Exhibit R-2, RDT&E Budget Item Justification							Date: February 2003	
APPROPRIATION/BUDGET ACTIVITY DEFENSE WIDE RDT&E BA 5				R-1 ITEM NOMENCLATURE JOINT ROBOTICS EMD PE 0604709D8Z				
COST ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	15.003	27.887	13.597	13.861	14.121	14.286	14.767	15.068
CRS	6.822	7.500	2.920	2.330	2.000	2.146	2.197	2.117
RCSS	3.481	7.000	2.950	2.870	2.094	2.420	2.460	2.471
MPRS	0.000	0.687	1.940	2.384	2.320	2.500	2.630	2.600
GLADIATOR	0.000	0.000	2.367	2.797	4.157	3.600	3.800	4.100
MDARS-E	4.700	12.700	3.420	3.480	3.550	3.620	3.680	3.780

A. Mission Description and Budget Item Justification:

This program is a budget activity level 5 based on the successful transition of robotic technologies from Concept and Technology Development activities to System Development and Demonstration (SDD) as part of an Evolutionary Strategy. This PE was established in response to Office of the Secretary of Defense (OSD) and Service agreement at the April 1997 Joint Robotics Program General Officer Steering Committee (GOSC). The agreement was to have OSD retain oversight of DoD robotics programs through SDD formerly Engineering, Manufacturing and Development (EMD). Individual Services are responsible for requirements generation and procurement funding. Within the JRP, emphasis is on the development of robotic technologies that are usable in multi-service missions; provide capability in hazardous environments; provide improved battlefield efficiency using supervised autonomous operational capability; reduce or enhance force manpower and sustainability; and are affordable. Success has been achieved in five programs to justify SDD at this time. This PE establishes the consolidated DoD robotics program for Unmanned Ground Vehicles (UGV) and advances UGV concepts into SDD for (1) the Common Robotic System (CRS) – a generic, modular set of robotic systems that can be used to retrofit several different types of currently fielded vehicles to allow remote obstacle breaching operations (minefields, earthworks, bunkers, etc.), and have supported operations in Bosnia and Kosovo; (2) the Robotic Combat Support System (RCSS) – capable of neutralizing anti-personnel mines, breaching wire obstacles and delivery of smoke or obscurants with P3I upgrades such as manipulator arm, semi-autonomous/autonomous control, prototypes have supported operations in Bosnia, Kosovo and Afghanistan; (3) the Man Portable Robotic Systems (MPRS) –an effort to develop smaller (10-40 lb. Class) UGV's to conduct operation in urban terrain and tunnel reconnaissance; (4) GLADIATOR—in response to a Marine Corps requirement, GLADIATOR will provide units of the Marine Air Ground Task Force (MAGTF) with multi-mission (RSTA, obstacles, direct fire, chem./bio detect) capability; (5) The Mobile Detection Assessment Response System, Exterior (MDARS-E) – to provide unmanned roving security patrols among buildings and around the perimeter of large fixed installations.

B. Program Change Summary:

	FY2002	FY 2003	FY 2004	FY 2005
Previous President's Budget	15.003	27.877	13.597	13.861
Current BES/President's Budget				
Total Adjustments				
Congressional program reductions				
Congressional rescissions				
Congressional increases		14.900		
Reprogrammings				
SBIR/STTR Transfer		(0.666)		

C. Other Program Funding Summary:

Not Applicable

D. Acquisition Strategy:

Not Applicable

Exhibit R-2a, RDT&E Budget Item Justification							Date: February 2003	
APPROPRIATION/BUDGET ACTIVITY DEFENSE WIDE RDT&E BA 5				R-1 ITEM NOMENCLATURE JOINT ROBOTICS PROGRAM PE 0604709D8Z				
COST ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
CRS	6.822	7.500	2.920	2.330	2.000	2.146	2.197	2.117

A. Mission Description and Budget Item Justification:

The Common Robotic System (CRS) program is a generic and modular robotic system that can be retrofitted to many different military applications and vehicles. The U.S. Army approved the Operational Requirements Document (ORD) in September 1997. Currently, the SRS system is being built for the DEUCE engineer dozer for the BCT; the GSTAMIDS Block 0 countermine system; the Unmanned Ground Vehicle Robotic Obscuration Platform (UGV ROP) for the M56 Coyote Smoke Obscuration System; and USMC Assault Breacher Vehicle (ABV) to allow remote obstacle breeching operations (minefields, earthworks, bunkers and obstacles such as clearing of rubble in a MOUT environment or a man-made obstacle covered by enemy fire). The Joint Project Office continues to support five M60 Panther systems, and is fielding six new M1A1 Panther systems for contingency support Bosnia and Kosovo that have cleared over 500 mines and submunitions. Panther is a tank chassis with SRS system and mine rollers used to proof roads or fields for mines.

B. Accomplishments/Planned Program

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost	6.822			
RDT&E Articles Quantity * (as applicable)				

- Fielded 6 Abrams Panther in Bosnia and Kosovo.
- Finalized government engineering, software and depot support capability, and completed production of spare systems for Abrams Panther.
- Began development of robotic capability for the USMC Assault Breacher Vehicle (ABV), UGV ROP, and Ground Standoff Mine Detection System Block 0 (GSTAMIDS0).
- Developed and executed new CRS acquisition strategy.
- Began CRS System Design and Development (SDD) acquisition activity for the competitive design, manufacture, and delivery of engineering prototypes for UGV ROP.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost		7.500		
RDT&E Articles Quantity * (as applicable)				

- Continue engineering and program management support for CRS system development.
- Continue SDD activity for the design, manufacture, and deliver of engineering prototypes for CRS.
- Award CRS SDD contract.
- Conduct CRS IPR.
- Test CRS contingency kits for GSTAMIDS Block 0.
- Deliver kits for the Assault Breacher and UGV ROP testing.

	FY 2002	FY 2003	FY 2004	FY2005
Accomplishment/Effort/Subtotal Cost			2.920	
RDT&E Articles Quantity * (as applicable)				

- Complete SDD for UGV ROP.
- Begin DT for UGV ROP.
- Begin GSTAMIDS Block 0 production of 10 units.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost				2.330
RDT&E Articles Quantity * (as applicable)				

- Obtain MS C for UGV ROP.
- Begin Full Rate Production of UGV ROP.

C. Other Program Funding Summary:
Not Applicable

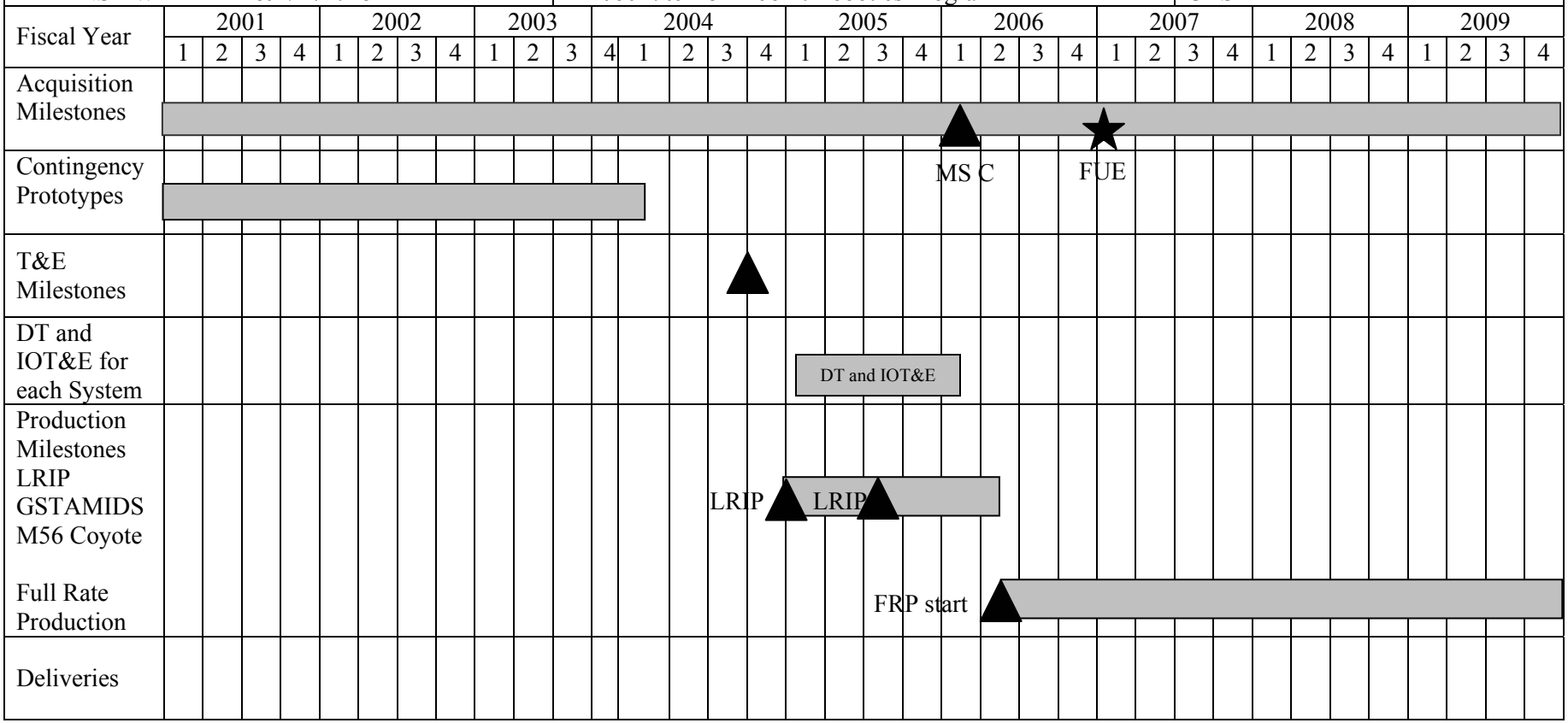
D. Acquisition Strategy:
Not Applicable

E. Major Performers:
Not Applicable

Exhibit R-3 Cost Analysis (page 1)								Date:	February-2003				
DEFENSE-WIDE BUDGET ACTIVITY 5			Program Element PE 0604709D8Z					CRS					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
Primary Hardware Development				3.702		1.036		0.746					
Ancilliary Hardware Development													
Systems Engineering				2.318		1.357		1.057					
Licenses													
Tooling													
GFE													
Award Fees													
Subtotal Product Development				6.020		2.393		1.803					
Remarks:													
Development Support				0.240		0.145		0.145					
Software Development				0.600		0.098		0.098					
Training Development													
Integrated Logistics Support				0.180		0.072		0.072					
Configuration Management				0.180		0.072		0.072					
Technical Data													
GFE													
Subtotal Support				1.200		0.387		0.387					
Remarks:													

Exhibit R-3 Cost Analysis (page 2)							Date:	February-2003				
DEFENSE-WIDE BUDGET ACTIVITY 5		Program Element PE 0604709D8Z					CRS					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT												
IOT&E												
Subtotal T&E				0.000		0.000		0.000				
Remarks:												
Contractor Engineering Support												
Government Engineering Support				0.160		0.080		0.080				
Program Management Support				0.120		0.060		0.060				
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management				0.280		0.140		0.140				
Remarks:												
Total Cost			30.067	7.500		2.920		2.330				
Remarks:												

Exhibit R-4, Schedule Profile			Date: February 2003
Appropriation/Budget Activity DEFENSE WIDE RDT&E/B.A. #5	Program Element Number and Name PE 0604709D8Z – Joint Robotics Program		Project Number and Name CRS



R-4 Schedule Profile – Item No. 20-3 of 20-4

Exhibit R-4a, Schedule Detail		Date: February 2003
Appropriation/Budget Activity Research, Development, Test & Evaluation, Defense-Wide, Budget Activity 4	Program Element Number and Name PE 0603709D8Z Joint Robotics Program	Project Number and Name Common Robotic System (CRS)

Schedule Profile	FY 2001	FY 2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
SDD	1-4Q	1-4Q	1-4Q	1-4Q				
Milestone C						1Q		
LRIP GSTAMIDS				3Q				
LRIP M56 Coyote								
Full Rate Production UGV ROP						2Q		

R-4a Schedule Profile - Item No. 20-4 of 20-4

Exhibit R-2a, RDT&E Budget Item Justification							Date: February 2003	
APPROPRIATION/BUDGET ACTIVITY DEFENSE WIDE RDT&E BA 5				R-1 ITEM NOMENCLATURE JOINT ROBOTICS PROGRAM PE 0604709D8Z				
COST ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
RCSS	3.481	7.000	2.950	2.870	2.094	2.420	2.460	2.471

A. Mission Description and Budget Item Justification:

The Robotic Combat Support System (RCSS) Program is an upgrade approach from the Product Improved Mini-Flail (PIMF). The PIMF has proven effective in Bosnia and Kosovo, as well as in Afghanistan, as a contingency asset. RCSS threshold requirements include anti-personnel mine clearing and neutralization, improved reliability and human-machine interface, wire obstacle breaching, remotely deployed smoke and obscurants, and the capability to carry soldier loads. P3I requirements include advanced controls, remotely delivered special munitions to support dismounted operations, hands-free control using dismounted soldier leader-follower technology, and mechanical devices that will be used to emplace demolitions and special breeching systems. A Mission Need Statement (MNS) and an Operational Requirements Document (ORD) have been approved by Army Training and Doctrine Command (TRADOC).

B. Accomplishments/Planned Program

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost	3.481			
RDT&E Articles Quantity * (as applicable)				

- Managed the two RCSS competitive contracts.
- Conducted Initial Verification Testing (IVT) on systems delivered under Concept and Technology Development phase.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost		7.000		
RDT&E Articles Quantity * (as applicable)				

- Obtain Milestone B approval, enter System Design and Development (SDD).
- Award SDD contract.
- Begin developmental testing on RCSS systems developed under SDD contract.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost			2.950	
RDT&E Articles Quantity * (as applicable)				

- Conduct DT/OT
- Conduct Maintenance/Log Demo.
- Begin preparation of Milestone C documentation.

	FY 2002	FY 2003	FY 2004	FY 20205
Accomplishment/Effort/Subtotal Cost				2.870
RDT&E Articles Quantity * (as applicable)				

- Obtain successful Milestone C.
- Initiate Full Rate Production.
- Complete First Unit Equipped.

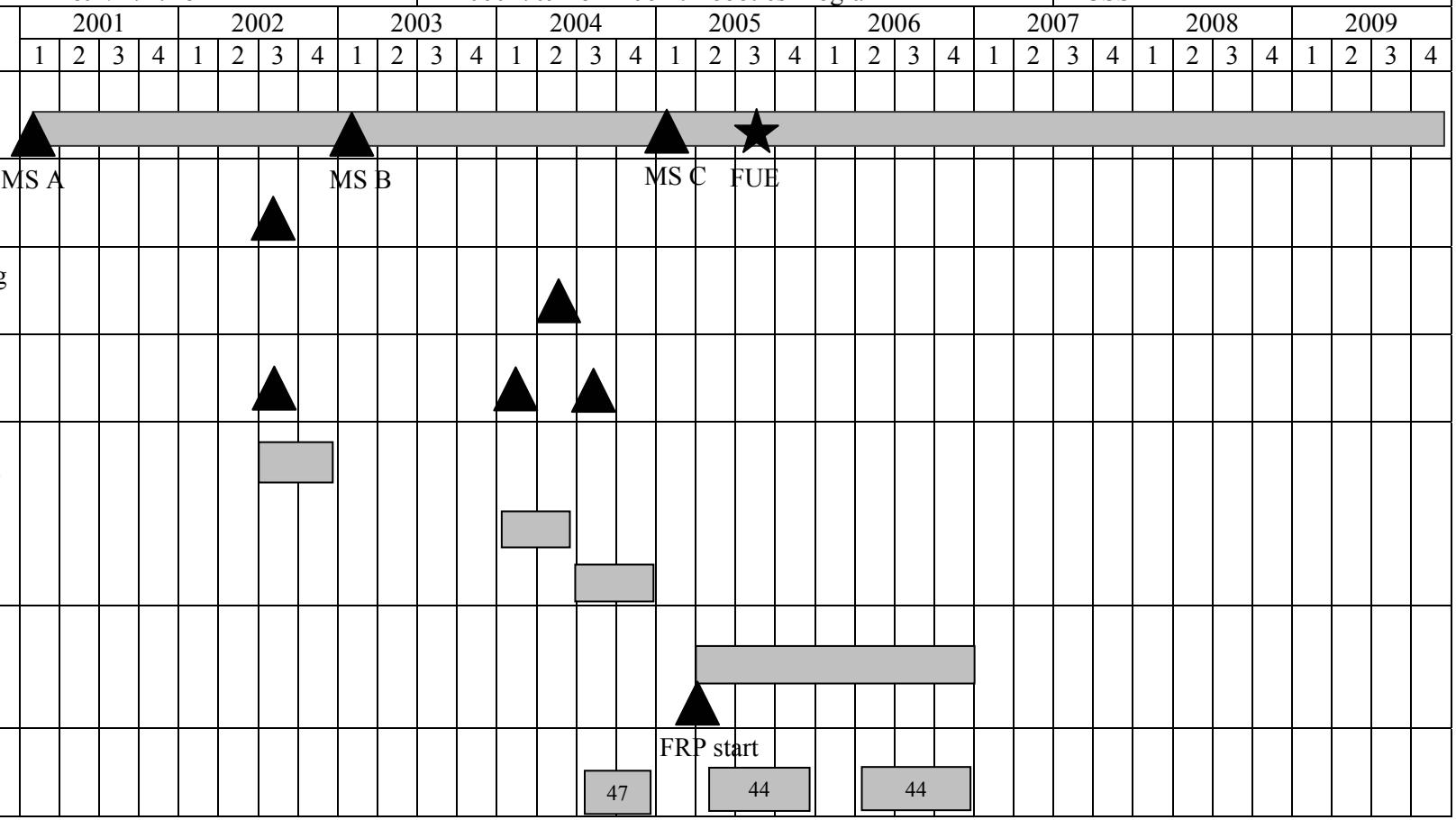
C. Other Program Funding Summary:
Not Applicable
D. Acquisition Strategy:
Not Applicable

E. Major Performers:
Not Applicable

Exhibit R-3 Cost Analysis (page 1)								Date:	February 2003				
DEFENSE-WIDE BUDGET ACTIVITY 5			Program Element PE 0604709D8Z					RCSS					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	CPFF			2.712		1.229		1.149				
Ancilliary Hardware Development												
Systems Engineering				2.663		0.602		0.602				
Licenses												
Tooling				0.080		0.052		0.052				
GFE												
Award Fees												
Subtotal Product Development				5.455		1.883		1.803				
Remarks:												
Development Support				0.075		0.052		0.052				
Software Development				0.112		0.086		0.086				
Training Development				0.125		0.105		0.105				
Integrated Logistics Support				0.125		0.085		0.085				
Configuration Management				0.125		0.075		0.075				
Technical Data												
GFE												
Subtotal Support				0.562		0.403		0.403				
Remarks:												

Exhibit R-3 Cost Analysis (page 2)								Date: February-2003				
DEFENSE-WIDE BUDGET ACTIVITY 5		Program Element PE 0604709D8Z						RCSS				
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT						0.206		0.206				
IOT&E						0.240		0.240				
Initial Verification Testing				0.746								
Subtotal T&E				0.746		0.446		0.446				
Remarks:												
Contractor Engineering Support				0.052		0.038		0.038				
Government Engineering Support				0.110		0.120		0.120				
Program Management Support				0.075		0.060		0.060				
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management				0.237		0.218		0.218				
Remarks:												
Total Cost			15.396	7.000		2.950		2.870				
Remarks:												

Exhibit R-4, Schedule Profile			Date: February 2003
Appropriation/Budget Activity DEFENSE WIDE RDT&E/B.A. #5		Program Element Number and Name PE 0604709D8Z – Joint Robotics Program	Project Number and Name RCSS



R-4 Schedule Profile – Item No. 20-3 of 20-4

Exhibit R-4a, Schedule Detail		Date: February 2003
Appropriation/Budget Activity Research, Development, Test & Evaluation, Defense-Wide, Budget Activity 5	Program Element Number and Name PE 0604709D8Z Joint Robotics Program	Project Number and Name Robotic Combat Support System (RCSS)

Schedule Profile	FY 2001	FY 2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Milestone A	1Q							
Contract Preparation	1-4Q	1-4Q	1-4Q					
CTD Contract Award	4Q		1Q					
CTD	4Q	1-4Q	1Q					
Milestone B			1Q					
Contract Preparation		4Q	1Q					
SDD Contract Award			1Q					
SDD			1-4Q	1-4Q				
Developmental Test				1-2Q				
Maintenance/Log Demo				2-3Q				
IOT&E				3-4Q				
Milestone C					1Q			
Full Rate Production					1Q			
First Unit Equipped					3Q			

R-4a Schedule Profile - Item No. 20-4 of 20-4

Exhibit R-2a, RDT&E Budget Item Justification							Date: February 2003	
APPROPRIATION/BUDGET ACTIVITY DEFENSE WIDE RDT&E BA 5				R-1 ITEM NOMENCLATURE JOINT ROBOTICS PROGRAM PE 0604709D8Z				
COST ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MPRS	0.000	0.687	1.940	2.384	2.320	2.500	2.630	2.600

A. Mission Description and Budget Item Justification:

Man-Portable Robotic Systems (MPRS) is an Army program involving the U.S. Army Maneuver Support Center (MANSCEN), U.S. Army Infantry Center (USAIC), and the U.S. Army Special Operations Command (SOCOM). A Joint Operational Requirements Document (ORD) is being developed to provide small, man-portable, unmanned ground vehicles to support mission needs in the following areas: Building Reconnaissance, Route Reconnaissance, Vehicle Inspection, Forward Observation/Listening Post, Trip Wire/Booby Trap Detection, Remote Resupply, Move/Carry Equipment, Personnel Evacuation, and Door/Wall Breaching. These mission needs will be typical during Military Operations in Urban Terrain (MOUT). MPRS is a low risk acquisition program, which leverages existing UGV technologies as an integral part of the development process to mitigate performance risk. Small unmanned ground vehicles have been provided for contingency operations to support urgent requirements. MPRS has also been provided to the National Guard to support the Civil Support Teams (CST) as contingency assets.

B. Accomplishments/Planned Program

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost	0.000			
RDT&E Articles Quantity * (as applicable)				

- Program remained in CTD.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost		0.687		
RDT&E Articles Quantity * (as applicable)				

- Obtain Milestone A approval.
- Award Phase 1 contracts.
- Begin Independent Verification Testing (IVT).
- Support Future Combat Systems (FCS) Small Unmanned Ground Vehicle program development.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost			1.940	
RDT&E Articles Quantity * (as applicable)				

- Complete IVT.
- Select Phase 2 contractor(s).
- Initiate Developmental Testing.
  Initiate Independent Operational Test & Evaluation.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost				2.384
RDT&E Articles Quantity * (as applicable)				

- Complete Independent Verification Test.
- Begin Development Test.
- Begin IOT&E.

C. Other Program Funding Summary:
Not Applicable

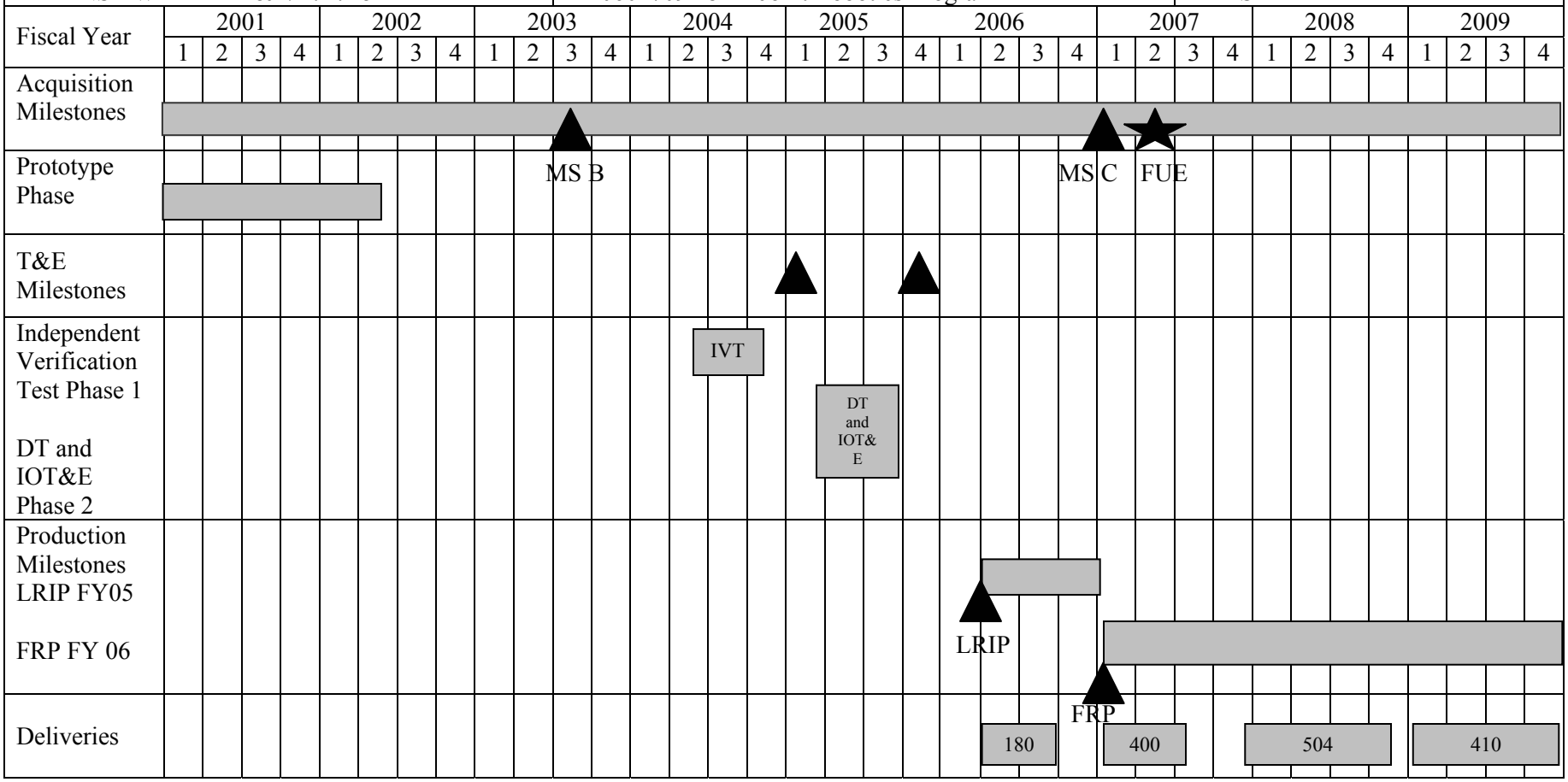
D. Acquisition Strategy:
Not Applicable

E. Major Performers:
Not Applicable

Exhibit R-3 Cost Analysis (page 1)							Date:	February 2003				
DEFENSE-WIDE BUDGET ACTIVITY 5			Program Element PE 0604709D8Z				MPRS					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development				0.536		0.724		1.168				
Ancilliary Hardware Development												
Systems Engineering						0.102		0.102				
Licenses												
Tooling						0.052		0.052				
GFE												
Award Fees												
Subtotal Product Development				0.536		0.878		1.322				
Remarks:												
Development Support						0.052		0.052				
Software Development				0.020		0.086		0.086				
Training Development						0.105		0.105				
Integrated Logistics Support						0.085		0.085				
Configuration Management						0.075		0.075				
Technical Data												
GFE												
Subtotal Support				0.020		0.403		0.403				
Remarks:												

Exhibit R-3 Cost Analysis (page 2)								Date:	February-2003				
DEFENSE-WIDE		Program Element						MPRS					
BUDGET ACTIVITY 5		PE 0604709D8Z											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT						0.201		0.201				
IOT&E						0.240		0.240				
Initial Verification Testing				0.056								
Subtotal T&E				0.056		0.441		0.441				
Remarks:												
Contractor Engineering Support						0.038		0.038				
Government Engineering Support				0.050		0.120		0.120				
Program Management Support				0.025		0.060		0.060				
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management				0.075		0.218		0.218				
Remarks:												
Total Cost			0.000	0.687		1.940		2.384				
Remarks:												

Exhibit R-4, Schedule Profile		Date: February 2003
Appropriation/Budget Activity DEFENSE WIDE RDT&E/B.A. #5	Program Element Number and Name PE 0604709D8Z – Joint Robotics Program	Project Number and Name MPRS



R-4 Schedule Profile – Item No. 20-3 of 20-4

Exhibit R-4a, Schedule Detail		Date: February 2003
Appropriation/Budget Activity Research, Development, Test & Evaluation, Defense-Wide, Budget Activity 4	Program Element Number and Name PE 0604709D8Z Joint Robotics Program	Project Number and Name Manportable Robotics System (MPRS)

Schedule Profile	FY 2001	FY 2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Milestone A			3Q					
Contract Preparation			2-3Q					
CTD Contract Award			4Q					
CTD		4Q	4Q	1-2Q				
Milestone B			3Q					
Contract Preparation				2-3Q				
SDD Contract Award				3Q				
Independent Verification Test				2-3Q				
Down Select					4Q			
Developmental Evaluation					1-3Q			
IOT&E					1-3Q			
LRIP						2Q		
Milestone C							1Q	
Full Rate Production							1Q	

R-4a Schedule Profile - Item No. 20-4 of 20-4

Exhibit R-2a, RDT&E Budget Item Justification							Date: February 2003	
APPROPRIATION/BUDGET ACTIVITY DEFENSE WIDE RDT&E BA 5				R-1 ITEM NOMENCLATURE JOINT ROBOTICS PROGRAM PE 0604709D8Z				
COST ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
GLADIATOR	0.000	0.000	2.367	2.797	4.157	3.600	3.800	4.100

A. Mission Description and Budget Item Justification:

The Gladiator Program is a USMC initiative based on the Joint Army-Marine Corps Tactical Unmanned Vehicle (TUV) ORD originated by the U.S. Army Infantry School. Mission Need Statement (MNS) INT 12.1.1 (dated 4 November 1993) validated the need for a tactical unmanned ground vehicle system, and the ORD was approved by the Army in August 1995 and by the Marine Corps in May 1996. Changes in Service deficiencies and required capabilities have led both Services to reevaluate the existing ORD and to initiate efforts to revise it or to approve new requirements documents for robotic systems supporting the tactical commander. The Marine Corps has drafted the Gladiator ORD to support the dismounted infantry of the Marine Ground Combat Element (GCE) with the organic unmanned capability to remote combat tasks including scout/surveillance. The system will reduce risk and neutralize threats to Marines across the full spectrum of conflict and military operations. Gladiator formal requirement document is in final staffing within the Marine Corps. The Gladiator is a teleoperated/semi-autonomous, small-to-medium sized, highly mobile UGV with, initially, the basic capability to conduct scout/surveillance missions and to carry various mission payloads for specific tasks. It will be inherently simple, durable, multi-functional, and easily transported. In the conduct of Operational Maneuver From The Sea (OMFTS), Ship To Objective Maneuver (STOM), Sustained Operations Ashore (SOA), and Operations Other Than War (OOTW), the Gladiator will enhance the ability to accomplish assigned missions. Operating just forward of the GCE units, Gladiator will perform basic scouting/surveillance, obstacle breaching, and NBC reconnaissance tasks while permitting the operator to remain covered or concealed. The basic Marine Corps system will consist of a mobile base unit (MBU), an OCU, and specific mission payload modules (MPMs). Initial MPMs will include Joint Chemical Agent Detector (JCAD), Anti-Personnel Obstacle Breaching System (APOBS), and direct fire (lethal and non-lethal) weapons.

B. Accomplishments/Planned Program

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost	0.000			
RDT&E Articles Quantity * (as applicable)				

- Program remained in CTD.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost		0.000		
RDT&E Articles Quantity * (as applicable)				

- Program remained in CTD.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost			2.367	
RDT&E Articles Quantity * (as applicable)				

- Complete detailed design of Gladiator.
- Complete Future Naval Capability demonstrations.
- Prepare Milestone B documentation.
- Obtain Milestone B approval, initiate System Design and Development (SDD).

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost				2.797
RDT&E Articles Quantity * (as applicable)				

- Complete build of 6 EDMs for DT/OT.
- Complete DT/OT.
- Complete Log Demo.
- Prepare MS C documentation.

C. Other Program Funding Summary:

Gladiator is a cooperative program of the Office of Naval Research and the DoD Joint Robotics Program. The ONR is responsible for funding the major portion of the technology demonstration, while the JRP continues to manage the Gladiator program through SDD to production in support of Marine Corps requirements.
FNC funding, under Autonomous Operations is:
FY02 5.0 million
FY03 2.5 million
FY04 1.5 million

D. Acquisition Strategy:

Not Applicable

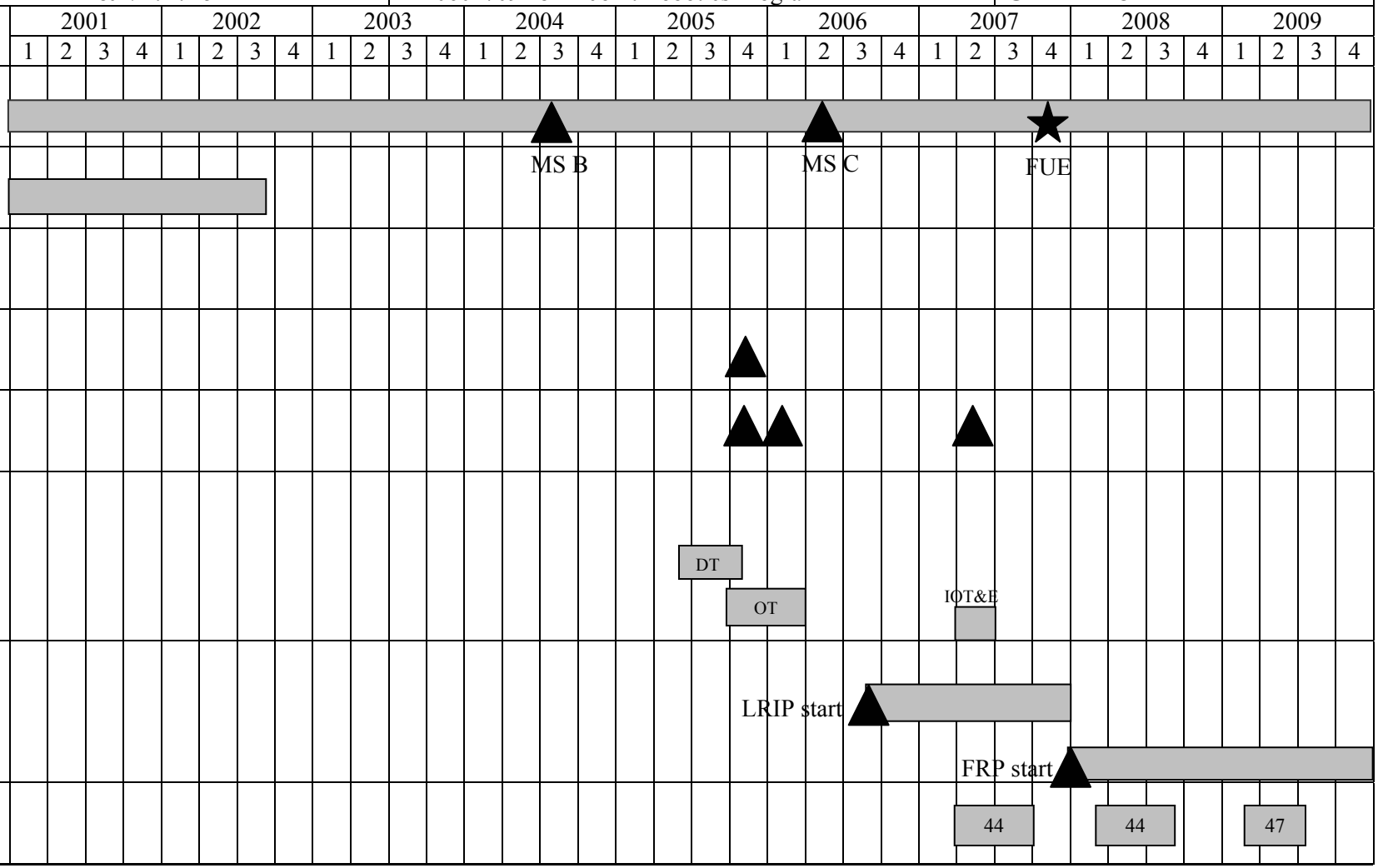
E. Major Performers:

Not Applicable

Exhibit R-3 Cost Analysis (page 1)								Date:	February-2003				
DEFENSE-WIDE		Program Element						Gladiator					
BUDGET ACTIVITY 5		PE 0604709D8Z											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
Primary Hardware Development	CPFF					1.203		2.076					
Ancilliary Hardware Development													
Systems Engineering						0.402		0.102					
Licenses													
Tooling						0.052		0.052					
GFE													
Award Fees													
Subtotal Product Development				0.000		1.657		2.230					
Remarks:													
Development Support						0.095		0.052					
Software Development						0.086		0.086					
Training Development						0.046		0.046					
Integrated Logistics Support						0.085		0.085					
Configuration Management						0.075		0.075					
Technical Data													
GFE													
Subtotal Support				0.000		0.387		0.344					
Remarks:													

Exhibit R-3 Cost Analysis (page 2)								Date: February-2003				
DEFENSE-WIDE BUDGET ACTIVITY 5		Program Element PE 0604709D8Z						Gladiator				
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT												
IOT&E												
Initial Verification Testing												
Subtotal T&E				0.000		0.000		0.000				
Remarks:												
Contractor Engineering Support						0.038		0.038				
Government Engineering Support						0.225		0.125				
Program Management Support						0.060		0.060				
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management				0.000		0.323		0.223				
Remarks:												
Total Cost			0.000	0.000		2.367		2.797				
Remarks:												

Exhibit R-4, Schedule Profile		Date: February 2003
Appropriation/Budget Activity DEFENSE WIDE RDT&E/B.A. #5	Program Element Number and Name PE 0604709D8Z – Joint Robotics Program	Project Number and Name GLADIATOR



R-4 Schedule Profile – Item No. 20-3 of 20-4

Exhibit R-4a, Schedule Detail		Date: February 2003
Appropriation/Budget Activity Research, Development, Test & Evaluation, Defense-Wide, Budget Activity 5	Program Element Number and Name PE 0604709D8Z Joint Robotics Program	Project Number and Name Gladiator

Schedule Profile	FY 2001	FY 2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Milestone A								
Contract Preparation		1-2Q						
CTD Contract Award		2Q						
CTD		2-4Q	1-4Q					
Milestone B				3Q				
Contract Preparation				2-4Q				
SDD Contract Award				4Q				
SDD				3-4Q	1-4Q			
Developmental Test					3-4Q			
Log Demo					4Q			
Operational Test					4Q	1Q		
Milestone C						2Q		
Low Rate Initial Production						2Q		
IOT&E							2Q	
Full Rate Production							4Q	
First Unit Equipped							4Q	

R-4a Schedule Profile - Item No. 20-4 of 20-4

Exhibit R-2a, RDT&E Budget Item Justification							Date: February 2003	
APPROPRIATION/BUDGET ACTIVITY DEFENSE WIDE RDT&E BA 5				R-1 ITEM NOMENCLATURE JOINT ROBOTICS PROGRAM PE 0604709D8Z				
COST ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MDARS-E	4.700	12.700	3.420	3.480	3.550	3.620	3.680	3.780

A. Mission Description and Budget Item Justification:

The Mobile Detection Assessment Response System – Exterior (MDARS-E) will provide commanders at Army, Air Force, Navy, and Defense Logistics Agency (DLA) facilities with the capability to conduct semi-autonomous, random patrols and surveillance activities, barrier assessment, and theft detection functions. MDARS-E can be used in a variety of installations: chemical storage facilities, general storage yards; depots; Arms, Ammunition, and explosives (AA&E) storage areas; air fields; rail-yards; and port facilities. The system will autonomously conduct surveillance activities, conduct lock interrogations, and assess the status of facility barriers such as AA&E storage bunkers. Capabilities include the detection of unauthorized personnel, verification of barriers and product status, and the remote investigation of an alarm source.

B. Accomplishments/Planned Program

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost	4.700			
RDT&E Articles Quantity * (as applicable)				

- Awarded SD&D contract to General Dynamics Robotics Systems.
- Updated Acquisition Program Baseline.
- Conducted Preliminary Design Review.
- Fabricated hardware.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost		12.700		
RDT&E Articles Quantity * (as applicable)				

- Conduct Critical Design Review
- Identify Early User Appraisal (EUA) Activities for Army and Air Force Sites.
- Deliver First Pre-Production Platforms.
- Conduct Production Qualifications Test (PQT) 1a.
- Explore Tactical/Contingency Applications.
- Continue System Integration of Sensor Technologies.
- Continue C2 Software Engineering and Test.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost			3.420	
RDT&E Articles Quantity * (as applicable)				

- Conduct PQT 1b.
- Conduct Early User Appraisal Training (EUA) at Hawthorne Army Depot and Nellis Air Force Base, NV.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/Effort/Subtotal Cost				3.480
RDT&E Articles Quantity * (as applicable)				

- Conduct PQT2.
- Conduct New Equipment Training.
- Initiate Initial Operational Test and Evaluation.

C. Other Program Funding Summary:
Not Applicable

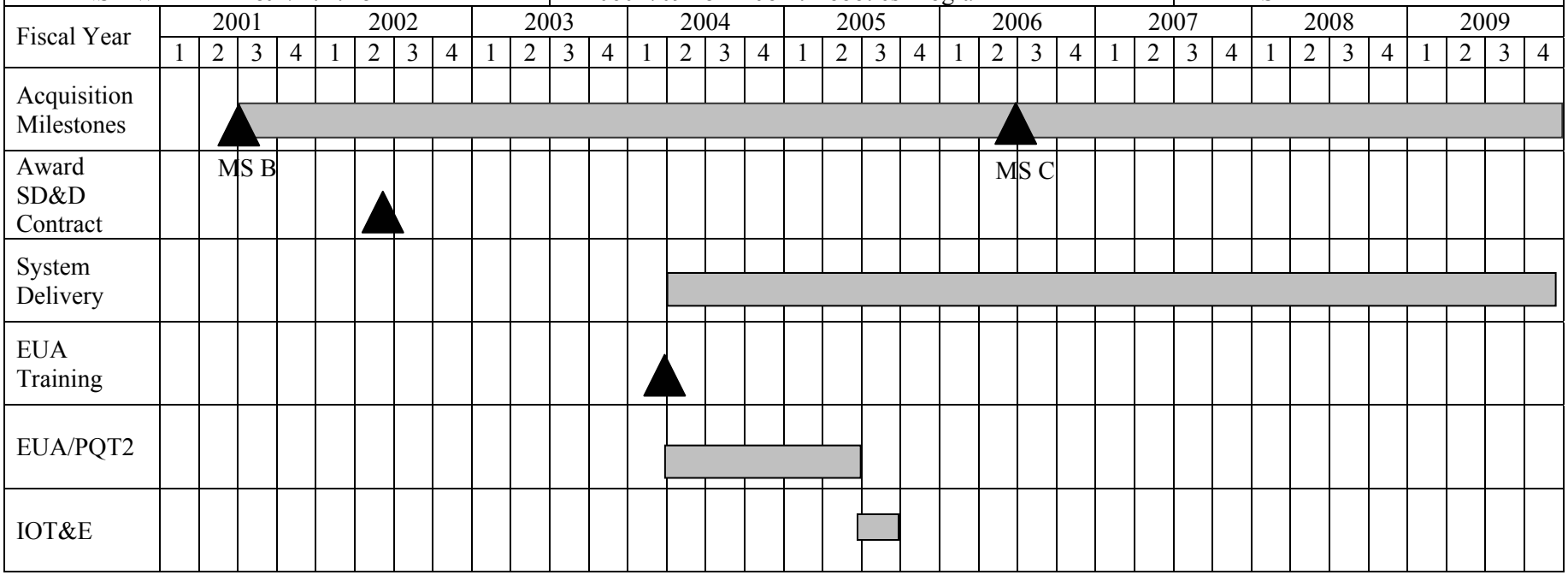
D. Acquisition Strategy:
Not Applicable

E. Major Performers:
Not Applicable

Exhibit R-3 Cost Analysis (page 1)							Date:	February 2003				
DEFENSE-WIDE BUDGET ACTIVITY 5			Program Eleement PE 0604709D8Z				MDARS-E					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development				12.700		3.420		3.480				
Ancilliary Hardware Development												
Systems Engineering												
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				12.700		3.420		3.480				
Remarks:												
Development Support												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support				0.000		0.000		0.000				
Remarks:												

Exhibit R-3 Cost Analysis (page 2)								Date: February 2003					
DEFENSE-WIDE BUDGET ACTIVITY 5		Program Element PE 0604709D8Z						MDARS-E					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total Pys Cost	2003 Cost	2003 Award Date	2004 Cost	2004 Award Date	2005 Cost	2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT												
IOT&E												
Subtotal T&E				0.000		0.000		0.000				
Remarks:												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support												
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management				0.000		0.000		0.000				
Remarks:												
Total Cost			4.700	12.700		3.420		3.480				
Remarks:												

Exhibit R-4, Schedule Profile		Date: February 2003
Appropriation/Budget Activity DEFENSE WIDE RDT&E/B.A. #5	Program Element Number and Name PE 0604709D8Z – Joint Robotics Program	Project Number and Name MDARS-E



R-4 Schedule Profile – Item No. 20-3 of 20-4

Exhibit R-4a, Schedule Detail		Date: February 2003
Appropriation/Budget Activity RDT&E, Defense Wide/ Budget Activity 5	Program Element Number and Name PE 0604709D8Z	Project Number and Name MDARS-E

Schedule Profile	FY 2001	FY 2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Milestone B IPR	3Q							
Award SD&D contract		2Q						
System Delivery				2Q				
EUA Training				2Q				
EUA/PQT2								
Initiate				2Q				
Complete					2Q			
IOT&E					3Q			
Milestone C IPR						3Q		

R-4a Schedule Profile - Item No. 20-4 of 20-4