

**Terms of Reference
Marine Corps Distributed Operations
NRAC Summer Study 2006**

Objective

Study the emergent concept of Marine Corps Distributed Operations in order to develop a set of future technology insertions and training opportunities. This study will identify time-phased insertions based on capability requirements and shortfalls and address the risk associated with various courses of action. The study should expand on current concepts and models regarding power, protection, logistics, performance and training.

Background

The most fundamental component of Distributed Operations is the secure, mobile, flexible, and lethal Marine rifle squad. The capability challenges to this fighting element are primarily in the areas of either equipment or training. Specific challenges to today's distributed operations include:

- An excessively heavy combat load carried by the individual Marine threatens the squad's mobility and persistence;
- Marines are vulnerable to enemy small arms;
- squad communications equipment emits strong and persistent radio signals, while being limited to line-of-sight;
- the squad's non-integrated situation awareness and data collection systems place unrealistic training burdens on the Marines, and can divert the Marine's attention from the task at hand;
- the squad's equipment consumes large amounts of electrical power, supplied by a variety of batteries, increasing weight and re-supply challenges;
- and finally, the squad must be re-supplied, often in environments where anti-air threats make conventional helicopter operations difficult.

Analysis of these challenges from a systems approach may enable their mitigation through insertion of emerging technologies in materials, communications and information, among others.

Specific Taskings

This study will specifically:

- Compare and contrast the required capabilities of Marines conducting Distributed Operations with those required by current operations.
- Determine appropriate options for insertion of technology to support Distributed Operations and associated training; key upstream investments, technology monitoring, and go/no-go assessment points; and probable time frames for exploration and implementation
- Estimate the risk associated with particular options, and identify potential show-stoppers

Study Sponsor: The study sponsor will be Commanding General, Marine Corps Combat Development Command.