

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2005

BUDGET ACTIVITY  
7 - Operational system development

PE NUMBER AND TITLE  
0203740A - Maneuver Control System

PROJECT  
484

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
484 MANEUVER CONTROL SYSTEM (MCS)	45403	23350	44903	14987	7285	6750	120	123	Continuing	0

**A. Mission Description and Budget Item Justification:** This program element funds the development, integration and testing of the Maneuver Control System (MCS) to include injectors for Joint Tactical COP Workstation (JTCW) and Command Post of the Future (CPOF). Project satisfies an urgent need for the efficient command and control (C2) of tactical operations on the battlefield. MCS is the Army's tactical C2 system used in command posts from corps to battalion to provide automated C2 for the commander and staff at and between echelons (i.e., Force Level Control). MCS is an essential component of the Army Battle Command System (ABCS) and provides critical coordination among Battlefield Functional Areas (BFAs) within each echelon. The primary component of Force Level Control is MCS's provision of the Common Operational Picture (COP). The COP depicts information provided by all the BFAs and includes a Situation Map (SITMAP) using Defense Mapping Agency data to display friendly and enemy unit locations, control measures (e.g., boundaries, phase lines, etc.), Intelligence and Electronic Warfare graphics, Fire Support plans, combat service support location information, air corridors and air defense weapons control information.

MCS software is based on the Defense Information Infrastructure(DII) Common Operating Environment (COE) standard architecture with applications to automate C2 operations. The MCS software uses the Joint Mapping Tool Kit (JMTK), a Defense Information Infrastructure Common Operating Environment (DII COE) product, for terrain analysis, planning and SITMAP graphical displays. The Task Organization (TO) tool provides the commander and staff a means of organizing (graphically and textually) tactical Army units. Unit commanders and their staffs can quickly and efficiently prepare and disseminate combat orders with MCS's automated Operations Order (OPORD) generating tool. MCS report displays provide resource information roll-ups on all battlefield units. MCS supports battlefield situation displays for all ABCS BFAs. MCS provides the Global Command and Control System - Army (GCCS-A) the Army "ground track" segment of the joint tactical common picture.

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Conduct MCS software development and support	30503	13253	6450	6225
Plan and participate in test events, and prepare for the MCS Operational Tests	2300	2555	0	0
Conduct MCS 6.4 IOT&E	5400	3942	0	0
JTCW Development	0	3600	20057	8762
CPOF Development	7200	0	18396	0
Totals	45403	23350	44903	14987

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## B. Program Change Summary

	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2005)	24753	16388	11774
Current Budget (FY 2006/2007 PB)	23350	44903	14987
Total Adjustments	-1403	28515	3213
Net of Program/Database Changes			
Congressional Program Reductions	-818		
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer	-585		
Adjustments to Budget Years		28515	3213

FY06/07: Funds increased to cover development and Operational Testing of Joint Tactical COP Workstation (JTCW) and development for the Command Post of the Future (CPOF).

## C. Other Program Funding Summary

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
BA9320 - Maneuver Control System (MCS)	35689	28553	49562	38786	31127	2122	1002	0	Continue	Continue
BS9710 - MCS Spares	1888	1919	1834	1906	1499	1529	0	0	Continue	Continue

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<p><b><u>D. Acquisition Strategy:</u></b> The MCS acquisition strategy is based on modular development of application software, integrated with the common system software, hosted on the ruggedized commercial off-the-shelf Common Hardware/ Software (CHS) computers and peripheral hardware that are procured under the Army CHS ordering contract. Software will be developed, tested, integrated and trained as necessary to meet warfighter tactical and training requirements. Upon completion of the base capability that is to be fielded, development will continue for Joint Interoperability, Common Operating Environment and Safety requirements as necessary to continue the life of the software in the field. Priced options on the MCS Software Development contract will be exercised for JTCW development. Fielding of the JTCW will begin upon obtaining Materiel Release planned for 1QFY07.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MCS 6.4 Software Development	C/CPAF	Lockheed Martin Corp., Tinton Falls, NJ	171367	7100	1-2Q	6160	1-2Q	4750	1-2Q	4750	194127	197327
b . JTCW Development	C/CPAF	Lockheed Martin Corp., Tinton Falls, NJ	0	3600	1-2Q	14226	1-2Q	4509	1-2Q	Continue	Continue	0
c . CPOF Development	MIPR	DARPA	5700	0		0		0		0	5700	0
d . CPOF Development	C/CP	To Be Selected	0	0		14124	1-2Q	0		Continue	Continue	0
e . Misc Contracts	Various	Various	13933	1025	1-2Q	1880	1-2Q	658	1-2Q	Continue	Continue	0
f . Software Development & Technical Support	MIPR	CECOM, NJ	25245	2843	1-2Q	2500	1-2Q	1067	1-2Q	Continue	Continue	0
g . Technical Support	In House	PM GC C2, NJ	12037	2079	1-4Q	2183	1-4Q	830	1-4Q	Continue	Continue	0
h . PSE H/W & S/W	Various	Various	2575	0		200	2Q	200	2Q	Continue	Continue	0
i . MITRE System Engineering	CPFF	MITRE Corp., Eatontown, NJ	8615	1106	1Q	875	1Q	755	1Q	Continue	Continue	0
j . ABCS SE&I	MIPR	PEO C3T, NJ	1830	0		0		0		0	1830	0
Subtotal:			241302	17753		42148		12769		Continue	Continue	197327

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II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Misc Support	In House	PM GC C2, NJ	3386	478	1-4Q	490	1-4Q	550	1-4Q	Continue	Continue	0
b . Misc Contracts	Various	Various	1963	165	1-2Q	200	1-3Q	225	1-2Q	Continue	Continue	0
Subtotal:			5349	643		690		775		Continue	Continue	0
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . OGA	MIPR	Various	2938	727	1-2Q	435	1-2Q	267	1Q	Continue	Continue	0
b . Misc Contracts	Various	Various	4071	508	1-2Q	422	1-2Q	250	1Q	Continue	Continue	0
c . Operational Test/Planning	MIPR	Various	16463	3065	1-2Q	524	2-3Q	221	1Q	Continue	Continue	0
Subtotal:			23472	4300		1381		738		Continue	Continue	0

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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Office Mgmt	In House	PM GC C2, NJ	2105	654	1-4Q	684	1-4Q	705	1-4Q	Continue	Continue	0
Subtotal:			2105	654		684		705		Continue	Continue	0
Project Total Cost:			272228	23350		44903		14987		Continue	Continue	197327

# Schedule Profile (R4 Exhibit)

February 2005

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Event Name	FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
S/W Development	Software Development and COE/Interoperability Upgrades																															
Fielding	Fielding (Purchase of CHS)																															
CTSF Integration Testing/Certification for MCS 6.4																																
(1) LRIP Approval for □09 systems	▲1																															
(2) MCS Full Rate Production Decision								▲2																								
(3) , (4) , (5) , (6) , (□) CHS Orders	▲3							▲4		▲5			▲6				▲7															
(□) MCS 6.4 IOT&E Completed								▲8																								
(9) JTCW Test													▲9																			
(10) JTCW Materiel Release Decision													▲10																			

## Schedule Detail (R4a Exhibit)

February 2005

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<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
LRIP Approval	1Q							
CTSF Integration/Certification for MCS 6.4	3-4Q	1-2Q						
Complete MCS Initial Operational Test & Evaluation		2-3Q						
MCS Full Rate Production Decision		3Q						
Initial Operational Capability		4Q						
Joint Tactical Common Operational Picture (COP) Workstation (JCTW) Test			4Q					
JTCW Materiel Release Decision				1Q				
Software Development of MCS / JTCW / CPOF	1-4Q	1-4Q	1-4Q					
Evolving Software Upgrades (e.g., joint interoperability, COE compliance, etc.)		4Q	1-4Q	1-4Q	1-4Q	1-4Q		

DARPA is transitioning CPOF development to the Army in FY06 as a preferred solution to meeting certain MCS documented requirements. Any requirements for further development will be addressed in the FY07 Army POM.