



DEPARTMENT OF THE NAVY
CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON DC 20350-2000

IN REPLY REFER TO

OCT 16 2006

MEMORANDUM FOR DIRECTOR, STRATEGIC STUDIES GROUP

Subj: STRATEGIC STUDIES GROUP XXVI THEME – “FIGHTING IN CYBERSPACE IN 2030”

1. Cyberspace opens a new dimension to warfare. As we look to the future and try to predict where we will be engaged in warfare, consider warfare in the information age – not only is it a seamless blend of sensors, networks, and advanced information technologies, it is also different in principles and concepts. Your task is to generate revolutionary naval concepts to ensure Navy capabilities in this emerging warfare domain in addition to our traditional domains.
2. Start by seeking an appreciation of the relationships between cyberspace and the traditional maritime domains including warfare and naval competition. With information and capital moving around the world at the speed of light, the geographic location of many knowledge-based activities is less important. The locus of strategic competition and operational advantage will increasingly shift to the ability to make sense of and use information in the cognitive domain. What will warfare be like in cyberspace? How do we provide the Joint Task Force Commander an intuitive understanding of this domain? How will the *1,000 Ship Navy* go to cyberspace? How would we respond if our potential adversaries create a virtual *1,000 Ship Navy*?
3. I want you to think in an unconstrained manner. Focus on the 2030 timeframe. Put as much effort into what we do not know as you do in what we know.
4. Here are some potentially interesting aspects, among others, to consider:
 - Consider scale, tempo, and other aspects of change. Be aggressive in identifying aspects of change that have been neglected or dismissed;
 - Examine blurring of strategy, operations, and tactics - how will we organize, train, and equip a future Navy to prevail in all domains;
 - Pay particular attention to how “command, control, and collaboration” must evolve;
 - Examine Navy culture - identify aspects that should be preserved, protected, and those that interfere with our ability to see, recognize, and adapt to future challenges.
5. Provide me a high-level blueprint that encompasses your longer-term view as well as a roadmap that includes immediately actionable steps – operational, process, and technological – that our Navy may take to begin developing the capabilities you envision.

M. G. MULLEN
Admiral, U.S. Navy