STRATEGY-TO-TASKS: A METHODOLOGY FOR RESOURCE ALLOCATION AND MANAGEMENT

Leslie Lewis and C. Robert Roll

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PREFACE

This paper was written for presentation at the Japan/U.S. Operations Research Seminar JUORS VI. The presentation discusses how the RAND Strategy-To-Tasks methodology links logistics and sustainability issues within a total resource allocation and management framework. The authors wish to thank the project sponsors for their support of this work and the approval for the presentation of the analysis.

STRATEGY-TO-TASKS: A METHODOLOGY FOR RESOURCE ALLOCATION AND MANAGEMENT

LESLIE LEWIS AND C. ROBERT ROLL

This paper discusses a RAND-developed methodology for improving the resource management process. In this discussion we present a resource management framework based on force planning concepts developed at RAND and tailored to the special needs of various clients. The thrust of the framework is that resource decisionmaking needs to include all resource considerations including logistics and sustainability issues. The framework is intended to make planning, programming and budgeting more rational and more credible by linking high-level strategic goals to tasks performed by the various participants in the Planning, Programming, and Budgeting System (PPBS). The linkages, defined by the methodology, are intended to help the various participants in the PPBS process to interact more effectively in DoD's overall PPBS functions. As to be expected, participants in the PPBS interact at different levels within the DoD structure. The methodology provides a common tableau for participants at every level, which enables all the players to work from a common framework and lexicon. In the course of this paper, we will discuss various applications of the methodology. All of our comments are unclassified.

The Strategy-To-Tasks framework was developed at RAND during the late 1980s and is currently being used by several DoD organizations. The initial framework was developed to justify for the Air Force resource decisions that had already been made. Gradually the concept was modified to become a decision support process for the planning and programming phases of the PPBS. It provides decisionmakers with an end-to-end concept of operations. If used correctly, it links resource decisions to specific military tasks that require resources, which in turn are linked downward hierarchically from higher-level operational and national security strategies to supporting programs and tasks. Likewise, resource decisions can be linked upward from tasks up through strategies.[1] As will be discussed in this paper, we also have begun to apply the methodology to CINC environments in which coalition warfare and cost sharing issues need to be considered. These environments also necessitate that political and economic issues be weighed in military resource decisionmaking.

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[1] There are a number of publications on the strategy-to-tasks methodology and its various applications. For a generic description of the methodology see: Glenn A. Kent, *A Framework For Defense Planning*, July 1989.

THE PLANNING, PROGRAMMING, BUDGETING SYSTEM (PPBS)

Before we can discuss the Strategy-To-Tasks methodology we must establish the resource decisionmaking framework in which it operates, which is the PPBS. The PPBS is DoD's primary system for planning and managing defense resources. It links the overall U.S. national security strategy to specific programs. It was designed to facilitate fiscally-constrained planning, progamming and budgeting in terms of complete programs (i.e. forces and systems), rather than through artificial budget categories.[2] The goal is to determine force, systems and program costs; the PPBS is designed to elicit options and provide for an evaluation of these options in terms of costs and benefits. The output of the process, the Defense Program (DP), is the official record of the major resource allocation decisions made by the SECDEF.

The PPBS is one of the SECDEF's key management tools. The process provides the SECDEF with the means to set and control the Department's agenda. The goal is to frame issues in national rather than service- or even CINC-specific, terms. The process is supposed to capture all important decisions affecting current and future defense budgets. The process, therefore, also includes documentation and data bases; these items are supposed to capture all important formal decisions.

The process is not supposed to be linear, either during a phase or from one phase to the next. Rather than being a "lock step" system, it is designed to be highly interactive. The PPBS provides the "forum" for both the informal and formal debate of the issues and options at all levels of the Department. In order to prepare for the formal debates, the decisionmakers and their staffs must interact with one another on an informal basis to share information, develop options, and even define a particular participant's strategy in the debate for resources.

There is a hierarchy to the PPBS (see Figure 1). The planning phase starts with broad decisions involving senior decisionmakers in DoD and progresses to the budgeting phase, where prior decisions are reviewed in detail to determine how they can best be implemented.

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[2] This discussion is based on previous RAND work. See Leslie Lewis, C. Robert Roll, John D. Mayer, *Assessing The Structure and Mix of Future Active and Reserve Forces: Assessment of Policies and Practices For Implementing Total Force Policy*, RAND, December 1992, MR-133-OSD.

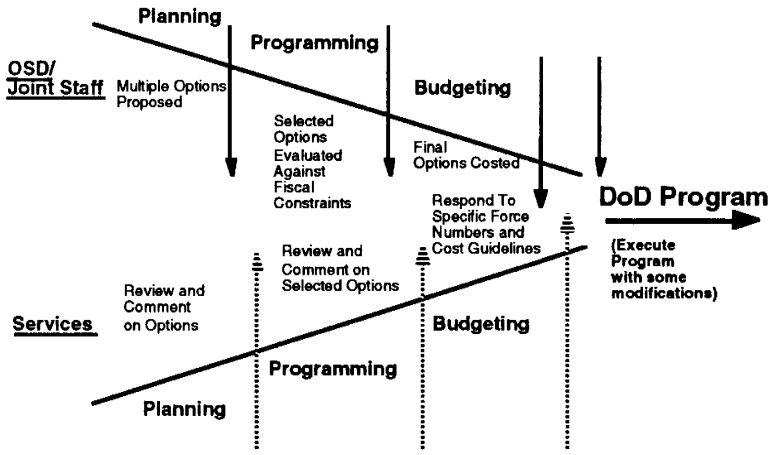

Figure 1. Decision Process as Shaped By the PPBS

Figure 2 shows the key PPBS events as they have existed since the implementation in 1986 of a two-year budget cycle. In practice, the Congress has generally appropriated funds on an annual basis and therefore the internal DoD process has had to compromise with the demands of producing a budget submission every year. From an external perspective, this behavior could look like the one-year cycle that existed prior to 1986.

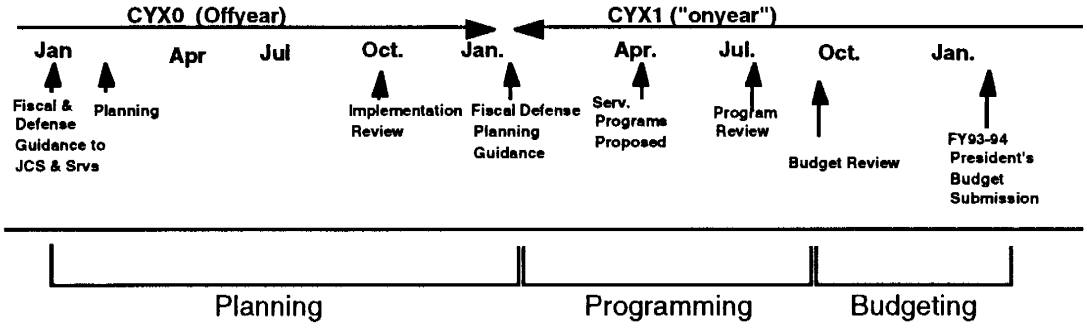

Figure 2. Generic Two-Year PPBS Cycle

Planning Phase: A new PPBS cycle begins immediately after the budget is submitted to Congress. During the planning phase, whose horizon may extend 15 years into the future, the existing military posture of the United States is assessed against various concerns, including national security objectives and resource limitations, available military strategies, and national security objectives contained in National Security Decision Directives (NSDD) and National Security Study Directives (NSSD).

The output of the process is the strategic plan for developing and employing future forces. This plan is defined in the SECDEF's Defense Planning Guidance (DPG), which may be published in the fall or early winter. The DPG contains the SECDEF's top-level guidance for producing the defense program. It is responsive to the President's national security strategy from which the national military strategy and fiscal guidance are derived, as set out by the President through the National Security Advisor and Office of Management and Budget. It may also contain very explicit program guidance regarding core programs that the SECDEF wants the services and DoD agencies to fund in their Program Objective Memorandums (POMs).

Programming Phase: The transition from the planning phase to the programming phase (from the Secretary of Defense's perspective) falls somewhere between the issuance of the DPG and the submittal of the POMs by the military departments and the defense agencies in the spring. The POMs are the resource programs that reflect the DPG and fiscal guidance. The POMs are reviewed by the Joint Staff and OSD to determine whether the programs meet the Secretary's guidance. The programming phase looks five to six years into the future.

The Joint Staff's evaluation of the POMs appears in an internal document, the Chairman's Program Assessment (CPA). The CPA assesses the risks in the total force proposed by the services and defense agencies in their respective POMs. Included in the assessment is an evaluation of how well the POMs satisfy the requirements identified by the various Commanders-in-Chiefs (CINCs).

OSD reviews the Departments' POMs and the CPA. Based on these reviews, OSD raises "issues" if there are problems identified during the reviews. These problems are then discussed, debated, and resolved within the Defense Planning and Resources Board, which consists of the SECDEF and selected high-level decisionmakers within OSD. Frequently, individuals (usually Assistant Secretaries and Service Chiefs) involved in a particular issue are asked to attend a specific session. Decisions taken on problem issues are published in the Program Decision Memorandum (PDM) issued by the Deputy Secretary of Defense (DEPSECDEF).

Budgeting Phase: The PDM marks the end of the programming phase and the beginning of the budgeting phase. The reality is that the services and defense agencies have already begun to build a detailed budget when they submit their POMs. After they receive the DEPSECDEF's program decisions, they must adjust their programs and budgets to conform to program decisions. Their programs and budgets are submitted to the OSD Comptroller in the form of Budget Estimate Submissions (BES), following which budget hearings are held. Major budget issues may be heard in a DPRB Budget Review, with final decisions announced in a series of Program Budget Decisions. The totality of the final PBDs, when used to revise the various BESs, become the President's budget for DoD, which is submitted to Congress.

This year several concurrent activities are occurring within the PPBS framework. These activities include:

1. Replacement of DPG activities by Bottom-Up Review;
2. Compressed Program and Budget Review;
3. Timely delivery of FY95 Budget.

But none, as yet, have altered the base PPBS process. What does become critical is how to allocate resources.

STRATEGY-TO-TASKS AND THE PPBS

The Strategy-To-Tasks methodology, regardless of its application, must be consistent and supportive of each phase of the PPBS. Later in this paper we will discuss three applications of the methodology: United States Special Operations Command (USSOCOM), United States Forces Korea (USFK), and the United States Army. This section describes the basic framework that we adapted to the resource allocation and management activities of the three above-mentioned organizations. They use it during the various phases of the PPBS. In each example we adapted the framework to the organization's specific needs.

At the highest levels of the hierarchy, we consider **national goals**, which are derived from the U.S. heritage and are embodied in the U.S. constitution. These do not change over time. The national goals form the basis for all U.S. statements regarding national security (see Figure 3).

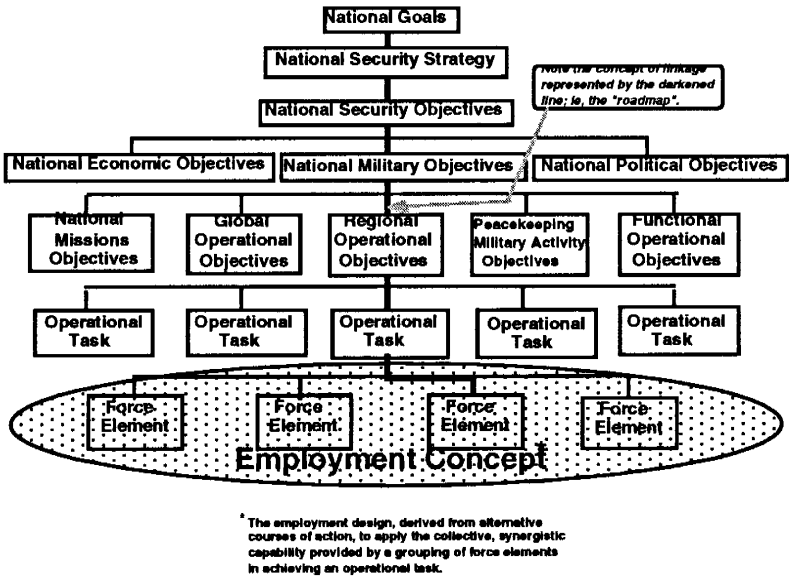

Figure 3. A Hierarchy of Linkages

National security strategy is formulated at the executive branch. It embodies the nation's political, economic, military and diplomatic activities to achieve U.S. wartime and peacetime national security objectives. **National security objectives** define what must be done to preserve and protect our fundamental principles, goals and interests with respect to threat and challenges. In contrast to national goals, national security objectives change in accordance with changes in the geopolitical environment.

National military objectives are formulated by the SECDEF and the Chairman, Joint Chiefs of Staff (CJCS). The national military objectives define how the U.S. national security strategy will be supported militarily. Collectively, they define the national military strategy, which identifies (at a high level) how the U.S. will respond to threats to its national security.

Operational objectives define various military strategies. They describe how forces will be used to support the national military objectives. They also define the military strategy for a particular region. A particular regional military strategy is defined within the framework of the national military strategy and from the SECDEF's and CJCS' guidance. Functional objectives (as shown on Figure 3) indicate the support activities that have to be present in order to sustain any military operation.

Tasks are formulated by the CINCs. They are the specific actions that must be performed in order to accomplish an operational objective. Each task is defined by an operational concept. An operational concept[3] weaves together the various systems, organizations, and tactics needed to accomplish a particular task. Figure 4 is a schematic diagram identifying the key functional elements of a generic operational concept. The operational concept is disaggregated into five key elements: surveillance, assessment, battle control/dynamic control, mission preparation, and mission execution. Surveillance assets collect raw data on the object(s) of the task and relay the data -- sometimes indirectly -- to assessment centers, often called intelligence fusion centers. Such centers turn the raw data into information that can be easily used by various control elements and, in some cases, by operational units as they prepare for and carry out their missions. Control elements assign specific targets to attack platforms and may provide dynamic control -- that is, additional real time assistance in directing the platforms to their targets. Operational units engage in detailed mission planning and prepare the attack platforms and munitions. Finally, the dedicated force elements, sometimes with the aid of dynamic control elements, execute the mission with attack platforms and weapons. Mission execution is the "business" end of the operational concept and generally involves three phases: move to engagement, engage, and return to base.

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[3] The discussion of an operational concept is based on the earlier unpublished RAND work of David E. Thaler, Dana J. Johnson, and Edwin L. Warner III. This work deals with the application of the strategy-to-tasks taxonomy to the Air Force.

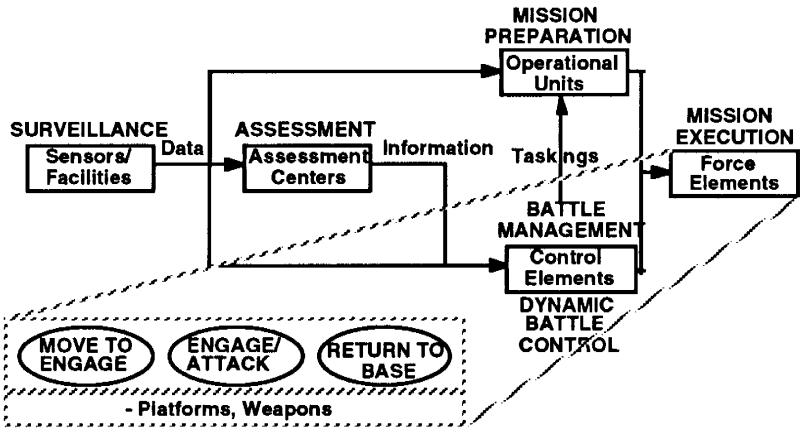

Figure 4. Generic Operational Concept For Accomplishing a Stated Military Task

ADAPTING THE FRAMEWORK

We have adapted the framework to three quite different environments. We will briefly describe each of them and the Strategy-To-Tasks framework as applied to each case study. For this discussion, we will provide the most detail on the USFK since it involves coalition considerations.

USSOCOM AND STRATEGY-TO-TASKS[4]

As many of you know, USSOCOM was created in 1986. Its mission is to support the unified and specified commands in such areas as anti-terrorism, hostage extraction, foreign internal development (FID) and humanitarian assistance. The command has three components: Army Special Operations Command (ARSOC), Naval Special Warfare Command (NAVSPECWARCOM), and Air Force Special Operations (AFSOC).

USSOCOM differs from other CINCs in two ways. First, it is the only command with its own budget. In the resource management arena, USSOCOM acts like a service. Like the services, USSOCOM is responsible for constructing a major force program (specifically known as Major Force Program 11, or MFP-11) that forms part of DoD's biennial budget request to Congress. By OSD direction, USSOCOM's research and development (R&D), procurement, and funding processes mirror those of the services. This means that USSOCOM must respond to that guidance, and implement programs based on the SECDEF's direction. Second, USSOCOM has no specific regional responsibilities. It is a supporting command to the unified and specified commands; it is organized, equipped, and trained to provide capability to different theaters.

These attributes make USSOCOM a unique participant in the Department of Defense (DoD) resource-management process. USSOCOM must

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[4] The research team consisted of Leslie Lewis, James Coggin, C. Robert Roll.

define the regional requirements for special operations and translate these requirements into capabilities that support special operations. These requirements must be then presented and justified to OSD and Congress. The command interacts with a variety of organizations in the development of its program. For instance, it must have strong ties to its internal organizations -- the components and the combatant commands -- in defining its missions and the requirements to perform them. Externally, the command must interact with the SECDEF, the CJCS, and the Congress.

RAND has been working with USSOCOM since 1991. Early in its analysis of how to improve USSOCOM's force development process it concluded that USSOCOM must have a planning, programming and budgeting process that is consistent with DoD's PPBS framework and schedule. USSOCOM's resource management process must facilitate the command's ability to articulate its resource capabilities during a period in which many of its warfighting and non-warfighting missions have not been clearly defined.

The issue for USSOCOM is how it can effectively participate in the total PPBS process, including both the formal and informal elements. Within USSOCOM, there is a concern that the current process will not provide a credible force development program or "right" outcomes. By "right" outcomes, we mean a program that funds sets of capabilities in support of USSOCOM's missions and is defensible and executable within the fiscal and program guidelines as defined by the SECDEF. USSOCOM's current system is not sufficiently sophisticated and analytical to meet these criteria.

The research team began by evaluating how USSOCOM currently plans, programs and budgets its resources. The emphasis was on the planning and programming functions (see Figure 5). Since our objective was to support improvements in USSOCOM's resource management decision, we concentrated on its activities during the PPBS process, with particular emphasis on the programming phase.

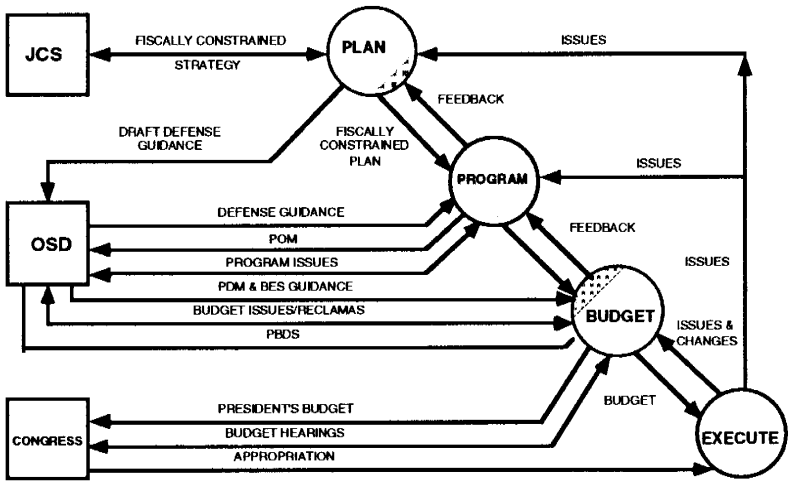

Figure 5. The "Strawman" Template

We concluded that any recommendation to USSOCOM for improving resource allocation and management had to contain the elements that DoD requires in the various PPBS phases: links from the national security

strategy down to specific military tasks. Furthermore, these elements had to be credible, replicable, and easily audited.

We also observed that various members of the Special Operations community lacked a shared terminology for describing operations and resources. We attributed this deficiency to the newness of the command. In defining and allocating the command's resources, all participants must work off the "same sheet of music." The lack of a consistent lexicon appeared to be a major hindrance to USSOCOM's resource management process. For instance, the command often viewed resources as individual things -- personnel and equipment -- rather than as groupings of critical resources that reflect the most efficient means to accomplish a task. In order to capture the resources at an appropriate level of aggregation (so that tradeoff analyses among different capability packages could be generated), we needed consistent definitions of key terms for operational objectives, tasks, and resources.

Another challenge centered on USSOCOM's size: because its force structure and budget are relatively small, USSOCOM defines its resources at very detailed levels (single battalions, rifles, truck, etc.). It was, therefore, difficult to aggregate resources at a sufficiently high level, which is necessary for two reasons: (1) to conduct tradeoff analyses among different resource packages for accomplishing a specific task; and (2) to enable the command to present its resource demands to OSD, the Joint Staff and Congress at a level consistent with other DoD entities. This is particularly important in helping USSOCOM compete in the DoD resource debate.

Based on all these reasons several suggestions for improvement were made:

1. Develop linkages between national security objectives and USSOCOM program and resource needs.

2. Change USSOCOM's planning and programming processes, functions, and data structures.

3. Realign selected functions and organizational structures.

USSOCOM STRATEGY-TO-TASKS FRAMEWORK

Figure 6 shows the revised Strategy-To-Tasks framework as applied to USSOCOM.

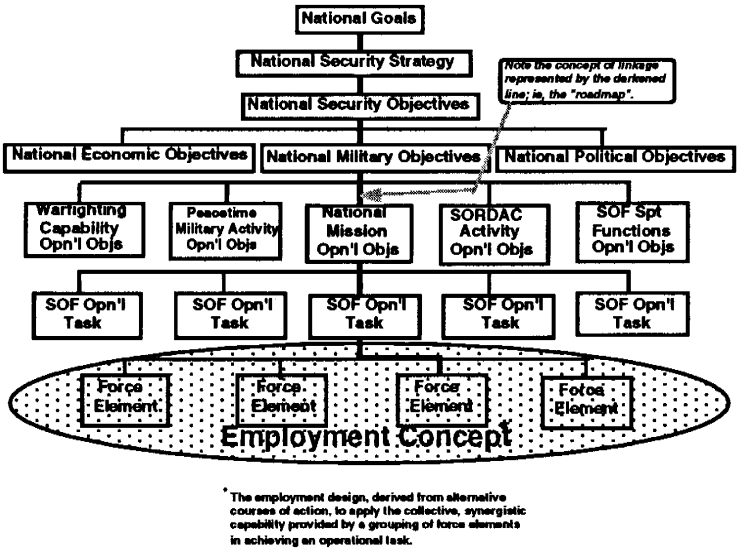

Figure 6. USSOCOM Hierarchy of Linkages

National Security Objectives

The impetus for USSOCOM's goals as a command originates with U.S. national security objectives. They support the national goals which are embodied in the Constitution. The national security objectives are found in the National Security Strategy of the United States.[5] These objectives are based on the perceived goals, intents, and behaviors of potential adversaries and their capability to execute strategies that threaten our national security. As stated earlier, national security objectives change in response to the changing environment. Listed below are the four major national security objectives:

- Survival of the United States;
- Healthy and growing economy;
- Healthy, Cooperative, politically vigorous relations with allies and friendly nations;
- Stable secure world, where political and economic freedom, human rights and democratic institutions flourish.

National Military Objectives

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[5] President George Bush, *National Security Strategy of the United States*, White House, August 1992, pp. 3-4

Normally, the national military objectives would be drawn directly from the National Military Strategy. Special operations, however, also include political and economic activities. For instance, the foreign internal defense (FID) and peacekeeping missions must be coordinated with multiple non-DoD agencies (e.g. U.S. Agency for International Development (USAID), the State Department, etc.) and do not include direct military actions. In order to capture all the potential military objectives that could affect SOF operations, we also examined documents and briefings from the Office of Assistant Secretary for Special Operations and Low Intensity Conflict (ASD-SO/LIC), the State Department and the Joint Staff.

The National Military Strategy defines the national military objectives. These are:

- Deter or defeat aggression in concert with allies;
- Ensure global access and influence;
- Promote regional stability and cooperation;
- Stem the flow of illegal drugs;
- Combat terrorism.

Using the national military strategy, we identified four SOF-specific military objectives. The rationale was to define sufficiently broad categories so as to capture all of USSOCOM's activities (both military and non-military) and to be consistent with the broadly defined national military objectives. The categories also had to fold in the strategic concepts as found in the National Military Strategy -- deterrence, force reconstitution, forward presence, and crisis response -- that support the national military objectives.

The SOF military objectives are: (1) warfighting capability, (2) peacekeeping military activities, (3) national mission capability, and (4) support functions, which include research and development.

The next consideration was **SOF operational objectives.** They represent the CINC's vision and strategic perspective on how the various SOF assets could support the national military objectives and the national security objectives. They are the link between higher-level national and military objectives and SOF-specific operations and the resources that support those operations. The operational objectives were derived from a variety of USCINCSOC references.[6]

In all we identified 24 operational objectives. These are sub-divided among the SOF-specific national military objectives categories of warfighting, peacekeeping engagement, national mission, and support functions. They include such SOF-objectives as: strategic agility, contingency operations training, technological superiority, and peacekeeping activities.

SOF Operational Tasks define the next level of the hierarchy. They support SOF operational objectives. An operational task is the SOF

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[6] Doctrinal SOCOM components references, USCINCSOC *Strategic Perspectives*, USCINCSOC *Operational Concept, Peacetime Engagement Conference Report* (ASD-SO-LIC), USCINCSOC's *Strategic Perspectives Briefings*.

activity that must be performed to support one or more SOF operational objective(s). For example, there are several operational tasks that support SOF's Peacekeeping objectives. These include: special operations, strategic reconnaissance, special operations search and rescue, psychological and deception activities, among others

SOF Employment Tasks are the actions that must be performed in support of an operational task. For example, the operational task of psychological operations (PSYOPs) and deception activities includes such employment tasks as providing intelligence on internal and externally controlled funded terrorist activities, conducting PSYOPS to alter the attitudes of the sponsoring regime and indigenous population towards the U.S., and conducting information gathering and dissemination activities. An individual employment task may contribute to more than one operational task, and in turn, an operational task may support more than one operational objective. This alteration to the generic Strategy-To-Tasks enabled us to eventually define a discrete set of tasks that contains all of USSOCOM's activities, which then facilitated the linkage of all of USSOCOM's resources to tasks, enabling USSOCOM decisionmakers to assess how their resources might be applied to more than one task. The ability to perform a task provides a SOF **capability.** The command, based on its resource decisions, provides SOF capabilities to the warfighting CINCs.

SOF Force Elements form the final resource column of the hierarchy. Force elements are the groups of resources (personnel, training and equipment) needed to perform an employment task. Because many different types of force elements can be used to support a task, decisionmakers must choose the resource combinations that are most cost effective in accomplishing a task. As new threats or missions emerge, new force elements may be defined to support the new operational objective and its associated tasks.

Typical SOF force elements are: Special Force battalions, Ranger battalions, SEAL platoons, AC-130 aircraft and crews, and PSYOP battalions. SOF force elements are grouped together to form a Joint Special Operations Task Force (JSOTF). It is in the force elements that support and sustainability resources are considered as building blocks for performing a task.

Figure 7 illustrates an example of the linkages for one operational task, Psychological Operations (PSYOPS). Each block shows how the national security strategy is linked down to the force elements, and finally, how a PSYOPs capability is resourced in the SODPs.

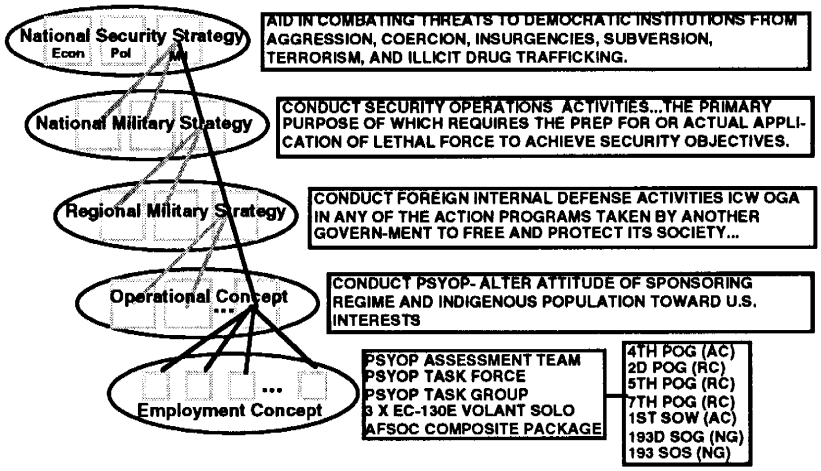

Figure 7. Operational Road Map For PSYOP Force Structure

With SOCOM we were able to establish a consistency across the hierarchy beginning at the highest level and a "funneling" down to the actual resource of force elements. Particularly difficult for USSOCOM is to keep its resources defined at a sufficiently high level of aggregation so that resource options can be debated.

FORCE DEVELOPMENT ISSUES IN THE U.S. ARMY[7]

Given classification sensitivities we will spend only a few minutes on the application of the Strategy-To-Tasks methodology to the Army. This is the least developed of the three examples that we are going to discuss, but is an important enough application to discuss some of the high points.

As a service, the Army is responsible for responding to OSD guidance and developing options in response to that guidance. We were requested by the Army to attempt to apply the Strategy-To-Tasks methodology to facilitate its force development decisionmaking. In particular, we concentrated on Army modernization. The hierarchy needed to be consistent with and responsive to the emerging Aspin defense guidance:

- Shift in the PPBS from threat to threat-based planning, costs and benefits;
- Flexible Force structure (not a scaled down Cold War Force and must be able to act unilaterally);
- Focus on joint operational environment;
- Technology is an essential element;

[7] The RAND research team consisted of: Leslie Lewis, Roger Brown, William Fedorochko, John Schrader, Preston Niblack, Marney Peet.

• Systems evaluated across multiple contingencies.

The new administration also noted that resources now need to be considered and allocated within the context of the newly defined four dangers: weapons of mass destruction, regional conflict, internal and external threats to emerging democracies, and the decline of the U.S. defense industrial base. These "dangers" needed to be defined within the context of the military strategy and within the parameters of defense resource constraints. Significantly, the services are being asked to apply resources to areas that have overt economic and political underpinnings. Given the emphasis on joint operations, the services are finding that they must compete for both missions and the resources to do them; thus, the hierarchy has to sufficiently capture all key joint operational objectives and tasks in which the Army could participate.

The research team concluded that the four dangers emerged in multiple places within the Strategy-To-Tasks hierarchy. Again the generic structure was slightly altered to accommodate the changes. Figure 8 shows our conceptualization of the overall structure. Notice that the four dangers and subsets of the dangers appear (in parts) both as national military objectives and as military operational objectives. There are additional levels that reside under these, but they are not shown here. The subset contains the sub-military operational objectives that could be performed by the U.S. military.

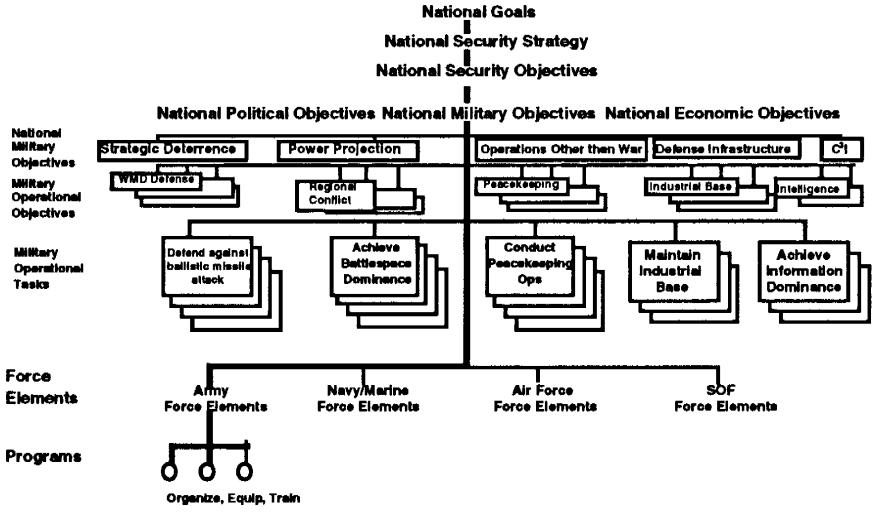

Figure 8. Strategy to Tasks As Applied to the U.S. Army

The military operational tasks contain lists of generic military tasks. Some of the tasks are clearly Army missions; others are being competed for within the services. Another dimension in the definition of operational tasks that probably would have not made the list four years ago is cooperation with coalition and United Nations forces. We also found that it was necessary to ferret out non-warfighting tasks such as: "assist in disaster relief operations", "provide security for relief workers", and "evacuate non-combatants from risk areas."

The approach that we outlined has enabled the Army to begin to evaluate its force structure and modernization programs against the

other services by operational objective and task. We call this "the competition among dissimilar systems." By this we mean that the DoD leadership will decide a system's funding based on its ability to provide capabilities to multiple mission areas, or that it is unique but necessary in order to support a particular mission. In the current U.S. DoD environment every resource decision must be justified from these various perspectives. Figure 9 is an illustrative comparison of competition among dissimilar systems.

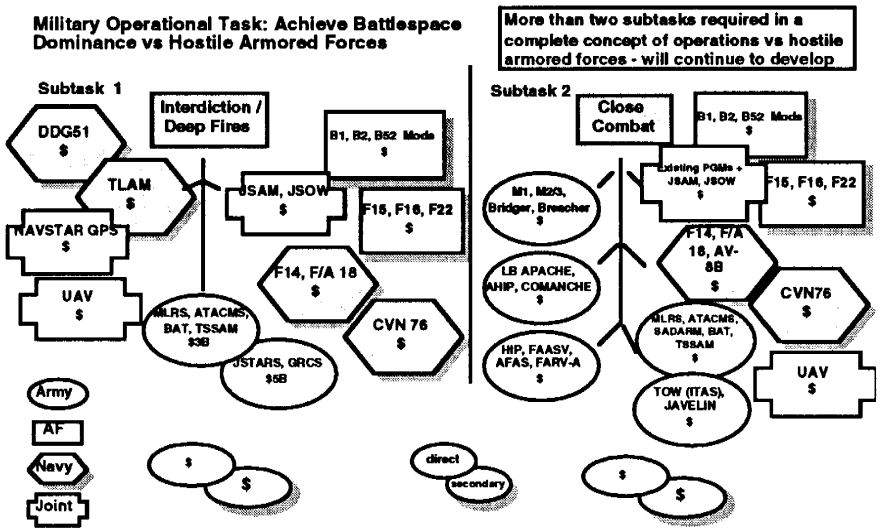

Figure 9. An Illustrative Comparison

THE EMERGING ROLES OF CINC IN THE PPBS PROCESS[8]

The Goldwater-Nichols legislation of 1986 placed new emphasis on the role of the CINCs in defense planning, particularly in the integration of their requirements into the resource allocation process. Given that USFK is a sub-unified command whose mission is integrally linked to a coalition environment -- Republic of Korea and the United Nations, the command provided an important case study. We wanted to see that if we could link U.S. national objectives to programs in such a multidimensional environment. Political and economic considerations are integral to any military decision made in this theater. In addition, cost-sharing issues had to be considered in any resource decisions.

The objective of Strategy-To-Task, in its application to the USFK, is to provide the command with a basis for evaluating alternative programs that potentially could meet the command's warfighting needs, and then to establish and justify the command's resource priorities within the context of the national security strategy. The CINC's plans establish requirements for military forces and provide a basis for

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[8] The RAND team consisted of Leslie Lewis, John Schrader, William Schwabe, C. Robert Roll and Ralph Suarez, and Marney Peet. This research was sponsored by General Robert RisCassi, who was CINCUNC until his retirement in July 1993. The research team is grateful to him in providing us support through all phases of this project.

evaluating alternative ways to achieve operational objectives. CINCs are essentially the demanders of resources.

In an environment in which the threat and operational demands are defining DoD requirements, the CINCs' input into the resource allocation process is critical. CINC input assists in building consistency between planning guidance for the resource allocation decision process and CINC operational plans. CINC participation also enhances the credibility of resource decisions and how adequately they are funded. This is done through Congressional testimony as well as through informal discussion within the context of the PPBS decisionmaking apparatus.

A natural tension, however, emerges between the CINCs' focus on present warfighting capabilities versus the longer-term investment strategy for which everyone must be sensitive in an environment of declining resources. Recently, with the decline in DoD expenditures and a redefinition of our national military strategy from a global perspective to a regional one, CINCs are being forced to consider their short-term requirements within the context of long-term warfighting needs. They must be able to clearly articulate these needs to the services (the suppliers of the resources); CJCS, who helps determine the warfighting priorities, and Congress, which approves the funding. For USFK, the CINC also needs to understand a longer term investment strategy, given the cost sharing issues.

Application of Strategy-to-Tasks to Commander, U.S. Forces Korea

The unique aspect of the USFK work is that Strategy-to-Tasks links force elements (programs) and the tasks and objectives they support. We propose that resource issues should be addressed using linkages of resources to supported objectives explicitly in decision papers and in program development forums. This means that when an issue, such as the cancellation of a program, arises in the budget review process, Commander, U.S. Forces Korea (COMUSFK) would be able to quickly identify tasks and theater operational objective influenced by a decision, evaluate the role that the system would play in defense of the Korean peninsula, and identify other objectives that the program influenced.

The United States' military presence in Northeast Asia contributes to the deterrence of the Peoples Republic of Korea's aggression against the Republic of Korea and to the continuation of U.S. participation in growing economies of the region and the increasing strength of democratic regimes. Resources committed to support our forces in the Republic of Korea, Japan and offshore in the western Pacific need to be evaluated with respect to both military and non-military critieria. As is well known the Commander of U.S. Forces Korea (COMUSFK) is multi-hatted.

CINC United Nations Command (CINCUNC) is responsible for maintaining the armistice until a permanent peace treaty is in place. He is also the commander of the U.N. forces in the event of the renewal of hostilities. Planning for future military operations in the Peninsula requires an understanding of the capabilities of forces earmarked for the defense of the Republic of Korea and the continued long-term commitment of both U.S. and ROK forces. On the other hand, the focus of CINCUNC is necessarily narrow given that the U.N. resolutions enfranchising his position are quite specific and limited. For instance, broader regional security issues are outside the responsibilities of CINCUNC. Changes in global security, however, affect CINCUNC. The decline of the Soviet threat has resulted in a far

more unstable and isolated North Korea, and concurrently, has led to the United States reducing its troop presence in Asia, in general, and specifically, in Korea. Although U.S. troop withdrawals are currently on hold due to the North Koreans' refusal to permit IAEA nuclear inspections, the trend is clear that the *initial* defense of the Republic of Korea (should hostilities resume between North Korea and the Republic of Korea) will depend on ROK capabilities.

COMUSFK has responsibilities that include the defense of South Korea with combined forces of the Republic of Korea and those U.S. forces allocated to him. In terms of the U.S. DoD organization for command and control and resource planning, COMUSFK is a subordinate commander under the Commander-in-Chief, Pacific Command (USCINCPAC). His primary reporting channel for resource and plan development is through USCINCPAC; it is important, therefore, that both COMUSFK and USCINCPAC understand the needs and perspectives of the other. The common threat between the two is the linkage from the National Security Strategy through the National Military Strategy down through the regional (Pacific) security objectives and to the theater (Korea) objectives that COMUSFK needs to support. These latter two categories are less clearly defined and possibly not shared as much as they could be between USCINCPAC and COMUSFK.

In all three roles (CINCUNC, CINCCFC, and COMUSFK), the senior U.S. Commander in Korea needs to participate in the tough decisions that will be made in Washington. The Strategy-To-Tasks methodology is intended to provide a framework and a process that provides the resource decisionmakers a common language and tableau of objectives and means to achieve objectives.

We defined for Korea a six-level structure: levels one through five focus on policy and operational objective that are important to COMUSFK; level six embodies the resource categories. Figure 9 shows the Strategy-To-Tasks framework as it applies to USFK. At the highest level we consider national security objectives as set forth in documents such as the national security strategy. The national military objectives are derivative and include political and economic objectives that can be supported by military forces. The source of these objective is the National Military Strategy document developed by the CJCS. Regional objectives for the Asia-Pacific region are found in a variety of sources that recently include the Clinton Administration's submissions to Congress and the Bush Administration's Nunn-Warner Initiatives. Although a number of formal documents contain these objectives, their linkages and interdependencies are not normally contained. Instead they are treated as stand-alone sources of requirements. As we proceed from board goals to specific actions that a commander can be expected to perform, we need to address theater operational objectives for Korea and the tasks that are necessary to support these objectives.

Defining an appropriate set of objectives and tasks will go a long way toward providing coherence in reporting on theater problems and placing resource issues in an appropriate context. We proposed an initial set of objectives and tasks, and will continue to refine them through interactions with key participants in Korea, Hawaii and Washington, D.C.

USFK Strategy-To-Tasks

Our concept for linking resource issues with objectives is so that alternatives can be generated that are based on specific sets of

objectives. Constructing the "right" set of objectives is a continual process because as the world changes so do U.S. objectives.

The upper tiers of the hierarchy are the same as the other applications. These include U.S. national goals, national security objectives and national military objectives. The specifics of the Korea theater emerge in regional security objectives. This is an expansion of the national security objectives. In this instance, we are interested in the Asia-Pacific region. Because of the political and economic importance of the Pacific rim, our military policy is strongly influenced by these other factors.

Regional objectives are based on higher level guidance. We identified eight key objectives:

(1) Protect the United States and its allies from attack

(2) Maintain regional peace and stability

(3) Preserve our political and economic access

(4) Contribute to nuclear deterrence

(5) Foster the growth of democracy and human rights

(6) Discourage proliferation of nuclear, chemical, and biological weapons, and missile technology

(7) Ensure freedom of navigation

(8) Reduce illicit drug trafficking

Although these objectives were based on strategic guidance for the Pacific they are sufficiently general so that they could apply to other regions. Figure 10 shows the first three levels of the hierarchy. The shading applied to the figure is done to illustrate an assessment of our ability to achieve the regional objectives of "Stop Proliferation" and "Reduce Illicit Drug Trafficking" (Bad). The objective of "Foster Growth of Democracy" is shown as questionable. When this methodology is fully instituted it would reflect the judgment of USCINCPAC and provide a basis for communicating concerns inside and outside the Department of Defense.

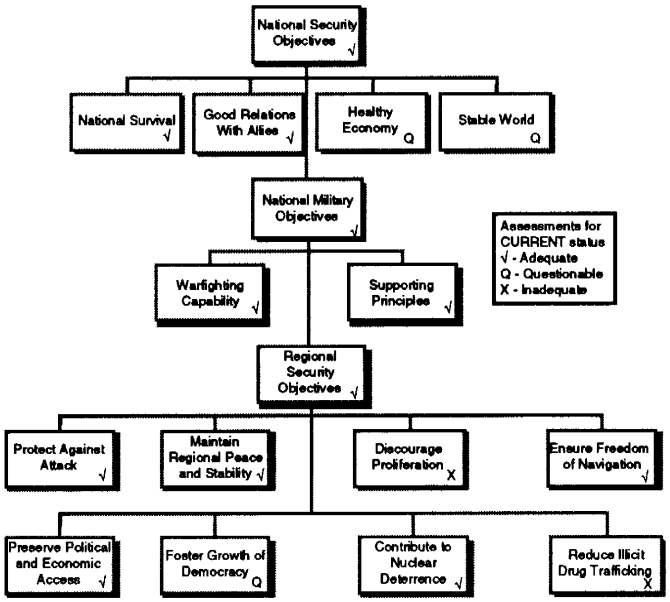

Figure 10. A Three-level Objectives and Assessments Tree

Thus, it is at the next level, **Theater Operational Objectives,** that we begin to specify regional attributes. The theater objectives are quite specific, it is at this level that we can begin associating resources with a specific activity. And because resources can be associated with these objectives, U.S. and Republic of Korea economic and political considerations are important at this level of the assessment. They are the first place that such considerations can be integrated into the analysis.

Theater operational objectives for Korea have been constructed from the viewpoint of the senior U.S. commander in theater. They have been constructed from a number of sources: command documentation, Congressional testimony and interviews with staff members. They were broken down into first- and -second level objectives:

- Lure North Korea out of its Cold War belligerent stance

  - Deter North Korean aggression and defend, if necessary

    -- Defend using combined forward defense

    -- Defend using U.S. nuclear weapons as necessary

    -- Deter attack through arms control and confidence and security building measures (CSBMs)

    -- Support increased cost sharing with the ROK government

    -- Maintain Korean War Armistice

  - Encourage North-South talks

- Discourage proliferation of weapons of mass destruction and ballistic missiles

- Encourage and facilitate the development of the ROK economy

• Implement Nunn-Warner Initiatives (COMUSFK)

- Transition to ROK leadership of Korean peninsula defense

- Reduce U.S. forces presence in Korea

- Maintain U.S. presence in Korea

• Contribute to Regional Stability

- Encourage stable democracy

- Promote reunification (under favorable terms)

- Reduce illicit drug trafficking

Figure 11 shows the theater operational objectives for USFK. Again we have applied assessments to them. For instance, a *questionable* status has been given to **North-South Talks, Arms Control, ROK leadership of Korean defense,** and **Reunification**. These assessments reflect the uncertainty of the moment of North Korea's intentions or possible actions. The ROK leadership issue reflects the status quo as far as transfer of command to the ROK, given recent North Korean actions on the nuclear inspection issue. The assessment of *Bad* is given to non-proliferation goals because of North Korea's unwillingness to cooperate.

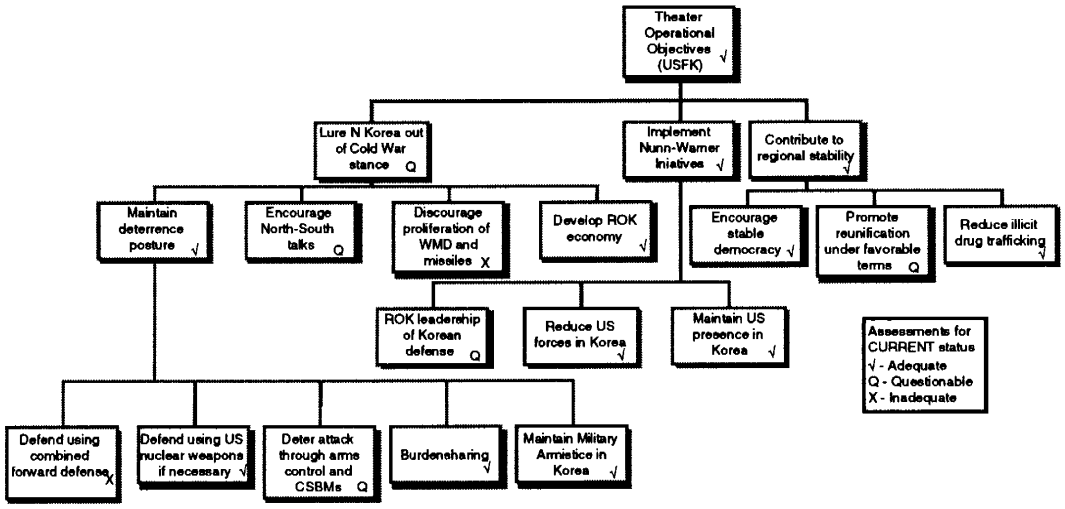

Figure 11. USFK's Theater Operational Objectives

Also constructed at this level were theater operational objectives for the Pacific. These reflect the USCINCPAC viewpoint. We did this so

that USFK had an ability to evaluate their theater operational objectives against those set by USCINCPAC for the Pacific theater. Figure 12 shows a summary of USCINCPAC's Pacific Theater Operational Objectives.

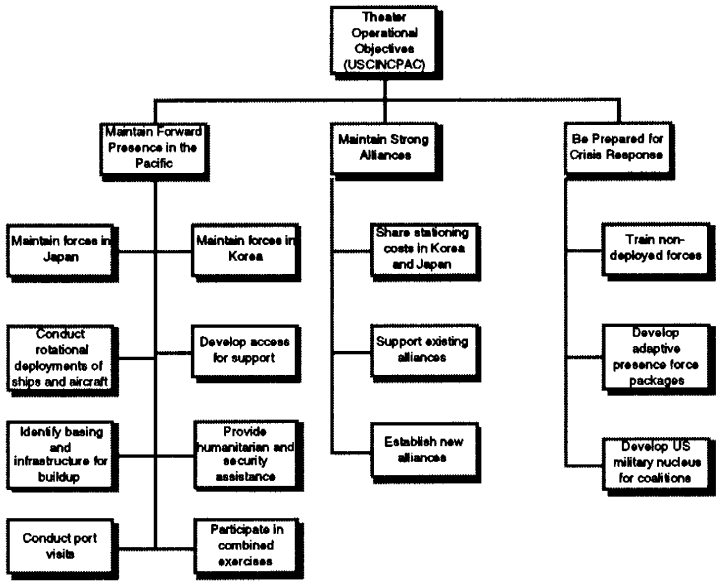

Figure 12. USCINCPAC Theater Operational Objectives

As expected, the theater operational objectives reflect a broader viewpoint. Though many force elements are the same, the total resources considered by CINCPAC must include the total theater assets. USCINCPAC is also concerned with broader and potentially conflicting theater objectives. Because of the proximity of the North Korean threat, USFK objectives have a large warfighting component, while USCINCPAC is more concerned with shaping the politico-military environment so that the threat of war is substantially reduced. Both the viewpoints, however, are valid and must be considered in any resource decisionmaking framework.

Putting all the pieces together into a single coherent picture is possible, if we show only major objectives at each level. This is done in Figure 13. The single representation of the complex and interacting political, economic and military objectives that a commander faces is still not simple, but it should be useful in identifying where specific resource issues have an impact. Conversely, if resource issues arise that cannot be tied to these objectives, we may be understand why that is the case.

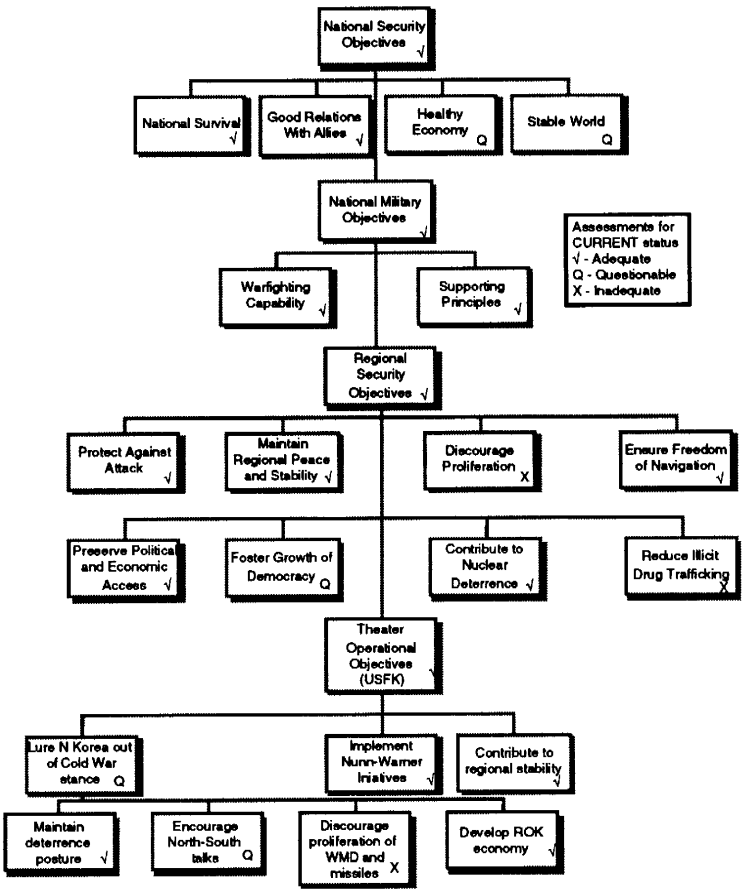

Figure 13. Objectives Hierarchy Tree for USFK

Operational Tasks in this application are formulated by the CINCs. They are the specific actions that must be performed in order to accomplish operational objectives. Each task is defined within the context of an operational concept. An operational concept weaves together the various systems, organizations and tactics needed to accomplish a particular set of tasks.

An operational concept is disaggregated into tasks that require resources in order to be accomplished. The development of a hierarchy of objectives permits us to consider the operational tasks that military forces can perform in support of important theater objectives. Tasks and sub-tasks can be developed by thinking of a particular objective -- **Defend South Korea from North Korean Attack Using A Combined Forward Defense** -- as a military operation with an end-to-end concept of operations.

Figures 14 and 15 show a breakdown of a single operational task, **Combined Forward Defense**, which is the defense of the Korean peninsula with conventional weapons involving U.S. and ROK forces working together to prevent the loss of Seoul before stopping and reversing a North Korean invasion. Other concepts of defense are not discussed in this paper. A number of phases were identified, as shown in the figures. The figures show the general sequencing of tasks. An assessment would

develop all concepts of forward defense and perform tradeoffs against military, economic and political considerations. In this assessment, however, the alternatives would be driven primarily by military effectiveness issues.

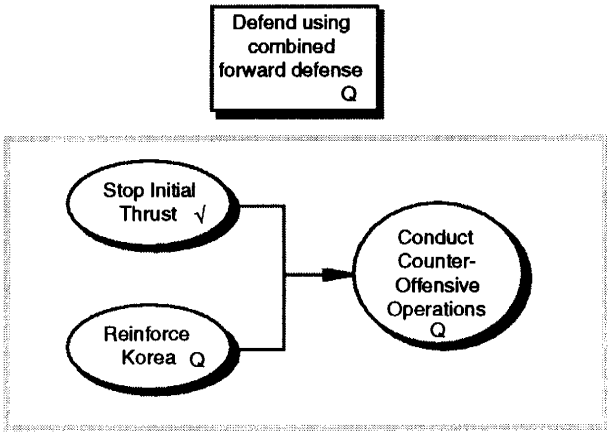

Figure 14. Sequencing of Operational Tasks For Combined Forward Defense

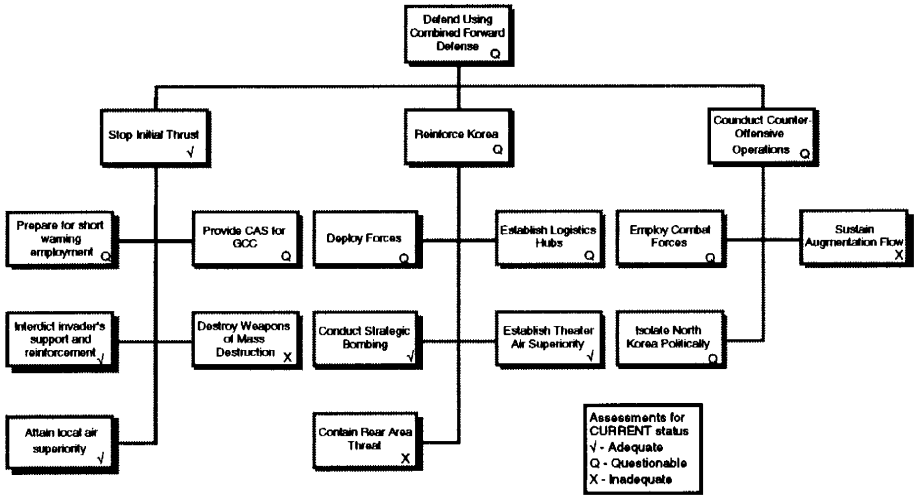

Figure 15. Operational Task Breakdown For Combined Forward Defense

Every theater objective must have at least one operational task associated with it. Tasks are the means to achieve objectives. We broke down individual tasks and sub-tasks, considering an alternative way to achieve objectives, building in each instance on an end-to-end picture of activities and the resources necessary to achieve them. An example of this type of breakdown is shown in Figure 16.

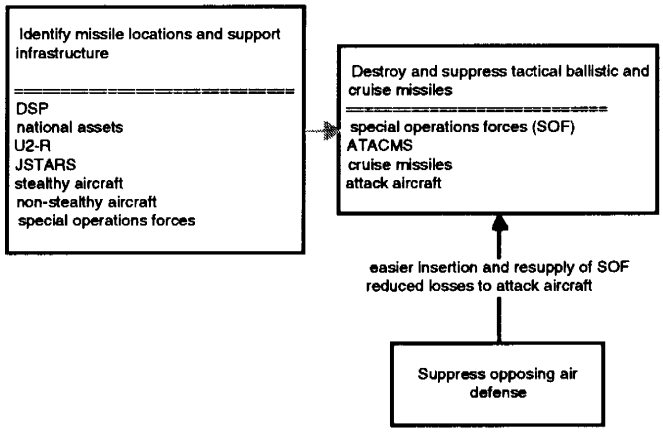

Figure 16. End-To-End Concept To Neutralize Enemy Weapons of Mass Destruction

The end-to-end concept of operations describes capabilities required to accomplish tasks and permits association of force elements (programs) with achieving operational objectives. The task of reinforcing Korea contains a subtask of deploying forces. Two concepts of operations are: (1) rapid deployment using only airlift and forces with prepositioned equipment, and (2) robust deployment using fast sealift shipping in addition to airlift. Assessments of our ability to accomplish the tasks depend on the concepts of operations considered (and their required capabilities) as well as the resourcing of program elements.

Force elements form the final category. Force elements are also programs. A task is accomplished using force elements in a sequenced application of capabilities. The assets used and the sequence of their use is defined in the concept of operations. For instance, if we consider the capability **"Collect data on friendly and opposing assets"** it can be accomplished using a combination of assets like JSTARS, through HUMINT, and by SOF units. Each of these force elements may be available to the theater commander.

Capabilities are the building blocks of operational concepts. Capabilities are provided by combining force elements. In the case of COMUSFK, some force elements that provide capabilities reside in theater on the Korean peninsula (U.S. and Korean); other planned support forces reside outside the theater controlled by USCINCPAC or other CINCs, until hostilities commence. Capabilities are combinations of force elements such as carrier battle groups or composite wings.

After we constructed a database of objectives, tasks, and capabilities, it was necessary to extract relevant parts to provide a basis for discussing resource tradeoffs and the implication of changes in programs. The purpose of the issue paper is to provide a single, consistent form for reviewing issues and obtaining COMUSFK guidance on resource problems. Figure 17 shows our example of what an issue paper could be.

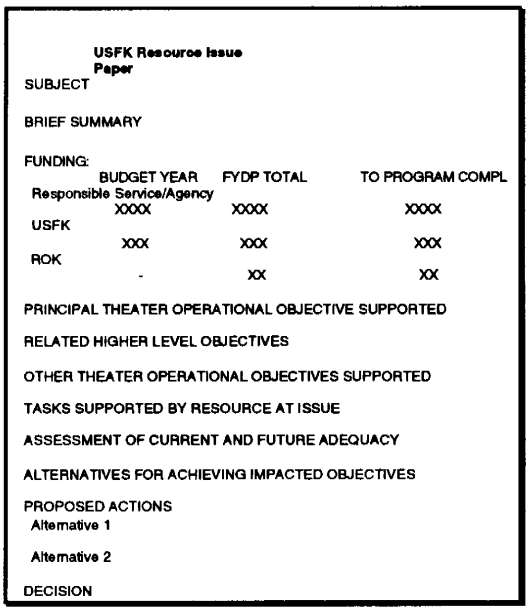

Figure 17. Structure of USFK Resource Issue Paper

Though more detail may be required, such as a breakdown of command or program fundings into budget categories, the intent is to identify the general magnitude of the issue, USFK financial involvement, any non-U.S. funding implications, and to provide a perspective on our year's needs and costs. Strategy-to-tasks linkages are presented keyed to the principal theater operational objectives being supported by the identified resources. Related high-level objectives and other theater operational objectives would be simply listed to show the implications of changes in resourcing.

The "meat" of the issue paper is the assessment of the adequacy of current and future force elements. It would explain the role that the resource at issue plays in the bigger picture of national, regional, and theater objectives. Of particular interest are cases in which a resource has no identifiable impact on objectives. When that occurs, it may be that, although a capability is improved, it still does not change our ability to achieve an objective or accomplish a task. For instance, if CORPSAM improved our air defense capability against high performance North Korean attack aircraft but had no real capability against SCUDs with submunitions, we might see no impact on our ability to protect the force. Other capabilities, such as air-to-air destruction of North Korean attack aircraft or destruction of North Korean airfields may be the primary way that the threat of attack on air hubs by aircraft is achieved and we still are left with no effective counter to SCUD attack.

Alternatives for achieving objectives are separately culled out to emphasize the need to consider tradeoffs at all levels. If CORPSAM was able to significantly increase our ability to defend large forces on the move, as in counter-offensive operations, if only there was no threat from SCUDs, we might identify complementary programs to identify SCUD locations. By facilitating their destruction before launch, we remove the effect of the deficiency in missile defense capability.

INSTITUTIONALIZING THE METHODOLOGY

Currently, each of the applications of the methodology is in various stages of automation. Our concept of operations for the Strategy-To-Tasks methodology is a computer database including listing of objectives, tasks, and resource data which provide the source for descriptions and a capability to generate diagrams showing linkages among objectives as well as a simplified way of displaying assessments.

The data base is contained in a simple EXCEL spreadsheet that runs on a desktop computer. In each application, an organization has been identified which is responsible for overseeing the total data base. Individuals are allowed to view and make recommendations for change in the data base, but only the organization with oversight responsibilities is allowed to rebaseline the framework. Oversight responsibiities have been given mostly to organizations who oversee the resource allocation and management -- the Program Evaluation and Analysis (PA&E) offices, force integration, and resource management.

The various Strategy-to-Tasks data bases have been generated through a lot of interactions with the staffs and their relevant components. The data bases have also been updated as the guidance has changed. Our goal is not to maintain the data bases, but to baseline them and "turnkey" them for client utilization. The data bases for USSOCOM and USFK are the most mature. With each automation activity we increase the data bases' ability to facilitate analysis.

We have also recommended supporting analytic tools that would facilitate option building. These have included: cost models, simulations, spreadsheets, and simple data bases. On occasion, we have linked Strategy-To-Tasks to an existing model or data base that is already being utilized by a particular client. The clickdown allows linkages to show and highlight potential problems.

The adoption of the Strategy-To-Tasks methodology also has organizational implications since it establishes a framework for how resources are identified and managed. The organizational implications fall outside the parameters of this discussion, but let us suffice to say that its adoption has contributed to some organizational realignments. In most cases, the reorganizations have contributed to streamlining functions, and, where appropriate, to eliminating organizational redundancies.

The applications of the Strategy-To-Tasks methodology demonstrates how total operational concepts can be developed and evaluated. It ensures that logistic and sustainability issues are considered along side major weapon systems. This whole concept is what we call "operationalizing the PPBS process."