

DRAFT**TERMS OF REFERENCE****Lightening the Information Load
NRAC Summer Study 2012****Objective**

This Naval Research Advisory Committee (NRAC) study will assess the information requirements at all echelons in modern-day battlespace, including air, land, sea, and cyberspace; evaluate the current level of effectiveness and efficiency being attained; and recommend technological directions for optimizing the delivery and assimilation of available information to/by the warfighter. While emphasis will be placed squarely on the Marine in the battlespace, the essential connection of Marine Corps fighting elements to supporting Naval forces afloat and in the air will be addressed as well.

Background

Modern open-source information technologies in the hands of ascending nations as well as militant groups from even the most underdeveloped regions have revolutionized today's battlespace. They have enabled forces that are clearly inferior in formal organization and kinetic power to equal, and sometimes surpass, the effectiveness of developed conventional forces principally through superior speed of action.

For developed conventional forces, this tips requirements heavily to the left side of the kill chain: acquiring relevant data, deriving actionable information, and making this actionable information available to the warfighter quickly and in a form that is intuitive to each individual. While our collection, analysis, and dissemination capabilities are well established, our ability to provide customizable information quickly and efficiently to the elements in contact with the enemy is rudimentary at best. This gap is **manifest** in an unmanageable quantity of information that is effectively not accessible to those who need it the most.

Various concepts including “supply push,” which emulates the established military intelligence processes of the day, and “demand pull,” which is the direction of today’s commercial development, have been proposed for military operations for some time. Yet, the information content and flow to the warfighter is still truly optimized for only the most rudimentary operations. If our forces are to remain preeminent in the battlespace in the face of the identified and yet unimagined future threats, a clear direction for improving this situation must be established and executed vigorously now.

Scope

This study will be conducted at a classification level consistent with the information considered and the sensitivity of the findings.

Specific tasking includes:

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- Frame the information requirements of each echelon in the battlespace, and establish the shortfalls in availability, access, and presentation of essential information at all levels.
- Review any relevant human factors studies related to the ease of assimilation (by the human intellect) of information provided through technology available today and projected into the future.
- Identify and evaluate naval S&T initiatives as well as the direction of commercial development in guided information search/discovery/filtering that are being or could be pursued to optimize the information form and flow to the warfighter. Consideration must be given to speed of delivery and ease of assimilation, including the flexibility and adaptability of information presentation to suit a variety of individual recipients.
- Finally, recommend the direction of S&T to support the needs of future warfighters as they engage more diverse forces than **every** before imagined in the air, on the ground, at sea, and in cyberspace.