

Fire Support Command and Control (FSC2) Team's Continued Quest for Optimal Joint Fires

Dr. Gary Notte

Joint fires have proven invaluable to U.S. and coalition forces in theater. Joint fires occur when two or more services use lethal and nonlethal weapons in coordinated action toward a common objective. However, as with most collaborative steps taken in DOD, decisions on joint fires must be supported by all echelons to achieve success. The Army's FSC2 division, which falls under the management of Project Manager Battle Command (PM BC), challenges itself daily to increase collaboration in joint fires, while simultaneously redefining the tools that warfighters use to maintain these connections.

Pictured is the High Mobility Artillery Rocket System, a joint fires system. (U.S. Army photo by Kari Hawkins, Redstone Arsenal, AL.)





SPC Todd Thomas, a Fire Support Specialist with Headquarters Co., 2nd Brigade Combat Team (BCT), 82nd Airborne Division (Abn Div.), receives a call for fire from troops in contact with the enemy during 2nd BCT's Virtual Joint Fire Coordination Exercise held at the BC Training Center. (U.S. Army photo by Mike Pryor, 82nd Abn Div.)

Making Jointness a Priority

Senior defense leaders, including those from the FSC2 team, continue to reinforce the idea of joint interdependence to ensure they are meeting the needs of warfighters on the battlefield as quickly as possible. The 2005 Army Strategic Planning Guidance stated that to reduce redundancies and gain efficiencies, the services must become interdependent, where each must rely on the other for certain capabilities so the entire force can function with greater effectiveness. Joint interdependence is the purposeful reliance on other service, coalition, and joint capabilities. It maximizes complementary and reinforcing effects and minimizes

vulnerabilities. The Army will continue implementing initiatives that leverage interdependence, a concept that is central to both the expeditionary mindset and the campaign quality we seek. This concept of interdependence also extends to interagency and coalition partners, enhancing the ability of Army and joint forces to effectively achieve joint force campaign objectives.

The FSC2 team leverages this guidance as much as possible. As FSC2 develops fire support technologies, it strives to incorporate international and coalition technologies where suitable. Today, it focuses on achieving 100 percent joint collaboration in every aspect of

fire support. The PM and the FSC2 team strive to make jointness a natural condition for everything they do. Given the nature of the security environment, sustained operational commitments, and challenges inherent in responsively implementing the defense strategy, joint interdependence is a strategic and operational imperative.

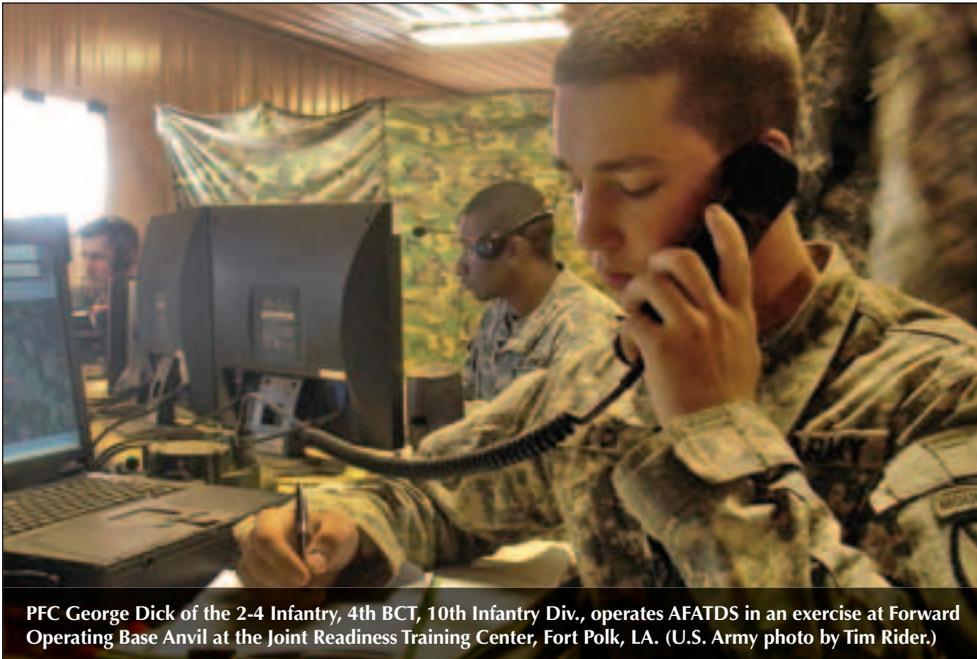
Enlisting the Tools of the Trade

FSC2 manages six products, all of which support multiservice applications:

- Advanced Field Artillery Tactical Data System (AFATDS).
- Joint Automated Deep Operations Coordination System (JADOCS).
- Pocket-Sized Forward Entry Device.
- Lightweight Forward Entry Device.
- Centaur (Lightweight Tactical Fire Direction System).
- Gun Display Unit-Replacement.

These products represent the first digital entry into the fires chain, as well as the

JADOCS represents a true joint and coalition tool, providing a timely, accurate, and detailed operational environment view for planning, coordination, and execution of time-sensitive and component targets.



PFC George Dick of the 2-4 Infantry, 4th BCT, 10th Infantry Div., operates AFATDS in an exercise at Forward Operating Base Anvil at the Joint Readiness Training Center, Fort Polk, LA. (U.S. Army photo by Tim Rider.)

C2 to conduct both lethal and non-lethal fires. While all FSC2 products support multiple services, AFATDS and JADOCs stand out among these systems as true joint and coalition tools.

AFATDS

AFATDS is the land component's automated fire support C2 system that processes, analyzes, and exchanges combat information within the Army/U.S. Marine Corps (USMC)/joint architecture. Its interoperability with other Army, USMC, U.S. Air Force, and U.S. Navy C2 systems, as well as international partners, makes this system an asset for commanders throughout the services. The technical fire direction capability is at the heart of AFATDS, designed to ensure that the right surface targets are quickly engaged with the most efficient fire support asset that meets the joint task force commander's intent. AFATDS provides fully automated support for planning, coordinating, controlling, and executing fires and effects. It supports weapon systems such as mortars, field artillery cannons, rockets, close air support, attack helicopters, and naval surface fire support systems. FSC2 recently enhanced the performance of AFATDS by adding fires planning, scheduling of fires, and

target list development to include no-strike lists and restricted target lists.

One unique aspect of AFATDS is its future approach to providing coalition support in current-day conflicts. FSC2 is currently designing the Artillery Systems Cooperation Activities (ASCA) interface, which is the first concerted effort to build a fires C2 interface among multiple countries. This tool will enable disparate country systems to interoperate and send bidirectional data from their own C2 systems to execute fires missions and planning/scheduling of fires using other countries' assets. ASCA recently underwent successful developmental testing, but is undergoing further analysis prior to implementation.

AFATDS continues to greatly enhance fire support in multinational and coalition activities, providing for successful

collaboration on the battlefield. The FSC2 team looks forward to the future development of ASCA and hopes to implement it soon. Joint fires could not be accomplished effectively across the battlefield without AFATDS C2.

JADOCs

JADOCs is also a joint and combined warfighting application that provides warfighters with a combination of tools, services, and mission managers to bridge "capability gaps" identified by combatant commands (COCOMs) and service commanders. JADOCs focuses on the joint service component, coalition-targeting process, and coordination carried out from battalion through the Joint Force headquarters and COCOMs based on the operational situation. Today, JADOCs represents a true joint and coalition tool, providing a timely, accurate, and detailed operational environment view for planning, coordination, and execution of time-sensitive and component targets.

JADOCs provides capabilities in each of the six phases of the joint targeting cycle (see figure on Page 43). Nomination of targets and subsequent vetting through execution and coordination enables the commander to assess an estimation of battle damage and collateral damage. JADOCs' mission coordination role is to deconflict, collaborate, exchange digital information, and visualize. Prior to JADOCs, there was limited horizontal mission coordination between programs of record (PORs). JADOCs has specifically solved this weakness and provides the horizontal coordination elements, interface, communications tools, and

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mission coordination managers between services, coalition, echelons, systems, and functional areas.

COL David Moore, PM BC, saw the capabilities that JADOCS brings to the targeting and fires area while in theater. “I am very proud of our ability to leverage JADOCS,” he said. “This system is present on U.S., NATO, and other national networks. It is a key enabler to ensure artillery and other fire support systems could be made available to the coalition fight.”

In 2008, the Vice Chief of Staff of the Army approved the transition of JADOCS from a capabilities development for rapid transition program to an acquisition program. This designation aligns JADOCS with the *DoD 5000.1* and *DoD 5000.2* acquisition documents, which will establish the system as a POR. JADOCS is currently employed in Central Command, European Command, Pacific Command, and U.S. Forces Korea with more than 3,000 dedicated users. Recently, JADOCS has been selected as the key targeting coordination system and provides services for effective coordination between Army, joint, and coalition systems in functional areas of multiple mission threads, such as deconfliction/collaboration, digital information

Soldiers from Charlie Battery, 1st Battalion, 321st Abn Field Artillery Regiment, fire 155 Howitzer rounds using an M777 weapons system in theater. The Soldiers were registering targets so they will have a more accurate and faster response time when providing fire support. (U.S. Army photo by SPC Evan D. Marcy.)



JADOCS plays a role in all six phases of the joint targeting cycle.

exchange, and visualization of the common operating picture.

Improving Joint Fires

Our Future Force concepts call for decisive maneuver through simultaneously distributed operations, continuous operations at high operational tempo, and direct attack of key enemy capabilities and centers of gravity. A networked approach to both lethal and nonlethal fires and true joint fires interdependence are necessary elements of this future concept. PM BC and FSC2 continue work to achieve fully interoperable joint BC and joint fire control systems while still trying to achieve a seamless interface between communications and computer networks.

“Even though each individual system is performing well, we are working to do better tying our information systems together more tightly and efficiently,” Moore said. “By doing this, we can continue to help the warfighter organize, mature, and share this information to ensure

that both U.S. and coalition forces maximize their freedom of maneuver and secure their objectives.” The Future Force will be equipped with enhanced systems and capabilities that improve our current platform and readiness. We continue to partner in joint initiatives to improve integration of necessary joint fires across the entire spectrum of conflict in support of land force operations throughout the range of military operations, from small-scale counterinsurgency to strategic global strike. Our concept development, experimentation, and capabilities generation processes must proceed along a joint path with that purpose in mind. The zenith for fire support coordination would be absolute joint integration to achieve the responsiveness and effectiveness required, and this is what the Army aims for each day.

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