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CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D. C.

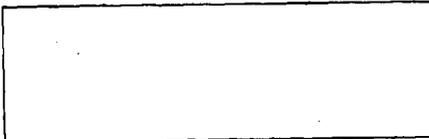
1 MAY 1962

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : STRATEGIC MISSILE BULLETIN: "The Control of
the Means of Strategic Attack of the Armed
Forces of the Capitalist Countries"

1. Enclosed is a verbatim translation of an article which appeared in a Soviet Ministry of Defense publication called Information Bulletin of the Missile Troops (Informatsionny Byulleten Raketnykh Voysk). This publication is classified TOP SECRET by the Soviets and was first issued in 1961. It is intended for generals and officers of the Missile Troops.

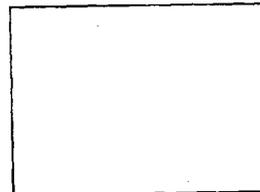
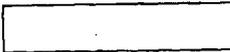
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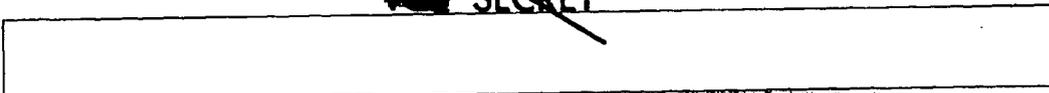
Richard Helms

Richard Helms
Deputy Director (Plans)

Enclosure



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Original: The Director of Central Intelligence

cc: The Director of Intelligence and Research,
Department of State

The Director, Defense Intelligence Agency

The Director for Intelligence,
The Joint Staff

The Assistant Chief of Staff for Intelligence,
Department of the Army

The Director of Naval Intelligence
Department of the Navy

The Assistant Chief of Staff, Intelligence
U. S. Air Force

Director, Special Investigation
Inspector General, U. S. Air Force

The Director, National Security Agency

Director, Division of Intelligence
Atomic Energy Commission

National Indications Center

Chairman, Guided Missiles and Astronautics
Intelligence Committee

The Deputy Director of Central Intelligence

Deputy Director for Intelligence

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52, 53, 54, and 55

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COUNTRY : USSR

SUBJECT : STRATEGIC MISSILE BULLETIN: "The Control of the Means of Strategic Attack of the Armed Forces of the Capitalist Countries"

DATE OF INFO: September 1961

APPRAISAL OF CONTENT : Documentary

SOURCE : Reliable source (B).

Following is a verbatim translation of an article titled "The Control of the Means of Strategic Attack of the Armed Forces of the Capitalist Countries", which appeared in the 1961 Second Issue of a TOP SECRET Soviet publication titled Information Bulletin of the Missile Troops (Informatsionnyy Byulleten Raketnykh Voysk). The 1961 Second Issue was sent to press on 19 September 1961.

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The Control of the Means of Strategic Attack
of the Armed Forces of the Capitalist Countries

One of the basic factors which determines a high degree of combat readiness is the prior organization of wartime control organs, possessing various means of communications (mainly multichannel and automated lines of communications) which must provide reliable control of troops in the theaters of war and theaters of military operations (TVD).

By theater of war is understood the totality of the territories and sea expanses on which the necessary armed forces are deployed and which might be enveloped in direct military operations. A theater of military operations forms a part of a theater of war, large enough to conduct operations with ground troops, air forces, and naval forces with their materiel and technical supply.

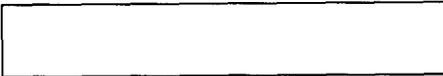
The political and military direction of a country (or of a bloc), according to the evaluation of the command of the USA and its partners, must ensure the accomplishment of the following main tasks:

-- working out a political and military strategy and determining a single foreign policy and economic policy, mainly in relation to the Soviet Union and other countries of the Socialist Camp;

-- working out views on the nature of a future war, operations, and combat, and based upon this the establishment of principles and the practical organization of the armed forces, determination of their strength, battle composition, and groupings in peace and wartime;

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↖- the prior organization of the necessary organs of control of the armed forces in the theaters of war and theaters of military operations, as well as in formations of ground, air, and naval forces;

↖- working out plans for conducting the war (operations) with the use of weapons of mass destruction, and passing down the combat tasks to the actual units concerned, and checking these plans during exercises and maneuvers;

↖- the maintenance of the armed forces in a state of high combat readiness;

↖- the preparation of the theaters of military operations for war and creation of munitions (including nuclear), of fuels and lubricants, and other materiel and technical means necessary for the first 90 days of war;

↖- four words missing military-economic measures several words missing.

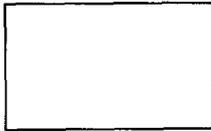
Control of the armed forces and the coordination of foreign with national troops within the bloc are organized so as to provide for:

↖- a sudden attack with the employment of nuclear weapons and other means of mass destruction;

↖- unity of command, flexibility, and efficient control;

↖- the possibility of effective and full use of all types of armed forces in combined operations;

↖- the maximum use of the characteristics and capabilities of each type of armed forces, arms of troops, and weapons.



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The control structure of the armed forces in each theater of military operations will have its own features arising from the military-political tasks to be performed in a given theater, geographical conditions, the degree of preparation in the theater for military operations, the military-political situation in other theaters, and several other preconditions.

The nature of this total war between coalitions, the employment during it of weapons of mass destruction, as well as the progress in the field of electronics and communications required a radical review of the principles and methods of controlling armed forces.

The basis of a stable and continuous direction of troops in a future war, and especially in the initial period, is considered to be the timely creation and deployment of command posts dispersed in place, which must be well equipped from the engineer point of view and provided with reliable communications. As the analysis of documentary material shows, the military direction of the capitalist states, and primarily the aggressive NATO Bloc, envisages the establishment and deployment of main, forward, alternate and rear command posts for the control of troops during wartime.

The main command posts are planned to be set up at all levels of command from division upward. At these posts will be located the main departments and directorates of the staffs, whose function will include the immediate direction of the combat operations of the troops.

The forward command posts are intended to be organized at the levels of division to a group of armies of ground troops, and of the corresponding large units and formations of the other types of armed forces, to ensure direction of the main groupings of troops on the decisive axes. The forward posts must be mobile, with a small staff, and located in places from which they could quickly influence the course of combat operations.

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Under conditions of nuclear weapon employment, the alternate command posts are to be set up and deployed at all levels of command. At these posts there must be the requisite number of officers with means of communications so that if the main command posts are put out of action they can take over the direction of the troops.

The rear command posts will be established only in field armies and army corps to direct the rear installations and units. It is planned to locate the rear (second) echelons of the headquarters at these posts.

In accordance with the views of the Anglo-American Command, command posts must be located in underground structures (in mountainous terrain - in mountains, cliffs, etc.) with a thickness of overhead cover up to 200 m and at a distance of not less than 16 km from any objective against which a nuclear strike may be delivered. Cases have been noted when the structures were built with an overhead cover of 3 m of concrete and up to 6.5 m of soil. Besides this, these structures must have lighting and power installations (with a fuel supply for one month), a heating system calculated to maintain constant temperature of +18° centigrade, two artesian wells with a water-supply system to all parts of the premises, a ventilation system, sewage system, and air conditioning.

The main command posts of groups of armies in a theater of war must be prepared at a distance from the peacetime locations of the headquarters that will ensure that the move of the headquarters from their peacetime locations to the wartime command posts could be done within 24 hours.

When locating the field control points of field armies and army corps and building structures for them, one should be guided by the following:

← to ensure security it is considered inadvisable in principle to have a headquarters located in the same place in peace and wartime;

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→-- wartime command posts are set in underground structures; they must also be located at a distance from the peacetime headquarters that ensures that the move of the headquarters from its peace to its war location can be completed in not more than 24 hours;

→-- the communications centers must be common to both peacetime and wartime headquarters, and their location must take into account the disposition of the above-mentioned headquarters; therefore they require suitable equipping, means of defense, and reserve communications equipment.

Communications are one of the main means of controlling the armed forces in a future war, and this control is becoming more and more automated. The system of communications must include the system of strategic communications of the various armed forces and the system of communications in the theaters of war and their component theaters of military operations.

The system of strategic communications created by the American command is intended for the direction of the various armed forces located in different theaters of war. This includes the strategic communications systems of the ground, air, and naval forces. The above-mentioned systems of communications employ radio, radio relay, tropospheric, ionospheric, and wire communications, ensuring telegraphic, facsimile, machine-cipher (mashinno-tsifrovaya) and telephonic communications. Radio is considered the main means of communications and the only means of communications for control of aircraft in the air and surface and submarine naval forces on the move.

The strategic communications system of the ground troops provides the Department of the Army organs of control with communications with troops in overseas theaters of military operations as well as with those in the continental USA. On the whole, this system provides reliable, rapid, flexible, and secure communications for the control of the ground troops.

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The strategic communications system of the Air Force permits the Department of the Air Force to maintain communications down to individual squadrons. Organizationally, this system is composed of three communications networks of the Air Force and of two printer radio-telephone networks of the Strategic Air Command. The last two networks are intended only for the direction of the US Air Force strategic means of attack.

The strategic communications system of the naval forces embraces all important theaters of naval operations and provides a central control of the surface and submarine naval forces, of naval bases and of marine units.

A great deal of attention is given to the strategic communications of the Air Force and, first of all, to that of the Strategic Air Command of the USA as the main organization in whose hands are concentrated all the means of strategic attack. Notwithstanding the adequate extent of the strategic communications system of the US Air Force, it does not at present satisfy all the requirements which have appeared with the development of the means of air attack (strategic aircraft, missiles) both as for range of communications and for speed of transmission, as well as for capacity. A requirement for an increase in range of communications and in the number of channels has been caused by the growth of the number of bases in distant overseas territories, by the increase in the volume of information and of the operational radius of strategic bombers, and by the practice of refueling aircraft in the air.

Taking into account that the Strategic Air Command takes up 75 percent of all the channels of the strategic communications system, since 1958 the command of the US Air Force has been taking measures to improve technically the existing systems of strategic communications (Project "Aircom").

At the present time the following complex automated systems are at the stage of being worked out and built for the US Air Force: the control of the attack weapons of the

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Strategic Air Command and of the early warning antimissile defense; control of antiaircraft defense means in the continental USA; control of the forces and weapons of the Air Force in theaters of military operations; control of the tactical aircraft; control of air movement; the service for supply of technical equipment; weather reconnaissance; collection and collation of intelligence data from radio intercept; transmission and processing of air reconnaissance data; and processing data to keep the air commands and the headquarters of the Air Force briefed. The Americans consider that a need has now arisen to introduce into the strategic communications system of the Air Force such networks as a network for alerting units of Strategic Air Command, a command network for the Air Force, an administrative network, and a network for collecting intelligence data from all theaters of war.

According to preliminary calculations, the cost to complete the entire improvement project is more than one billion dollars. It is proposed to carry out the project in 12 years and in three phases:

-- From 1958 to 1962 - expanding the existing communications networks and improving the equipment employed; creating a special radio communications network with intercontinental ballistic missile and cruise-missile units and subunits, as well as with the installations supporting the combat activities of these units and subunits. At the present time this network is already partly established. Radio traffic on it is carried out on short-wave radio links with multichannel cipher communications, making use of the strategic communication centers of the Air Force;

-- From 1962 to 1965 - a further increase in the number of communications links, during which the most important task is considered to be the introduction of new types of communications and new equipment developed before 1962.

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-- From 1965 to 1970 - the organization of communications links using artificial earth satellites, communications links with intercontinental craft (mezhkontinentalnyy korabl), as well as the development of new equipment based on the achievements of science and technology in recent years.

The automated control system of the forces and means of Strategic Air Command is intended for the control of the forces and means of strategic attack. This system will consist of the following subsystems: automatic communications which will include the communications centers of the air and missile bases and their headquarters; control of transmission of reports with centers of automatic control of communications; and processing information and presentation of the data in the appropriate centers located with the headquarters of Strategic Air Command and of the air armies.

It is planned to bring the system into full operation by the beginning of 1965. The main element of the system is the subsystem for processing information received from the communications centers of headquarters and divisions (armies) through the automatic control centers of the air and missile bases. The processing of information at headquarters will be done with the aid of high-speed electronic computers.

According to American calculations, the above-mentioned automated system will permit the commander to receive information about the actual state of the means of strategic attack in the course of a few minutes (with a non-automated control system it would take several hours) and pass the decisions taken to Strategic Air Force and ballistic missile units in a few seconds.

The experience of exercises and maneuvers has shown that it is essential to organize centers for target study at control points. According to preliminary information, it has been established that those large units (formations) which had such centers organized at their headquarters were able to destroy up to 70 percent of all detected targets with nuclear

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weapons. At the same time, those large units (formations) where these centers were not organized were able to destroy only up to 45 percent of the targets detected.

In connection with the possibility that the ground control points of the strategic weapons might be put out of action, the US command has taken the decision to create an alternate command post in the air. For this purpose three jet tanker KC-135 aircraft were re-equipped, and for each one a special operational group was prepared, consisting of 25 men, headed by a responsible general from the headquarters of Strategic Air Command.

In the event the main command post is put out of action, this command post located in the air has the right to enter into direct communications with the Joint Chiefs of Staff and to control all aircraft units and large units both on the ground and in the air. This considerably increases the strength and effectiveness of control of Strategic Air Force units. Since August 1960, the Americans have started working out in practice the direct control of Strategic Air Force units and large units from an airborne command post.

It is intended to carry out strategic air operations using piloted and pilotless means simultaneously along all strategic air axes according to a unified plan. These operations will be closely coordinated with operations being carried out by tactical aircraft and naval aircraft as far as both time and space are concerned. At the same time the plans for the delivery of nuclear strikes in theaters of war and theaters of military operations are worked out in detail in peacetime by army groups, especially for the first 3 to 7 days of war. In conjunction with this, the control of the means of attack in the initial period of war as a rule will be carried out with the aid of short signals which will be transmitted primarily by telephone cable lines. If it is necessary to send orders by radio, it is planned to use frequencies not known to have been used before.

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Immediate direction of missile units is carried out by Strategic Air Command on specially organized communications. In the continental USA, cable and radio relay lines are used for communications with squadrons of intercontinental ballistic missiles and cruise-missiles; and the short-wave radio links are in reserve. Communications with ballistic missile squadrons based in Europe are maintained through the channels of the main radio and cable communications links through the principal radio relaying centers of the Air Force which provide automatic passage of transit telegrams.

The missile base of a medium-range ballistic missile squadron represents a complex of stationary structures and equipment, intended to support the launching of ballistic missiles. It contains five launch sites, on each of which three launching mounts are located, and a supply center with a maintenance position and a storage area for nose cones of the ballistic missiles. Organizationally, the squadrons form part of the air force of the country on whose territory they are based. However, before the ballistic missiles are used in combat, permission is required from the American command under whose immediate command the warheads of the missiles with nuclear charges are held. In view of this dual subordination each squadron possesses direct communications with its senior headquarters of the national air force and with the headquarters of the US Strategic Air Command. Besides the direct radio-telephone, radio-telegraph, and cipher channels of communications, each squadron can make use of a considerable number of alternate channels within the strategic communications system.

For control of squadron subunits a special internal communications system is organized at the missile base. Communications between the squadron headquarters and the launch sites (including the alternate ones) are carried out by multichannel underground cable lines or by radio relay links. The internal communications of the squadrons have to meet the following basic requirements:

-- the communications equipment must be continuously ready to be switched on for the immediate transmission of commands;

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-- the communications system must provide a reliable, rapid, and secure control of the units with weapons of strategic attack;

-- the communications equipment must conform to the special features of the weapon system ("Jupiter" or "Thor");

-- the communications equipment must be simple to use and be capable of joint operation and coupling with other communications equipment;

-- the transmission of commands and messages along the network must be carried out by telephone, as being the most simple and convenient method for operational use.

Within the internal communications system of a squadron the following networks are organized:

-- command network - for the transmission of commands, orders, and operational reports; the network connects the squadron command post with the control points at the maintenance site, in the warhead storage area, and at the launch sites; the squadron controller (dispatcher) can maintain communications with all controllers of control points simultaneously as well as individually; the network has a 24-hour duty system;

-- a network for combat and technical maintenance - for linking the maintenance site and the warhead storage area with the squadron headquarters and launch sites; the controller of the storage area and the controller of the maintenance site maintain contact with each launch site individually; the network has a 24-hour duty system;

-- a network for strategic alert - for transmitting sound signals at which all the squadron subunits are brought to complete combat readiness;

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-- a network for technical service of launch sites - for coordinating the work of the launching mount combat crews and the subunits maintaining them with supplies of technical equipment;

-- administrative network - for everyday communications on problems of squadron administrative-economic activities.

The communications equipment of the squadron control points used on operational networks is uniform and consists of push-button switchboards, microphone-telephone instruments, and loudspeakers. The switchboards are placed at the control panels of the squadron command post, control points of the launch sites, the maintenance site, and the warhead storage area. Motor vehicles, trailers, and semi-trailers used for servicing the launching mounts with supplies and equipment are provided with the simplest telephone sets (interphone system with loudspeakers) which can be connected to cable lines laid to the transport parking places. In the area of the launching mounts, 14 outside interphone systems are laid out and placed at the most convenient points.

The organizational structure, the numerous lines, and the capacity of the internal communication system of a medium-range ballistic missile squadron ensures secure operational control of its subunits.

Besides the organization of aboveground and underground stationary missilebases, the Americans are conducting tests on railroad rolling stock with "Minuteman" guided missiles. It is intended to have one railroad car with radio equipment working on side-band frequencies for communications in the train. For communications with the operational group and with the control point for these trains as well as with Strategic Air Command, one of the cars is equipped with an ultra short-wave radio station.

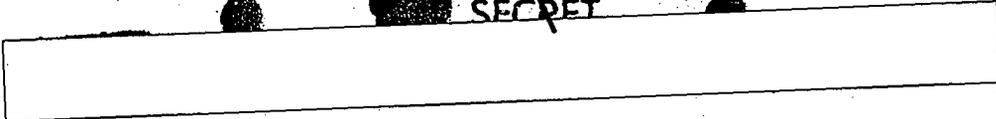
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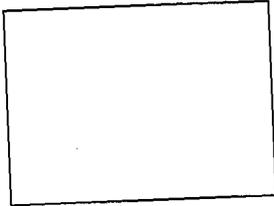
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In the view of the Americans, a communications system using cable and radio relay links is not sufficiently viable. Thus, at present the USA is conducting research in the use of an underground radio communications system, whereby the radio station and its antenna devices are placed in underground shelters, and the top layer of soil and the layer of air next to it are the means of radio wave propagation.



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