

Operation Allied Force: Target generation and approval

The Commander in Chief, U.S. European Command asked CNA to analyze the target generation and approval process used in Operation Allied Force, the NATO bombing campaign against targets in Kosovo and Serbia. We began by reconstructing the process. We found that target development, spawned from necessity, began as an ad hoc process. As the operation evolved, target development emerged as a complex, collaborative process that included inputs from geographically disparate commands throughout the theater and the U.S. and from a variety of functional areas of expertise, such as national and tactical intelligence, weaponeering and targeteering, and legal. On average, targets spent about one week in development and with the theater commander for approval.

The process used to gain National Command Authorities' (NCA) approval of targets was not unique to this operation. The same general process had been used in Operation Desert Fox, the contingency strike against targets in Iraq conducted in December 1998. Although Allied Force evolved from a pre-planned, pre-approved contingency operation to a longer campaign, the NCA's target approval process was only partially adapted to meet the requirements of continual strikes. The NCA granted the theater commander authority to approve targets in specific categories. Other target categories, however, required NCA approval on a target-by-target basis and were handled through the existing target approval process developed for Desert Fox. For those requiring NCA approval, targets spent about two weeks in Washington before a decision was available to the theater commander—if a decision was made at all. Indeed, by the end of

the operation, a significant backlog of targets had built up with the NCA.

The process of gaining NATO approval of targets was established for this operation and depended on personal relationships between the theater commander and key individuals. NATO had no pre-existing, agreed-upon policy or procedures for approving targets. Instead, the North Atlantic Council designated the NATO Secretary General its executive agent for approving specific targets. In addition, various NATO countries took interest in specific targets or target categories. SACEUR worked personally with the Secretary General and country representatives to gain approval of these targets. For those targets requiring NATO approval, a decision was typically available the same day SACEUR consulted NATO authorities, and few targets were left undecided at the end of the operation.

Throughout the operation, participants bemoaned the absence of strategic guidance for Allied Force. However, our review of the U.S. and NATO planning documents revealed that USCINCEUR/SACEUR's strategic guidance, intentions, and priorities were consistent throughout the operation. The problem was not an absence of guidance but rather conflicting views of how to operationally achieve the objectives. Indeed, some commanders advocated an operational plan that the theater commander judged to conflict with the political authorities he had been granted by the NCA and NATO. We concluded that the current preferred approach to operational strike planning and the intelligence support that has been built for that approach are not designed for politically constrained operations, and recommended that the military develop alternative approaches for future operations.

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Disturbing trends in first-term attrition

Although recent attention has started to reduce the rate of bootcamp attrition, the overall levels of first-term losses paint a disturbing picture. At each stage—bootcamp, specialized training, and in the fleet—first-term enlisted personnel are leaving at rates above those of the early 1990s. And when there are differences across personnel, it is the higher qualified and better trained whose attrition has increased the most.

We used CNA's Street-to-Fleet database to track sailors by their fiscal year of entry for the first 45 months of service. The figure shows the trends. The top line shows that losses at 45 months of service rose from 35 percent for the FY 1990 accessions to slightly under 40 percent for the FY 1996 accessions. Attrition rates at 12, 24, and 33 months of service also increased.

Perhaps most disturbing is that the largest increase in losses is among those that tend to be most successful in the Navy:

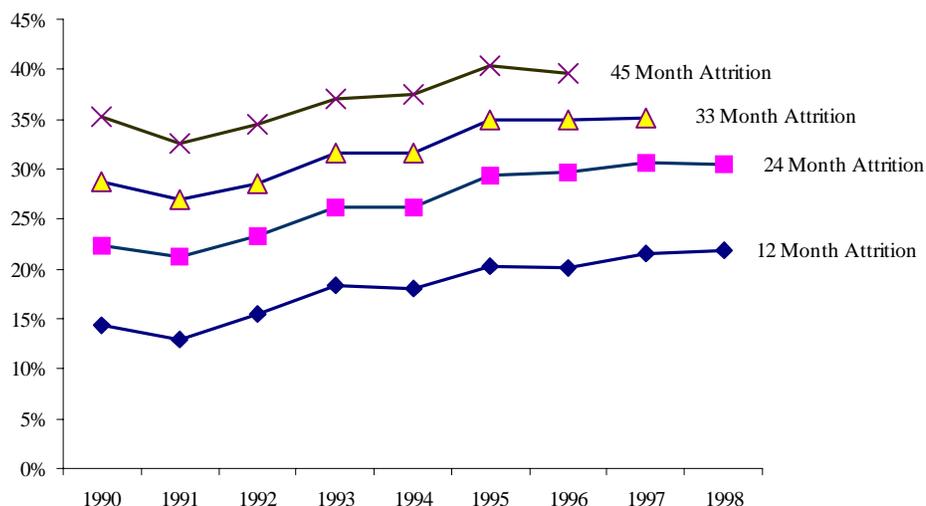
- The increase in bootcamp attrition, which peaked in FY 1999, has been disproportionately among the best recruits. Since the mid 1990s, attrition of high school graduates who did best on entrance tests and who were in the Delayed

Entry Program has increased by one-third; the attrition among high school dropouts who directly shipped is unchanged.

- Attrition of six-year obligors in the A- and C-Schools is also up. Between FY 1990 and 1997, the attrition rate of four-year obligors in school after bootcamp fell slightly. During the same period, however, the attrition rate for those signing six-year contracts increased from 11.4 percent to over 18 percent.
- Attrition is up in the fleet. Comparing losses to those in the late 1980s, the most technically skilled sailors have a 5-percentage-point higher attrition after 24 months while the GENDETs have a 2-percentage-point higher fleet attrition. Overall fleet attrition at 24 months rose from 17 percent to 18.5 percent.

Although some attrition is appropriate and necessary, it is costly and adds pressure to recruiting. Clearly, some of the personnel leaving are comparable to those who in previous years completed their tours; others among the losses could have productively completed their tours. Currently, CNA is examining reasons for the trends and exploring management practices that might reverse them.

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Average strength vs. end strength

The Military Services are required to have a specific number of personnel at the end of each fiscal year. As part of the Unified Legislative and Budget (ULB) process, the Army proposed a shift from specifying end strength to specifying average strength. OPNAV N1 asked CNA to assess the effect of such a shift on the management of Navy personnel.

Our analysis identified problems with using an average-strength target. Specifically, we found that an average-strength goal would provide less stability in both recruiting and force size:

- Recruiting would become more difficult to manage because the new metric would compound early-year problems. With an average-strength target, recruits at the beginning of the fiscal year would add more to the average than recruits at the end of the year. For example, if the Navy fell short by 1,000 recruits in the first half of the year, it would have to attract about 2,000 more recruits in the second half to produce the same average. As a result, recruiting would more likely go through a boom-bust cycle.
- Historically, Navy personnel strength peaks in the late summer and then declines until late spring. Under an average-strength rule, the pattern would not likely be as regular or stable. Planners would constantly balance being over strength with being under. Further, problems in one year would carry over to the next. For example, with average-strength goals, if the Navy had too many people near the end of the year, it would have to shed large numbers to bring down the average. Thus, it would start the next year significantly below the required average.

As a result of the analysis, we recommended that the Navy oppose this initiative.

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Managing Navy modeling and simulation

Discussions with senior Navy leaders from 30 offices most involved with computer modeling and simulation (M&S) reflect CNA's assessment of the Navy's recent efforts to manage this technology. The Navy must take strong action now to focus the efforts of the M&S community toward the real needs of the warfighter and to improve the intellectual foundation underlying warfare modeling and the decisions on where and how the Navy invests in M&S.

Without such action, the next-generation M&S systems needed by the fleet and program offices may never reach IOC. Or worse, once fielded, these systems may fail to satisfy the requirements of end-users. The Navy could strengthen the development and application of M&S by reorganizing M&S management along one of three paths:

- Stronger centralized management by one office (currently OPNAV N6)
- Strong decentralized management by functional area offices
- Outsourced M&S management.

We believe decentralized management—which would transfer the management responsibilities to qualified Navy organizations for training, warfare assessments, acquisition, and experimentation—offers the greatest prospect of delivering the required M&S systems and support to the warfighter.

Satisfying M&S responsibilities through centralized management presents a formidable challenge because no single office can be staffed with the expertise needed to support the users and developers of M&S in the diverse applications being pursued. The diversity and complexity of the M&S systems suggest that fewer efficiencies are to be gained by having them all managed by one office. And benefits anticipated through centralized management are outweighed by the challenges of identifying a single, all-embracing champion for Navy M&S willing to take on this additional duty, staffing a single office with the

broad range of talent needed, and establishing the mechanisms to identify and control M&S funds and enforce M&S policy.

The single common thread running through all of the Navy's M&S programs and applications is data—broadly defined as scenario descriptions, threat libraries, environmental representations, conceptual models, and performance databases. Under decentralized management, the Navy should retain a small corporate M&S office focused on overseeing the data. The Navy has an inherent interest in making sure that offices in and outside the Navy use the appropriate data in models and simulations, especially data describing force levels, weapon loadouts, and performance characteristics of naval units. Compiling and managing the data from a central office would reduce the time required to generate and critique data and to ensure consistency across applications.

Finally, the Navy may want to consider outsourcing entirely the management of M&S activities. The Navy already outsources much of its M&S work to various contractors. Placing the responsibilities for managing M&S with a single outside organization in which the Navy has utmost trust and confidence—a preeminent Navy lab, contractor, or FFRDC—could free up naval officers to work issues better matched with their skills and reduce the Navy's risks in the development of the next-generation M&S.

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Wargaming in NMITC's curriculum

The Navy and Marine Corps Intelligence Training Center (NMITC) trains fleet intelligence specialists at the basic, intermediate, and advanced levels. The Commanding Officer asked CNA to help NMITC integrate wargaming into the training curriculum as an additional format and opportunity to teach the core skills required of intelligence professionals. NMITC used our products and recommendations to develop a practical application, using a commercial computer wargame, for its Ground Intelligence Officer Course. The students reported that playing the game reinforced the analytic skills they learned in standard lectures and gave them a better appreciation of the intelligence needs of the supported commander. We found that playing the wargame provided feedback directly to the students on their analysis. In their initial games against the computer, the students did not use the intelligence analysis and mission planning skills taught in the course and they uniformly lost the game. When they applied those skills in a second round of games, the students typically won, with significantly better performance in their exchange ratio against the enemy force. We continue to analyze the data from this practical application and are working to extend our work to the Navy Intelligence Officer Basic Course.

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