

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

**February 2007**

<b>BUDGET ACTIVITY</b> <b>7 - Operational system development</b>	<b>PE NUMBER AND TITLE</b> <b>0203740A - Maneuver Control System</b>							<b>PROJECT</b> <b>484</b>		
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
484 MANEUVER CONTROL SYSTEM (MCS)	36602	34590	43961	28166	24013	15125	15458	15798		213713

**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), Joint Convergence, 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.

FY08/09 funding will provide for the development of the products and services that will satisfy the tactical Battle Command capability requirements, while migrating to a service oriented architecture supporting the Army Battle Command Migration Plan. This project funding includes developing Battle Command Common Services (BCCS) and providing an enabling infrastructure for tactical Battle Command within Army Software Blocking timelines.

<b><u>Accomplishments/Planned Program:</u></b>	<b><u>FY 2006</u></b>	<b><u>FY 2007</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>
MCS software development to enhance Interoperability, Usability, and Functionality	8476	6726	5303	1150
JTCW System Engineering and Development	3281			
Joint Convergence Engineering and Development	8445	8543	17361	8216
CPOF Development	16400	17149	17600	15000
Battle Command Common Services Development		1275	3697	3800
Small Business Innovative Research/Small Business Technology Transfer Programs		897		
<b>Total</b>	<b>36602</b>	<b>34590</b>	<b>43961</b>	<b>28166</b>

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<b><u>B. Program Change Summary</u></b>	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	40813	37976	22020	21621
Current BES/President's Budget (FY 2008/2009)	23737	14380	27615	6020
Total Adjustments	-17076	-23596	5595	-15601
Congressional Program Reductions		-3132		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-4211	-254		
SBIR/STTR Transfer				
Adjustments to Budget Years			21941	6545

**Change Summary Explanation:**

**Funding**  
 FY06: Funds decreased by \$4211 for reprogramming to higher priority requirements.  
 FY07: Funds decreased by \$3000 was for Joint Tactical Common Operational Picture Workstation (JTCW) development, and further decreased by \$386 for Economic Assumptions and Program Budget Decision offset.  
 FY08: Funds increased by \$21941 for development of Command Post of the Future (CPOF), Joint Convergence, and Battle Command Common Services capabilities.  
 FY09: Funds increased by \$6545 for Joint Convergence effort.

<b><u>C. Other Program Funding Summary</u></b>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
BA9320 - Maneuver Control System (MCS)	99218	76714	120767	113324	92541	100212	73093	71964	Continuing	Continuing
BS9710 - MCS Spares	1833	1778	1519	1555			1650	1700	Continuing	Continuing

Comment:

**D. Acquisition Strategy** 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. The current MCS/Joint Convergence/BCCS Software Development contract will be used to develop products and services (as network capability is able to support) in a net centric

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PE NUMBER AND TITLE

PROJECT

**7 - Operational system development**

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**484**

environment. Army acquisition strategy for technical insertion of Command Post of the Future (CPOF) capabilities into the MCS program is being implemented within this line.

# ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE									PROJECT		
7 - Operational system development			0203740A - Maneuver Control System									484		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MCS Software Development	C/CPAF	Lockheed Martin Corp., Tinton Falls, NJ	178467	6160	1-2Q							4750	184627	184627
MCS, Joint Convergence, and BCCS System Engineering & Development	C/CPAF	Lockheed Martin Corp., Tinton Falls, NJ	3600	10215	1-2Q	6169	1-2Q	15937	1-2Q	4046	1Q	Cont.	Cont.	
CPOF Development	MIPR	DARPA	11737	4500	2Q								16237	
CPOF Development	TBD	ILEX		5534	3Q	13689	2Q	12000	1-3Q	12000	1-3Q	Cont.	Cont.	
Misc Contracts	Various	Various	15101	1880	1-2Q	1958	1-2Q	2115	1-2Q	1650	1-2Q	Cont.	Cont.	
Software Development & Technical Support	MIPR	CECOM Software Engineering Center, NJ	29608	2500	1-2Q	3167	1-2Q	3326	1-2Q	2400	1-2Q	Cont.	Cont.	
Technical Support	In House	PM Battle Command, NJ	14116	2183	1-4Q	2830	1-4Q	2972	1-4Q	2400	1-4Q	Cont.	Cont.	
PSE H/W & S/W	Various	Various	2575			200	2Q	200	2Q			Cont.	Cont.	
MITRE System Engineering	CPFF	MITRE Corp., Eatontown, NJ	9721	875	1Q	1062	1Q	1147	1Q	1239	1Q	Cont.	Cont.	
ABCS SE&I	MIPR	PEO C3T, NJ	1830										1830	
SBIR/STTR						897	2Q						897	
Subtotal:			266755	33847		29972		37697		23735		Cont.	Cont.	184627
II. Support Costs			Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Misc Support	In House	PM Battle Command, NJ	3864	490	1-4Q	550	1-4Q	578	1-4Q	607	1-4Q	Cont.	Cont.	
Misc Contracts	Various	Various	2128	200	1-3Q	475	1-2Q	513	1-2Q	460	1-2Q	Cont.	Cont.	
Subtotal:			5992	690		1025		1091		1067		Cont.	Cont.	

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III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
OGA	MIPR	Various	3665	435	1-2Q	267	1-2Q	280	1-2Q	240	1-2Q	Cont.	Cont.	
Misc Contracts	Various	Various	4579	422	1-2Q	250	1-2Q	270	1-2Q	230	1-2Q	Cont.	Cont.	
Operational Test/Planning	MIPR	Various	19528	524	2-3Q	1721	1-3Q	3200	1-3Q	1400	1-2Q	Cont.	Cont.	
Subtotal:			27772	1381		2238		3750		1870		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Office Mgmt	In House	PM Battle Command, NJ	2759	684	1-4Q	1355	1-4Q	1423	1-4Q	1494	1-4Q	Cont.	Cont.	
Subtotal:			2759	684		1355		1423		1494		Cont.	Cont.	

<b>Project Total Cost:</b>			<b>303278</b>	<b>36602</b>		<b>34590</b>		<b>43961</b>		<b>28166</b>		<b>Cont.</b>	<b>Cont.</b>	<b>184627</b>
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# Schedule Profile (R4 Exhibit)

February 2007

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PROJECT  
484

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	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	S/W Development, Integration and COE/Interoperability Upgrades for MCS/CPOF/BCCS																															
Fielding (Purchase of Hardware)	[Redacted]																															
CTSF Integration Testing/Certification for MCS/CPOF/BCCS	[Redacted]																															
(1) CPOF Transitions from DARPA to Army	[Redacted]																															
(2) CPOF Development Contract Award	[Redacted]																															
Server Consolidation/Common Services Development	[Redacted]																															
(3) MCS and CPOF Merge	[Redacted]																															
Evolving Software Upgrades (e.g., joint interoperability, COE compliance, etc.)	[Redacted]																															



**Schedule Detail (R4a Exhibit)**

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**484**

<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
S/W Development	1Q - 4Q							
Fielding (Purchase of Hardware)	1Q - 4Q							
CTSF Integration Testing/Certification for MCS/CPOF/BCCS	1Q - 4Q							
CPOF Transitions from DARPA to Army	3Q							
CPOF Development Contract Award	3Q							
Server Consolidation/Common Services Development		1Q - 4Q						
MCS and CPOF Merge					4Q			
Evolving Software Upgrades (e.g., joint interoperability, COE compliance, etc.)	1Q - 4Q							