JOINT TARGETING WITH THE ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM (AFATDS)

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Joint targeting has long been a problem with limited answers. Anyone that has worked the issues of the air tasking order (ATO), integrated targeting order (ITO), or coordination of joint fires knows the frustration of manual charts, floppy disk transfers, and long phone calls. Soon we will have one of the answers to this complex problem.

The introduction of the Army's AFATDS as the fire support system of the Army Battle Command System (ABCS) provides one solution for coordination and planning for the near term. AFATDS will supply an automated digital coordination in Version 1 and through the tactical air support module (TASM), will provide digital linkage and automatic planning for Version 2.

AFATDS is a multiservice (Army and Marine Corps) software system that runs on the Army's Common Hardware for ABCS. AFATDS is being coded under the management of the Program Manager for Field Artillery Tactical Data Systems (PM AFATDS) out of Ft Monmouth, New Jersey, with Magnavox as its prime contractor. AFATDS Version 1 has just completed its initial operational test and evaluation with the 1st Cavalry Division at Ft Hood, Texas.

Automated Coordination

AFATDS provides the commander with a robust ability to conduct automatic digital coordination on all fire support requests from Army Tactical Missile System (ATACMS) deep missions to short range mortar missions. This coordination allows the commander to engage targets in the fastest time possible with positive coordination across the battlefield.

One typical scenario for this coordination is a high payoff target, such as a surface-to-surface missile, is digitally received from an intelligence asset and is passed from the all source analysis system to the AFATDS at the Corps Deep Operations Coordination Cell (DOCC) or directly to AFATDS from Joint Surveillance Target Attack Radar System (JSTARS). The AFATDS will automatically check the high payoff target list and conduct weapon-target pairing. The AFATDS will display to the operator if the target violates any restrictive fire measure. In this scenario the missiles path violates an air corridor that had been input by the battlefield coordination detachment (BCD), formerly battlefield coordination element (BCE), at the joint air operations center (JAOC). The operator at the AFATDS receives an amber coordination warning on his intervention window,

meaning coordination must take place. The operator would "OK" the mission and an automatic message would be sent to the BCD for coordination with the JAOC combat operations division. The target will appear on the display with a handshake icon. The BCD operator presses on the handshake icon and either approves or denies the request. (In the future the coordination will be sent to Contingency Theater Automated Planning System (CTAPS) digitally for the same coordination.) If approved, the mission is sent digitally to the firing unit for processing. This process can be streamlined in the optimum system with no operator intervention at the DOCC. This is the way AFATDS was planned to operate. (See Figure 1.)

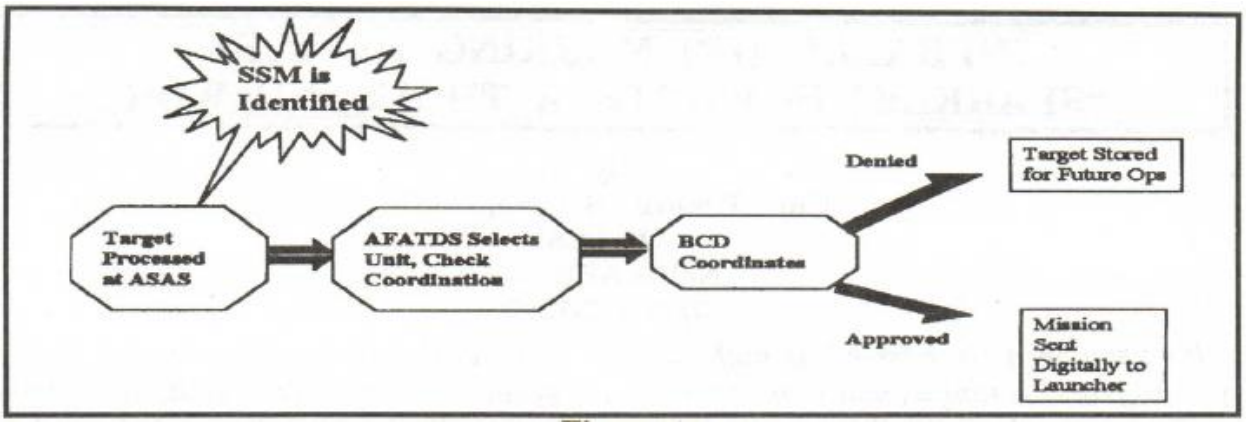

Figure 1. AFATDS Flowchart

The above capability allows a swift coordination of all missions from platoon to theater level with positive control of all fire support assets. This system of coordination will reduce fratricide through digital mapping (no more finger to the map) and increase the ability to coordinate the attack of targets with multiple sources, such as air and artillery.

Digital Targeting

AFATDS Version 2 will include the TASM to assist in the joint targeting process. TASM will process target nominations from the DOCC to the BCD or directly into CTAPS. Targets that are selected for attack will be sent back to AFATDS (digitally) and statused for attack. (See Figure 2.)

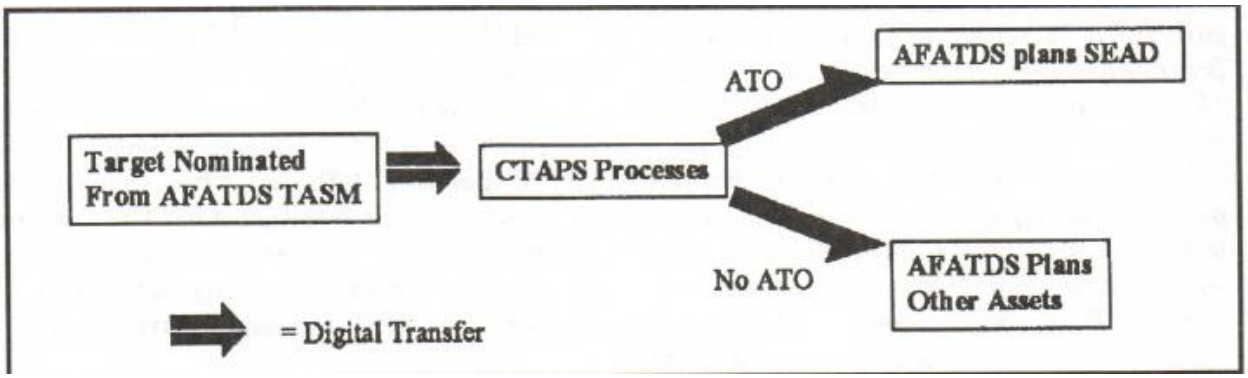

Figure 2. Digital Targeting

AFATDS will then automatically plan a suppression of enemy air defenses (SEAD) mission on the planned targets that the operator can accept or reject. Targets that are

not attacked will be placed in the target file and planned for attack by other means such as naval gunfire, immediate air, or Army assets.

TASM also allows AFATDS to pass immediate requests for close air support to the BCD and CTAPS digitally. Version 1 AFATDS processes missions and will select air assets if available but, until TASM is on line, the request must be passed to the air liaison officer voice. This allows for air components to accept or deny missions digitally much more quickly than in the past.

Conclusion

As the need for seamless targeting continues to get critical, the services are taking some positive steps to create a digital processing system to allow the expeditious destruction of the enemy with positive coordination of all assets. This is one of the first steps toward the integration of a Global Command and Control System (GCCS) in which all services can digitally process information jointly.

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