

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

May 2009

<b>BUDGET ACTIVITY</b> <b>7 - Operational system development</b>		<b>PE NUMBER AND TITLE</b> <b>0203759A - Force XXI Battle Command, Brigade and Below (FBCB2)</b>			
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
120 Force XXI Battle Cmd, Brigade & Below (FBCB2)	30974	23341			54315

**A. Mission Description and Budget Item Justification:** Force XXI Battle Command Brigade and Below (FBCB2) consists of FBCB2 and Joint Battle Command - Platforms (JBC-P) hardware and software.

The Force XXI Battle Command Brigade and Below (FBCB2) is a digital, battle command information system that provides integrated, on-the-move, timely, relevant battle command information to tactical combat, combat support and combat service support leaders and soldiers. FBCB2 incorporates state-of-the-art information technology to allow commanders to concentrate combat system effects rather than combat forces, enabling units to be both more survivable and more lethal. FBCB2 provides the capability to pass orders and graphics allowing the warfighter to visualize the commander's intent and scheme of maneuver. FBCB2 affords combat forces the capability to retain the tactical/operational initiatives under all mission, enemy, terrain, troops, and time available conditions to enable faster decisions, real/near-real-time communications and response. FBCB2 as a key component of the Army Battle Command System (ABCS), completes the information flow process from brigade to platform and across platforms within the brigade task force and across brigade boundaries. FBCB2 system provides a dual based capability consisting of both terrestrial (EPLRS) and satellite based (L-Band) systems. The system includes a Pentium based processor, display unit, keyboard, removable hard disk drive cartridge, and a platform specific installation kit. The satellite based system, more commonly known as Blue Force Tracking (BFT), includes an L-Band transceiver that employs commercial satellite services in lieu of tactical terrestrial radios. Currently over 60,000 total systems have been fielded with approximately 15,000 systems in support of Operation Enduring Freedom (OEF)/Operation Iraqi Freedom (OIF).

The Joint Battle Command - Platforms (JBC-P), which includes Blue Force Tracking and Army Aviation, provides true Joint force Command and Control (C2) Situational Awareness (SA) and communications (e.g., terrestrial, celestial) capability at the platform level through command center locations (e.g., Network Operations Centers, TOCs, Brigade Command Posts) and enables mission accomplishment across the entire spectrum of Joint military operations. JBC-P serves as the cornerstone for Joint Blue Force Situational Awareness (JBFS). It provides continuous near-real-time identification of friendly locations to populate the Joint Common Operating Picture (JCOP). Joint Battle Command - Platforms (JBC-P) enhances Joint Combat Identification to increase combat effectiveness and reduces fratricide in a secure environment. It enables Joint, net-centric C2/Battle Command by seamlessly passing/sharing relevant information vertically and horizontally, within all levels of command, regardless of Service unit hierarchy. In addition to utilizing the existing FBCB2/BFT system, JBC-P system hardware consists of a family of computers (e.g., handhelds, tablets, ruggedized computers, beacons and in-dash computers), communications equipment (e.g., satellite transceivers/antennas), encryption devices (e.g., KGV-72), and ancillary equipment (e.g., Mission Data Loader, Disk Duplicator, cables, installation kits, etc.).

FBCB2 RDTE Funding ends in FY09.

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<b><u>B. Program Change Summary</u></b>	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	32194	38418	
Current BES/President's Budget (FY 2010)	30974	23341	
Total Adjustments	-1220	-15077	
Congressional Program Reductions		-14424	
Congressional Recissions			
Congressional Increases			
Reprogrammings	-319		
SBIR/STTR Transfer	-901	-653	
Adjustments to Budget Years			

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

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FY09 funds continue execution of Chief of Staff of the Army Directives for Battle Command Architecture and Joint Requirements Oversight Council Memorandum (JROCM) efforts. Efforts include security network architecture requirements, and interoperability between Tactical Internet and L-Band based FBCB2 systems. Funds will be used to provide platform-level situational awareness and provide interoperability with ABCS System of Systems, Bradley, Abrams, Aviation, Stryker and support mandated Army/DoD protocol/system updates.

<b><u>Accomplishments/Planned Program:</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>
Continue to design, develop, fabricate and test a Type 1 Encryption Device (TIED) to meet requirements for processing secret messages.	5664		
Continue test and evaluation efforts to support Army Software Blocking schedule.	5259	4000	
PM FBCB2 Program Management	2566	3618	
Continue development of FBCB2 Joint Capabilities Release (JCR) to include Army and Marine Corp Common Battle Command Product Line (BCPL) initiatives, communications connectivity, and high speed data networks capabilities.	9894	8186	
Design, develop, fabricate and test prototype L-Band antennas to achieve data capacity and situation awareness accuracy requirements. Develop and deliver an organic FBCB2 Blue Force Tracking (BFT) L-band key management capability for the Army and other DoD and coalition users of the FBCB2 BFT L-Band network.	7591		
Initiate systems development efforts against current Combat Identification Capability gaps for accuracy/latency of Blue Position reporting,		3884	

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density of systems and joint coalition interoperability.		
Develop and test cross domain security solution to permit uncleared users to operate systems on a Type 1 secured network. Provide interface to unclassified sensor networks and logistics data.		3000
Small Business Innovative Research/Small Business Technology Transfer Programs		653
Total		30974      23341

<u><b>B. Other Program Funding Summary</b></u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA - W61900	596166	242933	514978		1354077
OPA - BS9736 (Spares)	2501	5055			7556
OMA - 432142	19816	11024			30840

Comment:

**C. Acquisition Strategy** The FBCB2 development effort follows an evolutionary acquisition strategy to support Product Line Architecture, Army/Marine Corps convergence, Army Battle Command System (ABCS) interoperability and Army Software Blocking requirements. A Full Rate Production (FRP) decision review conducted by the Army Systems Acquisition Review Council (ASARC) in Aug 2004 authorized the FBCB2 program to enter into the Production and Deployment phase. Development efforts are executed via an Indefinite Delivery/Indefinite Quantity (ID/IQ) Cost Plus Award/Fixed Fee type contract. The current contract was awarded in Sep 2004 with a period of performance through Sept 2009.

# ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE								PROJECT	
<b>7 - Operational system development</b>			<b>0203759A - Force XXI Battle Command, Brigade and Below (FBCB2)</b>								<b>120</b>	
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Software/Systems Engineering	CPIF/CPAF	Northrup Grumman, CA	189194	2428	1-2Q	6552	1-2Q				198174	
Hardware Development	CPFF	Northrup Grumman, CA	60719	7591	1-2Q						68310	
Software Development	CPIF/CPAF	Northrup Grumman, CA	261664	13130	1-2Q	9171	1-2Q				283965	
TACNAV	CPIF	TRW CA	1000								1000	
Systems Eng, Training and Log Development	CPAF	Lockheed Martin, NJ	11196								11196	
Systems Eng, Training and Log Development	Various	Various Contracts	1504								1504	
Subtotal:			525277	23149		15723					564149	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Office Support	N/A	CECOM, Ft. Monmouth	16113	670	1-4Q	874	1-4Q				17657	
Matrix Support	MIPR	CECOM, Ft. Monmouth	5653	528	1-2Q	673	1-2Q				6854	
Misc. Contracts Support	MIPR/PWD	CECOM, Ft. Monmouth	30699	1368	1-2Q	2071	1-2Q				34138	
Subtotal:			52465	2566		3618					58649	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CTSF	MIPR	CTSF	3342		1-4Q	75	1-4Q				3417	
ATEC	MIPR	ATEC	38784	765	1-4Q	2500	1-4Q				42049	
EPG	MIPR	EPG	20990	4494	1-4Q	1000	1-4Q				26484	

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CRTC	MIPR	CRTC	1040								1040	
Misc Contract Support			4071		1-4Q	425	1-4Q				4496	
Subtotal:			68227	5259		4000					77486	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
<b>Project Total Cost:</b>			<b>645969</b>	<b>30974</b>		<b>23341</b>					<b>700284</b>	

# Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY  
**7 - Operational system development**

PE NUMBER AND TITLE  
**0203759A - Force XXI Battle Command, Brigade and Below (FBCB2)**

PROJECT  
**120**

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	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
<b>FBCB2</b>																																
<b>Joint Capabilities Release (JCR)/ Product Line Architecture/ JROCM 161-03</b>																																
(1) System/Segment Acceptance Testing (SSAT), (2)					▲ V1.1				▲ V2.0																							
Intra Army Interoperability Certification (IAIC),					■ V1.1				■ V2.0																							
Operational Evaluation					■																											



# Schedule Detail (R4a Exhibit)

May 2009

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<u>Schedule Detail</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>	<u>FY 2014</u>	<u>FY 2015</u>
FBCB2	1Q - 4Q	1Q - 4Q						
Joint Capabilities Release (JCR)/ Product Line Architecture/ JROCM 161-03	1Q - 4Q	1Q - 4Q						
System/Segment Acceptance Testing (SSAT)	3Q							
		2Q						
Intra Army Interoperability Certification (IAIC)	2Q - 3Q							
		2Q - 3Q						
Operational Evaluation	4Q							