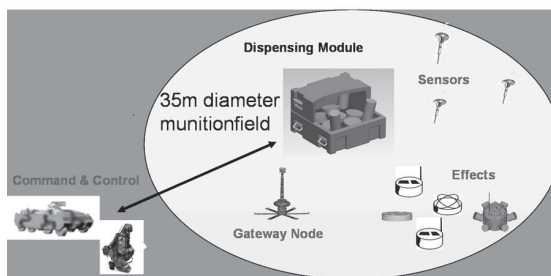


# ARMY PROGRAMS

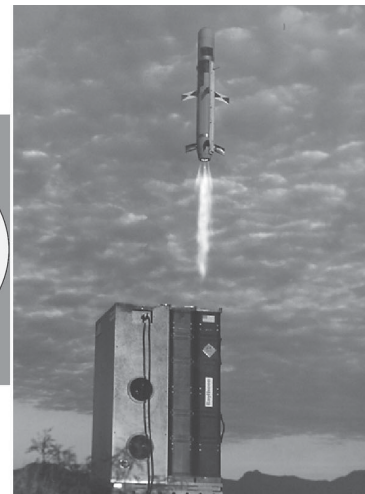
## Future Combat System (FCS) Munitions

### SUMMARY

- In July 2004, the Army announced a restructuring of the Future Combat System (FCS) program. That restructuring included fielding FCS capabilities in four “spirals” between FY08 and FY14.
- Non-Line-of-Sight Launch System (NLOS-LS) and Intelligent Munitions System (IMS) are the “unattended munitions” portion of the FCS program.
- The Army intends to field NLOS-LS and IMS in FY08 and FY09, respectively, with the first FCS spiral.
- The Army will revise the FCS Test and Evaluation Master Plan (TEMP) based upon the program’s restructuring. We anticipate that the Army will submit the revised TEMP to OSD for approval by 3QFY05.



Intelligent Munitions System (IMS)



Non-Line-of-Sight Launch System (NLOS LS)

*NLOS-LS is a family of precision-guided missiles launched from a “box” – the container/launch unit. IMS is an integrated system of unattended ground sensors linked to other lethal and non-lethal weapons systems via the Army Battle Command Network.*

### SYSTEM DESCRIPTIONS AND MISSIONS

#### Non-Line of Sight-Launch System (NLOS-LS)

NLOS-LS is a family of precision-guided missiles launched from a “box” – the container/launch unit (C/LU). The C/LU weighs approximately 3000 pounds and holds 15 missiles. It has an onboard navigation system for self-location and embedded fire control capabilities for remote, unmanned operations. Soldiers can fire it from a variety of vehicles or from the ground. NLOS-LS consists of two missile variants, the Precision Attack Munition (PAM) and the Loiter Attack Munition (LAM). The Army intends for PAM to attack point targets (moving and stationary) such as tanks, armored troop carriers, lightly fortified bunkers, and personnel. It will use infrared and semi-active laser sensors to guide to the targets. The Army plans for LAM to loiter over a target area, providing target information, as well as attack high payoff targets. LAM uses a laser radar sensor and can send images over the FCS network to aid operators in selecting targets. In addition, LAM will have the capability to select and attack targets autonomously.

Only NLOS-LS PAM will be part of the FCS Spiral 1 that the Army plans to field in FY08.

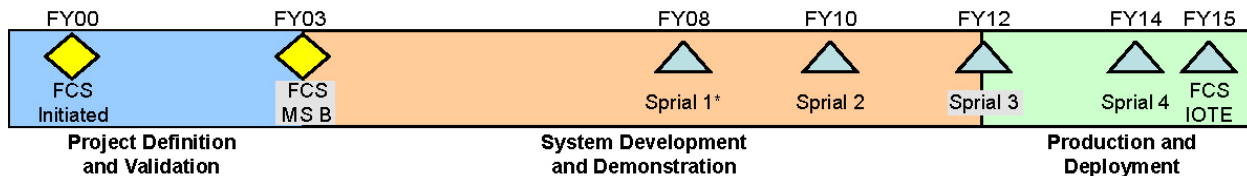
#### Intelligent Munitions System (IMS)

IMS is an integrated system of unattended ground sensors linked to other lethal and non-lethal weapons systems via the Army Battle Command Network. The Army plans for IMS to help see and understand enemy and non-combatant activities and then preclude enemy elements from interfering with friendly operations. The Army intends for IMS to achieve three objectives. First, IMS will over watch areas of interest and provide continuous surveillance to develop the common operating picture. Second, it will detect and engage a variety of personnel and vehicular targets with lethal and non-lethal munitions. Third, it will cue other systems to attack targets with networked fires and other munitions.

# ARMY PROGRAMS

The Army is developing IMS within an evolutionary acquisition process. The Army will field Increment 1 beginning in FY09 to support the current force and to comply with the National Landmine Policy. Soldiers will hand emplace an Increment 1 module that can dispense IMS sensor and effects components upon command. Soldiers can also hand-emplace the individual sensor and effects components for precise emplacement. The Army intends to emplace Increment 2 components out to 15 km via rockets, fixed-wing, rotary-wing, or unmanned aerial vehicles. The Army plans to field IMS Increment 2 with FCS Spiral 4 by FY14.

## TEST AND EVALUATION ACTIVITY



\* FCS Spiral 1 includes fielding of NLOS-LS (PAM) and IMS.

### Non-Line of Sight-Launch System (NLOS-LS)

NLOS-LS was a Defense Advanced Research Projects Agency (DARPA) program until FY03. DARPA conducted several successful flight tests of a PAM prototype system. The Army plans to change the design to incorporate the warhead and to make other improvements to meet threshold requirements. LAM's performance was less successful, but resulted in the understanding of technical limitations that the developer plans to address in future designs. The Army awarded a six-year system development and demonstration contract to the Netfires Limited Liability Company in March 2004. Before the FCS program restructure, the Army planned to begin the major test events for NLOS-LS in FY07. The Army will need to accelerate some test events to meet the new FCS schedule.

### Intelligent Munitions System (IMS)

The Army awarded 27-month technology development contracts to two contractors in April 2003. During FY04, each contractor provided the Army with Effects and Delivery Trade Studies and Increment Strategy Analysis Reports. The two contractors reported to the Army on the development and testing of component prototypes at quarterly program review meetings. These technology development efforts will culminate with a government conducted prototype assessment test in May and June 2005. Based on the results of this test, the Army will conduct a Milestone B decision review in August 2005 and then select between the two technology development contractors to complete the development. The program manager has formed an integrated process team to develop the Live Fire Test and Evaluation strategy for the Milestone B TEMP.

## TEST AND EVALUATION ASSESSMENT

We expect that the Army will submit the revised FCS TEMP for our approval by 2QFY05. This TEMP will include additional details for the live fire and operational testing of NLOS-LS and IMS.

### Non-Line of Sight-Launch System (NLOS-LS)

Although NLOS-LS PAM has completed some early prototype testing, it still has some technical challenges to overcome. In addition, the extent to which the FCS network will be available in FY08 is still to be determined. Once that availability is determined, the Army will have to demonstrate the capabilities PAM can deliver and conduct technical and operational tests to demonstrate operational effectiveness and suitability of the system.

### Intelligent Munitions System (IMS)

Both contractors have reported that their developmental efforts are on schedule to provide the hardware, software, and data required for the prototype assessment test. The Army has developed an acceptable test and evaluation strategy to guide its assessment of the contractor prototypes before the scheduled Milestone B decision. The Army Materiel Systems Analysis Activity has begun work on verification and validation of modeling and simulation tools to assist in the analysis of each contractor's proposed system in support of the Milestone B decision.