



ACQUISITION,
TECHNOLOGY
AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

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MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Terms of Reference -- Defense Science Board (DSB) Task Force on Time-Critical Conventional Strike from Strategic Standoff

Recent DSB and other government studies, as well as operational experience, have highlighted the need for the United States to have, within its options, the ability to strike with responsive conventional means when situations warrant. In many instances, precision and rapid response coupled with prompt and accurate battle damage assessment are the principal attributes required, even when U.S. forces are not present in the immediate area or when local access is severely restricted. Such a conventional capability -- characterized by rapidity of response, a high degree of precision and execution from afar -- does not exist today.

The technologies and C2 procedures to enable such a capability, including both the strike component as well as the supporting ISR component, are either available today or are in development. However, selecting the appropriate alternative to pursue involves establishing a number of tradeoffs and assessing the relative importance among many issues, including at a minimum, target set, strike basing, delivery range, time from authorization to strike to target impact, need for preparation (get ready) time, degree of precision, degree of blue force exposure, cost of ownership, marginal cost per kill, development time, and development risk. The study should seek to evaluate a complete range of options within several realistic scenarios. For example, it may be possible that increasing intelligence capabilities will provide adequate cueing and warning time to allow timely positioning of current or future tactical assets in order to accomplish many realistic missions.

These issues are complex, highly interrelated and span multiple services, as well as operational and technological disciplines. Accordingly, you are requested to establish a DSB Task Force on Time-Critical Conventional Strike from Strategic Standoff to explore and illuminate the various attributes associated with the different means of accomplishing such a capability. Parameters of Interest include:

1. Target set: Soft vehicles and individuals in the open to hardened facilities, some of which are defended and a part of a networked shell-game



2. Accuracy: Sub-meter to 10 meters, but the relevance of which depends on character of the target

3. Basing: CONUS, OCONUS, Surface, Sub-Surface, Air, Space for both the ISR and weapon

4. Kill Mechanism: Kinetic or DE, with signatures related to combat assessment. In addition, the kill mechanism should evaluate a timeline and pre-enabling techniques that either enable or enhance the kill mechanism, and magazine or reload capability to enable rapid firing.

As a function of the various alternatives being investigated, the Task Force should assess each alternative using four principal measures of effectiveness:

1. Time to strike: This should be examined not only as a function of a particular implementation concept, but also as a function of the ISR and strike demands of a given target type to achieve and assess a high probability of kill. In terms of moving or fleeting targets, this high probability of kill must also consider the surety and persistence of the supporting ISR concept and the inherent tradeoff between tracking/ID persistence and the time criticality of the strike response. Time to strike will be examined within the context of two distinct scenarios -- one in which sufficient tension and warning time is present to move assets into preparatory positions and one in which no warning time is available.

2. Cost: Rough Order of Magnitude for both development and procurement for 24/7 availability anywhere within the world temperate zones. Dependence upon other assets that may be available from other missions will be noted.

3. Development Risk: An assessment will be made of the development risk for assembling and integrating the entire end-to-end capability using DoD TRLs for the enabling technologies and an independent assessment of the integration risk.

4. Other: Any special requirements associated with a particular alternative should be noted here. These might take the form of policy issues, current treaty prohibitions, special training requirements, capabilities for peace-time practice and exercise, etc.

While the illumination of these tradeoff issues is the most important output product of the DSB study, it would be useful as well if the Task Force would include within its findings four specific recommendations:

1. A preferred approach if minimum acquisition cost were the dominant requirement and the near-term actions required to initiate development.

2. A preferred approach if minimum development risk were the dominant requirement and the near-term actions required to initiate development.

3. A preferred approach if operational flexibility were the dominant requirement and the near-term actions required to initiate development.

4. A preferred approach based on the Task Force's judgment when considering all of the competing pros and cons of the various alternatives and the near-term actions required to initiate development.

The study will be sponsored by me as the Under Secretary of Defense for Acquisition, Technology and Logistics, Under Secretary of Defense for Intelligence, Director, Defense Research and Engineering, and the Deputy Under Secretary of Defense (Acquisition and Technology). Mr. Bob Stein and Dr. Ron Kerber will serve as the Task Force Chairmen. Mr. Greg Hulcher and Mr. John Tuley will serve as Co-Executive Secretaries, and Mr. Andrew Chappell will serve as the Defense Science Board Secretariat representative.

The Task Force will operate in accordance with the provisions of P.L. 92-463, the "Federal Advisory Committee Act," and DoD Directive 5105.4, the "DoD Federal Advisory Committee Management Program." It is not anticipated that this Task Force will need to go into any "particular matters" within the meaning of title 18, United States Code, section 208, nor will it cause any member to be placed in the position of acting as a procurement official.



Kenneth J. Krieg