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HR 70-14

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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON, D.C. 20505

1 December 1976

MEMORANDUM FOR: The Director of Central Intelligence  
FROM : William W. Wells  
Deputy Director for Operations  
SUBJECT : MILITARY THOUGHT (USSR): Methods of Control  
of Rocket Troops in an Offensive Operation  
of a Front

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 examines the control of the rocket troops and artillery of a front and the activity of control organs based on command-staff exercises conducted in the Kiev Military District. A new layout for the accommodation of the primary directorates and departments of the front field headquarters at a command post is described and a diagram of it provided. Also discussed is the procedure for relocating the command post, as well as problems of preparing and delivering massed nuclear strikes during an operation. Recommendations for improving troop control include changing the organization of staffs in operational formations and establishing unified operations and information centers. This article appeared in Issue No. 2 (63) for 1962.

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

William W. Wells



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# Intelligence Information Special Report

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COUNTRY USSR

[Redacted]

DATE OF INFO. Early 1962

DATE 1 December 1976

SUBJECT

MILITARY THOUGHT (USSR): Methods of Control of Rocket Troops in an Offensive Operation of a Front

SOURCE Documentary  
Summary:

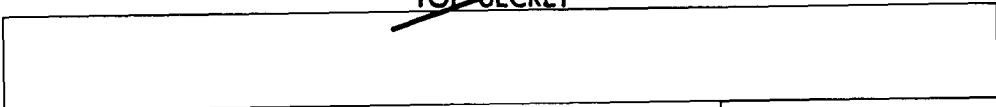
The following report is a translation from Russian of an article which appeared in Issue No. 2 (63) for 1962 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The authors of this article are General-Mayor of Artillery L. Sapkov and Lieutenant Colonel P. Pogarskiy. This article examines the control of the rocket troops and artillery of a front and the activity of control organs based on command-staff exercises conducted in the Kiev Military District. A new layout for the accommodation of the primary directorates and departments of the front field headquarters at a command post is described and a diagram of it provided. Also discussed is the procedure for relocating the command post, as well as problems of preparing and delivering massed nuclear strikes during an operation. Recommendations for improving troop control include changing the organization of staffs in operational formations and establishing unified operations and information centers.

End of Summary

[Redacted] Comment:

General-Leytenant of Artillery Leonid Sergeevich Sapkov has been identified as First Deputy Commander of the Rocket Troops and Artillery of the Ground Forces since late 1970. He also wrote "Improving the Control of Front Rocket Troops in the Transition from Non-Nuclear Actions to the Use of Nuclear Weapons" in Issue No. 2 (70) for 1970

[Redacted]



Methods of Control of Rocket Troops  
in an Offensive Operation of a Front

by

General-Mayor of Artillery L. Sapkov  
and

Lieutenant Colonel P. Pogarskiy

The experience of large operational exercises conducted in 1960-1962 as well as the research and generalization of the questions of planning and conducting the offensive operation of a front (army) have persistently required that the methods of controlling troops be revised and perfected.

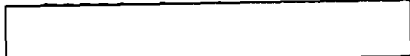
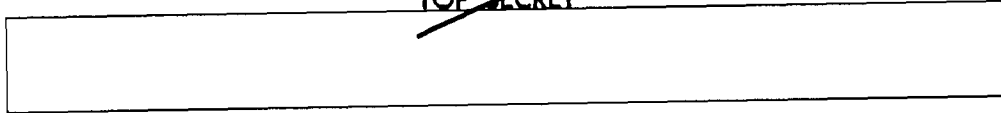
At the present time some successes have already been achieved in improving the methods of stable control of rocket troops within the framework of the existing organizational structure of the operational control organs. In particular, in the command-staff exercises conducted in November 1960 and August 1961 in the Kiev Military District, more efficient work methods for the control posts of the front, army, and division, the problems of providing them with accommodations and equipment, the procedure for relocating during combat actions, and the problems of setting up communications, etc., were worked out.

The organization of the control of rocket troops and artillery of a front based on the experience of these exercises, and also some questions of the activity of the control organs, are examined in this article.

To control the troops of a front, including rocket troops, requires precise knowledge of the situation and above all of the status of one's own troops, in particular of rocket troops, and constant availability to the chief of rocket troops and artillery of the front of precise data on the degree of readiness of each launch battery for the delivery of strikes and also on the readiness and location of missiles (nuclear and chemical) in front and army missile technical bases.

The main control problems, as the experience of exercises has shown, are maintenance of the constant readiness of missile units for the delivery of nuclear strikes with the maximum





possible number of missiles, conduct of continuous and effective reconnaissance in support of the rocket troops, timely assignment of tasks for the conduct of fire and execution of maneuvering, and availability of communications that operate without interruption.

The successful solution of these problems makes it possible to employ missile/nuclear weapons under any conditions of the situation according to the decision of the commander of the front in the shortest possible time and with high effectiveness.

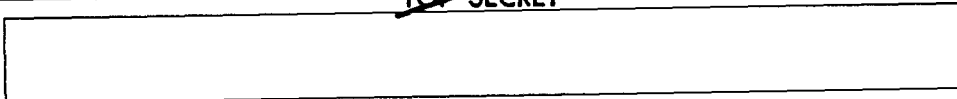
In the massed employment of missile/nuclear weapons for the purpose of routing the main groupings of troops and the nuclear means of the enemy in the most crucial periods of the conduct of a front offensive operation, large-volume fire tasks will have to be accomplished in limited time periods. For this, it is necessary to allocate not only front but also army missile brigades and, in individual cases on some axes, also missile battalions of motorized rifle (tank) divisions.

This is why in exercises the control of operational-tactical missile units and large units has, as a rule, been centralized at the front level, and that of tactical missile units at the army level. In the process, two variants of the centralized method of control have clearly manifested themselves.

In the first variant, the chief of rocket troops and artillery assigned fire tasks and issued commands directly to the front and army missile brigades according to the decision of the commander of the front. The chiefs of rocket troops and artillery of the armies were only informed of the fire tasks assigned to the army missile brigades and the tasks to be accomplished by front means in the zones of the armies.

In the second variant, the decision of the commander of the front for a massed nuclear strike was transmitted to the executors in the following ways: to the front missile brigades (battalions) -- by the commands of the chief of rocket troops and artillery of the front, and to the army brigades (battalions) -- by assigning operational-tactical tasks to the commanders of the armies with the subsequent transmission of commands by the chiefs of rocket troops and artillery of the armies.





Control of the maneuvering of the front rocket troops in all cases was implemented by the chief of rocket troops and artillery of the front. The routes of movement and the siting areas of the front missile brigades and battalions were indicated to those armies in whose zones the maneuvering was done and these areas were prepared.

To the armies were indicated the areas which had to be occupied by army missile brigades in readiness to fulfil tasks according to the decision of the commander of the front. Such areas were usually assigned at the lines of the immediate and subsequent tasks of the first-echelon armies, as well as in anticipation of the most complex and tense periods of a front offensive operation, an expected assault crossing of water obstacles, the probable deployment of large enemy reserves for a counterattack, and in other cases.

The daily relocation of the army missile brigades and other measures connected with the conduct of maneuvers were carried out according to the decisions of the commanders of the armies.

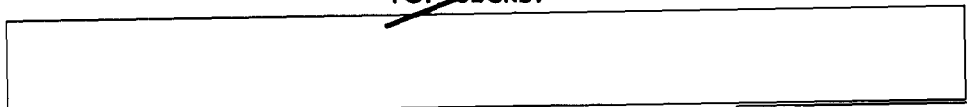
In the exercises conducted, a new layout for the accommodation of the primary directorates and departments of the front field headquarters at the command post was also employed (see diagram), which speeded up the work of all levels of control and promoted the timely preparation for the accomplishment of fire tasks by the rocket troops. As shown in the diagram, the main element of the command post is the front operations center, accommodated in seven specially outfitted buses on MAZ-501 chassis that are connected to each other. This being the case, bus no. 3, in which the chief of rocket troops and artillery was located, was brought as close as possible to the commander of the front troops.

Let us examine in more detail the organization of the work of the directorate of the chief of rocket troops and artillery in the exercises.

The staff of the rocket troops and artillery worked as three departments -- operations, intelligence, and communications.

The operations department was the main organ carrying out the planning of combat actions of the rocket troops in an





offensive operation and providing control of fire and maneuvering for the chief of rocket troops and artillery.

The intelligence department occupied itself with the organization of reconnaissance, directed the artillery reconnaissance means and implemented cooperation with the front intelligence directorate.

The communications department organized and supported continuous and stable communications by radio and radio-relay channels with all the missile units and large units of the front as well as with the chiefs of rocket troops and artillery of the armies, and had control over the communications means placed at the disposal of the chief of rocket troops and artillery of the front.

The operations department of the staff of the rocket troops and artillery of the front consisted of two main groups:

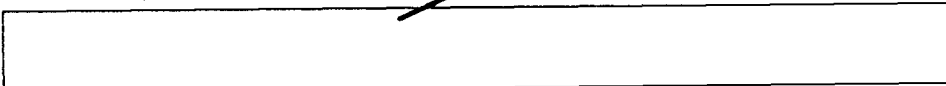
- a planning and fire control group made up of the deputy chief of staff and eight senior officers,
- a group of axis officers made up of the chief of the operations department and eight officers.

It should be mentioned that in the November 1960 exercise the operations department had three groups: the first -- planning; the second -- fire control; and the third -- axis officers. Experience of work in this and subsequent exercises showed the undesirability of such a division, and already in the August 1961 exercise a single planning and fire control group was created, which proved more effective.

In the planning and fire control group the following -- in our opinion the most desirable -- distribution of duties among the officers was worked out:

- four officers were concerned with planning the combat employment of rocket troops and artillery in the impending operation, kept track of the radiation situation, and provided fire control;





- two officers planned the regrouping and relocation of rocket troops and artillery during the operation and coordinated these matters with the front operations and engineer directorates;
- two officers kept track of the combat strength of the rocket troops and artillery of the front, as well as of the availability, arrival, expenditure, and degree of readiness of nuclear and chemical missiles.

Such a composition of the planning and fire control group and the distribution of duties permitted having two working shifts of five officers each, one of which was located in the main vehicle of the chief of rocket troops and artillery of the front and, receiving the necessary data from the axis officers, ensured the timeliness of planning and continuity of control of the fire and maneuvering of the front rocket troops. The other shift of this group was located in the operations department vehicle at a distance of 400 to 500 meters from the main vehicle and was concerned with working out the plan of combat employment, the plan of regrouping, and with preparing blanks of the fire control map and other necessary documents. Each shift took turns working in the main vehicle and the officers were afforded rest when possible.

The group of axis officers was located in the large bus no. 4 (the equipment vehicle of the staff of rocket troops and artillery, consisting of four outfitted compartments) connected to the main vehicle of the chief of rocket troops and artillery.

Each axis was allocated two officers apiece. There were four axes in all: one for the rocket troops and artillery of the front and one for each of the three armies. The availability of two officers per axis ensured continuity of the work of collecting the situation data.

The axis officers collected situation data received from the armies and missile brigades about the position, readiness, and actions of the missile units and artillery, as well as from the combined-arms axis officers of the operations directorate of the staff of the front about the position and actions of combined-arms large units, and they encoded and transmitted commands to prepare and open fire and combat instructions to the







armies and front brigades on the execution of maneuver and relocation of the rocket troops, the preparation of siting areas, and other matters.

One of the axis officers, jointly with an officer of the planning and fire control group, worked out the situation report.

Timeliness in transmitting commands and combat instructions to the missile brigades and armies was ensured by the availability of several communications channels for each axis. Thus, radio links and direct radio-relay communications were set up with the missile units of front subordination and the army missile brigades, and were used for working by microphone and morse employing the signal-code and secure communications equipment installed in the working position of each axis.

In case of the relocation of the command post of the front to a new area, the chief of staff of the rocket troops and artillery, one shift of the planning and fire control group, one shift of axis officers, two officers of the intelligence department, and the chief of communications went there beforehand. This operations group of officers organized the control of the rocket troops and artillery of the front before the arrival of the chief of rocket troops and artillery and the main component of his staff at the new command post.

For the period of relocating the command post of the front, control of the rocket troops and artillery was transferred to the alternate command post, where a group of officers headed by the deputy chief of rocket troops and artillery was located. Its work was structured the same as at the command post.

The experience of the exercises conducted confirmed the undesirability of allocating an operations duty officer. Under conditions where in practice the operations and other departments work continuously, and the volume of incoming data and problems to be solved is too much for one officer, the presence of an operations duty officer of the staff of rocket troops and artillery of the front only causes unneeded parallelism in the collection of situation data and the plotting of the map of combat actions.



At the command post of the front, 400 to 500 meters from the main vehicle of the chief of rocket troops and artillery, was located an operations group of the missile and artillery armament directorate, made up of the departments of operational planning and of surface-to-surface missile armament and mobile missile technical bases, headed by the chief of the directorate.

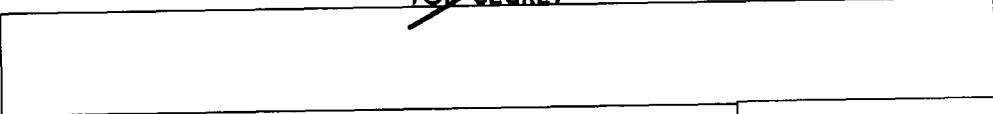
Attempts to organize the work of the missile and artillery rear services only from the rear control post of the front led to the disruption of the coordination of the actions of the front mobile missile technical bases and the army brigades and of the timeliness of delivering missiles.

The decision to employ missile/nuclear weapons in the exercises was made by the commander of the front, as a rule, in the presence of the chief of staff, the chief of rocket troops and artillery, the commander of the air army, and the chiefs of the intelligence and operations directorates. When this was done, the chief of rocket troops and artillery of the front would briefly report the combat strength, the disposition areas and capabilities of the missile units and large units, the degree of their readiness to deliver strikes, the availability of missile/nuclear warheads, and the plan of supplying them to the troops during the operation.

When planning the operation, the commander of the front personally determined the procedure for employing the nuclear and chemical missiles issued to the front, the time, number, and yield of warheads for delivering strikes on the most important targets and troop groupings of the "enemy", and he indicated, in addition, the centers of the bursts (strikes).

The chief of rocket troops and artillery of the front allocated the fire tasks among the units of the front missile brigades and the army brigades in conformity with the decision of the commander, the tasks received, and the capabilities of the missile units; he determined the procedure for their deployment and the siting areas, and gave instructions to the staff on planning the regrouping of missile large units and units during the operation and on transmitting the tasks to the executors.

Occupying an important place in the exercises conducted were problems concerning preparing and delivering massed nuclear



strikes during the operation, especially on the nuclear means and large groupings of "enemy" troops moving forward and deploying to conduct counterattacks. Here it was taken into consideration that the greatest effectiveness in hitting these groupings is achieved by delivering strikes on "enemy" divisions during their deployment for a counterattack. In this case the density of troops and combat equipment of the "enemy" in pre-battle and battle formations increases sharply and the safety of our own troops from nuclear strikes is also ensured.

Against an armored (tank) division six to seven strikes with a total yield of 300 to 350 thousand tons usually were planned and delivered, and on an infantry (motorized infantry) division -- five to six strikes with a total yield of 250 to 300 thousand tons. According to calculations done on the STRELA electronic computer, such a number and yield of nuclear strikes by army and front missiles at average ranges of fire permits achieving, with assured probability, the destruction of troops in areas constituting over half of the territory occupied by the battle formations of an enemy infantry division (armored division) on the line of deployment. This corresponds to the destruction on the average of up to 50 to 85 percent of the poorly protected personnel, up to 15 to 20 percent of the tank crews, up to 30 to 50 percent of the motor transport, up to 15 to 20 percent of the armored personnel carriers, up to 10 to 15 percent of the artillery, and up to five to ten percent of the tanks and self-propelled launchers; and on the whole, the "enemy" divisions lost their combat effectiveness and could not achieve the tasks of the counterattack.

When working out the decision for a massed nuclear strike, an assessment of the possible "enemy" actions also was done, the centers of nuclear bursts were projected, and the time of the massed strike was indicated. All this work took no more than 20 minutes in the exercises.

At the same time, spotter reconnaissance aviation subordinate to the staff of rocket troops and artillery of the front was assigned the task of determining the actual routes of movement and lines of deployment of the "enemy" divisions. The reconnaissance data came in from on board the aircraft to the command post of the front. When the routes of the actual movement of the "enemy" columns did not coincide with the





calculated routes, the chief of rocket troops and artillery of the front corrected the coordinates of the projected strikes.

Preparing commands for the delivery of 14 to 16 strikes and transmitting them directly to the missile large units and units of front and army subordination was done in 25 to 30 minutes.

In passing commands at the level brigade-launch batteries, up to 10 to 15 minutes were spent; and on preparing the launch batteries before their readiness for a launch -- up to 20 to 25 minutes.

Thus, from the beginning of the working out of the decision in the front up to the moment of delivery of the massed nuclear strike in the 1961 exercises, 80 to 90 minutes passed -- half as much as in the November 1960 exercises.

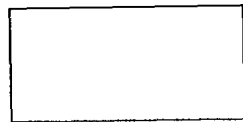
In the March 1962 exercise, the total time spent on the preparation of a massed strike by four brigades and one battalion against 24 targets, at the level front-launch battery, amounted to 60 minutes (after a decision was made by the commander of the front).

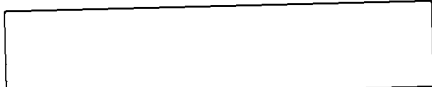
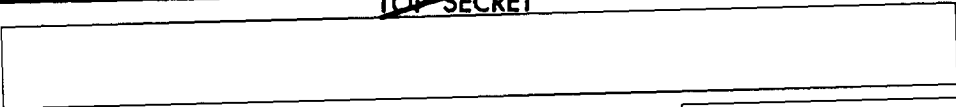
The experience of the exercises showed that also during an operation the most expedient method is the method of preparing a massed nuclear strike at the front level, assigning tasks directly to the front and army missile brigades and subsequently informing the chiefs and staffs of the rocket troops and artillery of the armies of this.

At the same time, the method of joint preparation of a massed strike by the staffs of rocket troops and artillery of the front and armies can be employed, with the commanders of the armies themselves assigning the tasks to the army missile brigades.

Shortening the preparation time for massed strikes was achieved also by improving the work methods of the directorate of the chief of rocket troops and artillery of the front, which amounts to the following.

First, the assessment of the latest data on the movement forward of the enemy reserves and on the probable lines of their





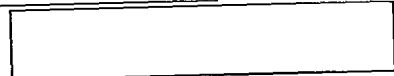
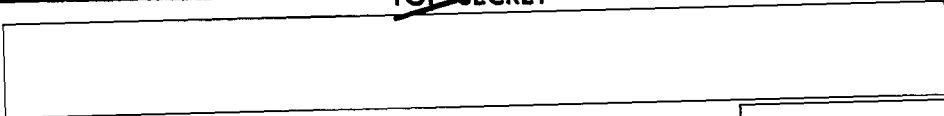
deployment for a counterattack had, if one may so express it, the nature of a one-step process going on under the direction of the commander of the front. This permitted eliminating the time which used to be spent on the solution of the same problems in the process of preparing to report to the commander.

Second, the commander of the front worked and made the decision according to a previously prepared map of the expected area of the meeting engagement (1:100,000 scale), on which the situation had been completely plotted, the coding written down, the ranges of fire of the missile brigades shown, etc. The chief of rocket troops and artillery of the front, in accordance with the decision, allocated the tasks among the missile brigades in the same place. The officers of the control group took the target coordinates from the commander's map, prepared the commands, and filled in cards for the delivery of nuclear strikes, which were signed by the commander and immediately turned over to the axis officers for the assignment of tasks to the executors. All of this also shortened the time, since it was not required to transfer the decision to other maps, and possible errors were eliminated.

Third, two standardized types of commands for the preparation and delivery of nuclear strikes were worked out. The standardization of commands, reducing them to only two types, consisted in adopting a single arrangement of groups that ensured transmission by any communications means (secure communications equipment, signal-code device, radio, and radio-relay) without changing the structure of the command and the sequence of its transmission. One command was designated for the preparation and delivery of single nuclear strikes; in this case, in the staff of the rocket troops and artillery of the front (army) the complete coordinates of the center of the burst were taken and encoded by the method indicated in the General Staff Directive (Table "0001"). The other was for assigning tasks to prepare and deliver massed nuclear strikes. This command was based on the use of the SEKTOR instrument which is a sector arc with angular divisions from 00-00 to 15-00 and a ruled pointer graduated in millimeters.

X Preparing commands with the SEKTOR instrument requires the encoding according to a signal table of only three values: readiness time, yield of warheads, and type of burst. The





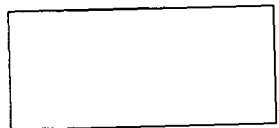
remaining values are automatically encoded by placing the center of the instrument on one of the points of intersection of the rectangular grid of a map with a scale of 1:200,000 or 1:100,000.

The experience of the exercises showed that using the SEKTOR instrument when a missile brigade is delivering five or six nuclear strikes allows shortening the time of preparing the command to one-half or one-third, and the number of groups transmitted to half. For instance, for a missile brigade to deliver six strikes with the former method of preparing the firing against individual targets requires transmitting 66 groups, but using the SEKTOR instrument it requires 29 in all.

And finally, fourth, the preparation time of nuclear strikes at the battalion-launch battery level was shortened as a result of shifting all the launch batteries of the missile brigades (battalions) of front and army subordination from 50-minute readiness (readiness no. 3) up to 20-minute readiness (readiness no. 2) in advance, at one signal. In the exercises, this signal, as a rule, was given according to the instruction of the chief of rocket troops and artillery when the front commander began working out the decision to rout with missile/nuclear weapons the "enemy" groupings moving forward for a counterattack.

Such is in brief the content of the basic measures, the conduct of which permitted the achievement of a considerable shortening of time in the work of the staff of rocket troops and artillery of the front in organizing and implementing control of rocket troops during an operation. This is already an attempt in practice to hasten the solution of a number of problems of control within the framework of the existing organizational structure of the front troop control organs.

Improving troop control in the modern operation of a front (army) also requires some change of the organization of the staffs of operational formations. These changes must provide for the possibility of quickly setting up the operations and information centers of the command post of the front (army), getting their normal work going in a period of combat actions, and setting up operable forward (alternate) and rear control posts of the front (army). Also necessary are special units and subunits capable of performing the tasks of security and combat support for the respective control posts.





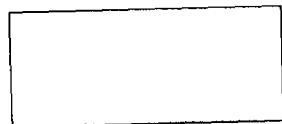
For instance, in our opinion, a practical step on the way to combining some directorates and staffs of branch arms into a unified control center will be the establishment of an operations center as the basic element of the command post of the front in exercises; and the concentration of the main planning and command functions of the front headquarters in it will make this center the main operating organ of the commander of the front.

There is no need to prove the superiority of this unification and compact accommodation of the control organs at the command post of the front in comparison to the old plan for situating them, whereby these organs were spread out at a considerable distance from one another, and the possibility of quickly deciding questions of the employment of nuclear weapons and carrying out other troop control measures was virtually excluded.

Some comrades, coming out in favor of centralized control, propose forming an independent missile/nuclear center where the rocket troops and aviation of the front ought to be united under one command. We object to the manner in which this question is posed.

The experience of exercises has shown that separating the chief of rocket troops and artillery with his staff and the commander of the air army with his operations group from the operations center and forming with them an independent center responsible for employing missile/nuclear weapons is undesirable, since this will lead anew to the necessity of coordinating various things and the loss of time. Besides that, the function of directly deciding questions of employing missile/nuclear weapons pertains entirely to the activity of the commander of the front (army) and cannot be transferred to the chief of a missile/nuclear center. And, finally, the necessity of constant control over the combat activity of the rocket troops and artillery, and over the work of the missile rear services of the front demands the presence of a corresponding independent control organ. The case is analogous also with regard to the air army of the front.

But the establishment of a combined operations center under the direction of the commander of the front will ensure the timely and correct solution of the questions of employing



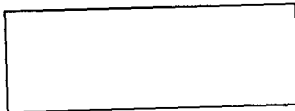


missile/nuclear weapons and commanding the combat activity of rocket troops, aviation, and combined-arms formations, and will ensure the necessary cooperation among them.

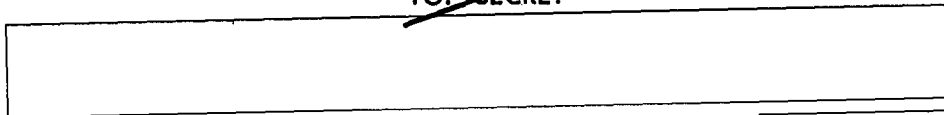
For purposes of further improving the methods of troop control, as the experience of the exercises conducted has shown, it is also necessary to solve the problem of centralizing the collection and processing of information, which up to now has been coming in to numerous directorates (departments) of the staff of the front (army) and to the staffs of the branch arms. Combining these data and systematizing them according to time and axes of troop actions as well as according to information sources presents great difficulties and takes much time. In our opinion, a unified information center should be created on the basis of the information department of the operations directorate with the inclusion of representatives of the staffs of the branch arms and services. This center should be entrusted with the full volume of the collection and processing of data on the operational and radiation situation for all branch arms and services and with the issuing of collated data on maps or on the screens of the operations center, where the commander and the chief of staff of the front, the chief of rocket troops and artillery of the front, and the commander of the air army are working. Besides that, the information of this center must go to the various directorates (departments) of the field headquarters of the front, and to the lower staffs of the formations and large units of front subordination. This same center ensures the preparation and timely transmission of the necessary data to the General Staff.

The collated situation data issued by the information center must be put together from the continuous and systematically incoming reporting on the combat activity of the troops from the combined-arms formations and individual large units of the front and from the staffs of the branch arms and services. To fulfil its tasks the information center must have direct communications channels with all the formations (large units) of the front, as well as two-way selective circuit communications with all the directorates (departments) of the front.

There already have been attempts to establish such an information center. For instance, during the conduct of an exercise in 1957 in the staff of the Moscow Military District a situation data collection point, which fully justified itself,







was created.

It is possible to further improve the work of the information center when there is positive solution of two basic problems.

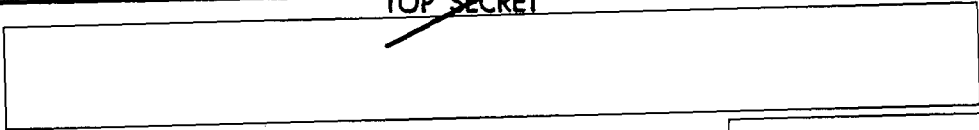
First, the system of secure troop control should be resolutely revised. This sector, in our opinion, is the most obsolescent and therefore also the biggest drag on the whole matter of troop control, since there has developed a clear contradiction between the modern demands on troop control and the system of secure troop control. The existing system of secure troop control leads to the total disorganization of reporting on the status of troops and on the radiation situation. Obviously, this contradiction must be eliminated in the very near future by decidedly improving the secure communications equipment and also by developing portable high-speed machines for encoding and decoding information, instructions, commands, etc.

Second, in our opinion, working on maps by hand should be discarded, and the constant running around by officers between departments and directorates at the command post should be done away with. We need special screens to display the overall operational situation and the radiation situation, and the grouping of our own missile/nuclear means and air defense means as well as those of the enemy. There must be such screens with the complete operational (combat) situation in the operations center (in the vehicles of the commander of the front, of the chief of staff, and of the chief of rocket troops and artillery of the front) as well as in the information center. In directorates and departments there can be screens displaying individual elements of the overall situation and complete data on their own branch arm (service).

The screen of the information center must concentrate all the situation data and put them out by electronic or electrical circuits in predetermined volume on the screens in other centers, directorates, and departments.

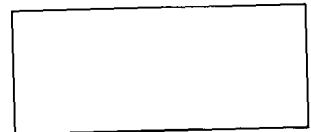
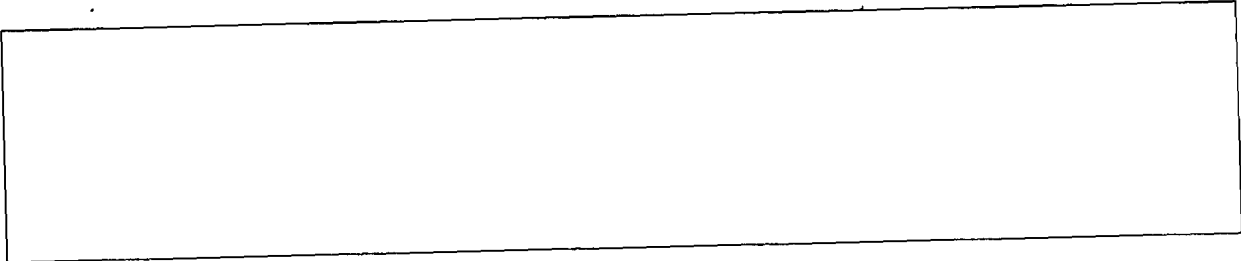
The current status and future prospects for development of our science and technology testify to the possibility of producing screens in the form of electronic-electric display boards on the basis of achievements in electronics, automation,



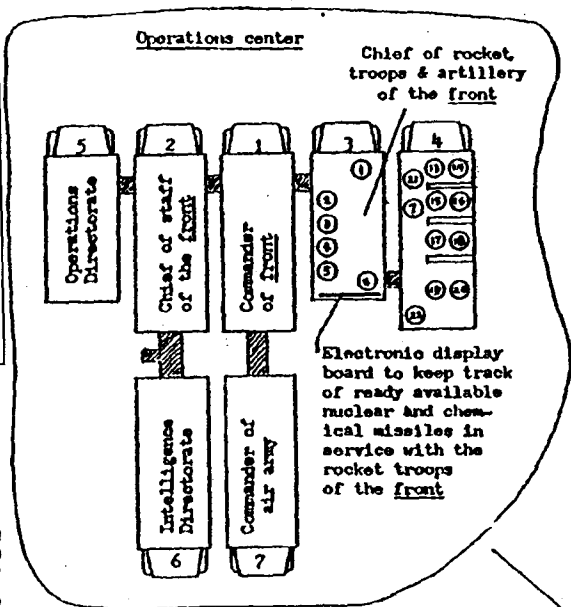


and instrument making. Characteristic in this respect is the work of the military science conference of the Siberian Military District at which Corresponding Member of the Academy of Sciences K. K. Karandeyev expressed, in the name of the Institute of Automation, readiness to offer assistance in the development of screens to display the ground and air situation. This deserves serious attention and firm support on the part of the central scientific research and appropriate directing organs of the Ministry of Defense.

Without claiming to have fully discussed the questions touched upon, we consider it advisable that there be further extensive discussion of them for the purpose of the practical improvement of troop control in a modern operation.



[Redacted]



Buses of operations center

- 1 - Commander of the front
- 2 - Chief of staff of the front
- 3 - Chief of rocket troops and artillery of front
- 4 - Equipment vehicle of axis officers of the chief of rocket troops and artillery
- 5 - Chief of operations directorate of front
- 6 - Chief of intelligence directorate
- 7 - Commander of the air army

Diagram of the layout of the directorate of the chief of rocket troops and artillery of the front (according to the experience of exercises)

[Redacted]

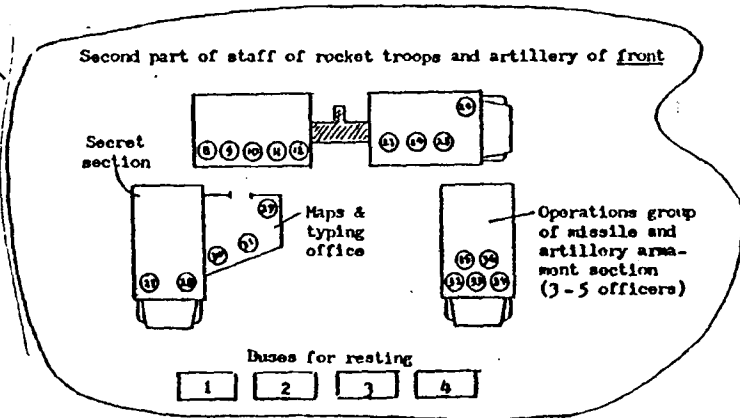
Personnel Positions

of the directorate of the chief of rocket troops and artillery of the front

- (1) Chief of rocket troops and artillery of front
- (2) Chief of staff of rocket troops and artillery of front

Operations department	Communications department
(3) Deputy chief of staff of rocket troops and artillery (or chief of operations dept)	(21) Chief of communications of rocket troops and artillery of front
(4) Officers for planning and fire control	(22) Officer of chief of communications
(5) Officers to keep track of missiles and combat strength of rocket troops & artillery	<b>Intelligence department</b>
(6) Chief of operations dept. (or deputy chief of staff of rocket troops and artillery)	(23) Chief of intelligence of rocket troops and artillery of front
(7) Officers for regrouping	(24) Officers of chief of intelligence of rocket troops and artillery
(8) Axis officers for front rocket troops and artillery	(25) of rocket troops and artillery
(9) Axis officers for rocket troops and artillery of tank army	(26) of front
(10) Axis officers for rocket troops & artillery of army	<b>Secret section</b>
(11) Axis officers for rocket troops & artillery of army	(27) Chief of secret section - master sergeant of secret section
(12) Axis officers for rocket troops & artillery of army	(28) Enlisted man of secret section
(13) Axis officers for rocket troops & artillery of army	(29) Responsible executor to issue maps, senior sergeant of secret section
(14) Axis officers for rocket troops & artillery of army	(30) Typists (enlisted man)
(15) Axis officers for rocket troops & artillery of army	(31) Typists (enlisted man)
(16) Axis officers for rocket troops & artillery of army	(32) Officers of the operations group
(17) Axis officers for rocket troops & artillery of army	(33) of missile and artillery armament section
(18) Axis officers for rocket troops & artillery of army	(34) (35) (36)
(19) Axis officers for rocket troops & artillery of army	
(20) Axis officers for rocket troops & artillery of army	

Total: Generals - 1  
 Officers - 30  
 Enlisted men - 5



[Redacted]

TOP SECRET