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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE February 2000			
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0203759A Force XXI Battle Command, Brigade and Below(FBCB2)				PROJECT D120		
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost	
D120 Force XXI Battle Command, Brigade & Below (FBCB2)	52003*	65176	63601	37699	29154	12179	0	0	264137	
<p>* Database presently shows 56328. Internal reprogrammings totaling 4325 have reduced this total to the current program of 52003. Database will be updated with the next submission.</p> <p>A. <u>Mission Description and Justification:</u> The initial FBCB2 effort was developed under Program Element 0203758A, Project D374 as part of the Army's digitization initiative and was transferred to this Program Element for central management by the Program Executive Officer for Command, Control and Communications (PEO C3S)/PM FBCB2 beginning in FY 1999. The mission of PM FBCB2 is to develop, acquire, test and field a digital information system that provides mounted tactical combat, combat support, and combat service support commanders, leaders and soldiers, integrated, on-the-move, real-time/near real-time, situational awareness and command and control information. This capability will be fielded from brigade down to the soldier/platform level across all Battlefield Functional Areas (BFAs), and include other division and corp elements necessary to support brigade operations. FBCB2 will be integrated into the mounted and dismounted maneuver (divisional, separate, heavy and light) calvary/reconnaissance and armored cavalry, mechanized infantry and aviation units. PM FBCB2 is developing, and delivering the Applique (computer, software, and installations kits) and FBCB2 (software) products which are integrated into various platforms. Battlefield digitization allows the Army's primary weapons and battle command systems to see, acquire and engage threats while sharing the same information with equal clarity, using advanced technologies and digital communications. These platforms are connected through a communications infrastructure called the Tactical Internet. Interoperability is provided through the use of graphics, images common messages and data elements. The FBCB2 system and tactical internet provide the power of the network to share situational awareness (SA) and command and control (C2) information toward the efficient use of resources within the enemy's decision cycle. FBCB2 is integrated with Army Tactical Command and Control Systems (ATCCS) located within the brigade and battalion. The interfaces between FBCB2 and ATCCS systems will provide users at all levels a common picture of their battlespace. This seamless digitization (Computer with graphics display, global positioning system, communications link and command and control software) will be applied across the army.</p> <p>FY 1999 Accomplishments:</p> <ul style="list-style-type: none"> • 13030 System Engineering, and Project Management • 5259 Contractor System Integration, Testing • 4221 Integrated Logistics Support, Specialty Engineering and Training • 788 Site operations • 14567 Software Development • 3608 Hardware Design and Management • 1907 Government Testing, Electronic Proving Ground (EPG, Reliability Development Test RDT, Safety Assessment – Successful "Growth" Demonstrated • 641 Time & Material Efforts • 1789 Hardware (174 Applique systems) in support of Field Development Test & Evaluation/Limited User Test 2 (FDT&E/LUT#2) 										
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7 - Operational System Development	0203759A Force XXI Battle Command, Brigade and Below(FBCB2)	D120
<p>FY 1999 Accomplishments: (continued)</p> <ul style="list-style-type: none"> • 6018 PM FBCB2 Program Management • 175 Y2K Compliance <p>Total 52003</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 11459 System Engineering, and Project Management • 7757 Contractor System Integration, Testing • 4868 Integrated Logistics Support, Specialty Engineering and Training • 1420 Site operations • 14133 Software Development • 2520 Hardware Design and Management • 11142 Government Testing EPG, Army Test & Evaluation Command (ATEC), LUT 2 • 2133 Central Technical Support Facility (CTSF) - Horizontal Integration, testing and training • 1600 Time and Materials efforts • 6389 PM FBCB2 Program Management • 1755 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs <p>Total 65176</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 12791 System Engineering, and Project Management • 8515 Contractor System Integration, Testing • 5020 Integrated Logistics Support, Specialty Engineering and Training • 12348 Software Development • 1117 Hardware Design and Management • 13643 Government Testing (EPG, ATEC) • 1339 Site operations • 2263 CTSF • 1600 Time & Material efforts • 4965 PM FBCB2 Program Management <p>Total 63601</p>		
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B. Program Change Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 2000/2001 PB)	52121	44225	28876
Appropriated Value	52469	65925	
Adjustments to Appropriated Value			
a. Congressional General Reductions	-348		
b. SBIR / STTR			
c. Omnibus or Other Above Threshold Reduction	+175	-270	
d. Below Threshold Reprogramming	-83		
e. Rescissions	-210	-479	
Adjustments to Budget Years Since FY 2000/2001 PB			+34725
Current Budget Submit (FY 2001 PB)	52003	65176	63601

Change Summary Explanation: Funding - FY 2001 increase of 34725

- 11100 for ATEC testing (LUT3/DCX1, DCX2, IOTE)
- 2000 for Electronic Proving Ground (EPG)
- 1200 CTSF Integration
- 1600 Time and Materials efforts to support numerous events
- 15800 Software development to accomplish functional capability requirements
- 1500 Aviation FBCB2 Development – Digitization of Army Aviation
- 1500 Windows NT Development

C. Other Program Funding Summary	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY2004</u>	FY2005	To Compl	Total Cost
Other Procurement Army Activity 2 SSN W61900		56165	60802	111394	170665	151491	225848	1281.0	2057.4

D. Acquisition Strategy: Spiral development is the overall FBCB2 acquisition strategy. It is based on proving out functional capabilities through numerous incremental testing events over time and incorporating results/feedback into the next “spiral”. The current competitive contract, awarded in 1995, is a System Engineering and Integration (SE&I) effort, with cost plus incentive fee, time and materials and firm fixed price orders. The contract is for the development of software version’s V1-V3 and appropriate hardware. The follow-on SE&I contract will be awarded in FY01 for software versions V4. A competition for Low Rate Initial Production (LRIP) hardware contractors began in FY99 under the management of the present SE&I contractor. A three year LRIP Firm Fixed Incentive Target Fee

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<p>(FFITF) contract is to be awarded in January 2000 and will be OPA funded. The LRIP permits establishment of a robust production base and an orderly increase in the production rate for the</p> <p>system sufficient to lead to full-rate production upon the successful completion of operation testing. The full rate production contract will be awarded in FY02. FBCB2 is integrated with the Army Tactical Command and Control (ATCCS) located within the brigade and battalion. The interfaces between FBCB2 and ATCCS systems will provide users at all levels a common picture of their battlespace.</p> <p>Program realigned in March 1999 to support DOTE guidance for “additional functionality” and “maturity” of software. Incorporates additional testing and force effectiveness evaluations.</p>																																																																																																																																																																		
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">E. Schedule Profile</th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>FY 2004</u></th> <th style="text-align: center;"><u>FY 2005</u></th> </tr> </thead> <tbody> <tr> <td>Version 3.0 FBCB2 Software Delivery</td> <td style="text-align: center;">1Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Version 3.1 FBCB2 Software Delivery</td> <td style="text-align: center;">3Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Version 3.2 FBCB2 Software Delivery</td> <td></td> <td style="text-align: center;">1Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Production Contract Award (LRIP)</td> <td></td> <td style="text-align: center;">2Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Force Development Test & Evaluation/LUT2</td> <td></td> <td style="text-align: center;">3Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Version 3.3 FBCB2 Software Delivery</td> <td></td> <td style="text-align: center;">3Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Equip 4TH ID</td> <td></td> <td style="text-align: center;">Start 3Q</td> <td style="text-align: center;">End 1Q</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bradley/Abrams IOTE/FOTE</td> <td></td> <td></td> <td style="text-align: center;">1Q</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Follow on SE&I Contract Award</td> <td></td> <td></td> <td style="text-align: center;">1Q</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Version 3.3+ FBCB2 Software Delivery</td> <td></td> <td></td> <td style="text-align: center;">1Q</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Software Development V4.-V...n</td> <td></td> <td></td> <td style="text-align: center;">1Q</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Limited User Test 3/DCX1</td> <td></td> <td></td> <td style="text-align: center;">2Q</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DCX II</td> <td></td> <td></td> <td style="text-align: center;">4Q</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Initial Operational Test & Evaluation (IOTE)</td> <td></td> <td></td> <td></td> <td style="text-align: center;">1Q</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Milestones Decision III</td> <td></td> <td></td> <td></td> <td style="text-align: center;">3Q</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Full Rate Production Contract Award</td> <td></td> <td></td> <td></td> <td style="text-align: center;">3Q</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Version 4.0 FBCB2 Software Delivery</td> <td></td> <td></td> <td></td> <td style="text-align: center;">3Q</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Software Development V.4-V...n</td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">1-4Q</td> <td></td> <td></td> </tr> <tr> <td>Software Development V4.-V...n</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">End 4Q</td> <td></td> </tr> </tbody> </table>			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>	Version 3.0 FBCB2 Software Delivery	1Q							Version 3.1 FBCB2 Software Delivery	3Q							Version 3.2 FBCB2 Software Delivery		1Q						Production Contract Award (LRIP)		2Q						Force Development Test & Evaluation/LUT2		3Q						Version 3.3 FBCB2 Software Delivery		3Q						Equip 4TH ID		Start 3Q	End 1Q					Bradley/Abrams IOTE/FOTE			1Q					Follow on SE&I Contract Award			1Q					Version 3.3+ FBCB2 Software Delivery			1Q					Software Development V4.-V...n			1Q					Limited User Test 3/DCX1			2Q					DCX II			4Q					Initial Operational Test & Evaluation (IOTE)				1Q				Milestones Decision III				3Q				Full Rate Production Contract Award				3Q				Version 4.0 FBCB2 Software Delivery				3Q				Software Development V.4-V...n					1-4Q			Software Development V4.-V...n						End 4Q	
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ARMY RDT&E COST ANALYSIS (R-3)	DATE February 2000
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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. SE/SW Development	CPIF	TRW, LA, CA	195840	40295	Nov 98	42992	Nov 99	42730	Nov 00	63396	385253	385253
b. Hardware Development	FFP	TRW, LA, CA.		3608	Jun 99	2520	Jan 00	0		0	6128	6128
c. Inflation Withhold				0								
Subtotal Product Development:			195840	43903		45512		42730		63396	391381	391381

Remark: Prior Years costs shown include funding from the Program Element 0203758A, Project D374 funding line of the Army Digitization Office (ADO).

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. PM Office Support	N/A	CECOM, Ft. Monmouth		2121	Oct 98	1998	Oct 99	1241	Oct 00	3499	8859	Cont.
b. Matrix Support	MIPR	CECOM, Ft. Monmouth		728	Nov 98	874	Nov 99	575	Nov 00	0	2177	Cont.
c. Misc. Contracts Support	MIPR/PWD	CECOM, Ft. Monmouth		3169	Nov 98	3517	Nov 99	3149	Nov 00	0	9835	Cont.
Subtotal Support Costs:				6018		6389		4965		3499	20871	Cont.

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. CTSE	MIPR	CTSE				2133	Dec 99	2263	Dec 00	5067	9463	
b. ATEC	MIPR	ATEC		400	Nov 98	4900	Dec 99	11100	Nov 00	7300	23700	
c. EPG	MIPR	EPG		1507	Nov 98	5240	Dec 99	2543	Nov 00	388	9678	
d. Other	MIPR	Misc		175		1002					1177	
Subtotal Test and Evaluation:				2082		13275		15906		12755	44018	

IV. Management Services: None

Project Total Cost:			195840	52003		65176		63601		79650	456270	391381
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