

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

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

5 - Engineering and manufacturing development

0604818A - Army Tactical Command & Control Hardware & Software

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
Total Program Element (PE) Cost	37849	57216	80672	57291	66271	64036	60146	Continuing	Continuing
323 COMMON HARDWARE SYSTEMS	12035	16947	22526	11950	11302	11481	11612	Continuing	Continuing
334 COMMON SOFTWARE	4432	4681	9261	9968	16957	17266	17468	Continuing	Continuing
C12 STANDARD INTEGRATED COMMAND POSTS (SICPS)	0	0	2505	2498	3988	2492	2486	0	13969
C29 CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)	0	0	11572	11825	12084	12360	12621	0	60462
C34 ARMY TAC C2 SYS ENG	15588	27719	13541	14052	14027	14014	13984	0	153376
C39 TACTICAL OPERATIONS CENTERS (TOCS)	5794	7869	5265	0	1786	1882	1975	0	36618
C3A ARMY AIRBORNE COMMAND & CONTROL SYS (A2C2S)	0	0	16002	6998	6127	4541	0	Continuing	Continuing

A. Mission Description and Budget Item Justification: The umbrella program to exploit automation technology for the conduct of combat operations is the Army Tactical Command and Control System (ATCCS) program which is a component of the Army Battle Command System (ABCS). The ATCCS program provides automation in the five battlefield functional areas (BFAs) with the following specific systems: (1) Maneuver Control System (MCS); (2) Effects and Fires Command and Control Systems (EFCCS); (3) All Source Analysis System (ASAS) for Intelligence/Electronic Warfare; (4) Forward Area Air Defense Command, Control and Intelligence System (FAADC2I); and (5) Combat Service Support Control System (CSSCS) and to other Army Joint and Allied systems. To provide an overall technically sound, cost effective, and operationally responsive approach, the design and development of ATCCS must be accomplished on a total systems basis. The ATCCS Engineering program provides the required systems engineering to assure integrated Army tactical command and control and the utilization of common hardware and software throughout the five ATCCS nodal systems. This project includes the Central Technical Support Facility (CTSF) which provides a single technical "center of mass" for software checkout and physical system integration. The Common Hardware and Software projects provide common hardware and software to customers to meet their developmental and fielding needs. The Tactical Operations Centers (TOCs) project designs and develops the TOCs that form the structural backbone of the Army's digitized fielding concept. The Army Airborne Command & Control (A2C2S) provides the avionics system required to horizontally and vertically integrate the battlefield. These systems support the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

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

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

5 - Engineering and manufacturing development**0604818A - Army Tactical Command & Control Hardware & Software**

<u>B. Program Change Summary</u>	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY 2002 PB)	39059	50887	49141
Appropriated Value	39420	57687	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-471	0
b. SBIR / STTR	-1114	0	0
c. Omnibus or Other Above Threshold Reprogrammings	0	0	0
d. Below Threshold Reprogramming	-97	0	0
e. Rescissions	-360	0	0
Adjustments to Budget Years Since FY2002 PB	0	0	31531
Current Budget Submit (FY 2003 PB)	37849	57216	80672

Change Summary Explanation:

Funding -

FY 2003: Plus Up of \$13.428M to C34 to finance SE&I costs for ATCCS under one funding line.

FY 2003: Information Dissemination Management-Tactical (IDM-T) Plus Up of \$4.490M to C334.

FY 2003: Addition of \$16.002M for C3A Army Airborne Command & Control System (A2C2S) as a new project code.

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar				PROJECT 323	
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
323 COMMON HARDWARE SYSTEMS	12035	16947	22526	11950	11302	11481	11612	Continuing	Continuing

A. Mission Description and Budget Item Justification: Project D323 Common Hardware Systems (CHS): CHS is the program through which the Army builds its integrated efforts for tying together the Army Battle Command Systems (ABCS). The project provides vehicles (contracts) through which customers can acquire state-of-the-art common hardware/software and associated peripherals to meet developmental and fielding needs. The project also provides software technology support and command post internal structures within shelters. The common software supports Army, other Services and Joint systems. The CHS program is instrumental in digitizing the battlefield. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:

- 3933 Continued management of the acquisition and delivery of CHS-2 equipment in support of customer requirements
- 655 Continued supporting customers testing efforts with CHS equipment
- 1400 Continued technology insertion
- 5600 Next generation command and control system. Integration of the Army's Advanced Warfare Environment's commercial technology solution and architecture into the Army's legacy and emerging command and control systems.
- 447 ABCS System Engineering and Integration efforts

Total 12035

FY 2002 Planned Program

- 4495 Continue management of the acquisition and delivery of CHS-2 equipment in support of customer requirements
- 3084 Initiate follow-on contract requirements effort (CHS-3)
- 300 Continue supporting customers testing efforts with CHS equipment
- 617 ABCS System Engineering and Integration efforts

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

February 2002

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

PROJECT

323

FY 2002 Planned Program (Continued)

- 6746 Continue integration of the Army's Advanced Warfare Environment's commercial technology solution and architecture into the Army's legacy and emerging command and control systems
- 1705 Continue technology insertion

Total 16947

FY 2003 Planned Program

- 4631 Continue management of the acquisition and delivery of CHS-2 equipment in support of customer requirements
- 300 Continue supporting customers testing efforts with CHS equipment
- 648 ABCS System Engineering and Integration efforts
- 12000 CHS-3 Non-Recurring Engineering
- 2000 CHS-3 Integration, Testing and Demonstration
- 2947 CHS-3 Source Selection Evaluation Board

Total 22526

B. Other Program Funding Summary: Not applicable for this item.

C. Acquisition Strategy: The overall goal is to improve interoperability and lower life cycle costs by standardizing Battlefield Command and Control (C2) automation through centralized buys of non-developmental items (NDI). Four NDI hardware versions are available to meet specific needs of each Battlefield Functional Area (BFA): handheld, portable, transportable and lightweight computer unit.

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

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
**0604818A - Army Tactical Command & Control
 Hardware & Softwar**

PROJECT
323

<u>D. Schedule Profile</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
LCU contract expired	3Q						
CHS-2 Technology Insertion (continuous)	1-4Q	1-4Q		1-4Q	1-4Q	1-4Q	1-4Q
Initiate follow-on contract requirements effort (CHS-3)		1Q					
CHS-3 contract award			3Q				
Delivery of CHS-3 V2 initial production hardware					2Q		
CHS-2 contract expires					3Q		

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604818A - Army Tactical Command & Control

323

Hardware & Softwar

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 . CHS Integrated Product Team - Testing/Logistics/Safety/Technical Writing Support and Follow-on CHS-3	MIPR	CECOM Matrix Support, Fort Monmouth, NJ	19933	560	1-2Q	1667	1-2Q	3209	1-2Q	Continue	Continue	0
b . CHS-3 Non-Recurring Engineering	FFP/IDIQ	TBD	0	0		0		12000	3Q	0	12000	12000
c . Technical Insertion	MISC	Miscellaneous	7164	1400	1-3Q	1705	1-3Q	0		Continue	Continue	0
d . Contractor/Govt Support - Engineering/Logistics/CHS-2 Ordering and CHS-3 Efforts	C/T&M and MIPR	PM ATCCS, Fort Monmouth, NJ	33482	2663	1-3Q	4576	1-3Q	2970	1-3Q	Continue	Continue	0
e . Hi-Tech Software Contract	C/T&M and MIPR	CSC, Fort Monmouth, NJ office	7654	0		0		0		7654	7654	0
f . Systems Engineering Support	MIPR	MITRE, Eatontown and Fort Monmouth, NJ office	9518	655	1Q	660	1Q	693	1Q	Continue	Continue	0
g . 3-D Display Technology	OTA	Concurrent Technology Corporation, PA	4000	5600	1Q	6746	2-3Q	0		0	16346	0
h . ABCS System Engineering and Integration Efforts	MIPR	PEO C3S, Fort Monmouth, NJ	0	447	1Q	617	1Q	648	1Q	Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar	PROJECT 323
--	--	------------------------------

I. Product Development (continued)	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:			81751	11325		15971		19520		Continue	Continue	12000

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 . Not applicable			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

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 . CHS Test Activities	MIPR	Other Government Activities	0	0		300	2-4Q	2300	2-4Q	Continue	Continue	0
Subtotal:			0	0		300		2300		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar	PROJECT 323
---	---	-----------------------

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
a . Program Office Management	In house	PM ATCCS, Fort Monmouth, NJ	0	710	1-4Q	676	1-4Q	706	1-4Q	Continue	Continue	0
Subtotal:			0	710		676		706		Continue	Continue	0

Project Total Cost:			81751	12035		16947		22526		Continue	Continue	12000
---------------------	--	--	-------	-------	--	-------	--	-------	--	----------	----------	-------

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development		PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar					PROJECT 334			
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	
334 COMMON SOFTWARE	4432	4681	9261	9968	16957	17266	17468	Continuing	Continuing	

A. Mission Description and Budget Item Justification: Project D334 Common Software (CS): Common Software is the program through which the Army procures, develops, integrates and tests common software products and or modules and or components for both the Army and Joint Services through the Defense Information Infrastructure Common Operating Environment (DII COE). The CS project provides state-of-the-art software technologies. The CS program is a cornerstone in the Army's battlefield digitization efforts. FY03-07 includes work under the Information Dissemination & Data Management-Tactical (IDM-T) which will cover web-based management tools. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:

- 913 Continued the management of the acquisition and delivery of CS and Commercial off the Shelf (COTS) products in support of Army and Joint Service customer requirements.
- 3519 Continued the execution of the common software technology and reuse program, continued supporting customer integration and testing, integrated Defense Message System client software into the ABCS baseline, continued the exploration and evaluation of new software technologies in support of the overall CS program and continued developing, upgrading and delivery of DII COE products into Army and Joint Service systems.

Total 4432

FY 2002 Planned Program

- 859 Continue the management of the acquisition and delivery of CS and COTS products in support of Army and Joint Service customer requirements.
- 3822 Continue execution of the Common Software technology and reuse program, continue supporting customer integration and testing, continue the exploration and evaluation of new software technologies in support of the overall CS program and continue developing, upgrading and delivery of DII COE products into Army and Joint Service systems.

Total 4681

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**February 2002**

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

PROJECT

334**FY 2003 Planned Program**

- 870 Continue the management of the acquisition and delivery of CS and COTS products in support of Army and Joint Service customer requirements.
- 3691 Continue execution of the Common Software technology and reuse program, continue supporting customer integration and testing, continue the exploration and evaluation of new software technologies in support of the overall CS program and continue developing, upgrading and delivery of DII COE products into Army and Joint Service systems.
- 4490 Information Dissemination Management - Tactical (IDM-T) effort. IDM-T will be integrated into the Army Battlefield Command and Control Systems (ABCS) version 7.0 and beyond and will be accessed by ABCS user terminals.
- 210 ABCS System Engineering and Integration Efforts.

Total 9261

B. Other Program Funding Summary: Not applicable for this item.

C. Acquisition Strategy: The overall goal is to improve software development, integration and interoperability, and to lower life cycle costs by providing common software products to the Army and Joint Services. This strategy will be realized through defined Application Program Interfaces (APIs), standardized protocols, reusable software and standard commercial products.

D. Schedule Profile: Not applicable for this item.

Software development is performed in accordance with Army Software Blocking Policy. DII COE software product deliveries are made every six (6) months.

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604818A - Army Tactical Command & Control

334

Hardware & Softwar

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 . Matrix Support of CS Lab, Data Access & JMTK	MIPR	CECOM, Fort Monmouth, NJ	0	362	1-3Q	365	1-3Q	370	1-3Q	Continue	Continue	0
b . Engineering/Software Development	MIPR	Various GSA Contractors / Various Locations	0	3453	1-3Q	3752	1-3Q	8121	1-4Q	Continue	Continue	0
c . ABCS SE&I	MIPR	PEO C3S, Fort Monmouth, NJ	0	0		0		210	1Q	0	210	0
Subtotal:			0	3815		4117		8701		Continue	Continue	0

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 . Automation Support	GSA / MIPR	PKMM, Oceanport, NJ	0	66	1-3Q	70	1-3Q	60	1-3Q	Continue	Continue	0
Subtotal:			0	66		70		60		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar	PROJECT 334
--	--	------------------------------

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 . Not applicable			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Remarks: DT is performed by development contractors and is covered under the Product Development section of this R-3. OT is funded by the applicable BFA application programs.

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
a . Program Office Management	In-House	Fort Monmouth, NJ	0	551	1-3Q	494	1-3Q	500	1-3Q	Continue	Continue	0
Subtotal:			0	551		494		500		Continue	Continue	0

Project Total Cost:			0	4432		4681		9261		Continue	Continue	0
----------------------------	--	--	---	------	--	------	--	------	--	----------	----------	---

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development		PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar					PROJECT C12			
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
C12 STANDARD INTEGRATED COMMAND POSTS (SICPS)		0	0	2505	2498	3988	2492	2486	0	13969

A. Mission Description and Budget Item Justification: The Standard Integrated Command Post System (SICPS) program procures five (5) command post variants, each designed to accommodate the various Battlefield Functional Areas (BFAs) and Tactical Operations Centers (TOCs) of the Army Battle Command System (ABCS) and other customers. The ABCS customers include the Army Tactical Command and Control System (ATCCS) to include Maneuver Control System (MCS), Effects and Fire Command and Control Systems (EFCCS), the Combat Services Support Control System (CSSCS), the Forward Area Air Defense Command and Control System (FAADC2), the Air and Missile Defense Planning and Control System (AMDPCS), the All Source Analysis System (ASAS), and the Integrated Meteorological System (IMETS). This also supports the First Digitized Corps (FDC), First Digitized Division (FDD), Second Digitized Division (SDD) and Transformation efforts. The seven (7) command post variants are: SICPS Test Command Post (CP), Rigid Wall Shelter (RWS) CP mounted on the High Mobility Multipurpose Wheeled Vehicle (HMMWV), Conversion Kits for the M577 Track Vehicle to make the M1068 Track CP, Installation Kits for the 5-Ton Expansible Van (E-Van), and Installation Kits for the Soft Top HMMWV, Large SICPS Shelter (LSS), and Modular Expandable Rigid Wall Shelter (MERWS). SICPS is essential to the Army's transformation efforts, providing mobile and environmentally protected platforms for the ABCS which is a major part of the Army Chief of Staff's efforts to digitize the battlefield. The RDT&E Program develops and matures the enabling technologies required to meet the ABCS Capstone Requirements Document (CRD) and develops SICPS designs for FDC, FDD, SDD and the transformation force. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:

This effort was funded under Logistics & Engineering Equipment (PE 0604804, project 429) FY 2001.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**February 2002**

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development**0604818A - Army Tactical Command & Control****C12****Hardware & Softwar****FY 2002 Planned Program**

This effort was funded under PE 64804/429 in FY 2002.

FY 2003 Planned Program

- 250 Large SICPS Tent. PdM Platforms will continue development of an alternate configuration of the SICPS Tent Command Post. This alternate design will include a larger base module than the current SICPS tent along with the required infrastructure to facilitate Tactical Operations Center (TOC) configurations. This Large SICPS Tent will be able to be complexed together by adjoining modules and will also have the capability to interface with existing SICPS.
- 1745 Continuation of Large SICPS Shelter (LSS) Modular Expendable Rigid Wall Shelter (MERWS) development. Infrastructure required to facilitate Tactical Operations Center (TOC) configurations.
- 510 Objective Remote Workstation (RWS) (w/o trailer) development.

Total 2505

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar	PROJECT C12
---	---	-----------------------

<u>B. Other Program Funding Summary</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
OPA 2, BZ9962	57587	32759	29535	36693	28623	44573	32774	Continuing	Continuing

C. Acquisition Strategy: In-house design and development effort transitioning to Depot for production and integration of Installation Kit (IK). Performance specifications and qualification procedures will be developed concurrently with IK development by Government Integrated Product Team (IPT) team.

<u>D. Schedule Profile</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Testing of Large Tent			1-2Q				
Development of LSS/MERWS IK			2-4Q				
Test & Verification for LSS/MERWS IK			1-2Q				
Development IK for FMTV			2-4Q	1Q			
Test & verification for FMTV IK					1-3Q		
Development of Objective RWS (w/Trailer)			1Q	1Q	1Q	1Q	1Q

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604818A - Army Tactical Command & Control

C12

Hardware & Softwar

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 . In House/Government, LSS/MERWS IK Development	MIPR	Natick, MA	0	0		0		1500	2-4Q	Continue	1500	0
b . RWS follow on concept development		TBD	0	0		0		505	1-2Q	0	505	0
Subtotal:			0	0		0		2005		Continue	2005	0

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 . Engineering Support	MIPR	Fort Monmouth, NJ	0	0		0		250	1-2Q	Continue	Continue	0
Subtotal:			0	0		0		250		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604818A - Army Tactical Command & Control

C12

Hardware & Softwar

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 . Tent Testing	MIPR	APG, MD	0	0		0		250		0	250	0
Subtotal:			0	0		0		250		0	250	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
a . Not applicable			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Project Total Cost:			0	0		0		2505		Continue	Continue	0
---------------------	--	--	---	---	--	---	--	------	--	----------	----------	---

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar				PROJECT C29	
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
C29 CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)	0	0	11572	11825	12084	12360	12621	0	60462

A. Mission Description and Budget Item Justification: Project DC29 - Centralized Technical Support Facility: The Central Technical Support Facility (CTSF) is located in Fort Hood, Texas. The CTSF provides a centralized on-the-ground capability to ensure interoperability among various digitized platforms and serves as the final integration and maturation facility for Common Operating Environment (COE). The CTSF is the Warfighters "Edge" that acts as an enabler for rapid integration of dissimilar software and hardware systems through real time, on-site integration of soldiers, contractors, testers, Program Managers and the requirements community. Also the CTSF provides a single technical "center of mass" for software checkout and system integration and provides a controlled environment with connectivity to other C4I systems either on-site or through the Army Interoperability Network (AIN) to support digital integration and fielding. This effort supports the Legacy to Objective transition path to the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:
Project not funded in FY 2001.

FY 2002 Planned Program
Project not funded in FY 2002.

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

February 2002

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

PROJECT

C29

FY 2003 Planned Program

- 2224 Continue test planning/procedures/execution/reporting
- 2029 Continue software engineering.
- 1451 Provide infrastructure (Facilities, upgrades, additions).
- 1287 Continue field engineering.
- 1275 Continue management operations.
- 800 Provide equipment for instrumentation, simulation/stimulation, software evaluation and development tools.
- 785 Continue configuration management.
- 300 Provide networks connections to include DISN, SIPRNET, NIPRNET, GUARDNET.
- 221 Provide logistics support.
- 1200 Provide DA Mandated Intra-Army Digital Certification test and validation.

Total 11572

B. Other Program Funding Summary: Not applicable for this item.

C. Acquisition Strategy: This project provides the technical and programmatic disciplines required for systems engineering and integration, experimentation, acquisition management, testing, software development, interoperability, fielding and sustainment to ensure an interoperable and affordable ATCCS. The Program Executive Officer for Command, Control, Communications, Tactical (PEO C3T) has planned an evolutionary approach to fielding ATCCS as soon as possible.

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

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
**0604818A - Army Tactical Command & Control
 Hardware & Softwar**

PROJECT
C29

<u>D. Schedule Profile</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Prairie Warrior 02 (ABCS 7.0)			2Q				
Roving Sands			3Q				
III Corps UFL 03			4Q				
III Corps UFL 04				4Q			
Prairie Warrior 05					3Q		
III Corps UFL 05					4Q		

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control
Hardware & Softwar

PROJECT
C29

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 . MANTECH (Direct Labor)	PWD	Fort Hood, TX	0	0		0		2915	1Q	Continue	Continue	0
b . Computer Science Corp (System Engineering)	PWD	Fort Hood, TX/Fort Monmouth, NJ	0	0		0		1158	2Q	Continue	1158	0
c . MITRE Corp (System Engineering)	PWD	Fort Hood, TX/Eatontown, NJ	0	0		0		1106	1Q	Continue	Continue	0
d . CAMBER (Config Mgt/Testing)	PWD	Fort Hood, TX	0	0		0		1025	1Q	Continue	Continue	0
e . TRW (Field Engineering)	PWD	Fort Hood, TX	0	0		0		965	1Q	Continue	Continue	0
f . Nichols (Logistics Support)	MIPR	Fort Hood, TX	0	0		0		754	2Q	Continue	Continue	0
g . ILEX (Field Engineering)	PWD	Fort Hood, TX	0	0		0		377	1Q	Continue	Continue	0
h . Robbin-Gioia (Data Base Management)	PWD	Fort Hood, TX/Fort Monmouth, NJ	0	0		0		300	1Q	Continue	Continue	0
i . GTE	PWD	Fort Hood, TX	0	0		0		231	1-4Q	Continue	Continue	0
j . EWA	PWD	Fort Hood, TX	0	0		0		140	1-2Q	Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604818A - Army Tactical Command & Control

C29

Hardware & Softwar

I. Product Development (continued)	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		8971		Continue	Continue	0

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 . CECOM Matrix	MIPRs	Fort Hood, TX/Fort Monmouth, NJ	0	0		0		145	1Q	Continue	Continue	0
b . In-House Support	MIPRs	Fort Hood, TX	0	0		0		123	1Q	Continue	Continue	0
c . Other Government Support	MIPRs	Fort Hood, TX	0	0		0		33	1Q	Continue	Continue	0
Subtotal:			0	0		0		301		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control
Hardware & Softwar

PROJECT
C29

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 . Electronic Proving Grounds (EPG)	MIPRs		0	0		0		2300	1-4Q	Continue	Continue	0
Subtotal:			0	0		0		2300		Continue	Continue	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
a . Not applicable			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Project Total Cost:			0	0		0		11572		Continue	Continue	0
---------------------	--	--	---	---	--	---	--	-------	--	----------	----------	---

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar	PROJECT C34
---	---	-----------------------

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
C34 ARMY TAC C2 SYS ENG	15588	27719	13541	14052	14027	14014	13984	0	153376

A. Mission Description and Budget Item Justification: Project DC34 - Army Tactical C2 Systems (ATCCS) Engineering: The Air/Land Battle Doctrine requires military leaders to make sound and timely command and control decisions to direct the activities of assigned and supporting units. The umbrella program to exploit automation technology in support of this mission is the ATCCS program, a component of the Army Battle Command System (ABCS). The effort to achieve horizontal integration of the ATCCS BFAs, although going on independently in each BFA, was not disciplined enough to address all connections and needs within the entire spectra of command, control and communications. Therefore, to ensure this horizontal integration effort is complete and fully automated, a significant management, systems engineering and integration effort is required. Within the SE&I line, requirements accomplished are System of Systems Engineering and Integration. This effort supports the Legacy to Objective transition path to the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:

- 1054 Continued ABCS/AWE Integrated Logistics Support/configuration management
- 1098 Continued ABCS/AWE Testing and Evaluation of all BFA fielded software
- 457 Continued ABCS/AWE Fielding/Scheduling
- 1614 Continued ABCS/AWE information engineering
- 523 Conducted and supported system interoperability engineering
- 273 Continued exploring state of the art technology insertion in support of the ABCS program
- 295 Continued development and implementation of the ABCS information assurance
- 1796 Continued ABCS/AWE System Engineering and Integration
- 8478 Central Technical Support Facility Technical Division (CTSF-TD) efforts to meet the Army's digital fielding requirements.

Total 15588

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

February 2002

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

PROJECT

C34

FY 2002 Planned Program

- 333 Continue ABCS/AWE Integrated Logistics Support/configuration management
- 865 Continue ABCS/AWE Testing and Evaluation of all BFA fielded software
- 1702 Continue ABCS/AWE Fielding/Scheduling
- 1500 Continue DD2-N Support
- 1926 Continue ABCS/AWE information engineering
- 638 Conduct and support system interoperability engineering
- 327 Continue exploring state of the art technology insertion in support of the ABCS program
- 809 Continue development and implementation of the ABCS information assurance
- 4924 Continue ABCS/AWE System Engineering
- 5500 Continue System of Systems Development
- 8000 Central Technical Support Facility Technical Division (CTSF-TD) efforts to meet the Army's digital fielding requirements
- 1195 Continue System/Equipment DA Mandated Interoperability Certification

Total 27719

FY 2003 Planned Program

- 962 Continue ABCS/AWE Integrated Logistics Support/configuration management
- 798 Continue ABCS/AWE Testing and Evaluation of all BFA fielded software
- 1165 Continue ABCS/AWE Fielding/Scheduling
- 1184 Continue DD2-N Support
- 1369 Continue ABCS/AWE information engineering
- 676 Conduct and support system interoperability engineering
- 485 Continue exploring state of the art technology insertion in support of the ABCS program
- 637 Continue development and implementation of the ABCS information assurance

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

February 2002

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

PROJECT

C34

FY 2003 Planned Program (Continued)

- 2992 Continue ABCS/AWE System Engineering
- 3273 Continue System of Systems Development

Total 13541

B. Other Program Funding Summary: Not applicable for this item.

C. Acquisition Strategy: This project provides the technical and programmatic disciplines required for systems engineering and integration, experimentation, acquisition management, testing, software development, interoperability, fielding and sustainment to ensure an interoperable and affordable ATCCS. The Program Executive Officer for Command , Control, Communications, Tactical (PEO C3T) has planned an evolutionary approach to fielding ATCCS as soon as possible.

<u>D. Schedule Profile</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
ABCS 6.2.1	3Q						
PRAIRIE WARRIOR	3Q						
ABCS 7.0 SOFTWARE INTEGRATION		2Q					
NTC 00-05		2Q					
ABCS 7.0 SOFTWARE INTEGRATION		2Q					
2ND IBCT FIELDING		4Q					
ROVING SANDS			2Q				
3RD IBCT FIELDING			3Q				
SECOND DIGITIZED DIVISION (2DD)			4Q				
Second Digitized Division (2DD)			4Q				
Digitized Corps				4Q			
4TH IBCT FIELDING				4Q			
101ST AA (Air Assault)					2Q		
Digitize XVIII Corps					3Q		

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

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
**0604818A - Army Tactical Command & Control
 Hardware & Softwar**

PROJECT
C34

D. Schedule Profile (continued)	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
5TH IBCT FIELDING					4Q		

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

C34

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. TRW	PWD	Fort Monmouth, NJ/Fort Hood, TX	1910	709	1Q	3518	1Q	1902	2Q	Continue	8039	0
b. CSC	PWD	Fort Monmouth, NJ/Fort Hood, TX	12804	2084	2Q	6478	2Q	3491	2Q	Continue	24857	0
c. MITRE	PWD	Ft Monmouth, NJ/Eatontown, NJ	8099	3402	1Q	2632	1Q	4294	2Q	Continue	Continue	0
d. MANTECH (Direct Labor)	PWD	Fort Monmouth, NJ/Fort Hood, TX	2470	1449	2Q	2627	2Q	0	2Q	Continue	Continue	0
e. EPG	MIPR	Fort Huachuca, AZ	800	628	1Q	785	1Q	0	2Q	Continue	Continue	0
f. CAMBER (Config Mgt/Testing)	PWD	Fort Hood, TX	0	725	1Q	785	2Q	0	2Q	Continue	Continue	0
g. NICHOLS	MIPR	Fort Hood, TX	0	0		554	3Q	0	3Q	Continue	Continue	0
h. ROBBINS-GIOIA	PWD	Fort Monmouth, NJ/Fort Hood, TX	1005	784	1Q	1300	1Q	1025	2Q	Continue	Continue	0
i. RAYTHEON	PWD	Fort Monmouth, NJ/Fort Hood, TX	0	0		250	1Q	197	2Q	Continue	Continue	0
j. LOCKHEED MARTIN	MIPR	Eatontown, NJ	0	732	1Q	2500	1Q	0	1-2Q	Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control
Hardware & Softwar

PROJECT
C34

I. Product Development (continued)	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
k . GTE (Labor and Equipment)	PWD	Fort Hood, TX	997	777	1-4Q	407	1-4Q	0	1-4Q	Continue	Continue	0
l . Misc Contracts	PWD	Fort Monmouth, NJ/Fort Hood, TX	3143	501	1-2Q	711	1-2Q	0	1-2Q	Continue	Continue	0
m . Unixpros	PWD	Eatontown, NJ	1045	815	1Q	1851	1Q	0	1-2Q	Continue	Continue	0
n . ATSC	MIPR	Fort Leavenworth, KY	500	390	2Q	350	2Q	300	2Q	Continue	Continue	0
o . IDA	MIPR	Fort Monmouth, NJ	300	234	2Q	400	2Q	390	2Q	Continue	Continue	0
p . ITT	PWD	Eatontown, NJ	1070	0		0		0		Continue	Continue	0
q . SAIC	PWD	Eatontown, NJ	0	96	1Q	96	1Q	77	2Q	Continue	Continue	0
r . ILEX	PWD	Fort Hood, TX	0	0	1Q	333	1Q	0	1-2Q	Continue	Continue	0
s . BOOZ-ALLEN	PWD	Eatontown, NJ	0	0		750	2Q	592	2Q	Continue	Continue	0
Subtotal:			34143	13326		26327		12268		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604818A - Army Tactical Command & Control

C34

Hardware & Softwar

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 . In-House Support	MIPRs	Fort Monmouth, NJ/Fort Hood, TX	4389	399	1Q	300	1Q	315	1-2Q	Continue	Continue	0
b . CECOM Matrix	MIPRs	Fort Monmouth, NJ/Fort Hood, TX	615	590	1Q	1052	1Q	925	1-2Q	Continue	Continue	0
c . Other Government Support	MIPRs	Fort Monmouth, NJ/Fort Hood, TX/Fort Belvoir, VA	1778	1273	1Q	40	2Q	33	2Q	Continue	Continue	0
Subtotal:			6782	2262		1392		1273		Continue	Continue	0

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 . Not applicable			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

C34

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
a . Not applicable			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Project Total Cost:			40925	15588		27719		13541		Continue	Continue	0
---------------------	--	--	-------	-------	--	-------	--	-------	--	----------	----------	---

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar				PROJECT C39	
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
C39 TACTICAL OPERATIONS CENTERS (TOCS)	5794	7869	5265	0	1786	1882	1975	0	36618

A. Mission Description and Budget Item Justification: Tactical Operations Centers (TOCs) support the overall mission area of "Exercising Command and Control". The TOC program provides commanders and staffs (at all echelons of command from battalion to corps) with integrated digitized command and control facilities. The commander executes battle command and makes decisions based on objective data and his intuitive feel for the battle. To perform these functions, he and his staff require command, control and communications systems integrated on mobile platforms capable of keeping pace with maneuver forces. The TOC program provides the integrated digitized physical infrastructure (platforms and networks) that operates under all conditions on the modern battlefield and provides the real-time situational understanding (Common Operating Picture) inherent in the command and control systems that comprise the Army Battle Command System (ABCS). These digitized TOCs are key to ensuring that information superiority and force synchronization are gained on the tactical and operational battlefield. TOCs are required for all types of combat, combat support and combat service support units. The program is critical to Army modernization/transformation. The RDT&E Program provides continued support to develop and mature the enabling technologies required to meet the ABCS Capstone Requirements Document (CRD) and develops TOC designs for the First Digitized Corps/Divisions and the transformation force. Examples of efforts requiring technology development are: voice, video and data over the Local Area Network (LAN) that will provide the commander with "virtual" TOC with no need for physical proximity and a Command Information Center (CIC) that links the entire staff and displays relevant information feed in real-time throughout the TOC. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:

- 2648 Sustain Division XXI prototype TOCs
 - 2978 Design and engineering of upgrades to 4th ID TOCs and initial design for 1st CD.
 - 168 ABCS SE&I
- Total 5794

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

February 2002

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

PROJECT

C39

FY 2002 Planned Program

- 1000 Sustain Division XXI Prototype TOCs
- 5369 System and design engineering for 1st CAV and IBCT (Transformation Forces)
- 1500 Develop enabling technologies and technology insertion to meet ORD requirements

Total 7869

FY 2003 Planned Program

- 3189 Design and engineering for 17 1st CAV TOCs, IBCT-3 (Transformation Forces and III Corps).
- 1988 Develop enabling technologies and technology insertion to meet ORD requirements.
- 88 ABCS SE&I

Total 5265

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar	PROJECT C39
---	---	-----------------------

<u>B. Other Program Funding Summary</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
Other Procurement Army 2 - SSN: BZ9865	57127	38653	42332	19940	65074	74356	63065	1839790	2235114

C. Acquisition Strategy: The acquisition strategy relies heavily on non-developmental items (NDI) and Government-furnished equipment (GFE) to design, integrate, assemble, test, train, and field Tactical Operations Centers (TOCs) for SDD, III Corps and IBCTs.

<u>D. Schedule Profile</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Design Reviews	4Q						
Interoperability Demonstration	3Q	1Q	1Q	1Q	1Q	1Q	1Q

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control
Hardware & Softwar

PROJECT
C39

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 . TRW	SS/CPFF	Huntsville, AL	5304	1908	2Q	2036	1Q	2200	1Q	Continue	11448	0
b . Motorola	C/CPFF	Huntsville, AL	4815	2736	1-2Q	4653	1-2Q	2212	1-2Q	Continue	14416	0
c . In-House/Gov't Support	Various	Various	1460	782	2Q	980	1-2Q	565	1-2Q	Continue	Continue	0
d . ABCS SE& I			0	168	1Q	0		88	1Q	0	256	0
Subtotal:			11579	5594		7669		5065		Continue	Continue	0

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 . SETA	Various	Various	200	200	3Q	200	2Q	200	2Q	Continue	Continue	Continue
Subtotal:			200	200		200		200		Continue	Continue	Continue

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control
Hardware & Softwar

PROJECT
C39

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 . Not applicable			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	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
a . Not applicable			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Project Total Cost:			11779	5794		7869		5265		Continue	Continue	Continue
---------------------	--	--	-------	------	--	------	--	------	--	----------	----------	----------

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development		PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar					PROJECT C3A			
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	
C3A ARMY AIRBORNE COMMAND & CONTROL SYS (A2C2S)	0	0	16002	6998	6127	4541	0	Continuing	Continuing	

A. Mission Description and Budget Item Justification: This project funds the development of an avionics system required to horizontally and vertically integrate the battlefield. Tasks in this project support research efforts in the engineering and manufacturing development phase of this system. This system supports the Legacy-to-Objective transition path of the Transformation Campaign Plan.

The Army Airborne Command and Control System (A2C2S) is the Army's only airborne C2 system supporting corps, division and brigade commanders. This system is critical to enhance the Battle Command Group's ability to effectively perform combat unit operations and serve as a force multiplier in Army XXI. It provides the capability to access the tactical internet to manipulate, store, manage, and analyze situational awareness information, intelligence data, mission plans, and mission progress data to support the command and control decision making process. The A2C2S will provide situational awareness and command and control by hosting the Army Battle Command System (ABCS) such as Maneuver Control Systems (MCS), All Source Analysis System (ASAS), Advanced Field Artillery Data System (AFATDS), and Force XXI Battle Command Brigade and Below (FBCB2). In addition to line-of-sight Combat Net Radios (including Single Channel Ground Airborne Radio System (SINGARS), Advanced System Improvement Program (ASIP) and HAVEQUICK II the A2C2S capabilities supports deep operations with non-line-of-sight radios such as High Frequency (HF) and Demand Assigned Multiple Access (DAMA), and Satellite Communications System Satellite Command (SATCOM). In addition, the system has the potential to improve the ability of state, local, and federal agencies to communicate and coordinate in a crisis environment such as hurricanes, forest fires, or terrorist incidents using weapons of mass destruction.

A2C2S is not a new start. Previous funding is under 0604201A-Aircraft Avionics.

FY 2001 Accomplishments:

FY 2001 funding was under 0604201A-Aircraft Avionics.

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

February 2002

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

**0604818A - Army Tactical Command & Control
Hardware & Softwar**

PROJECT

C3A

FY 2002 Planned Program

FY 2002 funding is under 0604201A-Aircraft Avionics.

FY 2003 Planned Program

- 1688 Continue System Development and Evaluation BLK I
- 4736 Complete Integration of Prototypes 3 to 7
- 217 Complete Integration of TDS
- 3564 Continue Systems Engineering, Logistics and Software Integration
- 270 ABCS System Engineering and Integration Efforts
- 4946 Continue Development Testing and Platform LUT
- 581 Continue Support of Systems 1 and 2

Total 16002

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

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar	PROJECT C3A
---	---	-----------------------

<u>B. Other Program Funding Summary</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
Airborne Command and Control SSN AA0710	0	0	27738	42281	51816	55664	0	Continuing	Continuing

C. Acquisition Strategy: The A2C2S is being developed by the Government with the Aircraft OEM as an consultant. A Competitive contract will be awarded in FY02 with options.

<u>D. Schedule Profile</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Continue System Development and Evaluation BLK I and BLK II			1-4Q	1-4Q	1-4Q	1-4Q	
Continue/Complete A2C2S Prototype Fabrication and Platform Integration Systems 3 to 7			1-4Q				
Continue System Engineering, Software Integration and Logistics Planning for A2C2S			1-4Q	1-4Q	1-4Q	1-4Q	
Continue Development Testing			1-4Q	1-4Q	1-4Q	1-4Q	
LUT			2Q				

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604818A - Army Tactical Command & Control Hardware & Softwar	PROJECT C3A
--	--	------------------------------

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 . System Dev and Eval BLK I and BLK II	Various	Various	0	0		0		1486	1Q	Continue	Continue	Continue
b . Prototype Integration (Systems 1-7)	MIPR/CPIF	AATD/Raytheon	0	0		0		4353	1Q	Continue	4353	Continue
c . System Engineering	Various	Various	0	0		0		1769		Continue	Continue	Continue
Subtotal:			0	0		0		7608		Continue	Continue	Continue

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 . Software Integration	Various	Various	0	0		0		711	1Q	Continue	Continue	0
b . Systems Logistics Support(ILS,NET,Tech Pubs)	CPIF/MIPR	Raytheon/AMCOM IMMC/CECOM	0	0		0		385	1Q	Continue	Continue	0
c . System 1 and 2 Deployment to 4th ID and 101st	Various	Various	0	0		0		581		Continue	Continue	0
d . ABCS System Engineering and Integration Efforts	MIPR	CECOM	0	0		0		270	1Q	0	270	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control
Hardware & Softwar

PROJECT
C3A

II. Support Cost (continued)	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
e . Training Development	CPIF	Raytheon	0	0		0		152		0	152	0
f . Configuration Management	CPIF	Raytheon	0	0		0		209		0	209	0
g . Technical Data	Various	Raytheon	0	0		0		339		0	339	0
Subtotal:			0	0		0		2647		Continue	Continue	0

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 . Development Test & Evaluation and AWQ	MIPR/CPIF	ATEC/RTTC/AATD/AED/Raytheon	0	0		0		3151	1Q	Continue	Continue	0
b . LUT (FY 03)	Various	Various	0	0		0		1794		0	1794	0
Subtotal:			0	0		0		4945		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control
Hardware & Softwar

PROJECT
C3A

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
a . Program Management Operations	Various	Various	0	0		0		802	1Q	Continue	Continue	0
Subtotal:			0	0		0		802		Continue	Continue	0
Project Total Cost:			0	0		0		16002		Continue	Continue	Continue