



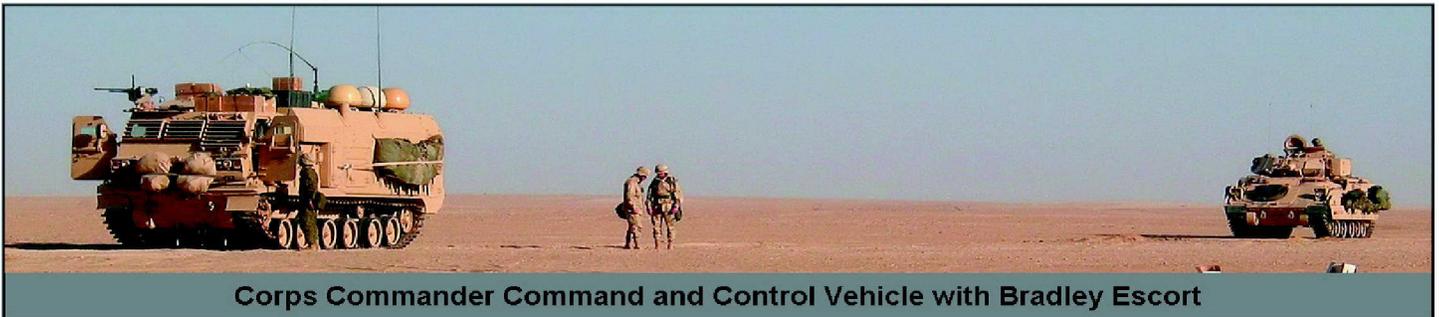
## **NETWORK ENABLED OPERATIONS IN OPERATION IRAQI FREEDOM: INITIAL IMPRESSIONS**

*By PROFESSOR DENNIS MURPHY*

“Network Centric Warfare (NCW) has the potential to contribute to the coalescence of the tactical, operational, and strategic levels of war. In brief, NCW is not narrowly about technology, but broadly about an emerging military response to the Information Age.” (Network Centric Warfare, Alberts, Garstka, Stein)

### **BACKGROUND**

The first Gulf War was conducted with legacy systems straddling the industrial and emergent information age. The major combat operations phase of Operation Iraqi Freedom (OIF), on the other hand, put into practice information age constructs and theory for the first time in warfare and was an impressive success in its speed and lethality. The impact of that network enabled campaign (often referred to as Network Centric Warfare) is the topic of a study conducted by the Center for Strategic Leadership, U.S. Army War College and commissioned by the Office of Force Transformation, U.S. Department of Defense. The study will be completed by the fall of 2005, but first drafts of the study hint at valuable operational and strategic insights.



Corps Commander Command and Control Vehicle with Bradley Escort

The study team has spent the past year researching 3rd Infantry Division (3ID) and V Corps major combat operations during OIF. The mission of the study is to conduct relevant research through documents, personal interviews, and surveys investigating the applicability of NCW tenets during this operation. Rigor was embedded in the study in three ways: by conducting over 50 personal interviews with participants of all ranks, particularly commanders; by compiling a statistical analysis of over 500 survey responses; and by establishing a peer review process with key senior experts. The peer review group included LTG William Wallace, (V Corps Commander during OIF-operational perspective); MG (R) Robert Scales (historical perspective); and Mr. E.B. Vandiver, Director, Center for Army Analysis (analytical perspective).

### **NETWORK ENABLED OPERATIONS**

So what is Network Centric Warfare? “It is about human and organizational behavior. It is based on adopting network-centric thinking and applying it to military operations. NCW focuses on the combat power that can be generated from the effective linking or networking of the warfighting enterprise. It is characterized by the ability of geographically dispersed forces to create a high level of shared battlespace awareness that can be

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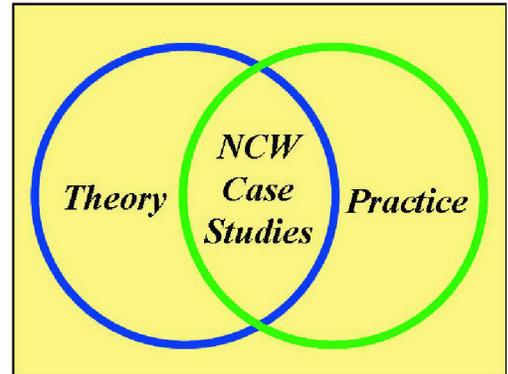
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exploited to achieve the commander's intent. NCW supports speed of command, which is the conversion of superior information position to action. It is transparent to mission, force size, and geography. A mature network-centric force has the ability to share information between sensors, regardless of platform, between commanders, regardless of location, and shooters, regardless of service." (Alberts, et. al)

NCW is not about: changing the nature of war; substituting the network for military force; or replacing all other older forces and forms of warfare. (Smith, "Effects Based Operations")

Network Centric Warfare subscribes to the following tenets:

- A robustly networked force improves information sharing
- Information sharing and collaboration enhances the quality of information and shared situational awareness
- Shared situational awareness enables collaboration and self-synchronization, and enhances sustainability and speed of command
- These in turn dramatically increase mission effectiveness



Given these tenets the case study evaluates the hypothesis that improved sensors, connectivity systems, and networked information technologies improved battle space situational awareness, understanding, decision-making and collaboration, which enhanced the combat effectiveness of US V Corps and its subordinate units. V Corps and 3 ID operations were characterized by their very high operational tempo, widely dispersed forces, and,



for the first time in major combat, a near real time common operational picture (COP). This COP was available from the maneuver company to the operational and strategic levels. The case study merges network centric warfare theory with practice for the first time and in doing so shows the benefit of network enhanced operations.

## FINDINGS

The uniqueness of this study was its landpower focus. Generally, the tenets described above certainly enabled operations but did not change the human nature of warfare, and the "fog and friction" of war was not eliminated by networked platforms and increased situational awareness. Therefore NCW is not a panacea or substitute for the principles of war or the art of command...but it certainly enhanced the ability of commanders to conduct combat operations. New information systems, sensors, and extended connectivity improved combat effectiveness. This extended connectivity allowed V Corps and 3 ID to both fight widely dispersed over extended distances and rapidly task organize and fully integrate newly arrived units into combat operations as shown in these findings:

- Increased connectivity and the flow of information provided freedom to command regardless of location. The network allows the commander to move about the battlespace and maintain command anywhere in the battlespace. The commander is "untethered" and can conduct "battle command on the move."
- On the whole, commanders made better decisions quicker because of the information they had readily available to them. The information systems did not make the decisions. There was still plenty of fog and friction. Commanders made better decisions, faster, and with more confidence. Most interestingly, the study found that with the shared common operating picture and the commanders' ability to interact with each

other that decision-making changed from a staff-centered planning focused process to a commander centered execution focused process.

- Information systems and the “richness” they provided changed the way upper echelon staffs functioned. Staffs spent less time gathering data. They had more time for analysis and synthesis and shifted to more execution-based support for the commander’s directed course of action rather than course of action development. This worked in a parallel “benevolent hierarchy” with senior and subordinate staff counterparts to meet the commander’s intent.
- Even a limited fielding of information/connectivity systems provided value added when the limited systems were leveraged. In these cases officer initiative and innovation were critical in placing these few systems in the key nodes necessary to track critical logistical resources and requirements.
- Voice communications were the primary means of gaining situational understanding and ensuring unity of command and/or effort at all levels. The wide band single channel TACSAT was critical to success. This was the only reliable means of long-range communications and a primary situational awareness tool. The use of the TACSAT for command nets at the Corps and Division created a “fish bowl” effect where anyone able to monitor the net gained increased situational awareness and understanding. This combined with the common operational picture provided a significant synergy beyond the individual capabilities of either system.
- Increased situational awareness had a significant positive impact on risk taking. Increased risk tolerance was reflected in boldness and audacity. One senior commander indicated he could assume a risk, discover he had made a mistake and correct it before the enemy realized he had taken the initial action.
- Training and exercising with the information systems are vital for commanders, staffs, and operators. Similarly, information systems increase the requirement for planning, exercising, and rehearsals for the implementation of effective procedures. Networked systems do not, of and by themselves, solve problems. They simply enable the abilities of commanders, staffs and operators who are trained individually and collectively to exploit the enhanced situational awareness the network provides.
- Bandwidth must be treated as a high-demand, low-density “class of supply” requiring command attention. Networked systems provide a greatly enhanced capability, but not without a price. Bandwidth is an issue for commanders. It is a commodity that must be acquired and requires prioritization and distribution.



## STRATEGIC AND OPERATIONAL LESSONS LEARNED

The Center for Strategic Leadership is currently in the process of culling out the operational and strategic lessons learned from this case study to share with both the national security community and War College faculty and students. More research is required. However, some initial impressions may be inferred from the findings that lead to questions for further development.

- The capability to fight over a widely dispersed battlespace with significantly enhanced situational awareness may have future force structure implications. Can we fight with a smaller force in major combat operations because of the ability to adapt, react and focus combat efforts? Do network-enabled operations allow us to achieve strategic efficiencies?
- It appears that network enabled operations may have strategic leader implications. Does it require a more adaptive leader? Does it require a more disciplined leader given the awareness of actions at levels down to company and below? What is the role of the staff in a commander-centered execution process?

- Operationally, commanders are now capable of assuming greater risk. How will this impact the conduct of campaigns and battles? What processes will be necessary to exploit this capability without undue reliance on it?
- Greatly enhanced situational awareness allows for more efficient reception, staging, onward movement, and integration of the force; it allowed a near seamless transition of new forces into the theater. How will this capability impact the operational fight? What will it mean for strategic lift, prepositioned stocks and operational maneuver?

## CONCLUSION

Network-enabled operations achieved proof of concept in the major combat operations phase of Operation Iraqi Freedom. In fact, one may argue that theory and practice having now merged, the concept is no longer transformational, but an accepted and enduring part of current and future combat. The Center for Strategic Leadership study is the first of its kind to focus on landpower and to place NCW in the context of its impact on the human dimension and vice versa. Initial findings show that there is, and will continue to be, fog and friction in war. Understanding the art of command remains a key to success. Constant and effective individual and collective training remain essential to smooth functioning operations. But the study also shows that NCW enhanced the ability of U.S. forces to conduct battles and campaigns by providing a common operating picture and situational awareness never before experienced in combat.

Much analysis still needs to be done. The Center for Strategic Leadership is currently in the second phase of the study. This phase will produce answers to the strategic and operational questions posed above and will certainly raise and answer more questions. That research will then be shared with faculty for incorporation into the War College curriculum and with key stakeholders in the national security community for consideration in strategic decision-making. The study results should be available in the early fall 2005. Follow on work is anticipated in the application and impact of NCW in the stability and reconstruction phase of operations.

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# NETWORK ENABLED OPERATIONS IN OPERATION: IRAQI FREEDOM: INITIAL IMPRESSIONS

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