

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2002

BUDGET ACTIVITY <b>4 - Demonstration/validation</b>	PE NUMBER AND TITLE <b>0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)</b>
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COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	263436	100587	124108	43062	26092	4358	0	0	586589
B99 TANK & MEDIUM CALIBER ARMAMENTS	8490	1986	0	0	0	0	0	0	20810
C03 INTERIM ARMORED VEHICLE (IAV) FAMILY	254946	98601	124108	43062	26092	4358	0	0	565779

**A. Mission Description and Budget Item Justification:** The Tank and Medium Caliber Armaments is an Acquisition Category (ACAT) Level III project that involves several efforts. It looks at promising tank and medium caliber technologies and assesses advantages and disadvantages of each technology, as well as, costs and implementation impacts. If successful, the technology can move into further development or into production. It also supports the International Quadripartite Agreement among the U.S., France, Germany and the United Kingdom for cooperative development/interoperability efforts to reduce risks on Tank and Medium Caliber Ammunition Systems.

An immediate need exists for an Interim Armored Vehicle (IAV) equipped C-130 transportable Brigade Combat Team (BCT), capable of deployment anywhere on the globe in a combat ready configuration. The IAV family is the force and consists of an Infantry Carrier (ICV), Reconnaissance Vehicle (RV), Mobile Gun System (MGS), Mortar Carrier (MC), Commander's Vehicle (CV), Fire Support Vehicle (FSV), Engineer Squad Vehicle (ESV), Medical Evacuation Vehicle (MEV), Anti-Tank Guided Missile Vehicle (ATGM), and NBC Reconnaissance (NBC RV). This system supports the Interim transition path of the Transformation Campaign Plan (TCP).

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<u><b>B. Program Change Summary</b></u>	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	265681	101461	18051
Appropriated Value	268139	101461	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-874	0
b. SBIR / STTR	-245	0	0
c. Omnibus or Other Above Threshold Reductions	0	0	0
d. Reprogramming	-2000	0	0
e. Rescissions	-2458	0	0
Adjustments to Budget Years Since FY2002 PB	0	0	106057
Current Budget Submit (FY 2003 PB )	263436	100587	124108

FY01 funding (\$2M) in Project DB99 reprogrammed to higher priority requirements.  
 FY03 program funding increased to align IAV program with Army Cost Position (ACP) as approved at Nov 00 DAB.

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COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost	
C03 INTERIM ARMORED VEHICLE (IAV) FAMILY	254946	98601	124108	43062	26092	4358	0	0	565779	

**A. Mission Description and Budget Item Justification:** This project supports the development of the Family of Interim Armored Vehicles (IAV). An immediate need exists for a rapid force to improve the deployability and operational effectiveness of rapid response/early entry forces. The IAV equipped C-130 transportable Brigade Combat Team (BCT) will be capable of deployment to anywhere on the globe in a combat ready configuration. A dynamic asymmetric threat and operational environment demands full spectrum, strategically responsive, agile and dominant land forces. Immediate response by a lethal, versatile, tactically agile joint force capable of operational maneuver once in the Area of Operations is essential to fulfilling the Warfighting needs of the U. S. Army. The IAV family includes: Infantry Carrier (ICV), Reconnaissance Vehicle (RV), Mobile Gun System (MGS), Mortar Carrier (MC), Commander's Vehicle (CV), Fire Support Vehicle (FSV), Engineer Squad Vehicle (ESV), Medical Evacuation Vehicle (MEV), Anti-Tank Guided Missile Vehicle (ATGM), and NBC Reconnaissance (NBC RV). The use of a common platform/common chassis design reduces requirements for repair parts and logistics support in the area of operations. RDTE funding will be used to integrate the mission equipment packages that make each platform unique and effective. This system supports the Interim transition path of the Transformation Campaign Plan (TCP).

**FY 2001 Accomplishments:**

- 170040 Designed refinement of Interim Armored Vehicles. Modified the Canadian LAV III into the IAV family: electrical requirements, hull changes, weapon integration. Continued design work on NBCRV and MGS: gun turret drives, fighting compartment assembly, fire control target acquisition.
  - 22545 Initiated Funding Systems Developmental Testing. Performed gun and autoloader qualification testing, ballistic hull and turret testing, and coupon (armor) testing
  - 4500 Government Systems Engineering and Program Management
  - 41012 Produced 2 IAV RDT&E test articles for live-fire test (ICV and ATGM) and 10 Mobile Gun System (MGS) production-like prototypes for government Development Testing (DT) for and Limited User Testing (LUT)
  - 1660 GFE for test vehicles
  - 1295 Training devices
  - 13894 Tube-Launched, Optically-Tracked, Wire-Guided (TOW) Improved Munitions
- Total 254946

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**C03****FY 2002 Planned Program**

- 40827 Continue vehicle design refinement and support to government testing. Complete design integration of NBCRV. Complete design work on MGS: gun turret drives, fighting compartment assembly, fire control target acquisition. Begin development of Block modifications: mounted mortar on Mortar Carrier, add-on armor, Integrated Electronic Technical Manuals (IETM). Complete weapon integration and design for ATGM and FSV.
- 48574 Partially fund Live Fire Test & Evaluation (LFT&E). Perform Development Testing: PQT, MC unique, Ammo Requal, MGS Unique, Remote Weapons Station (RWS) and Initial Operational Test & Evaluation (IOT&E) on all variants.
- 4200 Government Systems Engineering and Program Management
- 5000 Training Devices

Total 98601

**FY 2003 Planned Program**

- 37690 Complete Design Refinement efforts (Block Mods) and support to government testing
- 81918 Live Fire Test & Evaluation (LFT&E), Initial Operational Testing and Evaluation (IOT&E), and Production Qualification Test (PQT) on NBCRV and MGS
- 4500 Government Systems Engineering and Program Management

Total 124108

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<u>B. Other Program Funding Summary</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
PA, WTCV, G85100 Interim Armored Vehicle Family	928427	657990	811831	980828	806704	761057	816922	2179000	7964759
PA, OPA, W61900 IAV APPLIQUE*	0	14944	15035	15016	14996	14983	14967	30000	119941

\*Funding summary represents a portion of the overall funding in W61900, Other Procurement, Army. (FBCB2)

**C. Acquisition Strategy:** In Oct 99, the Army leadership announced a vision of the future. This vision included a Brigade structure and an organization crucial to the Army's strategic responsiveness goals. The PM is taking action to achieve this vision for the Army via accelerated procurement of the family of Interim Armored Vehicles. An RFP was developed by the end of 2nd Quarter FY00 and released in Apr 00. Contractors provided bid sample hardware for evaluation during the source selection process. On 16 Nov 00, after a successful MS II DAB approval, a requirements contract was awarded to GM GDLS Defense Group, L.L.C. with delivery orders issued for integration efforts and initial production vehicles. The contracting effort was stalled in FY01 as a result of a contract stop order. The contract stop order was lifted 9 Apr 01, and subsequently, contract execution began. Development, Integration and Assembly efforts are ongoing with the production TDP for the Infantry Carrier Vehicle (ICV) to be available for final changes to the production vehicle in first quarter FY01. First vehicles, ICVs, are scheduled for delivery to the government beginning in Feb 02, with other IAV variants to follow-on this hardware buy. The RDTE portion of the IAV contract is Delivery Order 1. Production buys are/will be Delivery Order 2 and beyond.

<u>D. Schedule Profile</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Release of Draft Solicitation							
Final Receipt of White Paper Comments							
Release of Formal Request for Proposals							
Receipt of Proposals							
Milestone II	1Q						
Contract Award	1Q						
Final Production Technical Data Package Available (ICV)		1Q					
First Vehicle Delivery		2Q					
Begin Testing of Vehicles**		3Q	2Q				
First Unit Equipped (Battalion -)**		4Q	2Q				

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<b>D. Schedule Profile (continued)</b>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Planned Initial Operational Capability (IOC)**			3Q	1Q			
Planned Milestone III**			3Q	2Q			

\*\*Reflects current program schedule, and schedule ranges briefed at MS II in November 00.

## ARMY RDT&E COST ANALYSIS(R-3)

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . IAV Development	Competitive-Cost Plus	GM GDLS DG L.L.C	1028	170040	1Q	40827	2Q	37690	1Q	9430	259015	259015
b . GFE	Requisition	Various	0	1660	1-4Q	0		0		0	1660	1660
c . Prototype Development (10)	Firm Fixed Price	GM GDLS DG L.L.C	0	37220	3Q	0		0		0	37220	37220
d . Training Devices	MIPR	STRICOM, Orlando, FL	0	1295	3Q	5000	3Q	0		13820	20115	20115
e . TOW for Missile Development	Reprogram		0	13894		0		0		0	13894	13894
Subtotal:			1028	224109		45827		37690		23250	331904	331904

Remarks: IAV development supports the following 10 vehicles: Infantry Carrier Vehicle (ICV), Reconnaissance Vehicle, Mobile Gun System, Mortar Carrier, Commander's Vehicle, Fire Support Vehicle, Engineer Squad Vehicle, Medical Evacuation Vehicle, Anti-Tank Guided Missile Vehicle, and NBC Reconnaissance Vehicle.

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II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Other Gov't Agencies	MIPR	TACOM, Warren, MI Various	3746	2000	1Q	2300	1Q	2600	1Q	8100	18746	18746
b . Source Selection Board			2338	0		0		0		0	2338	2338
Subtotal:			6084	2000		2300		2600		8100	21084	21084

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Developmental System Testing	MIPR	ATEC, APG, MD/Various	2015	13527	4Q	28719	2Q	0		0	44261	44261
b . Fort Lewis Concept Prove Out	MIPR	BCT Materiel Dev Cell, Ft Lewis, WA	1281	0		0		0		0	1281	1281
c . Procure Test Vehicles	Competitive/ CPAF	GM GDLS DG L.L.C.	0	3792	1Q	0		0		0	3792	3792
d . Live Fire Test & Evaluation	MIPR	ATC, ARL, AEC	0	3099		7340	2Q	6820	1Q	6842	24101	24101
e . Initial Operational Test & Evaluation	MIPR	OTC	0	5919		12515	2Q	38073	1-2Q	26426	82933	82933

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III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
f . Technical Systems Testing	MIPR	ATEC, APG, MD/VARIOUS	0	0		0		37025	1Q	1694	38719	38719
Subtotal:			3296	26337		48574		81918		34962	195087	195087

Remarks: \*Congressionally Mandated Testing, Section 113C of the FY01 Authorization Act.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PMO	NA	TACOM, Warren, MI	2505	2000	1Q	1400	1Q	1400	1Q	5200	12505	12505
b . Consultant Contract PM Support	Competitive/ Various	ICI, Camber, Warren, MI	1699	500	4Q	500	2Q	500	2Q	2000	5199	5199
Subtotal:			4204	2500		1900		1900		7200	17704	17704

Project Total Cost:			14612	254946		98601		124108		73512	565779	565779
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