

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE February 2000					
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0203740A Maneuver Control System				PROJECT D484				
COST (In Thousands)				FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D484 Maneuver Control System				28720	45776	48910	14070	14653	13269	3764	Continuing	Continuing
<p>A. <u>Mission Description and Budget Item Justification:</u> This program element funds the evolutionary software development, integration and testing of the Maneuver Control System (MCS). Project D484, Maneuver Control System (MCS) satisfies an urgent need for 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 Tactical Picture (CTP). The CTP depicts information provided by all the Battlefield Functional Areas (BFAs) and includes a Situation Map (SITMAP) using Defense Mapping Agency map 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.</p> <p>MCS software is based on the OSD-DISA Common Operating Environment (COE) standard architecture with applications to automate C2 operations. The MCS Block IV 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 by echelon. Unit commanders and their staffs can quickly and efficiently prepare and disseminate combat orders with MCS's automated Operations Order (OPORD) generating tool. MCS's report displays provide resource information roll-ups on all reporting battlefield units. MCS provides the Common Tactical Picture software supporting battlefield situation display for all ATCCS BFAs. MCS provides the Army "ground track" segment of the joint tactical common picture to the Global Command and Control System-Army (GCCS-A).</p> <p>FY 1999 Accomplishments:</p> <ul style="list-style-type: none"> • 28570 Continued MCS Block IV software development • 150 Began planning for Block IV Initial Operational Test and Evaluation (IOT&E) <p>Total 28720</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 40653 Continue MCS Block IV software development • 2930 Participate in test events leading to Block IV IOT&E • 1000 Integrate Tactical Voice Control • 1193 Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) programs <p>Total 45776</p>												
Project D484				Page 1 of 5 Pages				Exhibit R-2 (PE 0203740A)				

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)	DATE February 2000
---	------------------------------

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0203740A Maneuver Control System	PROJECT D484
---	---	-------------------------------

FY 2001 Planned Program:

- 33610 Continue MCS Block IV software development
 - 15300 Conduct Block IV Initial Operational Test & Evaluation
- Total 48910

B. Program Change Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 2000/2001 PB)	28623	45125	25682
Appropriated Value	28923	46125	
Adjustments to Appropriated Value			
a. Congressional General Reductions	-300		
b. SBIR / STTR	-724		
c. Omnibus or Other Above Threshold Reductions	+1384	-183	
d. Below Threshold Reprogramming	-449		
e. Rescissions	-114	-166	
Adjustments to Budget Years Since FY 2000/2001 PB			+23228
Current Budget Submit (FY 2001 PB)	28720	45776	48910

Change Summary Explanation:

Funding: FY2000 (+1000) Congressional increase for integration of a tactical voice control capability in MCS

FY2001 (+23228) Increase for MCS Block IV software development and conduct of the Block IV IOT&E.

Schedule: OSD Acquisition Decision Memorandum, dated Aug 6, 1999, approved change in the MCS program acquisition strategy. MCS Block III will only be fielded to the Training Base. MCS Block IV will complete its IOT&E in (1Q 02) with a Milestone III decision in BES/Q02.

C. Other Program Funding Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To</u>	<u>Total</u>
Other Procurement, Army								<u>Compl</u>	<u>Cost</u>
Maneuver Control System - BA9320	12755	24886	22935	31327	33745	43479	43433	Cont'g	Cont'g
MCS Spares - BS9710	0	0	0	1981	4553	1383	1382	Cont'g	Cont'g

D. Acquisition Strategy: Since the initial MCS was introduced in Europe in 1981, this program has been and will continue to be an evolutionary software development program broken out into Blocks. The MCS capability continues to expand in pre-planned, time-phased steps toward the objective system. The MCS acquisition strategy is based on modular development of application software, integrated with the common system software, hosted on the procured commercial off-the-shelf CHS computers and peripheral hardware. The current block of MCS software, Block IV, consists of development of two versions; MCS Version 1(FDD) and MCS Version 2(FDC). MCS

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)	DATE February 2000
---	------------------------------

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0203740A Maneuver Control System	PROJECT D484
---	---	-------------------------------

Version 2(FDC), the Block IV objective software will add applications and stand-alone functionality from MCS Version 1(FDD). Therefore technical risk associated with each version is minimized. The use of Common Hardware/Software (CHS) equipment enables the MCS to capitalize on state of the art ruggedized, commercial equipment and reduce life cycle costs. Commencement of the transition to CHS began in FY 1989 with the initiation of the porting of software as well as the initiation of the integration of CHS into both the Standardized Integrated Command Post System (SICPS). MCS is moving to ruggedized commercial workstations and notebook computers to enhance software development, support and training.

E. Schedule Profile	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Participation in ABCS 5.X testing	3Q-4Q*						
Participation in ABCS 6.X test events		1-4Q					
Participation in FBCB2 Limited Users Test-2		3Q					
MCS Version 1 System Segment Acceptance Test			1Q				
Participate in FBCB2 Limited Users Test-3			3Q				
Complete Block IV IOT&E (Version 1)				4Q			
Block IV Milestone III Decision				1Q			
Initial Operational Capability					1Q		
MCS Version 2 System Segment Acceptance Test					2Q		
Block IV FOTE (Version 2)						1Q	
P3I program							1-4Q

*Milestone Complete

UNCLASSIFIED

ARMY RDT&E COST ANALYSIS (R-3)										DATE February 2000		
BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0203740A Maneuver Control System					PROJECT D484		
I. Product Development												
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.	Block IV (LMC)	C/CPIF/AF Lockheed Martin Corp, Tinton Falls, NJ	24700	17289	2Q	26496	1Q	21700	1Q	20815	111000	See Remark
b.	Block III (TKC)	C/CPIF/AF CSC, Telos, MITRE	58969	0							58969	
c.	Other Contracts	C/Various	193174	5645	1Q-3Q	6185	1Q-2Q	3871	1Q-2Q	Cont'g	208875	
d.	Technical Support	MIPR CECOM	11343	838		2148		2255		Cont'g	16584	
e.	In-House		23919	1688		1722		1808		Cont'g	29137	
f.	PSE H/w &S/W	C/Various	9237	150	3Q	1844	1Q			Cont'g	11231	
g.	MITRE Sys Engrg			1665	1Q	2050	1Q	2255	1Q	Cont'g	5970	
h.	SBIR/STTR					1193					1193	
Subtotal Product Development:			321342	27275		41638		31889		20815	442959	
Remark: Total Cost represents Project Manager's current best estimate to completion in FY04 (anticipates two-year extension of contract).												
II. Support Costs												
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.	In-House		15699	630		655		681		Cont'g	17665	
b.	Other Contracts	C/Various	16456	502	1Q-2Q	553	1Q-2Q	1040	1Q-2Q	Cont'g	18551	
Subtotal Support Costs:			32155	1132		1208		1721			36216	
III. Test and Evaluation												
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.	OGA	MIPR	1761			1500		4500		Cont'g	7761	
b.	Other Contracts	C/Various	1452	221	1Q-2Q	730	1Q-2Q	800	1Q-2Q	Cont'g	3203	
c.	CHS-1 HW	C/FPP Miltope Corp	613								613	
d.	Operational Test/Planning	MIPR ATEC	4618	92	1Q	700	1Q	10000	1Q	Cont'g	15410	
Subtotal Test and Evaluation:			8444	313		2930		15300			26987	
IV. Management Services: None												
Project D484												

UNCLASSIFIED

ARMY RDT&E COST ANALYSIS (R-3)	DATE February 2000
---	------------------------------

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0203740A Maneuver Control System	PROJECT D484
--	--	------------------------

	Total PYs Cost	<u>FY 1999</u> Cost		<u>FY 2000</u> Cost		<u>FY 2001</u> Cost		Cost To Complete	Total Cost	Target Value of Contract
Project Total Cost:	361941	28720		45776		48910		Cont'g	Cont'g	