

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
RESEARCH DEVELOPMENT AND ACQUISITION
103 ARMY PENTAGON
WASHINGTON DC 20310-0103

23 DEC 1997

REPLY TO
ATTENTION OF

Dr. Michael S. Frankel
Chair, Army Science Board
103 Army Pentagon
Washington, DC 20310-0103

Dear Dr. Frankel:

Request that the Army Science Board (ASB) initiate a study: "Prioritizing Army Space Needs." This study, as a minimum, must address the Terms of Reference (TOR) described below. The ASB members appointed will consider the TOR as guidelines and may include in their discussion related issues deemed important by the sponsor. Modification to the TOR must be coordinated with the ASB office.

Background.

a. In order for Army information system materiel developers to make maximum use of current and future space assets specifically focused on national security needs, the Army will need to have in-depth understanding of the attributes and limitations of both existing and future space assets, regardless of which sector they are focused on supporting. This Army understanding will be needed to exploit national security space assets by continuing and expanding its already successful Tactical Exploitation of National Capabilities (TENCAP) program. The Army will need to establish new means to allow it to work cooperatively with the commercial space system developers with the goal of making commercial space systems as supportive as possible of Army needs with minimal or modest Army investments.

b. Although many of the Army's needs for better surveillance, intelligence, navigation, targeting, communications and environmental sensing capabilities may be achieved by use of existing and future space systems, alternative "nonspace" means should be considered from the point of view of technology, tasking restraints and cost-effectiveness.

c. Alternative "nonspace" ways to obtain the desired capabilities are associated with the use of organic assets (e.g., Guard Rail, tactical UAVs, tethered balloon systems, etc.). Other capabilities may be provided from shared or joint assets, such as Rivet Joint, JSTARS, AWACS, and the emerging high-altitude, long-endurance UAV systems, Dark Star and Global Hawk.

d. This study is motivated by a recently revamped Army space organizational structure thus making this an appropriate time to reexamine each of the Army's space efforts as new capabilities are identified against the backdrop of continued budget constraints.

e. The Army's initiative in digitizing the battlefield portends a number of new possibilities for the utilization of space assets. Space assets are potentially the major enabler of information dominance in the 21st Century. A clear understanding of the full potential of space platforms is therefore demanded.

f. The Army has a long, successful history of capitalizing on the national investment in space assets through such efforts as the TENCAP program. However, the traditional Army approach has been more to take advantage of what is available as opposed to influencing the requirements for space assets. The Army must develop a stronger voice in asserting the warfighter's needs for space capabilities.

g. The proliferation of a whole host of new and rapidly evolving commercial space systems provides an important new source for the satisfaction of important Army information system needs. The Army must capitalize on the potential value of these systems.

h. There are other new, organic Army and joint system development activities evolving. Tradeoffs between use of space and "nonspace" systems need to be carefully evaluated in order to maximize the effectiveness of the Army's limited resources.

Terms of Reference.

In order to provide the senior leadership of the Army with a new "future-oriented" Army Space System Alternatives Plan, the Army Science Board is requested to undertake a study that focuses on the following tasks:

a. Examine the ability of current and future national space systems to provide the surveillance, intelligence, navigation, targeting, communications and environmental sensing capabilities that Army XXI and Army After Next need.

b. Determine those existing and planned capabilities of the civilian space program which may provide some of the capabilities that Army XXI and Army After Next need. Also identify instances in commercially driven space development efforts where the Army might make modest investments or propose alternatives that could serve to satisfy critical Army needs.

c. Examine "nonspace" means to achieve needed surveillance, intelligence, navigation, targeting, communications and environmental sensing capabilities for the Army. In particular, examine the use, in theater, of High

Altitude, Long Endurance UAV's to act as either augmentation to or reconstitution of space-based capabilities.

d. Critically assess the technical, managerial, organizational, cost and vulnerabilities of the capabilities provided by each class of systems described in the foregoing paragraphs.

e. Identify and prioritize those efforts needed to ensure that recommended capabilities are appropriately leveraged in Army XXI and Army After Next.

Study Support. Cosponsors of this study are LTG Edward G. Anderson, Commanding General, U.S. Army Space and Missile Defense Command; LTG Thomas N. Burnette, Deputy Chief of Staff for Operations and Plans; LTG John N. Abrams, Deputy Commanding General, TRADOC. The Study Cognizant Deputies are Dr. Darrell Collier, Chief Scientist, SMDC and Dr. Herb Fallin, Director, Assessment and Evaluation, Office of the Assistant Secretary of the Army (Research, Development and Acquisition). The primary staff assistant is LTC Zappalla, SMDC; other staff assistants are LTC William Reiner, ODCSOPS; Mr. Andy Scharein, HQ TRADOC.

Schedule. The study panel will initiate the study immediately and conclude its effort at the report writing session to be conducted 13-23 July 1998 at the Beckman Center on the campus of the University of California, Irvine. As a first step, the study cochairs will submit a study plan to the sponsors and the Executive Secretary outlining the study approach and schedule. Conclusion of this study group will result in a final report to the sponsors in December 1998.

Special Provisions. It is not anticipated that this inquiry will go into any "particular matters" within the meaning of Section 208, Title 18, of the United States Code.

Sincerely,

Kenneth J. Oscar
Acting Assistant Secretary of the Army
(Research, Development and Acquisition)