

## NETWORK CENTRIC WARFARE

# NAVAL AVIATION: THE KEY ENABLER



By RAdm. John Nathman  
Director, Air Warfare



Naval Air Systems Command

Recent combat operations in Iraq and Kosovo have vividly demonstrated the precision and lethality of the Navy/Marine Corps team. These operations carried out by the *Enterprise* (CVN 65), *Carl Vinson* (CVN 70), *Theodore Roosevelt* (CVN 74) and *Kitty Hawk* (CV 63) battle groups have highlighted that strike warfare is at the heart of what we do in Naval Aviation. Whatever the asset—patrol, helicopters, electronic attack, surveillance or strike fighters—every platform has a role in strike warfare. Aircraft such as the EA-6B *Prowler* are indispensable for ongoing combat operations in Kosovo and are in high demand in every other theater as well. Other platforms such as the P-3 *Orion*'s antisurface warfare improvement system with recently upgraded suites of synthetic aperture radar, electro-optical sensors and

An F/A-18 *Hornet* is loaded with a JSOW, first used in combat during Operation Desert Fox, while "ordies" transport weapons to the flight deck in December 1998.



PH1 Todd Cichonowicz

Stand-off Land Attack Missiles (SLAM) are playing a role never before seen in strike warfare. Naval Aviation's unique ability to respond anytime, anywhere is keeping us on the hard edge of combat operations.

Investments in strike and strike support aircraft are generating huge payoffs in the numbers of targets we are able to attack. In just the last few years we've more than doubled our strike capability with precision weapons and new-generation high-sortie-rate aircraft. With the introduction of the F/A-18E/F *Super Hornet*

and Joint Stand-off Weapon (JSOW)/Joint Direct Attack Munition (JDAM), we will see a quantum improvement in strike capability, as evidenced by the phenomenal 26 for 26 success rate of the JSOW to date. The armed helicopter program is well underway, and in the near future we will see most deployed helicopters capable of being armed with Hellfire and Penguin missiles.

The challenge we now face is to maximize the combat performance of these individual platform capabilities by integrating them into a seamless

network. Advances in information technology promise to give us a revolutionary increase in combat effects by shifting the focus from specific platforms to a netted force. Netting geographically dispersed sensors and shooters into a coherent fighting force that can rapidly observe, orient, decide and then act will dramatically increase our ability to hit a diverse array of aimpoints, including mobile, short dwell targets.

Getting the right information to the right shooter at the right time is what Network Centric Warfare (NCW) is all about. Naval Aviation is uniquely positioned with platforms, sensors and weapons systems to give NCW center stage in naval and joint forces. NCW comprises Force Coordination/Planning, Force Command and Control, and Engagement.

On the Force Coordination/Planning level, new systems such as a PC version of the Tactical Aircraft Mission Planning System will compress the time it takes to do mission planning and significantly increase the fidelity of the product. We envision a Navy-wide Intranet where an aviator will be able to pull all relevant mission planning data from a variety of sources, arming him with the latest information prior to going in harm's way. Targeting data from overhead sources and unmanned aerial vehicles will be rapidly analyzed and measured into high-resolution coordinates by the Precision Targeting Workstation. These new technologies will allow us to do mission planning and derive shooter-quality information from imagery in minutes where it once took hours.

On the Force Command and Control level, the E-2C *Hawkeye* with Cooperative Engagement Capability (CEC) has the potential to provide the "ones and zeros" for high-quality shooter data to enable any platform in the net to remotely engage a target using another platform's sensors. Combining CEC with the Radar Modernization Program (RMP), currently in the demonstration process, will dramatically increase overland/maritime detection capability. CEC and RMP are very powerful targeting data systems, but they will also provide a single integrated air picture to build situational awareness and battlespace knowledge. Use of an integrated picture for establishing the defensive and offensive postures of the force will be a revolution in how we fight and put weapons on target.

Due to the unique nature of airborne platforms and sensors, Naval Aviation has more dispersed platforms on the Engagement level of Network Centric Warfare than any other force. Our potent mix of new-generation strike fighters, armed helicopters and SLAM-capable maritime aircraft are all armed to deliver precision ordnance. New and improved weapon systems are dramatically increasing the combat capability of these already potent platforms. JSOW and JDAM will be greatly enhanced with automatic target acquisition systems. Synthetic aperture radars and electronically scanned radars will provide high-resolution data for engaging targets at long range. Netting off-board and on-board sensors will not only give aviators better situational awareness, but will also give them critical weapons quality targeting data.

Our concept of Network Centric Warfare is still "a work in progress." The Naval Strike Air Warfare Center and other naval centers of excellence are actively developing new technologies for fighting and winning. Further, Navy leadership has made a tough choice to dedicate scarce resources to a Navy-wide Intranet and other technology initiatives. Our ultimate goal is to provide the warfighter the tools required to make innovations in strike warfare. Network Centric Warfare will enable our hard-edged aviators to do their jobs and dominate the battlespace of the 21st century, whenever and wherever they are called upon.

Stand by for more exciting news to come.

# NAVAL AVIATION news

**RAdm. John Nathman**  
Director, Air Warfare

Published by the Naval Historical Center under the  
auspices of the Chief of Naval Operations

**Dr. William S. Dudley**  
Director, Naval Historical Center

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*Naval Aviation News* (USPS 323-310; ISSN 0028-1417) is published bimonthly for the Chief of Naval Operations by the Naval Air Systems Command and the Naval Historical Center. Editorial offices are located on the Washington Navy Yard, 1231 10th Street SE Suite 1000, Washington DC 20374-5020. Periodicals postage is paid at Washington, DC, and additional mailing offices. The Secretary of the Navy has determined that this publication is necessary in the transaction of business required by law. The use of a name of any specific manufacturer, commercial product, commodity or service in this publication does not imply endorsement by the Navy. Photographs are U.S. Navy unless otherwise credited.

**POSTMASTER:** Send address changes to *Naval Aviation News*, 1231 10th Street SE Suite 1000, Washington DC 20374-5020.