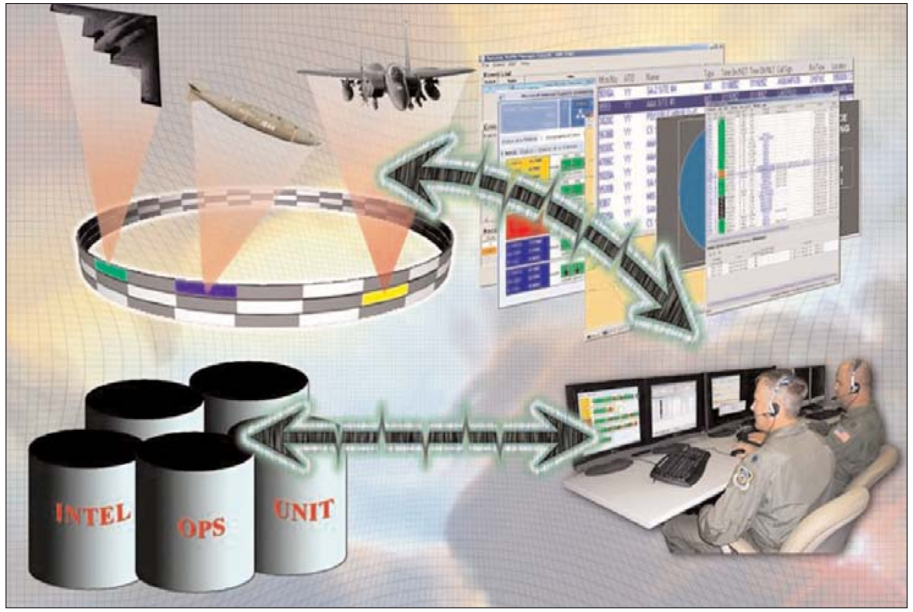
# JEFX 2004




**By 1st Lt. James Bressendorff**
JEFX 2004 Public Affairs

**NELLIS AIR FORCE BASE, Nev.** —The Data Link Automated Reporting System was one of the revolutionary initiatives tested during the Joint Expeditionary Force Experiment 2004 at Nellis AFB, Nev.

JEFX 2004 was an Air Force-sponsored experiment that assessed new and emerging technologies that can be quickly fielded.

"With this system we've reduced the time it takes to acquire, identify, assess, track and destroy a target by several orders of magnitude," said Combined Forces Air and Space Component Commander Lt. Gen. Bruce Carlson. "This capability greatly enhances dynamic mission planning because we have real-time access to such data as weapons available, fuel status and aircraft currently available to be tasked."

DLARS may be a new acronym, but the system has been in the planning stages for several years.

"DLARS started out as an outgrowth of a 2003 Lockheed Martin independent research and development project called Total Integrated Warfare," said John Herring Jr., program manager. "The project was demonstrated to Gen. Hal Hornburg, commander of Air Combat Command, and Gen. Gregory Martin, commander of Air Force Materiel Command, in December 2003. General Hornburg was so impressed he e-mailed the Air Force Chief of Staff, Gen. John Jumper, about the project and his desire to include it into JEFX."

Mr. Herring also recalled the events leading to the birth of what is now known as DLARS including product demonstrations to the commander of the Air Force Command and Control, and Intelligence, Surveillance and Reconnaissance Center, Maj. Gen. Tommy Crawford. There were also meetings to include DLARS as an initiative into JEFX, then only two months away.

Instead of fielding a new data format for DLARS to extract, officials decided to levy existing technologies such as the Air Force's newest aircraft data link system, LINK 16, and integrate it into the system.

"General Crawford came to the battle lab in January and saw what I was doing with another initiative and said, 'That looks great, but let's use LINK 16 information and get aircraft information into the CAOC faster,'" said Maj. Rod Schack, DLARS project officer.

Because of DLARS' unique architecture, Major Schack's team was able to integrate the system into JEFX within a short timeframe.

"DLARS is the last initiative added to JEFX 04. The tight timeline didn't give us room to make changes to the JEFX structure, so we built a system that paralleled it. Because of that, DLARS could integrate with JEFX and the Theater Battle Management Core System," said Major Schack. "The design also allowed us to build a flying version of DLARS in two days which was flown on … a flying test bed."

The information available through DLARS can also be used for close-air support requests from the Army, provide information to the unit-level maintenance crews to support aircraft regeneration and assist in upper-level air-refueling management process.

"During Operation Iraqi Freedom, the Air Support Operations Center, which manages CAS assets, needed to request additional air assets from the CAOC. At that time, the system in use was not built to search for assets that could be retasked. As a result, there was a lot of labor expended to find those assets because they were needed immediately," said Pete Peterman, lead Army CAS and situational awareness assessor. "With DLARS the requests happen at the touch of a button. Once a request is made the system searches for available aircraft and generates a listing of possible air assets that could be retasked to fulfill the CAS request within seconds."

The system also helps improve aircraft regeneration times by providing information the aircraft stores down to unit level.

"DLARS can provide the wing operations center quick turn display information that can be used to calculate how much fuel and munitions are needed even before the aircraft returns from a mission," said Maj. Bill Mengers, JEFX interdiction offensive duty officer. "With this ability, maintenance crews can preposition assets to put aircraft back into the fight even faster than before."

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The system also has the capability to assist in upper-level air-refueling management by helping to compute tanker-fuel off load based on data from receiving aircraft.

"DLARS in combination with LINK 16 information enables refueling management at the operational level by providing real-time fuel status for each receiving aircraft," said Mr. Herring.

This capability assists with decisions regarding prioritization based on how long an asset can stay on station, if it will have enough fuel to be redirected to another target and prioritization of aircraft based on fuel load and weapons load, said Major Mengers.

"The benefit has been realized in the Time Sensitive Targeting cell in JEFX 04 when searching for a suitable asset with proper weapons and enough fuel to strike a dynamic or emerging target," he said.

Although the recommendation to the Air Force chief of staff on whether or not to incorporate DLARS into the Air Force will not be made for some time, officials are already looking into possible future applications based on this system.

"The logical progression for DLARS is to exploit more data links. All you would need to do is translate the information into a usable format," said Major Schack. "DLARS is a very simple concept. The data has always been there; it's just a matter of taking the data and combining it with existing databases. That's what DLARS does; it correlates, sorts and displays useful information so we can make quick, accurate decisions."