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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 0208010A Joint Tactical Communications Program (TRI-TAC)				PROJECT D107		
COST (In Thousands)		FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D107	Integrated System Control (ISYSCON) Development	34086	18293	38926	33520	7700	8759	10786	Continuing	Continuing

A. Mission Description and Budget Item Justification: A requirement exists to automate Signal Corps units' capability to manage multiple tactical communications systems in support of battlefield operations. The Integrated System Control (ISYSCON) facility will provide centralized management of the tactical communications network, establish an interface with each technical control facility in the Army Tactical Command and Control System (ATCCS) architecture, and enable automated configuration and management in a dynamic battlefield data network. ISYSCON is being developed with incremental software releases. The ISYSCON Program serves as a baseline foundation to support future network management initiatives tied to and part of the digitized division and the WIN Architecture. ISYSCON V(4) is also being developed to do network planning and management of the Tactical Internet at Brigade and Below (EPLRS, SINCGARS, FBCB2, etc), as well as the TOC LAN. The Joint Network Management System (JNMS) is a commander in Chief (CINC), Commander, Joint Forces (CJF) communications planning and management tool. It provides the capability to conduct high level planning (war planning); detailed planning and engineering; monitoring; control and reconfiguration; spectrum planning and management; and security of networks supporting joint operations. The JNMS will be developed in phases, System Architecture, Key Performance Parameter (KPP) Threshold, Threshold and Objective. **FY 2000** ISYSCON supports the development of P2 Increment 2 software, operational test, training, and software release of P2 Increment 1. ISYSCON V(4) will be issued to the First Digitized Division, support FQT of Release 2 software, accomplish NET Training and support Operational Assessment of Release 1 & 2 software (participate in FBCB2 test events). **FY 2001** ISYSCON completes the development of P2 Increment 2 software, initiates development of P2 Increment 3 software, and supports operational test, training, and software release of P2 increment 2. ISYSCON (V) 4 will continue integration of EPLRS Network Manager functions, pursue Information Assurance Management integration, begin SINCGARS Network Manager integration, and initiate integration on New Tactical Internet components (e.g. Fire Support, Air Defense and Land Warrior). JNMS supports the development of the KPP Threshold requirements for initial fielding in FY03 to meet Defense Planning Guidance and continue remaining Threshold requirements. This program element also supports any network management development required for PM, Warfighter Information Network – Terrestrial (WIN-T).

FY 1999 Accomplishments:

- 1656 ISYSCON Conduct Post Test Support & Report Preparation for IOT&E Phase II
- 3062 ISYSCON Continue Software Requirements Analysis Phase 2 Inc 1
- 3391 ISYSCON Conduct Software Coding for P2 Inc 1 Baseline
- 1750 ISYSCON Deliver & Support P2 Inc 1 BETA Delivery
- 2750 ISYSCON Conduct Unit Test System Test for P2 Inc 1 Baseline
- 2400 ISYSCON Migration to COE Compliance – Level 6
- 2700 ISYSCON Initiate Concept Requirement Review for P2 Inc 2
- 3100 ISYSCON Initiate Software Requirements Analysis for P2 Inc 2
- 2200 ISYSCON Initiate System Design for P2 Inc 2 Baseline

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FY 1999 Accomplishments: (continued)		
•	3104 TI (V)4 Initiate Software & Requirement Analysis for ISYSCON V4 (Block 1 & 2)	
•	3002 TI (V)4 Initiate System Design for ISYSCON V4 (Block 1 & 2)	
•	2175 TI (V)4 Conduct Software Coding for ISYSCON V4(Block 1 & 2)	
•	1137 TI (V)4 Integration on FBCB2 platform (Block 1 & 2)	
•	1659 TI (V)4 Lab Development, test and report (Block 1 & 2)	
Total	34086	
FY 2000 Planned Program:		
•	1600 ISYSCON Conduct P2 Inc 1 Training V&V	
•	2150 ISYSCON Conduct P2 Inc 1 FQT	
•	1500 ISYSCON Conduct P2 Inc 1 Confidence Testing	
•	1551 ISYSCON Conduct P2 Inc 1 LUT Training	
•	2000 ISYSCON Conduct P2 Inc 1 LUT Testing	
•	1200 ISYSCON Conduct P2 Inc 1 Software Release	
•	2800 ISYSCON Initiate Software Coding for P2 Increment 2	
•	2300 ISYSCON Conduct Unit Test, System Test for P2 Increment 2	
•	1000 TI (V)4 Continue Lab Development, test and report (Block 1 & 2)	
•	200 TI (V)4 Conduct Operational Assessment Test (Block 1 & 2)	
•	1000 TI (V)4 Initiate Fielding and Training Block 2	
•	500 TI (V)4 Initiate Field Support Block 2 (Interim Contractor Support)	
•	492 Small Business Innovation Research (464)/Small Business Technology Transfer Program (28)	
Total	18293	
FY 2001 Planned Program:		
•	2355 ISYSCON Conduct P2 Inc 2 Training V&V	
•	2750 ISYSCON Conduct P2 Inc 2 FQT	
•	1932 ISYSCON Conduct P2 Inc 2 Confidence Test	
•	2400 ISYSCON Conduct P2 Inc 2 OT&E Training	
•	2000 ISYSCON Initiate Concept Requirement Review for P2 Inc 3	
•	2900 ISYSCON Initiate Software Requirements Analysis for P2 Inc 3	
•	2511 ISYSCON Initiate System Design for P2 Inc 3	
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FY 2001 Planned Program: (contiuned)

- 2578 ISYSCON Initiate Software Coding for P2 Inc 3
 - 750 TI (V)4 Complete Fielding and Training Block 2
 - 1500 TI (V)4 Complete Field Support Block 2
 - 500 TI (V)4 Initiate Software Requirements Analysis Block 3
 - 1000 TI (V)4 Initiate Software Design Block 3
 - 1750 TI (V)4 Conduct Software Coding Block 3
 - 1000 TI (V)4 Integrate on FBCB2 Block 3
 - 1500 TI (V)4 FQT Block 3
 - 1000 TI (V)4 Field exercise and LUTs (synchronized with FBCB2 Test events)
 - 2475 JNMS Initiate Concept Requirement and Analysis
 - 4025 JNMS Initiate System Design
 - 3591 JNMS Initiate Software Integration
 - 409 JNMS Initiate Training for User Evaluation
- Total 38926

B. Program Change Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 2000/2001 PB)	35664	18432	19666
Appropriated Value	35941	18432	
Adjustments to Appropriated Value			
a. Congressional General Reductions	-277		
b. SBIR / STTR	-945		
c. Omnibus or Other Above Threshold Reductions		-75	
d. Below Threshold Reprogramming	-489		
e. Rescissions	-144	-64	
Adjustments to Budget Years Since FY 2000/2001 PB			+19260
Current Budget Submit (FY 2001 PB)	34086	18293	38926

Change Summary Explanation: FY 2001 plus up funds TI Manager (V) 4 (\$9M), JNMS (\$10.5M).

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E. 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>	To Compl	Total Cost
Other Procurement, Army-2, BX0007				15829	14646	26558	19062	15765	4646	1977	Cont'd	Cont'd
<p>D. Acquisition Strategy: ISYSCON Competitive Engineering & Manufacturing Development (EMD) contract was awarded to GD in September 1992. ISYSCON LRIP decision received May 1995. IOT&E I conducted Mar 98. IOT&E II conducted/completed in Oct 98. LRIP systems supported IOT&E. Received successful MS III FEB 99 for ISYSCON (V)1 and (V)2. ISYSCON P2 Inc 1 software will support fielding of production systems starting with ECB units. ISYSCON Production systems will include acquisition of GFE (CHS/SICPS) hardware for the integration into system assemblages and fielding. TI Manager (V) 4 developed from Army Warfighter Experiments that showed tactical network management and planning to be extremely time consuming. A DD2028 change to the ISYSCON ROC identified the need for Tactical Internet and TOC LAN management. In March 99, PM WIN-T signed a delivery order under the PM FBCB2 contract with TRW, and another with Raytheon under the PM TRCS contract, in response to the DD-2028 requirements. Raytheon is under contract to develop an EPLRS Network Manager (ENM) capability while TRW will develop the remaining TI Mgr functionality (TOC LAN Mgt, Router Configurations, TIC/TIDs, etc) and integrate the ENM software onto a single platform. The TI Mgr is closely coupled to FBCB2 program events, and the Project Manager diverted \$2.7M from ISYSCON V1/V2 to TI Manager (V) 4 to continue its development to support the FBCB2 "System of Systems" test requirements (a congressional item of interest). Block 1 of TI Mgr SW will be formally tested at the contractor's facility prior to the FBCB2 LUT 2 (April 00). Final Block 2 will be issued to FDD in SEP 00. IOT&E and MS III decision will be synchronized with FBCB2 in FY02. Anticipate LRIP decision in OCT 00. JNMS: A competitive contract will be awarded on a best value basis for the development and integration of the JNMS software. The emphasis for the development will be the use of integration of commercial off the shelf (COTS) and government off the shelf (GOTS) control and management software to fulfill the JNMS requirement. TRADOC approved ORD dated 25 Oct 99.</p>												
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>		
ISYSCON Phase 1+ / IOT&E II				1Q								
ISYSCON Milestone III				2Q								
ISYSCON Production Contract Award				2Q								
ISYSCON Phase 2 – Increment 1 FQT					2Q							
ISYSCON LUT P2 Inc 1					3Q							
ISYSCON Phase 2 – Increment 2 FQT						4Q						
ISYSCON OT&E for P2 Inc 2							2Q					
ISYSCON Phase 2 – Increment 3 FQT								1Q				
ISYSCON OT&E for P2 Inc 3								4Q				
ISYSCON Phase 3 – Increment 1									1Q			
ISYSCON Phase 3 – Increment 2										1Q		
TI MANAGER (V)4 EPLRS Net Mgr Prototype				2Q								
TI MANAGER (V)4 Block 1 Release					1Q							
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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>
TI MANAGER (V)4 Milestone I/II		2Q					
TI MANAGER (V)4 Block 2 Release		4Q					
TI MANAGER (V)4 Milestone IIIa LRIP			1Q				
TI MANAGER (V)4 IOT&E				1Q			
TI MANAGER (V)4 Milestone IIIb Production				4Q			
JNMS Milestone I/II		2Q					
JNMS Contract Award			1Q				
JNMS OT&E				4Q			
JNMS Milestone III				4Q			

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 2000		
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0208010A Joint Tactical Communications Program (TRI-TAC)						PROJECT D107		
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. ISYS SW Development	CPAF	GD, Raleigh, NC	70856	18210	DEC 98	11532	DEC 99	13366	DEC 00	Cont'd.	Cont'd.	
b. ISYSCON Award Fee Contingencies	CPAF	GD, Raleigh, NC	2909	1101	AUG 99	1480	AUG 00	1631	AUG 01	Cont'd.	Cont'd.	
c. ISYS GFE	FFP	GD, Taunton, Mass	2239			-0-		-0-			2239	
d. TI Manager (V4)												
(1) Software Dev	IDIQ	Raytheon, Fullerton, CA		650	JAN 99	0		1500	NOV 00	Cont'd.	Cont'd.	
(2) Software Dev	CPIF	TRW, Carson, CA	48	9198	JAN 99	1682	MAR 00	5950	NOV 00	Cont'd.	Cont'd.	
(3) GFE	FFP	GSA		733	FEB 99	200	MAR 00	250	DEC 00	Cont'd.	Cont'd.	
f. JNMS Development	CPIF	TBD						8922	MAR 01	Cont'd.	Cont'd.	
g. SBIR(464)/STTR(28)						492					492	
Subtotal Product Development:			76052	29892		15386		31619		Cont'd.	Cont'd.	
Remark: I.a Supports ongoing ISYS (V1-2) software development to produce incremental software products. (Prior year Includes \$5.7M for Force XXI) I.b ISYSCON Award Fee cycles are semi-annually. (PY at 7%/FY99> at 12%) I.c Supports ISYSCON prototype hardware requirements in support of IOT&E. I.d Supports V4 TI Manager Software Development (FBCB2 & EPLRS Network Mgt). I.e Supports ongoing JNMS software development to produce phased products. TRADOC ORD dated 25 Oct 99.												
II. Support Costs: Not applicable												
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. ISYS Test Support	N/A	TEXCOM/APG/EPG	1352	750	NOV 98	273	JAN 00	200	NOV 00	Cont'd.	Cont'd.	
b. ISYS SIG CTR	TBD											
c. TI Manager (V)4	TBD	TBD				381	MAR 00	500	DEC 00	Cont'd.	Cont'd.	
d. JNMS Accreditation	TBD	TBD						400	DEC 00	Cont'd.	Cont'd.	
Subtotal Test and Evaluation:			1352	750		654		1100		Cont'd.	Cont'd.	
Remark: Prior year funds provided TEXCOM, APG, EPG, Signal Ctr, & 3 rd Signal Brigade test support for IOT&E I & II activity. FY99 supports TEXCOM test report activity in support of MS III.												
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IV. Management Services	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. ISYS Contractor Engr	See remarks		14640	1922	NOV 98	937	NOV 99	2285	NOV 00	Cont'd.	Cont'd.	
b. ISYS Government Engr	NA		10305	744	NOV 98	456	OCT 99	1484	OCT 00	Cont'd.	Cont'd.	
c. ISYS PM Support-CORE	NA		715	217	OCT 98	274	OCT 99	300	OCT 00	Cont'd.	Cont'd.	
d. ISYS Travel	NA		655	170	FY99	165	FY00	160	FY01	Cont'd.	Cont'd.	
e. TI MGR Contractor Engr	TBD					246	JAN 00	300	NOV 00	Cont'd.	Cont'd.	
f. TI MGR Govt Engr	NA			391	NOV 98	175	JAN 00	445	OCT 00	Cont'd.	Cont'd.	
g. TI MGR/JNMS-CORE	NA							110	OCT 00			
h. JNMS Contractor Engr	TBD					0		493	NOV 00	Cont'd.	Cont'd.	
i. JNMS Govt Engr	NA					0		630	OCT 00	Cont'd.	Cont'd.	
Subtotal Management Services:			26315	3444		2253		6207		Cont'd.	Cont'd.	

Remark:
 IV.a. Contractor engineering includes PM Support contractor [Nations (T&M)], software development support contractors [MITRE (FFDRC-CPFF) & JSC (CPAF 8%)], and FY01 includes \$2M Post Deployment SW Support (PDSS).
 IV.d. Travel will be expended throughout the year for Program Management Support.

Project Total Cost:			103719	34086		18293		38926			195024	
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