

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

June 2001

BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV				PE NUMBER AND TITLE 0208010A - Joint Tactical Communications Program (TRI TAC)					PROJECT 107	
COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
107 ISYSCON DEVELOPMENT	16934	38563	21615	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

PLEASE NOTE: This administration has not addressed FY2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

A requirement exists to provide Signal Corps units the automated capability to manage multiple tactical communication systems in support of battlefield operations. The Integrated System Control (ISYSCON) facility will provide centralized management of the tactical communication 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 Warfighter Information Network (WIN) architecture. This program element also supports any network management and the required interface with the Warfighter Information Network-Tactical (WIN-T) architecture. The Tactical Internet Management System (TIMS) is also being developed to do network planning and management of the Tactical Internet at Brigade and Below (Enhanced Position Locating Reporting System, Force Battle Command Brigade & Below, etc), as well as the Tactical Operation Center Local Area Network (TOC LAN). The Joint Network Management System (JNMS) is a Commander in Chief (CINC), Commander Joint Task Force (CJTF) 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, in support of joint operations. The JNMS will be developed in phases: System Architecture, Key Performance Parameters (KPP) Threshold, and Threshold and Objective. Starting in FY02, JNMS funding will transition to a separate Program Element (64783) and Project (D363).

The ISYSCON and TIM systems support the Legacy transition path of the Transformation Campaign Plan (TCP). The JNMS system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

- 1487 ISYSCON Conducted P2 Inc 1 Training V&V
- 1874 ISYSCON Conducted P2 Inc 1 FQT
- 1500 ISYSCON Conducted P2 Inc 1 Testing
- 1206 ISYSCON Conducted P2 Inc 1 Limited User Test (LUT) Training
- 1774 ISYSCON Conducted P2 Inc 1 LUT Testing

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107**FY 2000 Accomplishments (Continued)**

- 1741 ISYSCON Posted LUT Software Activities
- 1800 ISYSCON Performed Post LUT Baseline Regression Test
- 1200 ISYSCON P2 Inc 1 Software Release
- 1252 ISYSCON Initiated System Engineering Activities for P2 Increment 2
- 1200 TIMS Lab Development, test and report (Release 1)
- 400 TIMS Conducted Operational Assessment Test (Release 1)
- 1000 TIMS Initiated Joint Contingency Force Advanced Warfighter Experiment (JCF AWE)
- 500 TIMS Initiated Field Support (Release 2) (Interim Contractor Support)

Total 16934

FY 2001 Planned Program

- 1915 ISYSCON Initiate P2 Inc 2 Systems Requirements Analysis
- 1818 ISYSCON Initiate P2 Inc 2 System Design
- 1832 ISYSCON Initiate P2 Inc 2 Software Coding
- 2031 ISYSCON Initiate P2 Inc 2 Software Unit & System Test
- 1578 ISYSCON Conduct P2 Inc 2 BETA
- 1400 TIMS Complete System Engineering (Release 2.1)
- 1385 TIMS Complete Software Development (Release 2.1)
- 750 TIMS Conduct Test and Evaluation (Release 2.1)
- 1900 TIMS Complete Requirements and Analysis (Release 2.2)
- 1500 TIMS Conduct Operational Assessment(Release 2.2)
- 2493 TIMS Complete Systems Engineering(Release 2.2)
- 3000 TIMS Complete Software Development(Release 2.2)
- 950 TIMS Conduct Test & Evaluation (Release 2.2)
- 1000 TIMS Conduct Field Support(Release 2.1 & 2.2)

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FY 2001 Planned Program (Continued)

- 2475 JNMS Initiate Concept Requirement and Analysis
- 4025 JNMS Initiate System Design
- 3591 JNMS Initiate Software Integration
- 409 JNMS Initiate Training for User Evaluation
- 1364 ABCS Systems Engineering and Integration Effort
- 1147 Small Business Innovation Research (1082)/Small Business Technology Transfer Program (65)
- 2000 Reprogrammed to Higher Army Priority

Total 38563

FY 2002 Planned Program

- 1900 ISYSCON Conduct P2 Inc 2 Software Coding
- 1600 ISYSCON Conduct P2 Inc 2 Software Unit & System Test
- 2139 ISYSCON Initiate Support to P2 Inc 2 OT&E
- 2000 ISYSCON Conduct P2 Inc 2 Training and V&V
- 1406 ISYSCON Conduct P2 Inc 2 Regression Test
- 2200 ISYSCON Conduct P2 Inc 2 OT&E Training
- 1500 ISYSCON Conduct P2 Inc 2 OT&E
- 1350 ISYSCON Initiate P2 Inc 3 Concept Requirement Review
- 1550 TIMS Conduct IOT&E (Release 2.2)
- 1100 TIMS Initiate Requirements and Analysis (Release 3.0)
- 1750 TIMS Initiate Systems Engineering (Release 3.0)
- 2200 TIMS Initiate Software Development (Release 3.0)
- 620 TIMS Conduct Test & Evaluation (Release 3.0)
- 300 WIN-Tactical Network Management and Associated Activities

Total 21615

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<u>B. Program Change Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003
President's Previous Budget (FY 2001 PB)	18293	38926	33520	0
Appropriated Value	18432	38926	0	0
Adjustments to Appropriated Value	0	0	0	0
a. Congressional General Reductions	0	0	0	0
b. SBIR / STTR	-492	0	0	0
c. Omnibus or Other Above Threshold Reductions	-75	0	0	0
d. Below Threshold Reprogramming	-867	-7	0	0
e. Rescissions	-64	-356	0	0
Adjustments to Budget Years Since FY2001 PB	0	0	-11905	0
Current Budget Submit (FY 2002/2003 PB)	16934	38563	21615	0

FY2000: \$867K reprogrammed to higher Army priority

FY 2001: -\$7K, Dollars realigned due to DA alignment of priorities.

FY 2002: Funding realigned for higher priority requirements to include funding new JNMS Program Element. Decrease of \$3M for ABCS System Engineering and Integration Efforts(PBD 703).

FY 2003: Funds for TIMS (+\$7M); less small realignment to cover general reduction; and PBD 722 Decrement.

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C. Other Program Funding Summary	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
Other Procurement, Army-2, BX0007 ISYSCON	13152	29100	32448	0	0	0	0	0	0	0
RDT&E, PE 64783, Proj D363, JNMS	0	0	26130	0						

D. Acquisition Strategy: ISYSCON Competitive Engineering and Manufacturing Development (EMD) contract was awarded to General Dynamics in September 92. ISYSCON Low Rate Initial Production (LRIP) decision - May 95. First Initial Operational Test and Evaluation (IOT&E) - Mar 1998. Second IOT&E conducted/completed - Oct 98. LRIP systems supported IOT&E. Successful Milestone III - Feb 99 for ISYSCON (V)1 and (V)2. ISYSCON Phase 2 Increment 1 software will support fielding of production systems starting with echelon corps and below units. ISYSCON production systems will include acquisition of Government furnished equipment (common hardware and software(CHS)/Standardized Integrated Command Post System(SICPS)) hardware for the integration into system assemblages and fielding. The Tactical Internet Management System (TIMS) was developed from Army Warfighter Experiments that showed tactical network management and planning to be extremely time consuming. A DD-2028 change to the ISYSCON Requirement Operational Capability (ROC) identified the need for Tactical Internet and Tactical Operation Command (TI and TOC) Local Area Network management. In Mar 99, PM WIN-T signed a delivery order under the PM, Force XXI Battle Command Brigade and Below (FBCB2) contract with TRW, and another with Raytheon under the PM, Tactical Radio Communications System (TRCS) contract, in response to the DD-2028 requirements. Raytheon is under contract to develop an Enhanced Position/Location Reporting System Network Manager (ENM) capability while TRW will develop the remaining TIMS functionality (TOC LAN MGT, Router Configurations, Tactical Internet Configurer /Tactical Internet Designer, etc.) and integrate the ENM software onto a single platform. The TIMS is closely coupled to FBCB2 program events. A TIMS Operation Requirements Document (ORD) is in development to supercede the 2028 ISYSCON ROC and will be approved in 3QFY01. Release I of TIMS software was formally tested at the contractor's facility prior to the FBCB2 Customer Test (Apr 00). Release 2.1 was used for the FBCB2 Field Test 2 development test in Jan 00 and Release 2.2 was issued to 4th ID in Feb 01 to support the Division Capstone Exercise at NTC and the FBCB2 Limited User Test 2. Release 2.2 will be assessed at TIMS IOT&E in Dec 01 with a Milestone C decision in Jun 02. Joint Network Management System (JNMS): A competitive contract will be awarded on a best value basis for the development and integration of the JNMS software. TRADOC approved ORD dated 16 May 00.

E. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
ISYSCON Phase 2-Increment 1 FQT	2Q			0	0	0	0	0
ISYSCON LUT P2 Inc 1	3Q			0	0	0	0	0
ISYSCON Phase 2-Increment 2 Software Build		4Q		0	0	0	0	0
ISYSCON Phase 2 - Increment 2 FQT			3Q	0	0	0	0	0
ISYSCON OT&E for Phase 2 Increment 2			4Q	0	0	0	0	0
ISYSCON Phase 2-Increment 3 FQT				0	0	0	0	0
ISYSCON Phase 3-Increment 1 Software Build				0	0	0	0	0

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<u>E. Schedule Profile (continued)</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
ISYSCON Phase 3-Increment 1 FQT				0	0	0	0	0
ISYSCON Phase 3-Increment 2 Software Build				0	0	0	0	0
ISYSCON Phase 3-Increment 2 FQT				0	0	0	0	0
TIMS Release 1	1Q			0	0	0	0	0
TIMS Release 2.1		1Q		0	0	0	0	0
TIMS Release 2.2		3Q		0	0	0	0	0
TIMS IOT&E Release 2.2			1Q	0	0	0	0	0
TIMS Milestone C Production			3Q	0	0	0	0	0
TIMS Release 3.0				0	0	0	0	0
TIMS Release 4.0				0	0	0	0	0
TIMS Release 4.1				0	0	0	0	0
JNMS Milestone I/II	4Q			0	0	0	0	0
JNMS Contract Award		3Q		0	0	0	0	0

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . ISYS SW Development	CPAF	GD, Taunton, MA	99825	6607	1Q	11384	1Q	0	0	0	0	0
b . ISYS Award Fee Contingencies	CPAF	GD, Taunton, MA	5427	901		1354		0	0	0	0	0
c . ISYS GFE	FFP	GD, Taunton, MA	2239	0		0		0	0	0	0	0
d . TI MGR (1) Software Development	IDIQ	Raytheon, Fullerton, CA	650	0		0		0	0	0	0	0
e . TI MGR (2) Software Development	CPFF/TM	TRW, Carson, CA	11309	11834	1Q	5446	1Q	0	0	0	0	0
f . TI MGR GFE	FFP	GSA and GD, Taunton, MA	933	550	1Q	0		0	0	0	0	0
g . JNMS Development	CPFF/TM/FFP	TBD	0	9044	3Q	0		0	0	0	0	0
h . ABCS Systems Engineering and Integration Effort			0	1364		0		0	0	0	0	0
i . Small Business Innovation Research (1082)/Small Business Technology Transfer Program (65)			0	1147		0		0	0	0	0	0

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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
j . Below Threshold Reprogramming of \$2000 to WIN-T			0	2000		0		0	0	0	0	0
Subtotal:			120383	33447		18184		0		0	0	0

Remarks: I.a. Supports ongoing ISYS (V)1/2 software development to produce incremental software products. (Prior year cost includes \$5.7M for Force XXI).
 I.b. ISYSCON Award Fee cycles are semi-annual. (Prior to FY99 the rate was 7%. FY99 and beyond is at 12%).
 I.e. Supports ongoing JNMS software development to produce phased products. TRADOC ORD dated 16 May 00. FY02 and beyond funding for JNMS will reside in PE/Project 64783/D363.

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
Subtotal:			0	0		0		0		0	0	0

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III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . ISYS Test Support	N/A	TEXCOM/APG/EPG	2375	200	1Q	0		0	0	0	0	0
b . ISYS Accreditation	N/A	Software Engineering Center	0	110	1Q	139	1Q	0	0	0	0	0
c . TI MGR (V)4 Test Support	TBD	TEXCOM/APG/EPG	0	1000	1Q	1000	1Q	0	0	0	0	0
d . JNMS Accreditation	TBD	Software Engineering Center	0	100	1Q	0		0	0	0	0	0
Subtotal:			2375	1410		1139		0		0	0	0

Remarks: III.a. Prior year funds provided to TEXCOM, Aberdeen Proving Ground (APG) and Electronic Proving Ground (EPG) test support for IOT&E 1 & II activity.

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 . ISYS Contractor Engr	See remarks	MISC	17166	352	1Q	461	1Q	0	0	0	0	0
b . ISYS Government Engr	N/A	MISC	11750	704	1Q	739	1Q	0	0	0	0	0
c . ISYS PM Support-Core	N/A	PM WIN-T	1156	150	1Q	168	1Q	0	0	0	0	0

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IV. Management Services (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
d . ISYS Travel	N/A	MISC	989	150		150		0	0	0	0	0
e . TI MGR Contractor Engr	TBD	MISC	299	438	1Q	259	1Q	0	0	0	0	0
f . TI MGR Governmentt Engr	N/A	MISC	556	424	1Q	360	1Q	0	0	0	0	0
g . TI MGR PM Support-Core	N/A	PM, WIN-T	0	52	1Q	55	1Q	0	0	0	0	0
h . TI MGR Travel	N/A	MISC	65	80	1-4Q	100	1-4Q	0	0	0	0	0
i . JNMS Contractor Engr	TBD	MISC	0	512	1Q	0		0	0	0	0	0
j . JNMS Government Engr	N/A	MISC	0	486	1Q	0		0	0	0	0	0
k . JNMS PM Support-CORE	N/A	PM, WIN-T	0	158	1Q	0		0	0	0	0	0
l . JNMS Travel	N/A	MISC	0	200	1-4Q	0		0	0	0	0	0
Subtotal:			31981	3706		2292		0		0	0	0

Remarks: IV.a. Contractor engineering includes PM Support [Nations (T&M)], software development support [MITRE (FFRDC-CPFF) & JSC (CPAF 8%)], and \$2M of Post Deployment SW Support (PDSS) in FY01.
 IV.d,h,l. Travel will be expended throughout the year for Program Management Support.
 IV.i,j,k,l. Starting in FY02 JNMS will transition to a separate Program Element (64783), and Project (D363).

Project Total Cost:			154739	38563		21615		0		0	0	0
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