



**DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
ACQUISITION LOGISTICS AND TECHNOLOGY
103 ARMY PENTAGON
WASHINGTON DC 2031-0103**



2 MAR 2001

REPLY TO
ATTENTION OF

Mr. Michael Bayer
Chairman, Army Science Board
2511 Jefferson Davis Highway, Suite 11500
Arlington, Virginia 22202

Dear Mr. Bayer:

I request that the Army Science Board (ASB) conduct a study on "Adapting Future Wireless Technologies" as a means of exploring opportunities for modernizing the Objective Force given future budgetary constraints. Appointed ASB members and consultants to this study are to consider the Terms of Reference (TOR) as a guide and may expand the study to additional relevant issues. Modifications to the TOR must be addressed with the Chairman of the ASB.

Background:

a. Army modernization will continue to be a challenge in the near and mid term due to very little upward movement in the Army's budget top-line. Modernization will be based on both 1) adopting or adapting commercially available technologies or developing technologies internally to meet Army needs; and 2) using potential industry business processes that quickly jump-start and leverage emerging technology.

b. I envisage that this study will provide practical insights into potential opportunities for leveraging the significant wireless technologies to maintain modernization during an era of flat or declining budgets as percentage of the gross domestic product. The results of the study should highlight science and technology opportunities that will assist Army Leadership prioritize research, development and acquisition in order to yield dramatic improvements to the Objective Force. The study should also highlight potential pitfalls associated with adapting commercial wireless technologies to determine the viability of using such an approach for modernization.

Assumptions:

(1) Study participants will leverage associated past study efforts by the Army, other Service Science Boards and RAND.

(2) Objective Force units will be fielded in the Army beginning in the 2010 timeframe.

(3) These units will be highly mobile, extremely deployable and adaptable to emerging situations.

(4) They will be required to conduct enroute mission planning and have accessibility to up to the minute logistical information.

(5) Equipment ruggedization may be a key acquisition criterion.

(6) At least a portion of operational communications must be secure and robust.

(7) Terrain and operational tactics will drive the communications technology needs and developments.

TOR: The study should be guided by, but not limited to the following:

(1) Examine potential future commercial wireless capabilities and recommend which capabilities may have applicability for the Objective Force.

(2) Identify the range and source of the devices that may operate, or show the promise of operating, in most deployment situations – desert, urban, and jungle.

(3) Provide specific recommendations and associated next steps for incorporating graphics and future voice capabilities as well as available power sources, computer visioning capabilities and future information management and compression technologies.

(4) Identify and evaluate process models on how the Army might integrate future technologies.

(5) Identify and assess opportunities for the Army and military to become more involved with and to facilitate shaping emerging commercial standards and protocols.

(6) Identify and assess wireless technologies that may enhance and support the features required to ensure tactical information dominance.

(7) Address the role of information management in sizing system capacity and issues such as quality of service (QOS).

(8) Evaluate the degree of enhancement that could be offered by commercial technologies in each of the layers in the 3-D architecture (terrestrial, A/B, space) to achieve connectivity.

(9) Address vulnerabilities and methods to counter use by adversaries

(10) Address issues posed by legacy systems

(11) Address joint and coalition issues

Study Sponsorship: Co-Sponsors for this study will be Assistant Secretary of the Army (Acquisition, Logistics and Technology); Director for Information Systems Command Control, Communication and Computers; Commanding General, Communications and Electronics Command; and Commanding General, U.S. Army Signal School.

Schedule: The study panel will initiate the study immediately and conclude its effort by June 30, 2001.

Sincerely,



Kenneth J. Oscar
Acting Assistant Secretary of the Army
(Acquisition, Logistics and Technology)