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JSTPS

The Link between Strategy and Execution

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The very existence of an integrated nuclear team has lent enormous weight and credibility to our deterrent to aggression. . . virtually with the stroke of a pen, the nation's nuclear striking power has been strengthened immeasurably.

General Thomas S. Power
 Commander in Chief, SAC
 and Director of Strategic
 Target Planning, 1964

The "integrated nuclear team" referred to by General Power is the Joint Strategic Planning Staff (JSTPS) conceived in the late 1950s, brought into being in 1960, and which from that day to this, has been the nuclear general war planner for all United States forces. Comprised of 340 highly talented men and women from all services, this unique organization converts broad national strategy into the detailed plan that forms the framework of our deterrent. This plan—Single Integrated Operational (SIOP)—integrates and coordinates the forces committed by the nuclear Commanders in Chief (CINCP). Because this plan is based on the actual capabilities of forces in being, it measurably increases the credibility of the U.S. deterrent as perceived by our adversaries as well as our allies.

The SIOP, as with any plan, reflects the thrust and flavor of the strategy on which it is based. The national strategy in the years following World War II was based on the lessons learned during that war. Conditioned by several years of world war and possession of a nuclear monopoly, the U.S. strategy was to threaten massive retaliation as the ultimate deterrent against any nuclear aggressor. That strategy served the U.S. interest well; it acted as an effective deterrent to large-scale nuclear or conventional attacks on the U.S. and its allies.

Our nuclear plan at that time mirrored the relative simplicity of this strategy. With only a few hundred delivery vehicles and a small arsenal of nuclear weapons, the plan consisted of a small number of options employing our total nuclear force, designed to be exercised at the general war level. Because a single unit within the Air Force, the Strategic Air Command (SAC), maintained and operated all U.S. strategic delivery vehicles, nuclear war planning was almost entirely a SAC task.

Initial Nuclear Planning

Planning for the few nuclear-equipped theater forces was the responsibility of the appropriate theater commander, and all such plans were coordinated yearly at a planning conference. Changes to the plans during these years were evolutionary. The growth in the U.S. capability was arithmetic, and planning was a comparatively simple process carried out primarily by a small number of personnel at SAC Headquarters, Offutt AFB, Omaha, Nebraska.

early planning problems

The process, however, had several potential limitations that would be amplified by events underway in the late 1950s, as it became increasingly apparent that the Soviet Union was developing a meaningful nuclear delivery capability. In the face of this growing threat, it became evident that the process of nuclear war planning would have to undergo fundamental changes.

The size and the power of our nuclear arsenal were also increasing. The global capability of the air-refueled B-52 and the introduction of the intercontinental ballistic missile (ICBM) and submarine-launched ballistic missile (SLBM) added significant new capabilities to our strategic inventory and new air and ground nuclear delivery potential made for increased breadth and planning complexities. Plans capitalizing on the different qualities of these new weapon systems could not be handled by a simple expansion of existing practices. The complexities of applying the major force of three separate Triad elements—tactical aircraft and tactical atomic missiles and artillery—in an optional manner required new skills and an increasing reliance on automation.

Another element emerged about the same time; the NATO alliance, formed earlier, was seeking a greater voice in the determination of the defense of Europe. Some, however, feared that nuclear proliferation might waste valuable economic resources of our allies and "uncork the nuclear genie."

Differentiating between theater and strategic targets also created problems that were difficult to work out at "after-the-fact" planning conferences. These factors were all working to strain the capabilities of the planning mechanism of that time. It became obvious that the planning would have to increase in sophistication and complexity to cope with these rapidly unfolding developments.

the nuclear team

According to General Power, SAC Commander in Chief at the time, several approaches were suggested to cope with this increasing complexity. These proposals ranged from a revision of the "... existing coordination procedures to establishment of a 'United States Strategic Command. . .'" which would "... incorporate all forces possessing a nuclear strategic capability. . ." and provide plans for the employment of those forces. The decision was made by then Secretary of Defense Thomas Gates. Calling it "... the most important decision I have participated in since I have been in the Pentagon," he established the Joint Strategic Target Planning Staff, a single multiservice nuclear war planning agency.

Under this concept, each nuclear CINC "commits" forces to the JSTPS which, in accordance with guidance from the Joint Chiefs of Staff (JCS), develops detailed plans to employ these nuclear forces in a much more efficient manner than was previously possible.

Our NATO allies are represented in the JSTPS, where the NATO nuclear war plan is coordinated with the SIOP. Inputs to JSTPS—JCS guidance, CINC committee nuclear forces, and detailed intelligence data—are melded into a plan that applies available forces against the most critical strategic gets for varying levels of readiness and circumstances of hostility. In concept, seems a straightforward and relatively simple task. Yet, it is an amazingly intricate process, providing for the application thousands of weapons to widely dispersed targets, timing of the arrival of each of these weapons with a tolerance measured in seconds, and a capacity for the plan to be executed under any condition of warning or attack.

Guidance. The first ingredient necessary to the SIOP construction process, the JCS guidance, is necessarily broad in nature. This characteristic allows a wide latitude to JSTPS planners during the initial planning phases. To ensure that, as the planning becomes more detailed, it remains in consonance this guidance, the SIOP is briefed at specified intervals to the JCS. A constant, present in U.S. nuclear strategy since World War II, has been the primary goal of deterring a nuclear attack. Yet it was evident even at the beginning of the atomic age that there was no adequate direct defense against a well-armed and determined enemy. Even a defense that is 99 percent effective—an unattainable feat—would still allow some enemy delivery vehicles to penetrate borders, each possessing a capability for great destruction.

The goal of deterrence, given those circumstances, is one of making attack unattractive to a prospective aggressor. The most effective method of attaining that goal is to ensure a capability for counterattack of capability for counterattack of sufficient size and force to negate any possible advantage an enemy perceives in his attack. The capability of a sufficient portion of our strategic forces to ride out a surprise attack and still inflict unacceptable damage on an aggressor has been the foundation of our deterrent throughout the nuclear age. Secretary of Defense Robert S. McNamara stated the goal of this assured destruction, as being able "... to ensure the destruction, singly or in combination, of the Soviet Union, Communist China, and the Communist Satellites as national societies." ³

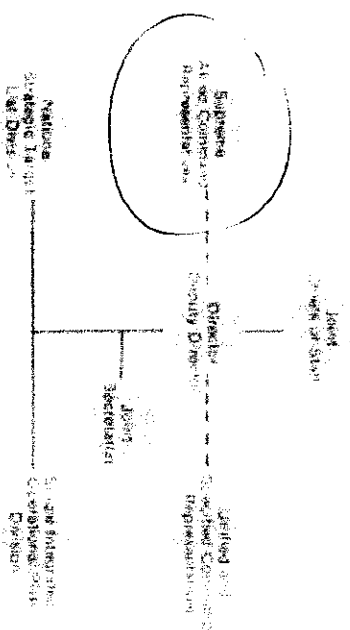
Forces. Fundamental to an understanding of the work of the JSTPS is the recognition that its product is a true, actual *operational plan*... based on extant, operational weapons systems in the hands of in-being operational forces. The SIOP's work is with actual forces, actual targets, actual planning tools; it is not futuristic, not theoretical, not of a "requirements" nature. This point must be borne in mind.

The forces committed by each nuclear CINC provide the second ingredient that helps form the SIOP. Because SAC is a global command, it's allocation of available nuclear forces is almost total. Commitment from the other CINCs is based on characteristics and availability of their possessed forces and theater responsibilities. Each CINC, at the time he commits these forces, provides a quantitative estimate of their capabilities.

Intelligence data. The third ingredient for planning, after JCS guidance and the nuclear forces commitment, is intelligence data. Highly classified intelligence from all sources is made available to the JSTPS. It is evaluated, and potential targets are sorted according to their suitability and priority in fulfilling national objectives. These three inputs—national guidance, nuclear forces, intelligence—are then melded, and from them flows a single output, the SIOP, the single integrated plan for strategic employment of U.S. forces in nuclear conflict.

organization

The organization of the JSTPS is arranged along functional lines (See Figure 1). At the top of the structure is the Director of Strategic Target Planning. The present Director, General Russell E. Dougherty, was appointed to the position on his assumption of the command of SAC, as have all CINCSAC since 1960. The Deputy Director has, by tradition, been a Navy Vice Admiral. Supporting the Director and Deputy, the Joint Secretariat performs a executive function and presides over the myriad administrative details attendant in a large-scale planning operation.



Senior officers from the Supreme Allied Commands and the Unified and Specified Commands are assigned to the JSTPS to provide an interface between the planning agency and the executing commands. Within North Atlantic Treaty Organization (NATO), Supreme Allied Commander, Europe (SACEUR) is designed as the NATO nuclear targeting coordinating authority; thus, these representatives ensure a high level of coordination between the NATO nuclear forces assigned to the international commanders: Supreme Allied Commander, Atlantic (SACLANT), SACEUR, and the U.S. nuclear equipped forces of Commander in Chief, Atlantic (CINCLANT), Commander in Chief, Pacific (CINCPAC), U.S. Commander in Chief, Europe (CINCEUR), and CINCSAC. The U.S. Army, Navy, Marine, and Air Force personnel assigned to the JSTPS work in two divisions, the National Strategic Target List (NSTL) Division, and the SIOP Division. The NSTL Division translates the national guidance into specific targeting guidelines used by the SIOP Division to assign individual weapons to designated targets.

Building the SIOP

The first step in any military planning exercise is an analysis of intelligence data. In building the SIOP, this step is distinguished by the depth of the analysis and the thoroughness in the examination of each potential target. Information from all civil and military intelligence sources flows into the JSTPS and is evaluated in order to identify those targets that best satisfy national targeting guidance.

evaluating intelligence

When all intelligence data are located, identified and evaluated, an accurate picture of the total target structure is compiled by NSTL analysts. The listing and description each target comprises the National Target Base (NTB). It is from this list that suitable targets are selected for weapons application, at a later point in the SIOP-building process.

selecting the aim points

The emphasis at this step is to select each aim point in a manner that will satisfy the targeting objectives with an optimum economy of effort. Factors peculiar to an installation considered include location, altitude, type of construction, distance from other installations, and terrain. These characteristics provide a starting point in selecting a weapon (for example, if the installation is hardened resist blast effects, a weapon with larger yield or better accuracy must be selected).

The proper height of burst (HOB) for weapon must be planned so that the combination of accuracy, aim point, yield, and HOB can produce the required level of damage to the target without producing unwanted collateral effects on other nearby installations. Computers are used to model the effects of a weapon at various aim points. The damage that could be inflicted on the target installation is calculated for each aim point, and the optimum aim point is selected.

The aim point is referred to as a Desired Ground Zero (DGZ). If, for any reason, the factors which affected the construction of a DGZ are changed, such as weapon yield or HOB, the entire process of reoptimizing weapon effects on the DGZ may have to be repeated. Thus, the iterative process of matching installations and weapons begins to shape the SIOP. Each successive step in developing the SIOP is a refinement of the previous work. For example, the selection of individual delivery vehicles and the actual numbers of each weapon available are ignored in early DGZ construction efforts. If conflicts in actual weapons application develop later, adjustments in earlier work may be required. Thus, use of an iterative methodology ensures integration of each element of the task in a systematic, properly sequential manner.

determining damage expectancy goals

When Desired Ground Zeros have been constructed for the appropriate installations in the National Target Base, the DGZs are entered in the National DGZ List. An initial allocation of available weapons is made against the DGZs to maximize target value destroyed. The allocation is analyzed to see how well the Damage Expectancy (DE) requirements in the employment guidance have been met. If the requirements are not met, the allocation is revised. When the DE and target coverage requirements in all areas are met, the weapons allocation is documented as the DE goals. They serve as a guideline during force application by the SIOP Division.

applying the force

Where the NSTL division analyzes overall weapons against overall targets in the allocation process, the SIOP Division is concerned with each delivery vehicle during force application. SIOP Division missile and aircraft application teams actually plan a delivery vehicle/weapon combination for each DGZ. For this task, the teams use the forces committed to the SIOP by the Unified and Specified Commanders and the JCS-approved planning factors, such as weapon system reliability or prelaunch survivability.

Using intelligence data and maps, the application teams study possible attack routes for each DGZ. The aircraft team selects tankers for each bomber in order to provide necessary bomber range. Computer programs are used to simulate the route of each bomber and model the defenses along the route. Routes are adjusted and re-evaluated until an acceptable probability of arrival is achieved.

Using ballistic missile trajectory models, the missile team applies ICBMs and SLBMs to ensure that target assignment is compatible with missile range and footprint* capabilities. The missile team also selects specific ICBMs for appropriate DGZs and determines if penetration aides (such as chaff or decoys) will be required.

*Footprint: that area to which a multi-warhead missile can deliver warheads. Footprints is normally described as an elliptical figure with cross range and down range dimensions in nautical units.

After each sortie has been planned for every option, the entire force must be timed. Force timing meshes the entire effort, to preclude intersortie conflicts and to phase the attack, particularly in dense target areas. If conflicts between different delivery vehicles cannot be resolved, the weapon assignments or attack routes must be reaccomplished. When all timing conflicts have been resolved, a painstaking re-evaluation is made of all sorties assignment and timing plans. Only after all the data are verified are the plans ready to be reproduced and distributed to the individual aircraft, ICBM, and submarine crew.

coordination

The ultimate product of this effort is the Single Integrated Operational Plan—a plan that assigns forces, targets, and times and coordinates the entire U.S. strategic arsenal.

The capability of each CINC to fulfill his portion of the plan is assured through interaction at regular intervals throughout the planning process. The NATO nuclear plans are also coordinated with the SIOP. Routine planning problems are resolved within the JSTPS—by the Director if necessary—and each is briefed at the next update to the JCS and the CINCs.

The Call for Flexibility

A common perception throughout the 1960s was that most U.S. strategic weapons were targeted indiscriminately and mainly against urban population in cities and industrial areas. In fact, during this period large numbers of available weapons were assigned to targets of a direct military nature, giving

these weapons a prime counter military role. Thus when it became known that increased flexibility would be attained by emphasis on improved targeting of an enemy's military forces, many mistakenly perceived this emphasis a "switch" or "shift" in targeting philosophy. ⁴

In actuality, it was the call for exploiting the flexibility of our weapon systems and for a larger number of available options in the use of our strategy forces that provided the basis for the new flexibility. This desire for a wider array of available choices is not a recent phenomenon. Four presidents have publicly stated a desire to have additional nuclear force options covering the gap between nuclear "nothing" and "all." The Senate Armed Services Subcommittee on Preparedness in 1968 worded the requirement as having the "... capability and flexibility to respond so that no matter how the war is initiated, we will be in a position to assure the termination of hostilities under conditions which are relatively favorable to us." ⁵

It was not, however, until the 1970s that the generally worded call for flexibility in the planning and the plans for employing our nuclear strategic force began to assume specific meaning. Secretary of Defense Schlesinger spelled out the need for preplanning for the possible use of a "... series of measured responses which bear some relation to the provocation; have prospects of terminating hostilities before general nuclear war breaks out and leave some possibility for restoring deterrence." ⁶

implementing the new guidance

The new nuclear policy emphasis taking shape during this period retained the basic features of the planning policy in being—while adding some new ones and altering others. There is no plan for a disarming first strike; there is no national policy requirement, nor do we field the capability for such a strike. The reasons underlying this absence of a first-strike plan reflect both military capability and national policy-making. In his FY 1977 Annual Defense Department Report, Secretary of Defense Donald H. Rumsfeld expressed the policy in these words:

This degree of flexibility... necessarily includes the option and the capability to strike accurately at military targets, including some hardened sites. But it does not permit, and our programs do not aim to acquire, a disarming first strike capability against the U.S.S.R. Such an objective is not even attainable at present because the Soviets themselves maintain a TRIAD of offensive forces—along with massive active strategic defense—that preclude a successful simultaneous attack on all three forces. ⁷

Retained in the new strategy was the fundamental reliance on achieving a high degree of assured destruction on primary targets as the ultimate deterrent to full-scale attack and as a deterrent necessity to limit escalation. Recognizing that neither the U.S. nor the U.S.S.R. has sufficient weapons for a disarming first strike, our planners concentrate targeting emphasis on those installations and facilities that are key to the viability of a nation to support conflict or recover aggressive capabilities as well as those forces and capabilities that can damage our nation and our allies. The intent is to ensure that the U.S. and its allies are not left in an inferior position following any nuclear strike, no matter how aggressive or devastating an attack we may have experiences.

New options were added that furnished more finely graduated, preplanned nuclear responses against a variety of meaningful targets at intermediate

levels of conflict. While the SIOOP retained the ultimate large-scale nuclear options, it now includes an increased number of lesser options that were integrated into our overall planning for the use of U.S. nuclear forces. SACEUR and SACLAN also have comparable, coordinated plans for forces under their command—in accordance with NATO nuclear planning precepts.

The alternative of committing or withholding certain categories of weapons and targets was designed into each of those lesser options for the intended purpose of controlling lesser hostilities within well-defined limits.

This new planning exploited the flexibility of our systems without compromising the ultimate levels of preplanned attacks and thereby provided a credible response—where specifically formulated planning had previously been conducted independently by the CINCs. The planning gap between the various foreseeable conflicts levels of tactical warfare and those that called for the use of strategic nuclear forces had been bridged—in fact as well as in theory.

interservice cooperation

This change in strategy held a special meaning within the JSTPS. Although changes were primarily additive ones of emphasis and options, the fundamental policy for planning the use of nuclear forces remained. Obviously, the complexity of building the SIOOP with additional preplanned options involving strategic forces has increased substantially. Assigning weapons in a manner that takes best advantage of the qualities each brings to the SIOOP is extremely complex and painstaking. It has been especially challenging to plan the various attack options and weapon use or nonuse against the range of target categories while maintaining weapons carrier "purity"—each individual aircraft/missile load of weapons on only one type of target so the options are indeed discreet. The entire task represents interservice cooperation at its best, and the finished products provide the framework for the most flexible deterrent use of strategic forces possible under current capabilities—all within present circumstances of threat and equipment.

THE SIOOP, then, is the embodiment of our actual (vs. theoretical) nuclear strategy. It has translated concepts and guidance into a complex of detailed plans that are both operable and credible—a specified necessary part of which is available in the individual ICBM launch control center, nuclear missile submarine, SAC bomber, and theater aircraft. The existence of these plans and the optional use of capabilities they represent must give pause to any potential adversary.

In this context, the Joint Strategic Target Planning Staff serves as a vital link between strategy and execution. By translating strategy into operational planning that allows various nuclear responses to be considered in greater variations of provocation, we have increased our ability to deter at all levels—and do it without sacrificing any major capability that we have had in the past. By successfully accommodating the significant increases in complexity in the planning revision, the JSTPS has again proved its value; its ability to meet dynamic and changing planning requirements in a fluid nuclear threat environment and the abilities of its combined membership to perform camp multiservice planning smoothly and efficiently.

Offutt AFB, Nebraska

Notes

<http://www.airpower.maxwell.af.mil/airchronicles/aureview/1977/may-jun/omalley.html>

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1. General Thomas S. Power, "The U.S. Nuclear Team," a speech delivered at the Armed Forces Day Luncheon, Detroit, Michigan, May 14, 1964.
2. *Ibid.*
3. U.S. Congress, House Subcommittee of the Committee on Appropriations for 1965, Hearings of the 88th Congress, 1st Session, Part 4 (Washington, D.C.: U.S. Government Printing Office, 1965), pp. 25-28.
4. See *Washington Post*, January 11, 1974, p. 1, *New York Times*, January 11, 1974, p. 6, and *U.S. News and World Report*, January 28, 1974,
5. U.S. Congress, *Status of U.S. Strategic Power*, Report of the Preparedness Investigating Subcommittee of the Senate Armed Services Committee (Washington, D.C.: U.S. Government Printing Office, 1968).
6. James R. Schiesinger, *Annual Defense Department Report--FY 1975* (Washington, D.C.: 1974), p. 38.
7. Donald H. Rumsfeld, *Annual Defense Department Report--FY 1977* (Washington, D.C.: 1976), p. 18.

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