, we strove to complicate the situation with data on the enemy employment of nuclear, chemical and bacteriological weapons on the routes of troop movement, by creating vast zones of radioactive contamination and destruction, and by disrupting communications for control and cooperation. For working out the problems of antilanding defense a situation was set up in which the enemy had superiority of forces in the landing sectors, and our troops operated at limited strength, having sustained heavy losses, etc. Of course, all the difficulties the director set up for the trainees followed the objective determined and provided for by the game plan, for the working out of any one training problem. This placed the playing commanders and staffs in the complex conditions of a rapidly changing situation and allowed them to acquire skills in analyzing it, making the appropriate decisions and transmitting tasks to the troops.

In war games the question often arises as to how to combine operational and sidereal time and play out the combat actions hour by hour, while working out a series of training problems connected with the conduct of in-depth operations, in the relatively short time allotted by the game plan. It seems to us that at the operational level the requirement for playing out the course of combat actions hour by hour must not be taken literally. The point is that while certain problems really can and must be played out strictly according to sidereal time, others, let us say, connected with conducting combat actions in the depth without operational transitions, are almost impossible to work out within the limits of a three-day command-staff war game.

Obviously operational and sidereal time must be combined more flexibly. We will examine this in more detail. From the beginning of each stage of the game until the decision is made, operational and sidereal time coincide, i.e. the situation is built up hour by hour. At this time the staff trainees, in keeping with their plans and requests, are given reconnaissance data on the enemy, his nuclear weapons delivery means, troop regroupings, and the preparation and delivery of nuclear warheads to his positions and stockpiling of materiel-technical means. All this is done right up until the belligerents deliver a nuclear strike and the players make decisions to eliminate its aftereffects and develop the operation further. During the period in which the game director monitors the trainees on various problems, which usually takes place as they are working and right at their places of work, the staff of the directing body continuously builds up the situation. Thus, the combat actions actually are played out hour by hour during the first hours. Subsequently, depending on the training problems being solved in the game, the director

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plans the operational transition worked out after a thorough analysis of the situation and the decisions of the players, and also with regard for the possible development of the operation. In the introduction, besides the operational-tactical situation, are given data on all the branch arms and services. Having turned the situation over to the trainees, the staff of the directing body continues to build it up until a decision is made and tasks are transmitted to the troops.

When conducting an antilanding defense of the seacoast we work hour by hour on the problems of combating the enemy landing forces at their ports and bases, on their sea transit and upon landing on shore. However, when working out training problems connected, let us say, with the organization and conduct of army and front counterattacks against the forces which have landed on our shore, we resort to small operational transitions.

The practice of many years has demonstrated that this method of playing out the combat actions on the one hand ensures achieving maximum effect in carrying out the various tasks stipulated in the plan, and on the other hand allows working out the main problems to "the entire depth" of the operation in the time allotted for the game.

As the combat actions are played out, the directing body naturally tries to take the decisions made by the belligerent sides into account in developing the next moves. However, in so doing something very often arises in the situation which develops objectively that does not correspond to the plan for working out the training problems. Suppose, for example, that according to the plan for conducting a game a situation develops which calls for one of the sides to make the decision to conduct a counterattack. However, the directing body cannot set up such a situation on the basis of the decisions made by the trainees without resorting to subjective intervention, which is extremely undesirable. Sometimes a way out of such a spot is found by imposing the desired decision of one of the sides, which frequently provokes justified criticism on the part of the trainees, and stifles their initiative and interest in the game. How should we act in order to bring the trainees to work out the desired training problem without imposing decisions on them from above?

One of the procedures we sometimes use is to hand supplementary situation data over to one of the sides (usually the one which has made the less desirable decision). For example, during one war game a situation developed in which, had they assessed it correctly, the "west" troops should have decided to commit the second operational echelon to the engagement, and the "east" -- to repulse the counterattack of large enemy

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operational reserves. However, the "west", underestimating the capabilities of the "east", decided to use their second echelon on a secondary axis, on which the outcome of the operation hardly could have been decided.

The directing body decided to give the "west" supplementary data to force them to acknowledge and correct the assumed mistake. This hypothetical situation was worked out outside the operational time and only by the "west". The "east" at this time drew up the decision adopted and issued combat instructions to the troops. Having corrected the mistake of the trainees, the game director handed out the next hypothetical situation to both sides at the same time.

It seems to us that using this method skilfully can ensure that the course of combat actions is played out instructively enough in accordance with the decisions of the trainees and, then, that the assigned training problems are completed.

Conducting a command-staff war game by situating staffs in their permanent garrisons produces much that is useful for working out problems of troop control. In this instance the operative technical and messenger communications means of the military district are used for the game. Tasks are transmitted to the troops via these means. To report the decisions for the situation, the army commanders travel to the front staff on aircraft or helicopters. Tasks are transmitted to the staffs, situation data collected, and information reports transmitted in reply, also via plain text and secure communications channels, with the use of procedure and coding tables. With the war game organized this way, the commanders and staffs acquire a great deal of practice in communicating via various communications means, and especially by radio, using secure troop control documents. In addition, the director and his staff can monitor the passage time of operational information and make certain the information is reliable.

The speed of passing instructions and information reports via communications means is, as we know, of primary importance for making timely decisions and transmitting tasks to the troops. The speed of passing instructions and reports comprises many factors: the time required for drafting the document, encoding (enciphering) it, transmitting it via communications means, decoding (deciphering) and reporting it to the addressee.

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To determine the time required for operational documents to pass through these levels, and to find the bottlenecks, while conducting war games we make a special study which reflects data on when the document was signed, how long it was in the cipher office and at the communications center, and the time spent transmitting it via communications means and handing it to the addressee. All this is entered in a table from which can easily be seen not only the total time required for passing documents to subordinate staffs, but also where the greatest waste of time occurs. An analysis of these data allows us subsequently to more purposefully organize work to eliminate the defects in transmitting instructions and reports via communications means.

A check on the ability of staff officers to correctly and without distortions, receive the operational situation from subordinate staffs using voice transmission via technical communications means, is made in the following manner: the situation developed by the directing body is handed at a certain time to the subordinate staff, which transmits these data to the staff of the front (directing body) by radio, using procedure tables and coded maps. The latter compares the previously developed situation with the data received from the subordinate staff and plots it on the map in a different color. All the inaccuracies which occurred in transmitting and receiving the situation are graphically visible on this type of map, and the game director can correctly judge how well the individual generals and officers have been trained to operate the communications means.

We also can recommend checking on the practicability of the decisions made or calculations performed during an operational command-staff war game. By way of illustration, at the command-staff war game on the theme "Organization and Conduct of a Long-Distance Troop Regrouping", to make more certain of the calculations performed by the players, it was possible to allocate a motorized rifle or tank regiment and with it conduct an exercise consisting of a day's march using the routes planned by the players, and then compare the actual time spent on the march with that planned for the game. A similar exercise may be conducted with pontoon bridging units to lay crossings over water obstacles. For this purpose the game director sets up a group of officers in advance, which flies out to the unit, alerts it on the basis of a signal and conducts the necessary exercise, and reports its results to the commander in the time stipulated in the plan. Using the data of the exercises conducted with the troops and comparing them with the planning documents from the command-staff war game, the director can draw a conclusion as to the practicability of the calculations made by the trainees. This makes the critique of the war game more considered and instructive.

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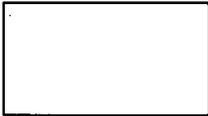


Recently a great deal of attention has been devoted to the questions of automating control processes. The possibility of using the URAL-4 electronic computer (of a civilian ministry) for solving operational problems during a front two-stage command-staff war game, was verified for the first time in our district. Since the generals and officers of the headquarters did not have enough experience in using the computer, lessons (practices) were organized beforehand to familiarize them with the basic principles of solving operational problems with the use of a computer. Information was exchanged between the command posts of the front (district staffs) and the computer via one secure telegraphic communications channel and messenger means, and between the front rear control post, the air army command post and the computer -- by messenger means and a telegraphic communications channel.

Eleven operational-tactical and rear services problems corresponding to the concept and the training objectives established for the war game were selected for solution on the computer. In choosing them we tried to cover the work of all the primary directorates, departments and services in order to research the possibility and desirability of using the computer. Thus, for the operations directorate the problems of determining one's own troop losses from enemy nuclear strikes were solved, and a march and results of a nuclear strike on a major industrial installation were calculated. The staff of the rocket troops and artillery calculated the yield of the nuclear warheads and the number of missiles required to destroy its targets, as well as the losses to one's own missile units and artillery from an enemy nuclear strike. The chief of the air defense troops made an assessment of the fire effectiveness of the front anti-aircraft means, and the staff of the air army determined the status of the aviation forces of both sides and the probable change in the combat strength of the air army during the operation, and made a number of calculations on the delivery of bombing strikes.

Voluminous and labor-consuming calculations also were performed by the front rear staff. Its departments and services obtained detailed data for moving front troops by railroad as well as on rations and the transport attached to supply bases. Some problems were solved over and over.

Solving operational-tactical and rear services problems by use of a computer during the game permitted the participants in the command-staff war game to gain initial experience in using computers in troop control. The trainees in the practical exercise were convinced that the rate of performing calculations on a computer was three to four times faster than working them out manually, and that accuracy was significantly increased.



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The director and his staff must pay a great deal of attention to monitoring the work of the directorates, departments and services while the command-staff war game is in progress. The monitoring, in our view, should be carried out in two main directions. First, to constantly build up the situation and see to it that all trainee activities are structured in accordance with its changes, and secondly -- to carefully study the work of each directorate (department) from the standpoint of the quality and timeliness with which it draws up the planning and combat documents, its speed of transmitting tasks to the troops, and the teamwork of the executors.

In the first case monitoring is relatively uncomplicated, since the game director personally monitors and checks the work of all the chiefs of the directorates (departments) and playing staffs on the main problems of the situation. It is a more complex matter to organize monitoring of the work immediately within the directorates and departments. The game director can study only the basic documents, and it is very difficult for him to observe the work inside the directorates.

We think the work of the directorates and departments may be monitored successfully by using two basic methods: first, when all the chiefs of the branch arms, services and directorates (departments) act in the game as both trainees and assistants to the director at the same time, i.e., they organize and monitor the work inside the directorates (departments) themselves; the second is when the chiefs of the directorates (departments) act only as trainees, and the directing body checks on the work inside the directorates (departments) through an umpiring organization. Both methods of organizing the monitoring have their positive and negative aspects.

The positive aspect of using the first method is that the front of the work is broadened, and each chief has an opportunity to personally monitor the fulfilment of responsibilities by his subordinates, to identify whatever shortcomings there are and take steps to eliminate them. This, in addition, makes a large umpiring organization unnecessary. However, it should be taken into consideration that in this instance the opportunity to assess the work of each directorate (department) objectively is lost to some extent. Using the second method, the game director gets an opportunity to give a more objective assessment of the work of the subordinates, but this involves assigning a large number of umpires, which under the conditions existing in the military district, cannot always be done.

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As a whole, then, in our view, the selection of any one variant for monitoring the work of the directorates (departments) while the game is in progress will depend on the training objectives established and the availability of a large enough qualified umpiring organization.

In conclusion a few remarks on the strength of the staff of the directing body and the umpires. In articles on operational training methods, authors have proposed various strengths and structures of a staff of the directing body for conducting operational exercises and games. It is difficult to agree with those who recommend having 45 to 50 men for this purpose.* In the first place, separating officers from the fulfilment of their functional responsibilities in this way cannot be justified and, secondly, with a large staff the director or chief of staff cannot be in close contact with each officer of the directing body, which has a negative effect on working efficiency.

The basic element of our staff of the directing body usually is the department of operational training. Besides this the staff includes officers of the branch arms and services (10 to 13 men), representatives of the air army (two men) and a critique group (two or three men). Army commanders and staffs have assigned to them one umpire and one or two officers from the combat training directorate to assist them. Thus, a total of about 25 men. This relatively low strength of the directing body and umpiring organization permits fully carrying out all the tasks of supporting the conduct of a command-staff war game.

The recommendations set forth in the article do not claim to be complete. A broad exchange of experience on the questions of methods of conducting operational exercises and war games will be conducive to successfully resolving the great and complex problems confronting operational staffs.

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* Collection of Articles of the Journal 'Military Thought', No. 2 (81) for 1967. ("The Methodology of Preparing and Conducting Command-Staff Exercises and War Games") [Redacted]

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