

INTERIM ARMORED VEHICLE (IAV)



Army ACAT ID Program

Total Number of Systems:	2,131
Total Program Cost (TY\$):	\$7500M
Average Unit Cost (TY\$):	\$2.9M
Full-rate production:	1QFY04

Prime Contractor

General Motors General Dynamics Land
Systems Defense Group, LLC

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2020

The Interim Armored Vehicle (IAV) program is a family of medium armored vehicles intended to equip the Army's Interim Brigade Combat Team (IBCT). The IAV family is based on the Light Armored Vehicle (LAV) III and will consist of two basic variants, the Infantry Carrier Vehicle (ICV) and the Mobile Gun System (MGS). The ICV is, in turn, the baseline vehicle for eight additional configurations, which are based on the same platform as the ICV. These configurations are the mortar carrier, the anti-tank guided missile vehicle, the reconnaissance vehicle, the fire support vehicle, the engineer squad vehicle, the commander's vehicle, the medical evacuation vehicle, and the NBC reconnaissance vehicle.

The Key Performance Parameters (KPP) defined by the Army for all vehicles in the IAV family are: (1) the IAV must be capable of hosting and effectively integrating existing and planned Army C⁴ISR systems; and (2) it must be transportable in a C-130 aircraft. The ICV and engineer squad vehicle have an additional KPP of being capable of carrying an infantry squad with its individual equipment. The

MGS has an additional KPP of being capable of defeating a standard infantry bunker and creating an opening in a re-inforced concrete wall with its main armament.

The IAV program is intended to contribute to the *dominant maneuver* and *information superiority* of the Interim Brigade Combat Team.

BACKGROUND INFORMATION

The IAV program was initiated in FY00 to provide a family of vehicles with the capabilities necessary to support the Army's IBCT. The IBCT is intended to satisfy a requirement for a combined arms team with enhanced strategic deployability. The IBCT is envisioned to be more strategically deployable than existing Army heavy forces, while having greater tactical mobility than existing light forces. While the IBCT is intended to be employable across the full spectrum of combat, the Army envisions its most likely operating environment to be small-scale contingencies in complex and urban terrain against low end to mid-range threats.

In November 2000, LAV III was selected by the Army as the IAV platform. Most of the IAV configurations are assessed by the Army to be "production-ready," based upon the fact that the base LAV III vehicle is currently in production for other countries, such as Canada. Developmental work is expected only to be necessary for the MGS, NBC reconnaissance vehicle, and FSV. All other configurations will integrate existing equipment to provide the relevant mission packages. Integration of FBCB2 digital C² will be accomplished by the Army at user sites after the contractor delivers the vehicles.

TEST & EVALUATION ACTIVITY

IAV T&E activities to date have focused on TEMP development to include development of an LFT&E strategy. The Director approved the initial IAV TEMP in November 2000 prior to contract award. This TEMP will be updated following contract award incorporating the details of the selected contractor's proposal and the LAV III specific configurations.

The TEMP contains provisions for a battalion-size IOT&E that will be conducted with all IAV variants and configurations not requiring significant developmental work. It is currently anticipated that all IAV variants and configurations will be available for IOT&E with the exception of the MGS, NBC reconnaissance vehicle, and the FSV. Additionally, the mortar carrier will be available with a dismounted mortar only, as a soft-recoil mortar is necessary for mounted mortar firing. The Army does not currently possess such a mortar. Additional OT events will need to be planned for those configurations not available for the first IAV IOT&E.

IOT&E will be conducted with two live IAV companies and one IAV company in simulation, provided the simulation is validated. Additionally, battalion and brigade level combat support and combat service support elements such as reconnaissance, engineer and anti-tank units will participate. This task force will operate under the command and control of a battalion tactical operations center with complete ATCCS digital C⁴I systems.

The initial IAV LFT&E strategy calls for testing three MGS's, three ICV's, and one each of the ICV-based configurations. The scope of the full-up, system-level tests call for up to 120 test events spread among up to ten test vehicles.

The detailed T&E schedule, to include planned IOT&E and LFT&E dates, will be established in the forthcoming TEMP update. Initial IAV IOT&E is currently scheduled to begin in late 4QFY02.

TEST & EVALUATION ASSESSMENT

The IAV T&E program will be inherently challenging due to the need to test and evaluate ten different variants and configurations, each of which performs a different combat function. Additionally, each platform's performance will be, in large measure, dependent upon the successful integration of a variety of mission packages. Of particular interest will be the integration and performance of FBCB2 digital command and control. The organizational and operational concepts for the IAV-equipped IBCT are, to a significant degree, based upon the "information superiority" presumed to be provided by FBCB2 as well as the other ATCCS systems. Additionally the successful integration of GFE mission packages such as the M707 Striker into the FSV and the LRAS into the RV will be essential to the IAV program.

The development of the MGS will likely be the greatest program challenge. The integration of the 105 mm main gun on the LAV III chassis is, to date, largely unproven.

The Army's assumption that the majority of the selected IAV configurations and variants are "production ready" is based upon the LAV III chassis only and does not consider the total system integration of mission packages for each configuration, to include FBCB2. Much of the planned T&E effort will necessarily focus on system integration issues.

