MAR 29 2002

DIRECTOR OF
NET ASSESSMENT

MEMORANDUM FOR THE SECRETARY OF DEFENSE

FROM: ANDREW MARSHALL

SUBJECT: Creation of an Organization to Explore the Information Aspects of
Warfare

BACKGROUND

Central to most of ideas about how warfare will change in the future is the
notion that the information and communication technologies should lead to new
operational methods and ultimately to major changes in warfare. We also already
see that precision strike is now possible in ways that it was not in the more distant
past, and that our ability to coordinate the actions of a wide variety of platforms or
units, even if they are widely separated geographically, is now possible in a way
that was never possible before. Information or superior information has always
been important in warfare. Napoleon's success can be seen as due to his ability to
use effectively available information and the staff that he created to support his
operational command efforts. There is reason to think that information will be
more central in the future than in the past. Therefore, a key competitive area in
warfare is likely to be based on being better at getting and using information than
one's opponent. One ought to start from a better position through superior
investment, better organization for exploiting information, training, etc. As
combat begins one would try to improve one's position by attacking and otherwise
screwing up including deception the opponent's information acquisition and
processing capabilities and defending against his efforts to similarly act upon our
information gathering and processing systems. The problem is that we don't have
an adequate basis for an analysis of the information aspect warfare, nor for
measuring the level of superiority we have in any particular situation. We talk
about information advantage, but there are few metrics. Also, our ability to model
the information aspects of warfare is very poor, and hence difficult to include in
any combat models that we have.

<u>SUGGESTION</u>

Create a RAND of the 1950's organization and provide it with a broad but clear mission statement. Such a statement might be something like the development of the science of the information aspects of warfare. The idea would be to bring together a very bright set of people and set them to work over an extended period thinking through the role of information in warfare and developing appropriate analytic tools, metrics and significantly improving our ability to model the contribution of information to the outcomes of combat. This is likely to be a decade long effort and not too expensive, although the bureaucratic obstacles to starting such a new Federal study organization would have to be negotiated with the Congress. I don't think this requires a lot of people; the numbers initially could be quite small, on the scale of 20-25 people in the organization. In any case, the key thing is picking the management and, as in the analogy with RAND, that means finding a Frank Colbohm and people like Charlie Hitch and John Williams to establish its character and provide initial intellectual leadership. Because there are no real experts in this area you would need to think about growing future Albert Wohlstetter and Herman Kahns. So young bright people with appropriate academic backgrounds that are willing to focus on concrete problems are what you need. Ideally, if I could, I would start two of these organizations and have them compete way to see which one could provide the best analytic framework for this area, the best case studies of the role of information in warfare, etc.