

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

**February 2002**

BUDGET ACTIVITY <b>7 - Operational system development</b>	PE NUMBER AND TITLE <b>0203759A - Force XXI Battle Command, Brigade and Below (FBCB2)</b>						PROJECT <b>120</b>		
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
120      FORCE XXI BATTLE CMD, BRIGADE & BELOW (FBCB2)	62144	56381	64915	29396	20578	15088	17035	70000	650103

**A. Mission Description and Budget Item Justification:** The Force XXI Battle Command Brigade and Below (FBCB2) is a digital battle command information system which provides integrated, real-time, situational awareness and command and control information. It will provide mounted/dismounted tactical combat, combat support and combat service support commanders, leaders and soldiers with integrated, on-the-move, real time/near real time battlefield information. This digitization is a pentium based computer with a graphics display, global positioning system and communications link. The system will enhance the ability of tactical commanders, while on the move, to synchronize their forces, achieve agility, and gain an understanding of the battlespace through improved SA. FBCB2 will be integrated into the mounted and dismounted maneuver (divisional, separate, heavy and light), cavalry/reconnaissance and armored cavalry, mechanized infantry, and aviation units.

FBCB2 is a key element of the Army Battle Command System (ABCS) and provides the technology to complete the ABCS information flow process from brigade to platform and across platforms within the brigade task force and across brigade boundaries. FY 03 dollars will further develop and test the FBCB2 software. FBCB2 is an Army designated Horizontal Technology Integration (HTI) program. This system supports the legacy to the objective transition paths of the Transformation Campaign Plan (TCP).

**FY 2001 Accomplishments:**

- 24201      Conducted system/network engineering, integration and testing, and modeling and simulation to support FBCB2 and Army Battle Command System (ABCS) integration.
  - 5020      Developed FBCB2 Interactive Electronic Technical Manual (IETM), training plans of instruction (POI's) for FBCB2 v3.4. Developed field maintenance manuals in support of technical/operational testing.
  - 13144      Completed software development efforts for FBCB2 v3.4 to support LUT 2A and FDD/FDC fielding; initiated development of FBCB2 v3.5 for IBCT and requirements for dismounted systems.
  - 14659      Conducted Government testing to include FBCB2 reliability test, FT4 and LUT 2/Division Capstone Exercise (DCX1).
  - 4120      PM FBCB2 Program Management.
  - 1000      TACNAV - Developed hardware/software interface between Tactical Navigation Electronic Digital Compass System and FBCB2
- Total 62144

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## FY 2002 Planned Program

- 13033 Continue ABCS architecture and system of systems network engineering and integration efforts in support of ABCS 7.0.
- 22320 Conduct LUT 2A at Ft. Hood, TX, FT5 at Ft. Huachuca, AZ, Line of Sight(LOS) Testing at Ft. Knox, KY, and Initiate IOT&E Planning and Preparation
- 14555 Complete software development for v3.5, initiate development of v7.0 and support Government Testing.
- 1299 Develop training plans, (POI's) maintenance and technical manuals for v3.5.
- 5174 PM FBCB2 Program Management

Total 56381

## FY 2003 Planned Program

- 19327 Continue ABCS architecture and system of systems network engineering and integration efforts in support of ABCS 7.0.
- 21040 Conduct combined FBCB2/MCS/ISYSCON(V4) Initial Operational Test and Evaluation (IOT&E)(Force Effectiveness, Phase I), at FT. Hood, TX, Climatic (Extreme Cold), at Ft. Greely, AK, NTC 03-05(Force Effectiveness Phase II) at National Training Center, Ft Irwin, CA
- 1038 Initiate development of training materials for FBCB2 v7.0.
- 18763 Continue development of FBCB2 software v7.0 and support Government Testing.
- 4747 PM FBCB2 Program Management.

Total 64915

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<u><b>B. Program Change Summary</b></u>	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	64009	56872	27789
Appropriated Value	64601	56872	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-491	0
b. SBIR / STTR	-1853	0	0
c. Omnibus or Other Above Threshold Reduction	0	0	0
d. Below Threshold Reprogramming	-12	0	0
e. Rescissions	-592	0	0
Adjustments to Budget Years Since FY2002 PB	0	0	37126
Current Budget Submit (FY 2003 PB)	62144	56381	64915

FY01: \$1M Congressional Plus-up for the Tactical Navigation Electronic Digital Compass System.  
 FY02: \$491K decrease due to Congressional General Reductions.  
 FY03: \$37.1M increase FY 03 for Software Development and Future Testing.

<u><b>C. Other Program Funding Summary</b></u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
Other Procurement Army Activity 2 SSN W61900	72225	74090	65294	133996	87886	98705	82593	1494805	2175773
Other Procurement Army Activity 4 SSN BS9736 (Spares)	743	1380	1891	3961	3202	3236	3233	0	17646

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**D. Acquisition Strategy:** The initial EMD contract, awarded in 1995, is a Cost Plus Incentive Fee (CPIF), Systems Engineering and Integration (SE&I) effort. The contract is for the development of software versions v1.0-v3.4, prototype computers, and associated hardware. A follow-on SE&I contract (CPAF) was awarded in May 2001 for software versions v3.5 and v7.0. This will satisfy the ORD Block II requirements and synchronize with ABCS 7.0.

A Low Rate Initial Production (LRIP)Fixed Price Incentive Fee (FPIF) contract was awarded in January 2000 for the production of 5,952 systems with OPA funds. A Full Rate Production (FRP)contract will be awarded in 1QFY04 following a FRP Decision Review in 4QFY03.

<b>E. Schedule Profile</b>	<b>FY 2001</b>	<b>FY 2002</b>	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>
Equip 4TH ID	1Q						
Abrams/Bradley IOTE/FOTE	1Q						
LUT2/DCX1	2Q						
Follow on SE&I (Block II) Contract Award	3Q						
Version 3.4 FBCB2 Software Delivery	4Q						
LUT 2A		1Q					
Version 3.5 FBCB2 S/W Delivery		2Q					
FT5		3-4Q					
Line of Sight (LOS) Testing		4Q					
Initial Operational Test & Evaluation (IOTE)			1Q				
Climatic (Extreme Cold) Testing Ft. Greely, AK			1-2Q				
NTC 03-05 (Force Effectiveness Phase II)			2Q				
MS III/Full Rate Production Decision Review			4Q				
Full Rate Production Contract Award				1-2Q			
Award SE&I (Block III) Contract				1Q			
FBCB2 Software v7.0 Delivery					1Q		
FBCB2 Software v8.0 Delivery						3Q	

## 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 . Software/Systems Engineering	CPIF/CPAF	TRW, CA	99002	24201	1Q	13033	1Q	19327	1Q	55408	210971	210971
b . Hardware Development	FFP	TRW, CA.	27645	0		0		0		0	27645	27645
c . Software Development	CPIF/CPAF	TRW, CA	149096	18164	1Q	15854	1Q	19801	1Q	65989	268904	268904
d . TACNAV	CPIF	TRW CA	0	1000		0		0		0	1000	1000
<b>Subtotal:</b>			275743	43365		28887		39128		121397	508520	508520

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 . PM Office Support	N/A	CECOM, Ft. Monmouth	8419	1534	1Q	984	1Q	1488	1Q	7144	19569	0
b . Matrix Support	MIPR	CECOM, Ft. Monmouth	3383	356	1Q	202	1Q	294	1Q	1599	5834	0
c . Misc. Contracts Support	MIPR/PWD	CECOM, Ft. Monmouth	12089	2230	1Q	3988	1Q	2965	1Q	12557	33829	33829
<b>Subtotal:</b>			23891	4120		5174		4747		21300	59232	33829

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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 . CTSF	MIPR	CTSF	2133	0	1Q	0		0		0	2133	0
b . ATEC	MIPR	ATEC	6623	9786	1-2Q	18190	1Q	20910	1Q	0	55509	0
c . EPG	MIPR	EPG	6176	4873	1Q	4130	1Q	130	1Q	9400	24709	0
Subtotal:			14932	14659		22320		21040		9400	82351	0

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
Subtotal:			0	0		0		0		0	0	0

Project Total Cost:			314566	62144		56381		64915		152097	650103	542349
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